



FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Phone No. 041-9220184
Fax No. 041-9220233
E-mail: mcpc@fesco.com.pk

OFFICE OF THE
CHIEF EXECUTIVE OFFICER
FESCO FAISALABAD

No. ~~258083~~ CFO/FESCO/CPC

Dated 07/08/2015

The Registrar NEPRA,
NEPRA Tower, Ataturk Avenue (East),
G-5/1, Islamabad.

Subject: PETITION FOR DETERMINATION OF CONSUMER END TARIFF FOR FY 2015-16 TO 2019-20 UNDER MULTIYEAR TARIFF REGIME IN RESPECT OF FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED (FESCO)

Ref; Your office letter No. NEPRA/R/SAT-I/10037-49 dated 06-07-2015.

I am pleased to file Tariff Petition for FY 2015-16 to 2019-20 under multiyear tariff regime on behalf of Faisalabad Electric Supply Company Limited (FESCO) in accordance with rule 3 (I) of NEPRA Tariff Standards & Procedure Rules, 1998. The demand draft No. 582972 dated 05-08-2015 for Rs. 839,856/- (Eight Hundred Thirty Nine Thousand Eight Hundred Fifty Six only), is attached as petition fee.

The Integrated Generation, Transmission and Distribution Plan for the above period, prepared by FESCO and reviewed by Technical Consultant of Financial Advisor appointed by Privatization Commission is also attached. In addition to above, tariff based on Cost of Service Study carried out by USAID is also attached with the Tariff Petition.

Subsequent changes, documents and information, if any, shall be communicated / provided for becoming a part of the Tariff Petition.

It is requested that the attached Tariff Petition of FESCO for the FY 2015-16 to 2019-20 may please be admitted.

For information &
D/Reg-I/SAR M/A
Guh:
SA (Tech)
SA T-I
Div (G-1) - Guha (Tad)
LA (LLD) - m/f
cc: chairman
VC/M(CA)
M(T)
M(M&E) - M/LC

Copy to: -

- ❖ Secretary, Privatization Commission - GoP, Islamabad.
- ❖ Joint Secretary (Power), Ministry of Water & Power, Islamabad.
- ❖ Mr. Shahid Raza, Senior Consultant, Privatization Commission - GoP, Islamabad

Yours Truly,

(RASHID AHMED ASLAM)
CHIEF EXECUTIVE OFFICER

Petition received & admitted
Cheque amounting Rs. 839,856/-

Registrar	8637
DY No.	
Dated	11-08-15



0391 FAISALABAD ABDULLAHPUR

Not Over: PKR 839,856.00**

Banker Cheque No. : 582972

Date: 05-Aug-2015

Serial No. 100093332

Payee's A/c Only

PAY TO NEPRA

OR ORDER

the sum of **PAKISTAN RUPEES EIGHT HUNDRED THIRTY-NINE
THOUSAND EIGHT HUNDRED FIFTY-SIX ONLY**

PKR 839,856.00

Payable at any MCB branch in Pakistan

MCB BANK LIMITED

Authorized Signatory

Authorized Signatory

Faisalabad Electric Supply Company Limited



**Multi Year Tariff Petition
For
Fiscal Year 2015-16 to 2019-20**

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List of Abbreviations

AMI	Advanced Metering Infrastructure	MDI	Maximum Demand Indicator
AMR	Automated Meter Reading	MEPCO	Multan Electric Power Company Limited
BOD	Board of Directors	MOU	Memorandum of Understanding
BPS	Basic Pay Scale	MYT	Multi-year Tariff
Bps	Basis Points	NEPRA	National Electric Power Regulatory Authority
CAGR	Compounded Average Growth Rate	NFA	Net Fixed Assets
CAPM	Capital Asset Pricing Model	NTDC	National Transmission and Despatch Company Limited
COE	Cost of Equity	NTS	National Testing Service
CPI	Consumer Price Index	O&M	Operations and maintenance
CPP	Capacity Purchase Price	OFA	Operating Fixed Assets
CPPA (G)	Central Power Purchasing Agency (Guarantee)	PDEIP	Power Distribution Enhancement Investment Program
CTC	Capacity Transfer Charge	PIB	Pakistan Investment Bond
DISCO	Distribution Company	PKR	Pakistani Rupee
DM	Distribution Margin	PPP	Power Purchase Price
DOP	Distribution of Power	PYA	Prior-Year Adjustments
ELR	Energy Loss Reduction	R&M	Repair and Maintenance
EPP	Energy Purchase Price	RAB	Regulatory Asset Base
ERP	Enterprise Resource Planning	RFO	Residual Fuel Oil
ETC	Energy Transfer Charge	RLNG	Re-gasified Liquefied Natural Gas
FESCO	Faisalabad Electric Supply Company Limited	ROE	Return on Equity
GoP	Government of Pakistan	RORB	Return on Rate Base
GWh	Giga watt per Hour	SAP	Systems, Applications and Products
HUBCO	Hub Power Company Limited	SECP	Securities and Exchange Commission of Pakistan
IAS	International Accounting Standards	STG	Secondary Transmission and Grid Stations
IGTDP	Integrated Generation Transmission and Distribution Plan	T&D	Transmission and Distribution
IPP	Independent Power Producer	TPM	Transfer Price Mechanism
IRR	Internal Rate of Return	UoSC	Use of System Charge
KSE	Karachi Stock Exchange	WACC	Weighted Average Cost of Capital
LPS	Late Payment Surcharge	WAPDA	Water and Power Development Authority

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H	Prior Year's Adjustments
I	Inconsistent Application of Multi Year Tariff
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K	Detail of Supplementary Charges invoiced by CPPA (G)

1. PETITION SUMMARY

1.1. Details of the Petitioner

1.1.1 Name and address

Faisalabad Electric Supply Company Limited ("FESCO" or the "Company"),
West Canal Road, Abdullahpur,
Faisalabad

1.1.2 License details

1.1.2.1 FESCO is a licensee of National Electric Power Regulatory Authority ("NEPRA") and holds the Distribution License bearing No. 02/DL/2002

1.1.3 Key representatives

1.1.3.1 The petition is being filed through Mr. Rashid Ahmed Aslam, the Chief Executive Officer of the Company who has been duly authorized by the Board of Directors vide Resolution (see Annexure-B) passed in its 141st / 29th meeting held on 6th August, 2015 to sign and file the Multi Year Tariff ("MYT") Petition for the fiscal years 2015-16 to 2019-20 ("Tariff Period"). The following officers of the Company have also been authorized by the Board to sign individually or jointly the multi-year tariff petition for the fiscal years 2015-16 to 2019-20, necessary documents in support of the petition and also to appear before the NEPRA as needed and do all acts necessary for completion and processing of the application:

1. Rashid Ahmed Aslam	GM Technical/Chief Executive Officer
2. Akhtar Ali Randhawa	GM (Operation)
3. Rana Tariq Pervaiz	Chief Financial Officer
4. Sardar Masood Iqbal	Chief Commercial Officer
5. Ihsan Muhammad Siddiqui	Director General (HR)
6. Aziz Ahmed	Director General (IS)
7. Masood Salahuddin	C.E. (P&D)/Company Secretary
8. Muhammad Zahid Hasan	Manager Finance (CP&C)
9. Sheikh Muhammad Ali	Legal Advisor-FESCO

1.1.4 Inputs on Tariff Petition from Financial Advisor to Privatisation Commission

1.1.4.1 In line with the policy objectives of Government of Pakistan ("GoP") to reform and liberalize the power sector, the privatisation program has been reinitiated by the GoP. In pursuance of these objectives, the Privatisation Commission ("PC") has appointed Financial Advisor to advise GoP on the privatisation of FESCO. The advisory consortium is led by United Bank Limited and supported by Ernst & Young Ford Rhodes Sidat Hyder, Lahmeyer International GmbH, Pakistan Engineering Services, HaidermotaBNR & Co and Excelerate Private Limited.

1.1.4.2 As per clause 4.1.4 of the terms of reference, the Financial Advisor has reviewed the existing tariff structure and methodology, identified shortcomings of the current tariff regime from the point of view of the privatisation of FESCO, and recommended Tariff Setting Methodologies and Distribution Margin keeping in view the Power Purchase Costs, Distribution Loss Margin and the overall retail tariff for end-users. The Financial Advisor has assisted FESCO in developing the multi-year tariff petition after taking into consideration the observations and recommendations and shall be available to support the Company in tariff proceedings before NEPRA.

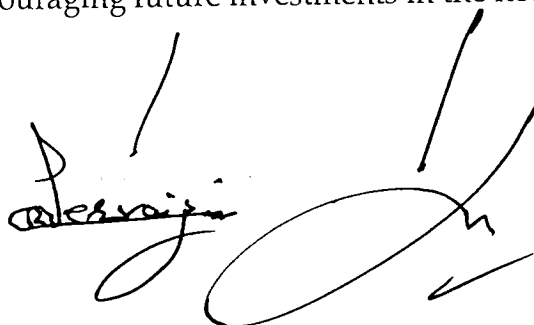
1.1.5 Grounds for petition

1.1.5.1 Under the "Regulation of Generation, Transmission & Distribution of Electric Power Act, 1997 (hereinafter called as 'NEPRA Act'), the regulator (National Electric Power Regulatory Authority or NEPRA) is empowered to determine tariffs and other terms and conditions for the supply of electricity by the generation, transmission and distribution companies. NEPRA also determines the process and procedures for reviewing tariffs and recommending tariff adjustments.

1.1.5.2 FESCO is licensed public limited company distributing and supplying electricity to the distribution area within its jurisdiction, as set out in the Company's license. In accordance with the requirements of the license, the Company is hereby submitting a petition which sets out a methodology for setting and reviewing tariffs throughout the period of the Company's license, subject to a rebase once every five years.

1.1.5.3 The Multi-Year Tariff petition for the period FY 2015-16 to FY 2019-20 is being filed by the Company in order to:

- Ensure its financial viability through timely recovery of its prudently incurred expenditures;
- Ensure that a reasonable return is earned on investments;
- Comply with regulatory standards and future investment for network expansion;
- Provide the utility with a tariff that supports organizational autonomy and fiscal independence while encouraging future investments in the network.



1.1.5.4 The petition is being filed in accordance with Rule 3(1) (2) of "NEPRA (Tariff Standard and Procedure) Rules, 1998 (hereinafter called as 'Tariff Rules')", NEPRA guidelines for determination of consumer end tariff issued vide SRO 34 (1)/2015, dated 16th January, 2015 and direction to file Tariff Petition for the determination of consumer end tariff pertaining to the FY 2015-16 to 2019-20 under Multiyear Tariff Regime in accordance with the said guidelines issued vide No. NEPRA/R/SAT/TRF-100/DISCOs/1065-77, dated January 23, 2015.

1.1.6 Directions of NEPRA in the tariff determination of FY 2014-15

1.1.6.1 The compliance/justification/clarification of the directions has been intimated to NEPRA vide letter No.5851-52 dated 31-03-2015, No.5922 dated 17-04-2015, No.5977 dated 28-04-2015 and No.71 dated 30-07-2015. (see Annexure-C)

1.2. Key Aims and Features of the Petition

1.2.1 Key aims of the petition

1.2.1.1 The aim of this petition is to submit the Company's MYT for the period FY 2015-16 to 2019-20 and to obtain requisite approvals for the immediate implementation of cost reflective tariffs to yield the Company's required revenues.

1.2.1.2 The key objectives of tariff petition include:

- Instant recovery of Cost of Service to protect the interest of existing and future consumers.
- To provide adequate incentives to the company for diverting requisite efforts to optimize its operations and enhance operational efficiencies.
- To provide an effective framework for optimization of installation and investment in the Company's distribution network.
- To provide protection to the Company against uncontrollable risks.
- To provide financial sustainability to the Company for the ultimate benefit of end consumers.
- To recover costs on account of Prior Year Adjustments.
- To provide a structure for the determination of tariff to meet the Revenue Requirements explained hereinafter.

1.2.2 Summary of key proposals

1.2.2.1 The petition includes the following key parameters:

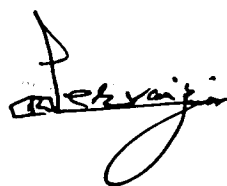
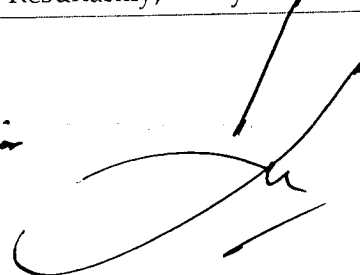
No.	Feature	Details
1	Tariff Period	Five year multi-year tariff for the period FY 2015-16 to FY 2019-20
2	Distribution Margin	The existing Distribution Margin (DM) has been modified to consider impact of internal and external factors, including inflationary impacts, increase in regulatory asset base, expansion of

		network, increase in salaries, retirement benefits, repair & maintenance and depreciation etc.
3	Bifurcation of O&M Cost	Distinction has been made between controllable and un-controllable costs, as detailed herein, with un-controllable costs directly passed through and controllable costs to be indexed.
4	Indexation of O&M and Efficiency Factor	The controllable O&M cost is being proposed to be indexed to Consumer Price Index (CPI) during the tariff period. Furthermore, an efficiency factor "X" is also being introduced for the tariff period which will be applied to the benchmark O&M cost adjusted by CPI. The X factor is proposed to be set at zero for the first three years (2016-2018) and subsequently at 0.5% and 1% during years four and five respectively.
5	Extra Ordinary Events	Given the Company's vulnerability to damages caused by natural disasters in the past like massive flooding in FY 2010, a provision for such extraordinary events is being proposed as a "Z" factor, which will be included in the O&M cost indexation formula. All such costs will be classified as force majeure and shall be recoverable during the following year, subjected to prior approval of NEPRA. Costs recoverable under insurance coverage shall not be included in the tariff for the subsequent year.
6	Allowance for Additional Hiring	Given the Company's current constraints relating to human resources and future requirements, a total of 3,094 additional personnel are being proposed to be added to the workforce under different cadres ranging from BS 2 to 17. The additions are consistent with WAPDA's benchmarking of the Company's optimal staff.
7	Creation of New Divisions/ Sub-Divisions	Provision of PKR 425 million has been made for creating of new divisions and sub-divisions in "the First Phase" already approved by NEPRA in its determination for FY2014-2015. This cost has been added to the benchmark O&M cost for FY 2015-2016. Based on future expansions and related organization requirements the petition also proposes the creation of 8 new divisions and 30 new sub-divisions in the 2nd & 3rd Phases during FY 2015-16 with an additional cost of PKR 509 million and PKR 499 million respectively.
8	Repairs & Maintenance Costs	With a view to allow the Company greater autonomy over its operations relating to network management, repair & maintenance costs has been determined via a "K" factor, capped at 3% of gross fixed assets, which is consistent with regional benchmarks.
9	Return on Rate Base	It is proposed that the Company receives the Weighted Average Cost of Capital (WACC) on its average regulatory assets as the return on rate base.
10	Capital Structure	The WACC shall be based on the actual debt to equity ratio, subject to a ceiling of 70:30 as prescribed in NEPRA's MYT Guidelines 2015.
11	Return on Equity (ROE)	The ROE shall be based on the Capital Asset Pricing Model (CAPM) which computes the return that a risky investment should deliver over the risk-free rate and adjusts for the investment's sensitivity to

the overall market to accommodate its riskiness in the return calculation.

12	Risk Free Rate	It is proposed that a long-term risk-free rate, ideally the yield to maturity on a 10 year Pakistan Investment Bond, prevailing as at 30 June 2015, be considered, while computing return on equity. This is in view of the long-term business horizon of an electricity distribution business, the Company's contractual obligations, operational risks, investment risk and time horizon, which extend beyond the tariff period.
13	Beta	Beta computations are proposed to be based on the average prevailing beta of foreign listed entities as at 30 June 2015, those have comparable businesses as the Company. The beta has been computed by using average betas of listed foreign companies, and adjusted for the capital structure prescribed by NEPRA.
14	Cost of Debt	The cost of debt represents the actual cost incurred by the Company on debt financing.
15	Regulatory Asset Base	The Regulatory Asset Base (RAB) is based on a two year average of net Operating Fixed Assets (OFA) of the Company. The OFA does not include surplus on revaluation of assets.
16	Incentive for Loss Reduction	Considering the significance of T&D loss reduction as a primary driver for improved efficiency and hence, customer service, it is proposed that an added incentive be provided to the Company for achieving a T&D loss level below the target set by NEPRA in a given year. The proportionate over-achievement of T&D losses shall be added to the return on equity, in order to incentivize rapid reductions and increased investment by the Company.
17	Floor on Return on Equity	It is further suggested that floor of 19%-20% be set for return on equity to provide stability in asset returns. Similar incentives granted in the past have led to the development of the power sector and will promote necessary investments in the Company.
18	Exclusion of LPS from other income	Given the historical challenges associated with managing cash flows and timely recoveries by the Company, the Late Payment Surcharge (LPS) has been excluded from other income to accurately reflect the Company's cash flow risk emanating from its operations.
19	Delay in TDS Settlement	Mark-up in the range of KIBOR + 300-350 bps is being proposed on delayed TDS by GoP [(via CPPA(G) credit notes)], thereby reflecting the cost of financing the working capital shortfall created by this delay. Alternatively, the Company should be allowed to adjust the TDS in advance from the Power Purchase Cost payments made to CPPA (G), thereby eliminating this cash imbalance for the Company.
20	Prior year adjustments (PYA)	Prior-year adjustments comprise of unrecovered power purchase cost (which includes fuel price adjustments), excess recovery of distribution margin, unrecovered PYA for prior years, recovery of Power Purchase Price through quarterly adjustments and consumer mix variance. Apart from above, PYA due to inconsistent application of previous multi-year tariff, claims by MEPCO regarding Use of System

		Charges (UoSC), supplementary charges invoices issued by CPPA (G), and pension expense relating to Ex-WAPDA/pre unbundling employees are also made part of PYA in this petition.
21	Annual Adjustments in Return on Rate Base Computation	It is requested that at the end of every year, NEPRA when adjusting RORB for variance between actual and budgeted capex, also recalculate the WACC for changes in various input parameters including: - the risk free rate used for computing return on equity under the Capital Asset Pricing Model (CAPM) - beta used in CAPM - variations in cost of debt
22	One-time Re-openers/ adjustments	Provision for one-time adjustments have been proposed for the following in the event of any potential private sector participation is introduced in the Company: 1) Revision of T&D loss targets 2) Amendments/Revisions to the IGTDP 3) Reassessment of cost of debt The deadlines and modalities for submission of the above mentioned amendments may be determined by NEPRA.
23	Retirement Benefit Payments	Given the Company's financial constraints and potential transition to private sector management, three options are proposed in response to NEPRA's requirement of creating a fully funded pension fund: 1) In light of the envisaged private sector participation in the Company, NEPRA may consider suspending its directive during the first tariff period. The requirement can be reviewed during the rebasing in 2020-21. 2) Allow the Company to build an annual provision in the tariff, subject to transfer of the allocated amount in a separately created fund. 3) A staggered funding strategy may be executed, whereby the Company funds the liability based on a predetermined schedule over a period of 10 years. The same shall need to be incorporated in the tariff determined for the Company to enable it to recoup the funds transferred.
24	Network Rehabilitation	1) Rehabilitation/replacement is required on those equipment/material at various grid stations and transmission lines which have completed their useful life, have become deteriorated due to excess wear and tear with passage of time or have become outdated and their spares are not available in local market. Due to these reasons, they cause frequent faults and loss of energy in the shape of leakages etc. Resultantly, many breakdowns occur

		due to which not only public is suffered but FESCO also sustains heavy financial loss.
		2) The objective of the Distribution Rehabilitation Project is to reduce system technical losses, resulting from power losses in the distribution conductors and equipments including losses due to additional current flowing in the system on account of poor power factor of customer loads.
25	Network Expansion	1) The load flow studies identified additional equipment needed, i.e. 132 kV transmission lines, 132/11 kV substations, reconductoring, additional 2nd circuit, power transformer, capacitor banks and related control equipments etc. 2) Proposed expansion of Distribution network consists of the following works:- a) Providing 900,000 new electricity connections to the prospective customers. b) Addition of 3,366 km 11 kV line. c) Addition of 3,400 km LT line. d) Installation of 24,397 distribution transformers of different capacities.
26	ERP Implementation	The Company is in the process of implementing an ERP system and a cost of PKR 300 million has been earmarked for the same in FY 2015-16. This is in continuance of an investment of PKR 200 million requested in previous year's tariff.

1.2.3 Structure of the petition

1.2.3.1 This Petition has been structured in the following manner:

- I. The tariff methodology is explained along with key features and formulae to be used in determining the Company's pass-through costs, T&D losses and average distribution margin within each year of the proposed tariff period.
- II. The tariff structure and components are then analyzed in detail along with supporting facts and basis.
- III. An overview of key periodic adjustments and one time reopeners is provided.
- IV. Finally, key conclusions and summary of key recommendations are covered.

2. TARIFF METHODOLOGY

2.1. Proposed tariff methodology

- 2.1.1.1 NEPRA (Tariff Standard and Procedure) Rules, 1998 provide details on the tariff setting process and broad parameters of tariff setting contain provision for a formula-based tariff. Additionally, the Rules also provide for a multi-year tariff from 3-5 years for a distribution company. Currently, K-Electric is the only distribution company to be operating under a multi-year tariff.
- 2.1.1.2 In accordance with the provisions in the above mentioned NEPRA Rules, it is submitted in this petition that the Company's tariff be changed to a five-year tariff with indexation every year and rebasing at the end of the five-year control period.
- 2.1.1.3 The above will allow the Company a longer horizon to implement its business plan – with the security of a locked tariff – that foregoes the yearly tariff determination process and provides a reasonable period for the Company to independently manage, and introduce efficiencies, in its operations.
- 2.1.1.4 In this respect, a 'CPI minus X' multi-year tariff is being proposed as it will allow the Company to automatically apply indexations for inflation and provides incentives to improve its operational performance through the X factor. Under the proposed MYT, the Company will be further incentivized to efficiently operate its distribution network as it will be able to benefit directly from efficiency gains for the whole length of the tariff period, rather than for a single-year period.
- 2.1.1.5 The formula-based method of computing the Company's tariff reduces ambiguity for the utility and ultimately benefits the consumers as it reduces yearly volatility in the end-user tariff.
- 2.1.1.6 The proposed tariff regime seeks to compute yearly revenue requirements of the DISCO based on a five-year investment plan and expected demand for electricity going forward. The tariff broadly comprises:
- i. Pass-through costs: Power Purchase Price (PPP) and Use of System Charge (UoSC), including impact of T&D losses
 - ii. Distribution margin
 - iii. Prior-year adjustment

2.2. Pass-through components of the tariff

- 2.2.1.1 The pass-through components of the tariff consist of the power purchase price and the cost to use the transmission networks i.e. Use of System Charges (UoSC).

2.2.2 Power purchase price and use of system charges

2.2.2.1 The Company is paying to CPPA (G) [(or on behalf of CPPA (G))] Power Purchase Price (PPP) for the electricity it procures, including a transmission charge for transporting electricity across the transmission network owned and operated by NTDC. The total cost of power comprises generation and transmission cost elements. The generation price consists of a Capacity Purchase Price (CPP) and Energy Purchase Price (EPP). The CPP is being paid on the basis of the Company's share of monthly demand and EPP is computed on the basis of average energy purchase price of IPPs, Hydel, GENCOs and other sources of generation. The UOSC is being charged according to NTDC tariff.

2.2.2.2 The PPP is calculated as per the following formula:

$$PPP = EPP + CPP + UoSC$$

Where,

PPP = Power Purchase Price

EPP = Energy Purchase Price

CPP = Capacity Purchase Price

UoSC = Use of System Charge

2.2.3 Additional Incentive for T&D Loss Reduction

2.2.3.1 Transmission and distribution losses are the difference between the energy received by a distribution company and the energy supplied at the other end to the consumers. Losses are inevitable in a distribution company's operations, however, they must be incentivized to be reduced using investments and allotting realistic efficiency targets for the distribution company.

2.2.3.2 The Company, as an independent distribution company, would require further incentives and it is submitted that a loss reduction that surpasses the target T&D losses shall be incorporated in the return on equity to the extent that it exceeds the target through the following formula:

$$\text{Return on Equity} = \text{Return of Equity}_U + \left(\frac{X_i - Y_i}{X_{i-1} - X_i} \right)$$

Where,

Return on Equity = Return on equity after addition of T&D incentive

Return on Equity_U = Return on equity calculated through CAPM

X_i = Target T&D Loss for i th year

X_{i-1} = Target T&D Loss for the $(i-1)$ th year

Y_i = Actual T&D Loss for the i th year

- 2.2.3.3 As per the above mechanism, the target T&D losses would be incorporated into the return on equity and would be allowed into the tariff.
- 2.2.3.4 The above mechanism provides additional incentive to the Company to achieve even lower losses than specified in the loss reduction trajectory approved by NEPRA for the eventual overall benefit to end consumers.

2.3. Distribution Margin

- 2.3.1.1 This Petition proposes an incentive-based formula to determine the Company's Distribution Margin. A formula provides a transparent and predictable way of determining the Company's revenues, and end-user tariffs. Distribution margin seeks to enable the utility to cover prudently incurred operating costs as well cover costs for securing both debt and equity capital.

2.3.2 Operations and Maintenance Costs

- 2.3.2.1 It is being submitted that the O&M cost be bifurcated into controllable and uncontrollable cost. The uncontrollable costs are requested to be trued-up at the end of every year and the controllable costs should be indexed every year to the following factor $(CPI - X + Z)$.

$$O\&M_t = [\text{Controllable cost per unit} \times \{1 + (CPI - X)\} \times \text{units sold}] + \text{Uncontrollable costs} + Z$$

Where,

CPI = Consumer Price Index

X = Efficiency factor

Z = Costs relating to extraordinary events

- 2.3.2.2 X represents the efficiency Company is expected to bring in operations by making investments in infrastructure, distribution network and by improving internal governance, reporting and control mechanism. The X factor is designed to incentivize real cost reductions. The DISCO will only be able to increase profits if it is able to ensure that annual increase in its costs is lower than the $CPI-X$ adjustment factor.

2.3.2.3 The aim of the formula is to provide the Company with targets to improve operating efficiency within the five year tariff period. To achieve this, the values of the parameters in the formula are not reviewed within the tariff period other than CPI indexations.

2.3.3 Return on Rate Base

2.3.3.1 According to Rule 17(3)(iii) of the NEPRA Tariff Standards and Procedure Rules 1998, tariff should allow the licensee a rate of return, which promotes continued reasonable investment in equipment and facilities for improved and efficient service.

2.3.3.2 It is important that returns provided to the DISCO commensurate with the risks associated with the sector. The rate of return should provide for a return which is commensurate with the prevailing cost of funds available in the market and with the risk involved in delivering the utility services.

2.3.3.3 The return on rate base to the Company is based on application of a Weighted Average Cost of Capital (WACC) to its regulatory asset base. The WACC is in turn based on return on equity and cost of debt weighted proportionately according to the debt and equity on the DISCO's balance sheet.

$$RORB = \text{Rate base} \times WACC$$

Where,

$$\text{Rate base} = \text{Average net fixed assets} + \text{Closing work-in-progress} - \text{Deferred credit} - \text{Surplus on revaluation of fixed assets}$$

2.3.3.4 The WACC is calculated as per the following formula:

$$WACC = K_e \times \left(\frac{E}{E + D} \right) + K_d \times \left(\frac{D}{E + D} \right)$$

Where,

K_e = Return on equity

K_d = Cost of debt

E = Total equity

D = Interest-bearing debt

2.3.3.5 As per NEPRA guidelines, the proportion of equity is capped at 30% and in cases where equity exceeds this threshold the remainder is considered as debt for the purposes of WACC computations. The return on equity is calculated with the use of the following CAPM formula:

$$K_e = R_f + (\text{beta} \times \text{risk premium})$$

Where,

K_e = Return on equity

R_f = Risk-free rate

Beta = correlation to the market return

Risk premium = return expected on equity investments over and above the risk free rate

Floor on return on equity

2.3.3.6 It is submitted that a floor of 19% (Pakistan Rupee return) be set for return on equity. This is proposed in view of the average of allowed US\$ return provided to IPPs based on various fuel sources of around 16%, and an additional 3% for expected currency devaluation in relation to the US\$. It is thus not unreasonable for an independent entity or a private investor to expect a similar minimum return for investment in the utility. As various IPPs are offered allowed return on investments and allowed hedge against US\$ depreciation, it is thus proposed that a floor on minimum return on equity be set in the above manner.

The case for floor on return on equity

As a result of the 1994 Power Policy – when the trend for allowed return on investment effectively commenced (the 18% allowed IRR being the deciding factor in the commissioning of HUBCO) – Pakistan saw an increase in power generation of over 6,000MW in installed capacity by 2001, doubling the installed capacity of the system; the only time in recent history when Pakistan had a surplus of generated electricity.

The 1994 Policy was successful because it offered an allowed IRR and safeguard from currency depreciation to the private investors.

Net installed capacity saw a year-on-year growth of 8.8 per cent for the five years after the Policy was announced.

Coal, hydel and other energy tariffs with allowed returns have also been introduced with allowed IRR as shown in Table 2.1 whereas increase in thermal capacity given under Table 2.2.

Table 2.1: Allowed return offered to IPPs

ROE for indigenous coal based power projects	18%
ROE on hydro power projects	17%
ROE for Wind power projects	17%
RFO - US\$ IRR	15%
IRR on equity for RLNG power projects	15%
IRR on solar power based projects	17%
Return on High speed diesel based project	15%

Source: Power Policy 1994, 2002, 2006 and subsequent NEPRA Determinations

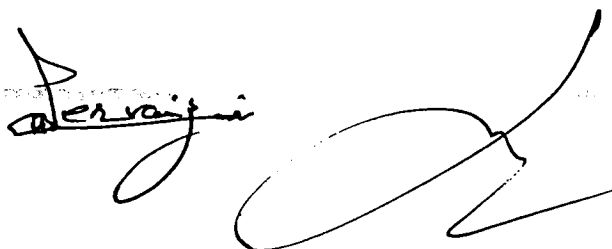
Table 2.2: Thermal capacity (MW) increase after 1994 Power Policy

1994	1995	1996	1997	1998	1999	2000
6,456	7,137	8,006	9,857	10,696	10,700	12,441

Source: Business Monitor International

Thermal capacity increased by a CAGR of 11.55% in the period up to 2000, largely through commissioning of IPP power plants under the 1994 Power Policy

- 2.3.3.7 Currently, the generation sector has been allowed a return in the range of 15% to 18% with a hedge against the US dollar. IPPs enjoy guaranteed off-take of electricity generated especially at peak demand. Apart from this, IPPs have sovereign guarantees, and in case there is a default or delay in payment these guarantees may be invoked by them.
- 2.3.3.8 The distribution segment on the contrary, does not have such overlapping allowances. A DISCO is also exposed to other risk factors, including theft of power as well risk of damage to infrastructure due to natural calamities and acts of violence. The riskiness of investment in the distribution segment is thus at least as risky as investment in the generation segment, if not more.
- 2.3.3.9 As financial theory suggests, return offered on an investment must commensurate with the risk profile of such an investment. It is thus requested that a floor be set for return on equity computations, to ensure that investors are adequately compensated for the risk taken. This shall also enable GoP to attract credible investors for the proposed private sector participation.



3. TARIFF ANALYSIS

3.1. Average tariff

3.1.1.1 The objective of proposing a five-year CPI-X based tariff with its specific features is to incentivize the distribution company's management to efficiently operate the Company in the long run. This stability will also facilitate the proposed private sector participation program of the GoP.

3.1.1.2 A five-year tariff is consistent with distribution company tariff models internationally. The time horizon provides for a reasonable length of time to bring efficiency into operations of the Company while not too long that the tariff's macroeconomic assumptions become outdated. Hence, it is submitted that the tariff be rebased after every five years, although the tariff methodology itself shall not be reviewed at the end of the tariff period. It must also be noted that it is important to apply the tariff consistently from one period to the next so that the progress of the efficiency levels can be reliably evaluated.

3.1.1.3 The following table details the projected components of the Company's tariff for the tariff period.

Table 3.1: Average tariff for tariff control period for FESCO					
PKR/KWh (Unless stated otherwise)	FY16	FY17	FY18	FY19	FY20
Total Units Purchased (GWh)	11,960	12,689	13,489	14,326	15,230
Total Units Sold (GWh)	10,657	11,349	12,087	12,873	13,709
T&D Losses (%)	10.90%	10.56%	10.40%	10.15%	9.98%
Power purchase price	10.66	10.74	10.84	10.94	11.06
O&M costs	1.51	1.51	1.52	1.52	1.51
Depreciation	0.22	0.24	0.25	0.26	0.27
Return on rate base	0.45	0.54	0.57	0.58	0.59
Other Income	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)
Total distribution margin	1.94	2.05	2.10	2.12	2.12
Revenue Requirement	12.59	12.79	12.94	13.06	13.17
Prior year/PPP adjustments	(0.38)	-	-	-	-
Total Revenue Requirement	12.21	12.79	12.94	13.06	13.17

3.2. Summary of tariff assumptions

1. *Inflation*: The CPI to be used in indexing the tariff yearly shall be the one notified by the Pakistan Bureau of Statistics. For the purposes of this tariff petition, forecasted inflation rates as reported by reputable international macroeconomic sources, including Business Monitor International (BMI), ranging between 4% to 6% have been applied over the tariff period. It may be noteworthy that the forecasted CPI average rates are significantly lower than the five-year historical average of 10.20%.
2. *Efficiency Factor*: The X factor has been set a 0% for the first 3 years, followed by 0.5% and 1% in FY19 and FY20 respectively based on the anticipated level of efficiency that the Company is expected to achieve during the tariff period, given low inflationary trends.
3. *Total Unit Sales*: Total unit sales start at 10,657GWh and are increased by the annual demand growth, determined by the number of new consumers and the change in consumption per consumer. The Compounded Average Growth Rate (CAGR) in sales for FY 2015-16 to FY 2019-20 is 6.50%.
4. *Target T&D Losses*: The T&D losses target has been set at 10.9% for the first year which gradually reduces to 9.98% by the end of the tariff period.
5. *Power Purchase Price (PPP)*: Total purchase starts at 11,960GWh which is assumed to grow at a CAGR of 6.23% and reaches 15,230GWh by FY20. The Power Purchase Price has three components: Energy Transfer Charge, Capacity Transfer Charge and NTDC Used of System Charge.
6. *Purchase Costs*: The purchase cost is calculated as the number of units of energy purchased times the PPP.
7. *O&M*: The base year O&M is set at PKR 1.51/kWh for the first year of the tariff that is subject to the CPI-X efficiency factor.
8. *Opening Gross Fixed Assets*: The value of the Opening Gross Fixed Assets (GFA) used in the base year of the tariff period has been determined on the basis of the latest available financial statements of the Company as of 30th June 2015.
9. *Regulatory Asset Base*: It is calculated as the sum of Opening GFA and capital additions less depreciation, plus capital work-in-progress and less deferred credit. The rate base does not include any surplus on revaluation of assets.
10. *Rate of Return*: The rate of return of 18.91% has been calculated based on the WACC of the Company and a debt-to-equity ratio of 70:30.
11. *Return on Rate Base*: RORB is calculated as the Rate of Return on the Regulatory Asset Base of the Company.
12. *Distribution Margin*: The distribution margin of the Company is calculated as the sum of O&M, Depreciation and RORB.

3.3. Analysis of key components

3.3.1 Power Purchase Price (PPP)

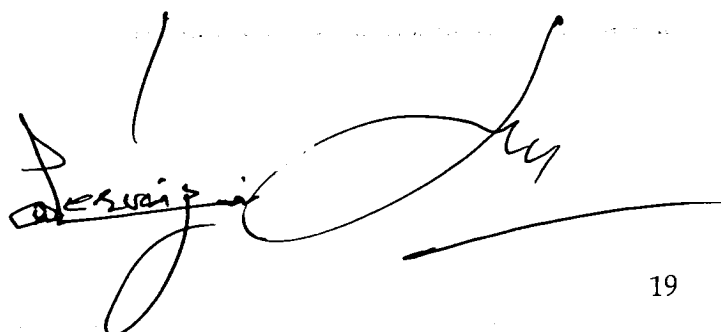
3.3.1.1 The Use of System Charges (UoSC) and Capacity Transfer Charges (CTC) for 2015-16 to 2019-20 have been assessed after giving an increase of 5% in MDI and 5% in CTC/kWh on the basis of increase in kW (MDI) and CTC of FY 2014-15 over FY 2013-14. The Energy Transfer Charges (ETC) of PKR 6.46/kWh for FY 2014-15 have been kept constant for the tariff period as a declining trend has recently been observed whereby ETC decreased by 25.4% in the previous year against PKR 8.10/kWh in FY 2013-14. The component wise detail is given below:

Table 3.2: Power Purchase Price (PPP)break-up (PKR'000)					
	FY16	FY17	FY18	FY19	FY20
Energy transfer charge	77,250,964	81,961,672	87,130,513	92,551,895	98,413,930
Capacity Transfer charge	33,418,218	36,889,389	40,721,113	44,950,841	49,619,913
NTDC Use of System charge	2,902,619	3,047,750	3,200,138	3,360,145	3,528,152
Power Purchase Price	113,571,802	121,898,812	131,051,765	140,862,881	151,561,995

3.3.2 Transmission and distribution losses

3.3.2.1 To achieve the reduction in target T&D losses, the Company has prepared an Integrated Generation Transmission & Distribution Plan (IGTDP), which includes formation of new grids, conversion of existing grids, revamping of secondary transmission (66, 132 KV) lines, augmentation of HT & LT lines, provision of T&P items, induction of low loss transformers, theft detection by enforcement agencies and replacement of meters, with static meters and upgrade to Automated Meter Reading and Advanced Metering Infrastructure. Detail of Plan is given at Para 3.3.5.

3.3.2.2 The Company has the ability to reduce the level of technical and commercial losses and it is appropriate that it be incentivized to do so. The Company's ability to reduce losses will, however, depend on the effectiveness of loss reduction programs implemented by the Company. It is also recognized that a given level of losses (technical and commercial) is inevitable in any electricity distribution network. For this reason, the tariff formula allows for an allowed level of predetermined distribution losses with the view to providing a loss reduction target.



- 3.3.2.3 Based on NEPRA's stated mechanism, the compensation for distribution losses would be automatically adjusted for any changes in the power purchase cost. The schedule of target losses, derived from the study of T&D losses, will, however, be maintained throughout the tariff period, regardless of the actual T&D losses incurred by the Company. Thus, if the Company were not able to meet the target loss reduction, it would be penalized by not being able to recover the cost of losses in excess of the target amount. If, on the other hand, the Company's actual losses are lower than the target amount, then it will be permitted to retain (for at least the duration of the tariff period) the revenues it obtains from outperforming the target loss factor.
- 3.3.2.4 NEPRA has to determine the difference between the units procured and units sold within the distribution service territory that includes the Technical as well as Administrative Losses. In the determination for FY 2014-15, NEPRA had set a T&D Loss target at 9.50% against the projected losses of 11% for FY 2014-15, computed on the basis of the market trend and previous year actual losses of 11.25%. The proposed losses were disallowed on the premise that the Company had not conducted an independent study of its T&D Losses as earlier instructed by NEPRA. NEPRA was of the view that fresh T&D loss targets cannot be set without the requisite third party study.
- 3.3.2.5 The Company petitioned in FY2013-14 that its T&D losses totaled 11.0%, with 9.2% relating to distribution and 1.8% relating to transmission. NEPRA, however, overruled the petition and allowed only 9.5% T&D losses and noted that they would only be reconsidered on the completion of T&D loss study. The Company has since, on the direction of NEPRA, resumed and completed the process of evaluation of Transmission Losses. According to the study, quantum of Transmission Losses of the Company is 2.5% to 3%, which is higher than the transmission losses anticipated by the Company. Findings of study are attached in the Annexure-F. Furthermore, a contract for determination of Distribution Losses has been awarded to M/S Power Planner International on 29th January 2015 and the study is currently underway.
- 3.3.2.6 A review of the five year historical T&D loss trend indicates that the Company has successfully maintained its T&D losses despite notable impacts of load growth, addition in the distribution network and number of consumers. Furthermore, the Company has achieved superior T&D losses as compared to its peers.

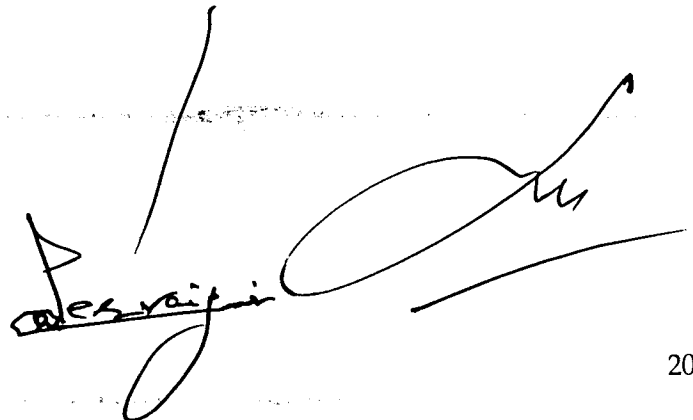
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Table 3.3: Historical analysis of T&D losses

Fiscal Year	T&D losses
2008-09	10.66%
2009-10	10.91%
2010-11	11.24%
2011-12	10.76%
2012-13	10.89%
2013-14	11.26%
2014-15	11.00%

Table 3.4: T&D losses of XWAPDA DISCOs (FY15)

FESCO	11.0%
IESCO	9.4%
GEPCO	10.7%
LESCO	14.1%
MEPCO	16.8%
QESCO	23.9%
HESCO	27.1%
TESCO	21.4%
SEPCO	38.3%
PESCO	34.8%

Source: Tariff petitions and determinations of DISCOs

3.3.2.7 The distribution losses study is in process and findings shall be promptly shared with NEPRA. However, proposed Transmission and Distribution Losses for FY 2015-16 to 2019-20 are given below:

Table 3.5: T&D Losses break-up

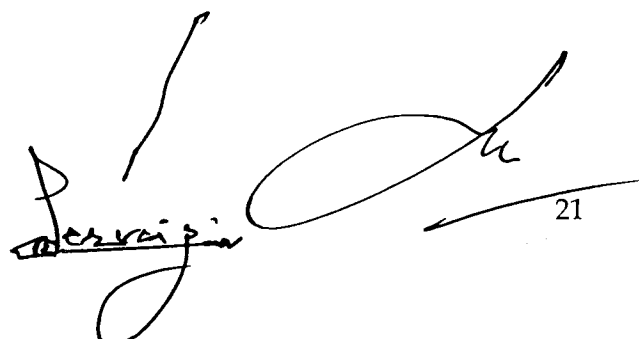
	FY16	FY17	FY18	FY19	FY20
Transmission Losses 132 kV	2.00%	1.90%	1.85%	1.95%	1.95%
11 kV + Transformer + Cable Metering Loss	6.10%	5.90%	5.75%	5.06%	5.06%
LT Losses	2.30%	2.26%	2.30%	2.06%	2.06%
Total Technical Losses	10.40%	10.06%	9.90%	9.07%	9.07%
Admin. Losses	0.50%	0.50%	0.50%	1.08%	0.91%
Total T&D losses	10.90%	10.56%	10.40%	10.15%	9.98%

3.3.2.8 An added incentive for achieving T&D losses below the target set by NEPRA is also proposed. The proposed mechanism, discussed in detail in the section on WACC and RORB computations, shall enhance the utility's return on equity by the proportionate difference between actual T&D losses and the target set by NEPRA.

Proposed readjustment

In order for the company to take full ownership of the T&D loss targets approved in the MYT tariff and to enable it to plan investments to achieve the same, it is proposed that, in accordance with NEPRA's directives, the T&D loss targets be reset after the completion of the independent third party study of the T&D losses.

In the event of any potential private sector participation in the Company, an opportunity should be provided to the private partner to review and reassess T&D levels and targets.



3.3.2.9 Furthermore, it is submitted that the loss targets be adjusted in the event of any potential private sector participation. The private sector partner should be given the opportunity to review the independent studies commissioned by the Company and suggest adjustments, if necessary as a one-time reopener.

3.3.3 Operating and Maintenance Costs

3.3.3.1 A summary of the forecasted O&M Expenses for 2015-16 to 2019-20 is as under:

Table 3.6: Operating and Maintenance Cost Breakup (PKR'000)

	FY16	FY17	FY18	FY19	FY20
Basic Pay and allowances	7,325,553	7,765,086	8,230,991	8,683,695	9,117,880
Employee Benefits	530,701	562,544	596,296	629,092	660,547
Cost of replacement HR	476,989	505,609	535,945	565,422	593,693
Retirement Benefits	4,109,769	4,356,355	4,617,736	4,871,712	5,115,297
Repair & Maintenance	1,983,787	2,284,407	2,584,367	2,876,517	3,164,369
Other Operating Expenses	1,613,869	1,708,053	1,808,737	1,909,760	2,010,631
Total	16,040,668	17,182,053	18,374,072	19,536,199	20,662,417

Notes:

- Increase in Basic Pay is attributable to the merging of ad-hoc relief for FY 2011 and 2012 which has an impact of 29% and annual increment with an impact of 5%
- Impact of other budgetary measures include:
 - 7.5% ad-hoc relief allowance; and
 - 25% increase in medical allowance.
- Financial impact on account of creation of new divisions and sub divisions in all phases amounting to PKR 1,432.203 million has been included in O&M costs of FY 2015-16.

Plan for Replacement Hiring

3.3.3.2 Under para 13.2.9 of the Tariff Determination of FY 2014-15, NEPRA, on the issue of additional recruitment of 2,807 personnel in different cadres of BPS 2 – 17, declined the Company's contentions on the grounds that the Petitioner had not submitted any proposed yardstick substantiating the need for additional recruitment. It is worth mentioning that, NEPRA did not provide any framework, guidelines or specific yardstick and its quantified benefits along with a comparison of existing state of affairs to be followed by the Company for approval by NEPRA.

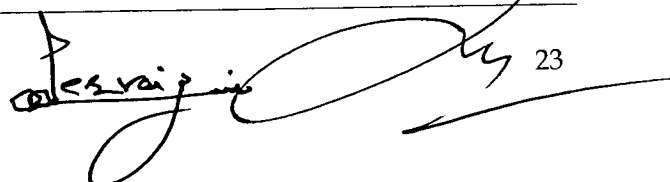
- 3.3.3.3 The Company is a staff deficient company (deficient by 21.30% as per WAPDA yardstick) and at present 4,214 posts in different cadres of BPS 01 to 17 are vacant out of the total 19,780 sanctioned posts. It should be appreciated that such a significant shortage affects overall performance of the Company. Therefore, following its existing yard stick and sanctioned strength of WAPDA and adopted/approved by its Board of Directors in its 120th/8th meeting held on 31.03.2014., the Company has a replacement hiring plan of 3,094 personnel in different cadres of BPS-2 to BPS-17.
- 3.3.3.4 GoP through Office Memorandum dated 22.10.2014 lifted the ban on recruitments and later issued a Recruitment Policy for the recruitment process. On clearance by Ministry of Water & Power and in the light of resolution of BOD dated 14.11.2014, the Company signed an MOU with National Testing Service (NTS) for outsourcing the written exams on 29.01.2015 to ensure transparency and merit based recruitment. Three (03) advertisements were published in the print media on 11, 12 & 13 February 2015 for filling of 1,611 vacant posts of BPS-05 to BPS-17 with last date for applications set at 28.02.2015. Rationale of each advertised category, embedded in its specific job description, is very instrumental in all the operational and construction activities. 1,178 vacancies of supporting staff in BPS-01 to BPS-04 have also been advertised on 19.04.2015 as per directions of Ministry of Water & Power dated 05.03.2015.
- 3.3.3.5 Each proposed recruitment category through its constant high performance has played valuable role in the overall performance of the Company which is evidently reflective in the performance of the DISCO versus other XWAPDA DISCOs and has been appreciated and acknowledge by NEPRA & Ministry at various occasions. Therefore, any reservations on the proposed replacement recruitment would lead to delay in the process adversely impacting the performance of the Company.

3.3.3.6 The following manpower statistics as of March 2015 highlights the shortage of staff:

Table 3.7: Man power statistics (As of March 2015)

Table 5.7: Man power statistics (As of March 2015)								
S. No	Description	Sanct'd	Actual Working Strength				Deficiency	%age
			Reg.	Cont.	Daily wages	Total		
Officers (BPS-17 and above)								
a.	Technical	320	207	-	-	207	114	35.63%
b.	Non-Technical	157	96	-	-	96	60	38.22%
	Sub-Total	477	303	-	-	303	174	36.48%
Officials (BPS-01 to 16)								
a.	Technical	11,554	9,139	193	205	9,537	1,989	17.21%
b.	Non-Technical	7,169	5,076	98	98	5,272	1,922	26.81%
c.	Commercial	580	436	15	3	454	129	22.24%
	Sub-Total	19,303	14,651	306	306	15,263	4,040	20.93%
	Total Manpower	19,780	14,954	306	306	15,566	4,214	21.30%
Source: FESCO's estimate								

Source: FESCO's estimate

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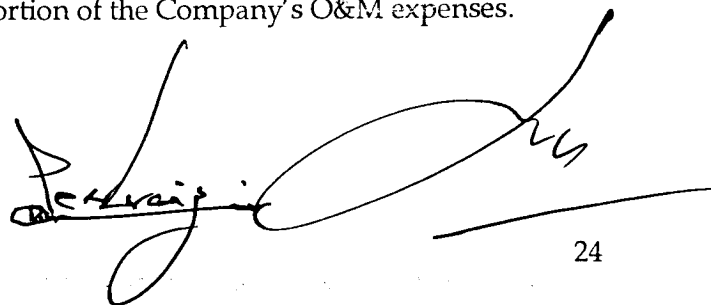
- 3.3.3.7 As is evident from the tables above, the Company has been requesting NEPRA for allowing cost of hiring staff at positions where it is under-staffed. The deficiency in staff is clearly greater at the officer level, where deficiency, as per WAPDA yardstick stands at 36.5%. The deficiency and the associated financial impact have successively increased over the years, as the Company's consumer base is continually expanding.
- 3.3.3.8 In order to meet the technical and operational targets, it is proposed that 3,094 vacancies are to be filled by the Company during FY15-16. This recruitment will increase the base year O&M by PKR 476 million. The recruitment will take place in following cadres:

Table 3.8: Replacement hiring

Cadre	Employees to be hired
BPS 2	187
BPS 3	878
BPS 4	113
BPS 5	454
BPS 6	326
BPS 7	386
BPS 8	80
BPS 9	65
BPS 11	5
BPS 13	4
BPS 14	367
BPS 15	113
BPS 16	4
BPS 17	112
Total	3,094

Basic pay, allowances and employee benefits

- 3.3.3.9 The pay & allowances for FY 2015-16 have been estimated based on the Company's present strength of 15,566. Pay & allowances and employee benefits including retirement benefits constitute a major portion of the Company's O&M expenses.



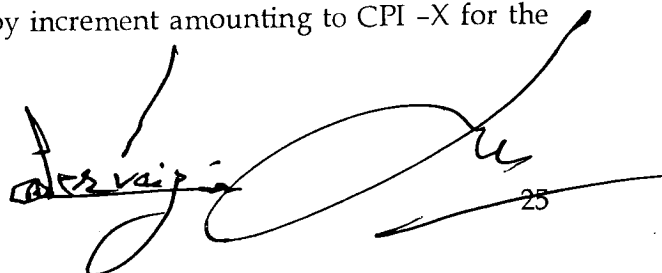
Retirement benefits

- 3.3.3.10 NEPRA in its determination for FY 2014-15 had allowed only the amount of actual payments made to pensioners rather than the amount provisioned annually. NEPRA further directed to transfer adequate funds in a post-retirement benefit fund in order to fully fund the plan liabilities. NEPRA had instructed the Company to claim the amount transferred in next year's tariff determination after provision of documentation adequately evidencing the said transfer of funds.
- 3.3.3.11 The Company fully understands its legal obligation to record and pay these liabilities. Since the unbundling of WAPDA, the Company has been making timely payments to all its retired employees.
- 3.3.3.12 As per requirement of IAS-19 and Companies Ordinance 1984, the Company recognizes the gross amount of retirement benefits including requisite provisions. The establishment of separate fund will cause liquidity issues for the Company.
- 3.3.3.13 Furthermore, in view of the Company's proposed transition to private sector management, funding such a major obligation through a one-time payment will create fiscal imbalance in the Company and act as a major deterrent to the private sector participation.

Potential options for incorporation of pension expense

- 3.3.3.14 The Company currently has pension obligations of PKR 25bn and is unable to transfer this amount in a separate fund as the Company does not have sufficient cash; therefore, following three options have been suggested:
- *Option I:* As both the relevant IAS as well as SECP allows an unfunded pension liability, it is requested that NEPRA withdraw its directive and status quo prevails.
 - *Option II:* Provisions for retirement benefits may be allowed in advance and an amount equivalent to that will be transferred to a separate fund.
 - *Option III:* A staggered funding strategy may be agreed with NEPRA, whereby the Company funds the liability in installments every year over a period of 5 to 10 years. The same shall need to be incorporated in the tariff determined for the Company to enable it to recoup the funds transferred.

Keeping in view the above, the gross Post Retirement Benefits have been projected for FY 2015-16 based on 20% increase followed by increment amounting to CPI -X for the remaining tariff period.



The growth of 20% in FY 2015-16 is in line with the historical trend. Afterwards, retirement expenses are assumed to grow in-line with CPI-X to maintain the historical ratio.

Table 3.9: Post-retirement Benefits break-up(PKR'000)

	FY15	FY16	FY17	FY18	FY19	FY20
Pension	2,802,186	3,362,623	3,564,380	3,778,243	3,986,046	4,185,349
Leave encashment	180,109	216,131	229,099	242,844	256,201	269,011
Medical	222,323	266,787	282,795	299,762	316,249	332,062
Free Supply (Retired)	220,190	264,228	280,081	296,886	313,215	328,876
Total	3,424,808	4,109,769	4,356,355	4,617,735	4,871,711	5,115,298
% Change		20.00%	6.00%	6.00%	5.50%	5.00%

NEPRA is requested to allow the above gross amount of retirement benefits in tariff for the tariff period.

Other operating expenses

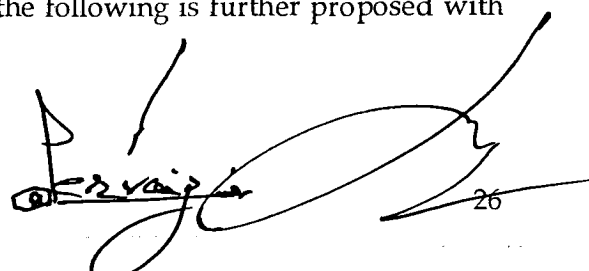
3.3.3.15 Building rent has been increased by 10% annually, while collection expense and software license fee are linked to growth in the Company's customers. NEPRA license fee is computed on the basis of the mechanism prescribed by NEPRA and projected annual demand of electricity. All other expenses are increased by CPI-X during the entire tariff period.

Adjustment mechanism for O&M costs

3.3.3.16 Efficiency factor (X) is submitted to be kept 0% during the first three years to allow the company and potential investors, in the event of private sector investment in the Company, sufficient time to make investment and to bring in efficiencies in the utility's operations. Further improvements in operational and governance structures at the Company are also expected to increase costs in the first few years and therefore sufficient time should be allowed to the Company to recover these costs.

3.3.3.17 For the remaining two years, X factor has been submitted to be kept at 0.5% and 1% respectively in light of the prevailing low inflationary environment (3.2% YoY inflation at 30 June 2015).

3.3.3.18 In view of the Company's earlier experience under MYT regime from 2007 until 2012, with the similar efficiency based adjustments, the following is further proposed with regards to adjustment of O&M expenses:



Segregation between "Controllable" and "Uncontrollable" costs

3.3.3.19 There was no bifurcation between controllable and uncontrollable costs in the Company's tariff and all costs were adjusted annually by the above X factor. Certain costs such as:

- Rent, which is paid on the basis of the terms of rental agreements and increases by approximately 10% annually;
- Collection expenditure and Software license fee costs which are based on a fixed cost per customer;
- NEPRA license fees which is based on methodology prescribed by NEPRA.

3.3.3.20 As these costs are driven by external factors it is proposed that these be considered as uncontrollable and passed on directly to the consumer.

3.3.3.21 The segregation of controllable and uncontrollable factors and their treatment in MYT is of vital importance. Non-segregation of these costs may force the Company to absorb some "uncontrollable costs" beyond its control, which are not fully recovered from its tariff resulting in financial losses to the Company.

3.3.3.22 Under the earlier mechanism, the Company was unable to pass through any extraordinary increases in salaries and benefits announced by the GoP in the federal budget, which resulted in an added unplanned cost burden on the DISCO. In order to address the above issues, it is submitted that any such increases announced by the GoP be considered uncontrollable costs.

3.3.3.23 In light of the above, it is submitted that any increase in uncontrollable costs be adjusted on an annual basis in the MYT tariff.

Z factor for force majeure events

3.3.3.24 There was no provision for costs incurred as a result of force majeure events such as earthquakes, flooding, acts of terrorism, etc. Immense flooding in Year 2010, for instance, caused significant damage to the Company's network. In the absence of a provision for such events and adjustments restricted strictly to the CPI-X factor, the Company was unable to recoup the costs required to undertake necessary repairs.

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- 3.3.3.25 In this respect it is submitted that an additional Z factor should be included in the MYT to cover costs for such events. These costs shall be computed after the occurrence of such an event at which point the Company shall estimate the financial impact of such an event and request NEPRA's approval for inclusion in the subsequent year. As replacement of any equipment as result of such damage shall be covered through proposed investments to be approved by NEPRA, it is anticipated that major costs falling under Z factor will comprise repair & maintenance costs. In the event that insurance coverage is available at a reasonable cost, recoveries made under such an arrangement will not be incorporated in the tariff for the subsequent period.

Repair and maintenance

- 3.3.3.26 In Tariff Petition for FY 2014-15, the Company requested an amount of PKR 1,080 million as costs for repair & maintenance. During the hearing, the Company elaborated that such amount shall enable the company to ensure smooth and efficient functioning of the transmission and distribution system in operation. Moreover, it shall contribute to the benefit of the consumers at large by reducing power outages and system breakdowns and also help in reduction of the T&D Losses. However, NEPRA allowed only PKR 480 million and declined the remaining amount of PKR 600 million.
- 3.3.3.27 In Para 13.4.4 of the Determination, NEPRA stated that it has been allowing the petitioner more than what it is actually spending under repair and maintenance by referring to the last two years actual expenditure. The Company is of the view, however, that the amount of repair and maintenance allowed by NEPRA in the past has been insufficient to cover the expenditure required to maintain the distribution infrastructure. Past trend of actual expenditure is thus not reflective of the actual requirements of the DISCO. Further, the notion of underutilization in a given year being reflected in a lower cost associated against repairs in the financial statements is not correct. This is because underutilization is partially caused by delays in determination of tariff which is often approved after a significant portion of the fiscal year has already elapsed. This coupled with the subsequent delays caused in procurement mean that the Company is unable to book an expense in its financial statement in the year the repairs were approved. Further, when the allowed repairs of other DISCOs are considered as a proportion of their fixed assets, it is shown that the repairs allowed to the Company are the lowest of all XWAPDA DISCOs.

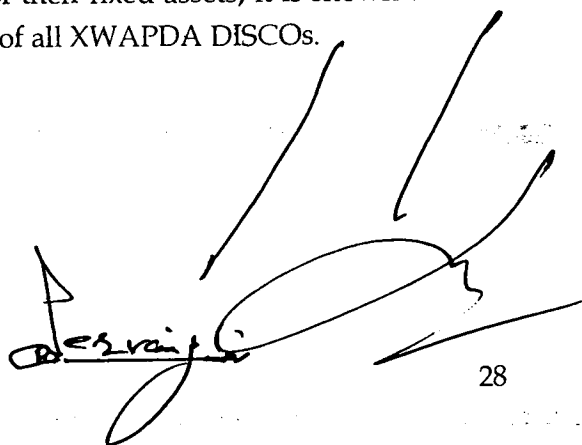


Table 3.10: Comparative historical analysis of R&M cost as a %age of NFA

Name of DISCO	NFA in Operation 2013-14	Allowed R&M Cost	R&M Cost (% of NFA)
SEPCO	15,804	979	6.19%
HESCO	18,692	973	5.21%
LESCO	44,403	1,261	2.84%
QESCO	21,033	557	2.65%
GEPCO	30,363	626	2.06%
PESCO	34,697	695	2.00%
IESCO	41,066	697	1.70%
MEPCO	60,390	835	1.38%
FESCO	37,316	480	1.29%

Source: Tariff petitions and determinations of DISCOs

3.3.3.28 It is submitted that, in the Company's view, the repair and maintenance cost requested by the Company was as per its requirement for FY 2014-15, and as such, the cost would be classified as operating expense. Repair and maintenance has never been a part of ELR and DOP. It is worth mentioning that DOP and ELR are the Company's capital projects which are being evaluated as per capital budgeting techniques wherein each and every item is treated as capital expenditure. The repair and maintenance is mainly for standalone items necessary for keeping the system in operation with no additional benefits.

3.3.3.29 The adherence to service standards and improvement of customer services is only possible through continuous repair and maintenance of distribution network etc. Timely repair and maintenance is vital to continuous and reliable supply of electricity. Delays in scheduled repairs ultimately result in system breakdowns which in turn not only has an impact on the end-consumer, including adversely affecting industrial and agricultural production, but also damages the distribution network which then requires further investments. Furthermore, not undertaking routine repairs results in accumulation of faults, with the utility requiring significant investments few years down the line - for an issue that could have been dealt earlier at a significantly lower cost. Repairs are thus an important aspect in controlling the increase in end-user tariff and necessary if distribution loss targets are to be achieved.

- 3.3.3.30 Given the state of the Company's infrastructure and the requisite repairs needed, it is proposed that a level of autonomy be provided to FESCO (and any potential private partner) for coverage of repair & maintenance costs in the tariff. In this regard it is proposed that a K factor be applied to determine repair & maintenance costs. The K factor shall be set as a percentage of gross fixed assets and the same shall be adjusted annually to reflect the actual net fixed assets at year-end. It is recommended that the Company is allowed to undertake repairs it deems as necessary within the allowed level of costs. This is in line with regional benchmarks and international best practices.
- 3.3.3.31 Currently the Company relies on approval by NEPRA of repairs and maintenance costs to be incurred during the year, for its inclusion in the tariff. Resultantly, the Company has been unable to undertake requisite repairs to its infrastructure. In line with best practices at regional DISCOs, it is suggested that K-factor be set in a range of 3% to 3.5% in line with regional benchmarks. It may be reasonable to expect that any incoming private partner will make significant expenditure to infrastructure going forward and provision of autonomy in repair expenditure shall provide it adequate room to better serve its customers.
- 3.3.3.32 Historically, variance between requested and allowed repair & maintenance costs has been over 50%. Such a situation, in view of the significant repair requirements of the Company's infrastructure, shall be untenable after transfer of control to the private sector. Capping repair costs on the basis of the K-factor mechanism shall provide the investor with a level of autonomy in undertaking requisite rehabilitation to improve system performance. Furthermore, historically, the Company has been allowed a fairly low level of R&M costs when compared to other DISCOs and taking overall asset base of each DISCO into account. The Company's allowed costs for FY15 were only 1.3%, the lowest level of allowed repairs across all DISCOs.
- 3.3.3.33 The R&M expenses have been calculated at 3% of average gross fixed assets. This K-Factor is in-line with regional practice where the K-Factor ranges between 2.5% to 3.5%. In light of the above NEPRA is requested to allow the Company the following repairs and maintenance expense for the period FY 2015-16 to FY 2019-20.

3.3.4 Return on Rate Base

Return on equity

- 3.3.4.1 Return on equity is calculated using CAPM model and requires the estimation of following components.
- i. Risk free rate (R_f)
 - ii. Beta (B)
 - iii. Market premium (P)

Risk-free rate

- 3.3.4.2 Risk free rate is the rate of return that the investors expect to earn on investments that have virtually no risk of default. Investors who buy assets have a return in mind that they expect to make over the time horizon that they will hold the asset. The actual returns that they make over this holding period may be very different from the expected returns, and this is where the risk comes in. Risk in finance is viewed in terms of the variance in actual returns around the expected return. For an investment to be risk free in this environment, then, the actual returns should always be equal to the expected return.
- 3.3.4.3 Typically, the returns on government securities are used by NEPRA as risk-free rates. Choosing an appropriate government security to use depends on the investment horizon under consideration. If the investment horizon is long-term, a long-term treasury bond may be used. On the other hand, if a short-term investment horizon is envisaged, a short-term treasury bill may be more appropriate. In general, regulators tend to use the longer-term rates as the regulated assets are long term in nature.
- 3.3.4.4 In view of the business horizon of a electricity distribution business, the Company's contractual obligations and operational risks which extend beyond a single year, it is recommended that yield to maturity on prevailing (or annual average of rates on a monthly basis) 10 year PIB be considered as the risk free rate rather than an instrument of a shorter maturity. This rate would be adjusted on an annual basis as per State Bank of Pakistan publications.

Beta

- 3.3.4.5 Beta is the measure of systematic risk, or in other words, the sensitivity of a stock to market variations. It measures the risk associated with holding a stock that cannot be eliminated through holding a diversified portfolio.
- 3.3.4.6 Beta is usually computed by regressing the returns of a particular company against the return of a benchmark index (such as KSE 100) which is considered a proxy to a fully diversified portfolio. In cases where beta of an unlisted concern is to be estimated, as is the case with the Company, one or more 'proxy' companies with characteristics similar to the 'target' company may be utilized.
- 3.3.4.7 The proxy beta is then un-leveraged to remove the effects of capital structure and re-leveraged again according to the target company's capital structure (70:30 in this case). This is done because the ratio of Debt/Equity can significantly impact a business's beta, with a high level of gearing increasing the variability of equity returns for any given variations in cash flows. If a comparable company is not available in the local market, comparable companies from foreign markets may also be used.

- 3.3.4.8 Currently, NEPRA uses a standard beta for calculating the return on equity for all DISCOs. The same beta has been used for computing return on equity in all previous three determinations. It should be appreciated that beta is a reflection of the riskiness of a particular investment as perceived by the market.
- 3.3.4.9 The beta thus is constantly changing as impact of various sector specific developments is captured. It is thus proposed that beta considered for return on equity computations are be computed annually on the basis of prevailing average beta of either global electricity distribution companies or local power sector entities. This shall ensure that the rate of return provided to the utility is always reflective of market perceptions of the riskiness of comparable businesses and captures the impact of any sector developments occurring during the year in review.
- 3.3.4.10 Beta computed on the basis of foreign comparable DISCOs was 1.77 whereas beta based on local power sector was 2.40. As there are no local listed DISCOs, the foreign comparable beta has been considered for computations of return on equity.
- 3.3.4.11 The companies used for calculating beta for the purposes of this petition are given in Annexure-G.

Incentive for reduction in Transmission and Distribution (T&D) losses

- 3.3.4.12 On the issue of T&D losses, it is proposed that an added incentive for reducing T&D losses beyond the targets set by NEPRA be provided to the DISCO. It is suggested that any over-achievement in T&D losses beyond the target set by NEPRA is compensated by a proportionate increase in the return on equity for WACC computations. This shall incentivize the DISCO to bring improvements in the system and further improve efficiency of operations. The benefit of such reduction is proposed to be shared between the consumer and DISCO similar to NEPRA practices for tariff setting for IPPs.
- 3.3.4.13 The increase in return on equity shall be calculated as over-achievement in target T&D losses divided by the difference in the T&D losses for the current year and the prior year.

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Cost of Debt

Cost of debt is taken at the actual cost the DISCO incurs. Typically, the cost of debt is adjusted for tax to reflect the impact of interest tax shield. However, as any taxes paid by the utility are passed on directly to the end-consumer such a tax shield is not applicable in this case. The Company's current cost of debt of 16.67% is considered for WACC computations. It is recommended that as the private sector investor will require autonomy on its sources and cost of financing the said rate be reset after the Company's potential private sector participation.

Revision of cost of debt

In the event of private sector participation, the incoming private investor shall be expected to secure its own funding to finance investments in the DISCO, it is requested that the investor be allowed to reassess both proposed investments as well as the proposed sources of funding of the said capex and an adjustment in this respect is allowed as a one-time adjustment.

WACC

3.3.4.14 Based on the above input parameters, the Company's weighted average cost of capital computes to 18.91%.

3.3.4.15 Regulatory asset base for FY 2015-16 to 2019-20 is shown in required forms.

WACC to be computed annually

According to the mechanism recommended herein, it is proposed that WACC be calculated annually, after taking into account variations in various input parameters including:

- Risk-free rate
- Beta
- Cost of debt

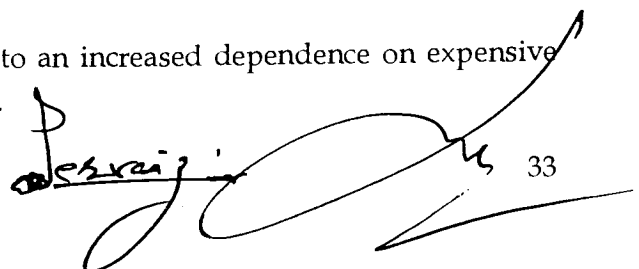
3.3.4.16 The Regulatory Asset Base (RAB) is the gross fixed asset that is used in the distribution activities of the Company. The return on rate base is calculated by applying the WACC on the RAB.

3.3.5 Integrated Generation Transmission and Distribution Plan

3.3.5.1 The Ministry of Water and Power, Government of Pakistan has developed an ambitious power policy to support the current and future energy needs of the country. This bold strategy will set Pakistan on a trajectory of rapid economic growth and social development. Simultaneously, it will address the key challenges of the power sector in order to provide much needed relief to the citizens of Pakistan.

3.3.5.2 Pakistan's power sector is currently afflicted by a number of challenges that have led to a crisis, specially:

- i. A widening supply-demand gap.
- ii. Highly expensive electricity generation due to an increased dependence on expensive thermal fuel sources (44% of total generation).



iii. An inefficient power transmission and distribution system that currently records losses of 23-25% due to poor infrastructure, mismanagement, and theft of electricity.

3.3.5.3 As such, a vision has been set "To develop the most efficient and consumer centric power generation, transmission, and distribution system that meets the needs of its population and boosts its economy in a sustainable and affordable manner."

3.3.5.4 For achieving this goal, Ministry of Water and Power, Government of Pakistan has planned to prepare a 5 year Integrated Generation, Transmission & Distribution Plan (IGTDP).

3.3.5.5 In line with the above, NEPRA has also obligated all DISCOs to submit an IGTDP which covers the utility's expectations for future demand, sources of electricity and proposed investment plan in view of expansion of customer base, the resultant increase in demand and generation capacity.

3.3.5.6 The Distribution Plan of the Company, which is integrated with the 132 KV network studies, envisages expansion and rehabilitation of the Company network during the years 2015-2015 to 2018-2019. The Company intends to invest an amount of PKR 29,088 million (this does not include the capex related to consumer contribution which amounts to PKR 22,517 million) over the tariff control period keeping in view its system requirements under the projects i.e. Secondary Transmission and Grid Stations (STG), Distribution of Power (DOP), Energy Loss Reduction (ELR) and Power Distribution Enhancement Investment Program (PDEIP).

3.3.5.7 As per clause 4.1.2 (Due diligence-Technical) of the terms of reference of Financial Advisor, the technical consultant of Financial Advisor is required to conduct due diligence on FESCO assets and other operations including purchase of energy from NTDC, sale of energy to consumers, staffing levels and environmental performance with a view to determine the condition of FESCO assets, asset valuation and the investment requirements. The technical consultant of Financial Advisor has reviewed the 5 year Integrated Generation, Transmission & Distribution Plan of the Company. The Plan and Review Report of technical consultant are being submitted along with this tariff petition.

3.3.5.8 The details of investments proposed annually are detailed below:

Table 3.11: Investment plan breakup(PKR million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Trans. Expansion	2,679	2,883	2,365	2,307	1,381	11,615
Trans. Rehabilitation	149	369	358	308	256	1,441
Dist. Expansion	244	308	353	414	495	1,814
Dist. Rehabilitation	749	902	1,090	1,256	1,498	5,495

Vehicles & T&P	104	119	90	68	49	430
Civil Works	530	1,045	680	400	210	2,865
Total escalated cost	4,456	5,626	4,935	4,754	3,889	23,660
Previously planned	4,214	914	-	-	-	5,128
ERP	300					
Total Investment	8,970	6,540	4,935	4,754	3,889	29,088

Source: IGTDP

3.3.5.9 It is also requested that the current investment plan and the underlying IGTDP be reviewed and reset on the basis of any amendments proposed by the incoming private sector investor in to the Company. This shall enable the investor to plan requisite system improvements in accordance with the investor's own strategic plan.

3.3.5.10 The above stated investment plan results in significant improvements in its T&D losses and enables the Company enhance its customer base by increasing connections. The plan is also intended to support the expected increase in generation based on investments being made by the private sector and GoP in generation assets.

3.3.5.11 Proposed impact of investments on T&D reduction is detailed below. As is evident the Company would be able to decrease losses by a cumulative 1.02% over the tariff period.

Table 3.12: T&D Loss reduction

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Projected T&D losses	11.00%	10.89%	10.56%	10.39%	10.14%	9.987%	
Reduction in losses		0.11%	0.33%	0.17%	0.25%	0.16%	1.02%

Source: IGTDP

3.3.5.12 As implied above, once the private investors' investment program is approved during rebasing, NEPRA would usually not adjust the tariffs for any subsequent proposal of a revised investment program until the next rebasing, unless an extraordinary adjustment is requested. Once the Company has obtained a private sector management, however, the new managers may hold the view that a different investment program is needed. Such a scenario is highly probable given that:

Revision of investment plan

Capital investments shall have a major impact on the operational efficiency and quality of service delivery of Company. FESCO has along with this petition submitted a detailed investment plan that targets focused reduction in system losses while enhancing network capacity to support expected increase in demand of electricity. However, as this is a strategic decision with significant bearing on the long-term financial and operational health of the utility, it is requested that in the event of private sector participation, the NEPRA allows the private investor to submit a revised investment plan to the NEPRA and RORB, depreciation and repairs & maintenance costs be recomputed accordingly.

- I. The investment program presented in this petition has been prepared without the involvement of the would-be investors/managers; and
- II. It would be the responsibility of the private investor to ensure compliance with all relevant regulatory rules affecting the Company's investment needs (including the performance standard requirements and investment guidelines) and thus discretion in making these investments should be provided.

3.3.5.13 To this extent, the Company should conduct a thorough review of its investment needs once a private sector partner is found, and propose any revision to the investment program within a year following the private sector participation, to be submitted for NEPRA's review/approval as an extraordinary adjustment to the tariffs.

Implementation of Technology Road Map (ERP/SAP) in FESCO

3.3.5.14 The Company is in the process of implementing an ERP system and a cost of PKR 300 million has been earmarked for the same in 2015-16. This is in continuation of an investment of PKR 200 million allowed by NEPRA in previous year's tariff for Phase 1.

3.3.5.15 The status of Financial Information System (FI-CO), Material Management System (MM) & Project Management and Project Costing System (PS) Modules of Phase-1 is as follows:

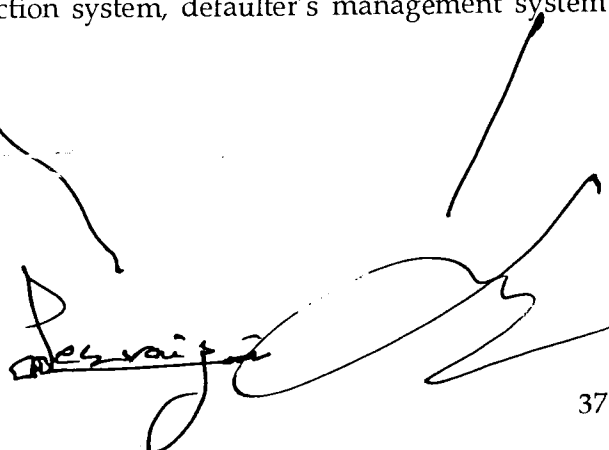
Table 3.13: Status of ERP (FI-CO, MM & PS Modules)

Phase	Deliverables	Status
Project Preparation Phase Inception Report	• Project charter • Project plan • Project Management Procedures • RFP and Delivery of Servers and Allied Equipment • RFP for Hardware and Networking	Complete
Business Blueprint Phase	• As-IS Analysis Document • Business Blueprint Documents for MM, PS and FICO • Gap Analysis Report • Business Blueprint- Sing-off	Complete
Realization Phase	• Configuration • Unit Testing and Scripts • User Manuals • DM Test Cycle 1 • System Integration Testing • Power User Training • UAT Scenario List • ABAP Development	Complete
	• UAT (Users Acceptance Testing) • Authorization Matrix	In progress

In the second phase during the FY 2015-16 the following modules are being planned.

Customer Care and Billing System

3.3.5.16 Re-engineering of the existing billing system using the latest technology in order to meet with the special reporting requirement using readily available historical data and to improve efficiency is on the way. It will re-engineer customer information system, power sale & billing system, bill collection system, defaulter's management system and MIS & Line Losses System.



Customer Relationship Management System

3.3.5.17 Call Centre is an automated system to receive customer complaints and divert them to the relevant staff and administrative bodies. In case of non-rectification of the problem within due course of time, system would uplift the complaint in the hierarchy. After rectification of the complaint system would give feedback to the customer and keep their records to generate analytical stats time-to-time.

Human Resource Management System

3.3.5.18 This module will contribute to automate the processes, setting resources free to develop tasks of major interest and optimizing the different Human Resources processes. It is expected that this system will help the users to fit the personnel management into the processes of the core business. The use of corporate system to promote the relationship with the employees will increase the satisfaction grade and knowledge, and at the same time will allow executing management tasks of personnel details that leads into a reduction of administrative costs.

Budget Requirement

3.3.5.19 The estimated cost for implementation of 2nd phase of ERP will be PKR 300 Million. This cost will include the following components.

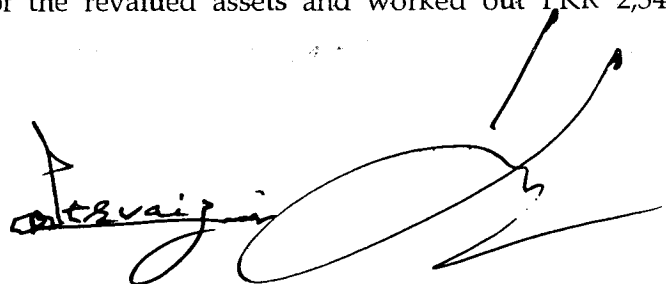
- License Cost
- Implementation Cost
- Computer Hardware Cost
- Manpower Outsourcing
- Consultancy Services Cost

Time line required

3.3.5.20 For implementation of 2nd phase, approximately 12 months will be required.

3.3.6 Depreciation

3.3.6.1 Depreciation is charged on the straight-line method so as to diminish the cost of an asset over its estimated useful life. As per Company's policy, building and civil works are depreciated @ 2%, feeders and grids & equipment's @ 3.5%, other plant/equipment and vehicles @ 10%. The depreciation for FY 2015-16 has been estimated on the original cost of the revalued assets and worked out PKR' 2,348 million.



3.3.7 Other income

3.3.7.1 Other Income includes mark-up on bank deposits, amortization of deferred credit and income from other sources. As there is no clear trend found during the past, hence, other income have been increased by considering moving average of last three financial years except for the amortization of deferred credit which has been calculated @ 3.5% on the accumulated balance of contributions against connection installed/ deposit works.

3.3.7.2 The Late Payment Surcharge has been excluded from the Total Other Income of FY 2015-16 as per decision of NEPRA in the Tariff determination of FY 2014-15.

Truing up of other income

As per mechanism prescribed by the NEPRA variance between projected other income and actual other income at year-end shall be adjusted in subsequent year's tariff.

3.3.7.3 The detail of other income is as under.

Table 3.14: Other income breakup (PKR'000)

	FY16	FY17	FY18	FY19	FY20
Late payment surcharge	1,147,620	1,222,216	1,301,660	1,386,267	1,476,375
Profit on bank deposits	397,068	422,878	450,365	479,638	510,815
Meter / service rent	48,038	48,038	48,245	48,163	48,105
Reconnection fees	14,114	14,114	15,045	14,927	14,463
Gain on new connections	301,256	301,256	301,256	301,256	301,256
Repair, testing and inspection fees	83,559	79,076	79,824	80,820	79,907
Recovery of late delivery surcharge	75,291	70,754	75,079	73,708	73,180
Service fees	139,076	139,560	137,510	138,715	138,595
Quarter rent FESCO residential colonies	3,891	3,827	3,776	3,831	3,811
Other income	253,210	253,210	243,884	268,371	254,377
Amortization of deferred credit	1,249,651	1,391,509	1,546,502	1,717,256	1,906,400
Total Other income	3,712,774	3,946,437	4,203,146	4,512,952	4,807,283
Less: Late payment surcharge	1,147,620	1,222,216	1,301,660	1,386,267	1,476,375
Other income	2,565,154	2,724,221	2,901,486	3,126,685	3,330,908

3.3.7.4 The other income offset against the revenue required by NEPRA has until now included the late payment surcharge (LPS) received from the consumer for delay in payment of bills. In the last determination (2015), NEPRA decided that the late payment charges recovered from the consumers on utility bills shall be excluded from the LPS to the extent of the mark-up on delayed payments levied on the Company by CPPA (G).

- 3.3.7.5 LPS, however, is requested to be excluded completely from other income as any delays in recovery from consumers in turn leads to cash constraints which need to be financed. The penal charge thus compensates the DISCO for the costs associated with the temporary mismatch between payments to be made for purchase of power and bills recovered from the consumer. NEPRA's treatment of LPS in previous tariff determinations and the current proposed mechanism is detailed below.

Up to FY14 determination	FY15 determination	Current proposal
LPS is included in other income offset against FESCO's revenue requirement	Allowed exclusion of LPS to the extent of mark-up on delayed payments levied by CPPA (G)	Complete exclusion of LPS from other income

- 3.3.7.6 Furthermore, the charge levied by CPPA (G) via supplementary invoices at year end, is an allocation of the costs charged from it by IPPs rather than compensation for actual payment delays on part of the DISCO. It is thus recommended that CPPA (G) be allowed to only charge mark-up on delayed payments for the actual delay made by the Company rather than allocating the total costs between all DISCOs based on arbitrary mechanisms.

3.3.8 Prior year's adjustment

- 3.3.8.1 The Company's tariff for FY 2014-15 determined by NEPRA on 10th March, 2015 and notified by GoP w.e.f. 11th June, 2015. The prior year's adjustment cost has been worked out and the following have been included in prior period adjustment. See Annexure-H.

Impact of inconsistent application of MYT

- 3.3.8.2 The Company requested an amount of PKR 4,827 million as a result of inconsistent application of MYT through adjustment of Revaluation Surplus which reduced the RORB for FY 2010-11 and 2011-12, Other Income and O&M for FY 2009-10, 2010-11 and 2011-12. The issue was raised with sufficient grounds and detail working by the Company at Para 2.2 of its Review Motion against the Tariff determination of FY 2011-12, Para 2.3 of Tariff Petition for FY 2012-13, Para 2.3 of the subsequent Review Petition for FY 2013-14. The said issue was again raised in Tariff Petition for FY 2014-15 with detailed working at Para 2.3. However, the Prior Year Adjustment was not allowed in the tariff. Refer to Annexure-I for details.
- 3.3.8.3 The Company, humbly once again brings the case of inconsistent application of MYT before NEPRA for consideration..

Use of system charges

3.3.8.4 MEPCO has claimed PKR 5,022 million as Use of System Charges for the period from Jan-2006 to Dec-2014 in pursuant to the orders of NEPRA given in tariff determinations. It is pertinent to mention that MEPCO is persistently issuing invoices on account of use of system charges which are not being entertained by the Company due to following reasons:

- i. The Use of System Charges is a part of Power Purchase Price (PPP) which is a pass through item. Adjustments on account of PPP (Fuel Prices, Capacity Charges and Use of System Charges) are being allowed by NEPRA on monthly and quarterly basis on reference values determined by NEPRA and actual values billed by CPPA (G). There is no provision for adjustment of wheeling charges to any DISCO.
- ii. The Company Distribution Margin (DM) being allowed by NEPRA has no cushion for payment of said wheeling charges to DISCOs.
- iii. Further the Company has also raised claims of Use of System Charges to all DISCOs including MEPCO importing units through its system, but none of them responded to the same so far.
- iv. NEPRA is requested to allow the amount of PKR 5,022 million as prior year adjustment for payment to MEPCO. Refer to Annexure-J for details.

Supplemental charges for FY 2010-11 to 2013-14

3.3.8.5 The Director Finance (B&R), CPPA (G) Lahore had issued following invoices regarding supplementary charges, re-allocation of interest/mark up paid to IPPs on account of energy purchased on behalf of the Company during said financial years. Detail is as under:

Table 3.15: Historical supplementary charges		
Description	Period	(PKR. Million)
Supplementary Charges FY 2010-11	Jun-11	2,766
Supplementary Charges FY 2011-12	Jun-12	2,063
Supplementary Charges FY 2012-13	Jun-13	1,236
Supplementary Charges FY 2013-14	Jun-14	121
Total		6,186

Source: NTDC invoices

Handwritten signature and initials, likely of the Director Finance (B&R), CPPA (G) Lahore, are present below the table.

- 3.3.8.6 The Company has not recognized these supplementary charges in its accounts so far due to disallowance of the same by NEPRA in its previous determinations. The Managing Director NTDC has taken up the issue with NEPRA regarding non-booking of these supplemental charges by DISCOs. In response, NEPRA has called a meeting of all stake holders and it has been decided that each company will provide necessary comments to resolve the issue. Accordingly, the comments were provided but the matter is yet to be decided by NEPRA. On the other hand, the CPPA (G) is persistent about incorporation of such charges which are pending as un-adjusted since long.
- 3.3.8.7 Keeping in view the above, NEPRA is requested to issue necessary instructions in order to resolve the matter. Refer to Annexure-K for details.

Pre-Unbundling pensioners retired before 01-07-1998

- 3.3.8.8 As per NEPRA decision in the tariff determination of FY 2014-15 at Para 13.3.2, the pension expenses of Ex-WAPDA/pre unbundling pensioners retired before 01-07-1998 will be borne by DISCOs w.e.f. 01-07-2014. The financial impact on this account pertaining to the pensioners to be paid by the Company for FY 2014-15 comes to PKR 190 million.

- 3.3.8.9 The summary of Prior Year Adjustment is as under:

Table 3.16: Prior year adjustment breakup

S. No.	Description	PKR (Millions)
1	Over recovered Power Purchase Cost for FY 2014-15	(2,714)
2	Consumer Mix Variance for FY 2014-15	(829)
3	Over recovered Prior Year Adjustment	(18,800)
4	Un recovered Distribution Margin / (Excess Recovery)	2,028
5	Impact of inconsistent application of MYT	4,827
6	MEPCO Claim of UoSC	5,022
7	Impact of Retirement Benefits of Pre-Unbundling Pensioners	190
8	Supplemental Charges	6,186
9	Total Prior Year's Adjustment	(4,090)

Handwritten signature and initials, likely of the Managing Director NTDC, are present below the table.

3.3.9 Other issues

Delays in payment of tariff differential subsidy

3.3.9.1 A major reason for cash constraints faced by the Company is the delay in payment of tariff differential subsidies by the GoP. As is evident from the table below, a major portion of the annual revenue attributed to tariff differential subsidy remained unpaid at year end in both 2011-12 and 2013. In 2011-12 almost 90% of TDS remained unpaid at year-end, while the situation only improved slightly in 2013. Clearance of circular debt by the GoP led to a rapid decline in unpaid receivables, which reduced to 19% of TDS for the year. At the end of FY 2014-15, unpaid receivables amounted to PKR 8,864 million, accounting for close to 40% of TDS recorded at the end of the year.

Table 3.17: Tariff differential subsidy (TDS)			PKR. (Millions)	
	FY12	FY13	FY14	FY15
Tariff differential subsidy (TDS)	14,713	47,526	34,589	22,297
Subsidy paid during the year		29,707	59,223	19,827
Unpaid subsidy at year end	13,209	31,028	6,393	8,864
Subsidy as % of revenue	17%	39%	25%	21%
Subsidy paid during the year (% of TDS)		63%	171%	89%
Unpaid subsidy at year end (% of TDS)	89.8%	65.3%	18.5%	40%

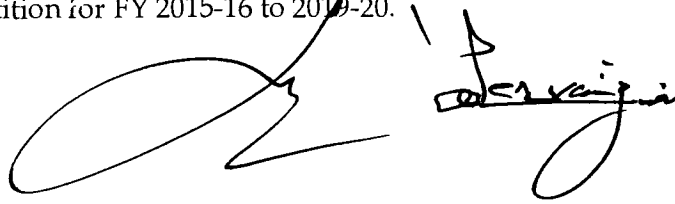
3.3.9.2 The imbalance created as a result of the above, adversely affects the Company's ability to manage, which ultimately leads to its inability to ensure reliable and consistent supply of electricity and also leads to creation of circular debt.

3.3.9.3 The Company is currently unable to pass-through the cost of financing this shortfall in cash through its tariff and thus has to finance it through its internal resources. In view of the above, it is thus requested, that NEPRA allow the Company to charge a penal interest in the range of KIBOR plus a spread of 3.0%-3.5%. This shall allow the Company to effectively manage its cash flows and help in improving the strained liquidity conditions the utility is currently in.

3.3.9.4 Alternatively, the Company should be allowed to adjust in advance the TDS from the Power Purchase Cost payments made to CPPA (G), thereby eliminating this cash imbalance for the Company. This will encourage the GoP to take full ownership of the TDS and ensure that the distribution companies do not suffer owing to policy matters.

Bifurcation/Creation of operation sub-divisions, divisions and circles

- 3.3.9.5 The issue of bifurcation/creation of operation sub-divisions, divisions and circles was raised by the Company, in its Tariff Petition for FY 2013-14 and FY 2014-15 with detailed justification in Annexure. NEPRA after conducting a separate hearing on the issue accepted the proposal initially to the extent of Phase - I only.
- 3.3.9.6 The work on creation/bifurcation of Divisions/sub divisions has been initiated in July 2015. At the same time the creation/bifurcation of Divisions/sub divisions proposed in the 2nd and 3rd phase may be allowed in FY 2015-16 due to the fact that FESCO is filing a Multi-Year Tariff Petition for FY 2015-16 to 2019-20.

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4. REVIEW OF ADJUSTMENTS

4.1. Pass-through items

4.1.1 Monthly Fuel Adjustments

It is proposed that the existing practice with respect to the adjustments on account of variation in fuel cost component of PPP on monthly basis may continue for the period FY 2015-16 to 2019-20 to be reflected in the consumers' monthly bill as Fuel Adjustment Charge as per following formula.

Fuel Price Variation =

$$\text{Actual Fuel Cost Component} - \text{Reference Fuel Cost Component}$$

Where:

Fuel Price variation is the difference between actual and reference fuel cost component

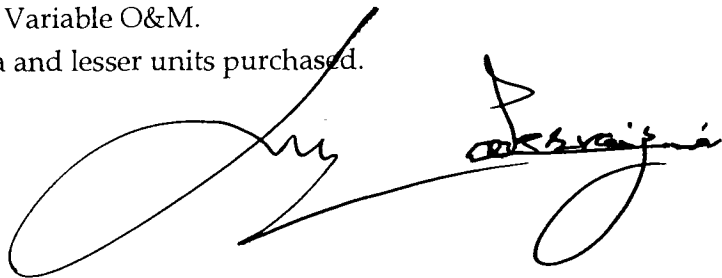
Actual fuel cost component is the fuel cost component in the pool price on which the DISCOs are being charged by CPPA (G) in a particular month; and

Reference fuel cost component is the fuel cost component for the corresponding month projected for the purpose of tariff determination.

4.1.2 Quarterly PPP Adjustments

4.1.2.1 The quarterly adjustments may also be done for the tariff period as per the following scope.

- The adjustments pertaining to the capacity and transmission charges.
- The impact of T&D losses on the components of PPP.
- Adjustment of Variable O&M.
- Impact of extra and lesser units purchased.



4.2. Annual true-up adjustment

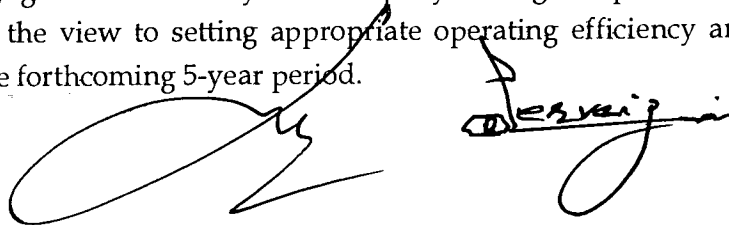
- 4.2.1.1 Investments made by the Company are added to the regulatory assets base which is used to determine the return on rate base. The difference between the budgeted and actual investment will result in variations in RAB and return on rate base. It is therefore requested that investments should be trued up every year. As a 5 year multi-year tariff has been requested, investment trued up at the end of each year will ensure that appropriate return is allowed on the regulatory assets base for the next year. Further, it will enable NEPRA to monitor performance of the DISCO in terms of timely completion of proposed projects and ensuring prudence in costs so no undue burden is placed on the end-user.

4.3. Future Prior Year Adjustments

- 4.3.1.1 It is proposed to continue Prior Year Adjustments in future periods to address the issues included, but not limited to the following:
- Any over/under-recovery of Power Purchase cost due to delayed determination/implementation of consumer end tariff to be trued up to the extent of actual figures;
 - Any under or over recovery of revenue due to variation in the forecasted and actual consumer mix;
 - Variation in forecasted & actual Distribution Margin, other income and Prior Period Adjustments; and
 - Any other adjustment in addition to above.

4.4. Rebasing

- 4.4.1.1 NEPRA will rebase tariffs every five years within the period of the Company's license. The rebasing will involve revising the forecast parameters to be used in setting tariffs for the next five years of the license period. This will involve NEPRA approving forecasts of operating costs, investment program, customer numbers and demand growth used in the average distribution margin formula. The average margin formula itself will not be reviewed. NEPRA would be expected to allow the Company a prudent level of operating costs and investment program consistent with forecasts of customer numbers, demand and network expansion. NEPRA would also be expected to review the efficiency gains achieved by the Company during the previous 5-year period of control with the view to setting appropriate operating efficiency and loss reduction targets for the forthcoming 5-year period.

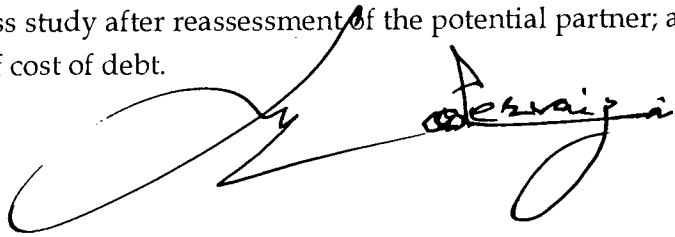


4.5. One-time Reopeners

4.5.1.1 Once the investment program is approved, it would not usually be revised. However, a one-time allowance of revision of the investment plan once the Company has achieved the potential private sector participation it would be necessary as the private sector partner may want to change the planned investments as per its view of the capital available and demand forecast. The revision should take place within a year of the determination of the MYT tariff after the Company has conducted a thorough review of its investment needs. Further, the T&D loss study as discussed in earlier sections should also be reviewed after reassessment by potential private sector partner.

4.5.1.2 One-time reopeners relating to private sector participation are as follows:

- i. Revision of the investment plan after private sector participation;
- ii. Review of the T&D loss study after reassessment of the potential partner; and
- iii. If required, revision of cost of debt.

A handwritten signature in black ink, appearing to read 'A. Desai', is written over the list items. The signature is stylized with a large loop at the end.

5. SUMMARY AND CONCLUSION

5.1.1.1 On the basis of above it is, inter alia, submitted that while admitting and allowing this petition, the Tariff of the Company for the period FY 2015-16 to FY 2019-20 whereby:

- I. The Company may be benefited by the timely determination and immediate application of the proposed tariff to ensure its financial viability and reliable system of supply of electricity to its 3.445 Million (by the end of FY15) consumers;
- II. NEPRA allow the tariff framework proposed herein designed with a view towards providing organizational and financial autonomy to the Company and at the same time facilitate eventual private sector participation in the Company
- III. NEPRA may determine with reasons and allow the Company, on basis of anticipated sale during FY2015-16 to FY2019-20, to recover the Revenue Requirement as mentioned in the petition above including Investment Plan of PKR 29,088 million;
- IV. The other periodical adjustments as per determinations of NEPRA may please be allowed to be continued;
- V. The Company may be allowed to create 30 new Sub Divisions and 08 new Divisions in the 2nd & 3rd Phases during FY 2015-16.
- VI. One-time private sector participation reopeners be allowed.
- VII. Annual WACC indexation for RORB calculation for the tariff period.
- VIII. Any other relief, order or direction which NEPRA deems fit.

Summary of key proposals

5.1.1.2 As discussed above, this petition has reviewed the prevalent tariff regime and the guidelines for end-user tariff determination promulgated by NEPRA. Based on an extensive review of tariff structures in place for private sector partnership of electricity distribution companies operating in the region and incentives offered to IPPs in Pakistan, certain recommendations are being proposed in the MYT regime. These proposals are made with a view towards fostering private sector participation in distribution sector as well as to address certain challenges faced in the power sector.

An overview of the said recommendations is detailed below.

Tariff component	FY2014-15 determination	NEPRA Tariff Guidelines relating to MYT	Proposed under this petition
Tariff regime	Annual revenue cap	Both MYT and ARR based mechanisms	5 year MYT
O&M cost bifurcation	No such explicit bifurcation but NEPRA exercises its discretion and	No such explicit bifurcation but NEPRA exercises its discretion and	Explicit distinction between controllable and uncontrollable costs. Uncontrollable costs, in any year, shall be passed through in

	understanding to determine appropriate cost levels on a yearly basis	understanding to determine appropriate base year cost levels on which indexation is applied to determine costs annually	end-user tariff. Base year expenses for controllable costs, on a per unit basis, to be set at the outset and indexed to inflation and an efficiency factor for setting of costs in subsequent years
O&M cost indexation	Costs were determined annually and thus no indexation was required	O&M costs are indexed to Consumer Price Index minus an efficiency factor (CPI - X)	Only controllable costs are indexed a CPI-X factor. Further, a Z factor to allow for inclusion of additional costs arising due to force-majeure or unforeseen events such as natural calamities, acts of violence, etc.
Extra-ordinary events	No such allowance	No provision	Allowance of a Z-factor to allow the pass-through of costs arising due to extra-ordinary/ <i>force majeure</i> events
Allowance for Additional Hiring	Requirement of submission of recruitment plan for hiring of additional staff alongside a cost/benefit analysis	No specific provision exists	A total of 3,094 additional personnel are being proposed to be added to the workforce under different cadres ranging from BPS 2 to 17
Mechanism for determining repair & maintenance costs	DISCO provided their annual estimates which were approved after requisite scrutiny by NEPRA	DISCO expected to provide their forward looking long-term estimates which are approved after requisite scrutiny by NEPRA	In view of the significant extent of repair & rehabilitation required, it is proposed that autonomy be given to the Company by capping allowed R&M costs at a 3% of gross fixed assets in line with the mechanism used in regional economies
RORB - WACC: Return on equity	i) Risk free rate: Taken as yield to maturity on a one year sovereign security ii) Beta: Considered the same beta for previous three determinations (including for FY15).	Silent on exact source and methodology of determining the COE components Risk free rate duration has been linked with the duration of the tariff	i) Risk free rate: Taken to be the yield to maturity on a 10 year Pakistan Investment Bond ii) Beta: Computed annually. Beta computed using average betas of regional comparable electricity distribution companies, re-levered to reflect debt-to-equity considered as standard by NEPRA

SUMMARY AND CONCLUSION

RORB - WACC: Additional Incentive for T&D Loss Reduction	No such incentive offered	No such incentive offered	Reduction of T&D losses beyond targets set by NEPRA to proportionately increase return on equity as an added incentive for rapid reduction in T&D losses
RORB - WACC: Floor on return on equity	No such floor	No such floor	Floor of 19% proposed for private sector investment in view of comparable returns offered to other operators in utilities and the power sector
RORB - WACC: Pre or post tax cost of debt	Pre-tax cost of debt was used in the FY15 determination	Proposes post tax cost of debt	The Company proposes application of pre-tax and NOT post-tax cost of debt. As tax is a direct pass-through in the tariff and FESCO is not able to benefit from the tax shield arising due to mark-up/interest payments on debt, pre-tax rate should be used
RORB - WACC: Annual adjustment	No such allowance	No provision	WACC should be revised annually to reflect the change in long term risk free rate and beta
Other income (treatment of Late Payment)	LPS excluded from other income for determining revenue requirement only to the extent of mark-up on delayed payments invoiced by CPPA (G)	Considers full value of LPS in other income, netted from the DM	The Company proposes complete exclusion of LPS from other income, when netting the latter off the DM, as any delays in recovery from consumers leads to cash constraints which need to be financed. The charge compensates the DISCO for the costs associated with the temporary mismatch between payments to be made for purchase of power and bills recovered from the consumer
			Further, charge levied by CPPA (G) via supplementary invoices at year end, is an allocation of the costs charged from it by IPPs rather than compensation for actual payment delays on part of the DISCO. It is thus recommended that CPPA (G) be allowed to only charge mark-up on delayed payments for the actual delay made by FESCO

			rather than allocating the total costs between all DISCOs
Prior year adjustments (PYA)	Prior-year adjustments were allowed in the determined tariff	Prior-year adjustments are to be allowed in the subsequent year's tariff with backing data	Prior-year adjustments comprise of unrecovered/ over recovered power purchase cost, excess/ under recovery of distribution margin, unrecovered/ over recovered PYA for prior years and consumer mix variance. Apart from above, PYA due to inconsistent application of previous multi-year tariff, claims by MEPCO regarding Use of System Charges (UoSC), supplementary charges issued by CPPA (G), and pension expense relating to Pre-Unbundling employees are also made part of PYA in this petition.
One-time reopeners if any potential private sector participation is introduced in the Company	Not petitioned for in the tariff	No explicit provision regarding re-opener in multi-year tariffs	One-time reopeners for the following: • Revision of T&D loss targets • Amendments/Revisions to the IGTDP • Reassessment of cost of debt
Network rehabilitation	Part of the investment plan	Investments relating to IGTDP shall be submitted by the distribution company which is relevant to the Company	Allowance of the Distribution Rehabilitation Project to reduce system technical losses due to old equipment and system overload.
Network expansion	Part of the investment plan	Investments relating to IGTDP shall be submitted by the distribution company which is relevant to the Company	Installation of 24,397 distribution transformers of different capacities
Introduction of ERP system	Allowed in previous year and allowed to be rolled over	Investment plans to be submitted alongside cost/benefit analysis	Investment of PKR 300 million during the next phase of ERP implementation requested.
Retirement Benefit Payments	NEPRA allowed only the amount on account of	Provision exists upto the extent of actual payment.	Submission of three options to handle the issue: 1. Withdrawal of

SUMMARY AND CONCLUSION

pension fund for
the previous two
years only

- requirement of fund;
2. Provisions for retirement benefits may be allowed in advance;
 3. Funding to occur in instalments over a 10-year period.

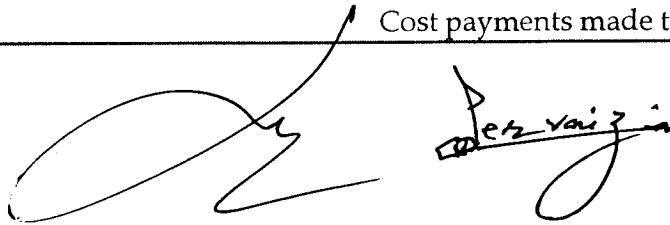
**Delayed tariff
differential
subsidy
(TDS)
payments**

No provision was
made for such
delays

No provision was
made for such delays

Allow charging a mark-up on any
delays in subsidy payments at
KIBOR plus 300bps to 350bps,
similar to the mark-up charged by
IPPs.

Alternatively, allowing the
Company to adjust TDS in
advance from the Power Purchase
Cost payments made to CPPA (G).



FAISALABAD ELECTRIC SUPPLY COMPANY

Direct Input of Proposed Tariff

Back to Index

FY 2015:-

TARIFF CATEGORIES		Sales kWh	Monthly Billing Demand MW	COS Rates		Proposed Tariff		Revenue on Proposed Tariff (PKR)	Adjusted * Cost of Service (PKR)	Cross Subsidy - (Under) / Over Recovery (PKR)	Over/ Under Recover
				Fixed Charge (Rs/kW/ Month)	Variable Charge (Rs/kWh)	Fixed Charge (Rs/kW/ Month)	Variable Charge (Rs/kWh)				
A1 (a)	Residential - A1										
i	Up to 50 Units	396,137,485		1,868	7.46		4.00	1,584,549,939	5,697,170,061	(4,112,620,123)	28%
ii	01-100 Units	1,637,625,763		1,868	7.46		10.09	16,523,643,953	23,552,006,138	(7,028,362,186)	70%
iii	101-300 Units	2,072,846,242		1,868	7.46		11.44	23,713,361,005	29,811,259,996	(6,097,898,991)	80%
iv	301-700 Units	437,114,775		1,868	7.46		15.70	6,862,701,967	6,286,497,253	576,204,714	109%
v	Above 700 Units	108,186,491		1,868	7.46		17.94	1,940,865,655	1,555,916,477	384,949,178	125%
A1(b)	Time of Use (TOU) - Peak	11,038,825		1,862	7.38		17.94	198,036,521	661,110,974	103,580,856	116%
	Time of Use (TOU) - Off-Peak	50,504,038			7.38		11.22	566,655,310			
	Total Residential - A1	4,713,453,619	-					51,389,814,350	67,563,960,901	(16,174,146,552)	76%
A2 (a)	Commercial - A2										
	Commercial - For peak load requirement up to 5 kW	297,019,089		1,868	7.46		16.82	4,995,861,078	4,271,669,123	724,191,955	117%
A2 (b)	Regular	3,743,244	1.59	1,862	7.38	400	16.26	68,489,941	40,210,990	28,278,952	170%
A2 (c)	Time of Use (TOU) - Peak	38,714,243		1,862	7.38	400	17.94	1,169,454,321	2,294,160,177	837,103,020	136%
	Time of Use (TOU) - Off-Peak	174,849,276	98.94		7.38		11.22	1,961,808,877			
	Total Commercial - A2	514,325,852	100.53					8,195,614,217	6,606,040,290	1,589,573,927	124%
B1(a)	Industrial B										
B1(b)	B1	125,265,187	-	1,868	7.46		14.58	1,826,366,420	1,801,538,855	24,827,565	101%
	B1 - TOU (Peak)	44,207,533	204.40	1,862	7.38		17.94	793,083,139	3,330,673,819	445,191,433	113%
	B1 - TOU (Off-peak)	265,845,108			7.38		11.22	2,982,782,113			
B2 (a)	B2	18,802,551	5.02	1,862	7.38	400	14.02	287,689,365	201,982,360	85,707,004	142%
B2 (b)	B2 - TOU (Peak)	229,776,504			7.38		17.94	6,478,538,474	17,210,318,362	4,048,248,076	124%
	B2 - TOU (Off-peak)	1,372,333,144	490.91	1,862	7.38	400	10.77	14,780,027,964			
B3	B3 - TOU (Peak)	137,065,838	289.84	1,808	7.09	380	17.94	3,780,615,581	12,107,190,239	4,712,517,373	139%
	B3 - TOU (Off-peak)	1,224,327,886			7.09		10.65	13,039,091,981			
B4	B4 - TOU (Peak)	104,646,418	142.38	1,489	6.59	360	17.94	2,492,429,701	6,768,992,470	3,180,192,117	147%
	B4 - TOU (Off-peak)	707,472,001			6.59		10.54	7,456,754,886			
	Total Industrial B	4,229,742,169	1,132.53					53,917,379,623	41,420,696,105	12,496,683,517	130%
C1(a)	Bulk C										
C1(b)	C1(a) - up to 5 kW	190,600	-	1,868	7.46		15.14	2,885,687	2,741,174	144,513	105%
C1(c)	C1(b) - exceeding 5 kW	2,581,448	1.00	1,862	7.38	400	14.58	42,430,712	27,730,650	14,700,062	153%
	Time of Use (TOU) - Peak	2,563,328	4.33	1,862	7.38	400	17.94	66,751,308	158,667,314	45,046,784	128%
	Time of Use (TOU) - Off-Peak	12,207,022			7.38		11.22	136,962,790			
C2(a)	C2 Supply at 11 kV	16,922,285	2.73	1,808	7.09	380	14.36	255,460,027	150,493,803	104,966,224	170%
C2(b)	Time of Use (TOU) - Peak	16,463,566			7.09		17.94	391,489,540	861,693,750	396,022,996	146%
	Time of Use (TOU) - Off-Peak	80,429,638	21.08	1,808	7.09	380	10.77	866,227,206			
C3(a)	C3 Supply above 11 kV	8,658,779	4.15	1,489	6.59	360	14.24	141,222,539	72,170,772	69,051,768	196%
C3(b)	Time of Use (TOU) - Peak	33,569,376	27.60	1,489	6.59	360	17.94	721,445,011	1,642,966,283	820,260,434	150%
	Time of Use (TOU) - Off-Peak	163,547,578			6.59		10.65	1,741,781,706			
	Total Single Point Supply - C	337,133,622	60.88					4,366,656,526	2,916,463,745	1,450,192,781	150%
D1(a)	Agriculture Tube Wells- Tariff D										
D2 **	D1 Scarp	14,282,980	-	1,862	7.38		14.58	208,245,842	153,431,837	54,814,006	136%
D1 (b)	D2 Agricultural Tube-wells **	6,702,092	3.38	1,862	7.38	200	14.02	102,074,932	71,995,784	30,079,148	142%
	Time of Use (TOU) - Peak	148,753,044	479.39	1,862	7.38	200	17.94	3,819,157,602	8,787,353,646	2,159,447,183	125%
	Time of Use (TOU) - Off-Peak	669,262,275			7.38		10.65	7,127,643,227			
	Total Agriculture	839,000,390	482.77					11,257,121,604	9,012,781,266	2,244,340,337	125%
E-1(i)	Temporary Supply Tariff - Tariff E										
E-1 (ii)	Temporary E-1 (i)	422,419	-	1,868	7.46		17.94	7,578,196	6,075,145	1,503,051	125%
E-2	Temporary E-1 (ii)	9,722,989	-	1,868	7.46		16.82	163,540,683	139,834,090	23,706,593	117%
	Temporary E-2	220,857	-	1,868	7.46		14.58	3,220,091	3,176,317	43,774	101%
	Total Temporary - E	10,366,265	-					174,338,970	149,085,552	25,253,418	117%
G	Public Lighting - Tariff G										
	Public Lighting G	7,964,533	-	1,862	7.38		15.70	125,043,169	85,557,284	39,485,885	146%
	Total Public Lighting G	7,964,533	-					125,043,169	85,557,284	39,485,885	146%
H	Residential Colonies attached to Industries										
	Residential Colonies H	4,647,580	-	1,808	7.09		15.70	72,967,000	41,332,004	31,634,996	177%
	Total Residential Colonies H	4,647,580	-					72,967,000	41,332,004	31,634,996	177%
	Sub Total A	10,656,634,030	1,776.71					129,498,935,458	127,795,917,148	1,703,018,310	101%
	Wheeling Charge: Export to DISCOs										
	Export to DISCOs 132 kV	1,494,708,155	446.03	341	0.16	-	-	-	2,253,548,358	(2,253,548,358)	0%
	Export to DISCOs 11 kV	61,985,657	9.61	660	0.63	-	-	-	60,405,274	(60,405,274)	0%
	Sub Total B - Export to DISCOs	1,556,693,812	455.64					-	2,313,953,632	(2,313,953,632)	0%
	Grand Total (A+B)	12,213,327,842	2,232.35					129,498,935,458	130,109,870,780	(610,935,322)	100%

* Adjusted Cost of Service is based on uniform Cost of Service rates for all current consumer categories supplied at a similar voltage level. This cost is therefore slightly different from the Allocated Cost of Service for Individual categories given in Scenario 1 sheets.

** Fixed Billing at Sanctioned Load

STANDARD PETITION FORMATS FOR DISTRIBUTION COMPANIES

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6

DF - FORM 1
FAISALBAD ELECTRIC SUPPLY COMPANY
Company Statistics

Particulars						2014-15	2015-16	2016-17	2017-18	2018-19	2019-20			
						Actual	Projected							
A	Units Sold					10,006	10,657	11,349	12,087	12,873	13,709			
	Units Received					11,243	11,960	12,689	13,489	14,326	15,230			
	Units Lost					1,237	1,303	1,340	1,402	1,453	1,521			
	Sales Revenue (MN)					127,509	130,110	145,119	156,433	168,126	180,562			
	Peak demand during FY (Computed demand) MW					3,059	3,261	3,474	3,728	4,009	4,314			
	Number of Consumers (Thousands)					3,445	3,595	3,757	3,934	4,129	4,345			
	Area (Sq.KM)					47,000	47,000	47,000	47,000	47,000	47,000			
	Circles (Nos.)					5	5	5	5	5	5			
	Divisions (Nos.)					26	37	37	37	37	37			
	Sub Divisions (Nos.)					132	174	174	174	174	174			
	Length of Feeders 11 kV					40,032	40,350	40,600	41,000	41,000	41,000			
	Average Length of Feeders (766-783)					44.80	45.15	45.42	45.86	45.86	45.86			
	Maximum Length of Feeder					271	238	233	211	211	211			
	Minimum Length of Feeder					0.14	0.14	0.14	0.14	0.14	0.14			
	Target for new connections					156,427	150,000	162,000	177,000	195,000	216,000			
	Length of High Voltage Transmission lines (132 kV) KM					40,032	40,350	40,600	41,000	41,000	41,000			
	Length of STG lines (66 kV) KM					44.80	45.15	45.42	45.86	45.86	45.86			
	Length of Low Voltage Distribution lines (400 V) KM					271	238	233	211	211	211			
						0.14	0.14	0.14	0.14	0.14	0.14			
	Number of HV transformers (Power Transformers)					145	165	176	182	182	182			
	Number of burned down HV transformers					Nil	Nil	Nil	Nil	Nil	Nil			
	Number of STG transformers 66/11					41	Nil	Nil	Nil	Nil	Nil			
	Number of burned down STG transformers					Nil	Nil	Nil	Nil	Nil	Nil			
	Number of LV transformers					91,716	93,500	95,800	97,450	97,450	97,450			
	Number of burned down LV transformers					998	986	975	968	968	968			
	A	Qualified Professionals	Strength						Cost (Rs. in Million)					
			2015	2016	2017	2018	2019	2020	2015	2016	2017	2018	2019	2020
			Act./Proj.	Estimated					Act./Proj.	Estimated				
			Number of Employees											
Engineers		324	342	361	384	390	395	103	154	163	173	183	192	
Dthers		153	157	160	169	173	175	45	67	71	75	79	83	
B		Staff												
		Technical	11,443	12,236	13,276	15,105	15,837	16,569	3,663	5,478	5,806	6,155	6,493	6,818
	Clerical	3,960	4,615	5,263	6,670	7,212	7,754	2,081	3,111	3,297	3,495	3,688	3,872	
	Non Technical & Others	3,900	4,172	4,505	5,165	5,418	5,671	181	271	287	305	321	338	
TOTAL		19,780	21,522	23,565	27,493	29,030	30,564	6,073	9,080	9,625	10,203	10,764	11,302	

FORM 2

Profit & Loss Statement		2014-15	2014-15	2015-16	2016-17	2017-18	2018-19	2018-19
		Determined	Act/Un-Aud.	Projected				
Power Balances								
Units Received	[MkWh]	10,958	11,243	11,960	12,689	13,489	14,326	15,230
Units Lost	[MkWh]	1,039	1,237	1,303	1,340	1,402	1,453	1,521
Units Lost	[%age]	9.50%	11.00%	10.90%	10.56%	10.40%	10.15%	9.98%
Units Sold	[MkWh]	9,899	10,006	10,657	11,349	12,087	12,873	13,709
Revenue								
Sales Revenue	[Mln Rs]	107,434	112,310	111,916	119,191	126,938	135,189	143,977
Subsidy	[Mln Rs]		22,423	18,193	25,928	29,494	32,937	36,585
Fuel Price Adjustment	[Mln Rs]		(7,888)	-	-	-	-	-
Reversal of FPA/impact of cut off units	[Mln Rs]		664					
Total Sales Revenue	[Mln Rs]	107,434	127,509	130,110	145,119	156,433	168,126	180,562
Rental & Service Income	[Mln Rs]		48	48	48	48	48	48
Amortization of Def Credits	[Mln Rs]		1,118	1,250	1,392	1,547	1,717	1,906
Other Income	[Mln Rs]	2,502	2,362	1,267	1,285	1,307	1,361	1,376
Total Revenue	[Mln Rs]	109,935	131,036	132,675	147,843	159,334	171,253	183,893
Operating Cost								
Power Purchase Cost	[Mln Rs]	113,415	105,627	113,572	121,899	131,052	140,863	151,562
O&M Expenses	[Mln Rs]	9,112	11,603	16,025	17,165	18,356	19,517	20,643
Depreciation	[Mln Rs]	1,997	2,937	3,449	3,808	4,148	4,484	4,814
Amortization	[Mln Rs]	-	-	-	-	-	-	-
1st Quarter PPP Adj.	[Mln Rs]	797	-					
Provision for Bad Debts	[Mln Rs]	-	-	403	106	112	120	128
Total Operating Cost	[Mln Rs]	125,321	120,167	133,449	142,978	153,668	164,984	177,146
EBIT	[Mln Rs]	(15,386)	10,869	(774)	4,865	5,666	6,269	6,747
Financial Charges	[Mln Rs]	-	205	958	810	646	464	261
Bank Charges	[Mln Rs]	-	15	16	17	18	19	20
EBT	[Mln Rs]	(15,386)	10,649	(1,748)	4,039	5,003	5,787	6,466
Tax	[Mln Rs]	-	-	-	-	-	-	-
EAT	[Mln Rs]	(15,386)	10,649	(1,748)	4,039	5,003	5,787	6,466
WPPF	[Mln Rs]	-	-	-	-	-	-	-
Profit for the period	[Mln Rs]	(15,386)	10,649	(1,748)	4,039	5,003	5,787	6,466

FORM - 3

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Profit & Loss Statement (2014-15)																		
		Month 1	Month 2	Month 3	1st Qrt	Month 4	Month 5	Month 6	2nd Qrt	Month 7	Month 8	Month 9	3rd Qrt	Month 10	Month 11	Month 12	4th Qrt	Total
		Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Act/Un-Aud	Prov	Prov	Prov	Act/Proj
Power Balances																		
Units Received	[MkWh]	1,176	1,199	1,059	3,434	959	755	756	2,470	670	694	757	2,121	870	1,172	1,178	3,219	11,243
Units Lost	[MkWh]	259	122	77	458	71	25	40	135	15	50	82	147	104	221	172	496	1,237
Units Lost	[%age]	22.05%	10.15%	7.28%	13.34%	7.38%	3.32%	5.24%	5.48%	2.27%	7.21%	10.85%	6.95%	11.92%	18.85%	14.59%	15.42%	11.00%
Units Sold	[MkWh]	916	1,078	982	2,976	888	730	716	2,335	655	644	675	1,973	766	951	1,006	2,723	10,006
Revenue																		
Sales Revenue	[Min Rs]	10,736	12,975	11,452	35,164	10,211	8,257	7,817	26,285	6,648	7,032	7,333	21,013	8,238	10,411	11,199	29,848	112,310
Subsidy	[Min Rs]	2,798	3,201	2,973	8,972	2,356	1,433	1,176	4,966	1,102	1,077	1,117	3,296	1,551	1,933	1,705	5,189	22,423
Fuel Price Adjustment	[Min Rs]	(601)	(63)	387	(277)	-	204	(380)	(176)	(1,929)	-	(1,950)	(3,879)	(1,183)	(2,373)	-	(3,557)	(7,888)
Reversal of FPA/impact of cut off un	[Min Rs]	601	63	-	664	-	-	(1,156)	(1,156)	1,156	-	-	1,156	-	-	-	-	664
Total Sales Revenue	[Min Rs]	13,534	16,177	14,812	44,523	12,567	9,894	7,458	29,919	6,977	8,109	6,500	21,586	8,606	9,970	12,904	31,481	127,509
Rental & Service Income	[Min Rs]	4	4	4	12	4	4	4	12	4	4	4	12	4	3	5	12	48
Amortization of Def Credits	[Min Rs]	85	85	85	255	85	85	85	255	85	85	85	255	85	107	161	353	1,118
Other Income	[Min Rs]	160	176	201	537	152	269	93	514	217	133	80	430	110	308	462	881	2,362
Total Revenue	[Min Rs]	13,783	16,442	15,102	45,327	12,808	10,253	7,640	30,701	7,283	8,331	6,669	22,283	8,805	10,389	13,533	32,726	131,036
									74,442		91,641		96,028					
Operating Cost																		
Power Purchase Cost	[Min Rs]	11,691	10,941	10,295	32,926	9,671	7,013	7,763	24,447	9,116	5,994	7,543	22,654	8,029	9,147	8,425	25,601	105,627
O&M Expenses	[Min Rs]	1,005	824	889	2,718	860	788	731	2,378	831	860	825	2,516	793	1,279	1,919	3,991	11,603
Depreciation	[Min Rs]	238	238	238	713	238	238	238	713	238	238	238	713	238	238	322	798	2,937
Provision for Bad Debt	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prior Year's + Adj. of Supp. Chgs	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Cost	[Min Rs]	12,933	12,003	11,422	36,358	10,768	8,038	8,731	27,538	10,185	7,092	8,606	25,883	9,060	10,664	10,666	30,390	120,167
EBIT	[Min Rs]	850	4,439	3,680	8,969	2,040	2,215	(1,092)	3,163	(2,902)	1,239	(1,937)	(3,600)	(255)	(275)	2,867	2,337	10,869
Financial Charges	[Min Rs]	-	-	-	-	-	-	-	-	-	37	-	37	-	-	168	168	205
Bank Charges	[Min Rs]	1	1	1	3	1	2	1	4	1	1	1	3	1	1	3	5	15
EBT	[Min Rs]	849	4,438	3,679	8,966	2,038	2,213	(1,093)	3,159	(2,903)	1,201	(1,938)	(3,640)	(256)	(276)	2,695	2,164	10,649
Tax	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EAT	[Min Rs]	849	4,438	3,679	8,966	2,038	2,213	(1,093)	3,159	(2,903)	1,201	(1,938)	(3,640)	(256)	(276)	2,695	2,164	10,649
WPPF	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit for the period	[Min Rs]	849	4,438	3,679	8,966	2,038	2,213	(1,093)	3,159	(2,903)	1,201	(1,938)	(3,640)	(256)	(276)	2,695	2,164	10,649

FORM - 3

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Profit & Loss Statement (2015-16)

		Month 1	Month 2	Month 3	1st Qrt's Total	Month 4	Month 5	Month 6	2nd Qrt's Total	Month 7	Month 8	Month 9	3rd Qrt's Total	Month 10	Month 11	Month 12	4th Qrt's Total	Total
Power Balances																		
Units Received	(MkWh)	1,277	1,273	1,124	3,674	1,017	801	802	2,621	710	736	803	2,250	922	1,244	1,250	3,416	11,960
Units Lost	(MkWh)	301	126	78	505	71	24	39	134	13	50	84	148	106	231	179	516	1,303
Units Lost	(%age)	23.57%	9.87%	6.95%	13.74%	7.01%	2.96%	4.88%	5.12%	1.86%	6.83%	10.52%	6.58%	11.54%	18.59%	14.30%	15.12%	10.90%
Units Sold	(MkWh)	976	1,148	1,046	3,169	946	778	763	2,486	697	686	718	2,102	816	1,013	1,071	2,900	10,657
Revenue																		
Sales Revenue	(Min Rs)	10,250	12,053	10,980	33,283	9,934	8,167	8,011	26,112	7,322	7,205	7,544	22,070	8,567	10,634	11,251	30,451	111,916
Subsidy	(Min Rs)	1,666	1,959	1,785	5,411	1,615	1,328	1,302	4,245	1,190	1,171	1,226	3,588	1,393	1,729	1,829	4,950	18,193
Fuel Price Adjustment	(Min Rs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sales Revenue	(Min Rs)	11,916	14,012	12,765	38,693	11,549	9,495	9,313	30,357	8,512	8,376	8,770	25,658	9,959	12,363	13,079	35,401	130,110
Rental & Service Income	(Min Rs)	2	3	3	9	3	4	4	11	4	4	5	13	5	5	5	15	48
Amortization of Def Credits	(Min Rs)	62	75	87	225	91	94	103	287	112	116	122	350	125	128	134	387	1,250
Other Income	(Min Rs)	63	76	89	228	92	95	105	292	114	117	124	355	127	130	136	393	1,267
Total Revenue	(Min Rs)	12,044	14,166	12,945	39,155	11,735	9,687	9,524	30,947	8,743	8,613	9,021	26,376	10,216	12,626	13,355	36,197	132,675
Operating Cost																		
Power Purchase Cost	(Min Rs)	12,731	11,709	11,033	35,473	10,359	7,575	8,345	26,279	9,774	6,459	8,110	24,344	8,600	9,833	9,043	27,476	113,572
*O&M Expenses	(Min Rs)	1,388	1,138	1,228	3,754	1,187	1,088	1,009	3,284	1,148	1,188	1,139	3,475	1,095	1,766	2,650	5,512	16,025
Depreciation	(Min Rs)	172.44	206.93	241.41	621	250	259	285	793	310.39	319	336	966	344.88	353	371	1,069	3,449
Amortization	(Min Rs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Bad Debt	(Min Rs)	20.17	24.21	28.24	73	29.25	30.26	33.29	93	36.31	37.32	39.34	113	40.35	41.35	43.37	125	403
Total Operating Cost	(Min Rs)	14,312	13,078	12,531	39,921	11,826	8,952	9,672	30,450	11,269	8,003	9,625	28,897	10,081	11,994	12,107	34,181	133,449
EBIT																		
EBIT	(Min Rs)	(2,267)	1,088	414	(766)	(91)	735	(147)	497	(2,526)	610	(604)	(2,520)	135	632	1,248	2,015	(774)
Financial Charges	(Min Rs)	-	-	86	86	-	-	411	411	-	-	81	81	-	-	381	381	958
Bank Charges	(Min Rs)	1	1	1	3	1	1	1	4	1	1	2	4	2	2	2	5	16
EBT	(Min Rs)	(2,267)	1,088	328	(852)	(91)	735	(558)	87	(2,526)	610	(685)	(2,601)	135	632	868	1,635	(1,748)
Tax	(Min Rs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EAT	(Min Rs)	(2,267)	1,088	328	(852)	(91)	735	(558)	87	(2,526)	610	(685)	(2,601)	135	632	868	1,635	(1,748)
WPPF	(Min Rs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit for the period	(Min Rs)	(2,267)	1,088	328	(852)	(91)	735	(558)	87	(2,526)	610	(685)	(2,601)	135	632	868	1,635	(1,748)

FORM - 3

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Profit & Loss Statement (2016-17)

		Month 1	Month 2	Month 3	1st Qrt's Total	Month 4	Month 5	Month 6	2nd Qrt's Total	Month 7	Month 8	Month 9	3rd Qrt's Total	Month 10	Month 11	Month 12	4th Qrt's Total	Total
Power Balances																		
Units Received	[MkWh]	1,356	1,352	1,193	3,901	1,079	849	850	2,779	753	780	851	2,384	978	1,321	1,327	3,626	12,689
Units Lost	[MkWh]	317	130	79	526	72	21	38	131	10	50	86	146	109	242	186	538	1,340
Units Lost	[%age]	23.35%	9.60%	6.63%	13.47%	6.67%	2.50%	4.44%	4.71%	1.34%	6.35%	10.10%	6.11%	11.18%	18.34%	14.05%	14.84%	10.56%
Units Sold	[MkWh]	1,039	1,222	1,113	3,375	1,007	828	812	2,648	742	731	765	2,238	869	1,078	1,141	3,088	11,349
Revenue																		
Sales Revenue	[Min Rs]	10,916	12,836	11,694	35,446	10,580	8,698	8,531	27,809	7,798	7,673	8,034	23,505	9,124	11,325	11,982	32,431	119,191
Subsidy	[Min Rs]	2,375	2,792	2,544	7,711	2,302	1,892	1,856	6,049	1,696	1,669	1,748	5,113	1,985	2,464	2,606	7,055	25,928
Fuel Price Adjustment	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sales Revenue	[Min Rs]	13,291	15,628	14,238	43,157	12,882	10,590	10,387	33,859	9,494	9,342	9,782	28,618	11,108	13,789	14,588	39,485	145,119
Rental & Service Income	[Min Rs]	2	3	3	9	3	4	4	11	4.32	4	5	13	4.80	5	5	15	48
Amortization of Def Credits	[Min Rs]	70	83	97	250	101	104	115	320	125	129	136	390	139	143	150	431	1,392
Other Income	[Min Rs]	64	77	90	231	93	96	106	295	116	119	125	360	128	132	138	398	1,285
Total Revenue	[Min Rs]	13,427	15,792	14,428	43,647	13,079	10,794	10,612	34,485	9,739	9,594	10,048	29,381	11,381	14,068	14,881	40,330	147,843
Operating Cost																		
Power Purchase Cost	[Min Rs]	13,624	12,536	11,830	37,991	11,102	8,182	8,968	28,252	10,476	6,959	8,717	26,152	9,217	10,575	9,713	29,504	121,899
*O&M Expenses	[Min Rs]	1,487	1,219	1,316	4,021	1,272	1,165	1,081	3,518	1,230	1,272	1,220	3,722	1,173	1,862	2,838	5,904	17,165
Depreciation	[Min Rs]	190	229	267	686	276	286	314	876	343	352	371	1,066	381	390	409	1,181	3,808
Amortization	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Bad Debt	[Min Rs]	5	6	7	19	8	8	9	24	10	10	10	30	11	11	11	33	106
Total Operating Cost	[Min Rs]	15,307	13,990	13,420	42,717	12,658	9,641	10,372	32,670	12,058	8,594	10,319	30,970	10,781	12,868	12,972	36,621	142,978
EBIT																		
EBIT	[Min Rs]	(1,880)	1,802	1,009	931	421	1,153	240	1,815	(2,319)	1,001	(271)	(1,589)	599	1,200	1,910	3,709	4,865
Financial Charges	[Min Rs]	-	-	76	76	-	-	349	349	-	-	71	71	-	-	315	315	810
Bank Charges	[Min Rs]	1	1	1	3	1	1	1	4	2	2	2	5	2	2	2	5	17
EBT	[Min Rs]	(1,880)	1,802	933	855	421	1,153	(108)	1,466	(2,319)	1,001	(342)	(1,660)	599	1,200	1,595	3,394	4,039
Tax	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EAT	[Min Rs]	(1,880)	1,802	933	855	421	1,153	(108)	1,466	(2,319)	1,001	(342)	(1,660)	599	1,200	1,595	3,394	4,039
WPPF	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit for the period	[Min Rs]	(1,880)	1,802	933	855	421	1,153	(108)	1,466	(2,319)	1,001	(342)	(1,660)	599	1,200	1,595	3,394	4,039

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FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Profit & Loss Statement (2017-18)

		Month 1	Month 2	Month 3	1st Qrt's Total	Month 4	Month 5	Month 6	2nd Qrt's Total	Month 7	Month 8	Month 9	3rd Qrt's Total	Month 10	Month 11	Month 12	4th Qrt's Total	Total
Power Balances																		
Units Received	[MkWh]	1,442	1,438	1,268	4,148	1,147	905	902	2,954	801	828	903	2,533	1,039	1,404	1,412	3,855	13,489
Units Lost	[MkWh]	335	136	82	554	74	23	37	133	11	50	89	149	113	256	197	566	1,402
Units Lost	[%age]	23.24%	9.48%	6.49%	13.35%	6.42%	2.50%	4.12%	4.52%	1.34%	6.02%	9.80%	5.89%	10.92%	18.23%	13.93%	14.68%	10.40%
Units Sold	[MkWh]	1,107	1,302	1,186	3,595	1,073	882	865	2,820	791	778	815	2,384	925	1,148	1,215	3,289	12,087
Revenue																		
Sales Revenue	[Min Rs]	11,626	13,670	12,454	37,750	11,268	9,263	9,086	29,617	8,304	8,172	8,557	25,033	9,717	12,061	12,761	34,538	126,938
Subsidy	[Min Rs]	2,701	3,176	2,894	8,771	2,618	2,152	2,111	6,882	1,930	1,899	1,988	5,816	2,258	2,802	2,965	8,025	29,494
Fuel Price Adjustment	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sales Revenue	[Min Rs]	14,327	16,847	15,348	46,522	13,886	11,416	11,197	36,499	10,234	10,070	10,545	30,849	11,974	14,864	15,726	42,564	156,433
Rental & Service Income	[Min Rs]	2	3	3	9	3	4	4	11	4	4	5	14	5	5	5	15	48
Amortization of Def Credits	[Min Rs]	77	93	108	278	112	116	128	356	139	143	151	433	155	159	166	479	1,547
Other Income	[Min Rs]	65	78	91	235	95	98	108	301	118	121	127	366	131	134	140	405	1,307
Total Revenue	[Min Rs]	14,472	17,021	15,551	47,044	14,096	11,633	11,436	37,166	10,495	10,339	10,828	31,662	12,264	15,161	16,038	43,463	159,334
Operating Cost																		
Power Purchase Cost	[Min Rs]	14,601	13,441	12,705	40,747	11,911	8,862	9,649	30,422	11,272	7,507	9,381	28,161	9,889	11,388	10,445	31,722	131,052
*O&M Expenses	[Min Rs]	1,590	1,303	1,407	4,300	1,360	1,246	1,156	3,762	1,315	1,360	1,305	3,980	1,255	2,023	3,031	6,313	18,356
Depreciation	[Min Rs]	207	249	290	747	301	311	342	954	373	384	404	1,161	415	425	446	1,286	4,148
Amortization	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Bad Debt	[Min Rs]	6	7	8	20	8	8	9	26	10	10	11	31	11	12	12	35	112
Total Operating Cost	[Min Rs]	16,405	15,000	14,410	45,814	13,580	10,428	11,157	35,164	12,970	9,262	11,101	33,334	11,570	13,848	13,938	39,356	153,668
EBIT	[Min Rs]	(1,933)	2,021	1,141	1,230	516	1,206	280	2,002	(2,475)	1,077	(274)	(1,672)	695	1,313	2,099	4,107	5,666
Financial Charges	[Min Rs]	-	-	66	66	-	-	279	279	-	-	61	61	-	-	241	241	646
Bank Charges	[Min Rs]	1	1	1	3	1	1	1	4	2	2	2	5	2	2	2	6	18
EBT	[Min Rs]	(1,933)	2,021	1,075	1,164	516	1,206	1	1,723	(2,475)	1,077	(334)	(1,733)	695	1,313	1,858	3,866	5,003
Tax	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EAT	[Min Rs]	(1,933)	2,021	1,075	1,164	516	1,206	1	1,723	(2,475)	1,077	(334)	(1,733)	695	1,313	1,858	3,866	5,003
WPPF	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit for the period	[Min Rs]	(1,933)	2,021	1,075	1,164	516	1,206	1	1,723	(2,475)	1,077	(334)	(1,733)	695	1,313	1,858	3,866	5,003

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FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Profit & Loss Statement (2018-19)		Month 1	Month 2	Month 3	1st Qrt's Total	Month 4	Month 5	Month 6	2nd Qrt's Total	Month 7	Month 8	Month 9	3rd Qrt's Total	Month 10	Month 11	Month 12	4th Qrt's Total	Total
Power Balances																		
Units Received	(MkWh)	1,536	1,527	1,347	4,410	1,217	960	957	3,134	854	878	958	2,689	1,102	1,492	1,499	4,093	14,326
Units Lost	(MkWh)	357	141	84	582	74	20	36	130	11	49	90	151	117	269	205	591	1,453
Units Lost	(%age)	23.24%	9.24%	6.21%	13.19%	6.12%	2.10%	3.72%	4.15%	1.34%	5.59%	9.43%	5.61%	10.60%	18.01%	13.70%	14.43%	10.15%
Units Sold	(MkWh)	1,179	1,386	1,263	3,828	1,143	939	921	3,003	842	829	868	2,539	985	1,223	1,294	3,503	12,873
Revenue																		
Sales Revenue	(Min Rs)	12,381	14,559	13,264	40,204	12,000	9,866	9,676	31,542	8,844	8,703	9,113	26,660	10,348	12,845	13,590	36,783	135,189
Subsidy	(Min Rs)	3,017	3,547	3,231	9,795	2,924	2,404	2,357	7,685	2,155	2,120	2,220	6,495	2,521	3,130	3,311	8,962	32,937
Fuel Price Adjustment	(Min Rs)				-				-				-				-	-
Total Sales Revenue	(Min Rs)	15,398	18,106	16,495	49,999	14,924	12,269	12,034	39,227	10,999	10,823	11,333	33,155	12,869	15,975	16,901	45,745	168,126
Rental & Service Income	(Min Rs)	2	3	3	9	3	4	4	11	4	4	5	13	5	5	5	15	48
Amortization of Def Credits	(Min Rs)	86	103	120	309	125	129	142	395	155	159	167	481	172	176	185	532	1,717
Other Income	(Min Rs)	68	82	95	245	99	102	112	313	123	126	133	381	136	140	146	422	1,361
Total Revenue	(Min Rs)	15,554	18,294	16,714	50,562	15,151	12,504	12,292	39,946	11,280	11,112	11,638	34,031	13,182	16,295	17,237	46,714	171,253
Operating Cost														10	10	11		
Power Purchase Cost	(Min Rs)	15,669	14,401	13,634	43,704	12,776	9,583	10,381	32,740	12,132	8,098	10,095	30,324	10,608	12,259	11,228	34,094	140,863
O&M Expenses	(Min Rs)	1,691	1,385	1,496	4,572	1,446	1,325	1,229	4,000	1,398	1,447	1,387	4,232	1,334	2,151	3,227	6,713	19,517
Depreciation	(Min Rs)	224	269	314	807	325	336	370	1,031	404	415	437	1,255	448	460	482	1,390	4,484
Amortization	(Min Rs)																	
Provision for Bad Debt	(Min Rs)	6	7	8	22	9	9	10	28	11	11	12	34	12	12	13	37	120
Total Operating Cost	(Min Rs)	17,590	16,063	15,452	49,105	14,556	11,253	11,990	37,799	13,945	9,970	11,931	35,845	12,402	14,882	14,950	42,234	164,984
EBIT	(Min Rs)	(2,036)	2,230	1,261	1,456	594	1,251	302	2,147	(2,664)	1,142	(293)	(1,815)	779	1,413	2,287	4,480	6,269
Financial Charges	(Min Rs)	-	-	56	56	-	-	200	200	-	-	51	51	-	-	157	157	464
Bank Charges	(Min Rs)	1	1	1	3	1	1	2	4	2	2	2	5	2	2	2	6	19
EBT	(Min Rs)	(2,036)	2,230	1,206	1,401	594	1,251	102	1,947	(2,664)	1,142	(343)	(1,865)	779	1,413	2,130	4,323	5,787
Tax	(Min Rs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EAT	(Min Rs)	(2,036)	2,230	1,206	1,401	594	1,251	102	1,947	(2,664)	1,142	(343)	(1,865)	779	1,413	2,130	4,323	5,787
WPPF	(Min Rs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit for the period	(Min Rs)	(2,036)	2,230	1,206	1,401	594	1,251	102	1,947	(2,664)	1,142	(343)	(1,865)	779	1,413	2,130	4,323	5,787

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FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Profit & Loss Statement (2019-20)		Month 1	Month 2	Month 3	1st Qrt's Total	Month 4	Month 5	Month 6	2nd Qrt's Total	Month 7	Month 8	Month 9	3rd Qrt's Total	Month 10	Month 11	Month 12	4th Qrt's Total	Total
Power Balances																		
Units Received	[MkWh]	1,636	1,627	1,434	4,697	1,296	1,015	1,012	3,324	909	928	1,013	2,851	1,174	1,589	1,597	4,359	15,230
Units Lost	[MkWh]	380	150	89	619	79	15	31	125	12	45	89	147	124	286	219	629	1,521
Units Lost	[%age]	23.24%	9.24%	6.21%	13.19%	6.12%	1.44%	3.07%	3.76%	1.34%	4.89%	8.82%	5.16%	10.60%	18.01%	13.70%	14.43%	9.98%
Units Sold	[MkWh]	1,256	1,476	1,345	4,077	1,217	1,000	981	3,199	897	883	924	2,704	1,049	1,303	1,378	3,730	13,709
Revenue																		
Sales Revenue	[Min Rs]	13,186	15,505	14,126	42,817	12,780	10,507	10,305	33,592	9,419	9,268	9,705	28,393	11,021	13,680	14,473	39,174	143,977
Subsidy	[Min Rs]	3,351	3,940	3,589	10,880	3,248	2,670	2,619	8,536	2,393	2,355	2,466	7,215	2,800	3,476	3,678	9,954	36,585
Fuel Price Adjustment	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sales Revenue	[Min Rs]	16,537	19,445	17,715	53,697	16,028	13,177	12,924	42,128	11,813	11,624	12,171	35,608	13,821	17,156	18,151	49,129	180,562
Rental & Service Income	[Min Rs]	2	3	3	9	3	4	4	11	4	4	5	13	5	5	5	15	48
Amortization of Def Credits	[Min Rs]	95	114	133	343	138	143	157	438	172	176	186	534	191	195	205	591	1,906
Other Income	[Min Rs]	69	83	96	248	100	103	114	317	124	127	134	385	138	141	148	427	1,376
Total Revenue	[Min Rs]	16,703	19,645	17,948	54,297	16,269	13,426	13,199	42,894	12,112	11,932	12,496	36,540	14,154	17,498	18,509	50,161	183,893
Operating Cost														10	10	11		
Power Purchase Cost	[Min Rs]	16,818	15,465	14,667	46,949	13,740	10,354	11,155	35,249	13,061	8,726	10,850	32,637	11,411	13,222	12,093	36,727	151,562
*O&M Expenses	[Min Rs]	1,781	1,465	1,582	4,836	1,530	1,401	1,300	4,231	1,479	1,530	1,467	4,476	1,411	2,276	3,413	7,100	20,643
Depreciation	[Min Rs]	241	289	337	867	349	361	397	1,107	433	445	469	1,348	481	493	518	1,492	4,814
Amortization	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Bad Debt	[Min Rs]	6	8	9	23	9	10	11	29	11	12	12	36	13	13	14	40	128
Total Operating Cost	[Min Rs]	18,854	17,226	16,595	52,675	15,628	12,125	12,863	40,616	14,985	10,713	12,799	38,497	13,316	16,004	16,038	45,358	177,146
EBIT	[Min Rs]	(2,150)	2,419	1,354	1,622	641	1,301	336	2,278	(2,873)	1,219	(303)	(1,957)	838	1,494	2,471	4,803	6,747
Financial Charges	[Min Rs]	-	-	45	45	-	-	112	112	-	-	40	40	-	-	63	63	261
Bank Charges	[Min Rs]	1	1	1	4	1	1	2	5	2	2	2	6	2	2	2	6	20
EBT	[Min Rs]	(2,150)	2,419	1,308	1,577	641	1,301	224	2,166	(2,873)	1,219	(343)	(1,997)	838	1,494	2,408	4,740	6,466
Tax	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EAT	[Min Rs]	(2,150)	2,419	1,308	1,577	641	1,301	224	2,166	(2,873)	1,219	(343)	(1,997)	838	1,494	2,408	4,740	6,466
WPPF	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit for the period	[Min Rs]	(2,150)	2,419	1,308	1,577	641	1,301	224	2,166	(2,873)	1,219	(343)	(1,997)	838	1,494	2,408	4,740	6,466

Description	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	(Previous)	(Current)	(Projected)				
Intangible Fixed Assets	-	-	-	-	-	-	-
Net Fixed Assets in Operations	74,156	77,743	84,114	90,527	96,155	101,372	106,047
Total Net Fixed Assets in Operations	74,156	77,743	84,114	90,527	96,155	101,372	106,047
Capital Work in Progress	5,863	6,161	9,064	9,435	9,024	8,955	8,759
Long Term Loans to Employees	156	119	142	164	164	164	164
Deferred Cost & Long Term Deposits	2	2	2	2	2	2	2
Current Assets							
Stores & Spares	1,163	908	1,000	1,095	1,186	1,277	1,365
Trade Debts	9,510	9,538	10,790	11,491	12,238	13,033	13,881
Short Term Advances	58	38	212	221	212	211	206
Balance with Statutory Authorities	12,189	11,043	11,047	12,321	13,282	14,275	15,331
Tariff Differential Subsidy	6,393	8,864	5,228	6,020	6,862	7,690	8,555
Receivable from Associated Companies	2,628	3,320	2,988	2,656	2,324	1,992	1,660
Interest Accrued	43	-	-	-	-	-	-
Current portion of the long term loan	51	40	48	56	56	56	56
Short Term Investments	3,896	2,459	4,290	3,026	5,026	8,295	13,376
Other Receivables	18,301	29,557	29,972	30,661	31,307	31,964	32,574
Cash & Bank Balances	1,546	2,543	2,602	2,902	3,129	3,363	3,611
Total Current Assets	55,777	68,310	68,176	70,450	75,622	82,155	90,614
Total Assets	135,955	152,335	161,498	170,579	180,967	192,649	205,587
Equity including Revaluation Surplus	52,668	52,668	52,668	52,668	52,668	52,668	52,668
Unappropriated Profit	20,084	31,796	30,107	34,207	39,275	45,131	51,670
Total Equity	72,752	84,464	82,774	86,875	91,943	97,799	104,338
Long Term Liability							
Security Deposits	3,872	4,455	4,649	4,858	5,087	5,339	5,619
Employee Retirement Benefits	24,707	25,679	28,320	31,232	34,445	37,987	41,894
TFCs /Development loan	1,156	1,207	1,073	940	806	673	673
Deferred Credits	24,702	26,823	28,972	31,634	34,515	37,677	41,175
Long Term financing/ Payable	-	-	4,233	2,989	1,585	0	0
Total Long Term Liability	54,437	58,164	67,247	71,653	76,438	81,676	89,360
Current Liability							
Current Maturity on Long Term Loans	383	134	1,236	1,378	1,538	1,718	(0)
Subsidy Received in Advance from GoP	-	-	-	-	-	-	-
Markup payable	435	19	479	405	323	232	130
Payable to NTDC	383	1,091	1,173	1,259	1,354	1,455	1,565
Payable to Associated Companies	911	892	892	892	892	892	892
Other Liabilities	6,654	7,571	7,695	8,116	8,479	8,876	9,301
Total Current Liability	8,766	9,707	11,476	12,051	12,586	13,174	11,890
Total Liabilities and Commitments	63,203	67,871	78,723	83,704	89,024	94,850	101,250
Total Liabilities and Equity	135,955	152,335	161,498	170,579	180,967	192,649	205,587

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Cash Flow Statement [in Million Rupees]

Description	Current: for FY ending 30-06-2015 (Act/Proj)	Projected for FY ending 30-06-2016 (Projected)	Projected for FY ending 30-06-2017 (Projected)	Projected for FY ending 30-06-2018 (Projected)	Projected for FY ending 30-06-2019 (Projected)	Projected for FY ending 30-06-2020 (Projected)
Average Monthly Demand Index (MDI) [MW]	2,249	2,361	2,480	2,604	2,734	2,870
Units Purchased [GWh]	11,243	11,960	12,689	13,489	14,326	15,230
Transmission Losses (132 kV) [GWh]	220	239	241	250	279	297
Distribution Losses [GWh]	1,017	1,064	1,099	1,153	1,174	1,224
Units Sold to Customers [GWh]	10,006	10,657	11,349	12,087	12,873	13,709
Average Tariff Required [Rs/unit]	10.916	12.209	12.787	12.942	13.061	13.171
Average Tariff Existing [Rs/unit]	10.916	10.916	10.916	10.916	10.916	10.916
Tariff Difference [Rs/unit]	0.000	1.293	1.871	2.026	2.145	2.255
Revenue from Sales [%]	127.509	130.110	145.119	156.433	168.126	180.562
Collection from Required	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Inflows from Operations						
Collection from Current Sales	105,058	128,858	144,418	155,686	167,331	179,715
Total Inflows from Operations	105,058	128,858	144,418	155,686	167,331	179,715
Outflow from Operations						
Payment against Provisions	2,802	3,363	3,564	3,778	3,986	4,185
Payment for electricity (to CPPA)	104,919	113,490	121,813	130,957	140,762	151,451
Distribution Service Cost (=DMC)	8,816	12,678	13,618	14,596	15,550	16,477
Taxes paid	0	2	0	0	0	0
Increase in long term deposits	116,538	129,533	138,995	149,331	160,298	172,114
Total Outflow from Operations	116,538	129,533	138,995	149,331	160,298	172,114
Surplus/Deficit from Operations	(11,480)	(674)	5,423	6,355	7,033	7,601
Inflows from Other Sources						
Capital Contributions	2,885	3,753	4,053	4,428	4,879	5,404
Consumer Security Deposits	583	499	403	438	481	531
Other Incomes	3,186	2,565	2,724	2,901	3,127	3,331
GOP Subsidy (Actual and Estimated)	19,953	21,829	25,136	28,652	32,109	35,720
Long Term Loan / Redeemable Capital	-	6,313	-	-	-	-
Additional Equity Investment	26,607	34,959	32,317	36,420	40,595	44,987
Total Inflows from Other Sources	26,607	34,959	32,317	36,420	40,595	44,987
Outflow Others						
Financial Charges	640	498	884	728	555	362
Repayment of Long Term Loans	187	1,111	1,236	1,378	1,538	1,718
Investment Program	2,649	14,554	9,329	11,364	12,901	14,374
Working Capital & Other Changes	12,091	16,231	27,254	27,079	29,132	30,896
Total Outflow Others	15,568	32,394	38,703	40,548	44,125	47,350
Surplus/Deficit Others	11,040	2,565	(6,387)	(4,128)	(3,530)	(2,363)
Total Inflows (Operations + Others)	131,665	163,817	176,735	192,106	207,926	224,702
Total Outflows (Operations + Others)	132,106	161,926	177,698	189,880	204,423	219,464
Opening Balance	5,442	5,002	6,892	5,928	8,155	11,657
Surplus/Deficit for Fiscal Year	(441)	1,891	(964)	2,227	3,502	5,238
Deficit from Financing/Loans	-	-	-	-	-	-
Closing Balance	5,002	6,892	5,928	8,155	11,657	16,895

FORM 6

2014-15

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Demand & Energy														
Units Received	[MkWh]	1,176	1,199	1,059	959	755	756	670	694	757	870	1,172	1,178	11,243
MDI	[MW]	2,419	2,461	2,428	2,183	1,810	2,074	1,951	1,973	2,109	2,367	2,608	2,605	-
Energy Purchase Price	[Rs/ kWh]	7.737	7.011	7.025	7.364	4.815	6.589	9.575	4.886	6.333	6.599	5.046	4.856	6.456
Capacity Purchase Price	[Rs/ kW/ M]	1.996	1.902	2.463	2.487	4.224	3.401	3.736	3.457	3.351	2.354	2.533	2.071	2.693
Transmission Charge	[Rs/ kW/ M]	0.211	0.210	0.235	0.233	0.246	0.281	0.298	0.291	0.286	0.279	0.228	0.227	0.246
Power Purchase Cost														
Energy Charge	[Min Rs]	9,096	8,408	7,438	7,062	3,637	4,980	6,414	3,392	4,792	5,739	5,912	5,719	72,589
Capacity Charge	[Min Rs]	2,346	2,281	2,608	2,385	3,191	2,571	2,503	2,400	2,536	2,047	2,967	2,439	30,274
Transmission Charge	[Min Rs]	248	252	249	224	185	212	200	202	216	242	267	267	2,764
Prior Year Adjustment	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Cost	[Min Rs]	11,691	10,941	10,295	9,671	7,013	7,763	9,116	5,994	7,543	8,029	9,147	8,425	105,627

FORM 6 (A)

2015-16

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
Demand & Energy														
Units Received	[MkWh]	1,277.00	1,273.31	1,123.58	1,017.28	801.39	801.92	710.40	736.33	802.81	922.12	1,243.78	1,250.00	11,960
MDI	[MW]	2,540.01	2,583.66	2,549.59	2,292.54	1,901.00	2,177.23	2,048.23	2,071.18	2,214.85	2,484.91	2,738.67	2,735.72	28,338
Energy Purchase Price	[Rs/ kWh]	7.74	7.01	7.03	7.36	4.81	6.59	9.57	4.89	6.33	6.60	5.05	4.86	6.46
Capacity Purchase Price	[Rs/ kW/ M]	2.03	1.98	2.56	2.59	4.39	3.54	3.89	3.60	3.49	2.45	2.63	2.15	2.79
Transmission Charge	[Rs/ kW/ M]	0.20	0.21	0.23	0.23	0.24	0.28	0.30	0.29	0.28	0.28	0.23	0.22	0.24
Power Purchase Cost														
Energy Charge	[Min Rs]	9,880.44	8,926.64	7,893.40	7,491.63	3,858.62	5,284.10	6,801.85	3,597.80	5,084.09	6,085.28	6,276.50	6,070.62	77,251
Capacity Charge	[Min Rs]	2,590.17	2,517.94	2,878.69	2,632.79	3,521.97	2,837.67	2,762.85	2,649.23	2,798.98	2,260.10	3,275.65	2,692.18	33,418
Transmission Charge	[Min Rs]	260.17	264.64	261.15	234.82	194.72	223.01	209.80	212.15	226.87	254.53	280.52	280.22	2,903
Adjustment	[Min Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Cost	[Min Rs]	12,730.78	11,709.22	11,033.25	10,359.24	7,575.30	8,344.79	9,774.49	6,459.18	8,109.94	8,599.91	9,832.66	9,043.03	113,572

b

2016-17

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
Demand & Energy														
Units Received	[MkWh]	1,356.00	1,352.08	1,192.62	1,079.40	849.48	850.04	752.57	780.19	850.99	978.06	1,320.62	1,327.40	12,689.46
MDI	[MW]	2,667.01	2,712.84	2,677.07	2,407.16	1,996.05	2,286.09	2,150.64	2,174.74	2,325.59	2,609.16	2,875.60	2,872.51	29,754.47
Energy Purchase Price	[Rs/ kWh]	7.74	7.01	7.03	7.36	4.81	6.59	9.57	4.89	6.33	6.60	5.05	4.86	6.46
Capacity Purchase Price	[Rs/ kW/ M]	2.11	2.06	2.66	2.69	4.58	3.69	4.05	3.75	3.63	2.55	2.74	2.24	2.91
Transmission Charge	[Rs/ kW/ M]	0.20	0.21	0.23	0.23	0.24	0.28	0.29	0.29	0.28	0.27	0.22	0.22	0.24
Power Purchase Cost														
Energy Charge	[Mln Rs]	10,491.72	9,478.83	8,378.37	7,949.13	4,090.17	5,601.21	7,205.67	3,812.12	5,389.23	6,454.43	6,664.28	6,446.53	81,961.67
Capacity Charge	[Mln Rs]	2,859.21	2,779.48	3,177.71	2,906.26	3,887.80	3,132.42	3,049.82	2,924.41	3,089.71	2,494.86	3,615.89	2,971.82	36,889.39
Transmission Charge	[Mln Rs]	273.18	277.88	274.21	246.57	204.46	234.16	220.29	222.76	238.21	267.26	294.55	294.23	3,047.75
Adjustment	[Mln Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Cost	[Mln Rs]	13,624.11	12,536.18	11,830.29	11,101.95	8,182.42	8,967.80	10,475.78	6,959.28	8,717.15	9,216.54	10,574.72	9,712.59	121,899

2017-18

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
Demand & Energy														
Units Received	[MkWh]	1,442.15	1,437.96	1,268.14	1,146.56	904.70	902.30	801.49	827.90	903.31	1,038.63	1,404.46	1,411.68	13,489.27
MDI	[MW]	2,800.37	2,848.48	2,810.93	2,527.52	2,095.85	2,400.39	2,258.17	2,283.48	2,441.87	2,739.62	3,019.38	3,016.13	31,242.19
Energy Purchase Price	[Rs/ kWh]	7.74	7.01	7.03	7.36	4.81	6.59	9.57	4.89	6.33	6.60	5.05	4.86	6.46
Capacity Purchase Price	[Rs/ kW/ M]	2.19	2.13	2.77	2.80	4.74	3.83	4.20	3.90	3.78	2.65	2.84	2.32	3.02
Transmission Charge	[Rs/ kW/ M]	0.20	0.20	0.23	0.23	0.24	0.27	0.29	0.28	0.28	0.27	0.22	0.22	0.24
Power Purchase Cost														
Energy Charge	[Mln Rs]	11,158.20	10,080.93	8,908.92	8,443.73	4,356.03	5,945.52	7,674.04	4,045.25	5,720.53	6,854.17	7,087.37	6,855.84	87,130.51
Capacity Charge	[Mln Rs]	3,156.20	3,068.18	3,507.78	3,208.13	4,291.63	3,457.79	3,366.61	3,228.17	3,410.64	2,754.00	3,991.47	3,280.51	40,721.11
Transmission Charge	[Mln Rs]	286.84	291.77	287.92	258.89	214.68	245.87	231.30	233.90	250.12	280.62	309.28	308.94	3,200.14
Adjustment	[Mln Rs]	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Cost	[Mln Rs]	14,601.25	13,440.88	12,704.61	11,910.76	8,862.33	9,649.18	11,271.95	7,507.31	9,381.29	9,888.79	11,388.12	10,445.29	131,051.76

2018-19

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
Demand & Energy														
Units Received	[MkWh]	1,535.88	1,527.43	1,346.57	1,217.09	959.50	956.95	853.59	877.71	958.02	1,102.14	1,491.75	1,499.44	14,326.08
MDI	[MW]	2,940.38	2,990.91	2,951.47	2,653.90	2,200.64	2,520.41	2,371.08	2,397.65	2,563.97	2,876.60	3,170.35	3,166.94	32,804.30
Energy Purchase Price	[Rs/ kWh]	7.74	7.01	7.03	7.36	4.81	6.59	9.57	4.89	6.33	6.60	5.05	4.86	6.46
Capacity Purchase Price	[Rs/ kW/ M]	2.27	2.22	2.88	2.91	4.94	3.99	4.35	4.06	3.93	2.76	2.95	2.42	3.14
Transmission Charge	[Rs/ kW/ M]	0.20	0.20	0.22	0.22	0.23	0.27	0.28	0.28	0.27	0.27	0.22	0.22	0.23
Power Purchase Cost														
Energy Charge	[Mln Rs]	11,883.49	10,708.15	9,459.89	8,963.11	4,619.91	6,305.62	8,172.85	4,288.64	6,067.03	7,273.29	7,527.86	7,282.05	92,551.89
Capacity Charge	[Mln Rs]	3,484.04	3,386.88	3,872.13	3,541.36	4,737.40	3,816.95	3,716.30	3,563.48	3,764.91	3,040.06	4,406.07	3,621.26	44,950.84
Transmission Charge	[Mln Rs]	301.18	306.36	302.32	271.84	225.41	258.17	242.87	245.59	262.63	294.65	324.74	324.39	3,360.14
Adjustment	[Mln Rs]													
Total Operating Cost	[Mln Rs]	15,668.71	14,401.38	13,634.34	12,776.32	9,582.72	10,380.74	12,132.02	8,097.71	10,094.56	10,608.00	12,258.67	11,227.69	140,862.88

2019-20

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
Demand & Energy														
Units Received	[MkWh]	1,635.72	1,626.71	1,434.09	1,296.20	1,015.07	1,012.35	909.07	927.96	1,013.49	1,173.78	1,588.71	1,596.91	15,230.07
MDI	[MW]	3,087.40	3,140.45	3,099.05	2,786.59	2,310.68	2,646.43	2,489.63	2,517.53	2,692.16	3,020.43	3,328.87	3,325.29	34,444.52
Energy Purchase Price	[Rs/ kWh]	7.74	7.01	7.03	7.36	4.81	6.59	9.57	4.89	6.33	6.60	5.05	4.86	6.46
Capacity Purchase Price	[Rs/ kW/ M]	2.35	2.30	2.98	3.02	5.15	4.16	4.51	4.24	4.10	2.86	3.06	2.50	3.26
Transmission Charge	[Rs/ kW/ M]	0.19	0.20	0.22	0.22	0.23	0.27	0.28	0.28	0.27	0.26	0.21	0.21	0.23
Power Purchase Cost														
Energy Charge	[Mln Rs]	12,655.91	11,404.18	10,074.79	9,545.72	4,887.46	6,670.68	8,704.09	4,534.18	6,418.32	7,746.06	8,017.17	7,755.38	98,413.93
Capacity Charge	[Mln Rs]	3,845.93	3,738.68	4,274.33	3,909.21	5,229.48	4,213.42	4,102.32	3,933.62	4,155.97	3,355.84	4,863.73	3,997.40	49,619.91
Transmission Charge	[Mln Rs]	316.24	321.68	317.44	285.43	236.68	271.07	255.01	257.87	275.76	309.38	340.98	340.61	3,528.15
Adjustment	[Mln Rs]													
Total Operating Cost	[Mln Rs]	16,818.08	15,464.53	14,666.55	13,740.35	10,353.62	11,155.18	13,061.42	8,725.67	10,850.05	11,411.27	13,221.88	12,093.39	151,562.00

6

FY 2014-15

Quarterly Adjustments - Qrt -I

EPP Adjustment

EPP - 1st month of the Qrt

Reference -	7.0622
Actual	7.4953
Disallowed	0.0026
Fuel Price Adjustment Allowed	<u>0.4331</u>

EPP - 2nd month of the Qrt

Reference -	7.0755
Actual	6.7739
Disallowed	0.0072
Fuel Price Adjustment Allowed	<u>(0.3016)</u>

EPP - 3rd month of the Qrt

Reference -	6.2493
Actual	6.7665
Disallowed	0.0090
Fuel Price Adjustment Allowed	<u>0.5171</u>

	Target Losses for the quarter	9.50%
1st month of the Qrt	1st month of the Qrt	1,176
	Units Received (MkWh)	916
	Units sold (MkWh)	896
	Units without Life line	386
	Adjustment already given (Min Rs)	509
	Adjustment that should have been with allowed costs only (Min Rs)	3
	Impact of disallowed costs (Min Rs)	121
	Remaining adjustment for the quarter only allowed (Min Rs)	124
	Remaining adjustment for the quarter with allowed & disallowed (Min Rs)	
2nd month of the Qrt	2nd month of the Qrt	1,199
	Units Received (MkWh)	1,078
	Units sold (MkWh)	955
	Units without Life line & Agricultural Consumers	(288)
	Adjustment already given (Min Rs)	(362)
	Adjustment that should have been with allowed costs only (Min Rs)	9
	Impact of disallowed costs (Min Rs)	(74)
	Remaining adjustment for the quarter only allowed (Min Rs)	(65)
	Remaining adjustment for the quarter with allowed & disallowed (Min Rs)	
3rd month of the Qrt	3rd month of the Qrt	1,059
	Units Received (MkWh)	982
	Units sold (MkWh)	961
	Units without Life line	497
	Adjustment already given (Min Rs)	548
	Adjustment that should have been with allowed costs only (Min Rs)	10
	Impact of disallowed costs (Min Rs)	50
	Remaining adjustment for the quarter (Min Rs)	60
	Remaining adjustment for the quarter with allowed & disallowed (Min Rs)	98
	Total Adjustment on account of EPP allowed only (Min Rs)	119
Total Adjustment on account of EPP allowed and disallowed (Min Rs)		

VARIABLE O&M ADJUSTMENT

Ref for the 1st month of the Qrt

1st Month of the Qtr.

Actual O&M per kWh

Delta O&M per kWh

Adjustment Required for the Month (Min Rs)

Ref. for the 2nd month of the Qrt

2nd Month of the Qtr.

Actual O&M per kWh

Delta O&M per kWh

Adjustment Required for the Month (Min Rs)

Ref. for the 3rd month of the qrt

3rd Month of the Qtr.

Actual O&M per kWh

Delta O&M per kWh

Adjustment Required for the Month (Min Rs)

Total Adjustment on account of O&M (Min Rs)

b

CPP ADJUSTMENT	1.9991
Ref for the 1st month of the Qrt	
1st month of the Qrt	1.9959
Actual CPP per kWh	(0.0032)
Delta CPP per kWh	(4)
Adjustment Required for the Month (Mln Rs)	2.0629
Ref. for the 2nd month of the Qrt	
2nd month of the Qrt	1.9019
Actual CPP per kWh	(0.1610)
Delta CPP per kWh	(193)
Adjustment Required for the Month (Mln Rs)	1.7717
Ref. for the 3rd month of the qrt	
3rd month of the Qrt	2.4631
Actual CPP per kWh	0.6914
Delta CPP per kWh	732
Adjustment Required for the Month (Mln Rs)	535
Total Adjustment on account of CPP (Mln Rs)	
UoSC ADJUSTMENT	0.1871
Ref for the 1st month of the Qrt	
1st month of the Qrt	0.2108
Actual UoSC per kWh	0.0237
Delta UoSc per kWh	28
Adjustment Required for the Month (Mln Rs)	0.1859
Ref. for the 2nd month of the Qrt	
2nd month of the Qrt	0.2101
Actual UoSC per kWh	0.0242
Delta UoSc per kWh	29
Adjustment Required for the Month (Mln Rs)	0.1881
Ref. for the 3rd month of the qrt	
3rd month of the Qrt	0.2349
Actual UoSC per kWh	0.0468
Delta UoSc per kWh	50
Adjustment Required for the Month (Mln Rs)	106
Total Adjustment on account of UoSC (Mln Rs)	841
Total Adjustment for the quarter allowed costs only (Mln Rs)	862
Total Adjustment for the quarter allowed & Disallowed costs only (Mln Rs)	
Impact of Extra or Less Purchases	
Ref Unit Purchased (M kWh)	931
1st month of the Qrt	989
2nd month of the Qrt	963
3rd month of the Qrt	
Actual Unit Purchased (M kWh)	1,176
1st month of the Qrt	1,199
2nd month of the Qrt	1,059
3rd month of the Qrt	
Difference (M kWh)	245
1st month of the Qrt	210
2nd month of the Qrt	96
3rd month of the Qrt	
PPP Ref (Per kWh)	
Ref PPP (per kWh)	9.4669
1st month of the Qrt	9.5312
2nd month of the Qrt	8.4115
3rd month of the Qrt	
Impact of extra Purchases (Rs. Millions)	5,127
Net remaining Adjustment for the Quarter (Rs. Million)	5,968

Quarterly Adjustments - Qrt -II

EPP Adjustment

EPP - 1st month of the Qrt

Reference -	7.5462
Actual	7.0667
Disallowed	0.0126
Fuel Price <u>Adjustment Allowed</u>	<u>(0.4795)</u>

EPP - 2nd month of the Qrt

Reference -	7.4167
Actual	4.4495
Disallowed	0.0502
Fuel Price <u>Adjustment Allowed</u>	<u>(2.9672)</u>

EPP - 3rd month of the Qrt

Reference -	9.5328
Actual	6.2902
Disallowed	0.0339
Fuel Price <u>Adjustment Allowed</u>	<u>(3.2426)</u>

	9.50%
	Target Losses for the quarter
1st month of the Qrt	1st month of the Qrt
	Units Received (MkWh)
	Units sold (MkWh)
	Units without Life line & Agricultural Consumers
	Adjustment already given (Mln Rs)
	Adjustment that should have been with allowed costs only (Mln Rs)
	Impact of disallowed costs (Mln Rs)
	Remaining adjustment for the quarter only allowed (Mln Rs)
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)
2nd month of the Qrt	2nd month of the Qrt
	Units Received (MkWh)
	Units sold (MkWh)
	Units without Life line & Agricultural Consumers
	Adjustment already given (Mln Rs)
	Adjustment that should have been with allowed costs only (Mln Rs)
	Impact of disallowed costs (Mln Rs)
	Remaining adjustment for the quarter only allowed (Mln Rs)
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)
3rd month of the Qrt	3rd month of the Qrt
	Units Received (MkWh)
	Units sold (MkWh)
	Units without Life line & Agricultural Consumers
	Adjustment already given (Mln Rs)
	Adjustment that should have been with allowed costs only (Mln Rs)
	Impact of disallowed costs (Mln Rs)
	Remaining adjustment for the quarter (Mln Rs)
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)
	Total Adjustment on account of EPP allowed only (Mln Rs)
	Total Adjustment on account of EPP allowed and disallowed (Mln Rs)

VARIABLE O&M ADJUSTMENT

Ref for the 1st month of the Qrt

1st Month of the Qtr.

Actual O&M per kWh

Delta O&M per kWh

Adjustment Required for the Month (Mln Rs)

Ref. for the 2nd month of the Qrt

2nd Month of the Qtr.

Actual O&M per kWh

Delta O&M per kWh

Adjustment Required for the Month (Mln Rs)

Ref. for the 3rd month of the qrt

3rd Month of the Qtr.

Actual O&M per kWh

Delta O&M per kWh

Adjustment Required for the Month (Mln Rs)

Total Adjustment on account of O&M (Mln Rs)

CPP ADJUSTMENT

Ref for the 1st month of the Qrt	2.2599
1st month of the Qrt	
Actual CPP per kWh	2.4872
Delta CPP per kWh	0.2273
Adjustment Required for the Month (Mln Rs)	218
Ref. for the 2nd month of the Qrt	2.7879
2nd month of the Qrt	
Actual CPP per kWh	4.2243
Delta CPP per kWh	1.4364
Adjustment Required for the Month (Mln Rs)	1,085
Ref. for the 3rd month of the qrt	3.2305
3rd month of the Qrt	
Actual CPP per kWh	3.4013
Delta CPP per kWh	0.1708
Adjustment Required for the Month (Mln Rs)	129
Total Adjustment on account of CPP (Mln Rs)	1,432

UoSC ADJUSTMENT

Ref for the 1st month of the Qrt	0.2188
1st month of the Qrt	
Actual UoSC per kWh	0.2332
Delta UoSc per kWh	0.0144
Adjustment Required for the Month (Mln Rs)	14
Ref. for the 2nd month of the Qrt	0.2429
2nd month of the Qrt	
Actual UoSC per kWh	0.2455
Delta UoSc per kWh	0.0026
Adjustment Required for the Month (Mln Rs)	2
Ref. for the 3rd month of the qrt	0.2742
3rd month of the Qrt	
Actual UoSC per kWh	0.2810
Delta UoSc per kWh	0.0068
Adjustment Required for the Month (Mln Rs)	5
Total Adjustment on account of UoSC (Mln Rs)	21
Total Adjustment for the quarter allowed costs only (Mln Rs)	709
Total Adjustment for the quarter allowed & Disallowed costs only (Mln Rs)	785

Impact of Extra or Less Purchases

Ref Unit Purchased (MWh)	
1st month of the Qrt	909
2nd month of the Qrt	744
3rd month of the Qrt	669
Actual Unit Purchased (MWh)	
1st month of the Qrt	959
2nd month of the Qrt	755
3rd month of the Qrt	756
Difference (MWh)	
1st month of the Qrt	50
2nd month of the Qrt	11
3rd month of the Qrt	87
PPP Ref (Per kWh)	
1st month of the Qrt	10.2518
2nd month of the Qrt	10.6625
3rd month of the Qrt	13.2997
Impact of extra Purchases (Rs. Millions)	1,787

Net remaining Adjustment for the Quarter (Rs. Million)

2,496

Quarterly Adjustments - Qrt -III

EPP Adjustment

EPP - 1st month of the Qrt	11.3605
Reference -	9.5747
Actual	
Disallowed	
Fuel Price <u>Adjustment Allowed</u>	<u>(1.7858)</u>
EPP - 2nd month of the Qrt	8.9972
Reference -	4.8862
Actual	
Disallowed	
Fuel Price <u>Adjustment Allowed</u>	<u>(4.1110)</u>
EPP - 3rd month of the Qrt	9.6341
Reference -	6.0144
Actual	
Disallowed	
Fuel Price <u>Adjustment Allowed</u>	<u>(3.6197)</u>

	Target Losses for the quarter	9.50%
1st month of the Qrt	1st month of the Qrt	670
	Units Received (MkWh)	655
	Units sold (MkWh)	566
	Units without Life line & Agricultural Consumers	(1,015)
	Adjustment already given (Mln Rs)	(1,196)
	Adjustment that should have been with allowed costs only (Mln Rs)	-
	Impact of disallowed costs (Mln Rs)	(181)
	Remaining adjustment for the quarter only allowed (Mln Rs)	(181)
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)	(181)
2nd month of the Qrt	2nd month of the Qrt	694
	Units Received (MkWh)	644
	Units sold (MkWh)	540
	Units without Life line & Agricultural Consumers	(2,219)
	Adjustment already given (Mln Rs)	(2,854)
	Adjustment that should have been with allowed costs only (Mln Rs)	-
	Impact of disallowed costs (Mln Rs)	(635)
	Remaining adjustment for the quarter only allowed (Mln Rs)	(635)
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)	(635)
3rd month of the Qrt	3rd month of the Qrt	757
	Units Received (MkWh)	674
	Units sold (MkWh)	601
	Units without Life line & Agricultural Consumers	(2,175)
	Adjustment already given (Mln Rs)	(2,738)
	Adjustment that should have been with allowed costs only (Mln Rs)	-
	Impact of disallowed costs (Mln Rs)	(563)
	Remaining adjustment for the quarter (Mln Rs)	(563)
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)	(1,379)
	Total Adjustment on account of EPP allowed only (Mln Rs)	(1,379)
	Total Adjustment on account of EPP allowed and disallowed (Mln Rs)	

VARIABLE O&M ADJUSTMENT

Ref for the 1st month of the Qrt	0.2638
1st Month of the Qtr.	0.2955
Actual O&M per kWh	0.0317
Delta O&M per kWh	21
Adjustment Required for the Month (Mln Rs)	
Ref. for the 2nd month of the Qrt	0.2430
2nd Month of the Qtr.	0.2625
Actual O&M per kWh	0.0195
Delta O&M per kWh	14
Adjustment Required for the Month (Mln Rs)	
Ref. for the 3rd month of the qrt	0.2529
3rd Month of the Qtr.	0.2916
Actual O&M per kWh	0.0387
Delta O&M per kWh	29
Adjustment Required for the Month (Mln Rs)	64
Total Adjustment on account of O&M (Mln Rs)	

CPP ADJUSTMENT

Ref for the 1st month of the Qrt	2.6517
1st month of the Qrt	
Actual CPP per kWh	3.7364
Delta CPP per kWh	1.0847
Adjustment Required for the Month (Mln Rs)	727
Ref. for the 2nd month of the Qrt	3.8201
2nd month of the Qrt	
Actual CPP per kWh	3.4571
Delta CPP per kWh	(0.3630)
Adjustment Required for the Month (Mln Rs)	(252)
Ref. for the 3rd month of the qrt	3.0136
3rd month of the Qrt	
Actual CPP per kWh	3.3512
Delta CPP per kWh	0.3376
Adjustment Required for the Month (Mln Rs)	255
Total Adjustment on account of CPP (Mln Rs)	730

UoSC ADJUSTMENT

Ref for the 1st month of the Qrt	0.2231
1st month of the Qrt	
Actual UoSC per kWh	0.2983
Delta UoSc per kWh	0.0752
Adjustment Required for the Month (Mln Rs)	50
Ref. for the 2nd month of the Qrt	0.3135
2nd month of the Qrt	
Actual UoSC per kWh	0.2911
Delta UoSc per kWh	(0.0224)
Adjustment Required for the Month (Mln Rs)	(16)
Ref. for the 3rd month of the qrt	0.2563
3rd month of the Qrt	
Actual UoSC per kWh	0.2856
Delta UoSc per kWh	0.0293
Adjustment Required for the Month (Mln Rs)	22
Total Adjustment on account of UoSC (Mln Rs)	57
Total Adjustment for the quarter allowed costs only (Mln Rs)	(528)
Total Adjustment for the quarter allowed & Disallowed costs only (Mln Rs)	(528)

Impact of Extra or Less Purchases

Ref Unit Purchased (M kWh)	
1st month of the Qrt	647
2nd month of the Qrt	557
3rd month of the Qrt	651
Actual Unit Purchased (M kWh)	
1st month of the Qrt	670
2nd month of the Qrt	694
3rd month of the Qrt	757
Difference (M kWh)	
1st month of the Qrt	23
2nd month of the Qrt	137
3rd month of the Qrt	106

PPP Ref (Per kWh)

Ref PPP (per kWh)	
1st month of the Qrt	14.2353
2nd month of the Qrt	13.3738
3rd month of the Qrt	13.1569

Impact of extra Purchases (Rs. Millions) 3,549

Net remaining Adjustment for the Quarter (Rs. Million) 3,021

Quarterly Adjustments - Qrt -IV

EPP Adjustment

EPP - 1st month of the Qrt

Reference -	8.9297
Actual	7.0684
Disallowed	
Fuel Price <u>Adjustment Allowed</u>	<u>(1.8613)</u>

EPP - 2nd month of the Qrt

Reference -	8.0982
Actual	5.0463
Disallowed	
Fuel Price <u>Adjustment Allowed</u>	<u>(3.0519)</u>

EPP - 3rd month of the Qrt

Reference -	6.8288
Actual	4.8565
Disallowed	
Fuel Price <u>Adjustment Allowed</u>	<u>(1.9723)</u>

1st month of the Qrt	Target Losses for the quarter	9.50%
	1st month of the Qrt	
	Units Received (MkWh)	870
	Units sold (MkWh)	766
	Units without Life line & Agricultural Consumers	411
	Adjustment already given (Mln Rs)	(765)
	Adjustment that should have been with allowed costs only (Mln Rs)	(1,619)
	Impact of disallowed costs (Mln Rs)	-
	Remaining adjustment for the quarter only allowed (Mln Rs)	<u>(854)</u>
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)	<u>(854)</u>
2nd month of the Qrt	2nd month of the Qrt	
	Units Received (MkWh)	1,172
	Units sold (MkWh)	951
	Units without Life line & Agricultural Consumers	833
	Adjustment already given (Mln Rs)	(2,543)
	Adjustment that should have been with allowed costs only (Mln Rs)	(3,576)
	Impact of disallowed costs (Mln Rs)	-
	Remaining adjustment for the quarter only allowed (Mln Rs)	<u>(1,032)</u>
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)	<u>(1,032)</u>
3rd month of the Qrt	3rd month of the Qrt	
	Units Received (MkWh)	1,178
	Units sold (MkWh)	1,006
	Units without Life line & Agricultural Consumers	929
	Adjustment already given (Mln Rs)	(1,832)
	Adjustment that should have been with allowed costs only (Mln Rs)	(2,323)
	Impact of disallowed costs (Mln Rs)	-
	Remaining adjustment for the quarter (Mln Rs)	<u>(491)</u>
	Remaining adjustment for the quarter with allowed & disallowed (Mln Rs)	<u>(491)</u>
	Total Adjustment on account of EPP allowed only (Mln Rs)	<u>(2,377)</u>
	Total Adjustment on account of EPP allowed and disallowed (Mln Rs)	<u>(2,377)</u>

VARIABLE O&M ADJUSTMENT

Ref for the 1st month of the Qrt	0.2598
1st Month of the Qtr.	
Actual O&M per kWh	0.2970
Delta O&M per kWh	0.0372
Adjustment Required for the Month (Mln Rs)	<u>32</u>
Ref. for the 2nd month of the Qrt	0.2431
2nd Month of the Qtr.	
Actual O&M per kWh	
Delta O&M per kWh	(0.2431)
Adjustment Required for the Month (Mln Rs)	<u>(285)</u>
Ref. for the 3rd month of the qrt	0.2179
3rd Month of the Qtr.	
Actual O&M per kWh	
Delta O&M per kWh	(0.2179)
Adjustment Required for the Month (Mln Rs)	<u>(257)</u>
Total Adjustment on account of O&M (Mln Rs)	<u>(509)</u>

CPP ADJUSTMENT

Ref for the 1st month of the Qrt	3.1291
1st month of the Qrt	
Actual CPP per kWh	2.354
Delta CPP per kWh	(0.7746)
Adjustment Required for the Month (Mln Rs)	(674)
Ref. for the 2nd month of the Qrt	2.7536
2nd month of the Qrt	
Actual CPP per kWh	2.53
Delta CPP per kWh	(0.2208)
Adjustment Required for the Month (Mln Rs)	(259)
Ref. for the 3rd month of the qrt	2.5318
3rd month of the Qrt	
Actual CPP per kWh	2.47
Delta CPP per kWh	(0.0579)
Adjustment Required for the Month (Mln Rs)	(68)
Total Adjustment on account of CPP (Mln Rs)	(1,001)

UoSC ADJUSTMENT

Ref for the 1st month of the Qrt	0.2779
1st month of the Qrt	
Actual UoSC per kWh	0.2788
Delta UoSc per kWh	0.0009
Adjustment Required for the Month (Mln Rs)	1
Ref. for the 2nd month of the Qrt	0.2497
2nd month of the Qrt	
Actual UoSC per kWh	0.2280
Delta UoSc per kWh	(0.0217)
Adjustment Required for the Month (Mln Rs)	(25)
Ref. for the 3rd month of the qrt	0.2631
3rd month of the Qrt	
Actual UoSC per kWh	0.2257
Delta UoSc per kWh	(0.0374)
Adjustment Required for the Month (Mln Rs)	(44)
Total Adjustment on account of UoSC (Mln Rs)	(69)
Total Adjustment for the quarter allowed costs only (Mln Rs)	(3,955)
Total Adjustment for the quarter allowed & Disallowed costs only (Mln Rs)	(3,955)

Impact of Extra or Less Purchases

Ref Unit Purchased (M kWh)	
1st month of the Qrt	669
2nd month of the Qrt	794
3rd month of the Qrt	891

Actual Unit Purchased (M kWh)	
1st month of the Qrt	870
2nd month of the Qrt	1,172
3rd month of the Qrt	1,178

Difference (M kWh)	
1st month of the Qrt	201
2nd month of the Qrt	378
3rd month of the Qrt	287

PPP Ref (Per kWh)

Ref PPP (per kWh)	
1st month of the Qrt	12.3367
2nd month of the Qrt	11.3446
3rd month of the Qrt	9.8416

Impact of extra Purchases (Rs. Millions) 9,580Net remaining Adjustment for the Quarter (Rs. Million) 5,625


FORM - 7

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Line Losses (2014-15)

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Power Balances														
Units Received	(MkWh)	1,176	1,199	1,059	959	755	756	670	694	757	870	1,172	1,178	11,243
Units Received at 11KV	(MkWh)	1,154	1,177	1,036	933	739	737	667	678	746	857	1,131	1,168	11,023
Units Sold	(MkWh)	916	1,078	982	888	730	716	655	644	675	766	951	1,006	10,006
Units Lost	(MkWh)	259	122	77	71	25	40	15	50	82	104	221	172	1,237
Units Lost(T&D)	(%age)	22.0%	10.2%	7.3%	7.4%	3.3%	5.2%	2.3%	7.2%	10.9%	11.9%	18.9%	14.6%	11.0%
Technical Losses	(%age)	21.3%	9.5%	6.9%	7.1%	3.1%	5.0%	2.0%	6.9%	10.5%	11.5%	18.6%	13.8%	10.5%
Administrative Losses (Estimated)	(%age)	0.8%	0.7%	0.4%	0.3%	0.3%	0.2%	0.2%	0.3%	0.4%	0.5%	0.3%	0.8%	0.5%
Technical Losses at Different Levels														
Transmission Losses 132 kV	(%age)	1.8%	1.9%	2.1%	2.7%	2.1%	2.5%	0.5%	2.4%	1.5%	1.4%	3.5%	0.8%	2.0%
11 kV + Transformer + Cable Meter	(%age)	15.1%	6.0%	3.5%	3.2%	0.9%	1.4%	0.9%	3.1%	5.3%	7.0%	12.0%	9.5%	6.34%
LT Losses	(%age)	4.4%	1.6%	1.3%	1.2%	0.1%	1.1%	0.6%	1.4%	3.1%	3.1%	3.1%	3.6%	2.20%
Total Technical Losses	(%age)	21.3%	9.5%	6.9%	7.1%	3.1%	5.0%	2.0%	6.9%	10.5%	11.5%	18.6%	13.8%	10.5%

FORM - 7 (A)

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Line Losses (2015-16)

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Power Balances														
Units Received	(MkWh)	1,277	1,273	1,124	1,017	801	802	710	736	803	922	1,244	1,250	11,960
Units Received at 11KV	(MkWh)	1241	1241	1104	1001	789	789	704	725	790	906	1214	1215	11,720
Units Sold	(MkWh)	976	1,148	1,046	946	778	763	697	686	718	816	1,013	1,071	10,657
Units Lost	(MkWh)	301	126	78	71	24	39	13	50	84	106	231	179	1,303
Units Lost(T&D)	(%age)	23.6%	9.9%	6.9%	7.0%	3.0%	4.9%	1.9%	6.8%	10.5%	11.5%	18.6%	14.3%	10.90%
Technical Losses	(%age)	22.8%	9.2%	6.6%	6.7%	2.7%	4.6%	1.6%	6.5%	10.1%	11.1%	17.8%	13.5%	10.40%
Administrative Losses (Estimated)	(%age)	0.77%	0.67%	0.38%	0.31%	0.26%	0.25%	0.24%	0.29%	0.40%	0.46%	0.75%	0.80%	0.50%
Technical Losses at Different Levels														
Transmission Losses 132 kV	(%age)	2.80%	2.5%	1.7%	1.6%	1.6%	1.6%	0.9%	1.6%	1.6%	1.7%	2.4%	2.8%	2.0%
11 kV + Transformer + Cable Meter	(%age)	14.7%	5.1%	3.5%	3.8%	0.8%	2.1%	0.5%	3.3%	5.6%	5.9%	11.3%	8.3%	6.1%
LT Losses	(%age)	5.3%	1.6%	1.4%	1.3%	0.3%	0.9%	0.2%	1.6%	2.9%	3.5%	4.1%	2.4%	2.3%
Total Technical Losses	(%age)	22.8%	9.2%	6.6%	6.7%	2.7%	4.6%	1.6%	6.5%	10.1%	11.1%	17.8%	13.5%	10.40%

FORM - 7 (A)

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Line Losses (2016-17)

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Power Balances														
Units Received	[MkWh]	1,356	1,352	1,193	1,079	849	850	753	780	851	978	1,321	1,327	12,689
Units Received at 11KV	[MkWh]	1,321	1,322	1,174	1,062	836	836	746	768	837	961	1,292	1,293	12,448
Units Sold	[MkWh]	1,039	1,222	1,113	1,007	828	812	742	731	765	869	1,078	1,141	11,349
Units Lost	[MkWh]	317	130	79	72	21	38	10	50	86	109	242	186	1,340
Units Lost(T&D)	[%age]	23.3%	9.6%	6.6%	6.7%	2.5%	4.4%	1.3%	6.4%	10.1%	11.2%	18.3%	14.0%	10.6%
Technical Losses	[%age]	22.6%	8.9%	6.3%	6.4%	2.2%	4.2%	1.1%	6.1%	9.7%	10.7%	17.6%	13.2%	10.1%
Administrative Losses (Estimated)	[%age]	0.77%	0.67%	0.38%	0.31%	0.26%	0.25%	0.24%	0.29%	0.40%	0.46%	0.75%	0.80%	0.50%
Technical Losses at Different Levels														
Transmission Losses 132 kV	[%age]	2.6%	2.2%	1.6%	1.6%	1.6%	1.6%	0.9%	1.6%	1.6%	1.7%	2.2%	2.6%	1.90%
11 kV + Transformer + Cable Meter	[%age]	15.1%	4.8%	3.4%	3.5%	0.4%	1.9%	0.2%	3.2%	5.8%	5.8%	11.9%	7.6%	5.9%
LT Losses	[%age]	4.9%	1.1%	1.3%	1.3%	0.2%	0.7%	0.0%	1.3%	2.3%	3.2%	3.5%	3.0%	2.3%
Total Technical Losses	[%age]	22.6%	8.9%	6.3%	6.4%	2.2%	4.2%	1.1%	6.1%	9.7%	10.7%	17.6%	13.2%	10.1%

FORM - 7 (A)

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Line Losses (2017-18)

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Power Balances														
Units Received	[MkWh]	1,442	1,438	1,268	1,147	905	902	801	828	903	1,039	1,404	1,412	13,489
Units Received at 11KV	[MkWh]	1,406	1,406	1,248	1,128	890	889	794	815	889	1,022	1,374	1,378	13,239
Units Sold	[MkWh]	1,107	1,302	1,186	1,073	882	865	791	778	815	925	1,148	1,215	12,087
Units Lost	[MkWh]	335	136	82	74	23	37	11	50	89	113	256	197	1,402
Units Lost(T&D)	[%age]	23.2%	9.5%	6.5%	6.4%	2.5%	4.1%	1.3%	6.0%	9.8%	10.9%	18.2%	13.9%	10.4%
Technical Losses	[%age]	22.5%	8.8%	6.1%	6.1%	2.2%	3.9%	1.1%	5.7%	9.4%	10.5%	17.5%	13.1%	9.9%
Administrative Losses (Estimated)	[%age]	0.77%	0.67%	0.38%	0.31%	0.26%	0.25%	0.24%	0.29%	0.40%	0.46%	0.75%	0.80%	0.50%
Technical Losses at Different Levels														
Transmission Losses 132 kV	[%age]	2.5%	2.2%	1.6%	1.6%	1.6%	1.5%	0.9%	1.5%	1.6%	1.6%	2.2%	2.4%	1.85%
11 kV + Transformer + Cable Meter	[%age]	14.2%	4.5%	3.4%	3.3%	0.5%	1.9%	0.2%	3.2%	5.0%	5.9%	11.4%	8.3%	5.75%
LT Losses	[%age]	5.8%	2.1%	1.1%	1.2%	0.1%	0.5%	0.0%	1.0%	2.8%	3.0%	3.9%	2.4%	2.30%
Total Technical Losses	[%age]	22.5%	8.8%	6.1%	6.1%	2.2%	3.9%	1.1%	5.7%	9.4%	10.5%	17.5%	13.1%	9.90%

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Line Losses (2018-19)

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Power Balances														
Units Received	[MkWh]	1,536	1,527	1,347	1,217	960	957	854	878	958	1,102	1,492	1,499	14,326
Units Received at 11KV	[MkWh]	1,494	1,491	1,324	1,198	947	943	846	864	943	1,085	1,456	1,460	14,049
Units Sold	[MkWh]	1,179	1,386	1,263	1,143	939	921	842	829	868	985	1,223	1,294	12,873
Units Lost	[MkWh]	357	141	84	74	20	36	11	49	90	117	269	205	1,453
Units Lost(T&D)	[%age]	23.2%	9.2%	6.2%	6.1%	2.1%	3.7%	1.3%	5.6%	9.4%	10.6%	18.0%	13.7%	10.1%
Technical Losses	[%age]	22.5%	8.6%	5.8%	5.8%	1.8%	3.5%	1.1%	5.3%	9.0%	10.1%	17.3%	12.9%	9.6%
Administrative Losses (Estimated)	[%age]	0.77%	0.67%	0.38%	0.31%	0.26%	0.25%	0.24%	0.29%	0.40%	0.46%	0.75%	0.80%	0.50%
Technical Losses at Different Levels														
Transmission Losses 132 kV	[%age]	2.7%	2.4%	1.7%	1.6%	1.3%	1.5%	0.9%	1.6%	1.6%	1.6%	2.4%	2.6%	1.95%
11 kV + Transformer + Cable Meter	[%age]	14.3%	3.2%	1.8%	1.4%	0.0%	0.9%	0.0%	1.2%	3.7%	4.7%	10.5%	10.1%	5.1%
LT Losses	[%age]	4.7%	1.5%	0.7%	1.0%	0.0%	0.4%	0.0%	0.5%	1.9%	3.4%	3.7%	4.2%	2.1%
Total Technical Losses	[%age]	21.7%	7.1%	4.2%	4.0%	1.3%	2.8%	0.9%	3.3%	7.2%	9.7%	16.6%	16.9%	9.1%

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Line Losses (2019-20)

		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Power Balances														
Units Received	[MkWh]	1,636	1,627	1,434	1,296	1,015	1,012	909	928	1,013	1,174	1,589	1,597	15,230
Units Received at 11KV	[MkWh]	1,592	1,588	1,410	1,275	1,002	997	901	913	997	1,155	1,551	1,555	14,936
Units Sold	[MkWh]	1,256	1,476	1,345	1,217	1,000	981	897	883	924	1,049	1,303	1,378	13,709
Units Lost	[MkWh]	380	150	89	79	15	31	12	45	89	124	286	219	1,521
Units Lost(T&D)	[%age]	23.2%	9.2%	6.2%	6.1%	1.4%	3.1%	1.3%	4.9%	8.8%	10.6%	18.0%	13.7%	10.0%
Technical Losses	[%age]	22.5%	8.6%	5.8%	5.8%	1.2%	2.8%	1.1%	4.6%	8.4%	10.1%	17.3%	12.9%	9.5%
Administrative Losses (Estimated)	[%age]	0.77%	0.67%	0.38%	0.31%	0.26%	0.25%	0.24%	0.29%	0.40%	0.46%	0.75%	0.80%	0.50%
Technical Losses at Different Levels														
Transmission Losses 132 kV	[%age]	2.7%	2.4%	1.7%	1.6%	1.3%	1.5%	0.9%	1.6%	1.6%	1.6%	2.4%	2.6%	1.95%
11 kV + Transformer + Cable Meter	[%age]	14.3%	3.2%	1.8%	1.4%	0.0%	0.9%	0.0%	1.2%	3.7%	4.7%	10.5%	10.1%	5.1%
LT Losses	[%age]	4.7%	1.5%	0.7%	1.0%	0.0%	0.4%	0.0%	0.5%	1.9%	3.4%	3.7%	4.2%	2.1%
Total Technical Losses	[%age]	21.7%	7.1%	4.2%	4.0%	1.3%	2.8%	0.9%	3.3%	7.2%	9.7%	16.6%	16.9%	9.1%

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FORM 8

DISCO load factors on yearly basis	2020	12.39%
	2019	12.44%
	2018	12.39%
	2017	12.44%
	2016	12.41%
	2015	11.01%
	2014	10.59%
	2013	12.70%
NTDC/DISCO Delivery Points metering accuracy		100.00%
DISCO metering accuracy		
For all customers (residential, commercial, industrial, etc.)		99.00%
Estimated High Voltage Transmission lines losses (132 kV) 2015-16		1.88%

b

FROM - 9

Average Rate per Unit Purchased and Sold
- Weighted Average Cost per Unit Sold to Customers

Use of System Charges (NTDC)						FY 2014-15
						Act/Proj
Estimated Average Rate			(Table 11 - 11.16)	[Rs/kW/Month]		102.43
Estimated Maximum Demand Indicator (MDI)			(Table 11 - 11.17)	[MW]		2,249
Number of Months (Fiscal Year)				[#]		12
Estimated Use of System Charges = $(10.02 \times 10.03 \times 10.04)$				[,000,000 Rs]		2,764.40
Fixed/Capacity Charge						
Estimated Average Rate			(Table 11 - 11.33)	[Rs/kW/Month]		1,121.74
Estimated MDI			Form 6 (A)	[MW]		2,249
Number of Months (Fiscal Year)				[#]		12
Estimated Capacity Charge = $(10.07 \times 10.08 \times 10.09)$				[,000,000 Rs]		30,274
Energy Charge						
Estimated Average Energy Charge			(Table 11 - 11.33)	[Rs/kWh]		6.4562
Estimated Energy Purchase for Fiscal Year				[GWh]		11,243
Estimated Energy Charges = (10.12×10.13)				[,000,000 Rs]		72,589
Estimated Power Purchase Price = $(10.05 + 10.10 + 10.14)$				[,000,000 Rs]		105,627
Average Rate per Unit Purchased = $(10.15 / 10.13)$				[Rs/kWh]		9.39
Estimated Energy Sold				[GWh]		10,006
Average Energy Rate per Unit Sold = $(10.15 / 10.17)$				[Rs/kWh]		10.5561
Distribution Margin				[,000,000 Rs]		13,908
Distribution Margin per Unit Sold = $(10.19 / 10.17)$				[Rs/kWh]		1.3899
Total Cost per Unit Sold to Customers = $(10.20 + 10.18)$				[Rs/kWh]		11.9461
Estimated Revenue from Energy Sold $(10.15 + 10.19)$				[,000,000 Rs]		119,535
Prior Period Adjustment (Uncovered Costs)				[,000,000 Rs]		
Required Estimated Revenue from Energy Sold $(10.22 + 10.23)$				[,000,000 Rs]		119,535

FORM - 9 (A)

Table 11 - CPPA Charges: Use of System, Capacity and Energy

11.01 Use of System Charges (NTDC)

			Demand	Fixed Use of	Fixed Use of	Energy	Variable	Variable Use of	Sum Use of
	Month	Year	[kW]	System Rate	System Charges	[kWh]	Use of	System Charges	System Charges
	1	2	3	4	5 = 3 x 4	6	Rate	8 = 6 x 7	9
							[Rs/kWh]	[Rs]	[Rs]
11.02	Jul	2014-2015	2,419,061	102.430	247,784,418	1,175,654,021			247,784,418
11.03	Aug	2014-2015	2,460,628	102.430	252,042,126	1,199,353,444			252,042,126
11.04	Sep	2014-2015	2,428,184	102.430	248,718,887	1,058,764,218			248,718,887
11.05	Oct	2014-2015	2,183,367	102.430	223,642,282	958,944,451			223,642,282
11.06	Nov	2014-2015	1,810,475	102.430	185,446,954	755,295,182			185,446,954
11.07	Dec	2014-2015	2,073,548	102.430	212,393,522	755,792,392			212,393,522
11.08	Jan	2014-2015	1,950,692	102.430	199,809,382	669,857,910			199,809,382
11.09	Feb	2014-2015	1,972,554	102.430	202,048,706	694,203,436			202,048,706
11.10	Mar	2014-2015	2,109,381	102.430	216,063,896	756,629,491			216,063,896
11.11	Apr	2014-2015	2,366,585	102.430	242,409,302	869,597,429			242,409,302
11.12	May	2014-2015	2,608,256	102.430	267,163,662	1,171,618,255			267,163,662
11.13	Jun	2014-2015	2,605,450	102.430	266,876,244	1,177,661,408			266,876,244
11.14			26,988,181	102.430	2,764,399,380	11,243,371,637			2,764,399,380
11.15			2,249,015			936,948			
11.16	Avg per month [MW]		2,249,015						
11.17									

11.18 Capacity and Energy

			Capacity Charge	Energy Charge	Sum of all Charges	Use Of System Rate per kWh	Capacity Rate per kWh	Energy Rate per kWh	Final Rate per kWh
	Month	Year	[Rs]	[Rs]	[Rs]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]
	1	2	11	12	13 = 9+11+12	14 = 9 / 6	15 = 11 / 6	16 = 12 / 6	17 = 13 / 6
11.19	Jul	2014-2015	2,346,443,676	9,096,299,682	11,690,527,776	0.21	2.00	7.74	9.9439
11.20	Aug	2014-2015	2,281,008,809	8,408,148,875	10,941,199,810	0.21	1.90	7.01	9.1226
11.21	Sep	2014-2015	2,607,818,120	7,438,030,385	10,294,567,392	0.23	2.46	7.03	9.7232
11.22	Oct	2014-2015	2,385,052,324	7,062,054,350	9,670,748,956	0.23	2.49	7.36	10.0848
11.23	Nov	2014-2015	3,190,563,133	3,636,676,059	7,012,686,146	0.25	4.22	4.81	9.2847
11.24	Dec	2014-2015	2,570,657,713	4,980,157,924	7,763,209,159	0.28	3.40	6.59	10.2716
11.25	Jan	2014-2015	2,502,870,343	6,413,683,842	9,116,363,567	0.30	3.74	9.57	13.6094
11.26	Feb	2014-2015	2,399,945,121	3,391,984,201	5,993,978,028	0.29	3.46	4.89	8.6343
11.27	Mar	2014-2015	2,535,603,672	4,791,633,935	7,543,301,503	0.29	3.35	6.33	9.9696
11.28	Apr	2014-2015	2,047,433,067	5,738,665,615	8,028,507,984	0.28	2.35	6.60	9.2324
11.29	May	2014-2015	2,967,417,687	5,912,367,662	9,146,949,011	0.23	2.53	5.05	7.8071
11.30	Jun	2014-2015	2,438,859,064	5,719,309,095	8,425,044,403	0.23	2.07	4.86	7.1540
11.31			30,273,672,729	72,589,011,625	105,627,083,734	2.69258	6.4562		9.3946
11.32			1121.7382						
11.33	Avg Cap. Charge =		1121.7382						
11.34									

FROM - 9

Average Rate per Unit Purchased and Sold
- Weighted Average Cost per Unit Sold to Customers

				FY 2015-16
10.01	Use of System Charges (NTDC)			Projected
		(Table 11 - 11.16)	[Rs/kW/Month]	102.43
10.02	Estimated Average Rate			2,361
10.03	Estimated Maximum Demand Indicator (MDI)	(Table 11 - 11.17)	[MW]	12
10.04	Number of Months (Fiscal Year)		[#]	2,903
10.05	Estimated Use of System Charges = (10.02 x 10.03 x 10.04)		[,000,000 Rs]	
10.06	Fixed/Capacity Charge			
		(Table 11 - 11.33)	[Rs/kW/Month]	1,179.29
10.07	Estimated Average Rate			2,361
10.08	Estimated MDI	Form 6 (A)	[MW]	12
10.09	Number of Months (Fiscal Year)		[#]	33,418
10.10	Estimated Capacity Charge = (10.07 x 10.08 x 10.09)		[,000,000 Rs]	
10.11	Energy Charge			
		(Table 11 - 11.33)	[Rs/kWh]	6.459
10.12	Estimated Average Energy Charge		[GWh]	11,960
10.13	Estimated Energy Purchase for Fiscal Year		[,000,000 Rs]	77,251
10.14	Estimated Energy Charges = (10.12 x 10.13)			
			[,000,000 Rs]	113,572
10.15	Estimated Power Purchase Price = (10.05 + 10.10 + 10.14)			
	Prior Year Adjustment		[Rs/kWh]	9.50
10.16	Average Rate per Unit Purchased = (10.15 / 10.13)			
			[GWh]	10,657
10.17	Estimated Energy Sold			
			[Rs/kWh]	10.657
10.18	Average Energy Rate per Unit Sold = (10.15 / 10.17)			
			[,000,000 Rs]	20,629
10.19	Distribution Margin			
			[Rs/kWh]	1.936
10.20	Distribution Margin per Unit Sold = (10.19 / 10.17)			
			[Rs/kWh]	12.593
10.21	Total Cost per Unit Sold to Customers = (10.20 + 10.18)			
			[,000,000 Rs]	134,200
10.22	Estimated Revenue from Energy Sold (10.15 + 10.19)			
			[,000,000 Rs]	(4,090)
10.23	Prior Period Adjustment (Uncovered Costs)			
			[,000,000 Rs]	130,110
10.24	Required Estimated Revenue from Energy Sold (10.22 + 10.23)			

While submitting Quarterly Petitions, this form should be submitted with actual amounts of previous quarters and projected figures of next quarter.

Figures in the forms should be substantiated with the forms below.

FORM - 9 (A)

Table 11 - CPPA Charges: Use of System, Capacity and Energy

11.01 Use of System Charges (NTDC)

			Demand	Fixed Use of System Rate	Fixed Use of System Charges	Energy	Variable Use of System Rate	Variable Use of System Charges	Sum Use of System Charges
11.02	Month	Year	[kW]	[Rs/kW]	[Rs]	[kWh]	[Rs/kWh]	[Rs]	[Rs]
11.03	1	2	3	4	5 = 3 x 4	6	7	8 = 6 x 7	9
11.04	Jul	2015-2016	2,540,014	102.430	260,173,639	1,277,000,000			260,173,639
11.05	Aug	2015-2016	2,583,659	102.430	264,644,232	1,273,311,418			264,644,232
11.06	Sep	2015-2016	2,549,593	102.430	261,154,831	1,123,583,892			261,154,831
11.07	Oct	2015-2016	2,292,535	102.430	234,824,396	1,017,275,840			234,824,396
11.08	Nov	2015-2016	1,900,999	102.430	194,719,302	801,389,369			194,719,302
11.09	Dec	2015-2016	2,177,225	102.430	223,013,198	801,918,897			223,013,198
11.10	Jan	2015-2016	2,048,227	102.430	209,799,851	710,398,674			209,799,851
11.11	Feb	2015-2016	2,071,182	102.430	212,151,142	736,326,659			212,151,142
11.12	Mar	2015-2016	2,214,850	102.430	226,867,091	802,810,408			226,867,091
11.13	Apr	2015-2016	2,484,914	102.430	254,529,767	922,121,262			254,529,767
11.14	May	2015-2016	2,738,669	102.430	280,521,845	1,243,775,300			280,521,845
11.15	Jun	2015-2016	2,735,723	102.430	280,220,056	1,250,000,000			280,220,056
11.16			28,337,590	102.430	2,902,619,349	11,959,911,719			2,902,619,349
11.17	Avg per month [MW]		2,361		Avg per month [MWh]		996,659		

11.18 Capacity and Energy

			Capacity Charge	Energy Charge	Sum of all Charges	Use Of System Rate per kWh	Capacity Rate per kWh	Energy Rate per kWh	Final Rate per kWh
11.19	Month	Year	[Rs]	[Rs]	[Rs]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]
11.20	1	2	11	12	13 = 9+11+12	14 = 9 / 6	15 = 11 / 6	16 = 12 / 6	17 = 13 / 6
11.21	Jul	2015-2016	2,590,170,255	9,880,436,323	12,730,780,217	0.20	2.03	7.74	9.9693
11.22	Aug	2015-2016	2,517,938,627	8,926,636,279	11,709,219,138	0.21	1.98	7.01	9.1959
11.23	Sep	2015-2016	2,878,693,826	7,893,401,559	11,033,250,217	0.23	2.56	7.03	9.8197
11.24	Oct	2015-2016	2,632,789,207	7,491,630,266	10,359,243,869	0.23	2.59	7.36	10.1833
11.25	Nov	2015-2016	3,521,968,930	3,858,615,282	7,575,303,513	0.24	4.39	4.81	9.4527
11.26	Dec	2015-2016	2,837,673,545	5,284,100,229	8,344,786,971	0.28	3.54	6.59	10.4060
11.27	Jan	2015-2016	2,762,845,058	6,801,849,212	9,774,494,121	0.30	3.89	9.57	13.7592
11.28	Feb	2015-2016	2,649,228,928	3,597,804,715	6,459,184,785	0.29	3.60	4.89	8.7722
11.29	Mar	2015-2016	2,798,978,418	5,084,091,539	8,109,937,048	0.28	3.49	6.33	10.1019
11.30	Apr	2015-2016	2,260,101,226	6,085,281,995	8,599,912,988	0.28	2.45	6.60	9.3262
11.31	May	2015-2016	3,275,645,226	6,276,495,634	9,832,662,705	0.23	2.63	5.05	7.9055
11.32	Jun	2015-2016	2,692,184,887	6,070,621,249	9,043,026,192	0.22	2.15	4.86	7.2344
11.33			33,418,218,133	77,250,964,283	113,571,801,766		2.794186021	6.459158403	9.4960
11.34	Avg Cap. Charge =		1,179.29						

FROM - 9

Average Rate per Unit Purchased and Sold
- Weighted Average Cost per Unit Sold to Customers

				FY 2016-17
10.01	Use of System Charges (NTDC)			Projected
10.02	Estimated Average Rate	(Table 11 - 11.16)	[Rs/kW/Month]	102.43
10.03	Estimated Maximum Demand Indicator (MDI)	(Table 11 - 11.17)	[MW]	2,480
10.04	Number of Months (Fiscal Year)		[#]	12
10.05	Estimated Use of System Charges = (10.02 x 10.03 x 10.04)		[,000,000 Rs]	3,048
10.06	Fixed/Capacity Charge			
10.07	Estimated Average Rate	(Table 11 - 11.33)	[Rs/kW/Month]	1,239.79
10.08	Estimated MDI	Form 6 (A)	[MW]	2,480
10.09	Number of Months (Fiscal Year)		[#]	12
10.10	Estimated Capacity Charge = (10.07 x 10.08 x 10.09)		[,000,000 Rs]	36,889
10.11	Energy Charge			
10.12	Estimated Average Energy Charge	(Table 11 - 11.33)	[Rs/kWh]	6.459
10.13	Estimated Energy Purchase for Fiscal Year		[GWh]	12,689
10.14	Estimated Energy Charges = (10.12 x 10.13)		[,000,000 Rs]	81,962
10.15	Estimated Power Purchase Price = (10.05 + 10.10 + 10.14)		[,000,000 Rs]	121,899
	Prior Year Adjustment			
10.16	Average Rate per Unit Purchased = (10.15 / 10.13)		[Rs/kWh]	9.61
10.17	Estimated Energy Sold		[GWh]	11,349
10.18	Average Energy Rate per Unit Sold = (10.15 / 10.17)		[Rs/kWh]	10.741
10.19	Distribution Margin		[,000,000 Rs]	23,220
10.20	Distribution Margin per Unit Sold = (10.19 / 10.17)		[Rs/kWh]	2.046
10.21	Total Cost per Unit Sold to Customers = (10.20 + 10.18)		[Rs/kWh]	12.787
10.22	Estimated Revenue from Energy Sold (10.15 + 10.19)		[,000,000 Rs]	145,119
10.23	Prior Period Adjustment (Uncovered Costs)		[,000,000 Rs]	-
10.24	Required Estimated Revenue from Energy Sold (10.22 + 10.23)		[,000,000 Rs]	145,119

While submitting Quarterly Petitions, this form should be submitted with actual amounts of previous quarters and projected figures of next quarter.

Figures in the forms should be substantiated with the forms below.

FORM - 9 (A)

Table 11 - CPPA Charges: Use of System, Capacity and Energy

11.01 Use of System Charges (NTDC)

			Demand	Fixed Use of System Rate	Fixed Use of System Charges	Energy	Variable Use of System Rate	Variable Use of System Charges	Sum Use of System Charges
11.02	Month	Year	[kW]	[Rs/kW]	[Rs]	[kWh]	[Rs/kWh]	[Rs]	[Rs]
11.03	1	2	3	4	5 = 3 x 4	6	7	8 = 6 x 7	9
11.04	Jul	2016-2017	2,667,015	102.430	273,182,321	1,356,005,000			273,182,321
11.05	Aug	2016-2017	2,712,842	102.430	277,876,444	1,352,076,660			277,876,444
11.06	Sep	2016-2017	2,677,073	102.430	274,212,573	1,192,616,845			274,212,573
11.07	Oct	2016-2017	2,407,162	102.430	246,565,616	1,079,398,770			246,565,616
11.08	Nov	2016-2017	1,996,049	102.430	204,455,267	849,479,678			204,455,267
11.09	Dec	2016-2017	2,286,087	102.430	234,163,858	850,043,626			234,163,858
11.10	Jan	2016-2017	2,150,638	102.430	220,289,843	752,574,588			220,289,843
11.11	Feb	2016-2017	2,174,741	102.430	222,758,699	780,187,892			222,758,699
11.12	Mar	2016-2017	2,325,593	102.430	238,210,445	850,993,084			238,210,445
11.13	Apr	2016-2017	2,609,160	102.430	267,256,255	978,059,144			267,256,255
11.14	May	2016-2017	2,875,602	102.430	294,547,937	1,320,620,694			294,547,937
11.15	Jun	2016-2017	2,872,509	102.430	294,231,058	1,327,403,360			294,231,058
11.16			29,754,470	102.430	3,047,750,316	12,689,459,341			3,047,750,316
11.17	Avg per month [MW]		2,480		Avg per month [MWh]		1,057,455		

11.18 Capacity and Energy

			Capacity Charge	Energy Charge	Sum of all Charges	Use of System Rate per kWh	Capacity Rate per kWh	Energy Rate per kWh	Final Rate per kWh
11.19	Month	Year	[Rs]	[Rs]	[Rs]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]
11.20	1	2	11	12	13 = 9 + 11 + 12	14 = 9 / 6	15 = 11 / 6	16 = 12 / 6	17 = 13 / 6
11.21	Jul	2016-2017	2,859,212,866	10,491,715,785	13,624,110,972	0.20	2.11	7.74	10.0472
11.22	Aug	2016-2017	2,779,478,494	9,478,825,365	12,536,180,303	0.21	2.06	7.01	9.2718
11.23	Sep	2016-2017	3,177,705,562	8,378,371,861	11,830,289,996	0.23	2.66	7.03	9.9196
11.24	Oct	2016-2017	2,906,258,676	7,949,128,617	11,101,952,909	0.23	2.69	7.36	10.2853
11.25	Nov	2016-2017	3,887,798,055	4,090,165,647	8,182,418,969	0.24	4.58	4.81	9.6323
11.26	Dec	2016-2017	3,132,424,478	5,601,209,464	8,967,797,799	0.28	3.69	6.59	10.5498
11.27	Jan	2016-2017	3,049,823,510	7,205,670,639	10,475,783,992	0.29	4.05	9.57	13.9199
11.28	Feb	2016-2017	2,924,406,001	3,812,117,409	6,959,282,109	0.29	3.75	4.89	8.9200
11.29	Mar	2016-2017	3,089,710,065	5,389,226,021	8,717,146,531	0.28	3.63	6.33	10.2435
11.30	Apr	2016-2017	2,494,859,360	6,454,428,441	9,216,544,056	0.27	2.55	6.60	9.4233
11.31	May	2016-2017	3,615,888,554	6,664,282,546	10,574,719,037	0.22	2.74	5.05	8.0074
11.32	Jun	2016-2017	2,971,823,823	6,446,530,435	9,712,585,316	0.22	2.24	4.86	7.3170
11.33			36,889,389,444	81,961,672,231	121,898,811,991		2.90708914	6.459035805	9.6063
11.34	Avg Cap. Charge =		1,239.79						

FROM - 9

Average Rate per Unit Purchased and Sold
- Weighted Average Cost per Unit Sold to Customers

10.01	Use of System Charges (NTDC)			FY 2017-18
				Projected
10.02	Estimated Average Rate	(Table 11 - 11.16)	[Rs/kW/Month]	102.43
10.03	Estimated Maximum Demand Indicator (MDI)	(Table 11 - 11.17)	[MW]	2,604
10.04	Number of Months (Fiscal Year)		[#]	12
10.05	Estimated Use of System Charges = (10.02 x 10.03 x 10.04)		[,000,000 Rs]	3,200
10.06	Fixed/Capacity Charge			
10.07	Estimated Average Rate	(Table 11 - 11.33)	[Rs/kW/Month]	1,303.40
10.08	Estimated MDI	Form 6 (A)	[MW]	2,604
10.09	Number of Months (Fiscal Year)		[#]	12
10.10	Estimated Capacity Charge = (10.07 x 10.08 x 10.09)		[,000,000 Rs]	40,721
10.11	Energy Charge			
10.12	Estimated Average Energy Charge	(Table 11 - 11.33)	[Rs/kWh]	6.459
10.13	Estimated Energy Purchase for Fiscal Year		[GWh]	13,489
10.14	Estimated Energy Charges = (10.12 x 10.13)		[,000,000 Rs]	87,131
10.15	Estimated Power Purchase Price = (10.05 + 10.10 + 10.14)		[,000,000 Rs]	131,052
	Prior Year Adjustment			
10.16	Average Rate per Unit Purchased = (10.15 / 10.13)		[Rs/kWh]	9.72
10.17	Estimated Energy Sold		[GWh]	12,087
10.18	Average Energy Rate per Unit Sold = (10.15 / 10.17)		[Rs/kWh]	10.842
10.19	Distribution Margin		[,000,000 Rs]	25,381
10.20	Distribution Margin per Unit Sold = (10.19 / 10.17)		[Rs/kWh]	2.100
10.21	Total Cost per Unit Sold to Customers = (10.20 + 10.18)		[Rs/kWh]	12.942
10.22	Estimated Revenue from Energy Sold (10.15 + 10.19)		[,000,000 Rs]	156,433
10.23	Prior Period Adjustment (Uncovered Costs)		[,000,000 Rs]	-
10.24	Required Estimated Revenue from Energy Sold (10.22 + 10.23)		[,000,000 Rs]	156,433

While submitting Quarterly Petitions, this form should be submitted with actual amounts of previous quarters and projected figures of next quarter.

Figures in the forms should be substantiated with the forms below.

FORM - 9 (A)

Table 11 - CPPA Charges: Use of System, Capacity and Energy

11.01 Use of System Charges (NTDC)

			Demand	Fixed Use of System Rate	Fixed Use of System Charges	Energy	Variable Use of System Rate	Variable Use of System Charges	Sum Use of System Charges
11.02	Month	Year	[kW]	[Rs/kW]	[Rs]	[kWh]	[Rs/kWh]	[Rs]	[Rs]
11.03	1	2	3	4	5 = 3 x 4	6	7	8 = 6 x 7	9
11.04	Jul	2017-2018	2,800,365	102.430	286,841,437	1,442,145,325			286,841,437
11.05	Aug	2017-2018	2,848,484	102.430	291,770,266	1,437,961,643			291,770,266
11.06	Sep	2017-2018	2,810,927	102.430	287,923,202	1,268,136,940			287,923,202
11.07	Oct	2017-2018	2,527,520	102.430	258,893,896	1,146,559,690			258,893,896
11.08	Nov	2017-2018	2,095,851	102.430	214,678,030	904,695,857			214,678,030
11.09	Dec	2017-2018	2,400,391	102.430	245,872,051	902,296,461			245,872,051
11.10	Jan	2017-2018	2,258,170	102.430	231,304,335	801,491,936			231,304,335
11.11	Feb	2017-2018	2,283,478	102.430	233,896,634	827,900,105			233,896,634
11.12	Mar	2017-2018	2,441,872	102.430	250,120,967	903,307,635			250,120,967
11.13	Apr	2017-2018	2,739,618	102.430	280,619,068	1,038,632,988			280,619,068
11.14	May	2017-2018	3,019,382	102.430	309,275,334	1,404,461,040			309,275,334
11.15	Jun	2017-2018	3,016,134	102.430	308,942,611	1,411,684,578			308,942,611
11.16			31,242,193	102.430	3,200,137,832	13,489,274,198			3,200,137,832
11.17	Avg per month [MW]		2,604		Avg per month [MWh]	1,124,106			

11.18 Capacity and Energy

			Capacity Charge	Energy Charge	Sum of all Charges	Use Of System Rate per kWh	Capacity Rate per kWh	Energy Rate per kWh	Final Rate per kWh
11.19	Month	Year	[Rs]	[Rs]	[Rs]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]
11.20	1	2	11	12	13 = 9+11+12	14 = 9 / 6	15 = 11 / 6	16 = 12 / 6	17 = 13 / 6
11.21	Jul	2017-2018	3,156,201,103	11,158,202,861	14,601,245,400	0.20	2.19	7.74	10.1247
11.22	Aug	2017-2018	3,068,184,671	10,080,927,878	13,440,882,815	0.20	2.13	7.01	9.3472
11.23	Sep	2017-2018	3,507,775,835	8,908,915,632	12,704,614,669	0.23	2.77	7.03	10.0183
11.24	Oct	2017-2018	3,208,133,590	8,443,728,766	11,910,756,252	0.23	2.80	7.36	10.3883
11.25	Nov	2017-2018	4,291,626,081	4,356,026,414	8,862,330,526	0.24	4.74	4.81	9.7959
11.26	Dec	2017-2018	3,457,791,376	5,945,520,119	9,649,183,546	0.27	3.83	6.59	10.6940
11.27	Jan	2017-2018	3,366,610,593	7,674,039,231	11,271,954,159	0.29	4.20	9.57	14.0637
11.28	Feb	2017-2018	3,228,165,890	4,045,246,582	7,507,309,105	0.28	3.90	4.89	9.0679
11.29	Mar	2017-2018	3,410,640,190	5,720,527,112	9,381,288,269	0.28	3.78	6.33	10.3855
11.30	Apr	2017-2018	2,754,001,969	6,854,168,627	9,888,789,663	0.27	2.65	6.60	9.5210
11.31	May	2017-2018	3,991,473,169	7,087,368,260	11,388,116,763	0.22	2.84	5.05	8.1085
11.32	Jun	2017-2018	3,280,509,030	6,855,841,919	10,445,293,561	0.22	2.32	4.86	7.3992
11.33			40,721,113,499	87,130,513,399	131,051,764,730		3.018777208	6.459243998	9.7153
11.34	Avg Cap. Charge =		1,303.40						

b

FROM - 9

Average Rate per Unit Purchased and Sold
- Weighted Average Cost per Unit Sold to Customers

10.01	Use of System Charges (NTDC)			FY 2018-19 Projected
10.02	Estimated Average Rate	(Table 11 - 11.16)	[Rs/kW/Month]	102.43
10.03	Estimated Maximum Demand Indicator (MDI)	(Table 11 - 11.17)	[MW]	2,734
10.04	Number of Months (Fiscal Year)		[#]	12
10.05	Estimated Use of System Charges = (10.02 x 10.03 x 10.04)		[,000,000 Rs]	3,360
10.06	Fixed/Capacity Charge			
10.07	Estimated Average Rate	(Table 11 - 11.33)	[Rs/kW/Month]	1,370.27
10.08	Estimated MDI	Form 6 (A)	[MW]	2,734
10.09	Number of Months (Fiscal Year)		[#]	12
10.10	Estimated Capacity Charge = (10.07 x 10.08 x 10.09)		[,000,000 Rs]	44,951
10.11	Energy Charge			
10.12	Estimated Average Energy Charge	(Table 11 - 11.33)	[Rs/kWh]	6.460
10.13	Estimated Energy Purchase for Fiscal Year		[GWh]	14,326
10.14	Estimated Energy Charges = (10.12 x 10.13)		[,000,000 Rs]	92,552
10.15	Estimated Power Purchase Price = (10.05 + 10.10 + 10.14)		[,000,000 Rs]	140,863
	Prior Year Adjustment			
10.16	Average Rate per Unit Purchased = (10.15 / 10.13)		[Rs/kWh]	9.83
10.17	Estimated Energy Sold		[GWh]	12,873
10.18	Average Energy Rate per Unit Sold = (10.15 / 10.17)		[Rs/kWh]	10.943
10.19	Distribution Margin		[,000,000 Rs]	27,263
10.20	Distribution Margin per Unit Sold = (10.19 / 10.17)		[Rs/kWh]	2.118
10.21	Total Cost per Unit Sold to Customers = (10.20 + 10.18)		[Rs/kWh]	13.061
10.22	Estimated Revenue from Energy Sold (10.15 + 10.19)		[,000,000 Rs]	168,126
10.23	Prior Period Adjustment (Uncovered Costs)		[,000,000 Rs]	-
10.24	Required Estimated Revenue from Energy Sold (10.22 + 10.23)		[,000,000 Rs]	168,126

While submitting Quarterly Petitions , this form should be submitted with actual amounts of previous quarters and projected figures of next quarter .

Figures in the forms should be substantiated with the forms below.

FORM - 9 (A)

Table 11 - CPPA Charges: Use of System, Capacity and Energy

11.01 Use of System Charges (NTDC)

			Demand	Fixed Use of System Rate	Fixed Use of System Charges	Energy	Variable Use of System Rate	Variable Use of System Charges	Sum Use of System Charges
11.02	Month	Year	[kW]	[Rs/kW]	[Rs]	[kWh]	[Rs/kWh]	[Rs]	[Rs]
11.03	1	2	3	4	5 = 3 x 4	6	7	8 = 6 x 7	9
11.04	Jul	2018-2019	2,940,384	102.430	301,183,509	1,535,884,771			301,183,509
11.05	Aug	2018-2019	2,990,909	102.430	306,358,779	1,527,429,150			306,358,779
11.06	Sep	2018-2019	2,951,473	102.430	302,319,362	1,346,565,841			302,319,362
11.07	Oct	2018-2019	2,653,896	102.430	271,838,591	1,217,086,070			271,838,591
11.08	Nov	2018-2019	2,200,644	102.430	225,411,932	959,501,087			225,411,932
11.09	Dec	2018-2019	2,520,411	102.430	258,165,653	956,945,731			258,165,653
11.10	Jan	2018-2019	2,371,078	102.430	242,869,552	853,588,912			242,869,552
11.11	Feb	2018-2019	2,397,652	102.430	245,591,465	877,713,612			245,591,465
11.12	Mar	2018-2019	2,563,966	102.430	262,627,016	958,022,631			262,627,016
11.13	Apr	2018-2019	2,876,599	102.430	294,650,021	1,102,144,132			294,650,021
11.14	May	2018-2019	3,170,351	102.430	324,739,101	1,491,751,007			324,739,101
11.15	Jun	2018-2019	3,166,941	102.430	324,389,742	1,499,444,076			324,389,742
11.16			32,804,303	102.430	3,360,144,724	14,326,077,021			3,360,144,724
11.17	Avg per month [MW]		2,734		Avg per month [MWh]	1,193,840			

11.18 Capacity and Energy

			Capacity Charge	Energy Charge	Sum of all Charges	Use Of System Rate per kWh	Capacity Rate per kWh	Energy Rate per kWh	Final Rate per kWh
11.19	Month	Year	[Rs]	[Rs]	[Rs]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]
11.20	1	2	11	12	13 = 9+11+12	14 = 9 / 6	15 = 11 / 6	16 = 12 / 6	17 = 13 / 6
11.21	Jul	2018-2019	3,484,037,694	11,883,486,047	15,668,707,250	0.20	2.27	7.74	10.2017
11.22	Aug	2018-2019	3,366,878,940	10,708,145,918	14,401,383,638	0.20	2.22	7.01	9.4285
11.23	Sep	2018-2019	3,872,130,715	9,459,894,348	13,634,344,425	0.22	2.88	7.03	10.1253
11.24	Oct	2018-2019	3,541,364,442	8,963,113,519	12,776,316,552	0.22	2.91	7.36	10.4975
11.25	Nov	2018-2019	4,737,399,978	4,619,908,503	9,582,720,413	0.23	4.94	4.81	9.9872
11.26	Dec	2018-2019	3,816,954,339	6,305,621,646	10,380,741,638	0.27	3.99	6.59	10.8478
11.27	Jan	2018-2019	3,716,302,551	8,172,851,781	12,132,023,883	0.28	4.35	9.57	14.2130
11.28	Feb	2018-2019	3,563,477,509	4,288,642,998	8,097,711,972	0.28	4.06	4.89	9.2259
11.29	Mar	2018-2019	3,764,905,529	6,067,029,906	10,094,562,451	0.27	3.93	6.33	10.5369
11.30	Apr	2018-2019	3,040,061,883	7,273,292,704	10,608,004,608	0.27	2.78	6.60	9.6249
11.31	May	2018-2019	4,406,069,995	7,527,861,893	12,258,670,988	0.22	2.95	5.05	8.2176
11.32	Jun	2018-2019	3,621,257,564	7,282,045,656	11,227,692,962	0.22	2.42	4.86	7.4879
11.33			44,950,841,138	92,541,894,919	140,862,880,781		3.137693667	6.460379543	9.8326
11.34	Avg Cap. Charge =		1,370.27						

b

FROM - 9

Average Rate per Unit Purchased and Sold
- Weighted Average Cost per Unit Sold to Customers

10.01	Use of System Charges (NTDC)			FY 2019-20 Projected
10.02	Estimated Average Rate	(Table 11 - 11.16)	[Rs/kW/Month]	102.43
10.03	Estimated Maximum Demand Indicator (MDI)	(Table 11 - 11.17)	[MW]	2,870
10.04	Number of Months (Fiscal Year)		[#]	12
10.05	Estimated Use of System Charges = (10.02 x 10.03 x 10.04)		[,000,000 Rs]	3,528
10.06	Fixed/Capacity Charge			
10.07	Estimated Average Rate	(Table 11 - 11.33)	[Rs/kW/Month]	1,440.58
10.08	Estimated MDI	Form 6 (A)	[MW]	2,870
10.09	Number of Months (Fiscal Year)		[#]	12
10.10	Estimated Capacity Charge = (10.07 x 10.08 x 10.09)		[,000,000 Rs]	49,620
10.11	Energy Charge			
10.12	Estimated Average Energy Charge	(Table 11 - 11.33)	[Rs/kWh]	6.462
10.13	Estimated Energy Purchase for Fiscal Year		[GWh]	15,230
10.14	Estimated Energy Charges = (10.12 x 10.13)		[,000,000 Rs]	98,414
10.15	Estimated Power Purchase Price = (10.05 + 10.10 + 10.14)		[,000,000 Rs]	151,562
	Prior Year Adjustment			
10.16	Average Rate per Unit Purchased = (10.15 / 10.13)		[Rs/kWh]	9.95
10.17	Estimated Energy Sold		[GWh]	13,709
10.18	Average Energy Rate per Unit Sold = (10.15 / 10.17)		[Rs/kWh]	11.055
10.19	Distribution Margin		[,000,000 Rs]	29,000
10.20	Distribution Margin per Unit Sold = (10.19 / 10.17)		[Rs/kWh]	2.115
10.21	Total Cost per Unit Sold to Customers = (10.20 + 10.18)		[Rs/kWh]	13.171
10.22	Estimated Revenue from Energy Sold (10.15 + 10.19)		[,000,000 Rs]	180,562
10.23	Prior Period Adjustment (Uncovered Costs)		[,000,000 Rs]	-
10.24	Required Estimated Revenue from Energy Sold (10.22 + 10.23)		[,000,000 Rs]	180,562

While submitting Quarterly Petitions , this form should be submitted with actual amounts of previous quarters and projected figures of next quarter .

Figures in the forms should be substantiated with the forms below.

FORM - 9 (A)

Table 11 - CPPA Charges: Use of System, Capacity and Energy

11.01 Use of System Charges (NTDC)

			Demand	Fixed Use of System Rate	Fixed Use of System Charges	Energy	Variable Use of System Rate	Variable Use of System Charges	Sum Use of System Charges
11.02	Month	Year	[kW]	[Rs/kW]	[Rs]	[kWh]	[Rs/kWh]	[Rs]	[Rs]
11.03	1	2	3	4	5 = 3 x 4	6	7	8 = 6 x 7	9
11.04	Jul	2019-2020	3,087,403	102,430	316,242,684	1,635,717,281			316,242,684
11.05	Aug	2019-2020	3,140,454	102,430	321,676,718	1,626,712,044			321,676,718
11.06	Sep	2019-2020	3,099,046	102,430	317,435,330	1,434,092,621			317,435,330
11.07	Oct	2019-2020	2,786,591	102,430	285,430,521	1,296,196,664			285,430,521
11.08	Nov	2019-2020	2,310,676	102,430	236,682,529	1,015,068,658			236,682,529
11.09	Dec	2019-2020	2,646,431	102,430	271,073,936	1,012,347,204			271,073,936
11.10	Jan	2019-2020	2,489,632	102,430	255,013,030	909,072,191			255,013,030
11.11	Feb	2019-2020	2,517,534	102,430	257,871,038	927,964,997			257,871,038
11.12	Mar	2019-2020	2,692,164	102,430	275,758,367	1,013,494,102			275,758,367
11.13	Apr	2019-2020	3,020,429	102,430	309,382,522	1,173,783,501			309,382,522
11.14	May	2019-2020	3,328,869	102,430	340,976,056	1,588,714,823			340,976,056
11.15	Jun	2019-2020	3,325,288	102,430	340,609,229	1,596,907,941			340,609,229
11.16			34,444,518	102,430	3,528,151,960	15,230,072,027			3,528,151,960
11.17	Avg per month [MW]		2,870		Avg per month [MWh]	1,269,173			

11.18 Capacity and Energy

			Capacity Charge	Energy Charge	Sum of all Charges	Use Of System Rate per kWh	Capacity Rate per kWh	Energy Rate per kWh	Final Rate per kWh
11.19	Month	Year	[Rs]	[Rs]	[Rs]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]	[Rs/kWh]
11.20	1	2	11	12	13 = 9+11+12	14 = 9 / 6	15 = 11 / 6	16 = 12 / 6	17 = 13 / 6
11.21	Jul	2019-2020	3,845,926,878	12,655,912,640	16,818,082,202	0.19	2.35	7.74	10.2818
11.22	Aug	2019-2020	3,738,676,183	11,404,175,403	15,464,528,305	0.20	2.30	7.01	9.5066
11.23	Sep	2019-2020	4,274,331,365	10,074,787,481	14,666,554,175	0.22	2.98	7.03	10.2271
11.24	Oct	2019-2020	3,909,208,191	9,545,715,898	13,740,354,610	0.22	3.02	7.36	10.6005
11.25	Nov	2019-2020	5,229,476,690	4,887,461,188	10,353,620,407	0.23	5.15	4.81	10.1999
11.26	Dec	2019-2020	4,213,423,784	6,670,679,677	11,155,177,397	0.27	4.16	6.59	11.0191
11.27	Jan	2019-2020	4,102,317,231	8,704,087,146	13,061,417,407	0.28	4.51	9.57	14.3679
11.28	Feb	2019-2020	3,933,618,156	4,534,178,952	8,725,668,147	0.28	4.24	4.89	9.4030
11.29	Mar	2019-2020	4,155,968,632	6,418,323,354	10,850,050,353	0.27	4.10	6.33	10.7056
11.30	Apr	2019-2020	3,355,835,021	7,746,056,729	11,411,274,273	0.26	2.86	6.60	9.7218
11.31	May	2019-2020	4,863,731,253	8,017,172,916	13,221,880,225	0.21	3.06	5.05	8.3224
11.32	Jun	2019-2020	3,997,399,862	7,755,378,624	12,093,387,715	0.21	2.50	4.86	7.5730
11.33			49,619,913,245	98,413,930,009	151,561,995,214		3.258022231	6.461816453	9.9515
11.34	Avg Cap. Charge =		1,440.58						

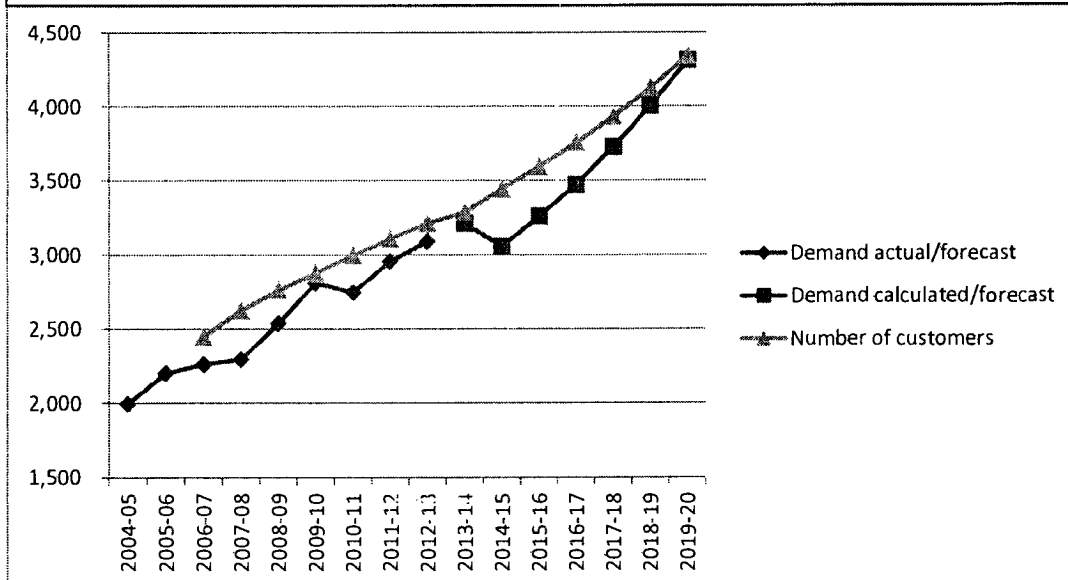
B

DEMAND (Actual and Calculated) and Number of Customers

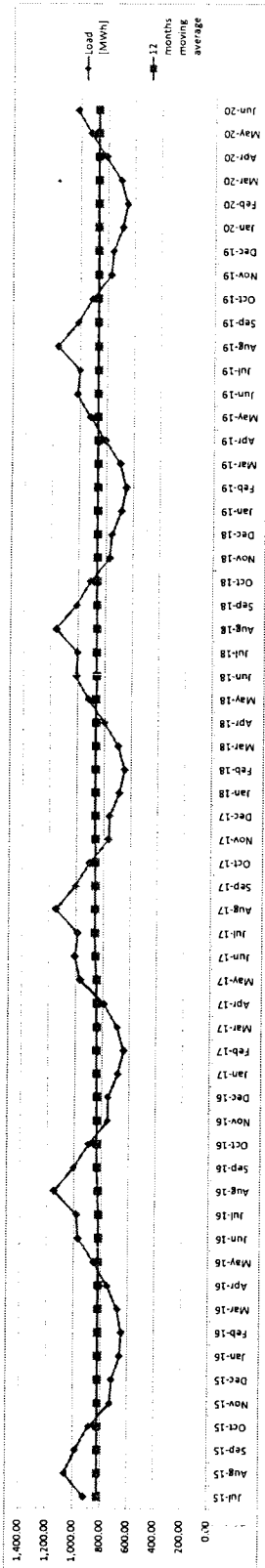
A. Actuals for Demands and Number of Customers

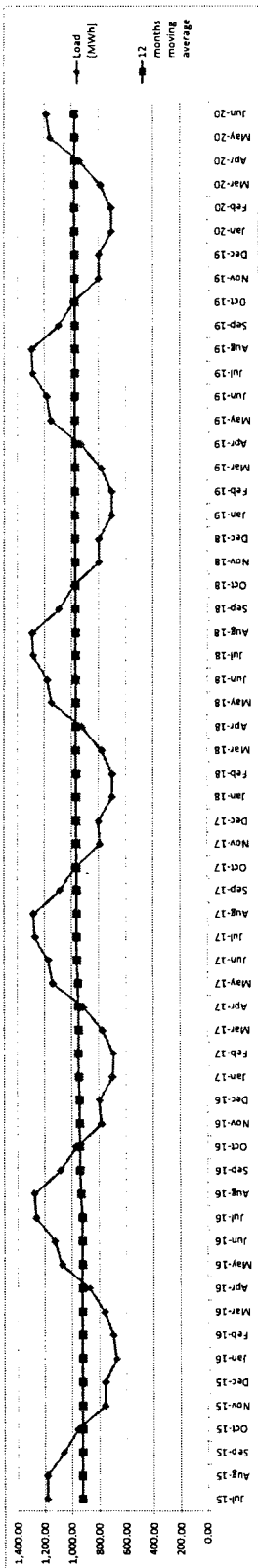
B. Forecasted Demands and Number of Customers using regression analysis

Fiscal Year	Demand Actual /Forecast [,000 kW]	change	Demand Calculated /Forecast [,000 kW]	change	Number of Customers [,000]	change
12.01						
12.02	2000-01					
12.03	2001-02					
12.04	2002-03					
12.05	2003-04					
12.06	2004-05	1,999				
12.07	2005-06	2,203	10.2%			
12.08	2006-07	2,265	2.8%		2,449	
12.09	2007-08	2,298	1.5%		2,624	7%
12.10	2008-09	2,538	10.4%		2,763	5%
12.11	2009-10	2,812	10.8%		2,879	4%
12.12	2010-11	2,747	-2.3%		2,997	4%
12.13	2011-12	2,958	7.7%	2,690	3,109	4%
12.14	2012-13	3,091	4.5%	2,844	3,214	3%
12.15	2013-14			3,214	3,289	2%
12.16	2014-15			3,059	3,445	5%
12.17	2015-16			3,261	3,595	4%
12.18	2016-17			3,474	3,757	5%
12.19	2017-18			3,728	3,934	5%
12.20	2018-19			4,009	4,129	5%
12.21	2019-20			4,314	4,345	5%



Month	Load (MWh)	moving average
Aug-14	1,077.63	821.42
Sep-14	1,016.40	821.56
Oct-14	981.72	820.20
Nov-14	888.21	820.22
Dec-14	730.21	810.07
Jan-15	716.21	810.07
Feb-15	654.62	810.05
Mar-15	674.50	819.94
Apr-15	644.15	820.01
May-15	752.60	820.01
Jun-15	965.31	820.01
Jul-15	1,061.30	820.08
Aug-15	1,145.90	820.57
Sep-15	1,004.78	832.62
Oct-15	895.96	834.53
Nov-15	759.50	837.36
Dec-15	758.82	840.77
Jan-16	683.73	843.13
Feb-16	641.22	843.83
Mar-16	668.78	844.06
Apr-16	751.33	847.16
May-16	967.22	856.80
Jun-16	989.28	860.31
Jul-16	1,145.90	860.71
Aug-16	1,006.58	861.07
Sep-16	757.96	861.22
Oct-16	732.76	862.74
Nov-16	684.80	862.95
Dec-16	647.37	865.25
Jan-17	693.61	863.87
Feb-17	688.78	863.87
Mar-17	790.49	859.98
Apr-17	970.98	860.76
May-17	1,008.12	862.19
Jun-17	986.32	860.71
Jul-17	1,159.21	862.19
Aug-17	1,006.58	861.22
Sep-17	757.96	862.74
Oct-17	732.76	862.95
Nov-17	684.80	865.25
Dec-17	647.37	863.87
Jan-18	693.61	863.87
Feb-18	688.78	859.98
Mar-18	790.49	860.76
Apr-18	970.98	862.19
May-18	1,008.12	860.71
Jun-18	986.32	862.19
Jul-18	1,159.21	862.74
Aug-18	1,006.58	862.95
Sep-18	757.96	865.25
Oct-18	732.76	863.87
Nov-18	684.80	863.87
Dec-18	647.37	859.98
Jan-19	693.61	860.76
Feb-19	688.78	862.19
Mar-19	790.49	860.71
Apr-19	970.98	862.19
May-19	1,008.12	860.71
Jun-19	986.32	862.74
Jul-19	1,159.21	862.95
Aug-19	1,006.58	865.25
Sep-19	757.96	863.87
Oct-19	732.76	863.87
Nov-19	684.80	859.98
Dec-19	647.37	860.76
Jan-20	693.61	862.19
Feb-20	688.78	862.19
Mar-20	790.49	860.71
Apr-20	970.98	862.19
May-20	1,008.12	860.71
Jun-20	986.32	862.74
Jul-20	1,159.21	862.95
Aug-20	1,006.58	865.25
Sep-20	757.96	863.87
Oct-20	732.76	863.87
Nov-20	684.80	859.98
Dec-20	647.37	860.76
Jan-21	693.61	862.19
Feb-21	688.78	862.19
Mar-21	790.49	860.71
Apr-21	970.98	862.19
May-21	1,008.12	860.71
Jun-21	986.32	862.74
Jul-21	1,159.21	862.95
Aug-21	1,006.58	865.25
Sep-21	757.96	863.87
Oct-21	732.76	863.87
Nov-21	684.80	859.98
Dec-21	647.37	860.76
Jan-22	693.61	862.19
Feb-22	688.78	862.19
Mar-22	790.49	860.71
Apr-22	970.98	862.19
May-22	1,008.12	860.71
Jun-22	986.32	862.74
Jul-22	1,159.21	862.95
Aug-22	1,006.58	865.25
Sep-22	757.96	863.87
Oct-22	732.76	863.87
Nov-22	684.80	859.98
Dec-22	647.37	860.76
Jan-23	693.61	862.19
Feb-23	688.78	862.19
Mar-23	790.49	860.71
Apr-23	970.98	862.19
May-23	1,008.12	860.71
Jun-23	986.32	862.74
Jul-23	1,159.21	862.95
Aug-23	1,006.58	865.25
Sep-23	757.96	863.87
Oct-23	732.76	863.87





Month	Load (MW)	12 months moving average
Jul-14	1,175.05	
Aug-14	1,199.35	
Sep-14	1,058.76	
Oct-14	958.95	
Nov-14	755.30	
Dec-14	755.79	
Jan-15	669.91	
Feb-15	694.33	
Mar-15	757.10	
Apr-15	867.22	
May-15	1,068.76	
Jun-15	1,121.07	
Jul-15	1,180.72	923.51
Aug-15	1,182.42	923.93
Sep-15	1,059.75	922.52
Oct-15	957.76	922.60
Nov-15	755.28	922.50
Dec-15	754.78	922.50
Jan-16	670.90	922.42
Feb-16	695.33	922.50
Mar-16	757.52	922.58
Apr-16	869.22	922.62
May-16	1,070.76	922.78
Jun-16	1,125.94	922.95
Jul-16	1,260.14	923.28
Aug-16	1,275.38	929.90
Sep-16	1,083.63	937.65
Oct-16	967.31	939.64
Nov-16	780.42	940.43
Dec-16	797.58	942.53
Jan-17	699.71	946.09
Feb-17	691.02	948.50
Mar-17	773.13	948.15
Apr-17	910.88	949.45
May-17	1,137.83	952.92
Jun-17	1,170.91	958.51
Jul-17	1,270.13	962.33
Aug-17	1,281.08	963.17
Sep-17	1,086.11	963.64
Oct-17	977.32	963.85
Nov-17	790.41	964.68
Dec-17	799.38	965.51
Jan-18	700.90	965.66
Feb-18	698.03	965.76
Mar-18	779.15	966.34
Apr-18	920.15	966.84
May-18	1,147.25	967.62
Jun-18	1,175.92	968.40
Jul-18	1,182.13	968.82
Aug-18	1,290.22	969.82
Sep-18	1,090.11	970.58
Oct-18	985.33	970.91
Nov-18	799.40	971.58
Dec-18	798.35	972.33
Jan-19	701.86	972.25
Feb-19	702.03	972.33
Mar-19	782.16	972.66
Apr-19	939.14	972.91
May-19	1,150.29	973.66
Jun-19	1,181.94	973.91
Jul-19	1285	974.41
Aug-19	1295.22	974.65
Sep-19	1094.11	975.07
Oct-19	987.33	975.40
Nov-19	800.41	975.57
Dec-19	798.34	975.65
Jan-20	703.96	975.74
Feb-20	704.17	975.91
Mar-20	786.16	976.09
Apr-20	935.16	976.42
May-20	1,158.27	976.92
Jun-20	1,183.94	977.59

Depreciation Schedule 2014-15

No.	Description	Cost (original)			Accumulated Depreciation (original cost)			Book Value as of June 30, 2015
		As at July 01, 2014	Addition/Deletion	As at June 30, 2015	As at July 01, 2014	Charge during the year	As at June 30, 2015	
A	Land							
1	Free Hold	86,643,248	109,000,000	195,643,248			-	195,643,248
2	Lease Hold	-		-			-	
	Total	86,643,248	109,000,000	195,643,248			-	195,643,248
B	Buildings							
1	Residential Building	623,010,261	75,111,633.28	698,121,894	169,102,030	22,395,851	191,497,880	506,624,014
2	Non-Residential Building	1,008,004,185	121,527,437.72	1,129,531,623	288,775,195	38,245,350	327,020,545	802,511,078
3	GSO Non-Residential Building	-	-	-				
4	Non-GSO Residential Building	-	-	-				
	Total	1,631,014,446	196,639,071	1,827,653,517	457,877,225	60,641,201	518,518,426	1,309,135,091
C	Sub Transmission							
1	132KV Sub Transmission Lines	2,028,249,690	244,530,718	2,272,780,408	852,536,841	99,133,711	951,670,552	1,321,109,857
2	66KV Sub Transmission Lines	385,704,405	46,501,462	432,205,867	241,689,727	28,103,888	269,793,614	162,412,250
3	33KV Sub Transmission Lines	-	-	-				
	Total	2,413,954,095	291,032,180	2,704,986,275	1,094,226,568	127,237,599	1,221,464,166	1,483,522,106
D	Grid Station							
1	132 KV Grid Station	7,311,407,529	881,481,083	8,192,888,613	1,978,470,558	230,058,244	2,208,528,802	5,984,359,811
2	66 KV Grid Station	354,461,108	42,734,694	397,195,801	150,261,045	17,472,482	167,733,528	229,462,273
3	33 KV Grid Station							
	Total	7,665,868,637	924,215,777	8,590,084,414	2,128,731,603	247,530,726	2,376,262,330	6,213,822,081
E	11 KV Distribution Equipments							
1	11 KV Poles	-	-	-				
2	11 KV Lines	18,396,035,977	2,217,870,864	20,613,906,841	5,697,080,040	691,875,559	6,388,955,599	14,224,951,242
3	Distribution Transformer	12,215,176,956	1,472,691,459	13,687,868,415	3,380,964,010	410,597,419	3,791,561,430	9,896,306,985
	Total	30,611,212,933	3,690,562,323	34,301,775,256	9,078,044,050	1,102,472,978	10,180,517,028	24,121,258,228
F	LV Distribution Equipments							
1	LV Poles	-	-	-	-	-	-	-
2	440 LV Distribution Line	-	-	-	-	-	-	-
3	220 LV Distribution Line	-	-	-	-	-	-	-
4	KWh Meters & Service Cable	-	-	-	-	-	-	-
5	Misc Equipment	10,910,750,881	1,315,426,677	12,226,177,558	3,633,906,681	441,315,761	4,075,222,442	8,150,955,117
	Total	10,910,750,881	1,315,426,677	12,226,177,558	3,633,906,681	441,315,761	4,075,222,442	8,150,955,117
G	Vehicles							
1	132/66/33 KV GSO Vehicles	-	-	-	-	-	-	-
2	Vehicles	825,493,589	99,523,516	925,017,105	557,922,806	30,691,894	588,614,700	336,402,405
	Total	825,493,589	99,523,516	925,017,105	557,922,806	30,691,894	588,614,700	336,402,405
H	Detail of General Plant Assets							
1	Computer Equipment	-	-	-	-	-	-	-
2	Furniture Equipment	-	-	-	-	-	-	-
3	Workshop Equipment	-	-	-	-	-	-	-
4	Laboratory Equipment	-	-	-	-	-	-	-
5	Total T&P Equipment	397,233,731	47,891,465	445,125,196	275,884,859	14,769,170	290,654,029	154,471,167
	Total	397,233,731	47,891,465	445,125,196	275,884,859	14,769,170	290,654,029	154,471,167
J	O & M Equipments							
	Grand Total	54,542,171,560	6,674,291,009	61,216,462,569	17,226,593,792	2,024,659,329	19,251,253,121	41,965,209,448

Depreciation Schedule 2015-16

No.	Description	Cost (original)			Accumulated Depreciation (original cost)			Book Value as June 30, 201
		As at July 01, 2015	Addition/Deletion	As at June 30, 2016	As at July 01, 2015	Charge during the year	As at June 30, 2016	
A	Land							
1	Free Hold	195,643,248	71,240,000	266,883,248			-	266,883
2	Lease Hold	-	-	-			-	-
	Total	195,643,248	71,240,000	266,883,248			-	266,883
B	Buildings							
1	Residential Building	698,121,894	105,272,904.45	803,394,799	191,497,880	25,773,021	217,270,901	586,123
2	Non-Residential Building	1,129,531,623	170,327,095.55	1,299,858,718	327,020,545	44,012,536	371,033,081	928,825
3	GSO Non-Residential Building	-	-	-				
4	Non-GSO Residential Building	-	-	-				
	Total	1,827,653,517	275,600,000	2,103,253,517	518,518,426	69,785,557	588,303,982	1,514,949
C	Sub Transmission							
1	132KV Sub Transmission Lines	2,272,780,408	1,011,961,381	3,284,741,790	951,670,552	143,273,253	1,094,943,806	2,189,797
2	66KV Sub Transmission Lines	432,205,867	192,440,785	624,646,651	269,793,614	40,617,216	310,410,831	314,235
3	33KV Sub Transmission Lines	-	-	-	-	-	-	-
	Total	2,704,986,275	1,204,402,166	3,909,388,441	1,221,464,166	183,890,470	1,405,354,636	2,504,033
D	Grid Station							
1	132 KV Grid Station	8,192,888,613	3,647,904,939	11,840,793,552	2,208,528,802	332,492,275	2,541,021,077	9,299,772
2	66 KV Grid Station	397,195,801	176,852,462	574,048,264	167,733,528	25,252,151	192,985,678	381,062
3	33 KV Grid Station	-	-	-	-	-	-	-
	Total	8,590,084,414	3,824,757,402	12,414,841,816	2,376,262,330	357,744,425	2,734,006,755	9,680,835
E	11 KV Distribution Equipments							
1	11 KV Poles	-	-	-	-	-	-	-
2	11 KV Lines	20,613,906,841	1,806,151,870	22,420,058,711	6,388,955,599	752,496,398	7,141,451,996	15,278,606
3	Distribution Transformer	13,687,868,415	1,199,305,368	14,887,173,783	3,791,561,430	446,573,196	4,238,134,625	10,649,039
	Total	34,301,775,256	3,005,457,239	37,307,232,495	10,180,517,028	1,199,069,593	11,379,586,622	25,927,645
F	LV Distribution Equipments							
1	LV Poles	-	-	-	-	-	-	-
2	440 LV Distribution Line	-	-	-	-	-	-	-
3	220 LV Distribution Line	-	-	-	-	-	-	-
4	KWh Meters & Service Cable	-	-	-	-	-	-	-
5	Misc Equipment	12,226,177,558	1,071,234,756	13,297,412,314	4,075,222,442	479,983,021	4,555,205,463	8,742,206
	Total	12,226,177,558	1,071,234,756	13,297,412,314	4,075,222,442	479,983,021	4,555,205,463	8,742,206
G	Vehicles							
1	132/66/33 KV GSO Vehicles	-	-	-	-	-	-	-
2	Vehicles	925,017,105	54,057,765	979,074,870	588,614,700	32,485,520	621,100,220	357,974
	Total	925,017,105	54,057,765	979,074,870	588,614,700	32,485,520	621,100,220	357,974
H	Detail of General Plant Assets							
1	Computer Equipment	-	-	-	-	-	-	-
2	Furniture Equipment	-	-	-	-	-	-	-
3	Workshop Equipment	-	-	-	-	-	-	-
4	Laboratory Equipment	-	-	-	-	-	-	-
5	Total T&P Equipment	445,125,196	312,779,144	757,904,340	290,654,029	25,147,124	315,801,153	442,103
	Total	445,125,196	312,779,144	757,904,340	290,654,029	25,147,124	315,801,153	442,103
J	O & M Equipments							
	Grand Total	61,216,462,569	9,819,528,472	71,035,991,041	19,251,253,121	2,348,105,710	21,599,358,832	49,436,632

B

Depreciation Schedule 2016-17

No.	Description	Cost (original)			Accumulated Depreciation (original cost)			Book Value as at June 30, 2017
		As at July 01, 2016	Addition/Deletion	As at June 30, 2017	As at July 01, 2016	Charge during the year	As at June 30, 2017	
A	Land							
1	Free Hold	266,883,248	96,595,200	363,478,448			-	363,478,448
2	Lease Hold	-	-	-			-	-
	Total	266,883,248	96,595,200	363,478,448			-	363,478,448
B	Buildings							
1	Residential Building	803,394,799	258,097,381.21	1,061,492,180	217,270,901	34,052,822	251,323,723	810,168,457
2	Non-Residential Building	1,299,858,718	417,590,618.79	1,717,449,337	371,033,081	58,151,936	429,185,017	1,288,264,320
3	GSO Non-Residential Building	-	-	-				
4	Non-GSO Residential Building	-	-	-				
	Total	2,103,253,517	675,688,000	2,778,941,517	588,303,982	92,204,758	680,508,740	2,098,432,777
C	Sub Transmission							
1	132KV Sub Transmission Lines	3,284,741,790	909,111,984	4,193,853,774	1,094,943,806	182,926,730	1,277,870,536	2,915,983,238
2	66KV Sub Transmission Lines	624,646,651	172,882,312	797,528,964	310,410,831	51,858,769	362,269,600	435,259,363
3	33KV Sub Transmission Lines	-	-	-	-	-	-	-
	Total	3,909,388,441	1,081,994,296	4,991,382,738	1,405,354,636	234,785,499	1,640,140,136	3,351,242,239
D	Grid Station							
1	132 KV Grid Station	11,840,793,552	3,277,154,798	15,117,948,350	2,541,021,077	424,515,554	2,965,536,631	12,152,411,719
2	66 KV Grid Station	574,048,264	158,878,289	732,926,553	192,985,678	32,241,142	225,226,821	507,699,732
3	33 KV Grid Station	-	-	-	-	-	-	-
	Total	12,414,841,816	3,436,033,087	15,850,874,903	2,734,006,755	456,756,696	3,190,763,451	12,660,111,452
E	11 KV Distribution Equipments							
1	11 KV Poles	-	-	-	-	-	-	-
2	11 KV Lines	22,420,058,711	2,079,428,043	24,499,486,755	7,141,451,996	822,289,351	7,963,741,348	16,535,745,407
3	Distribution Transformer	14,887,173,783	1,380,763,853	16,267,937,637	4,238,134,625	487,992,214	4,726,126,839	11,541,810,802
	Total	37,307,232,495	3,460,191,897	40,767,424,391	11,379,586,622	1,310,281,565	12,689,868,187	28,077,556,204
F	LV Distribution Equipments							
1	LV Poles	-	-	-	-	-	-	-
2	440 LV Distribution Line	-	-	-	-	-	-	-
3	220 LV Distribution Line	-	-	-	-	-	-	-
4	KWh Meters & Service Cable	-	-	-	-	-	-	-
5	Misc Equipment	13,297,412,314	1,233,315,774	14,530,728,088	4,555,205,463	524,500,752	5,079,706,215	9,451,021,873
	Total	13,297,412,314	1,233,315,774	14,530,728,088	4,555,205,463	524,500,752	5,079,706,215	9,451,021,873
G	Vehicles							
1	132/66/33 KV GSO Vehicles	-	-	-	-	-	-	-
2	Vehicles	979,074,870	87,832,737	1,066,907,607	621,100,220	35,399,794	656,500,014	410,407,593
	Total	979,074,870	87,832,737	1,066,907,607	621,100,220	35,399,794	656,500,014	410,407,593
H	Detail of General Plant Assets							
1	Computer Equipment	-	-	-	-	-	-	-
2	Furniture Equipment	-	-	-	-	-	-	-
3	Workshop Equipment	-	-	-	-	-	-	-
4	Laboratory Equipment	-	-	-	-	-	-	-
5	Total T&P Equipment	757,904,340	150,133,989	908,038,329	315,801,153	30,128,541	345,929,694	562,108,635
	Total	757,904,340	150,133,989	908,038,329	315,801,153	30,128,541	345,929,694	562,108,635
J	O & M Equipments							
	Grand Total	71,035,991,041	10,221,784,980	81,257,776,021	21,599,358,832	2,684,057,607	24,283,416,438	56,974,359,583

Annexure-1 is the list of FESCO Grid stations with no. of 132kV and 66kV circuits, no. of power transformers installed and 11kV feeders emanating from each grid station. In FESCO system, the total numbers of power transformers with voltage ratio are indicated as below;

Table 2.1: Power Transformers

Sr. No.	Voltage Ratio	Number Installed
1	132/66kV	9
2	132/11kV	134
3	66/11kV	41
	Total	184

2.2.2 Common Delivery Points (CDP) for Power Exchange

There are 83 Common Delivery Points in FESCO, at which metering is being done to record exchange of energy, which include purchase of power from NTDC, Six No. IPP and Import/Export with adjoining DISCOs. List of these Common Delivery Points is given in Annexure-2. NTDC supplies power to FESCO through its One 500kV grid-station at Ghatti and Seven 220kV grid stations at Nishatabad, Jaranwala Road, Summundri Road, Daud Khel, Toba-Tek-Singh, Ludawala and Bandala.

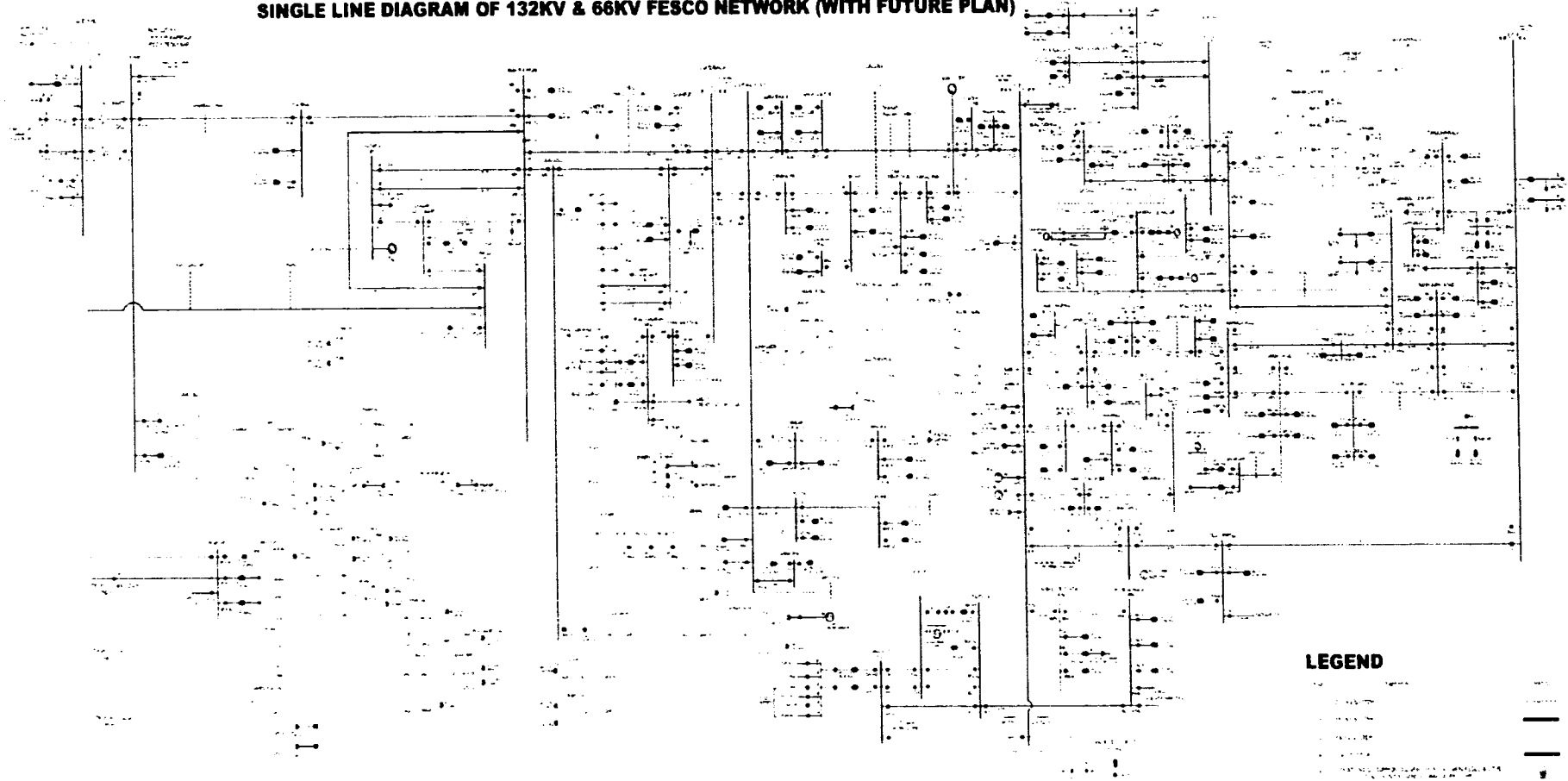
2.3 Distribution Network

Distribution network of FESCO consists of 11kV feeders, 11/0.4kV distribution transformers, 0.4kV Low Tension (LT) Networks (three phase, four wire system) and service connection to the individual consumers. According to the declared load of consumers, individual connections are either single phase or three phase. In all, the number of 11kV feeders in FESCO is about 867, as on 30-6-2014. The grid wise number of 11kV feeders from FESCO grid is shown in Annexure-1. Number of distribution transformers is more than 87359. Total length of HT lines is more than 39688 km, while length of LT lines in areas served by FESCO is more than 25876 km. Total no. of consumers in area fed by FESCO is more than three million.



Figure 2:

SINGLE LINE DIAGRAM OF 132KV & 66KV FESCO NETWORK (WITH FUTURE PLAN)



1



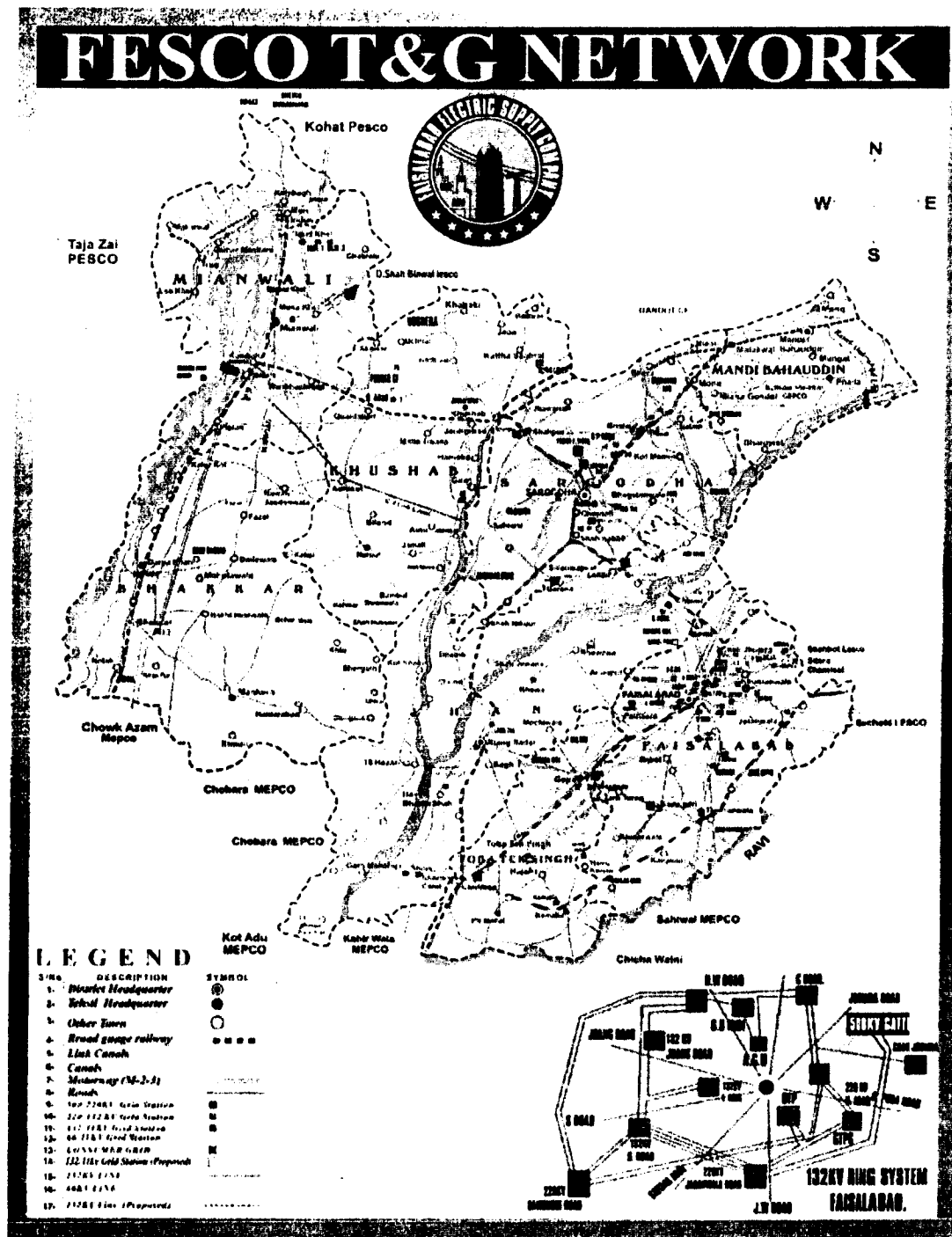
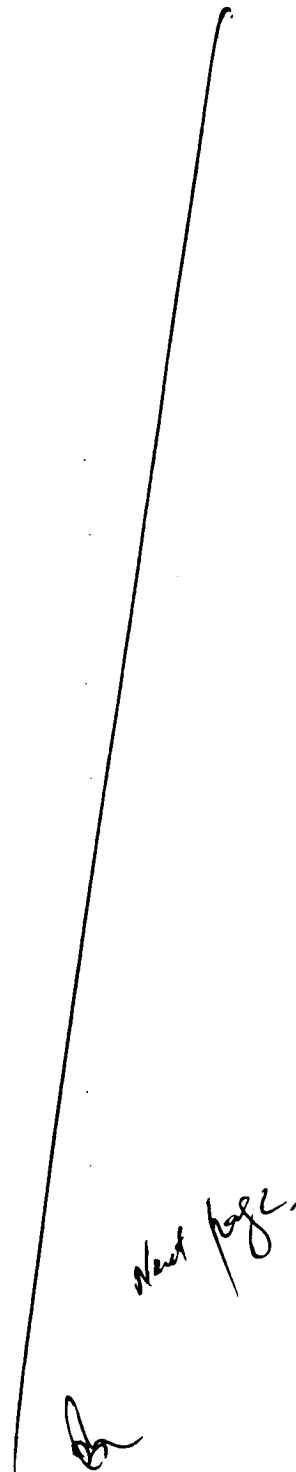


Figure 1: Geographical Map of 132 / 66kv G/S & T/ L Under GSO FESCO



Chapter 2

Existing Transmission and Distribution System of Faisalabad Electric Supply Company (FESCO)

2.1 Introduction

As a part of unbundling programme for Water and Power Development Authority (WAPDA), eight distribution companies with 100% State Equity, commonly called as DISCOs, were planned in 1994 to handle its Power Distribution network, spread all over Pakistan, except areas covered by KESC. No of Companies has been increased to Ten with the addition of SEPCO and TESCO recently. All 132/66kV grid-stations and transmission lines, falling in the jurisdiction of each DISCO, were subsequently handed over to respective DISCOs.

Faisalabad Electric Supply Company (FESCO) covers districts of Faisalabad, Jhang, Toba Tak Sing, Sargidha, Khoshab, Mianwali and Bhakkar. A geographical map showing Electrical Transmission Network of FESCO is attached as Figure.1. Single Line diagram of FESCO system is attached as Figure.2. Diagram showing boundaries of FESCO system as well as its interconnections to NTDC network, adjoining DISCOS and IPPS feeding FESCO system.

2.2 Details of Electrical Network of FESCO

Electrical network of FESCO can be divided into the following two components;

- i. Transmission Network
- ii. Distribution Network

The details of these as on 30-6-2014 are given below;

2.2.1 Transmission Network

FESCO network consists of 132kV and 66kV grid stations and transmission lines. At present, there are 62Nos 132kV grid stations and 23Nos. 66kV grid-stations, which are operated and operated and maintained by FESCO.

138 Nos.132/66kV over-head transmission lines in FESCO area have length of about 1865 km and 1260 km respectively.




- Recommendations for improvement or replacements of measuring equipment with respective costing

1.3 Methodology Adopted For Carrying Out Study

Following Data were collected from GSO and PDC-FESCO for FY2013-14:

- Loading Data of all Transmission Lines and Power Transformers
- Data of all energy meters and CT/PT installed at FESCO Grid-stations and CDP points
- Line flows (amperes or MW/MVAR)
- Bus voltages at 132kV, 66kV and 11kV at each substation at the same instant as of recorded peak and off-peak.
- Power Factor or cumulative KVARH of the whole month
- Power Transformers' loads recorded at 11kV side at the same instant (amperes or MW/MVAR) as of recorded peak and off-peak
- Name Plate data of power transformers along-with %age impedance (including resistance and reactance), tap positions and voltage regulation.
- Capacitors at the instant of other measurements recorded
- Generators' dispatches MW/MVAR of the power plants(both the IPPs and GENCOs) connected to FESCO network both of the same instants as of recorded peak and off-peak

1.4 Data Collection

Data were collected from various field formations of FESCO and NTDC i.e. Grid-System Operation (GSO), Power Distribution Control (PDC), Planning and Engineering (P&E), National Power Control Center (NPCC) Faisalabad and NTDC-Office Lahore.

1.5 Data Analysis

Present system of Transmission and Transformation Losses calculation was checked in view of Data supplied by FESCO. At present transmission Losses are not regularly calculated at FESCO level because the meters are not installed at both ends of Transmission lines. Similarly meters are not installed at all power transformers due to which transformation losses cannot be calculated completely. Apart from this various categories of accuracy class meters especially of class 1.0 still exist which need replacement for accurate measurement. Remedial measurement for improvement have also been suggested for grid-stations where bus-bar PTs and line CTs are not existing but only isolators are installed. All energy meters other than accuracy class 0.2 need to be replaced for correct evaluation of transmission and transformation losses of FESCO.



Chapter 1

Objectives and Methodology

1.1 Introduction

Electric Transmission and Distribution System is the only mode for transfer of the Electricity. However, no electric transmission and distribution system is immune to technical loss, since electricity while passing through conductors generate heat, which results in a power loss. In addition to the Copper Losses of transformers magnetization of core also result in losses, known as Iron or core losses. Precise measurement of such losses is important for any electric utility as these are an important component of its tariff. In fact correct determination of tariff is a major contributor towards the financial viability of a utility.

Unfortunately Transmission and distribution losses being claimed by FESCO do not present the correct picture of Technical Losses. Firstly transmission and transformation losses presently recorded are based on the existing metering system installed at transmission and distribution network i.e. grid-stations. Most of the meters installed are of accuracy Class-1 of electro-mechanical type. Secondly distribution losses are also calculated on the basis of 11kV outgoing units recorded at grid-stations and energy sold by the companies. FESCO has been directed by NEPRA to carry out simulation study through independent agency to validate its claim. FESCO has engaged services of PPI for evaluation of T&D Losses of FESCO System. This part of the report deals with the part-2 of scope of services of Transmission and Transformation Losses which is detailed below.

In parallel to the activities defined in part-1, the Consultant will also study and probe into the existing physical transmission system of FESCO to find out the reasons that accounts for false measurement of transmission losses. The reasons may vary from inaccuracy of measurement devices (meters, CTs, PTs etc. on Combined Delivery Points (CDPs), substations etc. to human error introduced due to manual readings and postings). The consultants' team will also recommend measures in the form of a complete comprehensive, elaborated project (including costing, material requirement etc.) to correctly measure and record the transmission system losses of FESCO.

1.2 Objectives of the Study

- Correct estimation of the transmission system and transformation losses of FESCO at 132kV and 66kV of FESCO comprising approximately 50 Nos. 132kV, 21Nos. 66kV Grid Stations and 11kV Bus-bar losses
- Examining the accuracy of equipment involving metering of energy at CDPs and Grid-stations including CTs and PTs used for evaluation for T&D losses
- Propose Measures to reduce transmission and transformation (T&T) system losses and distribution losses




- j. Testing of energy meters CTs and PTs should be carried out on regular basis. Concerned P&I Division should prepare a testing schedule for all Grid-stations in advance on regular basis and should ensure that it is followed strictly. Manager GSO should issue fortnightly report on the implementation of this schedule.
- k. FESCO system has 1300 energy meters installed on 132/66 kV lines, power Transformer and 11kV feeders. This figure will be increased once the transmission lines and HT side of transformer having no meters are also equipped with meters. Similarly new 11kV feeders and grid-stations are being added on regular basis causing further load on the existing staff of P&I and M&T deputed for testing of meters. It needs to be highlighted that this staff is not exclusively responsible for this mammoth task of meter testing but they are also responsible to attend other faults in addition to routine works. It is recommended that a separate section dedicated for metering only should be formed under Manager GSO.

I. Proposed investment plan for up-gradation

All the replacements, up-gradations and installation of energy meters of higher accuracy clause may be implemented in two phases.

Phase-1

- I. Installation of new PTs, CTs and energy meters at grid stations where none of these is existing. All of these would be of accuracy class 0.2.
- II. Replacement of electromechanical meters and those static meters having accuracy class other than 0.2. (e.g. poorer class of 0.5 or 1.0) by new meters of accuracy class 0.2
- III. Procurement of testing sets and lap top computers

This phase will cost Rs.131.665 Million.

Phase-2

Installation of dedicated PTs and CTs of class 0.2 or replacement of existing CTs/PTs with metering core of class 0.2

This phase will be completed at a cost of Rs.223.971 Million.

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transformers, Transmission loss and Transformation loss can be worked out and hence for the entire FESCO, consolidated Transmission and Transformation losses can be worked out, these meters should be of class 0.2 and should have feature of storage of time tag data, as well as remote data communication.

- f. Deficiency of the meters is summarized as follows.

Energy Meters Requirements

Equipment	Total No.	Required No. of Meters	No. of Meters Installed	Deficit	No. of Meters to be installed
Transmission Lines	138	276*	174	102	102
Power Transformers	184	184	75	109	109

* For both sides of Transmission Lines

- g. Dedicated PTs and CTs should be installed for energy meters at FESCO Grids as well as consumer's Grid. If installation of dedicated PT and CTS is not possible, then existing PTs should be replaced with class 0.2 to reduce error of recorded energy.
- h. At stations where PTs/CTs or both are not installed, these should be installed, so that the energy meters become operational following their installation.
- i. Standard Operating Procedure (SPOs) should be formulized for each activity being done in FESCO to have uniform and clear cut procedure all over the utility. Apart from preparing and distributing SOP, all the staff and engineers associated with working of losses should be trained to work out these losses in prescribed manner.




Executive Summary (Part 2)

- a. The Consultant team visited various offices of FESCO for data collection and information regarding metering system installed at various grid-stations as well as to know the procedure for recording the reading of different energy meters and method of calculating grid-losses.
- b. Details of findings are as under:
- Total No of transmission lines in FESCO are 138
 - Total meters required on both sides are 276
 - 174 line meters are installed as per accuracy given below:
 - 05 line have meter with accuracy class 0.2
 - 82 lines have meters with accuracy class 0.5
 - 87 lines have meters with accuracy class 1.0
 - Meters on CDP on other DISCOs are of accuracy class 0.2
- c. Factors effecting working of T&T Losses can be summarized as under:
- Non-existence of Energy Meters on both sides of all TL and HT sides of all Power Transformers
 - Different Accuracy Class and Type of installed meters
 - Actual %age error of meters beyond specified accuracy class.
 - Incorrect mechanism for computing T&T Losses
- d. As per current practice of FESCO energy figures received from CDP and energy reading of all 11kV feeders form the basis of calculation of T&T Losses. Most of the meters installed on 11kV incoming feeders are of class 0.5 are 86.38%, of 1.0 are 4.57% and on outgoing feeders, 96.65% of accuracy class 0.5 and 2.53% are of accuracy class 1.0 whereas 50% of installed meters on Transmission Lines and 29.3% on Power Transformers are also of accuracy Class 1.0, while meters at CDPs are of Class 0.2. This mismatch of accuracy class meters installed on both sides, i.e. CDPs and 11kV, is a major contributor towards reported inaccurate T&T losses, even if other factors on ground like high %age of error of meters, PTs and CTs, reading time lag, wrong basis of calculation etc. are altogether ignored.
- e. All Transmission Lines, whether 132kV or 66kV, and HT sides of Power Transformers, and 11kV should have energy meters so that for each line and power



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0391 FAISALABAD ABDULLAHPUR

Not Over: PKR 839,856.00

Banker Cheque No. : 582972

Date: 05-Aug-2015
Serial No. 100093332

Payee's A/c Only

PAY TO NEPRA

the sum of PAKISTAN RUPEES EIGHT HUNDRED THIRTY-NINE
THOUSAND EIGHT HUNDRED FIFTY-SIX ONLY

OR ORDER

PKR 839,856.00

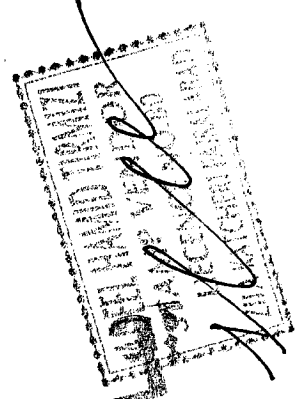
Payable at any MCB branch in Pakistan

MCB BANK LIMITED

Authorized Signatory

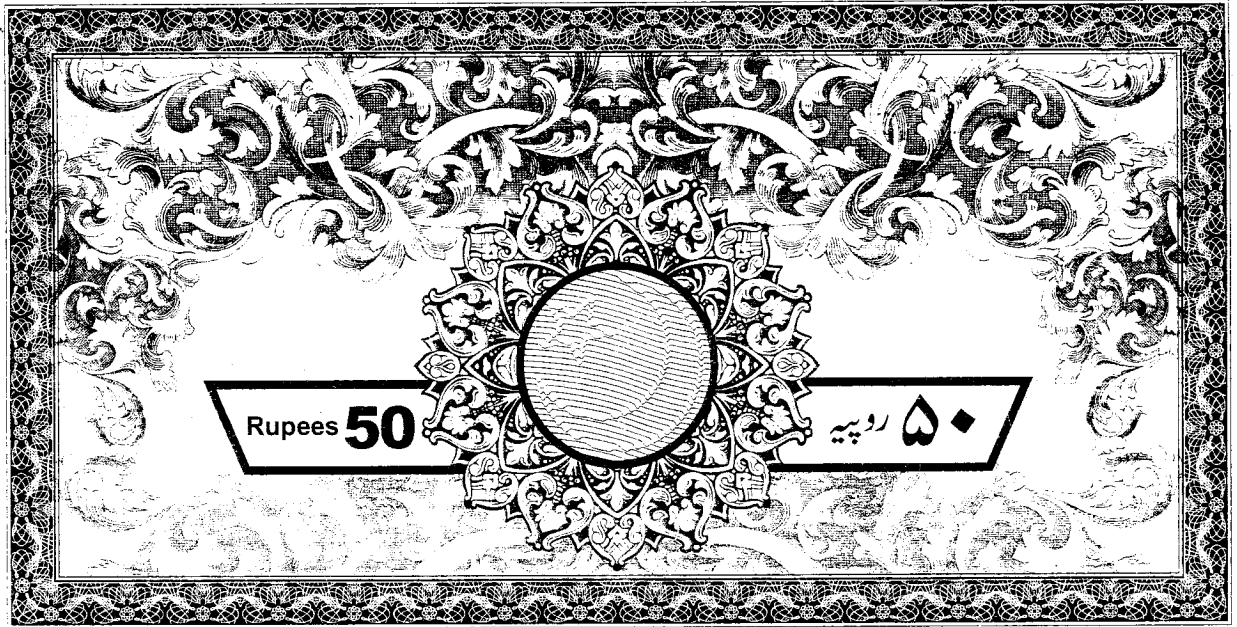
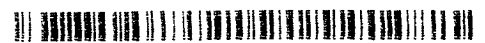
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ATTESTED
SHAFIQ HUSSAIN AMAR
Advocate
OATH COMMISSIONER

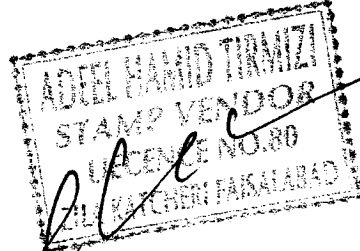
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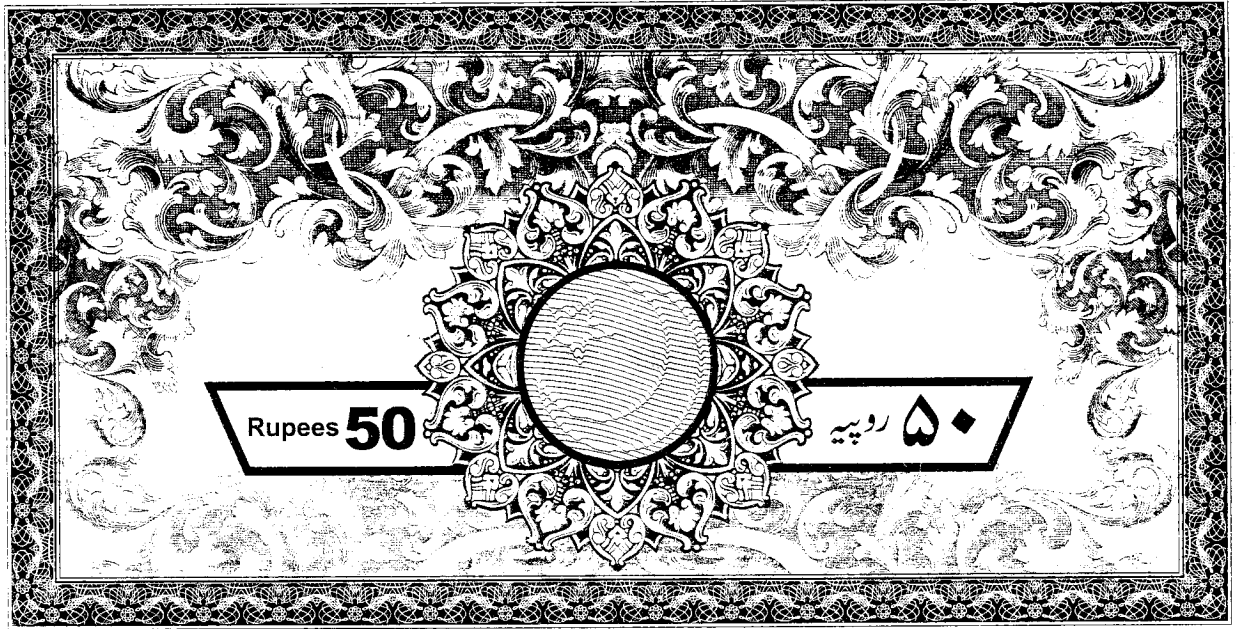
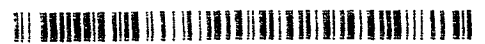
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شناختی 316

33100-0750036-5



AFFIDAVIT

I Rashid Ahmed Aslam S/O Niaz Muhammad, Chief Executive Officer Faisalabad Electric Supply Company Limited (FESCO), holding CNIC No. 33100-0750036-5, being duly authorized Representative/ Attorney of Faisalabad Electric Supply Company Limited (FESCO), Canal Road Abdullahpur Faisalabad, hereby solemnly affirm and declare that the contents of this Multi Year Tariff Petition for FY 2015-16 to FY 2019-20, including all supporting documents, are true and correct to the best of my knowledge and belief and that nothing has been concealed.

Verified on ___ day of August, 2015

DEPONENT

(RASHID AHMED ASLAM)
CHIEF EXECUTIVE OFFICER
FESCO FAISALABAD



To complete installation of TOU metering.	<table><tr><th>Sr. No.</th><th>Tariff Category</th><th>Total No. of connections for installation of TOU meters</th><th>Installed ending the previous month</th><th>Installed during the month</th><th>Total</th><th>TOU meters yet to be installed</th><th>Reasons for delaying for installation</th></tr><tr><td>1</td><td>Residential (A-1)</td><td>23,715</td><td>6,297</td><td>50</td><td>6347</td><td>17,368</td><td rowspan="6">Efforts are being made to replace remaining energy meters with TOU meter as per NEPRA instructions.</td></tr><tr><td>2</td><td>Commercial (A-2)</td><td>11,376</td><td>7,558</td><td>104</td><td>7662</td><td>3,714</td></tr><tr><td>3</td><td>Industrial (B)</td><td>33,871</td><td>28,131</td><td>46</td><td>28177</td><td>5,694</td></tr><tr><td>4</td><td>Bulk Supply (C)</td><td>175</td><td>175</td><td>0</td><td>175</td><td>0</td></tr><tr><td>5</td><td>Agriculture (D)</td><td>33,934</td><td>33,994</td><td>0</td><td>33994</td><td>0</td></tr><tr><td>6</td><td>Resid. Colonies attached to industrial premises (H)</td><td>78</td><td>78</td><td>0</td><td>78</td><td>0</td></tr><tr><td colspan="2">Total</td><td>103,209</td><td>76,233</td><td>200</td><td>76,433</td><td>26,776</td><td></td></tr></table>	Sr. No.	Tariff Category	Total No. of connections for installation of TOU meters	Installed ending the previous month	Installed during the month	Total	TOU meters yet to be installed	Reasons for delaying for installation	1	Residential (A-1)	23,715	6,297	50	6347	17,368	Efforts are being made to replace remaining energy meters with TOU meter as per NEPRA instructions.	2	Commercial (A-2)	11,376	7,558	104	7662	3,714	3	Industrial (B)	33,871	28,131	46	28177	5,694	4	Bulk Supply (C)	175	175	0	175	0	5	Agriculture (D)	33,934	33,994	0	33994	0	6	Resid. Colonies attached to industrial premises (H)	78	78	0	78	0	Total		103,209	76,233	200	76,433	26,776	
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To complete study of its Transmission and Distribution losses on 132 KV, 11KV and below.	The reply has already been provided vide this office letter No. 5922 dated 17-04-2015 at Sr. No. ii. It is further submitted that study of T&T losses by an independent third party M/S Power Planners International (PPI) have been completed (copy attached as Annexure-C)																																																											
To submit the details of investment expense undertaken in the FY 2013-14.	<table><tr><th colspan="2">(Rs. in Million)</th></tr><tr><th>Particulars</th><th>Expenditure 2013-14</th></tr><tr><td>DOP</td><td>315</td></tr><tr><td>ELR</td><td>722</td></tr><tr><td>STG</td><td>724</td></tr><tr><td>PDEIP</td><td>103</td></tr><tr><td>Deposit Works</td><td>811</td></tr><tr><td>Capital Contribution</td><td>1,312</td></tr><tr><td>Total</td><td>3,987</td></tr></table>	(Rs. in Million)		Particulars	Expenditure 2013-14	DOP	315	ELR	722	STG	724	PDEIP	103	Deposit Works	811	Capital Contribution	1,312	Total	3,987																																									
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To transfer amount in the post retirement benefit fund and claim the amount so transferred from the Authority in the next year's tariff determination by submission of evidence of transfer of amount.	The reply has already been provided vide this office letter No. 5922 dated 17-04-2015 at Sr. No. iv.																																																											
To submit a recruitment plan for the requested hiring of staff containing cost/benefit analysis based on best practices.	Noted for compliance.																																																											
To submit the certificate of replacement hiring before the finalization of the tariff determination pertaining to the FY 2015-16.	The certificate of replacement hiring will be provided before the due date.																																																											
To send quarterly report of progress made on creation of new circles w.e.f. 31 st March, 2015.	Reply has already been provided vide letter No. 5851-52 dated 31 st March, 2015.																																																											

(RASHID AHMED AHMAD)
CHIEF EXECUTIVE OFFICER

To share the details of late payment charges recovered from consumers and any invoice raised by CPPA under the head of mark up on delayed payments for the FY 2014-15. The information must be submitted before the next tariff petition is filed.	CPPA has not yet raised any Invoice on account of mark up on delayed payments to IPPs for FY 2014-15. The same will be provided as and when received. FESCO has recovered an amount of Rs. 923,399 Million as Late Payment Surcharge from Consumers during FY 2013-14. As far as the recovery of such charges during FY 2014-15 (upto May, 15), it comes to Rs. 989,343 Million.
The Petitioner is directed to give comments on the proposal of lifeline consumers before the next year's tariff petition, and also to share the financial impact of revision of criteria of lifeline consumers on its revenue.	<u>Definition of Lifeline Consumers</u> The following conditions may be included: - Upto 50 units consumed. - Maximum Load 03 KW. - 11 months (average) units consumed upto 50 units. The financial implication of the proposal is Rs.286 million.
To explain the amount of Rs. 15,279 million.	NEPRA determined Multi-Year Tariff (MYT) of FESCO on February 23, 2007 for a period of five years commencing from the date of notification of schedule of tariff in the official gazette and ending on February 23, 2012 or 5 years after the date of privatization whichever be later. The said tariff was notified by GoP on February 23, 2007 and made applicable with effect from February 24, 2007. Prior to February 24, 2007, FESCO used to charge its consumers such tariff/rates as notified by GoP and NEPRA's rates were not approved / available at that time. Due to non-recovery of cost base tariff the Company's cost exceeded its revenue and it suffered losses. During FY 2007-08 and 2008-09 PEPCO arranged finance facility of Rs.11,501 billion from different Banks (National Bank of Pakistan, Bank Al-Falah Limited and Askari Bank Limited) on account of payment to NTDC/CPPA for purchase of Power by issuing of Term Finance Certificates. During 2009, GOP decided to remove the bank borrowings that were on the books of power wing companies as a consequence of GoP's unpaid subsidy from FY 2004-05 through FY 2008-09. PEPCO issued notification No. GMF/PEPCO/PA-40/04-16 dated 02-07-2009, which specified that loans of Rs. 216 Billion (including FESCO loan of Rs. 11,501 Billion) would be transferred to Power Holding Pvt. Limited (PHPL) and adjusted against subsidy due to inadequate tariff of the said period. Thus, loans of Rs. 11,501 Billion was removed and shown as long term payable in the accounts as formal mechanism and quantum of subsidy for each Company was not finalized. PEPCO has now allocated the subsidy towards whole power distribution companies through credit notes issued by CPPA during FY 2013-14. The share of FESCO amounting to Rs. 15,279 Billion (net of mark-up of Rs. 1,374 Billion) has been shown in other income of the Company and long term payable of Rs. 11,501 Billion has been transferred/ adjusted against payables to CPPA. 

to work and customers relation through following letters / orders:-

- WAPDA o/o No.1872-FD(P)-III/Vol- III/5199-5211 dated 30-08-1982.
- WAPDA o/o No.23625-04/MDP/CEAP/DDAP-II/15/736 dated 27-08-2001.
- WAPDA letter No.2353-2406 dated 27-11-2001.
- Finance Division (Power) WAPDA o/o No.5958-74 dated 08-08-2002.
- WAPDA office order No. DDF(P)-1(1150)/5958-74 dated 08-08-2002.
- PEPCO letter No. CEO(PEPCO)/DDA/3874/477-91 dated 19-03-2002.
- Chief Engineer (WPPO) WAPDA letter No. 1729-43 dated 24-01-2003.
- PEPCO executive Order No. 92-131 dated 29-12-2006.
- PEPCO letter No.MD(PEPCO)/HRD/A-601/928-43 dated 28-01-2009.
- PEPCO No. 1625-39 dated 06-09-2010.

3. The yardstick is expressive of actual requirement of Manpower against the offices requirement, Technical installations, Distribution and Transmission Lines, Grid Stations, Numbers of Customers, Each sanctioned post is meant for performing specific duty verily instrumental in the chain for accomplishment of construction/operational works to achieve the target as fixed by Ministry and NEPRA.

Qualitative Benefits

- Better Service to the consumers.
- System will improve.
- Complaints will decrease.
- Supply continuity will improve.
- Efficient utility functions.
- Efficient utility practices.
- Administrative losses will reduce.
- Reduction in work burdened/stress upon employees.
- FESCO recovery will improve.
- FESCO image / name will be brightened.

Quantitative Benefits

The hardworking manpower of FESCO has transformed above achievements into statistically defined financial benefits. The result is vividly embodied in the top cumulative performance:

Year	T&D Losses %age	Recoveries % age	Combined Efficiency Index
2011-12	10.8	98.45	87.8
2012-13	10.9	99.06	88.3
2013-14	11.3	100.5	88.7

2014) by 31st December 2015 and remaining 70% till June, 2016.

- To initiate and install AMR/AMI at the consumer level in at least 10 of their high loss making sub divisions by 31st December, 2015 and remaining 70% by 30th June 2016.

To provide break-up of receivables with aging and nature of receivables and a concrete plan of their recovery not later than 31st March, 2015.

Reply has already been provided vide letter No. 5851-52 dated 31st March, 2015.

To monetize all the incremental costs which cause them additional losses and incorporate these as a part of project cost while calculating the IRR or NPVs for any village electrification project, in future.

FESCO appreciates NEPRA kind gesture for accepting the version that provision of electric power services to the villages has negative impact. However, financially speaking such Losses cannot be calculated in heads of IRR or NPV therefore the FESCO should not be deprived of giving allowance of such Losses in future tariffs.

To get its strength yard stick approved by the Authority based on proper justifications and its quantified benefits.

FESCO yardstick for the period ending June 2014 comprising of following Officer/ Subordinate cadres posts are attached as **Annexure-A:-**

Category	Sanctioned	Held
Officers (BPS17 & above)	459	321
Subordinate Staff (BPS-01 to BPS-16)	18,551	15,963
Total	19,010	16,284

Justification

1. Present FESCO yardstick of manpower taken up with NEPRA bears the approval of BOD FESCO accorded in the following meetings: (Annexure-B).

- Board of Directors FESCO in its 115th/03rd meeting held on 03-01-2014.
- Board of Directors FESCO in its 118th/06th meeting held on 07-03-2014.
- Board of Directors FESCO in its 120th/08th meeting held on 31-03-2014
- Board of Directors FESCO in its 124th/12th meeting held on 31-05-2014
- Board of Directors FESCO in its 129th/17th meeting held on 05-09-2014.
- Board of Directors FESCO in its 130th/18th meeting held on 10-10-2014.

2. Resolutions of BOD FESCO in above mentioned cases of yardstick is based on the authorization and the criteria notified vide WAPDA/ PEPCO from time to time in view of exigencies relating

is noted that except for certain pilot projects, DISCOs have not been able to make serious efforts on the installation of AMR and AMI systems.

- The Authority considers that one of the key reasons for high transmission and distribution losses in DISCOs is absence of any mechanism for tracking of electricity flow from the points of their electricity purchases (CDP) down to the final consumer. A reliable metering and recording system at every voltage level starting with the 132 kV grid, at the 11 kV and to 400 and 230 volts is therefore critical for not only elimination of theft, unaccounted for electricity and diagnosing technical problems. Such systems would also enable NEPRA in analyzing DISCOs' genuine investment requirements. Consequently reduction in losses would help to save billions of rupees annually and support GOP's efforts in eliminating circular debt. Reportedly the results through the model projects have been quite encouraging and noticeable reductions in the losses have been observed.
- The Authority therefore directs all DISCOs as follows:
 - To install AMR and AMI at all of their CDPs by December 31, 2015.
 - To install AMR and AMI on the receiving end of at least 30% of their 11 kV feeders (as existing on 30 June

07-2015. After the success of installation of AMI on these high loss feeders, rest of the work will be followed.





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FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Phone No. 041-9220184
Fax No. 041-9220233
E-mail: mepe@fesco.com.pk

OFFICE OF THE
CHIEF EXECUTIVE OFFICER
FESCO FAISALABAD

No. 71 CFO/FESCO/CPC

Dated 30/07/2015

The Registrar NEPRA,
NEPRA Tower, Ataturk Avenue (East),
G-5/1, Islamabad.

Subject: DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY FESCO FOR DETERMINATION OF ITS CONSUMER END TARIFF PERTAINING TO THE FY 2014-15 (CASE # NEPRA/TRF2014)-272/FESCO

Ref: Your office letter No. 4936 dated 03-04-2015.

The point wise reply of the directions is as under;

Directions	Implementation Status
To explain the reasons of varying reported numbers of installed TOU meters, not later than 31 st March, 2015.	Reply has already been provided vide letter No. 5851-52 dated 31 st March, 2015.
To print bills with snap shots of meter reading (both previous and current) not later than 30 th April, 2015.	Reply has already been provided vide letter No. 5977 dated 28 th April, 2015.
To submit its investment requirements for the implementation of Hand Handled Units (HHU) along with its completion timelines with its next tariff petition.	FESCO had started meter reading through mobile phones. The system has been implemented in all 52 Nos. Sub Divisions of Faisalabad Circle-I & Circle-II. In the remaining Circles i.e., Jhang & Sargodha, in July 2015, 18 Nos. Sub Divisions will be shifted on Mobile Meter Reading. For the remaining sub-divisions the system is being implemented.
The Authority had directed DISCOs vide Registrar's letter dated 21.12.2012 to submit their plans regarding introduction and expansion of Automatic Meter Reading System (AMR). DISCOs were also required to submit progress reports on NEPRA's directions. Subsequently vide letter No. NEPRA/R/L/AD-21/9016-26 Dated 7th August 2014, the Authority also directed DISCOs to install AMR and Automatic Metering Infrastructure (AMI) at all of their Common Delivery Points	i. Out of 100 CDPs, AMR & AMI have been installed on 87 Nos. For the remaining 13 Nos. installation of AMR & AMI is underway and will be completed soon. ii. AMR & AMI have been installed on all the receiving end of 11 KV feeders. iii. As regards installation of AMR & AMI at the consumer level two high loss feeders were selected, one from urban sub-division and one from rural sub-division. Approximately ten thousand (10,000) meters of all tariffs are to be replaced with AMI. Being new project in DISCOs no vendor participated in the tender which was scheduled to be opened on 5-03-2015. Again tender was invited which was scheduled to be opened on 9-06-2015 but again not participated by any vendor. Now again tender has been invited which is scheduled to be opened on 28-

b



FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Phone No. 041-9220184
Fax No. 041-9220233
E-mail: mcpe@fesco.com.pk

OFFICE OF THE
CHIEF EXECUTIVE OFFICER
FESCO FAISALABAD

No. 5977 CFO/FESCO/CPC

Dated 28/04/2015

The Registrar NEPRA,
NEPRA Tower, Ataturk Avenue (East),
G-5/1, Islamabad.

Subject: Monitoring of Directives Contained in Tariff Determination in the Matter of Tariff petition filed by FESCO for Determination of Consumer-end Tariff for FY 2014-15.

Please refer to your office letter No. 5974 dated 17-04-2015, the reply of Authority's directives passed in determination of consumer-end tariff of FESCO for FY 2014-15 at serial Nos. a, e, q & b whose deadline for implementation was 31-03-2015 & 30-04-2015 respectively, is as under:-

Sr. #	Directions	Implementation Status
a)	To explain the reasons of varying reported numbers of installed TOU meters, not later than 31st March, 2015	Reply has already been provided vide letter No. 5851-52 dated 31-03-2015. However, a copy of the same is again enclosed at Annex-A .
b)	To print bills with the snapshots of meter readings (both previous and current) not later than 30th April, 2015.	In the billing cycle for December 2014, FESCO had started, as a pilot project in Abdullahpur Division, meter reading through mobile phones. Now, in the billing cycle for March-2015, FESCO implemented this system in all Sub Divisions of Faisalabad Circle-I & Circle-II (52 Nos. Sub Divisions). In the remaining Circles i.e., Jhang & Sargodha, the training of meter readers is under process and this system will be implemented after completion of training. Copies of the bills are appended as Annex-B .
e)	To provide break-up of receivables with aging and nature of receivables and a concrete plan of their recovery not later than 31st March, 2015.	Reply has already been provided vide letter No. 5851-52 dated 31-03-2015. However, a copy of the same is again enclosed at Annex-C .
q)	To send quarterly report of progress made on creation of new circles w.e.f., 31st March, 2015.	Reply has already been provided vide letter No. 5851-52 dated 31-03-2015. However, a copy of the same is again enclosed at Annex-D .

Reply/ compliance of the remaining Authority's directions will be made before the due date please.

(RASHID AHMED ASLAM)
CHIEF EXECUTIVE OFFICER

	basically issued in the tariff determination for FY 2011-12 and repeated in the later tariff determination.	determination pertaining to the FY 2015-16. Working as per Authority framework is in process which will be provided to the commercial auditors of FESCO for onward submission to the Authority before the due date.
vi.	To submit concrete recovery plan and issue of subsidy and FPA with GOP, no later than 30th. June 2013.	FESCO has implemented the instructions of NEPRA as recovery percentage of Company for FY 2013-14 is 100%. Moreover, all outstanding amounts of FPA were recovered by FESCO. The long outstanding matter of subsidy has also been taken up with Govt. of Pakistan & Govt. Of Punjab vide this office letter No.1655 dated 3.2.2014, No. 2167 dated 21.03.2014, No.1918 dated 16.01.2015 & No.2246 dated 09.03.2015. Final position will be intimated to Authority accordingly.
vii.	To come up clearly on the settlement modality of accumulated cost in this regard till 30th June 2012 and a way forward for the future payments of these retired employees not later than 30th June, 2013.	NEPRA, in FESCO's determination of consumer-end tariff for FY 2014-15 under Clause 13.3.2, has finally decided the issue as under:- • All cost of the XWAPDA retired employees up to 30th June, 2014 would be borne by WAPDA. • Any cost after 30th June, 2014 would be borne by XWDISCOs.

Keeping in view the above mentioned submission, NEPRA is requested to withdraw the show cause notice as FESCO has complied with all directions of Authority in true letter and spirit.

(RASHID AHMED ASLAM)
CHIEF EXECUTIVE OFFICER

		NEPRA. The evaluation of transmission losses is expected to be completed by the end of April 2015 whereas the evaluation of distribution losses is underway as notification of award has been issued on 29.1.2015. Progress in the matter will be reported to Authority.
iii	To submit a comprehensive compliance report with respect to the excessive billing by 30th April 2013.	FESCO is complying with the directions of NEPRA to eliminate excessive billing as following measures have been adopted for the same:- 1. Prompt billing of new connections to avoid the complaints of accumulated billing. 2. Rotation of meter readers. 3. Ensure exercising of %age check by the supervisory staff. It is worth mentioning that FESCO had started meter reading through mobile phones in the billing cycle for December 2014 and presently all Sub Divisions of Faisalabad Circle-1 & Faisalabad Circle-2 (52 No. Sub Divisions) are taking meter reading through mobile phones. The images taken by meter readers at the time of reading are being printed on the electricity bills. In the remaining Circles i.e. Jhang and Sargodha, the training of meter readers is under process and this system will be implemented after completing of training.
iv.	To expedite the creation of independent post retirement benefit funds. This direction was issued in the tariff determination for FY 2011-12 and repeated in the subsequent tariff determinations.	In compliance of the Authority's direction, an independent post retirement benefit fund was constituted and got registered with Sub-Registrar, Faisalabad as already intimated vide letter No. 5360 dated 24-10-2014. The amount of funds to be transferred is under active consideration of management and will be intimated accordingly.
v.	To get the reported figure of additional recruitments verified by its Auditors and if it plans to carry out replacement hiring, a certificate from the Auditors of the Petitioner certifying that the recruitment is done as replacement hiring with no additional/incremental cost impact. The direction was	In compliance of Authority's direction, a certificate regarding replacement hiring signed by External Auditors was provided to NEPRA vide letter No. 3247 dated 09-01-2014. However, the same has not been considered by Authority. Being a common issue relating to all DISCOs, the Authority issued an audit frame work and directed all XWDISCOs to submit the required Certificate as per the agreed ISA. The Authority, in FESCO's determination of consumer-end tariff for FY 2014-15, has directed to submit the certificate of replacement hiring before the finalization of the tariff



FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

FESCO

Phone No. 041-9220184
Fax No. 041-9220233
E-mail: meca@fesco.com.pk

OFFICE OF THE
CHIEF EXECUTIVE OFFICER
FESCO FAISALABAD

No. 5922 CFO/FESCO/CPC

Dated 17 / 04 / 2015

The Registrar NEPRA,
NEPRA Tower, Ataturk Avenue (East),
G-5/1, Islamabad.

Subject: Show Cause Notice under Rule 4 (8) & (9) of the National Electric Power Regulatory Authority (Fines) Rules, 2002

Ref: Your office letter No. 4936 dated 03-04-2015.

Before submitting reply to the above mentioned show cause notice it is apprised that FESCO is making its all out efforts to comply with the directions of NEPRA and delay in implementation of directions, if any, occurs due to certain unavoidable circumstances beyond our control. The implementation status of the directions passed by NEPRA in the determination of consumer-end-tariff for financial year 2012-13 is as under:-

Sr. No.	Directions	Implementation Status
i.	To complete installations of TOU metering by 30th April, 2013 and continue with the consumer awareness campaign in this regard.	The installation of TOU meters is under way and balance of 27,420 meters will be replaced upto 31-12-2015. As regards awareness campaign, proper messages are being conveyed on the electricity bills of the consumers.
ii.	To conduct a study of its T&D losses and submit its TOR and completion timelines by 15 th April, 2013.	The Authority, in its determination dated 29-03-2013 (received in FESCO on 04-04-2013), had directed FESCO to conduct a study of its T&D losses through an Independent Consultant on 132 KV line, 11 KV line & below and submit its TORs and completion timeline upto 15th April, 2013. Due to time constraint, the requisites could not be submitted to Authority, however, FESCO had initiated process as per directions. After tender process of transmission losses, Notification of Award was issued to the successful bidder vide letter No.2281-87 dated 11-4-2014. The contract was signed on 8-5-2014 but the said process was verbally stopped by an honourable Member of NEPRA, in the hearing of tariff petition for financial year 2014-15 held on 22-8-2014 at Faisalabad, due to the reason that AMR meters were installed at all CDP's. The process has again been continued as per directions of

**FAISALABAD ELECTRIC SUPPLY COMPANY**

Phone: 041-9220242
Fax: 041-9220217

OFFICE OF THE
CHIEF EXECUTIVE OFFICER
FESCO FAISALABAD

No. 5851-52 /CFO/FESCO/CPC

Date: 31 / 03 /2015

The Registrar NEPRA,
NEPRA Tower, Ataturk Avenue (East),
G-5/1, Islamabad.

Subject: **COMPLIANCE OF THE DIRECTIONS PASSED IN FESCO'S DETERMINATION FOR FY 2014-15.**

In compliance of the directions passed by NEPRA in FESCO's tariff determination, the information required to be submitted up to March 31, 2015 is as under:

Sr. No.	Information Direction	Reply/ Remarks
1	Reasons of varying reported numbers of installed TOU meters.	As per Annexure-A.
2	Break-up of receivables with aging and nature of receivables and a concrete plan of their recovery.	As per Annexure-B.
3	Quarterly report of progress made on creation of new circles.	The Authority has recently determined the FESCO's tariff for FY 2014-15. Hence, quarterly progress ending quarter 30-06-2015 will be reported to Authority accordingly.

(RASHID AHMED ASLAM)
CHIEF EXECUTIVE OFFICER

CC to: Secretary, Ministry of Water & Power - Block A, Pak Secretariat, Islamabad.



FAISALABAD ELECTRIC SUPPLY COMPANY

OFFICE OF THE, CHIEF EXECUTIVE OFFICER FESCO, CANAL ROAD,
ABDULLAHPUR FAISALABAD TEL # 041-9220211/9220229 FAX # 041-9220233
e-mail:- secretaryfesco@fesco.com.pk web:- http://fesco.com.pk

COMPANY SECRETARIAT

No. 1105

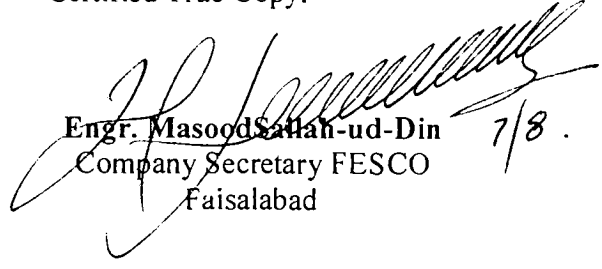
Dated 07/08/2015

Subject: - EXTRACT OF RESOLUTION PASSED BY THE BOARD OF DIRECTORS IN ITS
141ST/29TH MEETING HELD ON 06.08.2015

The Board resolved as follows:-

- a. To file Multi Year Tariff Petition, prepared with the assistance of Financial Advisors appointed by Privatization Commission, for determination of consumer end tariff of the Company for FY 2015-16 to 2019-20 for various categories of consumers along with Integrated Generation, Transmission and Distribution Plan (IGTDP) with National Electric Power Regulatory Authority (NEPRA).
- b. The Chief Executive Officer FESCO along with following officers is hereby authorized:-
 1. G.M (Operation)
 2. Chief Financial Officer
 3. Director General (HR&A)
 4. Chief Commercial Officer
 5. Chief Engineer (P&D)
 6. Director General (IS)
 7. Company Secretary
 8. Manager Finance (CP&C)
 9. Legal Advisor-FESCO
- i. To sign individually or jointly the necessary documents for filing of the Multi Year Petition for FY 2015-16 to 2019-20.
- ii. Subsequent review petition after determination on Multi Year Tariff Petition, if any.
- iii. To pay the necessary tariff petition filing fee as per NEPRA Rules.
- iv. To appear before the Authority as needed and do all acts necessary for completion and processing of the applications.

Certified True Copy.


Engr. Masood Salim-ud-Din
Company Secretary FESCO
Faisalabad

7/8.

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Proposed Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	Revenue as per new proposed Tariff		Revenue as per GOP Notified Tariff		Subsidy		
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Total
	(MkWh)	(%)		(kW)	(%)		(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	
Residential													
Up to 50 Units	396.14	3.72%	761,310			-	-	1,585	-	792	-	792	792
For peak load requirement up to 5 kW	-	0.00%	-			-	-	-	-	-	-	-	-
01-100 Units	1,637.63	15.37%	543,010			-	-	16,511	-	9,482	-	7,129	7,129
NEPRA	2,027.05					-	-	-	-	-	-	-	-
101-200 Units	1,230.41	11.55%	937,352			-	-	14,144	-	9,979	-	4,166	4,166
NEPRA	840.99					-	-	-	-	-	-	-	-
201-300 Units	842.43	7.91%	530,350			-	-	9,684	-	10,185	-	(501)	(501)
NEPRA	842.43					-	-	-	-	-	-	-	-
301-700	437.11	4.10%	326,688			-	-	6,897	-	6,557	-	340	340
NEPRA	437.11					-	-	-	-	-	-	-	-
Above 700 Units	108.19	1.02%	36,351			-	-	1,951	-	1,893	-	58	58
NEPRA	107.12					-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	0.00%	-			-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	11.04	0.10%	-			-	-	199	-	193	-	6	6
Time of Use (TOU) - Off-Peak	50.50	0.47%	8,630	93,776	6.15%	0.000	-	569	-	581	-	(12)	(12)
E-1(i) (55) TEMP	0.42	0.00%	229	1,315	3.67%	-	-	8	-	7	-	0	0
Total Residential	4,713.88	44.23%	3,143,921	7,290,313	7.38%	0.000	-	51,648	-	39,669	-	11,979	11,979
Commercial - A2													
Commercial -													
For peak load requirement up to 5 kW	297.02	2.79%	349,283	523,334	6.48%	-	-	5,021	-	5,198	-	(177)	(177)
Commercial (<100)													
Commercial (<20 kW)													
For peak load requirement exceeding 5 kW													
Regular	3.74	0.04%	55	5,371	7.98%	0.019	8	61	8	56	-	5	5
Time of Use (TOU) - Peak (A-2)	38.71	0.36%	-	-	0.00%	-	-	698	-	677	-	21	21
Time of Use (TOU) - Off-Peak (Temp)	174.85	1.84%	9,125	224,819	8.88%	1.187	475	1,971	475	2,011	-	(40)	(40)
E-1(i) (56) TEMP	9.72	0.09%	1,183	15,026	7.39%	-	-	164	-	170	-	(6)	(6)
Total Commercial	524.05	4.92%	359,646	768,550	7.78%	1.206	483	7,915	483	8,112	-	(197)	(197)
Industrial													
B1	125.27	1.18%	15,801	97,303	14.70%	0.000	-	1,835	-	1,816	-	19	19
B-1 (09) TOD peak	44.21	0.41%	-	-	0.00%	-	-	797	-	774	-	24	24
B-1 (09) TOD off peak	265.85	2.49%	22,041	237,787	13.15%	2.453	-	2,996	-	3,057	-	(61)	(61)
B-2 A (10)	18.80	0.18%	323	33,209	6.46%	0.060	24	265	24	263	-	2	2
B2 - TOU (Peak)	229.78	2.16%	-	-	0.00%	-	-	4,143	-	4,021	-	122	122
B2 - TOU (Off-peak)	1,372.33	12.88%	10,153	836,214	18.73%	5.891	2,356	14,848	2,356	15,507	-	(659)	(659)
B3 - TOU (Peak)	137.07	1.29%	4	9,818	159.37%	-	-	2,472	-	2,399	-	73	73
B3 - TOU (Off-peak)	1,224.33	11.49%	-	436,836	31.99%	3.478	1,322	13,109	1,322	13,712	-	(604)	(604)
B4 - TOU (Peak)	104.65	0.98%	295	-	0.00%	-	-	1,887	-	1,831	-	56	56
B4 - TOU (Off-peak)	707.47	6.64%	14	256,671	31.47%	1.709	615	7,495	615	7,853	-	(358)	(358)
E-2 (58) TEMP	0.22	0.00%	-	-	0.00%	-	-	3	-	3	-	0	0
Total Industrial	4,229.96	39.69%	48,631	1,900,818	25.40%	13.590	4,317	49,850	4,317	51,237	-	(1,387)	(1,387)
Bulk													
C1(a) Supply at 400 Volts - up to 5 kW	0.19	0.0%	27	153	14.22%	0.001	-	3	-	3	-	0	0
C1(b) Supply at 400 Volts - exceeding 5 kW	2.58	0.0%	31	2,861	10.30%	0.012	5	38	5	37	-	0	0
C-1C(26) T PEAK	2.56	0.0%	123	-	0.00%	-	-	46	-	45	-	1	1
C-1C(26) T OFF-PEAK	12.21	0.1%	-	11,908	11.70%	0.052	21	138	21	140	-	(3)	(3)
C2 Supply at 11 kV	16.92	0.2%	5	2,068	93.41%	0.033	12	244	12	242	-	2	2
Time of Use (TOU) - Peak	16.46	0.2%	-	-	0.00%	-	-	297	-	288	-	9	9
Time of Use (TOU) - Off-Peak	80.43	0.8%	36	40,990	22.40%	0.253	96	870	96	909	-	(39)	(39)
C3 Supply above 11 kV	8.66	0.1%	4	89,800	1.10%	0.050	18	124	18	123	-	1	1
Time of Use (TOU) - Peak	33.57	0.3%	-	-	0.00%	-	-	605	-	587	-	18	18
Time of Use (TOU) - Off-Peak	163.55	1.5%	2	38,900	47.99%	0.331	119	1,751	119	1,832	-	(81)	(81)
Total Single Point Supply	337.13	3.16%	229	186,680	20.82%	0.731	271	4,116	271	4,207	-	(91)	(91)
Agricultural Tube-wells - Tariff D													
D1 Scarp	14.28	0.13%	1,507	22,682	7.19%	-	-	209	-	186	-	23	23
D2 Agricultural Tube-wells	6.70	0.06%	737	6,368	-	0.041	8	94	8	77	-	17	17
Time of Use (45) T - Peak D-1B	4.51	0.04%	-	-	-	-	-	81	-	77	-	5	5
Time of Use (45) T - Off Peak D-1B	35.38	0.33%	1,396	28,492	14.18%	0.229	46	379	46	354	-	25	25
Time of Use (50,51) T - Peak D-1B	144.25	1.35%	-	-	-	-	33	2,601	-	1,493	33	1,108	1,141
Time of Use (50,51) T - Off-Peak D1B	633.88	5.95%	37,603	393,828	-	-	1,071	6,787	-	6,561	1,071	226	1,298
Total Agricultural	839.00	7.87%	41,243	451,370	21.22%	0.269	1,159	10,152	54	8,747	1,105	1,405	2,509
Public Lighting G	7.96	0.07%	1,565	10,850	8.38%	0.000	-	126	-	119	-	6	6
Residential Colonies H	4.65	0.04%	122	6,723	7.89%	-	-	73	-	70	-	4	4
Special Contracts - Tariff K (A/J/K)													
Time of Use (TOU) - Peak	-	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-	-	-	-	-	-	-	-	-	-
Railway Traction Tracton - I	-	-	-	-	-	-	-	-	-	-	-	-	-
Co-Generation-J	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	10,657	100%	3,595,357	10,615,304	11.46%	15.798	6,230	123,880	5,125	112,162	1,105	11,718	12,823

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Proposed Revenue & Subsidy Statement

2015-16

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	Revenue as per new proposed Tariff		Revenue as per GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh/M)	(Rs/kWh)	(Rs/kWh/M)	(Rs/kWh)	(Rs/kWh/M)	(Rs/kWh)
Residential												
Up to 50 Units	396.14	3.72%	761,310					4.00		2.00		2.00
For peak load requirement up to 5 kW												
01-100 Units GOP	1,637.63	15.37%	543,010					10.14		5.79		4.35
NEPRA	2,027.05											
101-200 Units GOP	1,230.41	11.55%	937,352					11.50		8.11		3.39
NEPRA	840.99											
201-300 Units GOP	842.43	7.91%	530,350					11.50		12.09		
NEPRA	842.43											
301-700 Units GOP	437.11	4.10%	326,688					15.78		15.08		0.78
NEPRA	437.11											
Above 700 Units GOP	108.19	1.02%	36,351					18.03		17.50		0.53
NEPRA	107.12											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	11.04	0.10%						18.03		17.50		0.53
Time of Use (TOU) - Off-Peak	50.50	0.47%	8,630	93,776	6.15%	0.000		11.27		11.50		
E-1(i) (55) TEMP	0.42	0.00%	229	1,315	3.67%			18.03		17.50		0.53
Total Residential	4,713.88	44.23%	3,143,921	7,290,313	7.38%	0.000						
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	297.02	2.79%	349,283	523,334	6.48%			16.91		17.50		
Commercial (<100)												
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW												
Regular	3.74	0.04%	55	5,371	7.96%	0.019	400.00	16.34	400.00	15.00		1.34
Time of Use (TOU) - Peak (A-2)	38.71	0.36%					400.00	18.03	400.00	17.50		0.53
Time of Use (TOU) - Off-Peak	174.85	1.64%	9,125	224,819	8.88%	1.187	400.00	11.27	400.00	11.50		
E-1(ii) (56) TEMP	9.72	0.09%	1,183	15,026	7.39%			16.91		17.50		
Total Commercial	524.05	4.92%	359,646	768,550	7.78%	1.206						
Industrial												
B1	125.27	1.18%	15,801	97,303	14.70%	0.000		14.65		14.50		0.15
B-1 (09) TOD Peak	44.21	0.41%						18.03		17.50		0.53
B-1 (09) TOD off peak	265.85	2.49%	22,041	230,767	13.15%	2.453		11.27		11.50		
B-2 A (10)	18.80	0.18%	323	33,209	6.46%	0.060	400.00	14.09	400.00	14.00		0.09
B2 - TOU (Peak)	229.78	2.16%					400.00	18.03	400.00	17.50		0.53
B2 - TOU (Off-peak)	1,372.33	12.88%	10,153	836,214	18.73%	5.891	400.00	10.82	400.00	11.30		
B3 - TOU (Peak)	137.07	1.29%	4	9,818	159.37%		380.00	18.03	380.00	17.50		0.53
B3 - TOU (Off-peak)	1,224.33	11.49%		436,836	31.99%	3.478	380.00	10.71	380.00	11.20		
B4 - TOU (Peak)	104.65	0.98%	295				360.00	18.03	360.00	17.50		0.53
B4 - TOU (Off-peak)	707.47	6.64%	14	256,671	31.47%	1.709	360.00	10.59	360.00	11.10		
E-2 (58) TEMP	0.22	0.00%						14.65		14.50		0.15
Total Industrial	4,229.96	39.69%	48,631	1,900,818	25.40%	13.590						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.19	0.00%	27	153	14.22%	0.001		15.21		15.00		0.21
C1(b) Supply at 400 Volts - exceeding 5 kW	2.58	0.02%	31	2,861	10.30%	0.012	400.00	14.65	400.00	14.50		0.15
C-1C(26) T PEAK	2.56	0.02%	123				400.00	18.03	400.00	17.50		0.53
C-1C(26) T OFF-PEAK	12.21	0.11%		11,908	11.70%	0.052	400.00	11.27	400.00	11.50		
C2 Supply at 11 kV	16.92	0.16%	5	2,068	93.41%	0.033	380.00	14.43	380.00	14.30		0.13
Time of Use (TOU) - Peak	16.46	0.15%					380.00	18.03	380.00	17.50		0.53
Time of Use (TOU) - Off-Peak	80.43	0.75%	36	40,990	22.40%	0.253	380.00	10.82	380.00	11.30		
C3 Supply above 11 kV	8.66	0.08%	4	89,800	1.10%	0.050	360.00	14.31	360.00	14.20		0.11
Time of Use (TOU) - Peak	33.57	0.32%					360.00	18.03	360.00	17.50		0.53
Time of Use (TOU) - Off-Peak	163.55	1.53%	2	38,900	47.99%	0.331	360.00	10.71	360.00	11.20		
Total Single Point Supply	337.13	3.16%	229	186,680	20.62%	0.731						
Agricultural Tube-wells - Tariff D												
D1 Scarp	14.28	0.13%	1,507	22,682	7.19%			14.65		13.01		1.64
D2 Agricultural Tube-wells	6.70	0.06%	737	6,368		0.041	200.00	14.09	200.00	11.51		2.58
Time of Use (45)T - Peak D-1B	4.51	0.04%					200.00	18.03	200.00	17.00		1.03
Time of Use (45)T - Off Peak D-1B	35.38	0.33%	1,396	28,492	14.18%	0.229	200.00	10.71	200.00	10.00		0.71
Time of Use (50.51)T - Peak D-1B	144.25	1.35%				0.167	200.00	18.03		10.35	200.00	7.68
Time of Use (50.51)T - Off-Peak D1B	633.88	5.95%	37,603	393,828		5.357	200.00	10.71		10.35	200.00	0.36
Total Agricultural	839.00	7.87%	41,243	451,370	21.22%	5.793						
Public Lighting G	7.96	0.07%	1,565	10,850	8.38%	0.000		15.78		15.00		0.78
Residential Colonies H	4.65	0.04%	122	6,723	7.89%			15.78		15.00		0.78
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Railway Traction Traction - I												
Co-Generation-J												
Grand Total	10,656.63	100%	3,595,357	10,611,304	11.46%	21.321						

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)					Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	371.96	3.72%	729,546	-		0.000	-	1,488	-	744	-	744
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units	1,537.68	15.37%	520,356	-		-	-	21,939	-	8,903	-	13,035
NEPRA	1,903.34	-	-	-	-	-	-	-	-	-	-	-
101-200 Units	1,155.32	11.55%	898,246	-		-	-	11,456	-	9,370	-	2,086
NEPRA	789.67	-	-	-	-	-	-	-	-	-	-	-
201-300 Units	791.02	7.91%	508,224	-		-	-	11,606	-	9,520	-	2,086
NEPRA	791.02	-	-	-	-	-	-	-	-	-	-	-
301-700 Units	410.44	4.10%	313,059	-		-	-	6,765	-	6,393	-	372
NEPRA	410.44	-	-	-	-	-	-	-	-	-	-	-
Above 700 Units	101.58	1.02%	34,834	-		-	-	1,904	-	1,806	-	98
NEPRA	100.58	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	10.37	0.10%	8,270	-		-	-	188	-	183	-	6
Time of Use (TOU) - Off-Peak	47.42	0.47%	-	93,776	69.27%	0.000	-	568	-	561	-	7
E-1(i) (55) TEMP	0.40	0.00%	219	1,315	41.32%	-	-	7	-	7	-	0
Total Residential	4,426.19	44.23%	3,012,756	7,290,313	83.17%	0.000	-	55,921	-	37,486	-	18,435
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	278.89	2.79%	334,711	523,334	73.00%	-	-	5,071	-	4,917	-	154
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	3.51	0.04%	53	5,371	89.64%	0.019	8	54	8	54	-	-
Time of Use (TOU) - Peak (A-2)	36.35	0.36%	8,744	-	-	-	-	659	-	641	-	19
Time of Use (TOU) - Off-Peak (Temp)	164.18	1.64%	-	224,819	100.04%	1.187	475	1,959	475	1,937	-	22
E-1(ii) (56) TEMP	9.13	0.09%	1,134	15,026	83.23%	-	-	158	-	158	-	-
Total Commercial	492.07	4.92%	344,642	766,550	87.71%	1.206	483	7,902	483	7,707	-	195
Industrial												
B1	117.62	1.18%	15,142	97,303	165.59%	0.000	-	1,731	-	1,697	-	34
B-1 (09) TOD peak	41.51	0.41%	-	-	-	-	-	744	-	728	-	16
B-1 (09) TOD off peak	249.62	2.49%	-	230,767	148.18%	2.453	-	2,944	-	2,918	-	26
B-2 A (10)	17.66	0.18%	310	33,209	72.83%	0.060	24	253	24	247	-	6
B2 - TOU (Peak)	215.75	2.16%	-	-	-	-	-	3,904	-	3,806	-	97
B2 - TOU (Off-peak)	1,288.58	12.88%	-	836,214	211.09%	5.891	2,356	15,070	2,356	14,921	-	149
B3 - TOU (Peak)	128.70	1.29%	4	9,818	0.00%	-	-	2,315	-	2,268	-	47
B3 - TOU (Off-peak)	1,149.61	11.49%	-	436,836	360.50%	3.478	1,322	13,335	1,322	13,204	-	131
B4 - TOU (Peak)	98.26	0.98%	283	-	-	-	-	1,770	-	1,732	-	38
B4 - TOU (Off-peak)	664.30	6.64%	-	256,671	354.54%	1.709	615	7,626	615	7,554	-	72
E-2 (58) TEMP	0.21	0.00%	-	-	-	-	-	3	-	3	-	-
Total Industrial	3,971.81	39.69%	46,602	1,900,818	286.24%	13.590	4,317	49,694	4,317	49,079	-	615
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.18	0.00%	26	153	160.24%	0.001	-	3	-	3	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	2.42	0.02%	29	2,861	116.06%	0.012	5	35	5	35	-	-
C-1C(26) T PEAK	2.41	0.02%	118	-	-	-	-	44	-	43	-	1
C-1C(26) T OFF-PEAK	11.46	0.11%	-	11,908	131.86%	0.052	21	138	21	136	-	2
C2 Supply at 11 kV	15.89	0.16%	5	2,068	1052.54%	0.033	12	228	12	227	-	1
Time of Use (TOU) - Peak	15.46	0.15%	-	-	-	-	-	281	-	273	-	8
Time of Use (TOU) - Off-Peak	75.52	0.75%	-	40,990	252.39%	0.253	96	897	96	882	-	15
C3 Supply above 11 kV	8.13	0.08%	4	89,800	12.40%	0.050	18	116	18	115	-	0
Time of Use (TOU) - Peak	31.52	0.32%	-	-	-	-	-	574	-	557	-	17
Time of Use (TOU) - Off-Peak	153.57	1.53%	-	38,900	540.78%	0.331	119	1,803	119	1,775	-	28
Total Single Point Supply	316.56	3.16%	219	186,680	232.29%	0.731	271	4,118	271	4,047	-	71
Agricultural Tube-wells - Tariff D												
D1 Scarp	13.41	0.13%	1,444	22,682	81.00%	-	-	198	-	174	-	24
D2 Agricultural Tube-wells	6.29	0.06%	706	6,368	135.37%	0.041	8	91	6	69	2	22
Time of Use (TOU) - Peak D-1B	4.23	0.04%	-	-	-	-	-	76	-	72	-	5
Time of Use (TOU) - Off-Peak D1B	33.22	0.33%	1,338	28,492	159.72%	0.229	46	384	46	331	-	53
D-1B(50.51)T Peak	135.44	1.35%	-	-	0.00%	0.167	33	2,462	-	1,402	33	1,061
D-1B(50.51)T Off-Peak	595.20	5.95%	36,034	393,828	0.00%	5.357	1,071	6,956	-	6,123	1,071	833
Total Agricultural	787.80	7.87%	39,522	451,370	239.09%	5.793	1,159	10,167	52	8,171	1,107	1,996
Public Lighting G	7.48	0.1%	1,500	10,850	94.42%	0.000	-	114	-	112	-	2
Residential Colonies H	4.36	0.0%	117	5,723	88.92%	-	-	67	-	65	-	2
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	10,006.27	100.00%	3,445,358	10,615,304	129.13%	21.322	6,230	127,983	5,123	106,667	1,107	21,316

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

2014-15

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	371.96	3.72%	729,548			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	1,537.68	15.37%	520,356				-	11.09	-	5.79	-	5.30
101-200 Units	1,903.34											
201-300 Units	1,155.32	11.55%	898,246					14.00		8.11	-	5.89
301-700 Units	789.67											
Above 700 Units	791.02	7.91%	508,224				-	14.00	-	12.09	-	1.91
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	410.44	4.10%	313,059				-	15.00	-	15.00	-	-
Time of Use (TOU) - Off-Peak	410.44											
E-1(i) (55) TEMP.	101.58	1.02%	34,834				-	17.50	-	17.50	-	-
Total Residential	4,426.19	84.16%	3,012,756	7,290,313	83.17%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	278.89	2.79%	334,711	523,334	73.00%	-	-	17.50		17.50	-	-
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	3.51	0.04%	53	5,371	89.64%	0.019	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	36.35	0.36%	-	-	-	-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	164.18	1.64%	8,744	224,819	10.00%	1.187	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	9.13	0.09%	1,134	15,026	83.23%	-	-	17.50		17.50	-	-
Total Commercial	492.07	4.92%	344,642	768,550	87.71%	1.206						
Industrial												
B1 (07)	117.62	1.18%	15,142	97,303	165.59%	0.000	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	41.51	0.41%	-	-	-	-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	249.62	2.49%	21,121	230,767	148.18%	2.453	-	11.50	-	11.50	-	-
B-2 A (10)	17.66	0.18%	310	33,209	72.83%	0.060	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	215.75	2.16%	-	-	-	-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	1,288.58	12.88%	9,729	836,214	211.09%	5.891	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	128.70	1.29%	4	9,818	-	-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	1,149.61	11.49%	-	436,836	360.50%	3.478	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	98.26	0.98%	283	-	-	-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	664.30	6.64%	13	2,671	354.54%	1.709	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.21	0.00%	-	-	-	-	-	14.50	-	14.50	-	-
Total Industrial	3,971.81	39.69%	46,602	1,900,818	286.24%	13.590						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.18	0.00%	26	153	160.24%	0.001	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	2.42	0.02%	29	2,861	116.06%	0.012	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	2.41	0.02%	118	-	-	-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	11.46	0.11%	-	11,908	131.86%	0.052	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	15.89	0.16%	5	2,068	1052.54%	0.033	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	15.46	0.15%	-	-	-	-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	75.52	0.75%	34	40,990	252.39%	0.253	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	8.13	0.08%	4	89,800	12.40%	0.050	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	31.52	0.32%	-	-	-	-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	153.57	1.53%	2	38,900	540.78%	0.331	360	11.20	360	11.20	-	-
Total Single Point Supply	316.56	3.16%	219	186,680	232.29%	0.731						
Agricultural Tube-wells - Tariff D												
D1 Scarp	13.41	0.13%	1,444	22,682	81.00%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	6.29	0.06%	706	6,368	135.37%	0.041	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D1B	4.23	0.04%	-	-	-	-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	33.22	0.33%	1,338	28,492	159.72%	0.229	200	11.20	200	10.00	-	1.20
D-1B(50,51)T Peak	135.44	1.35%	-	-	-	0.167	200	17.50	-	10.35	200	7.15
D-1B(50,51)T Off-Peak	595.20	5.95%	36,034	393,828	-	5.357	200	11.20	-	10.35	200	0.85
Total Agricultural	787.80	7.87%	39,522	451,370	239.09%	5.793						
Public Lighting G	7.48	0.07%	1,500	10,850	94.42%	0.000	-	15.00	-	15.00	-	-
Residential Colonies H	4.36	0.04%	117	6,723	88.92%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (A/JK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	10,006.27	139.93%	3,445,358	10,615,304	129.13%	21.322	-	-	-	-	-	-

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	79.76	2.93%	729,548			0.000	-	319	-	160	-	160
For peak load requirement up to 5 kW	-	-	-			-	-	-	-	-	-	-
01-100 Units	417.12	15.32%	520,356			-	-	5,929	-	2,415	-	3,514
NEPRA	541.67		-			-	-	-	-	-	-	-
101-200 Units	383.63	14.09%	898,246			-	-	3,553	-	3,111	-	442
NEPRA	259.08		-			-	-	-	-	-	-	-
201-300 Units	253.49	9.31%	508,224			-	-	3,461	-	3,021	-	440
NEPRA	253.49		-			-	-	-	-	-	-	-
301-700 Units	108.45	3.98%	313,059			-	-	1,615	-	1,615	-	-
NEPRA	108.45		-			-	-	-	-	-	-	-
Above 700 Units	22.49	0.83%	34,834			-	-	389	-	389	-	-
NEPRA	21.49		-			-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW						-	-	-	-	-	-	-
Time of Use (TOU) - Peak	3.05	0.11%	-			-	-	53	-	53	-	-
Time of Use (TOU) - Off-Peak	14.63	0.54%	8,270	93,776	21.38%	0.000	-	166	-	166	-	-
E-1(i) (55) TEMP.	0.09	0.00%	219	1,315	9.68%	-	-	2	-	2	-	-
Total Residential	1,282.74	47.11%	3,012,756	7,290,313	24.10%	0.000	-	15,487	-	10,932	-	4,555
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	81.62	3.00%	334,711	523,334	21.36%	-	-	1,413	-	1,413	-	-
Commercial (<100)	-	0.00%	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW	-	0.00%	-	-	-	-	-	-	-	-	-	-
Regular	0.92	0.03%	53	5,371	23.55%	0.005	2	14	2	14	-	-
Time of Use (TOU) - Peak (A-2)	9.63	0.35%	-	-	-	-	-	167	-	167	-	-
Time of Use (TOU) - Off-Peak (Temp)	44.10	1.62%	8,744	224,819	26.87%	0.270	108	502	108	502	-	-
E-1(ii) (56) TEMP.	2.79	0.10%	1,134	15,026	25.44%	-	-	49	-	49	-	-
Total Commercial	139.07	5.11%	344,842	768,850	24.79%	0.275	110	2,144	110	2,144	-	-
Industrial												
B1	29.92	1.10%	15,142	97,303	42.13%	-	-	426	-	426	-	-
B-1 (09) TOD peak	11.14	0.41%	-	-	-	-	-	192	-	192	-	-
B-1 (09) TOD off peak	64.22	2.36%	21,121	230,767	38.12%	0.632	-	721	-	721	-	-
B-2 A (10)	3.79	0.14%	310	33,209	15.65%	0.012	5	53	5	53	-	-
B2 - TOU (Peak)	55.24	2.03%	-	-	-	-	-	965	-	965	-	-
B2 - TOU (Off-peak)	341.25	12.53%	9,729	836,214	55.90%	1.478	591	3,845	591	3,845	-	-
B3 - TOU (Peak)	30.29	1.11%	4	9,818	0.00%	-	-	530	-	530	-	-
B3 - TOU (Off-peak)	291.28	10.70%	-	436,836	91.34%	0.847	322	3,262	322	3,262	-	-
B4 - TOU (Peak)	24.46	0.90%	283	-	-	-	-	428	-	428	-	-
B4 - TOU (Off-peak)	170.07	6.25%	13	256,671	90.77%	0.444	160	1,888	160	1,888	-	-
E-2 (58) TEMP.	0.03	0.00%	-	-	-	-	-	0	-	0	-	-
Total Industrial	1,021.70	37.53%	46,602	1,900,818	73.63%	3.414	1,078	12,310	1,078	12,310	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.05	0.00%	26	153	46.91%	0.000	-	1	-	1	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.45	0.02%	29	2,861	21.49%	0.002	1	7	1	7	-	-
C-1C(26) T PEAK	0.65	0.02%	118	-	-	-	-	11	-	11	-	-
C-1C(26) T OFF-PEAK	3.29	0.12%	-	11,908	37.88%	0.013	5	38	5	38	-	-
C2 Supply at 11 kV	1.56	0.06%	5	2,068	103.52%	0.003	1	22	1	22	-	-
Time of Use (TOU) - Peak	4.70	0.17%	-	-	-	-	-	82	-	82	-	-
Time of Use (TOU) - Off-Peak	22.32	0.82%	34	40,990	74.59%	0.071	27	252	27	252	-	-
C3 Supply above 11 kV	4.21	0.15%	4	89,800	6.42%	0.011	4	60	4	60	-	-
Time of Use (TOU) - Peak	7.84	0.29%	-	-	-	-	-	137	-	137	-	-
Time of Use (TOU) - Off-Peak	38.31	1.41%	2	38,900	134.90%	0.079	28	429	28	429	-	-
Total Single Point Supply	83.38	3.06%	219	186,680	61.19%	0.179	66	1,039	66	1,039	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	3.66	0.13%	1,444	22,682	22.11%	-	-	53	-	48	-	5
D2 Agricultural Tube-wells	1.42	0.05%	706	6,368	0.00%	0.010	2	20	2	16	-	3
Time of Use (45)T - Peak D-1B	0.95	0.03%	-	-	0.00%	-	-	16	-	16	-	1
Time of Use (45)T - Off Peak D-1B	8.72	0.32%	1,338	28,492	41.93%	0.053	11	96	11	86	-	10
Time of Use (50.51)T - Peak D-1B	32.00	1.18%	-	-	0.00%	0.027	5	550	-	331	5	219
Time of Use (50.51)T - Off-Peak D-1B	145.91	5.36%	36,034	393,828	50.75%	1.359	272	1,592	-	1,473	272	119
Total Agricultural	192.66	7.08%	39,522	451,370	58.47%	1.448	290	2,327	13	1,970	277	357
Public Lighting G	1.82	0.07%	1,500	10,850	23.02%	0.000	-	27	-	27	-	-
Residential Colonies H	1.20	0.04%	117	6,723	24.49%	-	-	18	-	18	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	2,722.58	100%	3,445,358	10,615,304	35.13%	5.316	1,544	33,353	1,267	28,441	277	4,912

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

4th Quarter

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	79.76	2.93%	729,548			0.00					-	2.00
For peak load requirement up to 5 kW											-	-
01-100 Units GDP	417.12	15.32%	520,356								-	5.30
NEPRA	541.67										-	-
101-200 Units GOP	383.63	14.09%	898,246								-	5.89
NEPRA	259.08										-	-
201-300 Units GOP	253.49	9.31%	508,224								-	1.91
NEPRA	253.49										-	-
301-700 Units GOP	108.45	3.98%	313,059								-	-
NEPRA	108.45										-	-
Above 700 Units GOP	22.49	0.83%	34,834								-	-
NEPRA	21.49										-	-
For peak load requirement exceeding 5 kW	-	0.00%									-	-
Time of Use (TOU) - Peak	3.05	0.11%				-		17.50		17.50	-	-
Time of Use (TOU) - Off-Peak	14.63	0.54%	8,270	93,776	21.38%	0.000		11.50		11.50	-	-
E-1(i) (55) TEMP.	0.09	0.00%	219	1,315	9.68%	-		17.50		17.50	-	-
Total Residential	1,282.74	47.11%	3,012,756	7,290,313	24.10%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial - For peak load requirement up to 5 kW	81.62	3.00%	334,711	523,334	21.36%	-		17.50		17.50	-	-
Commercial (<100)	-	0.00%									-	-
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW	-										-	-
Regular	0.92	0.03%	53	5,371	23.55%	0.005	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	9.63	0.35%	-	-	-	-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	44.10	1.62%	8,744	224,819	26.87%	0.270	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	2.79	0.10%	1,134	15,026	25.44%	-	-	17.50		17.50	-	-
Total Commercial	139.07	5.11%	344,642	768,550	24.79%	0.275						
Industrial												
B1	29.92	1.10%	15,142	97,303	42.13%	-		17.50		17.50	-	-
B-1 (09) TOD peak	11.14	0.41%	-	-	-	-		17.50		17.50	-	-
B-1 (09) TOD off peak	64.22	2.36%	21,121	230,767	38.12%	0.632		11.50		11.50	-	-
B-2 A (10)	3.79	0.14%	310	33,209	15.65%	0.012	400	15.00	400	15.00	-	-
B2 - TOU (Peak)	55.24	2.03%	-	-	-	-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	341.25	12.53%	9,729	836,214	55.90%	1.478	400	11.50	400	11.50	-	-
B3 - TOU (Peak)	30.29	1.11%	4	9,818	-	-	400	17.50	400	17.50	-	-
B3 - TOU (Off-peak)	291.28	10.70%	-	436,836	91.34%	0.847	400	11.50	400	11.50	-	-
B4 - TOU (Peak)	24.46	0.90%	283	-	-	-	400	17.50	400	17.50	-	-
B4 - TOU (Off-peak)	170.07	6.25%	13	256,671	90.77%	0.444	400	11.50	400	11.50	-	-
E-2 (58) TEMP.	0.03	0.00%	-	-	-	-	-	17.50		17.50	-	-
Total Industrial	1,021.70	37.53%	46,602	1,900,818	73.63%	3.414						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.05	0.00%	26	153	46.91%	0.000		17.50		17.50	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.45	0.02%	29	2,861	21.49%	0.002		17.50		17.50	-	-
C-1C(26) T PEAK	0.65	0.02%	118	-	-	-		17.50		17.50	-	-
C-1C(26) T OFF-PEAK	3.29	0.12%	-	11,908	37.88%	0.013		11.50		11.50	-	-
C2 Supply at 11 kV	1.56	0.06%	5	2,068	103.52%	0.003		17.50		17.50	-	-
Time of Use (TOU) - Peak	4.70	0.17%	-	-	-	-		17.50		17.50	-	-
Time of Use (TOU) - Off-Peak	22.32	0.82%	34	40,990	74.59%	0.071		11.50		11.50	-	-
C3 Supply above 11 kV	4.21	0.15%	4	89,800	6.42%	0.011		17.50		17.50	-	-
Time of Use (TOU) - Peak	7.84	0.29%	-	-	-	-		17.50		17.50	-	-
Time of Use (TOU) - Off-Peak	38.31	1.41%	2	38,900	134.90%	0.079		11.50		11.50	-	-
Total Single Point Supply	83.38	3.06%	219	186,680	61.19%	0.179						
Agricultural Tube-wells - Tariff D												
D1 Scarp	3.66	0.13%	1,444	22,682	22.11%	-		17.50		17.50	-	1.49
D2 Agricultural Tube-wells	1.42	0.05%	706	6,368	-	0.010		17.50		17.50	-	2.49
Time of Use (45)T - Peak D-1B	0.95	0.03%	-	-	-	-		17.50		17.50	-	0.50
Time of Use (45)T - Off Peak D-1B	8.72	0.32%	1,338	28,492	41.93%	0.053		11.50		11.50	-	1.20
Time of Use (50,51)T - Peak D-1B	32.00	1.18%	-	-	-	0.027		17.50		17.50	200	7.15
Time of Use (50,51)T - Off-Peak D1B	145.91	5.36%	36,034	393,828	50.75%	1.359		11.50		11.50	200	0.85
Total Agricultural	192.66	7.08%	39,522	451,370	58.47%	1.448						
Public Lighting G	1.82	0.07%	1,500	10,850	23.02%	0.000		17.50		17.50	-	-
Residential Colonies H	1.20	0.04%	117	6,723	24.49%	-		17.50		17.50	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	2,722.58	100%	3,445,358	10,615,304	35.13%	5.316	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Mn Rs)	(Mn Rs)	(Mn Rs)	(Mn Rs)	(Mn Rs)	(Mn Rs)
Residential												
Up to 50 Units	22.90	2.28%	729,548	-		-	-	92	-	46	-	46
For peak load requirement up to 5 kW							-	-	-	-	-	-
01-100 Units												
GOP	132.53	13.18%	520,356	-		-	-	1,959	-	767	-	1,191
NEPRA	183.68		-			-	-	-	-	-	-	-
101-200 Units												
GOP	149.58	14.87%	898,246	-		-	-	1,304	-	1,213	-	91
NEPRA	98.43		-			-	-	-	-	-	-	-
201-300 Units												
GOP	118.53	11.78%	508,224	-		-	-	1,571	-	1,389	-	182
NEPRA	118.53		-			-	-	-	-	-	-	-
301-700 Units												
GOP	58.94	5.86%	313,059	-		-	-	872	-	872	-	-
NEPRA	58.94		-			-	-	-	-	-	-	-
Above 700 Units												
GOP	13.25	1.32%	34,834	-		-	-	228	-	228	-	-
NEPRA	13.25		-			-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW							-	-	-	-	-	-
Time of Use (TOU) - Peak	1.29	0.13%	8,270	-		-	-	22	-	22	-	-
Time of Use (TOU) - Off-Peak	6.16	0.61%	-	93,776	9.00%	0.000	-	69	-	69	-	-
E-1(i) (55) TEMP.	0.03	0.00%	219	1,315	3.44%	-	-	1	-	1	-	-
Total Residential	503.21	50.03%	3,012,756	7,290,313	9.46%	0.000	-	6,117	-	4,607	-	1,510
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	31.47	3.13%	334,711	523,334	8.24%	-	-	536	-	536	-	-
Commercial (<100)							-	-	-	-	-	-
Commercial (<20 KW)							-	-	-	-	-	-
For peak load requirement exceeding 5 kW							-	-	-	-	-	-
Regular	0.39	0.04%	53	5,371	9.94%	0.002	1	6	1	6	-	-
Time of Use (TOU) - Peak (A-2)	3.29	0.33%	8,744	-		-	-	56	-	56	-	-
Time of Use (TOU) - Off-Peak (Temp)	13.39	1.33%	-	224,819	8.16%	0.102	41	148	41	148	-	-
E-1(ii) (56) TEMP.	1.05	0.10%	1,134	15,026	9.58%	-	-	18	-	18	-	-
Total Commercial	49.59	4.93%	344,642	768,550	8.84%	0.103	41	764	41	764	-	-
Industrial												
B1	10.09	1.00%	15,142	97,303	14.21%	-	-	138	-	138	-	-
B-1 (09) TOD peak	3.55	0.35%	-	-		-	-	59	-	59	-	-
B-1 (09) TOD off peak	19.14	1.90%	-	230,767	11.36%	0.210	-	202	-	202	-	-
B-2 A (10)	1.36	0.14%	310	33,209	5.62%	0.004	2	19	2	19	-	-
B2 - TOU (Peak)	20.62	2.05%	-	-		-	-	359	-	359	-	-
B2 - TOU (Off-peak)	123.41	12.27%	-	836,214	20.22%	0.504	202	1,383	202	1,383	-	-
B3 - TOU (Peak)	11.84	1.18%	4	9,818	0.00%	-	-	207	-	207	-	-
B3 - TOU (Off-peak)	101.36	10.08%	-	436,836	31.78%	0.288	109	1,135	109	1,135	-	-
B4 - TOU (Peak)	8.73	0.87%	283	-		-	-	153	-	153	-	-
B4 - TOU (Off-peak)	63.74	6.34%	-	256,671	34.02%	0.153	55	708	55	708	-	-
E-2 (58) TEMP.	0.01	0.00%	-	-		-	-	0	-	0	-	-
Total Industrial	363.84	36.17%	46,602	1,900,818	26.22%	1.160	368	4,363	368	4,363	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	26	153	17.42%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.18	0.02%	29	2,861	8.77%	0.001	0	3	0	3	-	-
C-1C(26) T PEAK	0.27	0.03%	118	-		-	-	5	-	5	-	-
C-1C(26) T OFF-PEAK	1.40	0.14%	-	11,908	16.08%	0.005	2	16	2	16	-	-
C2 Supply at 11 kV	0.50	0.05%	5	2,068	33.38%	0.001	0	7	0	7	-	-
Time of Use (TOU) - Peak	1.95	0.19%	-	-		-	-	34	-	34	-	-
Time of Use (TOU) - Off-Peak	9.94	0.99%	-	40,990	33.21%	0.029	11	112	11	112	-	-
C3 Supply above 11 kV	2.01	0.20%	4	89,800	3.07%	0.004	2	29	2	29	-	-
Time of Use (TOU) - Peak	2.96	0.29%	-	-		-	-	52	-	52	-	-
Time of Use (TOU) - Off-Peak	14.74	1.47%	-	38,900	51.91%	0.025	9	165	9	165	-	-
Total Single Point Supply	33.98	3.38%	219	186,680	24.93%	0.065	24	423	24	423	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.67	0.07%	1,444	22,682	4.06%	-	-	10	-	9	-	1
D2 Agricultural Tube-wells	0.44	0.04%	706	6,368	9.47%	0.003	1	6	1	5	-	1
Time of Use (TOU) - Peak D-1R	0.27	0.03%	-	-		-	-	4	-	4	-	0
Time of Use (TOU) - Off-Peak D1B	2.17	0.22%	1,338	28,492	10.44%	0.018	4	23	4	21	-	2
D-1B(50.51)T Peak	10.69	1.06%	-	-	0.00%	0.009	2	177	-	111	2	66
D-1B(50.51)T Off-Peak	39.82	3.96%	36,034	393,828	0.00%	0.468	94	404	-	375	94	29
Total Agricultural	54.06	5.37%	39,522	451,370	16.41%	0.498	100	623	4	524	95	99
Public Lighting G	0.69	0.1%	1,500	10,850	8.66%	-	-	10	-	10	-	-
Residential Colonies H	0.52	0.1%	117	6,723	10.67%	-	-	8	-	8	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	1,005.89	100.00%	3,445,358	10,615,304	12.98%	1.826	533	12,309	438	10,699	95	1,610

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

June 2015

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	22.90	2.28%	729,548	-		-	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units	132.53	13.18%	520,356	-		-	-	9.00	-	5.79	-	3.21
NEPRA	183.68					-	-	-	-	-	-	-
101-200 Units	149.58	14.87%	898,246	-		-	-	10.20	-	8.11	-	2.09
NEPRA	98.43					-	-	-	-	-	-	-
201-300 Units	118.53	11.78%	508,224	-		-	-	10.20	-	10.20	-	-
NEPRA	118.53					-	-	-	-	-	-	-
301-700 Units	58.94	5.86%	313,059	-		-	-	14.00	-	14.00	-	-
NEPRA	58.94					-	-	-	-	-	-	-
Above 700 Units	13.25	1.32%	34,834	-		-	-	16.00	-	16.00	-	-
NEPRA	13.25					-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	1.29	0.13%	-	-	-	-	-	16.00	-	16.00	-	-
Time of Use (TOU) - Off-Peak	6.16	0.61%	8,270	93,776	9.00%	0.000	-	10.00	-	10.00	-	-
E-1(i) (55) TEMP.	0.03	0.00%	219	1,315	3.44%	-	-	16.00	-	16.00	-	-
Total Residential	503.21	50.03%	3,012,756	7,290,313	9.46%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	31.47	3.13%	334,711	523,334	8.24%	-	-	15.00	-	15.00	-	-
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.39	0.04%	53	5,371	9.94%	0.002	400	14.50	400	14.50	-	-
Time of Use (TOU) - Peak (A-2)	3.29	0.33%	-	-	-	-	400	16.00	400	16.00	-	-
Time of Use (TOU) - Off-Peak	13.39	1.33%	8,744	224,819	0.82%	0.102	400	10.00	400	10.00	-	-
E-1(i) (56) TEMP.	1.05	0.10%	1,134	15,026	9.58%	-	-	15.00	-	15.00	-	-
Total Commercial	49.59	4.93%	344,642	768,550	8.84%	0.103	-	-	-	-	-	-
Industrial												
B1 (07)	10.09	1.00%	15,142	97,303	14.21%	-	-	13.00	-	13.00	-	-
B-1 (09) TOD peak	3.55	0.35%	-	-	-	-	-	16.00	-	16.00	-	-
B-1 (09) TOD off peak	19.14	1.90%	21,121	230,767	11.36%	0.210	-	10.00	-	10.00	-	-
B-2 A (10)	1.36	0.14%	310	33,209	5.62%	0.004	400	12.50	400	12.50	-	-
B2 - TOU (Peak)	20.62	2.05%	-	-	-	-	400	16.00	400	16.00	-	-
B2 - TOU (Off-peak)	123.41	12.27%	9,729	836,214	20.22%	0.504	400	9.60	400	9.60	-	-
B3 - TOU (Peak)	11.84	1.18%	4	9,818	-	-	-	-	-	-	-	-
B3 - TOU (Off-peak)	101.36	10.08%	-	436,836	31.78%	0.288	-	-	-	-	-	-
B4 - TOU (Peak)	8.73	0.87%	283	-	-	-	-	-	-	-	-	-
B4 - TOU (Off-peak)	63.74	6.34%	13	256,671	34.02%	0.153	-	-	-	-	-	-
E-2 (58) TEMP.	0.01	0.00%	-	-	-	-	-	13.00	-	13.00	-	-
Total Industrial	363.84	36.17%	46,602	1,900,818	26.22%	1.160	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	26	153	17.42%	0.000	-	-	-	-	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.18	0.02%	29	2,861	8.77%	0.001	-	-	-	-	-	-
C-1C(26) T PEAK	0.27	0.03%	118	-	-	-	400	16.00	400	16.00	-	-
C-1C(26) T OFF-PEAK	1.40	0.14%	-	11,908	16.08%	0.005	400	10.00	400	10.00	-	-
C2 Supply at 11 kV	0.50	0.05%	5	2,068	33.38%	0.001	-	-	-	-	-	-
Time of Use (TOU) - Peak	1.95	0.19%	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	9.94	0.99%	34	40,990	33.21%	0.029	-	-	-	-	-	-
C3 Supply above 11 kV	2.01	0.20%	4	89,800	3.07%	0.004	-	-	-	-	-	-
Time of Use (TOU) - Peak	2.96	0.29%	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	14.74	1.47%	2	38,900	51.91%	0.025	-	-	-	-	-	-
Total Single Point Supply	33.98	3.38%	219	186,680	24.93%	0.065	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.67	0.07%	1,444	22,682	4.06%	-	-	13.00	-	12.00	-	1.00
D2 Agricultural Tube-wells	0.44	0.04%	706	6,368	9.47%	0.003	200	12.50	200	11.50	-	1.00
Time of Use (TOU) - Peak D-1B	0.27	0.03%	-	-	-	-	200	16.00	200	15.00	-	1.00
Time of Use (TOU) - Off-Peak D-1B	2.17	0.22%	1,338	28,492	10.44%	0.018	200	9.50	200	8.85	-	0.65
D-1B(50,51)T Peak	10.69	1.06%	-	-	-	0.009	200	16.00	-	10.35	200	5.65
D-1B(50,51)T Off-Peak	39.82	3.96%	36,034	393,828	-	0.468	200	9.50	-	8.85	200	0.65
Total Agricultural	54.06	5.37%	39,522	451,370	16.41%	0.498	-	-	-	-	-	-
Public Lighting G	0.69	0.07%	1,500	10,850	8.66%	-	-	14.00	-	14.00	-	-
Residential Colonies H	0.52	0.05%	117	6,723	10.67%	-	-	14.00	-	14.00	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	1,005.89	100.00%	3,445,358	10,615,304	12.98%	1.826	-	-	-	-	-	-

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)					Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
				(kW)	(%)		(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	24.53	2.58%	769,846	-	-	0.000	-	98	-	49	-	49
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units												
GOP	139.21	14.64%	551,777	-	-	-	-	2,068	-	806	-	1,262
NEPRA	186.49	-	-	-	-	-	-	-	-	-	-	-
101-200 Units												
GOP	142.44	14.98%	937,763	-	-	-	-	1,332	-	1,155	-	177
NEPRA	95.16	-	-	-	-	-	-	-	-	-	-	-
201-300 Units												
GOP	94.91	9.98%	467,316	-	-	-	-	1,329	-	1,147	-	181
NEPRA	94.91	-	-	-	-	-	-	-	-	-	-	-
301-700 Units												
GOP	36.42	3.83%	241,299	-	-	-	-	546	-	546	-	-
NEPRA	36.42	-	-	-	-	-	-	-	-	-	-	-
Above 700 Units												
GOP	6.58	0.69%	17,053	-	-	-	-	115	-	115	-	-
NEPRA	5.58	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.04	0.11%	-	-	-	-	-	18	-	18	-	-
Time of Use (TOU) - Off-Peak	5.36	0.56%	-	90,614	8.11%	-	-	62	-	62	-	-
E-1(i) (55) TEMP.	0.03	0.00%	218	1,313	3.37%	-	-	1	-	1	-	-
Total Residential	450.53	47.39%	2,993,055	7,239,399	8.53%	0.000	-	5,569	-	3,900	-	1,670
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	28.18	2.96%	333,635	521,133	7.41%	-	-	493	-	493	-	-
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.30	0.03%	53	5,371	7.72%	0.002	1	5	1	5	-	-
Time of Use (TOU) - Peak (A-2)	3.48	0.37%	8,654	-	-	-	-	61	-	61	-	-
Time of Use (TOU) - Off-Peak (Temp)	17.34	1.82%	-	223,982	10.61%	0.090	36	199	36	199	-	-
E-1(ii) (56) TEMP.	1.04	0.11%	1,125	14,695	9.73%	-	-	18	-	18	-	-
Total Commercial	50.35	5.30%	343,467	765,181	9.01%	0.092	37	776	37	776	-	-
Industrial												
B1	10.45	1.10%	15,224	97,961	14.61%	-	-	151	-	151	-	-
B-1 (09) TOD peak	4.02	0.42%	-	-	-	-	-	70	-	70	-	-
B-1 (09) TOD off peak	24.87	2.62%	-	229,335	14.85%	0.203	-	286	-	286	-	-
B-2 A (10)	1.21	0.13%	311	33,245	5.00%	0.004	2	17	2	17	-	-
B2 - TOU (Peak)	17.40	1.83%	-	-	-	-	-	304	-	304	-	-
B2 - TOU (Off-peak)	111.32	11.71%	-	832,020	18.33%	0.496	199	1,258	199	1,258	-	-
B3 - TOU (Peak)	7.64	0.80%	4	9,818	0.00%	-	-	134	-	134	-	-
B3 - TOU (Off-peak)	97.55	10.26%	-	434,884	30.73%	0.282	107	1,093	107	1,093	-	-
B4 - TOU (Peak)	6.49	0.68%	281	-	-	-	-	114	-	114	-	-
B4 - TOU (Off-peak)	47.55	5.00%	-	256,671	25.38%	0.134	48	528	48	528	-	-
E-2 (58) TEMP.	0.01	0.00%	-	-	-	-	-	0	-	0	-	-
Total Industrial	328.49	34.55%	46,505	1,893,934	23.76%	1.120	356	3,955	356	3,955	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	26	153	14.19%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	29	2,861	7.87%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.23	0.02%	117	-	-	-	-	4	-	4	-	-
C-1C(26) T OFF-PEAK	1.20	0.13%	-	11,908	13.76%	0.004	2	14	2	14	-	-
C2 Supply at 11 kV	0.54	0.06%	5	2,068	35.71%	0.001	0	8	0	8	-	-
Time of Use (TOU) - Peak	1.56	0.16%	-	-	-	-	-	27	-	27	-	-
Time of Use (TOU) - Off-Peak	7.48	0.79%	-	40,845	25.08%	0.024	9	85	9	85	-	-
C3 Supply above 11 kV	1.52	0.16%	4	89,800	2.31%	0.003	1	22	1	22	-	-
Time of Use (TOU) - Peak	2.53	0.27%	-	-	-	-	-	44	-	44	-	-
Time of Use (TOU) - Off-Peak	12.35	1.30%	-	38,900	43.49%	0.030	11	138	11	138	-	-
Total Single Point Supply	27.58	2.90%	217	186,535	20.26%	0.063	23	344	23	344	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.47	0.16%	1,451	22,802	8.86%	-	-	21	-	19	-	2
D2 Agricultural Tube-wells	0.60	0.06%	707	6,372	0.00%	0.003	1	8	1	7	-	1
Time of Use (TOU) - Peak D-1B	0.35	0.04%	-	-	-	-	-	6	-	6	-	0
Time of Use (TOU) - Off-Peak D1B	3.34	0.35%	1,321	28,190	16.23%	0.017	3	37	3	33	-	4
D-1B(50.51)T Peak	14.74	1.55%	-	-	0.00%	0.009	2	258	-	153	2	105
D-1B(50.51)T Off-Peak	72.32	7.61%	35,930	392,131	0.00%	0.433	87	810	-	749	87	61
Total Agricultural	92.85	9.77%	39,409	449,495	28.30%	0.463	93	1,142	4	967	88	175
Public Lighting G	0.57	0.1%	1,496	10,847	7.21%	0.000	-	9	-	9	-	-
Residential Colonies H	0.38	0.0%	116	6,698	7.87%	-	-	6	-	6	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	950.76	100.00%	3,424,265	10,552,089	12.34%	1.737	508	11,800	420	9,956	88	1,844

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

May 2015

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%age)		(kW)	(%age)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	24.53	2.58%	769,846			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	139.21	14.64%	551,777				-	11.09	-	5.79	-	5.30
NEPRA	186.49											
101-200 Units	142.44	14.98%	937,763					14.00	-	8.11	-	5.89
NEPRA	95.16											
201-300 Units	94.91	9.98%	467,316				-	14.00	-	12.09	-	1.91
NEPRA	94.91											
301-700 Units	36.42	3.83%	241,299				-	15.00	-	15.00	-	-
NEPRA	36.42											
Above 700 Units	6.58	0.69%	17,053				-	17.50	-	17.50	-	-
NEPRA	5.58											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.04	0.11%				-	-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	5.36	0.56%	7,783	90,614	8.11%	-	-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.03	0.00%	218	1,313	3.37%	-	-	17.50	-	17.50	-	-
Total Residential	450.53	47.39%	2,993,055	7,239,399	8.53%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	28.18	2.96%	333,635	521,133	7.41%	-	-	17.50	-	17.50	-	-
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	0.30	0.03%	53	5,371	7.72%	0.002	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	3.48	0.37%				-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	17.34	1.82%	8,654	223,982	1.06%	0.090	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	1.04	0.11%	1,125	14,695	9.73%	-	-	17.50	-	17.50	-	-
Total Commercial	50.35	5.30%	343,467	765,181	9.01%	0.092	-	-	-	-	-	-
Industrial												
B1 (07)	10.45	1.10%	15,224	97,961	14.61%	-	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	4.02	0.42%				-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	24.87	2.62%	20,987	229,335	14.85%	0.203	-	11.50	-	11.50	-	-
B-2 A (10)	1.21	0.13%	311	33,245	5.00%	0.004	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	17.40	1.83%				-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	111.32	11.71%	9,685	832,020	18.33%	0.496	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	7.64	0.80%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	97.55	10.26%		434,884	30.73%	0.282	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	6.49	0.68%	281			-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	47.55	5.00%	13	256,671	25.38%	0.134	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.01	0.00%				-	-	14.50	-	14.50	-	-
Total Industrial	328.49	34.55%	46,505	1,893,934	23.76%	1.120	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	26	153	14.19%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	29	2,861	7.87%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.23	0.02%	117			-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	1.20	0.13%		11,908	13.76%	0.004	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	0.54	0.06%	5	2,068	35.71%	0.001	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	1.56	0.16%				-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	7.48	0.79%	34	40,845	25.08%	0.024	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	1.52	0.16%	4	89,800	2.31%	0.003	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	2.53	0.27%				-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	12.35	1.30%	2	38,900	43.49%	0.030	360	11.20	360	11.20	-	-
Total Single Point Supply	27.58	2.90%	217	186,535	20.26%	0.063	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.47	0.16%	1,451	22,802	8.86%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	0.60	0.06%	707	6,372		0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D1B	0.36	0.04%				-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	3.34	0.35%	1,321	28,190	16.23%	0.017	200	11.20	200	10.00	-	1.20
D-1B(50,51)T Peak	14.74	1.55%				0.009	200	17.50	-	10.35	200	7.15
D-1B(50,51)T Off-Peak	72.32	7.61%	35,930	392,131		0.433	200	11.20	-	10.35	200	0.85
Total Agricultural	92.65	9.77%	39,409	449,495	28.30%	0.463	-	-	-	-	-	-
Public Lighting G	0.57	0.06%	1,496	10,847	7.21%	0.000	-	15.00	-	15.00	-	-
Residential Colonies H	0.38	0.04%	116	6,898	7.87%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	950.76	100.00%	3,424,265	10,552,089	12.34%	1.737	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	32.34	4.22%	1,120,221	-	-	-	-	129	-	65	-	65
For peak load requirement up to 5 kW												
01-100 Units	145.38	18.98%	763,058	-	-	-	-	1,902	-	842	-	1,060
NEPRA	171.50		-	-	-	-	-	-	-	-	-	-
101-200 Units	91.61	11.96%	764,293	-	-	-	-	917	-	743	-	174
NEPRA	65.49		-	-	-	-	-	-	-	-	-	-
201-300 Units	40.06	5.23%	196,914	-	-	-	-	561	-	484	-	77
NEPRA	40.06		-	-	-	-	-	-	-	-	-	-
301-700 Units	13.09	1.71%	70,143	-	-	-	-	196	-	196	-	-
NEPRA	13.09		-	-	-	-	-	-	-	-	-	-
Above 700 Units	2.67	0.35%	5,152	-	-	-	-	47	-	47	-	-
NEPRA	2.67		-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.72	0.09%	5,723	-	-	-	-	13	-	13	-	-
Time of Use (TOU) - Off-Peak	3.11	0.41%		71,620	5.94%	-	-	36	-	36	-	-
E-1(i) (55) TEMP.	0.03	0.00%	195	1,206	3.13%	-	-	0	-	0	-	-
Total Residential	328.99	42.95%	2,925,698	6,891,108	6.54%	-	-	3,801	-	2,425	-	1,375
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	21.96	2.87%	329,939	497,745	6.04%	-	-	384	-	384	-	-
Commercial (<100)	-		-	-	-	-	-	-	-	-	-	-
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW	-		-	-	-	-	-	-	-	-	-	-
Regular	0.23	0.03%	57	5,581	5.67%	0.001	0	3	0	3	-	-
Time of Use (TOU) - Peak (A-2)	2.87	0.37%	7,835	-	-	-	-	50	-	50	-	-
Time of Use (TOU) - Off-Peak (Temp)	13.37	1.75%		208,347	8.79%	0.078	31	154	31	154	-	-
E-1(i) (56) TEMP.	0.70	0.09%	1,005	12,889	7.41%	-	-	12	-	12	-	-
Total Commercial	39.13	5.11%	338,837	724,562	7.40%	0.079	32	604	32	604	-	-
Industrial												
B1	9.39	1.23%	16,765	107,965	11.91%	-	-	136	-	136	-	-
B-1 (09) TOD peak	3.58	0.47%	-	-	-	-	-	63	-	63	-	-
B-1 (09) TOD off peak	20.22	2.64%		206,943	13.38%	0.219	-	232	-	232	-	-
B-2 A (10)	1.22	0.16%	346	36,701	4.55%	0.004	2	17	2	17	-	-
B2 - TOU (Peak)	17.23	2.25%	-	-	-	-	-	301	-	301	-	-
B2 - TOU (Off-peak)	106.53	13.91%		770,167	18.95%	0.477	191	1,204	191	1,204	-	-
B3 - TOU (Peak)	10.81	1.41%	4	9,818	0.00%	-	-	189	-	189	-	-
B3 - TOU (Off-peak)	92.38	12.06%	277	402,166	31.47%	0.277	105	1,035	105	1,035	-	-
B4 - TOU (Peak)	9.24	1.21%	-	-	-	-	-	162	-	162	-	-
B4 - TOU (Off-peak)	58.78	7.67%		223,456	36.04%	0.157	57	653	57	653	-	-
E-2 (58) TEMP.	0.01	0.00%		-	-	-	-	0	-	0	-	-
Total Industrial	329.38	43.00%	45,929	1,757,216	25.68%	1.135	355	3,992	355	3,992	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	30	194	12.06%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.10	0.01%	44	4,125	3.37%	0.001	0	1	0	1	-	-
C-1C(26) T PEAK	0.15	0.02%	-	-	-	-	-	3	-	3	-	-
C-1C(26) T OFF-PEAK	0.70	0.09%		10,525	9.11%	0.004	1	8	1	8	-	-
C2 Supply at 11 kV	0.52	0.07%	8	8,328	8.55%	0.001	0	7	0	7	-	-
Time of Use (TOU) - Peak	1.19	0.16%	-	-	-	-	-	21	-	21	-	-
Time of Use (TOU) - Off-Peak	4.90	0.64%		32,576	20.62%	0.019	7	55	7	55	-	-
C3 Supply above 11 kV	0.68	0.09%	3	53,800	1.73%	0.003	1	10	1	10	-	-
Time of Use (TOU) - Peak	2.34	0.31%	-	-	-	-	-	41	-	41	-	-
Time of Use (TOU) - Off-Peak	11.22	1.46%		38,900	39.50%	0.024	9	126	9	126	-	-
Total Single Point Supply	21.83	2.85%	220	148,448	20.14%	0.051	19	272	19	272	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.51	0.20%	1,660	25,645	8.09%	-	-	22	-	20	-	2
D2 Agricultural Tube-wells	0.38	0.05%	749	6,487	8.04%	0.003	1	5	1	4	-	1
Time of Use (TOU) - Peak D1B	0.32	0.04%		-	-	-	-	6	-	5	-	0
Time of Use (TOU) - Off-Peak D1B	3.21	0.42%	1,493	30,565	14.38%	0.018	4	36	4	32	-	4
D-1B(50,51)T Peak	6.56	0.86%	-	-	0.00%	0.009	2	115	-	68	2	47
D-1B(50,51)T Off-Peak	33.77	4.41%	35,809	380,276	0.00%	0.457	91	378	-	350	91	29
Total Agricultural	45.75	5.97%	39,711	442,973	14.15%	0.488	98	562	4	479	93	83
Public Lighting G	0.57	0.1%	1,495	10,678	7.27%	-	-	8	-	8	-	-
Residential Colonies H	0.29	0.0%	111	6,361	6.32%	-	-	4	-	4	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	765.93	100.00%	3,352,000	9,981,346	10.51%	1.753	503	9,243	410	7,785	93	1,458

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

April 2015

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	32.34	4.22%	1,120,221				-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	145.38	18.98%	763,058				-	11.09	-	5.79	-	5.30
NEPRA	171.50											
101-200 Units	91.61	11.96%	764,293					14.00		8.11	-	5.89
NEPRA	65.49											
201-300 Units	40.06	5.23%	196,914				-	14.00	-	12.09	-	1.91
NEPRA	40.06											
301-700 Units	13.09	1.71%	70,143				-	15.00	-	15.00	-	-
NEPRA	13.09											
Above 700 Units	2.67	0.35%	5,152				-	17.50	-	17.50	-	-
NEPRA	2.67											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.72	0.09%					-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	3.11	0.41%	5,723	71,620	5.94%	-	-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.03	0.00%	195	1,206	3.13%	-	-	17.50	-	17.50	-	-
Total Residential	328.99	42.95%	2,925,698	6,891,108	6.54%	-	-					
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	21.96	2.87%	329,939	497,745	6.04%	-	-	17.50		17.50	-	-
Commercial (<100)												
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW												
Regular	0.23	0.03%	57	5,581	5.67%	0.001	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	2.87	0.37%				-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	13.37	1.75%	7,835	208,347	0.88%	0.078	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	0.70	0.09%	1,005	12,889	7.41%	-	-	17.50		17.50	-	-
Total Commercial	39.13	5.11%	338,837	724,562	7.40%	0.079						
Industrial												
B1 (07)	9.39	1.23%	16,765	107,965	11.91%	-	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	3.58	0.47%	-	-		-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	20.22	2.64%	19,227	206,943	13.38%	0.219	-	11.50	-	11.50	-	-
B-2 A (10)	1.22	0.16%	346	36,701	4.55%	0.004	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	17.23	2.25%	-	-		-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	106.53	13.91%	9,298	770,167	18.95%	0.477	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	10.81	1.41%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	92.38	12.06%	277	402,166	31.47%	0.277	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	9.24	1.21%	-	-		-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	58.78	7.67%	11	223,456	36.04%	0.157	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.01	0.00%				-	-	14.50	-	14.50	-	-
Total Industrial	329.38	43.00%	45,929	1,757,216	25.68%	1.135						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	30	194	12.06%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.10	0.01%	44	4,125	3.37%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.15	0.02%	-	-		-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	0.70	0.09%	102	10,525	9.11%	0.004	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	0.52	0.07%	8	8,328	8.55%	0.001	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	1.19	0.16%	-	-		-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	4.90	0.64%	31	32,576	20.62%	0.019	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	0.68	0.09%	3	53,800	1.73%	0.003	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	2.34	0.31%	-	-		-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	11.22	1.46%	2	38,900	39.50%	0.024	360	11.20	360	11.20	-	-
Total Single Point Supply	21.83	2.85%	220	148,448	20.14%	0.051						
Agricultural Tube-wells - Tariff D												
O1 Scarp	1.51	0.20%	1,660	25,645	8.09%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	0.38	0.05%	749	6,487	8.04%	0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-1B	0.32	0.04%	-	-		-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	3.21	0.42%	1,493	30,565	14.38%	0.018	200	11.20	200	10.00	-	1.20
D-1B(50.51)T Peak	6.56	0.86%	-	-		0.009	200	17.50	-	10.35	200	7.15
D-1B(50.51)T Off-Peak	33.77	4.41%	35,809	380,276		0.457	200	11.20	-	10.35	200	0.85
Total Agricultural	45.75	5.97%	39,711	442,973	14.15%	0.488						
Public Lighting G	0.57	0.07%	1,495	10,678	7.27%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.29	0.04%	111	6,361	6.32%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	765.93	100.00%	3,352,000	9,981,346	10.51%	1.753	-					

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)					Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
				(kW)	(%)		(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	137.11	6.95%	1,033,293	-		0.000	-	548	-	274	-	274
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units												
GOP	345.08	17.49%	813,820	-		-	-	4,142	-	1,998	-	2,144
NEPRA	373.51											
101-200 Units												
GOP	117.84	5.97%	794,440	-		-	-	1,252	-	956	-	296
NEPRA	89.41											
201-300 Units												
GOP	43.70	2.21%	192,671	-		-	-	612	-	528	-	83
NEPRA	43.70											
301-700 Units												
GOP	20.57	1.04%	69,003	-		-	-	309	-	309	-	-
NEPRA	20.57											
Above 700 Units												
GOP	6.06	0.31%	6,365	-		-	-	106	-	106	-	-
NEPRA	6.06											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.91	0.10%	6,778	-		-	-	33	-	33	-	-
Time of Use (TOU) - Off-Peak	8.11	0.41%		82,335	13.49%	0.000	-	93	-	93	-	-
E-1(i) (55) TEMP.	0.07	0.00%	212	1,333	7.22%	-	-	1	-	1	-	-
Total Residential	680.46	34.48%	2,916,582	7,041,183	13.24%	0.000	-	7,097	-	4,299	-	2,798
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	48.96	2.48%	328,068	509,559	13.16%	-	-	857	-	857	-	-
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 kW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.57	0.03%	54	5,494	14.33%	0.004	1	9	1	9	-	-
Time of Use (TOU) - Peak (A-2)	7.14	0.36%	8,223	-		-	-	125	-	125	-	-
Time of Use (TOU) - Off-Peak (Temp)	32.85	1.66%		215,532	20.88%	0.219	87	378	87	378	-	-
E-1(i) (56) TEMP.	1.66	0.08%	1,066	13,701	16.64%	-	-	29	-	29	-	-
Total Commercial	91.18	4.62%	337,411	744,286	16.78%	0.222	89	1,397	89	1,397	-	-
Industrial												
B1	26.91	1.36%	15,813	102,720	35.89%	-	-	390	-	390	-	-
B-1 (09) TOD peak	10.51	0.53%	19,904	-		-	-	184	-	184	-	-
B-1 (09) TOD off peak	62.43	3.16%		218,269	39.18%	0.625	-	718	-	718	-	-
B-2 A (10)	4.28	0.22%	319	34,235	17.11%	0.014	6	60	6	60	-	-
B2 - TOU (Peak)	49.25	2.50%	9,415	-		-	-	862	-	862	-	-
B2 - TOU (Off-peak)	309.83	15.70%		802,616	52.88%	1.432	573	3,501	573	3,501	-	-
B3 - TOU (Peak)	40.16	2.04%	4	9,818	0.00%	-	-	703	-	703	-	-
B3 - TOU (Off-peak)	293.94	14.90%	280	420,437	95.77%	0.851	323	3,292	323	3,292	-	-
B4 - TOU (Peak)	29.00	1.47%	11	-		-	-	508	-	508	-	-
B4 - TOU (Off-peak)	178.16	9.03%		223,456	109.22%	0.436	157	1,978	157	1,978	-	-
E-2 (58) TEMP.	0.03	0.00%		-		-	-	0	-	0	-	-
Total Industrial	1,004.49	50.90%	45,746	1,811,551	75.96%	3.358	1,059	12,195	1,059	12,195	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.04	0.00%	29	194	27.28%	0.000	-	1	-	1	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.48	0.02%	42	3,992	16.31%	0.002	1	7	1	7	-	-
C-1C(26) T PEAK	0.45	0.02%	100	-		-	-	8	-	8	-	-
C-1C(26) T OFF-PEAK	2.02	0.10%		10,615	26.12%	0.010	4	23	4	23	-	-
C2 Supply at 11 kV	3.38	0.17%	7	5,328	86.91%	0.007	3	48	3	48	-	-
Time of Use (TOU) - Peak	3.27	0.17%	32	-		-	-	57	-	57	-	-
Time of Use (TOU) - Off-Peak	13.76	0.70%		37,585	50.14%	0.048	18	155	18	155	-	-
C3 Supply above 11 kV	2.19	0.11%	4	89,800	3.34%	0.022	8	31	8	31	-	-
Time of Use (TOU) - Peak	7.26	0.37%	2	-		-	-	127	-	127	-	-
Time of Use (TOU) - Off-Peak	34.81	1.76%		38,900	122.58%	0.071	25	390	25	390	-	-
Total Single Point Supply	67.85	3.43%	216	186,414	49.71%	0.160	59	848	59	848	-	-
Agricultural Tube-wells - Tariff O												
D1 Scarp	2.69	0.14%	1,576	24,784	14.85%	-	-	39	-	35	-	4
D2 Agricultural Tube-wells	0.82	0.04%	710	6,460	17.38%	0.010	2	11	2	9	-	2
Time of Use (TOU) - Peak D-1B	1.12	0.06%		-		-	-	20	-	19	-	1
Time of Use (TOU) - Off-Peak D1B	7.83	0.40%	1,517	31,496	34.06%	0.052	10	88	10	78	-	9
D-1B(50.51)T Peak	18.58	0.94%	-	-	0.00%	0.032	6	325	-	192	6	133
D-1B(50.51)T Off-Peak	95.83	4.86%	35,652	388,419	0.00%	1.306	261	1,073	-	992	261	81
Total Agricultural	126.87	6.43%	39,455	451,159	38.52%	1.400	280	1,556	12	1,326	268	230
Public Lighting G	1.89	0.1%	1,480	10,779	23.97%	-	-	28	-	28	-	-
Residential Colonies H	0.73	0.0%	114	6,561	15.25%	-	-	11	-	11	-	-
Special Contracts - Tariff K (AJK)	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	1,973.27	100.00%	3,341,004	10,251,933	26.37%	5.141	1,487	23,132	1,219	20,104	268	3,028

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement 3rd Quarter

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	137.11	6.95%	1,033,293			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	345.08	17.49%	813,820				-	11.09	-	5.79	-	5.30
101-200 Units	117.84	5.97%	794,440				-	14.00	-	8.11	-	5.89
201-300 Units	43.70	2.21%	192,671				-	14.00	-	12.09	-	1.91
301-700 Units	20.57	1.04%	69,003				-	15.00	-	15.00	-	-
Above 700 Units	6.06	0.31%	6,365				-	17.50	-	17.50	-	-
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.91	0.10%					-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	8.11	0.41%	6,778	82,335	13.49%	0.000	-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.07	0.00%	212	1,333	7.22%		-	17.50	-	17.50	-	-
Total Residential	680.46	34.48%	2,916,582	7,041,183	13.24%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	48.96	2.48%	328,068	509,559	13.16%	-	-	17.50	-	17.50	-	-
Commercial (<100)												
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW												
Regular	0.57	0.03%	54	5,494	14.33%	0.004	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	7.14	0.36%				-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	32.85	1.66%	8,223	215,532	2.09%	0.219	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	1.66	0.08%	1,066	13,701	16.64%		-	17.50	-	17.50	-	-
Total Commercial	91.18	4.62%	337,411	744,286	16.78%	0.222	-	-	-	-	-	-
Industrial												
B1 (07)	26.91	1.36%	15,813	102,720	35.89%	-	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	10.51	0.53%				-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	62.43	3.16%	19,904	218,269	39.18%	0.625	-	11.50	-	11.50	-	-
B-2 A (10)	4.28	0.22%	319	34,235	17.11%	0.014	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	49.25	2.50%				-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	309.83	15.70%	9,415	802,616	52.88%	1.432	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	40.16	2.04%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	293.94	14.90%	280	420,437	95.77%	0.851	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	29.00	1.47%				-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	178.16	9.03%	11	223,456	109.22%	0.436	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.03	0.00%				-	-	14.50	-	14.50	-	-
Total Industrial	1,004.49	50.90%	45,746	1,811,551	75.96%	3.358	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.04	0.00%	29	194	27.28%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.48	0.02%	42	3,992	16.31%	0.002	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.45	0.02%				-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	2.02	0.10%	100	10,615	26.12%	0.010	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	3.38	0.17%	7	5,328	86.91%	0.007	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	3.27	0.17%				-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	13.76	0.70%	32	37,585	50.14%	0.048	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	2.19	0.11%	4	89,800	3.34%	0.022	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	7.26	0.37%				-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	34.81	1.76%	2	38,900	122.58%	0.071	360	11.20	360	11.20	-	-
Total Single Point Supply	67.65	3.43%	216	186,414	49.71%	0.160	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	2.69	0.14%	1,576	24,784	14.85%	-	-	14.50	-	13.01	-	1.49
O2 Agricultural Tube-wells	0.82	0.04%	710	6,460	17.38%	0.010	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-1B	1.12	0.06%	-			-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	7.83	0.40%	1,517	31,496	34.06%	0.052	200	11.20	200	10.00	-	1.20
O-1B(50,51)T Peak	18.58	0.94%	-			0.032	200	17.50	-	10.35	200	7.15
D-1B(50,51)T Off-Peak	95.83	4.86%	35,652	308,419		1.306	200	11.20	-	10.35	200	0.85
Total Agricultural	126.87	6.43%	39,455	451,159	38.52%	1.400	-	-	-	-	-	-
Public Lighting G	1.89	0.10%	1,480	10,779	23.97%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.73	0.04%	114	6,561	15.25%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	1,973.27	100.00%	3,341,004	10,251,933	26.37%	5.141	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	45.23	6.70%	1,033,293	-	-	-	-	181	-	90	-	90
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units	121.80	18.06%	813,820	-	-	-	-	1,460	-	705	-	754
NEPRA	131.62	-	-	-	-	-	-	-	-	-	-	-
101-200 Units	41.81	6.20%	794,440	-	-	-	-	448	-	339	-	109
NEPRA	31.99	-	-	-	-	-	-	-	-	-	-	-
201-300 Units	13.95	2.07%	192,671	-	-	-	-	195	-	169	-	27
NEPRA	13.95	-	-	-	-	-	-	-	-	-	-	-
301-700 Units	6.02	0.89%	69,003	-	-	-	-	90	-	90	-	-
NEPRA	6.02	-	-	-	-	-	-	-	-	-	-	-
Above 700 Units	1.81	0.27%	6,365	-	-	-	-	32	-	32	-	-
NEPRA	1.81	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	0.60	0.09%	6,778	-	-	-	-	11	-	11	-	-
Time of Use (TOU) - Off-Peak	2.64	0.39%	-	82,335	4.39%	0.000	-	30	-	30	-	-
E-1(i) (55) TEMP.	0.02	0.00%	212	1,333	1.78%	-	-	0	-	0	-	-
Total Residential	233.87	34.67%	2,916,582	7,041,183	4.55%	0.000	-	2,447	-	1,467	-	980
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	16.74	2.48%	328,068	509,559	4.50%	-	-	293	-	293	-	-
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.17	0.03%	54	5,494	4.30%	0.001	0	3	0	3	-	-
Time of Use (TOU) - Peak (A-2)	2.39	0.35%	8,223	-	-	-	-	42	-	42	-	-
Time of Use (TOU) - Off-Peak (Temp)	11.70	1.74%	-	215,532	7.44%	0.067	27	135	27	135	-	-
E-1(i) (56) TEMP.	0.55	0.08%	1,066	13,701	5.46%	-	-	10	-	10	-	-
Total Commercial	31.55	4.68%	337,411	744,286	5.81%	0.068	27	482	27	482	-	-
Industrial												
B1	9.15	1.36%	15,813	102,720	12.20%	-	-	133	-	133	-	-
B-1 (09) TOD peak	3.44	0.51%	19,904	-	-	-	-	60	-	60	-	-
B-1 (09) TOD off peak	22.26	3.30%	-	218,269	13.97%	0.206	-	256	-	256	-	-
B-2 A (10)	1.36	0.20%	319	34,235	5.46%	0.005	2	19	2	19	-	-
B2 - TOU (Peak)	16.57	2.46%	9,415	-	-	-	-	290	-	290	-	-
B2 - TOU (Off-peak)	106.45	15.78%	-	802,616	18.17%	0.473	189	1,203	189	1,203	-	-
B3 - TOU (Peak)	16.25	2.41%	4	9,818	0.00%	-	-	284	-	284	-	-
B3 - TOU (Off-peak)	108.57	16.10%	280	420,437	35.37%	0.283	108	1,216	108	1,216	-	-
B4 - TOU (Peak)	10.11	1.50%	11	-	-	-	-	177	-	177	-	-
B4 - TOU (Off-peak)	63.96	9.48%	-	223,456	39.21%	0.146	52	710	52	710	-	-
E-2 (58) TEMP.	0.02	0.00%	-	-	-	-	-	0	-	0	-	-
Total Industrial	358.15	53.10%	45,746	1,811,551	27.08%	1.112	351	4,348	351	4,348	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	12.43%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.15	0.02%	42	3,992	5.17%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.13	0.02%	100	-	-	-	-	2	-	2	-	-
C-1C(26) T DFF-PEAK	0.59	0.09%	-	10,615	7.61%	0.003	1	7	1	7	-	-
C2 Supply at 11 kV	0.52	0.08%	7	5,328	13.41%	0.001	0	7	0	7	-	-
Time of Use (TOU) - Peak	1.06	0.16%	32	-	-	-	-	18	-	18	-	-
Time of Use (TOU) - Off-Peak	4.25	0.63%	-	37,585	15.50%	0.015	6	48	6	48	-	-
C3 Supply above 11 kV	0.43	0.06%	4	89,800	0.65%	0.001	0	6	0	6	-	-
Time of Use (TOU) - Peak	2.52	0.37%	2	-	-	-	-	44	-	44	-	-
Time of Use (TOU) - Off-Peak	12.15	1.80%	-	38,900	42.80%	0.021	8	136	8	136	-	-
Total Single Point Supply	21.82	3.23%	216	186,414	16.03%	0.042	16	272	16	272	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.91	0.13%	1,576	24,784	5.01%	-	-	13	-	12	-	1
D2 Agricultural Tube-wells	0.17	0.03%	710	6,460	3.68%	0.003	1	2	1	2	-	0
Time of Use (TOU) - Peak D-1B	0.53	0.08%	-	-	-	-	-	9	-	9	-	0
Time of Use (TOU) - Off-Peak D1B	3.05	0.45%	1,517	31,496	13.28%	0.017	3	34	3	31	-	4
D-1B(50,51)T Peak	3.87	0.57%	-	-	0.00%	0.010	2	68	-	40	2	28
D-1B(50,51)T Off-Peak	19.78	2.93%	35,652	388,419	0.00%	0.422	84	222	-	205	84	17
Total Agricultural	28.29	4.19%	39,455	451,159	8.59%	0.453	91	348	4	298	86	50
Public Lighting G	0.58	0.1%	1,480	10,779	7.40%	-	-	9	-	9	-	-
Residential Colonies H	0.23	0.0%	114	6,561	4.90%	-	-	4	-	4	-	-
Special Contracts - Tariff K (AJK)	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	674.50	100.00%	3,341,004	10,251,933	9.01%	1.674	484	7,909	398	6,878	86	1,030

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

March 2015

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	45.23	6.70%	1,033,293				-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units GDP	121.80	18.06%	813,820				-	11.09	-	5.79	-	5.30
NEPRA	131.62											
101-200 Units GDP	41.81	6.20%	794,440					14.00		8.11	-	5.89
NEPRA	31.99											
201-300 Units GDP	13.95	2.07%	192,671				-	14.00	-	12.09	-	1.91
NEPRA	13.95											
301-700 Units GDP	6.02	0.89%	69,003				-	15.00	-	15.00	-	-
NEPRA	6.02											
Above 700 Units GDP	1.81	0.27%	6,365				-	17.50	-	17.50	-	-
NEPRA	1.81											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.60	0.09%					-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	2.64	0.39%	6,778	82,335	4.39%	0.000	-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.02	0.00%	212	1,333	1.78%		-	17.50	-	17.50	-	-
Total Residential	233.87	34.67%	2,916,582	7,041,183	4.55%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	16.74	2.48%	328,068	509,559	4.50%	-	-	17.50		17.50	-	-
Commercial (<100)												
For peak load requirement exceeding 5 kW												
Regular	0.17	0.03%	54	5,494	4.30%	0.001	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	2.39	0.35%				-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	11.70	1.74%	8,223	215,532	0.74%	0.067	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	0.55	0.08%	1,066	13,701	5.46%		-	17.50		17.50	-	-
Total Commercial	31.55	4.68%	337,411	744,286	5.81%	0.068						
Industrial												
B1 (07)	9.15	1.36%	15,813	102,720	12.20%	-	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	3.44	0.51%				-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	22.26	3.30%	19,904	218,269	13.97%	0.206	-	11.50	-	11.50	-	-
B-2 A (10)	1.36	0.20%	319	34,235	5.46%	0.005	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	16.57	2.46%				-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	106.45	15.78%	9,415	802,616	18.17%	0.473	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	16.25	2.41%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	108.57	16.10%	280	420,437	35.37%	0.283	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	10.11	1.50%				-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	63.96	9.48%	11	223,456	39.21%	0.146	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.02	0.00%				-	-	14.50	-	14.50	-	-
Total Industrial	358.15	53.10%	45,746	1,811,551	27.08%	1.112						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	12.43%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.15	0.02%	42	3,992	5.17%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.13	0.02%				-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	0.59	0.09%	100	10,615	7.61%	0.003	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	0.52	0.08%	7	5,328	13.41%	0.001	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	1.06	0.16%				-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	4.25	0.63%	32	37,585	15.50%	0.015	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	0.43	0.06%	4	89,800	0.65%	0.001	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	2.52	0.37%				-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	12.15	1.80%	2	38,900	42.80%	0.021	360	11.20	360	11.20	-	-
Total Single Point Supply	21.82	3.23%	216	86,414	16.03%	0.042						
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.91	0.13%	1,576	24,784	5.01%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	0.17	0.03%	710	6,460	3.68%	0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-1B	0.51	0.08%				-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	3.05	0.45%	1,517	31,496	13.28%	0.017	200	11.20	200	10.00	-	1.20
D-1B(50.51)T Peak	3.87	0.57%				0.010	200	17.50	-	10.35	200	7.15
D-1B(50.51)T Off-Peak	19.78	2.93%	35,652	290,119		0.422	200	11.20	-	10.35	200	0.85
Total Agricultural	28.29	4.19%	39,455	451,159	8.59%	0.453						
Public Lighting G	0.58	0.09%	1,480	10,779	7.40%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.23	0.03%	114	6,561	4.90%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	674.50	100.00%	3,341,004	10,251,933	9.01%	1.674	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	45.12	7.00%	1,518,536	-	-	0.000	-	180	-	90	-	90
For peak load requirement up to 5 kW							-	-	-	-	-	-
01-100 Units												
GOP	109.85	17.05%	816,758	-	-	-	-	1,313	-	636	-	676
NEPRA	118.35		-	-	-	-	-	-	-	-	-	-
101-200 Units												
GOP	35.53	5.52%	480,123	-	-	-	-	378	-	288	-	90
NEPRA	27.03		-	-	-	-	-	-	-	-	-	-
201-300 Units												
GOP	13.52	2.10%	83,107	-	-	-	-	189	-	163	-	26
NEPRA	13.52		-	-	-	-	-	-	-	-	-	-
301-700 Units												
GOP	6.77	1.05%	31,843	-	-	-	-	102	-	102	-	-
NEPRA	6.77		-	-	-	-	-	-	-	-	-	-
Above 700 Units												
GOP	2.04	0.32%	4,296	-	-	-	-	36	-	36	-	-
NEPRA	2.04		-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW							-	-	-	-	-	-
Time of Use (TOU) - Peak	0.63	0.10%	7,301	-	-	-	-	11	-	11	-	-
Time of Use (TOU) - Off-Peak	2.69	0.42%		86,635	4.26%	0.000	-	31	-	31	-	-
E-1(i) (55) TEMP.	0.01	0.00%	216	1,309	1.57%	-	-	0	-	0	-	-
Total Residential	216.16	33.56%	2,942,180	7,107,288	4.17%	0.000	-	2,240	-	1,357	-	883
Commercial - A2												
Commercial - For peak load requirement up to 5 kW	15.77	2.45%	330,225	513,963	4.20%	-	-	276	-	276	-	-
Commercial (<100)	-		-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-		-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-		-	-	-	-	-	-	-	-	-	-
Regular	0.19	0.03%	53	5,371	4.80%	0.001	0	3	0	3	-	-
Time of Use (TOU) - Peak (A-2)	2.33	0.36%	8,462	-	-	-	-	41	-	41	-	-
Time of Use (TOU) - Off-Peak (Temp)	11.41	1.77%		219,393	7.12%	0.072	29	131	29	131	-	-
E-1(ii) (56) TEMP.	0.59	0.09%	1,091	14,021	5.76%	-	-	10	-	10	-	-
Total Commercial	30.29	4.70%	339,831	752,748	5.51%	0.073	29	461	29	461	-	-
Industrial												
B1	9.12	1.42%	15,546	100,590	12.41%	-	-	132	-	132	-	-
B-1 (09) TOD peak	3.68	0.57%	20,551	-	-	-	-	64	-	64	-	-
B-1 (09) TOD off peak	21.75	3.38%		225,368	13.22%	0.206	-	250	-	250	-	-
B-2 A (10)	1.42	0.22%	313	33,817	5.74%	0.005	2	20	2	20	-	-
B2 - TOU (Peak)	16.52	2.56%	9,550	-	-	-	-	289	-	289	-	-
B2 - TOU (Off-peak)	101.13	15.70%		818,220	16.93%	0.477	191	1,143	191	1,143	-	-
B3 - TOU (Peak)	12.74	1.98%	4	9,818	0.00%	-	-	223	-	223	-	-
B3 - TOU (Off-peak)	89.61	13.91%	279	423,379	28.99%	0.280	107	1,004	107	1,004	-	-
B4 - TOU (Peak)	8.83	1.37%	12	-	-	-	-	155	-	155	-	-
B4 - TOU (Off-peak)	51.08	7.93%		240,671	29.07%	0.138	50	567	50	567	-	-
E-2 (58) TEMP.	0.00	0.00%	-	-	-	-	-	0	-	0	-	-
Total Industrial	315.88	49.04%	46,255	1,851,863	23.37%	1.106	349	3,847	349	3,847	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	27	171	7.41%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	41	3,960	5.57%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.16	0.02%	104	-	-	-	-	3	-	3	-	-
C-1C(26) T OFF-PEAK	0.70	0.11%		10,791	8.91%	0.003	1	8	1	8	-	-
C2 Supply at 11 kV	1.42	0.22%	7	5,328	36.62%	0.003	1	20	1	20	-	-
Time of Use (TOU) - Peak	1.12	0.17%	32	-	-	-	-	20	-	20	-	-
Time of Use (TOU) - Off-Peak	4.67	0.72%		37,585	17.01%	0.016	6	53	6	53	-	-
C3 Supply above 11 kV	1.49	0.23%	4	89,800	2.28%	0.015	5	21	5	21	-	-
Time of Use (TOU) - Peak	2.09	0.32%	2	-	-	-	-	37	-	37	-	-
Time of Use (TOU) - Off-Peak	10.01	1.55%		38,900	35.24%	0.026	9	112	9	112	-	-
Total Single Point Supply	21.84	3.39%	217	186,535	16.04%	0.064	24	276	24	276	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.48	0.07%	1,509	23,506	2.78%	-	-	7	-	6	-	1
D2 Agricultural Tube-wells	0.35	0.05%	710	6,394	7.58%	0.003	1	5	1	4	-	1
Time of Use (TOU) - Peak D-1B	0.30	0.05%		-	-	-	-	5	-	5	-	0
Time of Use (TOU) - Off-Peak D1B	2.72	0.42%	1,279	27,904	13.37%	0.017	3	30	3	27	-	3
D-1B(50.51)T Peak	8.28	1.29%	-	-	0.00%	0.010	2	145	-	86	2	59
D-1B(50.51)T Off-Peak	47.07	7.31%	35,793	390,230	0.00%	0.440	88	527	-	487	88	40
Total Agricultural	59.21	9.19%	39,291	448,034	18.10%	0.470	94	720	4	616	90	104
Public Lighting G	0.57	0.1%	1,488	10,823	7.28%	-	-	9	-	9	-	-
Residential Colonies H	0.20	0.0%	115	6,629	4.15%	-	-	3	-	3	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	644.15	100.00%	3,369,377	10,363,920	8.51%	1.713	496	7,555	406	6,568	90	987

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement February 2015

(Monthly, Quarterly as well as Consolidated)

(Monthly , Quarterly as well as Consolidated)												
Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GDP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	45.12	7.00%	1,518,536			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units GDP	109.85	17.05%	816,758				-	11.09	-	5.79	-	5.30
NEPRA	118.35											
101-200 Units GOP	35.53	5.52%	480,123					14.00		8.11	-	5.89
NEPRA	27.03											
201-300 Units GOP	13.52	2.10%	83,107				-	14.00	-	12.09	-	1.91
NEPRA	13.52											
301-700Units GOP	6.77	1.05%	31,843				-	15.00	-	15.00	-	-
NEPRA	6.77											
Above 700 Units GOP	2.04	0.32%	4,296				-	17.50	-	17.50	-	-
NEPRA	2.04											
For peak load requirement exceeding 5 kW											-	-
Time of Use (TOU) - Peak	0.63	0.10%					-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	2.69	0.42%	7,301	86,635	4.26%	0.000	-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.01	0.00%	216	1,309	1.57%		-	17.50	-	17.50	-	-
Total Residential	216.16	33.56%	2,942,180	7,107,288	4.17%	0.000	-		-			
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	15.77	2.45%	330,225	513,963	4.20%	-	-	17.50		17.50	-	-
Commercial (<100)	-										-	-
Commercial (<20 KW)	-										-	-
For peak load requirement exceeding 5 kW	-										-	-
Regular	0.19	0.03%	53	5,371	4.80%	0.001	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	2.33	0.36%		-		-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	11.41	1.77%	8,462	219,393	0.71%	0.072	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	0.59	0.09%	1,091	14,021	5.76%		-	17.50		17.50	-	-
Total Commercial	30.29	4.70%	339,831	752,748	5.51%	0.073						
Industrial												
B1 (07)	9.12	1.42%	15,546	100,590	12.41%	-	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	3.68	0.57%		-		-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	21.75	3.38%	20,551	225,368	13.22%	0.206	-	11.50	-	11.50	-	-
B-2 A (10)	1.42	0.22%	313	33,817	5.74%	0.005	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	16.52	2.56%				-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	101.13	15.70%	9,550	818,220	16.93%	0.477	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	12.74	1.98%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	89.61	13.91%	279	423,379	28.99%	0.280	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	8.83	1.37%				-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	51.08	7.93%	12	240,671	29.07%	0.138	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.00	0.00%		-		-	-	14.50	-	14.50	-	-
Total Industrial	315.88	49.04%	46,255	1,851,863	23.37%	1.106						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	27	171	7.41%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.16	0.02%	41	3,960	5.57%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.16	0.02%		-		-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	0.70	0.11%	104	10,791	8.91%	0.003	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	1.42	0.22%	7	5,328	36.62%	0.003	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	1.12	0.17%				-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	4.67	0.72%	32	37,585	17.01%	0.016	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	1.49	0.23%	4	89,800	2.28%	0.015	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	2.09	0.32%				-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	10.01	1.55%	2	38,900	35.24%	0.026	360	11.20	360	11.20	-	-
Total Single Point Supply	21.84	3.39%	217	186,535	16.04%	0.064						
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.48	0.07%	1,509	23,506	2.78%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	0.35	0.05%	710	6,394	7.58%	0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-18	0.30	0.05%				-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D18	2.72	0.42%	1,279	27,904	13.37%	0.017	200	11.20	200	10.00	-	1.20
D-1B(50,51)T Peak	8.28	1.25%				0.010	200	17.50	-	10.35	200	7.15
D-1B(50,51)T Off- Peak	47.07	7.31%	35,793	390,230	0.440	200	11.20	-	10.35	200	0.85	
Total Agricultural	59.21	9.19%	39,291	448,034	18.10%	0.470						
Public Lighting G	0.57	0.09%	1,488	10,823	7.28%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.20	0.03%	115	6,629	4.15%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	644.15	100.00%	3,369,377	10,363,920	8.51%	1.713	-					

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	46.76	7.14%	1,453,596	-		0.000	-	187	-	94	-	94
For peak load requirement up to 5 kW							-	-	-	-	-	-
01-100 Units												
GOP	113.44	17.33%	813,546	-		-	-	1,370	-	657	-	713
NEPRA	123.55		-	-		-	-	-	-	-	-	-
101-200 Units												
GOP	40.50	6.19%	515,263	-		-	-	425	-	328	-	97
NEPRA	30.39		-	-		-	-	-	-	-	-	-
201-300 Units												
GOP	16.24	2.48%	99,451	-		-	-	227	-	196	-	31
NEPRA	16.24		-	-		-	-	-	-	-	-	-
301-700 Units												
GOP	7.78	1.19%	39,801	-		-	-	117	-	117	-	-
NEPRA	7.78		-	-		-	-	-	-	-	-	-
Above 700 Units												
GOP	2.21	0.34%	5,259	-		-	-	39	-	39	-	-
NEPRA	2.21		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW							-	-	-	-	-	-
Time of Use (TOU) - Peak	0.67	0.10%	7,168	-		-	-	12	-	12	-	-
Time of Use (TOU) - Off-Peak	2.78	0.42%		58,309	6.54%	-	-	32	-	32	-	-
E-1(i) (55) TEMP.	0.04	0.01%	217	1,310	3.97%	-	-	1	-	1	-	-
Total Residential	230.43	35.20%	2,934,301	7,087,019	4.45%	0.000	-	2,410	-	1,475	-	935
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	16.45	2.51%	329,763	513,029	4.39%	-	-	288	-	288	-	-
Commercial (<100)	-			-		-	-	-	-	-	-	-
Commercial (<20 KW)	-			-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-			-		-	-	-	-	-	-	-
Regular	0.21	0.03%	53	5,371	5.46%	0.001	1	3	1	3	-	-
Time of Use (TOU) - Peak (A-2)	2.41	0.37%	8,385	-		-	-	42	-	42	-	-
Time of Use (TOU) - Off-Peak (Temp)	9.74	1.49%		218,706	6.10%	0.080	32	112	32	112	-	-
E-1(ii) (56) TEMP.	0.53	0.08%	1,086	13,991	5.18%	-	-	9	-	9	-	-
Total Commercial	29.34	4.48%	339,287	751,097	5.35%	0.082	33	455	33	455	-	-
Industrial												
B1	8.65	1.32%	15,638	101,344	11.69%	-	-	125	-	125	-	-
B-1 (09) TOD peak	3.39	0.52%	20,435	-		-	-	59	-	59	-	-
B-1 (09) TOD off peak	18.42	2.81%		224,418	11.24%	0.213	-	212	-	212	-	-
B-2 A (10)	1.49	0.23%	314	33,847	6.04%	0.005	2	21	2	21	-	-
B2 - TOU (Peak)	16.16	2.47%	9,532	-		-	-	283	-	283	-	-
B2 - TOU (Off-peak)	102.25	15.62%		814,530	17.20%	0.482	193	1,155	193	1,155	-	-
B3 - TOU (Peak)	11.17	1.71%	4	9,818	0.00%	-	-	195	-	195	-	-
B3 - TOU (Off-peak)	95.75	14.63%	279	421,899	31.11%	0.288	109	1,072	109	1,072	-	-
B4 - TOU (Peak)	10.06	1.54%	12	-		-	-	176	-	176	-	-
B4 - TOU (Off-peak)	63.11	9.64%		232,156	37.24%	0.152	55	701	55	701	-	-
E-2 (58) TEMP.	0.01	0.00%		-		-	-	0	-	0	-	-
Total Industrial	330.46	50.48%	46,214	1,837,812	24.63%	1.140	359	4,000	359	4,000	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	28	186	8.66%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	41	3,960	5.66%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.16	0.02%	104	-		-	-	3	-	3	-	-
C-1C(26) T OFF-PEAK	0.73	0.11%		10,791	9.30%	0.003	1	8	1	8	-	-
C2 Supply at 11 kV	1.43	0.22%	7	5,328	36.87%	0.003	1	21	1	21	-	-
Time of Use (TOU) - Peak	1.09	0.17%	32	-		-	-	19	-	19	-	-
Time of Use (TOU) - Off-Peak	4.84	0.74%		37,585	17.63%	0.017	6	55	6	55	-	-
C3 Supply above 11 kV	0.27	0.04%	4	89,800	0.41%	0.007	2	4	2	4	-	-
Time of Use (TOU) - Peak	2.65	0.41%	2	-		-	-	46	-	46	-	-
Time of Use (TOU) - Off-Peak	12.65	1.93%		38,900	44.54%	0.024	9	142	9	142	-	-
Total Single Point Supply	24.00	3.67%	218	186,550	17.62%	0.055	20	300	20	300	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.30	0.20%	1,576	23,757	7.51%	-	-	19	-	17	-	2
D2 Agricultural Tube-wells	0.29	0.04%	711	6,438	6.22%	0.003	1	4	1	3	-	1
Time of Use (TOU) - Peak D-1B	0.30	0.05%		-		-	-	5	-	5	-	0
Time of Use (TOU) - Off-Peak D1B	2.06	0.31%	1,524	27,713	10.16%	0.018	4	23	4	21	-	2
D-1B(50.51)T Peak	6.43	0.98%	-	-	0.00%	0.012	2	113	-	67	2	46
D-1B(50.51)T Off-Peak	28.98	4.43%	35,456	389,916	0.00%	0.444	89	325	-	300	89	25
Total Agricultural	39.37	6.01%	39,267	447,824	12.04%	0.477	95	488	4	413	91	76
Public Lighting G	0.73	0.1%	1,484	10,804	9.24%	-	-	11	-	11	-	-
Residential Colonies H	0.29	0.0%	115	6,629	6.09%	-	-	4	-	4	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	654.62	100.00%	3,360,886	10,327,735	8.68%	1.753	507	7,668	416	6,657	91	1,011

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FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement January 2015

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GDP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	46.76	7.14%	1,453,596			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	113.44	17.33%	813,546					11.09		5.79		5.30
NEPRA	123.55											
101-200 Units	40.50	6.19%	515,263					14.00		8.11		5.89
NEPRA	30.39											
201-300 Units	16.24	2.48%	99,451					14.00		12.09		1.91
NEPRA	16.24											
301-700 Units	7.78	1.19%	39,801					15.00		15.00		-
NEPRA	7.78											
Above 700 Units	2.21	0.34%	5,259					17.50		17.50		-
NEPRA	2.21											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.67	0.10%						17.50		17.50		-
Time of Use (TOU) - Off-Peak	2.78	0.42%	7,168	58,309	6.54%			11.50		11.50		-
E-1(i) (55) TEMP.	0.04	0.01%	217	1,310	3.97%			17.50		17.50		-
Total Residential	230.43	35.20%	2,934,301	7,087,019	4.45%							
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	16.45	2.51%	329,763	513,029	4.39%	-	-	17.50		17.50		-
Commercial (<100)												
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW												
Regular	0.21	0.03%	53	5,371	5.46%	0.001	400	15.00	400	15.00		-
Time of Use (TOU) - Peak (A-2)	2.41	0.37%					400	17.50	400	17.50		-
Time of Use (TOU) - Off-Peak	9.74	1.49%	8,385	218,706	0.61%	0.080	400	11.50	400	11.50		-
E-1(ii) (56) TEMP.	0.53	0.08%	1,086	13,991	5.18%			17.50		17.50		-
Total Commercial	29.34	4.48%	339,287	751,097	5.35%	0.082						
Industrial												
B1 (07)	8.65	1.32%	15,638	101,344	11.69%	-	-	14.50	-	14.50		-
B-1 (09) TOD peak	3.39	0.52%					-	17.50	-	17.50		-
B-1 (09) TOD off peak	18.42	2.81%	20,435	224,418	11.24%	0.213	-	11.50	-	11.50		-
B-2 A (10)	1.49	0.23%	314	33,847	6.04%	0.005	400	14.00	400	14.00		-
B2 - TOU (Peak)	16.16	2.47%					400	17.50	400	17.50		-
B2 - TOU (Off-peak)	102.25	15.62%	9,532	814,530	17.20%	0.482	400	11.30	400	11.30		-
B3 - TOU (Peak)	11.17	1.71%	4	9,818			380	17.50	380	17.50		-
B3 - TOU (Off-peak)	95.75	14.63%	279	421,699	31.11%	0.288	380	11.20	380	11.20		-
B4 - TOU (Peak)	10.06	1.54%					360	17.50	360	17.50		-
B4 - TOU (Off-peak)	63.11	9.84%	12	232,156	37.24%	0.152	360	11.10	360	11.10		-
E-2 (58) TEMP.	0.01	0.00%						14.50	-	14.50		-
Total Industrial	330.46	50.48%	46,214	1,837,812	24.63%	1.140						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	28	186	8.66%	0.000	-	15.00	-	15.00		-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	41	3,960	5.66%	0.001	400	14.50	400	14.50		-
C-1C(26) T PEAK	0.16	0.02%					400	17.50	400	17.50		-
C-1C(26) T OFF-PEAK	0.73	0.11%	104	10,791	9.30%	0.003	400	11.50	400	11.50		-
C2 Supply at 11 kV	1.43	0.22%	7	5,328	36.87%	0.003	380	14.30	380	14.30		-
Time of Use (TOU) - Peak	1.09	0.17%					380	17.50	380	17.50		-
Time of Use (TOU) - Off-Peak	4.84	0.74%	32	37,585	17.63%	0.017	380	11.30	380	11.30		-
C3 Supply above 11 kV	0.27	0.04%	4	89,800	0.41%	0.007	360	14.20	360	14.20		-
Time of Use (TOU) - Peak	2.65	0.41%					360	17.50	360	17.50		-
Time of Use (TOU) - Off-Peak	12.65	1.93%	2	38,900	44.54%	0.024	360	11.20	360	11.20		-
Total Single Point Supply	24.00	3.67%	218	186,550	17.62%	0.055						
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.30	0.20%	1,576	23,757	7.51%	-	-	14.50	-	13.01		1.49
D2 Agricultural Tube-wells	0.29	0.04%	711	6,438	6.22%	0.003	200	14.00	200	11.51		2.49
Time of Use (TOU) - Peak D-1B	0.30	0.05%					200	17.50	200	17.00		0.50
Time of Use (TOU) - Off-Peak D1B	2.06	0.31%	1,524	27,713	10.16%	0.018	200	11.20	200	10.00		1.20
D-1B(50.51)T Peak	6.43	0.98%				0.012	200	17.50	-	10.35	200	7.15
D-1B(50.51)T Off-Peak	28.98	4.43%	35,456	389,916		0.444	200	11.20	-	10.35	200	0.85
Total Agricultural	39.37	6.01%	39,267	447,824	12.04%	0.477						
Public Lighting G	0.73	0.11%	1,484	10,804	9.24%	-	-	15.00	-	15.00		-
Residential Colonies H	0.29	0.05%	115	6,629	6.09%	-	-	15.00	-	15.00		-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	654.62	100.00%	3,360,886	10,327,735	8.68%	1.753						

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	97.02	4.16%	1,390,582	-		0.000	-	388	-	194	-	194
For peak load requirement up to 5 kW			-	-		-	-	-	-	-	-	-
01-100 Units	400.78	17.17%	835,922	-		-	-	5,405	-	2,321	-	3,084
NEPRA	474.01		-	-		-	-	-	-	-	-	-
101-200 Units	247.87	10.62%	550,291	-		-	-	2,520	-	2,010	-	510
NEPRA	174.64		-	-		-	-	-	-	-	-	-
201-300 Units	134.01	5.74%	100,703	-		-	-	1,956	-	1,620	-	336
NEPRA	134.01		-	-		-	-	-	-	-	-	-
301-700 Units	56.74	2.43%	35,539	-		-	-	910	-	875	-	35
NEPRA	56.74		-	-		-	-	-	-	-	-	-
Above 700 Units	12.54	0.54%	4,408	-		-	-	229	-	222	-	7
NEPRA	12.54		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW						-	-	-	-	-	-	-
Time of Use (TOU) - Peak	2.08	0.09%	6,980	-		-	-	37	-	37	-	1
Time of Use (TOU) - Off-Peak	9.65	0.41%		83,810	15.76%	0.000	-	114	-	113	-	1
E-1(i) (55) TEMP.	0.06	0.00%	215	1,368	6.06%	-	-	1	-	1	-	0
Total Residential	960.75	41.15%	2,924,640	7,062,712	18.63%	0.000	-	11,560	-	7,392	-	4,168
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	60.45	2.59%	328,920	511,162	16.20%	-	-	1,088	-	1,065	-	22
Commercial (<100)	-					-	-	-	-	-	-	-
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW	-					-	-	-	-	-	-	-
Regular	0.80	0.03%	54	5,494	19.97%	0.005	2	12	2	12	-	-
Time of Use (TOU) - Peak (A-2)	8.42	0.36%	8,330	-		-	-	150	-	148	-	2
Time of Use (TOU) - Off-Peak (Temp)	38.07	1.63%		217,297	24.00%	0.321	128	446	128	443	-	2
E-1(i) (56) TEMP.	1.98	0.08%	1,074	13,830	19.62%	-	-	34	-	34	-	-
Total Commercial	109.73	4.70%	338,378	747,783	20.10%	0.325	130	1,730	130	1,703	-	26
Industrial												
B1	27.91	1.20%	15,806	103,342	37.00%	0.000	-	405	-	405	-	1
B-1 (09) TOD peak	9.68	0.41%	20,228	-		-	-	170	-	169	-	0
B-1 (09) TOD off peak	58.84	2.52%		222,080	36.30%	0.600	-	678	-	678	-	0
B-2 A (10)	4.44	0.19%	317	33,979	17.90%	0.016	6	63	6	62	-	1
B2 - TOU (Peak)	55.68	2.39%	9,482	-		-	-	993	-	979	-	14
B2 - TOU (Off-peak)	323.64	13.86%		808,723	54.82%	1.480	592	3,738	592	3,715	-	23
B3 - TOU (Peak)	35.77	1.53%	4	9,818	0.00%	-	-	643	-	630	-	13
B3 - TOU (Off-peak)	297.85	12.76%	279	416,480	97.97%	0.897	341	3,422	341	3,397	-	25
B4 - TOU (Peak)	25.50	1.09%	12	-		-	-	458	-	449	-	9
B4 - TOU (Off-peak)	170.78	7.32%		232,156	100.77%	0.433	156	1,945	156	1,931	-	14
E-2 (58) TEMP.	0.07	0.00%		-		-	-	1	-	1	-	-
Total Industrial	1,010.17	43.27%	46,128	1,826,578	75.76%	3.426	1,095	12,517	1,095	12,417	-	100
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.04	0.00%	29	194	26.38%	0.000	-	1	-	1	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.56	0.02%	41	3,930	19.47%	0.003	1	8	1	8	-	-
C-1C(26) T PEAK	0.52	0.02%	102	-		-	-	9	-	9	-	0
C-1C(26) T OFF-PEAK	2.27	0.10%		10,747	28.97%	0.014	5	27	5	27	-	0
C2 Supply at 11 kV	4.51	0.19%	7	5,328	115.87%	0.009	4	65	4	64	-	0
Time of Use (TOU) - Peak	3.01	0.13%	32	-		-	-	54	-	53	-	1
Time of Use (TOU) - Off-Peak	14.72	0.63%		37,585	53.64%	0.051	19	173	19	171	-	2
C3 Supply above 11 kV	0.69	0.03%	4	89,800	1.05%	0.011	4	10	4	10	-	0
Time of Use (TOU) - Peak	7.31	0.31%	2	-		-	-	132	-	129	-	3
Time of Use (TOU) - Off-Peak	35.04	1.50%		38,900	123.38%	0.077	28	407	28	402	-	5
Total Single Point Supply	68.65	2.94%	217	186,484	50.43%	0.165	61	885	61	874	-	12
Agricultural Tube-wells - Tariff O												
D1 Scarp	3.60	0.15%	1,548	24,286	20.33%	-	-	53	-	47	-	6
D2 Agricultural Tube-wells	1.25	0.05%	712	6,457	26.52%	0.010	2	18	2	14	0	3
Time of Use (TOU) - Peak D-1B	0.98	0.04%		-		-	-	17	-	17	-	1
Time of Use (TOU) - Off-Peak D1B	7.96	0.34%	1,247	27,189	40.10%	0.060	12	90	12	80	-	10
D-1B(50.51)T Peak	34.43	1.47%	-	-	0.00%	0.031	6	604	-	356	6	247
D-1B(50.51)T Off-Peak	134.11	5.74%	35,707	389,127	0.00%	1.344	269	1,505	-	1,388	269	117
Total Agricultural	182.34	7.81%	39,214	447,059	55.87%	1.446	289	2,286	14	1,902	275	384
Public Lighting G	2.07	0.1%	1,484	10,799	26.24%	-	-	31	-	31	-	0
Residential Colonies H	0.94	0.0%	114	6,561	19.68%	-	-	14	-	14	-	0
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	2,334.64	100.00%	3,350,175	10,287,976	31.09%	5.363	1,576	29,024	1,301	24,333	275	4,691

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement 2nd Quarter

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	97.02	4.16%	1,390,582			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units												
GOP	400.78	17.17%	835,922				-	11.09	-	5.79	-	5.30
NEPRA	474.01											
101-200 Units												
GOP	247.87	10.62%	550,291					14.00		8.11	-	5.89
NEPRA	174.64											
201-300 Units												
GOP	134.01	5.74%	100,703				-	14.00		12.09	-	1.91
NEPRA	134.01											
301-700 Units												
GOP	56.74	2.43%	35,539				-	15.00	-	15.00	-	-
NEPRA	56.74											
Above 700 Units												
GOP	12.54	0.54%	4,408				-	17.50	-	17.50	-	-
NEPRA	12.54											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	2.08	0.09%					-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	9.65	0.41%	6,980	83,810	15.76%	0.000	-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.06	0.00%	215	1,368	6.06%	-	-	17.50	-	17.50	-	-
Total Residential	960.75	41.15%	2,924,640	7,062,712	18.63%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	60.45	2.59%	328,920	511,162	16.20%	-	-	17.50		17.50	-	-
Commercial (<100)	-											
Commercial (<20 KW)	-											
For peak load requirement exceeding 5 kW	-											
Regular	0.80	0.03%	54	5,494	19.97%	0.005	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	8.42	0.36%				-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	38.07	1.63%	8,330	217,297	2.40%	0.321	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	1.98	0.08%	1,074	13,830	19.62%	-	-	17.50	-	17.50	-	-
Total Commercial	109.73	4.70%	338,378	747,783	20.10%	0.325	-	-	-	-	-	-
Industrial												
B1 (07)	27.91	1.20%	15,806	103,342	37.00%	0.000	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	9.68	0.41%					-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	58.84	2.52%	20,228	222,080	36.30%	0.600	-	11.50	-	11.50	-	-
B-2 A (10)	4.44	0.19%	317	33,979	17.90%	0.016	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	55.68	2.39%					400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	323.64	13.86%	9,482	808,723	54.82%	1.480	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	35.77	1.53%	4	9,818			380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	297.85	12.76%	279	416,480	97.97%	0.897	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	25.50	1.08%					360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	170.78	7.32%	12	232,156	100.77%	0.433	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.07	0.00%					-	14.50	-	14.50	-	-
Total Industrial	1,010.17	43.27%	46,128	1,826,578	75.76%	3.426	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.04	0.00%	29	194	26.38%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.56	0.02%	41	3,930	19.47%	0.003	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.52	0.02%					400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	2.27	0.10%	102	10,747	28.97%	0.014	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	4.51	0.19%	7	5,328	115.87%	0.009	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	3.01	0.13%					380	17.50	380	70.500	-	(53.00)
Time of Use (TOU) - Off-Peak	14.72	0.63%	32	37,585	53.64%	0.051	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	0.69	0.03%	4	89,800	1.05%	0.011	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	7.31	0.31%					360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	35.04	1.50%	2	38,900	123.38%	0.077	360	11.20	360	11.20	-	-
Total Single Point Supply	68.65	2.94%	217	186,484	50.43%	0.165	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	3.60	0.15%	1,548	24,286	20.33%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	1.25	0.05%	712	6,457	26.52%	0.010	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak Q-18	0.98	0.04%					200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak Q18	7.96	0.34%	1,247	27,189	40.10%	0.060	200	11.20	200	10.00	-	1.20
Q-18(50.51)T Peak	34.43	1.47%				0.031	200	17.50	-	10.35	200	7.15
D-18(50.51)T Off-Peak	134.11	5.74%	35,707	389,127		1.344	200	11.20	-	10.35	200	0.85
Total Agricultural	182.34	7.81%	39,214	447,059	55.87%	1.446	-	-	-	-	-	-
Public Lighting G	2.07	0.09%	1,484	10,799	26.24%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.94	0.04%	114	6,561	19.68%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	2,334.64	100.00%	3,350,175	10,287,976	31.09%	5.363	-	-	-	-	-	-

B

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)					Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	44.45	6.21%	1,390,582	-	-	-	-	178	-	89	-	89
For peak load requirement up to 5 kW			-	-	-	-	-	-	-	-	-	-
01-100 Units	119.15	16.64%	835,922	-	-	-	-	1,436	-	690	-	746
NEPRA	129.46		-	-	-	-	-	-	-	-	-	-
101-200 Units	42.42	5.92%	550,291	-	-	-	-	450	-	344	-	106
NEPRA	32.11		-	-	-	-	-	-	-	-	-	-
201-300 Units	15.46	2.16%	100,703	-	-	-	-	216	-	187	-	30
NEPRA	15.46		-	-	-	-	-	-	-	-	-	-
301-700 Units	6.78	0.95%	35,539	-	-	-	-	102	-	102	-	-
NEPRA	6.78		-	-	-	-	-	-	-	-	-	-
Above 700 Units	1.87	0.26%	4,408	-	-	-	-	33	-	33	-	-
NEPRA	1.87		-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.59	0.08%	6,980	-	-	-	-	10	-	10	-	-
Time of Use (TOU) - Off-Peak	2.60	0.36%		83,810	4.25%	-	-	30	-	30	-	-
E-1(i) (55) TEMP.	0.01	0.00%	215	1,368	1.05%	-	-	0	-	0	-	-
Total Residential	233.32	32.58%	2,924,640	7,062,712	4.53%	-	-	2,454	-	1,484	-	970
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	16.64	2.32%	328,920	511,162	4.46%	-	-	291	-	291	-	-
Commercial (<100)	-					-	-	-	-	-	-	-
Commercial (<20 KW)	-					-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-					-	-	-	-	-	-	-
Regular	0.22	0.03%	54	5,494	5.58%	0.001	0	3	0	3	-	-
Time of Use (TOU) - Peak (A-2)	2.31	0.32%	8,330	-	-	-	-	40	-	40	-	-
Time of Use (TOU) - Off-Peak (Temp)	11.71	1.63%		217,297	7.38%	0.091	36	135	36	135	-	-
E-1(ii) (56) TEMP.	0.60	0.08%	1,074	13,830	5.99%	-	-	11	-	11	-	-
Total Commercial	31.49	4.40%	338,378	747,783	5.77%	0.092	37	480	37	480	-	-
Industrial												
B1	9.11	1.27%	15,806	103,342	12.07%	0.000	-	132	-	132	-	-
B-1 (09) TOD peak	3.39	0.47%	20,228	-	-	-	-	59	-	59	-	-
B-1 (09) TOD off peak	21.04	2.94%		222,080	12.98%	0.203	-	242	-	242	-	-
B-2 A (10)	1.56	0.22%	317	33,979	6.27%	0.005	2	22	2	22	-	-
B2 - TOU (Peak)	20.19	2.82%	9,482	-	-	-	-	353	-	353	-	-
B2 - TOU (Off-peak)	119.36	16.67%		808,723	20.22%	0.493	197	1,349	197	1,349	-	-
B3 - TOU (Peak)	12.93	1.80%	4	9,818	0.00%	-	-	226	-	226	-	-
B3 - TOU (Off-peak)	108.13	15.10%	279	416,480	35.57%	0.291	111	1,211	111	1,211	-	-
B4 - TOU (Peak)	8.29	1.16%	12	-	-	-	-	145	-	145	-	-
B4 - TOU (Off-peak)	63.38	8.85%		232,156	37.40%	0.156	56	703	56	703	-	-
E-2 (58) TEMP.	0.03	0.00%		-	-	-	-	0	-	0	-	-
Total Industrial	367.39	51.30%	46,128	1,826,578	27.55%	1.148	366	4,443	366	4,443	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	6.80%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.14	0.02%	41	3,930	4.81%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.13	0.02%	102	-	-	-	-	2	-	2	-	-
C-1C(26) T OFF-PEAK	0.58	0.08%		10,747	7.40%	0.003	1	7	1	7	-	-
C2 Supply at 11 kV	1.24	0.17%	7	5,328	31.96%	0.003	1	18	1	18	-	-
Time of Use (TOU) - Peak	0.88	0.12%	32	-	-	-	-	15	-	15	-	-
Time of Use (TOU) - Off-Peak	3.91	0.55%		37,585	14.26%	0.012	5	44	5	44	-	-
C3 Supply above 11 kV	0.20	0.03%	4	89,800	0.30%	0.001	0	3	0	3	-	-
Time of Use (TOU) - Peak	1.94	0.27%	2	-	-	-	-	34	-	34	-	-
Time of Use (TOU) - Off-Peak	8.99	1.26%		38,900	31.66%	0.021	8	101	8	101	-	-
Total Single Point Supply	18.01	2.52%	217	186,484	13.23%	0.040	15	226	15	226	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.27	0.18%	1,548	24,286	7.18%	-	-	18	-	17	-	2
D2 Agricultural Tube-wells	0.36	0.05%	712	6,457	7.56%	0.003	1	5	1	4	-	1
Time of Use (TOU) - Peak D-1B	0.29	0.04%		-	-	-	-	5	-	5	-	0
Time of Use (TOU) - Off-Peak D1B	2.75	0.38%	1,247	27,189	13.85%	0.018	4	31	4	27	-	3
D-1B(50.51)T Peak	9.20	1.28%	-	-	0.00%	0.015	3	161	-	95	3	66
D-1B(50.51)T Off-Peak	51.04	7.13%	35,707	389,127	0.00%	0.442	88	572	-	528	88	43
Total Agricultural	64.91	9.06%	39,214	447,059	19.89%	0.478	96	792	4	677	91	115
Public Lighting G	0.84	0.1%	1,484	10,799	10.70%	-	-	13	-	13	-	-
Residential Colonies H	0.25	0.0%	114	6,561	5.20%	-	-	4	-	4	-	-
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	716.21	100.00%	3,350,175	10,287,976	9.54%	1.758	513	8,412	422	7,327	91	1,085

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement December 2014

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	44.45	6.21%	1,390,582				-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	119.15	16.64%	835,922				-	11.09	-	5.79	-	5.30
NEPRA	129.46											
101-200 Units	42.42	5.92%	550,291					14.00		8.11	-	5.89
NEPRA	32.11											
201-300 Units	15.46	2.16%	100,703				-	14.00		12.09	-	1.91
NEPRA	15.46											
301-700 Units	6.78	0.95%	35,539				-	15.00		15.00	-	-
NEPRA	6.78											
Above 700 Units	1.87	0.26%	4,408				-	17.50		17.50	-	-
NEPRA	1.87											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.59	0.08%		-			-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	2.60	0.36%	6,980	83,810	4.25%		-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.01	0.00%	215	1,368	1.05%		-	17.50	-	17.50	-	-
Total Residential	233.32	32.58%	2,924,640	7,062,712	4.53%		-		-			
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	16.64	2.32%	328,920	511,162	4.46%	-	-	17.50		17.50	-	-
Commercial (<100)												
Commercial (<20 kW)												
For peak load requirement exceeding 5 kW												
Regular	0.22	0.03%	54	5,494	5.58%	0.001	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	2.31	0.32%					400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	11.71	1.63%	8,330	217,297	0.74%	0.091	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	0.60	0.08%	1,074	13,830	5.99%		-	17.50		17.50	-	-
Total Commercial	31.49	4.40%	338,378	747,783	5.77%	0.092						
Industrial												
B1 (07)	9.11	1.27%	15,806	103,342	12.07%	0.000	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	3.39	0.47%					-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	21.04	2.94%	20,228	222,080	12.98%	0.203	-	11.50	-	11.50	-	-
B-2 A (10)	1.56	0.22%	317	33,979	6.27%	0.005	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	20.19	2.82%					400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	119.36	16.67%	9,482	808,723	20.22%	0.493	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	12.93	1.80%	4	9,818			380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	108.13	15.10%	279	416,480	35.57%	0.291	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	8.29	1.16%					360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	63.38	8.85%	12	232,156	37.40%	0.156	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.03	0.00%					-	14.50	-	14.50	-	-
Total Industrial	367.39	51.30%	46,128	1,826,578	27.55%	1.148						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	6.80%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.14	0.02%	41	3,930	4.81%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.13	0.02%					400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	0.58	0.08%	102	10,747	7.40%	0.003	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	1.24	0.17%	7	5,328	31.96%	0.003	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	0.88	0.12%					380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	3.91	0.55%	32	37,585	14.26%	0.012	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	0.20	0.03%	4	89,800	0.30%	0.001	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	1.94	0.27%					360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	8.99	1.26%	2	38,900	31.66%	0.021	360	11.20	360	11.20	-	-
Total Single Point Supply	18.01	2.52%	217	186,484	13.23%	0.040						
Agricultural Tube-wells - Tariff D												
O1 Scarp	1.27	0.18%	1,548	24,286	7.18%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	0.36	0.05%	712	6,457	7.56%	0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-1B	0.29	0.04%					200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	2.75	0.38%	1,247	27,189	13.85%	0.018	200	11.20	200	10.00	-	1.20
D-1B(50.51) T Peak	9.20	1.28%					200	17.50	-	10.35	200	7.15
D-1B(50.51) T Off-Peak	51.04	7.13%	35,707	389,127		0.442	200	11.20	-	10.35	200	0.85
Total Agricultural	64.91	9.06%	39,214	447,059	19.89%	0.478						
Public Lighting G	0.84	0.12%	1,484	10,799	10.70%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.25	0.03%	114	6,561	5.20%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	716.21	100.00%	3,350,175	10,287,976	9.54%	1.758						

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	32.03	4.39%	1,033,293	-	-	-	-	128	-	64	-	64
For peak load requirement up to 5 kW												
01-100 Units	143.20	19.61%	813,820	-	-	-	-	1,805	-	829	-	975
NEPRA	162.72		-					-		-		-
101-200 Units	73.26	10.03%	794,440	-	-	-	-	752	-	594	-	158
NEPRA	53.75		-					-		-		-
201-300 Units	29.09	3.98%	192,671	-	-	-	-	407	-	352	-	56
NEPRA	29.09		-					-		-		-
301-700 Units	10.97	1.50%	69,003	-	-	-	-	165	-	165	-	-
NEPRA	10.97		-					-		-		-
Above 700 Units	2.50	0.34%	6,365	-	-	-	-	44	-	44	-	-
NEPRA	2.50		-					-		-		-
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.61	0.08%	6,778	-	-	-	-	11	-	11	-	-
Time of Use (TOU) - Off-Peak	2.61	0.36%		82,335	4.34%	-	-	30	-	30	-	-
E-1(j) (55) TEMP.	0.02	0.00%	212	1,333	2.07%	-	-	0	-	0	-	-
Total Residential	294.30	40.30%	2,918,582	7,041,183	5.73%	-	-	3,342	-	2,088	-	1,253
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	18.07	2.47%	328,068	509,559	4.86%	-	-	316	-	316	-	-
Commercial (<100)	-		-	-		-	-	-	-	-	-	-
Commercial (<20 KW)	-		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW												
Regular	0.26	0.04%	54	5,494	6.60%	0.001	1	4	1	4	-	-
Time of Use (TOU) - Peak (A-2)	2.86	0.39%	8,223	-	-	-	-	50	-	50	-	-
Time of Use (TOU) - Off-Peak (Temp)	11.99	1.64%		215,532	7.62%	0.112	45	138	45	138	-	-
E-1(g) (56) TEMP.	0.63	0.09%	1,066	13,701	6.35%	-	-	11	-	11	-	-
Total Commercial	33.83	4.63%	337,411	744,286	6.23%	0.114	45	519	45	519	-	-
Industrial												
B1	10.16	1.39%	15,813	102,720	13.55%	-	-	147	-	147	-	-
B-1 (09) TOD peak	3.34	0.46%	19,904	-	-	-	-	59	-	59	-	-
B-1 (09) TOD off peak	19.98	2.74%		218,269	12.54%	0.197	-	230	-	230	-	-
B-2 A (10)	1.44	0.20%	319	34,235	5.76%	0.005	2	20	2	20	-	-
B2 - TOU (Peak)	19.87	2.72%	9,415	-	-	-	-	348	-	348	-	-
B2 - TOU (Off-peak)	108.08	14.80%		802,616	18.45%	0.491	196	1,221	196	1,221	-	-
B3 - TOU (Peak)	9.88	1.35%	4	9,818	0.00%	-	-	173	-	173	-	-
B3 - TOU (Off-peak)	97.65	13.37%	280	420,437	31.82%	0.303	115	1,094	115	1,094	-	-
B4 - TOU (Peak)	8.30	1.14%	11	-	-	-	-	145	-	145	-	-
B4 - TOU (Off-peak)	54.48	7.46%		223,456	33.40%	0.136	49	605	49	605	-	-
E-2 (58) TEMP.	0.02	0.00%		-	-	-	-	0	-	0	-	-
Total Industrial	333.20	45.63%	45,746	1,811,551	25.20%	1.133	363	4,042	363	4,042	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	9.06%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	42	3,992	5.61%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.17	0.02%	100	-	-	-	-	3	-	3	-	-
C-1C(26) T OFF-PEAK	0.65	0.09%		10,615	8.43%	0.007	3	8	3	8	-	-
C2 Supply at 11 kV	1.40	0.19%	7	5,328	35.87%	0.003	1	20	1	20	-	-
Time of Use (TOU) - Peak	0.87	0.12%	32	-	-	-	-	15	-	15	-	-
Time of Use (TOU) - Off-Peak	4.26	0.58%		37,585	15.52%	0.016	6	48	6	48	-	-
C3 Supply above 11 kV	0.15	0.02%	4	89,800	0.23%	0.001	0	2	0	2	-	-
Time of Use (TOU) - Peak	2.41	0.33%	2	-	-	-	-	42	-	42	-	-
Time of Use (TOU) - Off-Peak	11.44	1.57%		38,900	40.30%	0.022	8	128	8	128	-	-
Total Single Point Supply	21.52	2.95%	216	186,414	15.81%	0.049	18	269	18	269	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.10	0.15%	1,576	24,784	6.07%	-	-	16	-	14	-	2
D2 Agricultural Tube-wells	0.35	0.05%	710	6,460	7.48%	0.003	1	5	1	4	-	1
Time of Use (TOU) - Peak D-1B	0.36	0.05%		-	-	-	-	6	-	6	-	0
Time of Use (TOU) - Off-Peak D1B	2.67	0.37%	1,517	31,496	11.61%	0.021	4	30	4	27	-	3
D-1B(50,51)T Peak	7.37	1.01%		-	-	0.017	3	129	-	76	3	53
D-1B(50,51)T Off-Peak	34.56	4.73%	35,652	388,419	0.00%	0.442	88	387	-	358	88	29
Total Agricultural	46.41	6.36%	39,455	451,159	14.09%	0.483	97	573	5	485	92	88
Public Lighting G	0.68	0.1%	1,480	10,779	8.63%	-	-	10	-	10	-	-
Residential Colonies H	0.28	0.0%	114	6,561	5.84%	-	-	4	-	4	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	730.21	100.00%	3,341,004	10,251,933	9.76%	1.779	523	8,759	431	7,418	92	1,341

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement November 2014

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GDP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	32.03	4.39%	1,033,293				-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units GDP	143.20	19.61%	813,820				-	11.09	-	5.79	-	5.30
NEPRA	162.72											
101-200 Units GDP	73.26	10.03%	794,440				-	14.00	-	8.11	-	5.89
NEPRA	53.75											
201-300 Units GDP	29.09	3.98%	192,671				-	14.00	-	12.09	-	1.91
NEPRA	29.09											
301-700 Units GDP	10.97	1.50%	69,003				-	15.00	-	15.00	-	-
NEPRA	10.97											
Above 700 Units GDP	2.50	0.34%	6,365				-	17.50	-	17.50	-	-
NEPRA	2.50											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.61	0.08%					-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	2.61	0.36%	6,778	82,335	4.34%		-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.02	0.00%	212	1,333	2.07%		-	17.50	-	17.50	-	-
Total Residential	294.30	40.30%	2,916,582	7,041,183	5.73%		-		-			
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	18.07	2.47%	328,068	509,559	4.86%		-	17.50		17.50	-	-
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	0.26	0.04%	54	5,494	6.80%	0.001	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	2.86	0.39%		-		-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	11.99	1.64%	8,223	215,532	0.76%	0.112	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	0.63	0.09%	1,066	13,701	6.35%		-	17.50	-	17.50	-	-
Total Commercial	33.83	4.63%	337,411	744,286	6.23%	0.114						
Industrial												
B1 (07)	10.16	1.39%	15,813	102,720	13.55%	-	-	14.50	-	14.50	-	-
B-1 (09) TOU peak	3.34	0.46%		-		-	-	17.50	-	17.50	-	-
B-1 (09) TOU off peak	19.98	2.74%	19,904	218,269	12.54%	0.197	-	11.50	-	11.50	-	-
B-2 A (10)	1.44	0.20%	319	34,235	5.76%	0.005	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	19.87	2.72%				-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	108.08	14.80%	9,415	802,616	18.45%	0.491	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	9.88	1.35%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	97.65	13.37%	280	420,437	31.82%	0.303	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	8.30	1.14%				-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	54.48	7.46%	11	223,456	33.40%	0.136	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.02	0.00%				-	-	14.50	-	14.50	-	-
Total Industrial	333.20	45.63%	45,746	1,811,551	25.20%	1.133						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	9.06%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.16	0.02%	42	3,992	5.61%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.17	0.02%		-		-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	0.65	0.09%	100	10,615	8.43%	0.007	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	1.40	0.19%	7	5,328	35.87%	0.003	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	0.87	0.12%				-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	4.26	0.58%	32	37,585	15.52%	0.016	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	0.15	0.02%	4	89,800	0.23%	0.001	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	2.41	0.33%				-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	11.44	1.57%	2	38,900	40.30%	0.022	360	11.20	360	11.20	-	-
Total Single Point Supply	21.52	2.95%	216	186,414	15.81%	0.049						
Agricultural Tube-wells - Tariff D												
O1 Scarp	1.10	0.15%	1,576	24,784	6.07%	-	-	14.50	-	13.01	-	1.49
O2 Agricultural Tube-wells	0.35	0.05%	710	6,460	7.48%	0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-1B	0.36	0.05%				-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Off-Peak D1B	2.67	0.37%	1,517	31,496	11.61%	0.021	200	11.20	200	10.00	-	1.20
D-1B(50.51)T Peak	7.37	1.01%				0.017	200	17.50	-	10.35	200	7.15
D-1B(50.51)T Off-Peak	34.56	4.73%	35,652	388,419		0.442	200	11.20	-	10.35	200	0.85
Total Agricultural	46.41	6.36%	39,455	451,159	14.09%	0.483						
Public Lighting G	0.68	0.09%	1,480	10,779	8.63%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.28	0.04%	114	6,561	5.84%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-	-										
Time of Use (TOU) - Off-Peak	-	-										
Grand Total	730.21	100.00%	3,341,004	10,251,933	9.76%	1.779	-					

b

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MKW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(KW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	9.64	2.32%	716,872	-	-	-	-	39	-	19	-	19
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units	63.43	15.24%	590,461	-	-	-	-	909	-	367	-	541
NEPRA	81.94	-	-	-	-	-	-	-	-	-	-	-
101-200 Units	57.43	13.80%	910,148	-	-	-	-	545	-	466	-	79
NEPRA	38.92	-	-	-	-	-	-	-	-	-	-	-
201-300 Units	36.34	8.73%	429,891	-	-	-	-	509	-	439	-	69
NEPRA	36.34	-	-	-	-	-	-	-	-	-	-	-
301-700 Units	15.36	3.69%	230,881	-	-	-	-	230	-	230	-	-
NEPRA	15.36	-	-	-	-	-	-	-	-	-	-	-
Above 700 Units	3.20	0.77%	21,305	-	-	-	-	56	-	56	-	-
NEPRA	3.20	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	0.47	0.11%	6,504	-	-	-	-	8	-	8	-	-
Time of Use (TOU) - Off-Peak	2.25	0.54%	-	79,883	3.86%	-	-	26	-	26	-	-
E-1(i) (55) TEMP.	0.01	0.00%	210	1,326	0.82%	-	-	0	-	0	-	-
Total Residential	188.12	45.20%	2,906,272	7,013,800	3.67%	-	-	2,321	-	1,612	-	709
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	10.80	2.60%	326,827	507,115	2.92%	-	-	189	-	189	-	-
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.11	0.03%	54	5,494	2.85%	0.001	0	2	0	2	-	-
Time of Use (TOU) - Peak (A-2)	2.02	0.49%	8,139	-	-	-	-	35	-	35	-	-
Time of Use (TOU) - Off-Peak (Temp)	8.89	2.14%	-	214,807	5.67%	0.069	28	102	28	102	-	-
E-1(i) (56) TEMP.	0.31	0.07%	1,055	13,557	3.09%	-	-	5	-	5	-	-
Total Commercial	22.12	5.32%	336,075	740,973	4.09%	0.070	28	334	28	334	-	-
Industrial												
B1	7.99	1.92%	15,860	103,182	10.61%	-	-	116	-	116	-	-
B-1 (09) TOD peak	2.74	0.66%	19,739	-	-	-	-	48	-	48	-	-
B-1 (09) TOD off peak	16.65	4.00%	-	216,217	10.55%	0.186	-	191	-	191	-	-
B-2 A (10)	0.48	0.12%	323	34,698	1.90%	0.002	1	7	1	7	-	-
B2 - TOU (Peak)	6.27	1.51%	9,367	-	-	-	-	110	-	110	-	-
B2 - TOU (Off-peak)	38.63	9.28%	-	798,070	6.63%	0.213	85	437	85	437	-	-
B3 - TOU (Peak)	4.32	1.04%	4	9,818	0.00%	-	-	76	-	76	-	-
B3 - TOU (Off-peak)	30.69	7.37%	279	416,862	10.09%	0.101	38	344	38	344	-	-
B4 - TOU (Peak)	2.97	0.71%	11	-	-	-	-	52	-	52	-	-
B4 - TOU (Off-peak)	17.64	4.24%	-	223,456	10.82%	0.047	17	196	17	196	-	-
E-2 (58) TEMP.	0.01	0.00%	-	-	-	-	-	0	-	0	-	-
Total Industrial	128.40	30.85%	45,583	1,802,303	9.76%	0.549	141	1,576	141	1,576	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	4.04%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.09	0.02%	42	3,992	2.94%	0.000	0	1	0	1	-	-
C-1C(26) T PEAK	0.07	0.02%	100	-	-	-	-	1	-	1	-	-
C-1C(26) T OFF-PEAK	0.35	0.08%	-	10,615	4.47%	0.001	1	4	1	4	-	-
C2 Supply at 11 kV	0.62	0.15%	7	5,328	16.01%	0.001	1	9	1	9	-	-
Time of Use (TOU) - Peak	0.42	0.10%	32	-	-	-	-	7	-	7	-	-
Time of Use (TOU) - Off-Peak	2.18	0.52%	-	37,585	7.95%	0.008	3	25	3	25	-	-
C3 Supply above 11 kV	0.11	0.03%	4	89,800	0.17%	0.003	1	2	1	2	-	-
Time of Use (TOU) - Peak	0.99	0.24%	2	-	-	-	-	17	-	17	-	-
Time of Use (TOU) - Off-Peak	4.87	1.17%	-	38,900	17.14%	0.011	4	55	4	55	-	-
Total Single Point Supply	9.71	2.33%	216	186,414	7.13%	0.025	9	121	9	121	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.62	0.15%	1,581	24,902	3.42%	-	-	9	-	8	-	1
D2 Agricultural Tube-wells	0.48	0.11%	715	6,495	10.07%	0.003	1	7	1	5	-	1
Time of Use (TOU) - Peak D-1B	0.29	0.07%	-	-	-	-	-	5	-	5	-	0
Time of Use (TOU) - Off-Peak D1B	2.03	0.49%	1,571	32,354	8.61%	0.018	4	23	4	20	-	2
D-1B(50,51)T Peak	17.24	4.14%	-	-	0.00%	-	-	302	-	178	-	123
D-1B(50,51)T Off-Peak	46.81	11.25%	35,584	387,560	0.00%	0.444	89	524	-	484	89	40
Total Agricultural	67.48	16.21%	39,451	451,311	20.48%	0.465	93	870	4	702	89	168
Public Lighting G	0.19	0.0%	1,478	10,779	2.40%	-	-	3	-	3	-	-
Residential Colonies H	0.15	0.0%	114	6,561	3.13%	-	-	2	-	2	-	-
Special Contracts - Tariff K (AJK)	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	416.17	100.00%	3,329,189	10,212,141	5.58%	1.109	271	5,226	183	4,349	89	877

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Revenue & Subsidy Statement October 2014 (New Rate)
(Monthly , Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	9.64	2.32%	716,872				-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units GOP	63.43	15.24%	590,461					11.09		5.79	-	5.30
NEPRA	81.94											
101-200 Units GOP	57.43	13.80%	910,148					14.00		8.11	-	5.89
NEPRA	38.92											
201-300 Units GOP	36.34	8.73%	429,891					14.00		12.09	-	1.91
NEPRA	36.34											
301-700 Units GOP	15.36	3.69%	230,881					15.00	-	15.00	-	-
NEPRA	15.36											
Above 700 Units GOP	3.20	0.77%	21,305					17.50	-	17.50	-	-
NEPRA	3.20											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.47	0.11%		-			-	17.50	-	17.50	-	-
Time of Use (TOU) - Off-Peak	2.25	0.54%	6,504	79,883	3.86%		-	11.50	-	11.50	-	-
E-1(i) (55) TEMP.	0.01	0.00%	210	1,326	0.82%		-	17.50	-	17.50	-	-
Total Residential	188.12	45.20%	2,906,272	7,013,800	3.67%		-		-			
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	10.80	2.60%	326,827	307,115	2.92%	-	-	17.50		17.50	-	-
Commercial (<100)											-	-
Commercial (<20 KW)											-	-
For peak load requirement exceeding 5 kW											-	-
Regular	0.11	0.03%	54	5,494	2.85%	0.001	400	15.00	400	15.00	-	-
Time of Use (TOU) - Peak (A-2)	2.02	0.49%		-		-	400	17.50	400	17.50	-	-
Time of Use (TOU) - Off-Peak	8.89	2.14%	8,139	214,807	0.57%	0.069	400	11.50	400	11.50	-	-
E-1(ii) (56) TEMP.	0.31	0.07%	1,055	13,557	3.09%		-	17.50	-	17.50	-	-
Total Commercial	22.12	5.32%	336,075	740,973	4.09%	0.070						
Industrial												
B1 (07)	7.99	1.92%	15,860	103,182	10.61%	-	-	14.50	-	14.50	-	-
B-1 (09) TOD peak	2.74	0.66%		-		-	-	17.50	-	17.50	-	-
B-1 (09) TOD off peak	16.65	4.00%	19,739	216,217	10.55%	0.186	-	11.50	-	11.50	-	-
B-2 A (10)	0.48	0.12%	323	34,698	1.90%	0.002	400	14.00	400	14.00	-	-
B2 - TOU (Peak)	6.27	1.51%				-	400	17.50	400	17.50	-	-
B2 - TOU (Off-peak)	38.63	9.28%	9,367	798,070	6.63%	0.213	400	11.30	400	11.30	-	-
B3 - TOU (Peak)	4.32	1.04%	4	9,818		-	380	17.50	380	17.50	-	-
B3 - TOU (Off-peak)	30.69	7.37%	279	416,862	10.09%	0.101	380	11.20	380	11.20	-	-
B4 - TOU (Peak)	2.97	0.71%				-	360	17.50	360	17.50	-	-
B4 - TOU (Off-peak)	17.64	4.24%	11	223,456	10.82%	0.047	360	11.10	360	11.10	-	-
E-2 (58) TEMP.	0.01	0.00%		-		-	-	14.50	-	14.50	-	-
Total Industrial	128.40	30.85%	45,583	1,802,303	9.76%	0.549						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	4.04%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.09	0.02%	42	3,992	2.94%	0.000	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.07	0.02%		-		-	400	17.50	400	17.50	-	-
C-1C(26) T OFF-PEAK	0.35	0.08%	100	10,615	4.47%	0.001	400	11.50	400	11.50	-	-
C2 Supply at 11 kV	0.62	0.15%	7	5,328	16.01%	0.001	380	14.30	380	14.30	-	-
Time of Use (TOU) - Peak	0.42	0.10%				-	380	17.50	380	17.50	-	-
Time of Use (TOU) - Off-Peak	2.18	0.52%	32	37,585	7.95%	0.008	380	11.30	380	11.30	-	-
C3 Supply above 11 kV	0.11	0.03%	4	89,800	0.17%	0.003	360	14.20	360	14.20	-	-
Time of Use (TOU) - Peak	0.99	0.24%				-	360	17.50	360	17.50	-	-
Time of Use (TOU) - Off-Peak	4.87	1.17%	2	38,900	17.14%	0.011	360	11.20	360	11.20	-	-
Total Single Point Supply	9.71	2.33%	216	186,414	7.13%	0.025						
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.62	0.15%	1,581	24,902	3.42%	-	-	14.50	-	13.01	-	1.49
D2 Agricultural Tube-wells	0.48	0.11%	715	6,495	10.07%	0.003	200	14.00	200	11.51	-	2.49
Time of Use (TOU) - Peak D-1B	0.29	0.07%				-	200	17.50	200	17.00	-	0.50
Time of Use (TOU) - Diff-Peak D1B	2.03	0.49%	1,571	32,354	8.61%	0.018	200	11.20	200	10.00	-	1.20
0-1B(50,51)T Peak	17.24	4.14%				-	200	17.50	-	10.35	200	7.15
0-1B(50,51)T Off- Peak	46.81	11.25%	35,584	387,560		0.444	200	11.20	-	10.35	200	0.85
Total Agricultural	67.48	16.21%	39,451	451,311	20.48%	0.465						
Public Lighting G	0.19	0.05%	1,478	10,779	2.40%	-	-	15.00	-	15.00	-	-
Residential Colonies H	0.15	0.04%	114	6,561	3.13%	-	-	15.00	-	15.00	-	-
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	416.17	100.00%	3,329,189	10,212,141	5.58%	1.109	-					

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly , Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MKW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	10.91	2.31%	716,872	-		0.000	-	44	-	22	-	22
For peak load requirement up to 5 kW	-		-	-		-	-	-	-	-	-	-
01-100 Units	75.00	15.89%	590,461	-		-	-	1,256	-	434	-	821
NEPRA	99.89		-	-		-	-	-	-	-	-	-
101-200 Units	74.76	15.84%	910,148	-		-	-	773	-	606	-	167
NEPRA	49.87		-	-		-	-	-	-	-	-	-
201-300 Units	53.11	11.25%	429,891	-		-	-	823	-	642	-	181
NEPRA	53.11		-	-		-	-	-	-	-	-	-
301-700 Units	23.64	5.01%	230,881	-		-	-	414	-	378	-	35
NEPRA	23.64		-	-		-	-	-	-	-	-	-
Above 700 Units	4.97	1.05%	21,305	-		-	-	97	-	89	-	7
NEPRA	4.97		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	0.00%	-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Peak	0.42	0.09%	6,504	-		-	-	8	-	8	-	1
Time of Use (TOU) - Off-Peak	2.18	0.46%	-	79,883	3.74%	0.000	-	28	-	27	-	1
E-1(i) (55) TEMP.	0.02	0.00%	210	1,326	2.26%	-	-	0	-	0	-	0
Total Residential	245.02	51.91%	2,906,272	7,013,800	4.79%	0.000	-	3,443	-	2,207	-	1,235
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	14.94	3.16%	326,827	507,115	4.03%	-	-	291	-	269	-	22
Commercial (<100)	-		-	-		-	-	-	-	-	-	-
Commercial (<20 KW)	-		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-		-	-		-	-	-	-	-	-	-
Regular	0.20	0.04%	54	5,494	4.93%	0.001	0	3	0	3	-	-
Time of Use (TOU) - Peak (A-2)	1.23	0.26%	8,139	-		-	-	24	-	22	-	2
Time of Use (TOU) - Off-Peak (Temp)	5.49	1.16%	-	214,807	3.50%	0.048	19	71	19	69	-	2
E-1(ii) (56) TEMP.	0.43	0.09%	1,055	13,557	4.40%	-	-	7	-	7	-	-
Total Commercial	22.29	4.72%	336,075	740,973	4.12%	0.050	20	397	20	370	-	26
Industrial												
B1	0.66	0.14%	15,860	103,182	0.87%	-	-	10	-	10	-	1
B-1 (09) TOD peak	0.20	0.04%	19,739	-		-	-	4	-	4	-	0
B-1 (09) TOD off peak	1.18	0.25%	-	216,217	0.75%	0.013	-	15	-	15	-	0
B-2 A (10)	0.96	0.20%	323	34,698	3.80%	0.004	1	14	1	13	-	1
B2 - TOU (Peak)	9.35	1.98%	9,367	-		-	-	182	-	168	-	14
B2 - TOU (Off-peak)	57.57	12.20%	-	798,070	9.88%	0.284	114	731	114	708	-	23
B3 - TOU (Peak)	8.65	1.83%	4	9,818	0.00%	-	-	169	-	156	-	13
B3 - TOU (Off-peak)	61.38	13.00%	279	418,862	20.17%	0.202	77	773	77	749	-	25
B4 - TOU (Peak)	5.94	1.26%	11	-		-	-	116	-	107	-	9
B4 - TOU (Off-peak)	35.28	7.47%	-	223,456	21.63%	0.094	34	441	34	427	-	14
E-2 (58) TEMP.	0.01	0.00%	-	-		-	-	0	-	0	-	-
Total Industrial	181.18	38.38%	45,583	1,802,303	13.77%	0.597	226	2,456	226	2,356	-	100
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	6.47%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.17	0.04%	42	3,992	5.88%	0.001	0	2	0	2	-	-
C-1C(26) T PEAK	0.15	0.03%	100	-		-	-	3	-	3	-	0
C-1C(26) T OFF-PEAK	0.69	0.15%	-	10,615	8.93%	0.003	1	9	1	9	-	0
C2 Supply at 11 kV	1.25	0.26%	7	5,328	32.03%	0.003	1	18	1	18	-	0
Time of Use (TOU) - Peak	0.84	0.18%	32	-		-	-	16	-	15	-	1
Time of Use (TOU) - Off-Peak	4.36	0.92%	-	37,585	15.90%	0.015	6	56	6	54	-	2
C3 Supply above 11 kV	0.23	0.05%	4	89,800	0.35%	0.006	2	3	2	3	-	0
Time of Use (TOU) - Peak	1.98	0.42%	2	-		-	-	39	-	36	-	3
Time of Use (TOU) - Off-Peak	9.74	2.06%	-	38,900	34.28%	0.023	8	124	8	119	-	5
Total Single Point Supply	19.41	4.11%	216	186,414	14.26%	0.050	19	270	19	258	-	12
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.61	0.13%	1,581	24,902	3.36%	-	-	9	-	8	-	2
D2 Agricultural Tube-wells	0.06	0.01%	715	6,495	1.34%	0.000	0	1	-	1	0	0
Time of Use (TOU) - Peak D-1B	0.04	0.01%	-	-		-	-	1	-	1	-	0
Time of Use (TOU) - Off-Peak D1B	0.51	0.11%	1,571	32,354	2.14%	0.004	1	6	1	5	-	1
D-1B(50,51)T Peak	0.62	0.13%	-	-		-	-	12	-	6	-	6
D-1B(50,51)T Off- Peak	1.70	0.36%	35,584	387,560	0.00%	0.017	3	22	-	18	3	4
Total Agricultural	3.54	0.75%	39,451	451,311	1.07%	0.021	4	51	1	38	3	13
Public Lighting G	0.36	0.1%	1,478	10,779	4.53%	-	-	6	-	5	-	0
Residential Colonies H	0.26	0.1%	114	6,561	5.50%	-	-	4	-	4	-	0
Special Contracts - Tariff K (AJK)	-		-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-		-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-		-	-		-	-	-	-	-	-	-
Grand Total	472.04	100.00%	3,329,189	10,212,141	6.33%	0.718	268	6,627	265	5,239	3	1,387

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement October 2014 (old rate)

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	10.91	2.31%	716,872			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	75.00	15.89%	590,461				-	12.57	-	5.79	-	6.78
NEPRA	99.89											
101-200 Units	74.76	15.84%	910,148					15.50		8.11	-	7.39
NEPRA	49.87											
201-300 Units	53.11	11.25%	429,891					15.50	-	12.09	-	3.41
NEPRA	53.11											
301-700 Units	23.64	5.01%	230,881				-	17.50	-	16.00	-	1.50
NEPRA	23.64											
Above 700 Units	4.97	1.05%	21,305				-	19.50	-	18.00	-	1.50
NEPRA	4.97											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	0.42	0.09%					-	19.50	-	18.00	-	1.50
Time of Use (TOU) - Off-Peak	2.18	0.46%	6,504	79,883	3.74%	0.000	-	12.90	-	12.50	-	0.40
E-1(i) (55) TEMP.	0.02	0.00%	210	1,326	2.26%		-	16.50	-	15.50	-	1.00
Total Residential	245.02	51.91%	2,906,272	7,013,800	4.79%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	14.94	3.16%	326,827	507,115	4.03%	-	-	19.50		18.00	-	1.50
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	0.20	0.04%	54	5,494	4.93%	0.001	400	16.00	400	16.00	-	-
Time of Use (TOU) - Peak (A-2)	1.23	0.26%				-	400	19.50	400	18.00	-	1.50
Time of Use (TOU) - Off-Peak	5.49	1.16%	8,139	214,807	0.35%	0.048	400	12.90	400	12.50	-	0.40
E-1(ii) (56) TEMP.	0.43	0.09%	1,055	13,557	4.40%		-	17.00		17.00	-	-
Total Commercial	22.29	4.72%	336,075	740,973	4.12%	0.050						
Industrial												
B1 (07)	0.66	0.14%	15,860	103,182	0.87%	-	-	15.50	-	14.50	-	1.00
B-1 (09) TOD peak	0.20	0.04%				-	-	19.50	-	18.00	-	1.50
B-1 (09) TOD off peak	1.18	0.25%	19,739	216,217	0.75%	0.013	-	12.90	-	12.50	-	0.40
B-2 A (10)	0.96	0.20%	323	34,698	3.80%	0.004	400	15.00	400	14.00	-	-
B2 - TOU (Peak)	9.35	1.98%				-	400	19.50	400	18.00	-	1.50
B2 - TOU (Off-peak)	57.57	12.20%	9,367	798,070	9.88%	0.284	400	12.70	400	12.30	-	0.40
B3 - TOU (Peak)	8.65	1.83%	4	9,818		-	380	19.50	380	18.00	-	1.50
B3 - TOU (Off-peak)	61.38	13.00%	279	416,862	20.17%	0.202	380	12.60	380	12.20	-	0.40
B4 - TOU (Peak)	5.94	1.26%				-	360	19.50	360	18.00	-	1.50
B4 - TOU (Off-peak)	35.28	7.47%	11	223,456	21.63%	0.094	360	12.50	360	12.10	-	-
E-2 (58) TEMP.	0.01	0.00%				-	-	12.00	-	12.00	-	-
Total Industrial	181.18	38.38%	45,583	1,802,303	13.77%	0.597						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.01	0.00%	29	194	6.47%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.17	0.04%	42	3,992	5.88%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.15	0.03%				-	400	19.50	400	18.00	-	1.50
C-1C(26) T OFF-PEAK	0.69	0.15%	100	10,615	8.93%	0.003	400	12.90	400	12.50	-	0.40
C2 Supply at 11 kV	1.25	0.26%	7	5,328	32.03%	0.003	380	14.40	380	14.30	-	0.10
Time of Use (TOU) - Peak	0.84	0.18%				-	380	19.50	380	18.00	-	1.50
Time of Use (TOU) - Off-Peak	4.36	0.92%	32	37,585	15.90%	0.015	380	12.80	380	12.30	-	0.50
C3 Supply above 11 kV	0.23	0.05%	4	89,800	0.35%	0.006	360	14.30	360	14.20	-	0.10
Time of Use (TOU) - Peak	1.98	0.42%				-	360	19.50	360	18.00	-	1.50
Time of Use (TOU) - Off-Peak	9.74	2.06%	2	38,900	34.28%	0.023	360	12.70	360	12.20	-	0.50
Total Single Point Supply	19.41	4.11%	216	186,414	14.26%	0.050						
Agricultural Tube-wells - Tariff D												
D1 Scarp	0.61	0.13%	1,581	24,902	3.36%	-	-	15.50	-	13.01	-	2.49
D2 Agricultural Tube-wells	0.06	0.01%	715	6,495	1.34%	0.000	200	15.00	-	10.35	200	4.65
Time of Use (TOU) - Peak D-1B	0.04	0.01%				-	200	19.50	200	17.00	-	2.50
Time of Use (TOU) - Off-Peak D1B	0.51	0.11%	1,571	32,354	2.14%	0.004	200	12.70	200	10.00	-	2.70
D-1B(50,51)T Peak	0.62	0.13%				-	200	19.50	-	10.35	200	9.15
D-1B(50,51)T Off-Peak	1.70	0.36%	35,584	387,560		0.017	200	12.70	-	10.35	200	2.35
Total Agricultural	3.54	0.75%	39,451	451,311	1.07%	0.021						
Public Lighting G	0.36	0.08%	1,478	10,779	4.53%	-	-	16.00	-	15.00	-	1.00
Residential Colonies H	0.26	0.06%	114	6,561	5.50%	-	-	16.00	-	15.00	-	1.00
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	472.04	100.00%	3,329,189	10,212,141	6.33%	0.718	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)	Sales GWh	Sales GWh	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	58.08	1.95%	658,954	-		0.000	-	232	-	116	-	116
For peak load requirement up to 5 kW	-		-	-		-	-	-	-	-	-	-
01-100 Units												
GOP	374.69	12.59%	545,008	-		-	-	6,463	-	2,169	-	4,293
NEPRA	514.14		-	-		-	-	-	-	-	-	-
101-200 Units												
GOP	405.98	13.64%	895,759	-		-	-	4,131	-	3,293	-	839
NEPRA	266.54		-	-		-	-	-	-	-	-	-
201-300 Units												
GOP	359.81	12.09%	473,986	-		-	-	5,577	-	4,350	-	1,227
NEPRA	359.81		-	-		-	-	-	-	-	-	-
301-700 Units												
GOP	224.67	7.55%	287,498	-		-	-	3,932	-	3,595	-	337
NEPRA	224.67		-	-		-	-	-	-	-	-	-
Above 700 Units												
GOP	60.49	2.03%	33,386	-		-	-	1,180	-	1,089	-	91
NEPRA	60.49		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-		-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Peak	3.32	0.11%	6,269	-		-	-	65	-	60	-	5
Time of Use (TOU) - Off-Peak	15.03	0.51%		77,694	26.50%	0.000	-	194	-	188	-	6
E-1(i) (55) TEMP.	0.17	0.01%	209	1,323	17.91%	-	-	3	-	3	-	0
Total Residential	1,502.25	50.48%	2,901,069	6,999,673	29.40%	0.000	-	21,776	-	14,862	-	6,914
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	87.87	2.95%	326,399	506,219	23.78%	-	-	1,713	-	1,582	-	132
Commercial (<100)	-		-	-		-	-	-	-	-	-	-
Commercial (<20 KW)	-		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-		-	-		-	-	-	-	-	-	-
Regular	1.22	0.04%	54	5,494	30.32%	0.006	3	19	3	19	-	-
Time of Use (TOU) - Peak (A-2)	11.16	0.37%	8,062	-		-	-	218	-	201	-	17
Time of Use (TOU) - Off-Peak (Temp)	49.15	1.65%		213,504	31.54%	0.378	151	634	151	614	-	20
E-1(i) (56) TEMP.	2.69	0.09%	1,038	13,424	27.50%	-	-	46	-	46	-	-
Total Commercial	152.09	5.11%	335,553	738,641	28.21%	0.384	154	2,630	154	2,462	-	168
Industrial												
B1	32.87	1.10%	15,912	103,827	43.37%	0.000	-	510	-	477	-	33
B-1 (09) TOD peak	10.18	0.34%	19,632	-		-	-	199	-	183	-	15
B-1 (09) TOD off peak	64.12	2.15%		215,261	40.81%	0.595	-	827	-	802	-	26
B-2 A (10)	5.15	0.17%	326	34,979	20.15%	0.018	7	77	7	72	-	5
B2 - TOU (Peak)	55.58	1.87%	9,323	-		-	-	1,084	-	1,001	-	83
B2 - TOU (Off-peak)	313.86	10.55%		793,666	54.17%	1.501	600	3,986	600	3,860	-	126
B3 - TOU (Peak)	22.48	0.76%	4	9,818	0.00%	-	-	438	-	405	-	34
B3 - TOU (Off-peak)	266.54	8.96%	279	416,862	87.59%	0.883	335	3,358	335	3,252	-	107
B4 - TOU (Peak)	19.30	0.65%	11	-		-	-	376	-	347	-	29
B4 - TOU (Off-peak)	145.29	4.88%		223,456	89.07%	0.395	142	1,816	142	1,758	-	58
E-2 (58) TEMP.	0.08	0.00%	-	-		-	-	1	-	1	-	-
Total Industrial	935.45	31.44%	45,487	1,797,869	71.28%	3.392	1,085	12,672	1,085	12,157	-	515
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.05	0.00%	29	194	35.72%	0.000	-	1	-	1	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.94	0.03%	42	3,992	32.29%	0.004	2	14	2	14	-	-
C-1C(26) T PEAK	0.79	0.03%	100	-		-	-	15	-	14	-	1
C-1C(26) T OFF-PEAK	3.87	0.13%		10,615	49.97%	0.015	6	50	6	48	-	2
C2 Supply at 11 kV	6.44	0.22%	7	5,328	165.57%	0.013	5	93	5	92	-	1
Time of Use (TOU) - Peak	4.48	0.15%	32	-		-	-	87	-	81	-	7
Time of Use (TOU) - Off-Peak	24.73	0.83%		37,585	90.13%	0.083	32	317	32	304	-	12
C3 Supply above 11 kV	1.05	0.04%	4	89,800	1.60%	0.006	2	15	2	15	-	0
Time of Use (TOU) - Peak	9.11	0.31%	2	-		-	-	178	-	164	-	14
Time of Use (TOU) - Off-Peak	45.41	1.53%		38,900	159.93%	0.105	38	577	38	554	-	23
Total Single Point Supply	96.88	3.26%	216	186,414	71.19%	0.226	84	1,346	84	1,287	-	59
Agricultural Tube-wells - Tariff D												
D1 Scarp	3.46	0.12%	1,583	24,920	19.01%	-	-	54	-	45	-	9
D2 Agricultural Tube-wells	2.81	0.09%	708	6,373	60.29%	0.010	2	42	-	29	2	13
Time of Use (TOU) - Peak D-18	1.18	0.04%		-		-	-	23	-	20	-	3
Time of Use (TOU) - Off-Peak D18	8.71	0.29%	1,538	31,290	38.13%	0.064	13	111	13	87	-	24
D-1B(50,51)T Peak	50.43	1.69%	-	-	0.00%	0.076	15	983	-	522	15	461
D-1B(50,51)T Off-Peak	219.34	7.37%	35,503	387,413	0.00%	1.349	270	2,786	-	2,270	270	515
Total Agricultural	285.93	9.61%	39,332	449,996	87.04%	1.499	300	3,998	13	2,973	287	1,025
Public Lighting G	1.70	0.06%	1,476	10,766	21.64%	-	-	27	-	26	-	2
Residential Colonies H	1.49	0.05%	113	6,495	31.41%	-	-	24	-	22	-	1
Special Contracts - Tariff K (AJK)	-		-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-		-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-		-	-		-	-	-	-	-	-	-
Grand Total	2,975.78	100.00%	3,323,246	10,189,854	40.00%	5.501	1,623	42,474	1,336	33,790	287	8,685

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

1st Quarter

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix Sales Mix	No. of Consumers Sales GWh	Connected Load Sales GWh	Load Factor (%)	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)			(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
Residential												
Up to 50 Units	58.08	1.95%	658,954			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units												
GOP	374.69	12.59%	545,008				-	12.57	-	5.79	-	6.78
NEPRA	514.14											
101-200 Units												
GOP	405.98	13.64%	895,759					15.50		8.11	-	7.39
NEPRA	266.54											
201-300 Units												
GOP	359.81	12.09%	473,986				-	15.50	-	12.09	-	3.41
NEPRA	359.81											
301-700 Units												
GOP	224.67	7.55%	287,498				-	17.50	-	16.00	-	1.50
NEPRA	224.67											
Above 700 Units												
GOP	60.49	2.03%	33,386				-	19.50	-	18.00	-	1.50
NEPRA	60.49											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	3.32	0.11%	6,269				-	19.50	-	18.00	-	1.50
Time of Use (TOU) - Off-Peak	15.03	0.51%		77,694	26.50%	0.000	-	12.90	-	12.50	-	0.40
E-1(i) (55) TEMP.	0.17	0.01%	209	1,323	17.91%		-	16.50	-	15.50	-	1.00
Total Residential	1,502.25	50.48%	2,901,069	6,999,673	29.40%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	87.87	2.95%	326,399	506,219	23.78%	-	-	19.50		18.00	-	1.50
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	1.22	0.04%	54	5,494	30.32%	0.006	400	16.00	400	16.00	-	-
Time of Use (TOU) - Peak (A-2)	11.16	0.37%	8,062			-	400	19.50	400	18.00	-	1.50
Time of Use (TOU) - Off-Peak	49.15	1.65%	-	213,504	3.15%	0.378	400	12.90	400	12.50	-	0.40
E-1(ii) (56) TEMP.	2.69	0.09%	1,038	13,424	27.50%		-	17.00		17.00	-	-
Total Commercial	152.09	5.11%	335,553	738,641	28.21%	0.384	-	-	-	-	-	-
Industrial												
B1 (07)	32.87	1.10%	15,912	103,827	43.37%	0.000	-	15.50	-	14.50	-	1.00
B-1 (09) TOD peak	10.18	0.34%	19,632	-		-	-	19.50	-	18.00	-	1.50
B-1 (09) TOD off peak	64.12	2.15%	-	215,261	40.81%	0.595	-	12.90	-	12.50	-	0.40
B-2 A (10)	5.15	0.17%	326	34,979	20.15%	0.018	400	15.00	400	14.00	-	-
B2 - TOU (Peak)	55.58	1.87%	9,323			-	400	19.50	400	18.00	-	1.50
B2 - TOU (Off-peak)	313.86	10.55%	-	793,666	54.17%	1.501	400	12.70	400	12.30	-	0.40
B3 - TOU (Peak)	22.48	0.76%	4	9,818		-	380	19.50	380	18.00	-	1.50
B3 - TOU (Off-peak)	266.54	8.96%	279	416,862	87.59%	0.883	380	12.60	380	12.20	-	0.40
B4 - TOU (Peak)	19.30	0.65%	11			-	360	19.50	360	18.00	-	1.50
B4 - TOU (Off-peak)	145.29	4.88%	-	223,456	89.07%	0.395	360	12.50	360	12.10	-	-
E-2 (58) TEMP.	0.08	0.00%	-	-		-	-	12.00	-	12.00	-	-
Total Industrial	935.45	31.44%	45,487	1,797,869	71.28%	3.392	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.05	0.00%	29	194	35.72%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.94	0.03%	42	3,992	32.29%	0.004	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.79	0.03%	100	-		-	400	19.50	400	18.00	-	1.50
C-1C(26) T OFF-PEAK	3.87	0.13%	-	10,615	49.97%	0.015	400	12.90	400	12.50	-	0.40
C2 Supply at 11 kV	6.44	0.22%	7	5,328	165.57%	0.013	380	14.40	380	14.30	-	0.10
Time of Use (TOU) - Peak	4.48	0.15%	32			-	380	19.50	380	18.00	-	1.50
Time of Use (TOU) - Off-Peak	24.73	0.83%	-	37,585	90.13%	0.083	380	12.80	380	12.30	-	0.50
C3 Supply above 11 kV	1.05	0.04%	4	89,800	1.60%	0.006	360	14.30	360	14.20	-	0.10
Time of Use (TOU) - Peak	9.11	0.31%	2			-	360	19.50	360	18.00	-	1.50
Time of Use (TOU) - Off-Peak	45.41	1.53%	-	38,900	159.93%	0.105	360	12.70	360	12.20	-	0.50
Total Single Point Supply	96.88	3.26%	216	186,414	71.19%	0.226	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	3.46	0.12%	1,583	24,920	19.01%	-	-	15.50	-	13.01	-	2.49
D2 Agricultural Tube-wells	2.81	0.09%	708	6,373	60.29%	0.010	200	15.00	-	10.35	200	4.65
Time of Use (TOU) - Peak D-1B	1.18	0.04%	-			-	200	19.50	200	17.00	-	2.50
Time of Use (TOU) - Off-Peak D1B	8.71	0.29%	1,538	31,290	38.13%	0.064	200	12.70	200	10.00	-	2.70
D-1B(50,51)T Peak	50.43	1.69%	-			0.076	200	19.50	-	10.35	200	9.15
D-1B(50,51)T Off-Peak	219.34	7.37%	35,363	387,413		1.349	200	12.70	-	10.35	200	2.35
Total Agricultural	285.93	9.61%	39,332	449,996	87.04%	1.499	-	-	-	-	-	-
Public Lighting G	1.70	0.06%	1,476	10,766	21.64%	-	-	16.00	-	15.00	-	1.00
Residential Colonies H	1.49	0.05%	113	6,495	31.41%	-	-	16.00	-	15.00	-	1.00
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	2,975.78	100.00%	3,323,246	10,189,854	40.00%	5.501	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	20.45	2.08%	658,954	-		0.000	-	82	-	41	-	41
For peak load requirement up to 5 kW	-	-	-	-		-	-	-	-	-	-	-
01-100 Units	133.23	13.57%	545,008	-		-	-	2,271	-	771	-	1,500
NEPRA	180.71			-		-	-	-	-	-	-	-
101-200 Units	140.73	14.33%	895,759	-		-	-	1,445	-	1,141	-	304
NEPRA	93.25			-		-	-	-	-	-	-	-
201-300 Units	109.24	11.13%	473,986	-		-	-	1,693	-	1,321	-	373
NEPRA	109.24			-		-	-	-	-	-	-	-
301-700 Units	56.36	5.74%	287,498	-		-	-	986	-	902	-	85
NEPRA	56.36			-		-	-	-	-	-	-	-
Above 700 Units	13.41	1.37%	33,386	-		-	-	261	-	241	-	20
NEPRA	13.41			-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	0.00%		-		-	-	-	-	-	-	-
Time of Use (TOU) - Peak	1.05	0.11%	6,269	-		-	-	21	-	19	-	2
Time of Use (TOU) - Off-Peak	5.03	0.51%		77,694	8.87%	0.000	-	65	-	63	-	2
E-1(i) (55) TEMP.	0.06	0.01%	209	1,323	5.76%	-	-	1	-	1	-	0
Total Residential	479.55	48.85%	2,901,069	6,999,673	9.38%	0.000	-	6,826	-	4,500	-	2,326
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	28.53	2.91%	326,399	506,219	7.72%	-	-	556	-	514	-	43
Commercial (<100)	-	-	-	-		-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-		-	-	-	-	-	-	-
Regular	0.47	0.05%	54	5,494	11.83%	0.002	1	8	1	8	-	-
Time of Use (TOU) - Peak (A-2)	3.72	0.38%	8,062	-		-	-	72	-	67	-	6
Time of Use (TOU) - Off-Peak (Temp)	16.50	1.68%		213,504	10.58%	0.125	50	213	50	206	-	7
E-1(ii) (56) TEMP.	0.87	0.09%	1,038	13,424	8.92%	-	-	15	-	15	-	-
Total Commercial	50.09	5.10%	335,553	738,641	9.29%	0.127	51	864	51	809	-	55
Industrial												
B1	10.76	1.10%	15,912	103,827	14.20%	-	-	167	-	156	-	11
B-1 (09) TOD peak	3.53	0.36%	19,632	-		-	-	69	-	64	-	5
B-1 (09) TOD off peak	21.28	2.17%		215,261	13.54%	0.199	-	275	-	266	-	9
B-2 A (10)	1.86	0.19%	326	34,979	7.28%	0.006	2	28	2	26	-	2
B2 - TOU (Peak)	20.39	2.08%	9,323	-		-	-	398	-	367	-	31
B2 - TOU (Off-peak)	112.83	11.49%		793,666	19.47%	0.500	200	1,433	200	1,388	-	45
B3 - TOU (Peak)	10.61	1.08%	4	9,818	0.00%	-	-	207	-	191	-	16
B3 - TOU (Off-peak)	96.89	9.87%	279	416,862	31.84%	0.298	113	1,221	113	1,182	-	39
B4 - TOU (Peak)	8.17	0.83%	11	-		-	-	159	-	147	-	12
B4 - TOU (Off-peak)	52.70	5.37%		-		0.132	48	659	48	638	-	21
E-2 (56) TEMP.	0.03	0.00%		-		-	-	0	-	0	-	-
Total Industrial	339.04	34.54%	45,487	1,574,413	25.83%	1.134	363	4,615	363	4,424	-	190
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	12.43%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.34	0.03%	42	3,992	11.53%	0.001	1	5	1	5	-	-
C-1C(26) T PEAK	0.28	0.03%	100	-		-	-	6	-	5	-	0
C-1C(26) T OFF-PEAK	1.35	0.14%		10,615	17.45%	0.005	2	17	2	17	-	1
C2 Supply at 11 kV	2.17	0.22%	7	5,328	55.66%	0.004	2	31	2	31	-	0
Time of Use (TOU) - Peak	1.40	0.14%	32	-		-	-	27	-	25	-	2
Time of Use (TOU) - Off-Peak	7.78	0.79%		37,585	28.35%	0.029	11	100	11	96	-	4
C3 Supply above 11 kV	0.21	0.02%	4	89,800	0.32%	0.001	0	3	0	3	-	0
Time of Use (TOU) - Peak	2.99	0.31%	2	-		-	-	58	-	54	-	4
Time of Use (TOU) - Off-Peak	14.82	1.51%		38,900	52.19%	0.034	12	188	12	181	-	7
Total Single Point Supply	31.36	3.19%	216	186,414	23.04%	0.074	27	436	27	417	-	19
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.13	0.11%	1,583	24,920	6.19%	-	-	17	-	15	-	3
D2 Agricultural Tube-wells	0.76	0.08%	708	6,373	16.23%	0.003	1	11	-	8	1	4
Time of Use (TOU) - Peak D-1B	0.37	0.04%		-		-	-	7	-	6	-	1
Time of Use (TOU) - Off-Peak D1B	2.87	0.29%	1,538	31,290	12.56%	0.021	4	36	4	29	-	8
D-1B(50.51)T Peak	14.44	1.47%		-		0.00%	0.021	4	281	-	149	4
D-1B(50.51)T Off-Peak	61.01	6.21%	35,503	387,413	0.00%	0.430	86	775	-	631	86	143
Total Agricultural	80.56	8.21%	39,332	449,996	24.52%	0.476	95	1,129	4	838	91	290
Public Lighting G	0.58	0.1%	1,476	10,766	7.36%	-	-	9	-	9	-	1
Residential Colonies H	0.53	0.1%	113	6,495	11.26%	-	-	9	-	8	-	1
Special Contracts - Tariff K (AJK)	-	-	-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Peak	-	-	-	-		-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-		-	-	-	-	-	-	-
Grand Total	981.72	100.00%	3,323,246	9,966,398	13.20%	1.811	536	13,887	446	11,005	91	2,862

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

September-14

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	20.45	2.08%	658,954			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units												
GOP	133.23	13.57%	545,008					12.57	-	5.79	-	6.78
NEPRA	180.71											
101-200 Units												
GOP	140.73	14.33%	895,759					15.50		8.11	-	7.39
NEPRA	93.25											
201-300 Units												
GOP	109.24	11.13%	473,986					15.50	-	12.09	-	3.41
NEPRA	109.24											
301-700 Units												
GOP	56.36	5.74%	287,498					17.50	-	16.00	-	1.50
NEPRA	56.36											
Above 700 Units												
GOP	13.41	1.37%	33,386					19.50	-	18.00	-	1.50
NEPRA	13.41											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.05	0.11%						19.50	-	18.00	-	1.50
Time of Use (TOU) - Off-Peak	5.03	0.51%	6,269	77,694	8.87%	0.000	-	12.90	-	12.50	-	0.40
E-1(i) (55) TEMP.	0.06	0.01%	209	1,323	5.76%		-	16.50	-	15.50	-	1.00
Total Residential	479.55	48.85%	2,901,069	6,999,673	9.38%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial												
For peak load requirement up to 5 kW	28.53	2.91%	326,399	506,219	7.72%	-	-	19.50		18.00	-	1.50
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	0.47	0.05%	54	5,494	11.83%	0.002	400	16.00	400	16.00	-	-
Time of Use (TOU) - Peak (A-2)	3.72	0.38%				-	400	19.50	400	18.00	-	1.50
Time of Use (TOU) - Off-Peak	16.50	1.68%	8,062	213,504	1.06%	0.125	400	12.90	400	12.50	-	0.40
E-1(ii) (56) TEMP.	0.87	0.09%	1,038	13,424	8.92%		-	17.00		17.00	-	-
Total Commercial	50.09	5.10%	335,553	738,641	9.29%	0.127	-	-	-	-	-	-
Industrial												
B1 (07)	10.76	1.10%	15,912	103,827	14.20%	-	-	15.50	-	14.50	-	1.00
B-1 (09) TOD peak	3.53	0.36%				-	-	19.50	-	18.00	-	1.50
B-1 (09) TOD off peak	21.28	2.17%	19,632	215,261	13.54%	0.199	-	12.90	-	12.50	-	0.40
B-2 A (10)	1.86	0.19%	326	34,979	7.28%	0.006	400	15.00	400	14.00	-	-
B2 - TOU (Peak)	20.39	2.08%				-	400	19.50	400	18.00	-	1.50
B2 - TOU (Off-peak)	112.83	11.49%	9,323	793,666	19.47%	0.500	400	12.70	400	12.30	-	0.40
B3 - TOU (Peak)	10.61	1.08%	4	9,818		-	380	19.50	380	18.00	-	1.50
B3 - TOU (Off-peak)	96.89	9.87%	279	416,862	31.84%	0.298	380	12.60	380	12.20	-	0.40
B4 - TOU (Peak)	8.17	0.83%				-	360	19.50	360	18.00	-	1.50
B4 - TOU (Off-peak)	52.70	5.37%	11	223,456	32.31%	0.132	360	12.50	360	12.10	-	-
E-2 (58) TEMP.	0.03	0.00%				-	-	12.00	-	12.00	-	-
Total Industrial	339.04	34.54%	45,487	1,797,869	25.83%	1.134	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	12.43%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.34	0.03%	42	3,992	11.53%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.28	0.03%				-	400	19.50	400	18.00	-	1.50
C-1C(26) T OFF-PEAK	1.35	0.14%	100	10,615	17.45%	0.005	400	12.90	400	12.50	-	0.40
C2 Supply at 11 kV	2.17	0.22%	7	5,328	55.66%	0.004	380	14.40	380	14.30	-	0.10
Time of Use (TOU) - Peak	1.40	0.14%				-	380	19.50	380	18.00	-	1.50
Time of Use (TOU) - Off-Peak	7.78	0.79%	32	37,585	28.35%	0.029	380	12.80	380	12.30	-	0.50
C3 Supply above 11 kV	0.21	0.02%	4	89,800	0.32%	0.001	360	14.30	360	14.20	-	0.10
Time of Use (TOU) - Peak	2.99	0.31%				-	360	19.50	360	18.00	-	1.50
Time of Use (TOU) - Off-Peak	14.62	1.51%	2	38,900	52.19%	0.034	360	12.70	360	12.20	-	0.50
Total Single Point Supply	31.36	3.19%	216	186,414	23.04%	0.074	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.13	0.11%	1,583	24,920	6.19%	-	-	15.50	-	13.01	-	2.49
D2 Agricultural Tube-wells	0.76	0.08%	708	6,373	16.23%	0.003	200	15.00	-	10.35	200	4.65
Time of Use (TOU) - Peak D-1B	0.37	0.04%				-	200	19.50	200	17.00	-	2.50
Time of Use (TOU) - Off-Peak D1B	2.87	0.29%	1,538	31,290	12.56%	0.021	200	12.70	200	10.00	-	2.70
D-1B(50.51)T Peak	14.44	1.47%				0.021	200	19.50	-	10.35	200	9.15
D-1B(50.51)T Off-Peak	61.01	6.21%	35,503	387,413	0.430	0.430	200	12.70	-	10.35	200	2.35
Total Agricultural	80.56	8.21%	39,332	449,996	24.52%	0.476	-	-	-	-	-	-
Public Lighting G	0.58	0.06%	1,476	10,766	7.36%	-	-	16.00	-	15.00	-	1.00
Residential Colonies H	0.53	0.05%	113	6,495	11.26%	-	-	16.00	-	15.00	-	1.00
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	981.72	100.00%	3,323,246	10,189,854	13.20%	1.811	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	17.48	1.62%	615,531	-		0.000	-	70	-	35	-	35
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units												
GOP	113.51	10.53%	448,476	-		-	-	2,093	-	657	-	1,435
NEPRA	166.48		-	-		-	-	-	-	-	-	-
101-200 Units												
GOP	146.50	13.60%	774,359	-		-	-	1,450	-	1,188	-	262
NEPRA	93.53		-	-		-	-	-	-	-	-	-
201-300 Units												
GOP	158.96	14.75%	529,032	-		-	-	2,464	-	1,922	-	542
NEPRA	158.96		-	-		-	-	-	-	-	-	-
301-700 Units												
GOP	109.14	10.13%	441,636	-		-	-	1,910	-	1,746	-	164
NEPRA	109.14		-	-		-	-	-	-	-	-	-
Above 700 Units												
GOP	31.24	2.90%	79,569	-		-	-	609	-	562	-	47
NEPRA	31.24		-	-		-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	0.00%	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	1.21	0.11%	6,099	-		-	-	24	-	22	-	2
Time of Use (TOU) - Off-Peak	5.38	0.50%	-	76,116	9.69%	0.000	-	69	-	67	-	2
E-1(i) (55) TEMP.	0.05	0.00%	207	1,256	5.83%	-	-	1	-	1	-	0
Total Residential	583.48	54.15%	2,894,909	6,983,850	11.44%	0.000	-	8,689	-	6,201	-	2,489
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	32.68	3.03%	325,816	505,087	8.86%	-	-	637	-	588	-	49
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.40	0.04%	54	5,494	10.08%	0.002	1	6	1	6	-	-
Time of Use (TOU) - Peak (A2)	3.87	0.36%	7,968	-		-	-	75	-	70	-	6
Time of Use (TOU) - Off-Peak (Temp)	17.32	1.61%	-	212,095	11.19%	0.124	50	223	50	217	-	7
E-1(ii) (56) TEMP.	1.09	0.10%	1,030	13,319	11.25%	-	-	19	-	19	-	-
Total Commercial	55.37	5.14%	334,868	735,995	10.31%	0.126	50	961	50	899	-	62
Industrial												
B1	11.69	1.08%	16,145	105,812	15.14%	0.000	-	181	-	170	-	12
B-1 (09) TOD peak	3.45	0.32%	19,343	-		-	-	67	-	62	-	5
B-1 (09) TOD off peak	21.44	1.99%	-	212,730	13.80%	0.193	-	277	-	268	-	9
B-2 A (10)	1.79	0.17%	330	35,542	6.92%	0.006	2	27	2	25	-	2
B2 - TOU (Peak)	18.10	1.68%	9,265	-		-	-	353	-	326	-	27
B2 - TOU (Off-peak)	106.24	9.86%	-	788,172	18.46%	0.503	201	1,349	201	1,307	-	42
B3 - TOU (Peak)	5.10	0.47%	4	9,818	0.00%	-	-	99	-	92	-	8
B3 - TOU (Off-peak)	83.17	7.72%	278	414,162	27.51%	0.295	112	1,048	112	1,015	-	33
B4 - TOU (Peak)	4.60	0.43%	11	-		-	-	90	-	83	-	7
B4 - TOU (Off-peak)	43.88	4.07%	-	223,456	26.90%	0.126	45	548	45	531	-	18
E-2 (58) TEMP.	0.03	0.00%	-	-		-	-	0	-	0	-	-
Total Industrial	299.49	27.79%	45,376	1,789,692	22.92%	1.122	361	4,040	361	3,878	-	162
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	12.57%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.33	0.03%	42	3,992	11.30%	0.002	1	5	1	5	-	-
C-1C(26) T PEAK	0.26	0.02%	100	-		-	-	5	-	5	-	0
C-1C(26) T OFF-PEAK	1.38	0.13%	-	10,615	17.77%	0.005	2	18	2	17	-	1
C2 Supply at 11 kV	2.13	0.20%	7	5,328	54.82%	0.004	2	31	2	30	-	0
Time of Use (TOU) - Peak	1.58	0.15%	32	-		-	-	31	-	28	-	2
Time of Use (TOU) - Off-Peak	9.07	0.84%	-	37,585	33.06%	0.027	10	116	10	112	-	5
C3 Supply above 11 kV	0.25	0.02%	3	53,800	0.63%	0.001	0	4	0	4	-	0
Time of Use (TOU) - Peak	3.08	0.29%	2	-		-	-	60	-	55	-	5
Time of Use (TOU) - Off-Peak	15.39	1.43%	-	38,900	54.20%	0.035	13	195	13	188	-	8
Total Single Point Supply	33.48	3.11%	215	150,414	30.49%	0.074	28	464	28	444	-	20
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.21	0.11%	1,598	25,189	6.59%	-	-	19	-	16	-	3
D2 Agricultural Tube-wells	1.00	0.09%	710	6,400	21.48%	0.003	1	15	-	10	1	5
Time of Use (TOU) - Peak D-1B	0.37	0.03%	-	-		-	-	7	-	6	-	1
Time of Use (TOU) - Off-Peak D1B	2.76	0.26%	1,516	31,568	11.98%	0.020	4	35	4	28	-	7
D-1B(50,51)T Peak	18.38	1.71%	-	-	0.00%	0.027	5	358	-	190	5	168
D-1B(50,51)T Off-Peak	80.95	7.51%	35,355	384,989	0.00%	0.432	86	1,028	-	838	86	190
Total Agricultural	104.68	9.71%	39,179	448,146	32.00%	0.483	97	1,463	4	1,088	92	374
Public Lighting G	0.58	0.1%	1,472	10,746	7.42%	-	-	9	-	9	-	1
Residential Colonies H	0.52	0.0%	113	6,495	10.98%	-	-	8	-	8	-	1
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Grand Total	1,077.59	100.00%	3,316,132	10,125,338	14.58%	1.805	535	15,635	443	12,527	92	3,109

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

August 2014

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)	(Rs/kW/M)	(Rs/kWh)
Residential												
Up to 50 Units	17.48	1.62%	615,531			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units	113.51	10.53%	448,476				-	12.57	-	5.79	-	6.78
NEPRA	166.48											
101-200 Units	146.50	13.60%	774,359					15.50		8.11	-	7.39
NEPRA	93.53											
201-300 Units	158.96	14.75%	529,032				-	15.50	-	12.09	-	3.41
NEPRA	158.96											
301-700 Units	109.14	10.13%	441,636				-	17.50	-	16.00	-	1.50
NEPRA	109.14											
Above 700 Units	31.24	2.90%	79,569				-	19.50	-	18.00	-	1.50
NEPRA	31.24											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.21	0.11%					-	19.50	-	18.00	-	1.50
Time of Use (TOU) - Off-Peak	5.38	0.50%	6,099	76,116	9.69%	0.000	-	12.90	-	12.50	-	0.40
E-1(i) (55) TEMP.	0.05	0.00%	207	1,256	5.83%		-	16.50	-	15.50	-	1.00
Total Residential	583.48	54.15%	2,894,909	6,983,850	11.44%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	32.68	3.03%	325,816	505,087	8.86%	-	-	19.50		18.00	-	1.50
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	0.40	0.04%	54	5,494	10.08%	0.002	400	16.00	400	16.00	-	-
Time of Use (TOU) - Peak (A-2)	3.87	0.36%				-	400	19.50	400	18.00	-	1.50
Time of Use (TOU) - Off-Peak	17.32	1.61%	7,968	212,095	1.12%	0.124	400	12.90	400	12.50	-	0.40
E-1(i) (55) TEMP.	1.09	0.10%	1,030	13,319	11.25%		-	17.00		17.00	-	-
Total Commercial	55.37	5.14%	334,868	735,995	10.31%	0.126	-	-	-	-	-	-
Industrial												
B1 (07)	11.69	1.08%	16,145	105,812	15.14%	0.000	-	15.50	-	14.50	-	1.00
B-1 (09) TOD peak	3.45	0.32%				-	-	19.50	-	18.00	-	1.50
B-1 (09) TOD off peak	21.44	1.99%	19,343	212,730	13.80%	0.193	-	12.90	-	12.50	-	0.40
B-2 A (10)	1.79	0.17%	330	35,542	6.92%	0.006	400	15.00	400	14.00	-	-
B2 - TOU (Peak)	18.10	1.68%				-	400	19.50	400	18.00	-	1.50
B2 - TOU (Off-peak)	106.24	9.86%	9,265	788,172	18.46%	0.503	400	12.70	400	12.30	-	0.40
B3 - TOU (Peak)	5.10	0.47%	4	9,818		-	380	19.50	380	18.00	-	1.50
B3 - TOU (Off-peak)	83.17	7.72%	278	414,162	27.51%	0.295	380	12.60	380	12.20	-	0.40
B4 - TOU (Peak)	4.60	0.43%				-	360	19.50	360	18.00	-	1.50
B4 - TOU (Off-peak)	43.88	4.07%	11	223,456	26.90%	0.126	360	12.50	360	12.10	-	-
E-2 (58) TEMP.	0.03	0.00%				-	-	12.00	-	12.00	-	-
Total Industrial	299.49	27.79%	45,376	1,789,692	22.92%	1.122	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	12.57%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.33	0.03%	42	3,992	11.30%	0.002	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.26	0.02%				-	400	19.50	400	18.00	-	1.50
C-1C(26) T OFF-PEAK	1.38	0.13%	100	10,615	17.77%	0.005	400	12.90	400	12.50	-	0.40
C2 Supply at 11 kV	2.13	0.20%	7	5,328	54.82%	0.004	380	14.40	380	14.30	-	0.10
Time of Use (TOU) - Peak	1.58	0.15%				-	380	19.50	380	18.00	-	1.50
Time of Use (TOU) - Off-Peak	9.07	0.84%	32	37,585	33.06%	0.027	380	12.80	380	12.30	-	0.50
C3 Supply above 11 kV	0.25	0.02%	3	53,800	0.63%	0.001	360	14.30	360	14.20	-	0.10
Time of Use (TOU) - Peak	3.08	0.29%				-	360	19.50	360	18.00	-	1.50
Time of Use (TOU) - Off-Peak	15.39	1.43%	2	38,900	54.20%	0.035	360	12.70	360	12.20	-	0.50
Total Single Point Supply	33.48	3.11%	215	150,414	30.49%	0.074	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.21	0.11%	1,598	25,189	6.59%	-	-	15.50	-	13.01	-	2.49
D2 Agricultural Tube-wells	1.00	0.09%	710	6,400	21.48%	0.003	200	15.00	-	10.35	200	4.65
Time of Use (TOU) - Peak D-1B	0.37	0.03%				-	200	19.50	200	17.00	-	2.50
Time of Use (TOU) - Off-Peak D1B	2.76	0.26%	1,516	31,568	11.98%	0.020	200	12.70	200	10.00	-	2.70
D-1B(50.51)T Peak	18.38	1.71%				0.027	200	19.50	-	10.35	200	9.15
D-1B(50.51)T Off-Peak	80.95	7.51%	35,355	384,989	0.432	0.432	200	12.70	-	10.35	200	2.35
Total Agricultural	104.68	9.71%	39,179	448,146	32.00%	0.483	-	-	-	-	-	-
Public Lighting G	0.58	0.05%	1,472	10,746	7.42%	-	-	16.00	-	15.00	-	1.00
Residential Colonies H	0.52	0.05%	113	6,495	10.98%	-	-	16.00	-	15.00	-	1.00
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	1,077.59	100.00%	3,316,132	10,125,338	14.58%	1.805	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
							(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)	(Min Rs)
Residential												
Up to 50 Units	20.14	2.20%	797,773	-		0.000	-	81	-	40	-	40
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units	127.95	13.96%	564,317	-		-	-	2,099	-	741	-	1,358
NEPRA	166.95	-	-	-	-	-	-	-	-	-	-	-
101-200 Units	118.76	12.96%	838,917	-		-	-	1,236	-	963	-	273
NEPRA	79.76	-	-	-	-	-	-	-	-	-	-	-
201-300 Units	91.61	10.00%	389,555	-		-	-	1,420	-	1,108	-	312
NEPRA	91.61	-	-	-	-	-	-	-	-	-	-	-
301-700 Units	59.17	6.46%	246,144	-		-	-	1,036	-	947	-	89
NEPRA	59.17	-	-	-	-	-	-	-	-	-	-	-
Above 700 Units	15.84	1.73%	41,033	-		-	-	309	-	285	-	24
NEPRA	15.84	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	0.00%	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	1.06	0.12%	5,922	-	-	-	-	21	-	19	-	2
Time of Use (TOU) - Off-Peak	4.62	0.50%	-	74,549	8.49%	-	-	60	-	58	-	2
E-1(i) (55) TEMP.	0.06	0.01%	202	1,242	7.05%	-	-	1	-	1	-	0
Total Residential	439.22	47.93%	2,883,863	6,955,588	8.65%	0.000	-	6,261	-	4,162	-	2,100
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	26.66	2.91%	324,885	503,190	7.26%	-	-	520	-	480	-	40
Commercial (<100)	-	-	-	-	-	-	-	-	-	-	-	-
Commercial (<20 kW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	0.34	0.04%	54	5,494	8.41%	0.002	1	5	1	5	-	-
Time of Use (TOU) - Peak (A-2)	3.58	0.39%	7,862	-	-	-	-	70	-	64	-	5
Time of Use (TOU) - Off-Peak (Temp)	15.33	1.67%	-	211,048	9.95%	0.129	52	198	52	192	-	6
E-1(ii) (56) TEMP.	0.73	0.08%	1,016	13,208	7.54%	-	-	12	-	12	-	-
Total Commercial	46.63	5.09%	333,817	732,940	8.71%	0.131	52	805	52	754	-	51
Industrial												
B1	10.42	1.14%	16,225	106,579	13.40%	-	-	162	-	151	-	10
B-1 (09) TOD peak	3.21	0.35%	19,179	-	-	-	-	63	-	58	-	5
B-1 (09) TOD off peak	21.41	2.34%	-	211,074	13.89%	0.204	-	276	-	268	-	9
B-2 A (10)	1.49	0.16%	333	35,863	5.69%	0.006	2	22	2	21	-	1
B2 - TOU (Peak)	17.09	1.87%	9,226	-	-	-	-	333	-	308	-	26
B2 - TOU (Off-peak)	94.79	10.34%	-	1,03,728	16.57%	0.498	199	1,204	199	1,166	-	38
B3 - TOU (Peak)	6.77	0.74%	4	9,818	0.00%	-	-	132	-	122	-	10
B3 - TOU (Off-peak)	86.48	9.44%	278	412,063	28.75%	0.291	110	1,090	110	1,055	-	35
B4 - TOU (Peak)	6.53	0.71%	11	-	-	-	-	127	-	117	-	10
B4 - TOU (Off-peak)	48.71	5.31%	-	223,456	29.86%	0.137	49	809	49	589	-	19
E-2 (58) TEMP.	0.03	0.00%	-	-	-	-	-	0	-	0	-	-
Total Industrial	296.92	32.40%	45,256	1,782,581	22.82%	1.136	361	4,018	361	3,855	-	163
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	10.71%	0.000	-	0	-	0	-	-
C1(b) Supply at 400 Volts - exceeding 5 kW	0.28	0.03%	42	3,992	9.47%	0.001	1	4	1	4	-	-
C-1C(26) T PEAK	0.25	0.03%	100	-	-	-	-	5	-	4	-	0
C-1C(26) T OFF-PEAK	1.14	0.12%	-	10,615	14.76%	0.005	2	15	2	14	-	0
C2 Supply at 11 kV	2.14	0.23%	7	5,328	55.09%	0.004	2	31	2	31	-	0
Time of Use (TOU) - Peak	1.50	0.16%	32	-	-	-	-	29	-	27	-	2
Time of Use (TOU) - Off-Peak	7.88	0.86%	-	37,585	28.72%	0.027	10	101	10	97	-	4
C3 Supply above 11 kV	0.59	0.06%	3	53,800	1.50%	0.004	2	8	2	8	-	0
Time of Use (TOU) - Peak	3.04	0.33%	2	-	-	-	-	59	-	55	-	5
Time of Use (TOU) - Off-Peak	15.20	1.66%	-	38,900	53.54%	0.036	13	193	13	185	-	8
Total Single Point Supply	32.04	3.50%	215	150,414	29.18%	0.078	29	446	29	426	-	19
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.12	0.12%	1,609	25,407	6.04%	-	-	17	-	15	-	3
D2 Agricultural Tube-wells	1.05	0.11%	740	6,516	22.00%	0.004	1	16	-	11	1	5
Time of Use (TOU) - Peak D-1B	0.44	0.05%	-	-	-	-	-	0	-	8	-	1
Time of Use (TOU) - Off-Peak D1B	3.08	0.34%	36,716	31,290	13.49%	0.022	4	39	4	31	-	8
O-1B(50.51)T Peak	17.62	1.92%	-	-	0.00%	0.028	6	344	-	182	6	161
O-1B(50.51)T Off-Peak	77.38	8.44%	-	383,571	0.00%	0.487	97	983	-	801	97	182
Total Agricultural	100.69	10.99%	39,065	446,784	30.87%	0.540	108	1,407	4	1,047	104	360
Public Lighting G	0.54	0.1%	1,470	10,734	6.90%	-	-	9	-	8	-	1
Residential Colonies H	0.43	0.0%	113	6,495	9.17%	-	-	7	-	7	-	0
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Off-Peak	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	916.47	100.00%	3,303,799	10,085,536	12.45%	1.885	551	12,952	447	10,258	104	2,694

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Revenue & Subsidy Statement

July 2014

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkWh)	NEPRA Determined Tariff		GOP Notified Tariff		Subsidy	
							Fixed Charge	Variable Charge	Fixed Charge	Variable Charge	Fixed Charge	Variable Charge
	(MkWh)	(%)		(kW)	(%)		(Rs/kWh/M)	(Rs/kWh)	(Rs/kWh/M)	(Rs/kWh)	(Rs/kWh/M)	(Rs/kWh)
Residential												
Up to 50 Units	20.14	2.20%	797,773			0.000	-	4.00	-	2.00	-	2.00
For peak load requirement up to 5 kW												
01-100 Units												
GOP	127.95	13.96%	564,317				-	12.57	-	5.79	-	6.78
NEPRA	166.95											
101-200 Units												
GOP	118.76	12.96%	838,917					15.50		8.11	-	7.39
NEPRA	79.76											
201-300 Units												
GOP	91.61	10.00%	389,555				-	15.50	-	12.09	-	3.41
NEPRA	91.61											
301-700 Units												
GDP	59.17	6.46%	246,144				-	17.50	-	16.00	-	1.50
NEPRA	59.17											
Above 700 Units												
GOP	15.84	1.73%	41,033				-	19.50	-	18.00	-	1.50
NEPRA	15.84											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	1.06	0.12%					-	19.50	-	18.00	-	1.50
Time of Use (TOU) - Off-Peak	4.62	0.50%	5,922	74,549	8.49%		-	12.90	-	12.50	-	0.40
E-1(i) (55) TEMP.	0.06	0.01%	202	1,242	7.05%		-	16.50	-	15.50	-	1.00
Total Residential	439.22	47.93%	2,883,863	6,955,588	8.65%	0.000	-	-	-	-	-	-
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	26.66	2.91%	324,885	503,190	7.26%		-	19.50		18.00	-	1.50
Commercial (<100)												
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW												
Regular	0.34	0.04%	54	5,494	8.41%	0.002	400	16.00	400	16.00	-	-
Time of Use (TOU) - Peak (A-2)	3.58	0.39%					400	19.50	400	18.00	-	1.50
Time of Use (TOU) - Off-Peak	15.33	1.67%	7,862	211,048	1.00%	0.129	400	12.90	400	12.50	-	0.40
E-1(ii) (56) TEMP.	0.73	0.08%	1,016	13,208	7.54%		-	17.00	-	17.00	-	-
Total Commercial	46.63	5.09%	333,817	732,940	8.71%	0.131	-	-	-	-	-	-
Industrial												
B1 (07)	10.42	1.14%	16,225	106,579	13.40%		-	15.50	-	14.50	-	1.00
B-1 (09) TOD peak	3.21	0.35%					-	19.50	-	18.00	-	1.50
B-1 (09) TOD off peak	21.41	2.34%	19,179	211,074	13.89%	0.204	-	12.90	-	12.50	-	0.40
B-2 A (10)	1.49	0.16%	333	35,863	5.69%	0.006	400	15.00	400	14.00	-	-
B2 - TOU (Peak)	17.09	1.87%					-	400	19.50	400	18.00	1.50
B2 - TOU (Off-peak)	94.79	10.34%	9,226	783,728	16.57%	0.498	400	12.70	400	12.30	-	0.40
B3 - TOU (Peak)	6.77	0.74%	4	9,818			-	380	19.50	380	18.00	1.50
B3 - TOU (Off-peak)	86.48	9.44%	276	412,063	28.75%	0.291	380	12.60	380	12.20	-	0.40
B4 - TOU (Peak)	6.53	0.71%					-	360	19.50	360	18.00	1.50
B4 - TOU (Off-peak)	48.71	5.31%	11	223,456	29.86%	0.137	360	12.50	360	12.10	-	-
E-2 (58) TEMP.	0.03	0.00%					-	12.00	-	12.00	-	-
Total Industrial	296.92	32.40%	45,256	1,782,581	22.82%	1.136	-	-	-	-	-	-
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.02	0.00%	29	194	10.71%	0.000	-	15.00	-	15.00	-	-
C1(b) Supply at 400 Volts -exceeding 5 kW	0.28	0.03%	42	3,992	9.47%	0.001	400	14.50	400	14.50	-	-
C-1C(26) T PEAK	0.25	0.03%					-	400	19.50	400	18.00	1.50
C-1C(26) T OFF-PEAK	1.14	0.12%	100	10,615	14.76%	0.005	400	12.90	400	12.50	-	0.40
C2 Supply at 11 kV	2.14	0.23%	7	5,328	55.09%	0.004	380	14.40	380	14.30	-	0.10
Time of Use (TOU) - Peak	1.50	0.16%					-	380	19.50	380	18.00	1.50
Time of Use (TOU) - Off-Peak	7.88	0.86%	32	37,585	28.72%	0.027	380	12.80	380	12.30	-	0.50
C3 Supply above 11 kV	0.59	0.06%	3	53,800	1.50%	0.004	360	14.30	360	14.20	-	0.10
Time of Use (TOU) - Peak	3.04	0.33%					-	360	19.50	360	18.00	1.50
Time of Use (TOU) - Off-Peak	15.20	1.66%	2	38,900	53.54%	0.036	360	12.70	360	12.20	-	0.50
Total Single Point Supply	32.04	3.50%	215	150,414	29.18%	0.078	-	-	-	-	-	-
Agricultural Tube-wells - Tariff D												
D1 Scarp	1.12	0.12%	1,609	25,407	6.04%		-	15.50	-	13.01	-	2.49
D2 Agricultural Tube-wells	1.05	0.11%	740	6,516	22.00%	0.004	200	15.00	-	10.35	200	4.65
Time of Use (TOU) - Peak D-1B	0.44	0.05%					-	200	19.50	200	17.00	2.50
Time of Use (TOU) - Off-Peak D1B	3.08	0.34%	36,716	31,290	13.49%	0.022	200	12.70	200	10.00	-	2.70
D-1B(50.51) T PEAK	17.62	1.92%					200	19.50		10.35	200	9.15
D-1B(50.51) T Off-Peak	77.38	8.44%		383,571		0.487	200	12.70		10.35	200	2.35
Total Agricultural	100.69	10.99%	39,065	446,784	30.87%	0.540	-	-	-	-	-	-
Public Lighting G	0.54	0.06%	1,470	10,734	6.90%		-	16.00	-	15.00	-	1.00
Residential Colonies H	0.43	0.05%	113	6,495	9.17%		-	16.00	-	15.00	-	1.00
Special Contracts - Tariff K (AJK)	-											
Time of Use (TOU) - Peak	-											
Time of Use (TOU) - Off-Peak	-											
Grand Total	916.47	100.00%	3,303,799	10,085,536	12.45%	1.885	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Existing & Proposed Tariff Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales (MkWh)	Sales Mix (%)	No. of Consumers	Connected Load (kW)	Load Factor (%)	MDI Charged (MkWh)	NEPRA Existing Tariff		Proposed New Tariff		Difference	
							Fixed Charge (Min Rs)	Variable Charge (Min Rs)	Fixed Charge (Min Rs)	Variable Charge (Min Rs)	Fixed Charge (Min Rs)	Variable Charge (Min Rs)
Residential												
Up to 50 Units	396.14	3.72%	761,310	-	-	0.000	-	1,585	-	1,585	-	-
For peak load requirement up to 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
01-100 Units GOP	1,637.63	15.37%	543,010	-	-	-	-	14,739	-	16,611	-	1,872
NEPRA	2,027.05	-	-	-	-	-	-	-	-	-	-	-
101-200 Units GOP	1,230.41	11.55%	937,352	-	-	-	-	12,550	-	14,144	-	1,594
NEPRA	840.99	-	-	-	-	-	-	-	-	-	-	-
201-300 Units GOP	842.43	7.91%	530,350	-	-	-	-	8,593	-	9,684	-	1,092
NEPRA	842.43	-	-	-	-	-	-	-	-	-	-	-
301-700 Units GOP	437.11	4.10%	326,688	-	-	-	-	6,120	-	6,897	-	777
NEPRA	437.11	-	-	-	-	-	-	-	-	-	-	-
Above 700 Units GOP	108.19	1.02%	36,351	-	-	-	-	1,731	-	1,951	-	220
NEPRA	107.12	-	-	-	-	-	-	-	-	-	-	-
Far peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Time of Use (TOU) - Peak	11.04	0.10%	-	-	-	-	-	177	-	199	-	22
Time of Use (TOU) - Off-Peak	50.50	0.47%	8,630	93,776	6.15%	0.000	-	505	-	569	-	64
E-1(i) (55) TEMP.	0.42	0.00%	229	1,315	3.67%	-	-	7	-	8	-	1
Total Residential	4,713.88	44.23%	3,143,921	7,290,313	7.38%	0.000	-	46,005	-	51,648	-	5,643
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	297.02	2.79%	349,283	523,334	6.48%	-	-	4,455	-	5,021	-	566
Commercial (<100)	-	0.00%	-	-	-	-	-	-	-	-	-	-
Commercial (<20 KW)	-	-	-	-	-	-	-	-	-	-	-	-
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-	-	-	-	-	-
Regular	3.74	0.04%	55	5,371	7.96%	0.019	8	54	8	61	-	7
Time of Use (TOU) - Peak (A-2)	38.71	0.36%	-	-	-	-	-	619	-	698	-	79
Time of Use (TOU) - Off-Peak (Temp)	174.85	1.64%	9,125	224,819	8.88%	1.187	475	1,748	475	1,971	-	222
Temp Commercial E-II (56)	9.72	0.09%	1,183	15,026	7.39%	-	-	146	-	164	-	19
Total Commercial	524.05	4.92%	359,646	768,550	7.78%	1.206	483	7,023	483	7,915	-	892
Industrial												
B1	125.27	1.18%	15,801	97,303	14.70%	0.000	-	1,628	-	1,835	-	207
B-1 (09) TOD peak	44.21	0.41%	-	-	-	-	-	707	-	797	-	90
B-1 (09) TOD off peak	265.85	2.49%	22,041	230,767	13.15%	2.453	-	2,658	-	2,996	-	338
B-2 A (10)	18.80	0.18%	323	33,209	6.46%	0.060	24	235	24	265	-	30
B2 - TOU (Peak)	229.78	2.16%	-	-	-	-	-	3,676	-	4,143	-	467
B2 - TOU (Off-peak)	1,372.33	12.88%	10,153	836,214	18.73%	5.891	2,356	13,174	2,356	14,848	-	1,673
B3 - TOU (Peak)	137.07	1.29%	4	9,818	0.00%	-	-	2,193	-	2,472	-	279
B3 - TOU (Off-peak)	1,224.33	11.49%	-	436,836	31.99%	3.478	1,322	11,631	1,322	13,109	-	1,477
B4 - TOU (Peak)	104.65	0.98%	295	-	-	-	-	1,674	-	1,887	-	213
B4 - TOU (Off-peak)	707.47	6.64%	14	256,671	31.47%	1.709	615	6,650	615	7,495	-	845
E-2 (58) TEMP.	0.22	0.00%	-	-	-	-	-	3	-	3	-	0
Total Industrial	4,229.96	39.69%	48,631	1,900,818	25.40%	13.590	4,317	44,232	4,317	49,850	-	5,619
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.19	0.00%	27	153	14.22%	0.001	-	3	-	3	-	0
C1(b) Supply at 400 Volts - exceeding 5 kW	2.58	0.02%	31	2,831	10.30%	0.012	5	34	5	38	-	4
C-1C(26) T PEAK	2.56	0.02%	123	-	-	-	-	41	-	46	-	5
C-1C(26) T OFF-PEAK	12.21	0.11%	-	11,908	11.70%	0.052	21	122	21	138	-	16
C2 Supply at 11 kV	16.92	0.16%	5	2,068	93.41%	0.033	12	217	12	244	-	28
Time of Use (TOU) - Peak	16.46	0.15%	-	-	-	-	-	263	-	297	-	33
Time of Use (TOU) - Off-Peak	80.43	0.75%	36	40,990	22.40%	0.253	96	772	96	870	-	98
C3 Supply above 11 kV	8.66	0.08%	4	89,800	1.10%	0.050	18	110	18	124	-	14
Time of Use (TOU) - Peak	33.57	0.32%	-	-	-	-	-	537	-	605	-	68
Time of Use (TOU) - Off-Peak	163.55	1.53%	2	38,900	47.99%	0.331	119	1,554	119	1,751	-	197
Total Single Point Supply	337.13	3.16%	229	186,680	20.62%	0.731	271	3,652	271	4,116	-	464
Agricultural Tube-wells - Tariff D												
D1 Scarp	14.28	0.13%	1,507	22,682	7.19%	-	-	186	-	209	-	24
D2 Agricultural Tube-wells	6.70	0.06%	737	6,368	12.01%	0.041	8	84	8	94	-	11
Time of Use (45) T - Peak D-1B	4.51	0.04%	-	-	-	-	-	72	-	81	-	9
Time of Use (45) T - Off Peak D-1B	35.38	0.33%	1,396	28,432	14.18%	0.229	46	336	46	379	-	43
Time of Use (50,51) T - Peak D-1B	144.25	1.35%	-	-	-	0.167	33	2,308	33	2,601	-	293
Time of Use (50,51) T - Off-Peak D1B	633.88	5.95%	37,603	393,828	-	5.357	1,071	6,022	1,071	6,787	-	765
Total Agricultural	839.00	7.87%	41,243	451,370	21.22%	5.793	1,199	9,007	1,159	10,152	-	1,144
Public Lighting G	7.96	0.07%	1,565	10,850	8.38%	0.000	-	112	-	126	-	14
Residential Colonies H	4.65	0.04%	122	6,723	7.89%	-	-	65	-	73	-	8
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Railway Traction Traction - I												
Co-Generation-J												
Grand Total	10,657	100%	3,595,357	10,615,304	11.46%	21.322	6,230	110,096	6,230	123,880	-	13,784

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Existing & Proposed Tariff Statement

(Monthly, Quarterly as well as Consolidated)

Description	Sales	Sales Mix	No. of Consumers	Connected Load	Load Factor	MDI Charged (MkW)	NEPRA Existing Tariff		Proposed New Tariff		Difference	
	(MkWh)	(%)		(kW)	(%)		Fixed Charge (Rs/kWh)	Variable Charge (Rs/kWh)	Fixed Charge (Rs/kWh)	Variable Charge (Rs/kWh)	Fixed Charge (Rs/kWh)	Variable Charge (Rs/kWh)
Residential												
Up to 50 Units	396.14	3.72%	761,310			0.000	-	4.00	-	4.00	-	-
For peak load requirement up to 5 kW												
01-100 Units								9.00	-	10.14	-	1.14
GOP	1,638	15.37%	543,010									
NEPRA	2,027											
101-200 Units								10.20	-	11.50	-	1.30
GOP	1,230	11.55%	937,352									
NEPRA	841											
201-300 Units								10.20	-	11.50	-	1.30
GOP	842	7.91%	530,350									
NEPRA	842											
301-700 Units								14.00	-	15.78	-	1.78
GOP	437	4.10%	326,688									
NEPRA	437											
Above 700 Units								16.00	-	18.03	-	2.03
GOP	108	1.02%	36,351									
NEPRA	107											
For peak load requirement exceeding 5 kW												
Time of Use (TOU) - Peak	11.04	0.10%	-				-	16.00	-	18.03	-	2.03
Time of Use (TOU) - Off-Peak	50.50	0.47%	8,630	93,776	6.15%	0.000	-	10.00	-	11.27	-	1.27
E-1(i) (55) TEMP.	0.42	0.00%	229	1,315	3.67%	-	-	16.00	-	18.03	-	2.03
Total Residential	4,713.88	44.23%	3,143,921	7,290,313	7.38%	0.000	-					
Commercial - A2												
Commercial -												
For peak load requirement up to 5 kW	297.02	2.79%	349,283	523,334	6.48%	-	-	15.00	-	16.91	-	1.91
Commercial (<100)	-	0.00%	-	-	-	-	-					
Commercial (<20 KW)												
For peak load requirement exceeding 5 kW	-	-	-	-	-	-	-					
Regular	3.74	0.04%	55	5,371	7.96%	0.019	400.00	14.50	400	16.34	-	1.84
Time of Use (TOU) - Peak (A-2)	38.71	0.36%	-	-	-	-	400.00	16.00	400	18.03	-	2.03
Time of Use (TOU) - Off-Peak (Temp)	174.85	1.64%	9,125	224,819	8.88%	1.187	400.00	10.00	400	11.27	-	1.27
Temp Commercial E-II (56)	9.72	0.09%	1,183	15,076	7.39%	-	-	15.00	-	16.91	-	1.91
Total Commercial	524.05	4.83%	359,646	768,550	7.78%	1.206						
Industrial												
B1	125.27	1.18%	15,801	97,303	14.70%	0.000	-	13.00	-	14.65	-	1.65
B-1 (09) TOD peak	44.21	0.41%	-	-	-	-	-	16.00	-	18.03	-	2.03
B-1 (09) TOD off peak	265.85	2.49%	22,041	230,767	13.15%	2.453	-	10.00	-	11.27	-	1.27
B-2 A (10)	18.80	0.18%	323	33,209	6.46%	0.060	400.00	12.50	400	14.09	-	1.59
B2 - TOU (Peak)	229.78	2.16%	-	-	-	-	400.00	16.00	400	18.03	-	2.03
B2 - TOU (Off-peak)	1,372.33	12.88%	10,153	836,214	18.73%	5.891	400.00	9.60	400	10.82	-	1.22
B3 - TOU (Peak)	137.07	1.29%	4	9,818	-	-	380.00	16.00	380	18.03	-	2.03
B3 - TOU (Off-peak)	1,224.33	11.49%	-	436,836	31.99%	3.478	380.00	9.50	380	10.71	-	1.21
B4 - TOU (Peak)	104.65	0.98%	295	-	-	-	360.00	16.00	360	18.03	-	2.03
B4 - TOU (Off-peak)	707.47	6.64%	14	256,671	31.47%	1.709	360.00	9.40	360	10.59	-	1.19
E-2 (58) TEMP.	0.22	0.00%	-	-	-	-	-	13.00	-	14.65	-	1.65
Total Industrial	4,229.96	39.69%	48,631	1,900,818	25.40%	13.590						
Bulk												
C1(a) Supply at 400 Volts - up to 5 kW	0.19	0.00%	27	153	14.22%	0.001	-	13.50	-	15.21	-	1.71
C1(b) Supply at 400 Volts - exceeding 5 kW	2.58	0.02%	31	2,861	10.30%	0.012	400.00	13.00	400	14.65	-	1.65
C-1C(26) T PEAK	2.56	0.02%	123	-	-	-	400.00	16.00	400	18.03	-	2.03
C-1C(26) T OFF-PEAK	12.21	0.11%	-	11,908	11.70%	0.052	400.00	10.00	400	11.27	-	1.27
C2 Supply at 11 kV	16.92	0.16%	5	2,068	93.41%	0.033	380.00	12.80	380	14.43	-	1.63
Time of Use (TOU) - Peak	16.46	0.15%	-	-	-	-	380.00	16.00	380	18.03	-	2.03
Time of Use (TOU) - Off-Peak	80.43	0.75%	38	40,990	22.40%	0.253	380.00	9.60	380	10.82	-	1.22
C3 Supply above 11 kV	8.66	0.08%	4	89,800	1.10%	0.050	360.00	12.70	360	14.31	-	1.61
Time of Use (TOU) - Peak	33.57	0.32%	-	-	-	-	360.00	16.00	360	18.03	-	2.03
Time of Use (TOU) - Off-Peak	163.55	1.53%	2	38,900	47.99%	0.331	360.00	9.50	360	10.71	-	1.21
Total Single Point Supply	337.13	3.16%	229	186,680	20.62%	0.731						
Agricultural Tube-wells - Tariff D												
D1 Scarp	14.28	0.13%	1,507	22,682	7.19%	-	-	13.00	-	14.65	-	1.65
D2 Agricultural Tube-wells	6.70	0.06%	737	6,368	12.01%	0.041	200.00	12.50	200	14.09	-	1.59
Time of Use (45)T - Peak D-1B	4.51	0.04%	-	-	-	-	200.00	16.00	200	18.03	-	2.03
Time of Use (45)T - Off Peak D-1B	35.38	0.33%	1,396	28,492	14.18%	0.229	200.00	9.50	200	10.71	-	1.21
Time of Use (50,51)T - Peak D-1B	144.25	1.35%	-	-	-	0.167	200.00	16.00	200	18.03	-	2.03
Time of Use (50,51)T - Off-Peak D1B	633.88	5.95%	37,603	393,828	-	5.357	200.00	9.50	200	10.71	-	1.21
Total Agricultural	839.00	7.87%	41,243	451,370	21.22%	5.793						
Public Lighting G	7.96	0.07%	1,565	10,850	8.38%	0.000	-	14.00	-	15.78	-	1.78
Residential Colonies H	4.65	0.04%	122	6,723	7.89%	-	-	14.00	-	15.78	-	1.78
Special Contracts - Tariff K (AJK)												
Time of Use (TOU) - Peak												
Time of Use (TOU) - Off-Peak												
Railway Traction Traction - 1												
Co-Generation-J												
Grand Total	10,658.6	100%	3,595,357	10,615,304	11.46%	21.322	-					

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Provision for Tax

Rs. Million

Sr. No.	Provision for Tax allowed	Actual tax paid during the FY 2013-14				Total
		1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
		NOT APPLICABLE				
		-	-	-	-	-

b

Domestic Consumers

Slabs	No. of Customers														Annual Consumption (MKWH)	Revenue Rs. Million	Average Rate Rs./kWh
		0-50	1 - 100	101 - 200	201-300	301-400	401-500	501-600	601-700	701-800	801-900	901-1,000	1,000-1,100	1,100 & Above			
0 - 50	729,548	371.961													371.961	743.92	2.00
1 - 100	520,356		1,537.683												1,537.683	8,903.18	5.79
101 - 200	898,246			1,155.321											1,155.321	9,369.65	8.11
201 - 300	508,224				791.021										791.021	9,519.69	12.03
301 - 400	200,358					205.219									205.219	3,196.34	15.58
401-500	68,873						102.609								102.609	1,598.17	15.58
501-600	28,175							61.566							61.566	958.90	15.58
601-700	15,653								41.044						41.044	639.27	15.58
701-800	10,102									18.285					18.285	325.13	17.78
801-900	6,270										13.206				13.206	234.82	17.78
901-1,000	4,180											10.158			10.158	180.63	17.78
1,001-1,100	2,787												8.127		8.127	144.50	17.78
1,100 & Above	11,495													51.808	51.808	921.20	17.78
Total	3,004,267	371.961	1,537.683	1,155.321	791.021	205.219	102.609	61.566	41.044	18.285	13.206	10.158	8.127	51.808	4,368.008	36,735.40	8.41

b

Development Loan 2014-15

Sr. No.	Loan	Interest Rate	Remaining Years	First Qrt				Second Qrt				Third Qrt				Fourth Qrt			
				O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal
1	ADB-2438-PAK	17.00%		1,285,615	-	113,323	1,172,292	1,172,292	-	-	1,172,292	1,172,292	-	59,445	1,112,847	1,112,847	-	-	1,112
2	ADB-2727-PAK	15.00%		242,527	-	-	242,527	242,527	-	7,349	235,178	235,178	-	-	235,178	235,178	-	7,349	227
3	Foreign loan	12.85%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Local Bank loan	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Loan 2015-16

Sr. No.	Loan	Interest Rate	Remaining Years	First Qrt				Second Qrt				Third Qrt				Fourth Qrt			
				O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal
1	ADB-2438-PAK	17.00%		1,112,847	-	59,445	1,053,402	1,053,402	-	-	1,053,402	1,053,402	-	59,445	993,957	993,957	-	-	993
2	ADB-2727-PAK	15.00%		227,829	-	-	227,829	227,829	-	7,349	220,480	220,480	-	-	220,480	220,480	-	7,349	212
3	Foreign loan	12.85%		-	6,313,000	-	6,313,000	6,313,000	-	473,829	5,839,171	5,839,171	-	-	5,839,171	5,839,171	-	503,344	5,335
4	Local Bank loan	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Loan 2016-17

Sr. No.	Loan	Interest Rate	Remaining Years	First Qrt				Second Qrt				Third Qrt				Fourth Qrt			
				O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal
1	ADB-2438-PAK	17.00%		993,957	-	59,445	934,512	934,512	-	-	934,512	934,512	-	59,445	875,067	875,067	-	-	875
2	ADB-2727-PAK	15.00%		213,131	-	-	213,131	213,131	-	7,349	205,782	205,782	-	-	205,782	205,782	-	7,349	198
3	Foreign loan	12.85%		5,335,827	-	-	5,335,827	5,335,827	-	534,897	4,801,131	4,801,131	-	-	4,801,131	4,801,131	-	568,003	4,233
4	Local Bank loan	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Loan 2017-18

Sr. No.	Loan	Interest Rate	Remaining Years	First Qrt				Second Qrt				Third Qrt				Fourth Qrt			
				O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal
1	ADB-2438-PAK	17.00%		875,067	-	59,445	815,622	815,622	-	-	815,622	815,622	-	59,445	756,177	756,177	-	-	756
2	ADB-2727-PAK	15.00%		198,433	-	-	198,433	198,433	-	7,349	191,084	191,084	-	-	191,084	191,084	-	7,349	183
3	Foreign loan	12.85%		4,233,128	-	-	4,233,128	4,233,128	-	603,383	3,629,745	3,629,745	-	-	3,629,745	3,629,745	-	640,967	2,988
4	Local Bank loan	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Loan 2018-19

Sr. No.	Loan	Interest Rate	Remaining Years	First Qrt				Second Qrt				Third Qrt				Fourth Qrt			
				O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal
1	ADB-2438-PAK	17.00%		756,177	-	59,445	696,732	696,732	-	-	696,732	696,732	-	59,445	637,287	637,287	-	-	637
2	ADB-2727-PAK	15.00%		183,735	-	-	183,735	183,735	-	7,349	176,386	176,386	-	-	176,386	176,386	-	7,349	169
3	Foreign loan	12.85%		2,988,778	-	-	2,988,778	2,988,778	-	680,893	2,307,885	2,307,885	-	-	2,307,885	2,307,885	-	723,305	1,504
4	Local Bank loan	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Loan 2019-20

Sr. No.	Loan	Interest Rate	Remaining Years	First Qrt				Second Qrt				Third Qrt				Fourth Qrt			
				O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal	O/Bal	Disbursement	Repayment	C/Bal
1	ADB-2438-PAK	17.00%		637,287	-	59,445	577,842	577,842	-	-	577,842	577,842	-	59,445	518,397	518,397	-	-	518
2	ADB-2727-PAK	15.00%		169,037	-	-	169,037	169,037	-	7,349	161,688	161,688	-	-	161,688	161,688	-	7,349	154
3	Foreign loan	12.85%		1,584,580	-	-	1,584,580	1,584,580	-	768,359	816,220	816,220	-	-	816,220	816,220	-	816,220	0
4	Local Bank loan	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Interest on Development Loans

Figures in Million

Sr. No.	Loans	Interest Rate %	FY 2014-15				Total
			1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
1	ADB-2438-PAK	17	96.003	-	90.950	-	186.953
2	ADB-2727-PAK	15	-	18.528	-	17.966	36.494
3	Foreign loan						
4	Local bank loan						

Sr. No.	Loans	Interest Rate %	FY 2015-16				Total
			1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
1	ADB-2438-PAK	17	85.898	-	80.845	-	166.743
2	ADB-2727-PAK	15	-	17.405	-	16.843	34.248
3	Foreign loan	12.85	-	393.233		363.718	756.951
4	Local bank loan		-	-	-	-	-

Sr. No.	Loans	Interest Rate %	FY 2016-17				Total
			1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
1	ADB-2438-PAK	17	75.792	-	70.739	-	146.531
2	ADB-2727-PAK	15	-	16.282	-	15.610	31.892
3	Foreign loan	12.85	-	332.365		299.059	631.425
4	Local bank loan			-		-	-

Sr. No.	Loans	Interest Rate %	FY 2017-18				Total
			1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
1	ADB-2438-PAK	17	65.686	-	60.634	-	126.320
2	ADB-2727-PAK	15	-	15.159	-	14.598	29.756
3	Foreign loan	12.85		263.679		226.095	489.774
4	Local bank loan			-		-	-

Sr. No.	Loans	Interest Rate %	FY 2018-19				Total
			1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
1	ADB-2438-PAK	17	55.581	-	50.528	-	106.109
2	ADB-2727-PAK	15	-	14.036	-	13.475	27.511
3	Foreign loan	12.85		186.169		143.757	329.926
4	Local bank loan			-		-	-

Sr. No.	Loans	Interest Rate %	FY 2019-20				Total
			1st Qrt	2nd Qrt	3rd Qrt	4th Qrt	
1	ADB-2438-PAK	17	45.475	-	40.422	-	85.897
2	ADB-2727-PAK	15	-	12.913	-	12.352	25.265
3	Foreign loan	12.85		98.702		50.842	149.544
4	Local bank loan			-		-	-

H.T WORK ORDERS ISSUED FROM 01-07-2014 TO 30-06-2015

SR #	FEEDER NAME	WORK ORDER NO.	RESULTS BEFORE		RESULTS ACHIEVED		LENGTH (KM)	INVESTMENT CARRIED OUT	Rs.(Min)	SAVING (MKWH)	REMARKS
			%AEL	%VD	%AEL	%VD					
1	RAVI & JAKHAR	14-15-ELR-01	19, 10	44,31.1	3,3,3	8.8, 8.9, 9.8	147.9,143.3	55.114		3.437	AREA PLANN./BIFR.
2	LAHORE ROAD	14-15-ELR-02	18	40.9	1,1,2	3.8,3.7,4.3	102.0	4.501		3.002	LOAD SHIFTING/TRIFURCATIO
3	BUCHEKI ROAD	14-15-ELR-03	13	38.1	1,2	4.7,6.6	123.1	10.529		1.998	LOAD SHIFTING/BIFR.
4	PINDI SHEKKH MUSA	14-15-DOP-01	8	26.2	3,2	7.9,5.2	91.7	22.842		1.422	LOAD SHIFTING/BIFR.
5	BURALA	14-15-DOP-02	17	46	1,3	4.6,9.0	107.5	15.416		2.758	LOAD SHIFTING/BIFR.
6	RAVI	14-15-ELR-04	19	43.9	3,3	9.3,8.7	140.4	33.534		2.294	BIFR.
7	SANDHILIAN WALI	14-15-ELR-05	13	39.1	3,3	7.3,9.6	187.5	34.479		2.104	BIFR.
8	SAEED ABAD-1	14-15-DOP-03	7	22.6	3,3	6.9,7.9	158.2	26.424		0.782	BIFR.
9	NOOR MEHAL	14-15-DOP-04	8	21.5	3	10.0	58.9	9.622		0.645	REC.
10	JAIL ROAD	14-15-DOP-05	2	4.9	1,1	3.8,2.6	19.9	9.976		0.220	BIFR.
11	PSD (PIR SALUH DIN)	14-15-ELR-06	12	3.3	3,2	9.6,3	105.7	14.825		1.674	BIFR.
12	FAREED	14-15-DOP-06	7	21.3	3,2	9.5,1	54.0	21.396		0.893	BIFR.
13	TALIB WALA	14-15-ELR-07	15	26	3	10.5	114.0	15.000		1.073	REC.
14	GULFISHAN & JAMIL PARK	14-15-DOP-07						8.472			Shifting of HT Line NA-85 in the light of Minutes of BOD FESCO.
15	MELA	14-15-DOP-08	17	35	4	9.4	65.9	15.666		0.876	REC./RE-ROUTING
16	RAIL BAZAR & CIVIL LINES	14-15-DOP-09	2,2	5.1,4.5	1,1,1	2.2,3.6,2	11.9,12.5	6.594		0.445	AREA PLANN./BIFR.
17	BHOWANA	14-15-DOP-10	1	3	1	2.3	22.6	2.220		0.060	REC./RE-ROUTING
18	HADDA	14-15-DOP-11	7	18.3	3,2	8.6,5.5	89.7	9.439		0.261	LOAD SHIFTING/BIFR.
19	P.C, KHIZERABAD & D-GROUND	14-15-DOP-12	2,3,3	5.8,8.1,7.5	1,2,2,2	2.6,4.9,4.8,5.0	9.3,10.8,12.8	11.912		0.711	LOAD SHIFTING/BIFR. AREA PLANN.
20	QADIR BUX & CIVIL LINES	14-15-DOP-13	8,6	32.1,18.8	3,2,3	7.6,5.9,8.7	147.5,44.3	24.687		1.086	AREA PLANN./BIFR.
21	UNIVERSITY ROAD	14-15-DOP-14	3	8.6	1,1	3.2,1.6	11.8	13.422		0.623	BIFR.
Total								366.070		26.364	

LIST OF CASES OF HT PROPOSALS TO BE PROCESSED FOR FINANCIAL YEAR 2015-16

SR NO	NAME OF FEEDER	LOAD	LENGTH	%AEL	%VD	BC	ESTIMATED COST (Rs.) Mln	REMARKS
1	JANI WALA	340	72.3	12	29.2	5.53	23.028	UNDER APPROVAL
2	AROTI	380	194.7	14	40.9	3.78	31.43	UNDER APPROVAL
3	KOT AMIR	300	47.4	12	35.2	2.86	29.197	UNDER APPROVAL
4	WARYAM	320	203.4	22	57.1	5.82	31.421	SENT FOR BOQ
5	MOHAR	130	226.3	3	9.6	4.82	24.08	SENT FOR BOQ
6	JANDAN WALA	360	213	33	79.9	6.24	56.303	SENT FOR BOQ
7	KHANUANA	320	113.2	10	29	5.8	13.072	SENT FOR BOQ
8	TOTAL & BEHAL	385,385	157.7,149.9	9,15	26.1,37.4	5.48	40.271	UNDER APPROVAL
9	SARI KRISHNA & JAHAN KHAN	300,360	234.2,198.9	6,8	24.1,30.1	2.39	36.576	SENT FOR BOQ
10	PIR KOT	400	188.4	9	38.7	2.17	29.503	SENT FOR BOQ
11	DULLEY WALI & KHANSA	320,140	192,108.30	5,10	20.8,20.9	1.93	26.59	SENT FOR BOQ
12	BANLA	250	67.8	16	34.6	3.8	25.93	SENT FOR BOQ
13	KHANSAR	150	108.5	11	22.4	5.9	10.65	SENT FOR BOQ
14	ASSIAN	260	65	9	24.3	3.69	14.85	SENT FOR BOQ
15	SANGA	280	213.6	9	24.3	2.14	29.78	SENT FOR BOQ
16	SANDRAL	149	143.1	9	24.3	2.14	18.83	SENT FOR BOQ
17	SAT GARAH	80	40.3	7	11.8	7.58	1.79	SENT FOR BOQ
18	49-TAIL & ASTANA FAZAL	160	18.1	10	29.4	3.6	6.69	SENT FOR BOQ
19	BUKHARIAN	380	141.9	4	18.3	2.31	10.23	SENT FOR BOQ
20	JHUMRA ROAD	220	46.9	4	11.3	2.82	5.92	SENT FOR BOQ
21	KHIZARABAD	130	75.8	3	9.6	4.8	0.85	SENT FOR BOQ
22	SHEIKHUPURA ROAD	415	16.1	1	2.8	1.57	3.82	SENT FOR BOQ
23	RAFHAN	370	11.1	2	5.8	2.05	6.6	SENT FOR BOQ
24	PIR ASHAB & INYATABAD	290	142.5	16	46.6	4.71	40.9	SENT FOR BOQ
25	AL-BARKET	290	102.3	8	32.7	1.69	25.9	SENT FOR BOQ
26	MANWAL	180	164.2	11	36.2	1.56	20.5	SENT FOR BOQ
27	DAJAL	360	200.2	18	42.4	4.37	38.5	SENT FOR BOQ
28	TRUG & ESSA KHEL	230	78.6	6	17.6	2.63	27.6	SENT FOR BOQ
29	CIRCUIT HOUSE & PATHA MANDI	330	10.6	1	3.7	2.34	6.25	SENT FOR BOQ
30	JABBI	220	116.1	16	38.7	3.47	26.5	SENT FOR BOQ
31	BITTA	126	109.7	10	23.9	1.14	17.3	SENT FOR BOQ
32	RADHAN	240	148.7	5	14.6	5.64	6.9	SENT FOR BOQ
33	KOT MOMAN	360	61.8	11	36.6	2.84	30.1	SENT FOR BOQ
34	SATH SHAHNI	180	160.1	30	75	2.34	49.9	SENT FOR BOQ
35	KAMAR MASHANI	280	81.2	9	26.7	2.36	22.2	SENT FOR BOQ
TOTAL BUDGET REQUIRED							789.961	

b

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Investment

Investment		2013-14	2014-15		2015-16	2016-17	2017-18	2017-18	2017-18	
		Actual	Budgeted	Act./Proj.	Estimated					
A	Investment Plan									
	DOP	[Min Rs]	-	-	1,068	244	308	353	414	495
	ELR	[Min Rs]	-	-	984	749	902	1,090	1,256	1,498
	STG	[Min Rs]	-	-	1,500	2,828	3,252	2,722	2,616	1,637
	PDEIP *	[Min Rs]	103	1,050	335	4,214	914	-	-	-
	ERP	[Min Rs]	-	-	200	300	-	-	-	-
	Capital Contribution/ Deposit work	[Min Rs]	-	-	-	3,753	4,053	4,428	4,879	5,404
	Vehicles	[Min Rs]	-	-	-	104	119	90	68	49
	Civil works	[Min Rs]	-	-	-	530	1,045	680	400	210
	Total	[Min Rs]	103	1,050	4,087	12,723	10,593	9,364	9,632	9,293

B Financing Arrangement

	Foreign/Local Banks (Committed)	[Min Rs]	-	-	-	6,313	-	-	-	-
	Asian Development Loan	[Min Rs]	21	550	31	-	-	-	-	-
	PSDP / Own Resources	[Min Rs]	81	500	32	-	-	-	-	-
	GOP Grant	[Min Rs]	-	-	-	-	-	-	-	-
	Consumer Contribution	[Min Rs]	-	-	-	3,753	4,053	4,428	4,879	5,404
	Others (Own sources)	[Min Rs]	-	-	-	2,657	6,540	4,935	4,754	3,889
	Total	[Min Rs]	103	1,050	64	12,723	10,593	9,364	9,632	9,293

Supported by the following details:

1. Complete Cost Benefit Analysis
2. Expected efficiency/ improvement in the system

FORM 20 (A)

Particulars			2014-15	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
			Determined	Act/Proj	Projected				
A	Power Purchase Price	[Rs/ kWh]	11.457	10.556	10.657	10.741	10.842	10.943	11.055
B	DM								
	O&M	[Rs/ kWh]	0.921	1.161	1.505	1.514	1.520	1.518	1.507
	Depreciation	[Rs/ kWh]	0.202	0.202	0.220	0.236	0.249	0.258	0.265
	RORB	[Rs/ kWh]	0.350	0.345	0.451	0.536	0.571	0.585	0.586
	Other Income	[Rs/ kWh]	(0.253)	(0.318)	(0.241)	(0.240)	(0.240)	(0.243)	(0.243)
	Working capital requirement			-	-	-	-	-	-
	Total DM	[Rs/ kWh]	1.220	1.390	1.9357	2.0460	2.0999	2.1179	2.1153
C	Revenue Requirement (A+B)	[Rs/ kWh]	12.677	11.946	12.593	12.787	12.942	13.061	13.171
D	Prior year/other adjustments	[Rs/ kWh]	(1.824)	-	(0.384)	-	-	-	-
E	Total Revenue Requirement (C+D)	[Rs/ kWh]	10.853	11.946	12.209	12.787	12.942	13.061	13.171

b

Particulars			2014-15	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
			Determined	Act/Proj	Projected				
A	Power Purchase Price	[Mln Rs]	113,415	105,627	113,572	121,899	131,052	140,863	151,562
B	DM								
	O&M	[Mln Rs]	9,112	11,619	16,041	17,182	18,374	19,536	20,662
	Depreciation	[Mln Rs]	1,997	2,025	2,348	2,684	3,005	3,324	3,638
	RORB	[Mln Rs]	3,467	3,451	4,805	6,078	6,903	7,529	8,031
	Other Income	[Mln Rs]	(2,502)	(3,186)	(2,565)	(2,724)	(2,901)	(3,127)	(3,331)
	Working capital requirement	[Mln Rs]		-	-	-	-	-	-
	Total DM	[Mln Rs]	12,075	13,908	20,629	23,220	25,381	27,263	29,000
C	Revenue Requirement (A+B)	[Mln Rs]	125,490	119,535	134,200	145,119	156,433	168,126	180,562
D	Prior year/PPP adjustments	[Mln Rs]	(18,056)	-	(4,090)	-	-	-	-
E	Total Revenue Requirement (C+D)	[Mln Rs]	107,434	119,535	130,110	145,119	156,433	168,126	180,562

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

RORB Calculation

	Description		2014-15	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
			Determined	Act/Proj	Projected				
A	Gross Fixed Assets in Operation - Opening Bal	[Mln Rs]	54,542	54,542	61,216	71,036	81,258	91,033	100,734
B	Addition in Fixed Assets	[Mln Rs]	5,763	6,674	9,820	10,222	9,776	9,701	9,489
C	Gross Fixed Assets in Operation - Closing Bal	[Mln Rs]	60,305	61,216	71,036	81,258	91,033	100,734	110,223
D	Less: Accumulated Depreciation	[Mln Rs]	(19,036)	(19,251)	(21,599)	(24,283)	(27,289)	(30,613)	(34,251)
E	Net Fixed Assets in Operation	[Mln Rs]	41,269	41,965	49,437	56,974	63,745	70,121	75,972
F	Add: Capital Work In Progress - Closing Bal	[Mln Rs]	7,475	6,161	9,064	9,435	9,024	8,955	8,759
G	Investment in Fixed Assets	[Mln Rs]	48,744	48,126	58,501	66,410	72,768	79,076	84,731
H	Less: Deferred Credits	[Mln Rs]	(27,047)	(26,823)	(28,972)	(31,634)	(34,515)	(37,677)	(41,175)
J	Regulatory Assets Base	[Mln Rs]	21,697	21,303	29,529	34,776	38,253	41,399	43,557
K	Average Regulatory Assets Base	[Mln Rs]	19,988	-	25,416	32,152	36,514	39,826	42,478
L	Rate of Return	[%age]	17.36%	-	18.91%	18.91%	18.91%	18.91%	18.91%
M	Return on Rate Base	[Mln Rs]	3,470	-	4,805	6,078	6,903	7,529	8,031

FORM - 18

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED**Financial Charges**

		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
		Actual	Act/Proj	Estimated				
A	Long Term Loans							
	GOP loans	-	-	-	-	-	-	-
	Foreign Loans	-	-	-	-	-	-	-
	Bonds	-	-	-	-	-	-	-
	TFCs	-	-	-	-	-	-	-
	Asian Development Loan	249	205	958	810	646	464	261
	Local bank loan		-	-	-	-	-	-
	Total	249	205	958	810	646	464	261
B	Short Term Loan							
	Running Finance	-	-	-	-	-	-	-
	Short Term Loan	-	-	-	-	-	-	-
	Others	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-
C	Total Financial Charges (A+B)	249	205	958	810	646	464	261

FORM - 17

Distribution Margin Comparison:

Description	2013	2014	2015	2016	2017	2018	2019	2020
	Actual		Act/Proj	Projected				
O&M Expenses	10,629	9,999	11,619	16,041	17,182	18,374	19,536	20,662
Increase in %	22.61%	-5.93%	16.20%	38.06%	7.12%	6.94%	6.32%	5.76%
Depreciation	1,664	1,807	2,025	2,348	2,684	3,005	3,324	3,638
RORB	1,835	2,001	3,451	4,805	6,078	6,903	7,529	8,031
Other Income/ Non Cash Subsidy	(3,061)	(3,425)	(3,186)	(2,565)	(2,724)	(2,901)	(3,127)	(3,331)
Distribution Margin	11,067	10,382	13,908	20,629	23,220	25,381	27,263	29,000
Energy Sold	8,576	9,681	10,006	10,657	11,349	12,087	12,873	13,709
DM per unit	1.29	1.07	1.39	1.94	2.05	2.10	2.12	2.12
DM per unit increase	2.22	(0.22)	0.32	0.55	0.11	0.05	0.02	(0.00)

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Operating Cost

		2014-15 Determined	2014-15 Act/Proj	2015-16	2016-17	2017-18 Projected	2018-19	2019-20
A	Power Purchase Cost							
	Energy Charge	(Min Rs) 79,533	72,589	77,251	81,962	87,131	92,552	98,414
	Capacity Charge	(Min Rs) 28,380	30,274	33,418	36,889	40,721	44,951	49,620
	Transmission Charge	(Min Rs) 2,551	2,764	2,903	3,048	3,200	3,360	3,528
	Variable O&M Cost	(Min Rs) 2,951	-	-	-	-	-	-
	Total Power Purchase Cost	(Min Rs) 113,415	105,627	113,572	121,899	131,052	140,863	151,562

B	Operation & Maintenance *	Determined	Act/Proj	Projected				
	Employees Cost **							
	Salaries, Wages & Benefits	(Min Rs) 7,441	6,073	8,333	8,833	9,363	9,878	10,372
	Retirement Benefits	(Min Rs) -	3,425	4,110	4,356	4,618	4,872	5,115
	Total Employees Cost	(Min Rs) 7,441	9,498	12,443	13,190	13,981	14,750	15,487
	Admin Expenses	(Min Rs)						
	Repair & Maintenance	(Min Rs) 480	804	1,984	2,284	2,584	2,877	3,164
	Travelling	(Min Rs) 239	239	321	340	360	380	399
	Transportation	(Min Rs) 248	258	357	379	401	423	444
	Miscellaneous Expenses	(Min Rs) 704	820	936	989	1,047	1,106	1,167
	Less Overhead Recovery Charges	(Min Rs) -	-	-	-	-	-	-
	Total O&M	(Min Rs) 9,112	11,619	16,041	17,182	18,374	19,536	20,662

C	Depreciation & Amortization	Determined	Act/Proj	Projected				
	Depreciation	(Min Rs) 1,997	2,025	2,348	2,684	3,005	3,324	3,638
	Amortization of Leased Assets	(Min Rs) -	-	-	-	-	-	-
	Total	(Min Rs) 1,997	2,025	2,348	2,684	3,005	3,324	3,638
D	Provision for Bad Debts							
	Provision for bad debts *	(Min Rs) -	1.22	1.62	1.73	1.84	1.96	2.09
	Bad debts written off	(Min Rs) -	-	-	-	-	-	-

* Basis of this provision should be elaborated.

Projected Energy Sales by Tariffs

Category	Voltage	Energy Purchased	Energy Sales	Distribution Losses	Sales Projection	Sales Projection	Sales Projection	Sales Projection	Sales Projection
	Level	2014-15 (Act/Proj)	2014-15 (Act/Proj)		2015-16	2016-17	2017-18	2018-19	2019-20
A1 Domestic									
Flat Rate Fata	LV								
Upto - 50	LV	417.95	371.96	11.00%	402.78	428.96	456.84	486.53	518.16
1 -100	LV	1,727.79	1,537.68	11.00%	1,650.39	1,757.67	1,871.92	1,993.59	2,123.18
101-200	LV	1,298.16	1,155.32	11.00%	1,216.64	1,295.72	1,379.95	1,469.64	1,565.17
201-300	LV	888.82	791.02	11.00%	829.05	882.93	940.33	1,001.45	1,066.54
301 - 700	LV	461.18	410.44	11.00%	437.87	466.33	496.64	528.92	563.30
above 700	LV	114.14	101.58	11.00%	110.85	118.06	125.73	133.91	142.61
Temporary Domestic	LV	0.45	0.40	11.00%	0.45	0.48	0.52	0.55	0.58
A1 (TOD)	LV	64.93	57.79	11.00%	59.70	63.58	67.71	72.12	76.80
Summary		4,973.41	4,426.19	11.00%	4,707.74	5,013.74	5,339.63	5,686.71	6,056.34
A2 Commercial									
A2 - A	LV	313.37	278.89	11.00%	296.62	315.90	336.43	358.30	381.59
> 20 kW	LV	3.95	3.51	11.00%	3.76	4.00	4.26	4.54	4.84
A2(2) TOD	LV	225.32	200.53	11.00%	216.30	230.36	245.33	261.28	278.26
Temporary Commercial	LV	10.26	9.13	11.00%	9.56	10.18	10.84	11.55	12.30
Summary		552.90	492.07	11.00%	526.23	560.44	596.86	635.66	676.98
Industry									
B-1 400 V Upto 40 kW	LV	132.16	117.62	11.00%	125.42	133.58	142.26	151.51	161.35
B1 (TOD)	LV	327.12	291.13	11.00%	307.32	327.30	348.58	371.23	395.36
B-2 400 V Upto (41-500 kW)	LV	19.84	17.66	11.00%	19.67	20.95	22.31	23.76	25.30
B-2 400 V (TOD)	LV	1,690.32	1,504.33	11.00%	1,595.89	1,699.62	1,810.10	1,927.75	2,053.06
B-3 11/33 KV	HV	0.00	0.00		0.00	0.00	0.00	0.00	0.00
B-3 11/33 KV (TOD)	HV	1,436.35	1,278.31	11.00%	1,357.96	1,446.23	1,540.23	1,640.35	1,746.97
B-4 66/132/220 KV	STG	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
B-4 66/132/220 KV (TOD)	STG	856.83	762.56	11.00%	811.42	864.16	920.33	980.15	1,043.86
E-2 (58) TEMP.		0.23	0.21		0.24	0.26	0.27	0.29	0.31
Summary		4,462.86	3,971.81	11.00%	4,217.92	4,492.09	4,784.07	5,095.04	5,426.22
Bulk Supply									
C-1(a) upto 20 kW	LV	0.20	0.18	11.00%	0.20	0.21	0.22	0.24	0.25
C-1(b) above 20 kW	LV	2.72	2.42	11.00%	2.72	2.90	3.09	3.29	3.50
C-1c TOD		15.58	13.87	11.00%	14.55	15.49	16.50	17.57	18.71
C-2 11/33 KV	HV	17.85	15.89	11.00%	18.86	20.09	21.39	22.78	24.26
C2 (TOD)	STG	102.23	90.98	11.00%	94.85	101.01	107.58	114.57	122.02
C-3 (66/132/220 KV)	STG	9.14	8.13	11.00%	7.40	7.88	8.39	8.94	9.52
C3 (TOD)	STG	207.97	185.09	11.00%	200.17	213.18	227.04	241.80	257.51
Summary		355.70	316.56	11.00%	338.74	360.76	384.21	409.18	435.78
Tubewells									
D-1 Scarp	LV	15.07	13.41	11.00%	14.33	15.27	16.26	17.31	18.44
D-1 (TOD)	LV	42.08	37.45	11.00%	39.94	42.54	45.31	48.25	51.39
D-2 (i) Punjab & Sind	LV	7.07	6.29	11.00%	6.95	7.40	7.88	8.39	8.94
D-2 (1) TOD		820.97	730.64	11.00%	792.17	843.66	898.50	956.91	1,019.10
D-2 (II) TOD									
Summary		885.19	787.80	11.00%	853.40	908.87	967.95	1,030.86	1,097.87
Others									
G-1 Public Lighting	LV	8.40	7.48	11.00%	7.99	8.51	9.06	9.65	10.28
H-1 Residential Colonies	LV	4.90	4.36	11.00%	4.61	4.91	5.23	5.57	5.93
	HV		0.00		0	0	0	0	0
H-2 Residential Colonies	HV		0.00		0.00	0.00	0.00	0.00	0.00
I-Traction	HV		0.00		0.00	0.00	0.00	0.00	0.00
J-Co-Generation	HV		0.00		0.00	0.00	0.00	0.00	0.00
Summary		13.31	11.84	11.00%	12.60	13.42	14.29	15.22	16.21
Total		11,243.37	10,006.27	11.00%	10,656.63	11,349.32	12,087.02	12,872.68	13,709.40

Aging of Accounts Receivables as on 30th June

Outstanding for current year

Outstanding for more than 1 year

Outstanding for more than 2 years

Outstanding for more than 3 years

Outstanding for more than 4 years

Outstanding for more than 5 years

Total Receivables as on June 30, ...

This form should be accompanied with a reconciliation of bad debts written off during the year .

Considered good

Considered doubtful

Less: Provision for doubtful debts

Total

	Actual	Act/Proj.	Projected				
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Rs in Million	9,679	9,705	11,198	11,925	12,701	13,526	14,405
Rs in Million	460	461	532	567	604	643	685
Rs in Million	342	343	395	421	449	478	509
Rs in Million	65	66	76	81	86	92	97
Rs in Million	58	58	67	71	76	81	86
Rs in Million	126	126	146	155	165	176	188
Rs in Million	10,730	10,759	12,414	13,221	14,080	14,995	15,970
Rs in Million	9,510	9,538	10,790	11,491	12,238	13,033	13,881
Rs in Million	1,221	1,221	1,624	1,730	1,842	1,962	2,089
Rs in Million	(1,221)	(1,221)	(1,624)	(1,730)	(1,842)	(1,962)	(2,089)
Rs in Million	9,510	9,538	10,790	11,491	12,238	13,033	13,881

YEAR WISE DETAIL OF PROVISION FOR DOUBTFUL DEBTS

Financial Year	Rs. in Million			
	Opening Balance	Reversal during the year	Provision	Closing Balance
2011-12	835	-	1,431	2,266
2012-13	2,266	(1,045)	-	1,221
2013-14	1,221	-	0.01	1,221
2014-15 (Estimated)	1,221	-	-	1,221
2015-16 (Projected)	1,221	-	403	1,624
2016-17 (Projected)	1,624	-	106	1,730
2017-18 (Projected)	1,730	-	112	1,842
2018-19 (Projected)	1,842	-	120	1,962
2019-20 (Projected)	1,962	-	128	2,089

Depreciation Schedule 2019-20

No.	Description	Cost (original)				Accumulated Depreciation (original cost)				Book Value as on June 30, 2020
		As at July 01, 2019	Addition/Deletion	Addition/Deletion	As at June 30, 2020	As at July 01, 2019	Charge during the year	Adjustments	As at June 30, 2020	
A	Land									
1	Free Hold	540,363,678	-	40,185,376	580,549,054				-	580,549,054
2	Lease Hold	-	-	-	-				-	-
	Total	540,363,678	-	40,185,376	580,549,054				-	580,549,054
B	Buildings									
1	Residential Building	1,524,195,150	3,744,310	139,511,475.54	1,663,706,625	342,580,223	53,371,948		395,952,171	1,267,754,454
2	Non-Residential Building	2,466,083,122	-	225,723,651.76	2,691,806,774	585,023,557	91,143,169		676,166,726	2,015,640,048
3	GSO Non-Residential Building	-	-	-	-	-	-		-	-
4	Non-GSO Residential Building	-	-	-	-	-	-		-	-
	Total	3,990,278,272	3,744,310	365,235,127	4,355,513,399	927,603,780	144,515,117	-	1,072,118,897	3,283,394,503
C	Sub Transmission									
1	132KV Sub Transmission Lines	5,513,148,782	89,963,113	462,904,303	5,976,053,085	1,732,315,272	260,662,366		1,992,977,638	3,983,075,447
2	66KV Sub Transmission Lines	1,048,414,197	-	88,028,722	1,136,442,919	491,102,301	73,896,415		564,998,716	571,444,204
3	33KV Sub Transmission Lines	-	-	-	-	-	-		-	-
	Total	6,561,562,979	89,963,113	550,933,025	7,112,496,004	2,223,417,573	334,558,781	-	2,557,976,354	4,554,519,650
D	Grid Station									
1	132 KV Grid Station	19,873,725,465	115,339,781	1,668,671,279	21,542,396,744	4,020,160,299	604,915,580		4,625,075,878	16,917,320,865
2	66 KV Grid Station	963,489,276	12,728,332	80,898,113	1,044,387,388	305,323,466	45,942,178		351,265,644	693,121,744
3	33 KV Grid Station	-	-	-	-	-	-		-	-
	Total	20,837,214,741	128,068,113	1,749,569,391	22,586,784,132	4,325,483,764	650,857,758	-	4,976,341,522	17,610,442,610
E	11 KV Distribution Equipments									
1	11 KV Poles	-	-	-	-	-	-		-	-
2	11 KV Lines	29,487,233,806	274,133,244	2,969,915,492	32,457,149,298	9,854,624,909	1,089,376,627		10,944,001,536	21,513,147,762
3	Distribution Transformer	19,579,858,363	396,838,754	1,972,057,639	21,551,916,002	5,848,282,263	646,496,651		6,494,778,915	15,057,137,088
	Total	49,067,092,169	670,971,998	4,941,973,131	54,009,065,300	15,702,907,172	1,735,873,278		17,438,780,450	36,570,284,850
F	LV Distribution Equipments									
1	LV Poles	-	-	-	-	-	-		-	-
2	440 LV Distribution Line	-	-	-	-	-	-		-	-
3	220 LV Distribution Line	-	-	-	-	-	-		-	-
4	KWh Meters & Service Cable	-	-	-	-	-	-		-	-
5	Misc Equipment	17,488,977,659	211,276,628	1,761,466,878	19,250,444,537	6,285,814,319	694,863,505		6,980,677,824	12,269,766,713
	Total	17,488,977,659	211,276,628	1,761,466,878	19,250,444,537	6,285,814,319	694,863,505	-	6,980,677,824	12,269,766,713
G	Vehicles									
1	132/66/33 KV GSO Vehicles	-	-	-	-	-	-		-	-
2	Vehicles	1,234,263,362	-	63,042,206	1,297,305,568	735,812,119	43,044,355		778,856,474	518,449,094
	Total	1,234,263,362	-	63,042,206	1,297,305,568	735,812,119	43,044,355	-	778,856,474	518,449,094
H	Detail of General Plant Assets									
1	Computer Equipment	-	-	-	-	-	-		-	-
2	Furniture Equipment	-	-	-	-	-	-		-	-
3	Workshop Equipment	-	-	-	-	-	-		-	-
4	Laboratory Equipment	-	-	-	-	-	-		-	-
5	Total T&P Equipment	1,014,693,515	12,550,473	16,603,618	1,031,297,133	412,116,656	34,218,245		446,334,902	584,962,231
	Total	1,014,693,515	12,550,473	16,603,618	1,031,297,133	412,116,656	34,218,245	-	446,334,902	584,962,231
J	O & M Equipments									
	Grand Total	100,734,446,375	1,116,574,634	9,489,008,754	110,223,455,129	30,613,155,383	3,637,931,039	-	34,251,086,423	75,972,368,706

Depreciation Schedule 2018-19

No.	Description	Cost (original)			Accumulated Depreciation (original cost)			Book Value as June 30, 201
		As at July 01, 2018	Addition/Deletion	As at June 30, 2019	As at July 01, 2018	Charge during the year	As at June 30, 2019	
A	Land							
1	Free Hold	456,644,144	83,719,534	540,363,678			-	540,363
2	Lease Hold	-		-			-	
	Total	456,644,144	83,719,534	540,363,678			-	540,363
B	Buildings							
1	Residential Building	1,320,446,046	203,749,104.17	1,524,195,150	293,683,823	48,896,400	342,580,223	1,181,614
2	Non-Residential Building	2,136,425,711	329,657,411.03	2,466,083,122	501,523,273	83,500,284	585,023,557	1,881,059
3	GSO Non-Residential Building	-	-	-	-			
4	Non-GSO Residential Building	-	-	-	-			
	Total	3,456,871,757	533,406,515	3,990,278,272	795,207,096	132,396,684	927,603,780	3,062,674
C	Sub Transmission							
1	132KV Sub Transmission Lines	4,905,638,955	607,509,827	5,513,148,782	1,491,843,779	240,471,493	1,732,315,272	3,780,833
2	66KV Sub Transmission Lines	932,886,401	115,527,796	1,048,414,197	422,929,893	68,172,408	491,102,301	557,311
3	33KV Sub Transmission Lines	-	-	-	-			
	Total	5,838,525,356	723,037,623	6,561,562,979	1,914,773,671	308,643,901	2,223,417,573	4,338,145
D	Grid Station							
1	132 KV Grid Station	17,683,782,114	2,189,943,352	19,873,725,465	3,462,101,402	558,058,897	4,020,160,299	15,853,565
2	66 KV Grid Station	857,319,603	106,169,673	963,489,276	262,939,963	42,383,503	305,323,466	658,165
3	33 KV Grid Station	-			-	-		
	Total	18,541,101,716	2,296,113,024	20,837,214,741	3,725,041,365	600,442,400	4,325,483,764	16,511,730
E	11 KV Distribution Equipments							
1	11 KV Poles	-	-	-	-	-		
2	11 KV Lines	26,850,205,913	2,637,027,892	29,487,233,806	8,864,929,141	989,695,768	9,854,624,909	19,632,608
3	Distribution Transformer	17,828,841,873	1,751,016,490	19,579,858,363	5,260,941,775	587,340,488	5,848,282,263	13,731,576
	Total	44,679,047,787	4,388,044,382	49,067,092,169	14,125,870,916	1,577,036,256	15,702,907,172	33,364,184
F	LV Distribution Equipments							
1	LV Poles	-	-	-	-	-		
2	440 LV Distribution Line	-	-	-	-	-		
3	220 LV Distribution Line	-	-	-	-	-		
4	KWh Meters & Service Cable	-	-	-	-	-		
5	Misc Equipment	15,924,947,537	1,564,030,122	17,488,977,659	5,654,532,674	631,281,646	6,285,814,319	11,203,163
	Total	15,924,947,537	1,564,030,122	17,488,977,659	5,654,532,674	631,281,646	6,285,814,319	11,203,163
G	Vehicles							
1	132/66/33 KV GSO Vehicles	-						
2	Vehicles	1,156,108,941	78,154,421	1,234,263,362	694,859,492	40,952,627	735,812,119	498,451
	Total	1,156,108,941	78,154,421	1,234,263,362	694,859,492	40,952,627	735,812,119	498,451
H	Detail of General Plant Assets							
1	Computer Equipment	-						
2	Furniture Equipment	-						
3	Workshop Equipment	-						
4	Laboratory Equipment	-						
5	Total T&P Equipment	980,102,644	34,590,871	1,014,693,515	378,449,316	33,667,340	412,116,656	602,576
	Total	980,102,644	34,590,871	1,014,693,515	378,449,316	33,667,340	412,116,656	602,576
J	O & M Equipments							
	Grand Total	91,033,349,882	9,701,096,493	100,734,446,375	27,288,734,530	3,324,420,854	30,613,155,383	70,121,290

Depreciation Schedule 2017-18

No.	Description	Cost (original)			Accumulated Depreciation (original cost)			Book Value as June 30, 2017
		As at July 01, 2017	Addition/Deletion	As at June 30, 2018	As at July 01, 2017	Charge during the year	As at June 30, 2018	
A	Land							
1	Free Hold	363,478,448	93,165,696	456,644,144			-	456,644,144
2	Lease Hold	-	-	-			-	-
	Total	363,478,448	93,165,696	456,644,144			-	456,644,144
B	Buildings							
1	Residential Building	1,061,492,180	258,953,865.67	1,320,446,046	251,323,723	42,360,099	293,683,823	1,026,762,223
2	Non-Residential Building	1,717,449,337	418,976,374.33	2,136,425,711	429,185,017	72,338,256	501,523,273	1,634,902,438
3	GSO Non-Residential Building	-	-	-	-	-	-	-
4	Non-GSO Residential Building	-	-	-	-	-	-	-
	Total	2,778,941,517	677,930,240	3,456,871,757	680,508,740	114,698,356	795,207,096	2,661,663,701
C	Sub Transmission							
1	132KV Sub Transmission Lines	4,193,853,774	711,785,182	4,905,638,955	1,277,870,536	213,973,243	1,491,843,779	3,413,795,179
2	66KV Sub Transmission Lines	797,528,964	135,357,437	932,886,401	362,269,600	60,660,293	422,929,893	509,956,508
3	33KV Sub Transmission Lines	-	-	-	-	-	-	-
	Total	4,991,382,738	847,142,619	5,838,525,356	1,640,140,136	274,633,536	1,914,773,671	3,923,751,720
D	Grid Station							
1	132 KV Grid Station	15,117,948,350	2,565,833,764	17,683,782,114	2,965,536,631	496,564,771	3,462,101,402	14,221,680,713
2	66 KV Grid Station	732,926,553	124,393,049	857,319,603	225,226,821	37,713,142	262,939,963	594,379,642
3	33 KV Grid Station	-	-	-	-	-	-	-
	Total	15,850,874,903	2,690,226,813	18,541,101,716	3,190,763,451	534,277,913	3,725,041,365	14,816,060,365
E	11 KV Distribution Equipments							
1	11 KV Poles	-	-	-	-	-	-	-
2	11 KV Lines	24,499,486,755	2,350,719,159	26,850,205,913	7,963,741,348	901,187,793	8,864,929,141	17,985,276,770
3	Distribution Transformer	16,267,937,637	1,560,904,237	17,828,841,873	4,726,126,839	534,814,936	5,260,941,775	12,567,900,038
	Total	40,767,424,391	3,911,623,396	44,679,047,787	12,689,868,187	1,436,002,729	14,125,870,916	30,553,176,870
F	LV Distribution Equipments							
1	LV Poles	-	-	-	-	-	-	-
2	440 LV Distribution Line	-	-	-	-	-	-	-
3	220 LV Distribution Line	-	-	-	-	-	-	-
4	KWh Meters & Service Cable	-	-	-	-	-	-	-
5	Misc Equipment	14,530,728,088	1,394,219,448	15,924,947,537	5,079,706,215	574,826,458	5,654,532,674	10,270,414,822
	Total	14,530,728,088	1,394,219,448	15,924,947,537	5,079,706,215	574,826,458	5,654,532,674	10,270,414,822
G	Vehicles							
1	132/66/33 KV GSO Vehicles	-	-	-	-	-	-	-
2	Vehicles	1,066,907,607	89,201,334	1,156,108,941	656,500,014	38,359,478	694,859,492	461,249,449
	Total	1,066,907,607	89,201,334	1,156,108,941	656,500,014	38,359,478	694,859,492	461,249,449
H	Detail of General Plant Assets							
1	Computer Equipment	-	-	-	-	-	-	-
2	Furniture Equipment	-	-	-	-	-	-	-
3	Workshop Equipment	-	-	-	-	-	-	-
4	Laboratory Equipment	-	-	-	-	-	-	-
5	Total T&P Equipment	908,038,329	72,064,315	980,102,644	345,929,694	32,519,622	378,449,316	601,653,328
	Total	908,038,329	72,064,315	980,102,644	345,929,694	32,519,622	378,449,316	601,653,328
J	O & M Equipments							
	Grand Total	81,257,776,021	9,775,573,861	91,033,349,882	24,283,416,438	3,005,318,092	27,288,734,530	63,744,615,352



National Transmission And Despatch Company

Central Power Purchase Agency (CPPA), WAPDA House, Lahore

NTDC GST No: 03-00-2716-095-73

Supplemental Charges

Name and Address
Faisalabad Electric Supply Company (FESCO)

Year	2010-11
Issue Date	19.01.2012

Description
Supplementary Charges, re-allocation of interest/Markup paid to IPPs on account of Energy purchased on behalf of DISCOs for the year 2010-11
Total:-

Amount (Rs.)
2,766,175,868
2,766,175,868

Director Finance (CPPA)



National Transmission And Despatch Company
Central Power Purchase Agency (CPPA), WAPDA House, Lahore
NTDC GST No. 03-00 2516 005 73

Supplemental Charges

Provisional

Name and Address
Faisalabad Electric Supply Company (FESCO)

Year	2011-12
Issue Date	17.09.12

Description
Supplementary Charges, re-allocation of Interest/Markup paid to IPPs on account of Energy purchased on behalf of DISCOs for the year 2011-12
Total:-

Amount (Rs.)
2,062,952,878
2,062,952,878


Director Finance (CPPA)


Central Power Purchasing Agency

PABX: 042-9202211 Ext: 2106
Tel: 042-9204045
Fax: 042-9203996



**Office of the
Chief Operating Officer
(CPPA)
106 -WAPDA House Lahore.**

No. COO (CPPA) /IT/ 8211-30

Dated: 18/09/2012

1. Chief Executive Officer (LESCO)
2. Chief Executive Officer (GEPCO)
3. Chief Executive Officer (IESCO)
4. Chief Executive Officer (PESCO)
5. Chief Executive Officer (FESCO)
6. Chief Executive Officer (MEPCO)
7. Chief Executive Officer (HESCO)
8. Chief Executive Officer (QESCO)
9. Chief Executive Officer (SEPCO)

RECEIVED (676)
OCT 20 1971
FBI - NEW YORK

Subject:-SUPPLEMENTAL CHARGES INVOICE FOR THE YEAR 2011-2012

Supplemental charges invoice on account of re-allocation of interest/markup paid to IPP on account of energy purchased on behalf of DISCOs for the year of 2011-2012 is sent herewith for further necessary action in the matter please.

D.A. (As Above)

(c)
 K. O. One
 French
 in person.
 1919

Dir, Finance (B&R)
(CPPA)

Copy to:-

1. Finance Director (NTDC), WAPDA House, Lahore.
2. Finance Directors, (All DISCOs) along with invoices .
(IESCO, GIPCO, HESCO, PESCO, FESCO, MESCO, QESCO)
3. MF Treasury.
4. D.G CPCC.

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DMK
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DIARY NO.....
DATED 31-3-76
HEADQUARTERS FESCO
Faisalabad



NATIONAL TRANSPORTATION & DESPATCH COMPANY LTD.

Office of the

General Manager (CPFA)

2334-S3

Dated 21/03/2011

No. COO-GM(CPFA)/ADLDGMF(B&R)/TREASURY/

- Chief Executive Officer (FESCO)
- Chief Executive Officer (GEPSCO)
- Chief Executive Officer (IFESCO)
- Chief Executive Officer (PESCO)
- Chief Executive Officer (QESCO)
- Chief Executive Officer (S&PSCO)
- Chief Executive Officer (S&PSCO)
- Chief Executive Officer (S&PSCO)

Subject: IMP. QCE ON ACCOUNT OF SUPPLEMENTAL CHARGES FOR FY 2012-13

Supplemental charges for FY 2012-13 are submitted herewith for further necessary action.

D/A/above

General Manager (CPFA)
Faisalabad

1. Finance Director (NED) for FY 2012-13
2. Finance Director (GEPSCO) for FY 2012-13
3. Finance Director (IFESCO) for FY 2012-13
4. Finance Director (PESCO) for FY 2012-13
5. Finance Director (QESCO) for FY 2012-13
6. Finance Director (S&PSCO) for FY 2012-13
7. Finance Director (S&PSCO) for FY 2012-13
8. Finance Director (S&PSCO) for FY 2012-13

MR&A Dir.	
GM/COO	
CTO	
CE/COO	
C.E (Opr)	
C.E (ISG)	
C.E (Dev.)	
C.E (P&D)	
Finance Dir.	
Mgr. (L&L)	
Mgr. (MIS)	
Mgr. (Audit)	
Secretary	
Asst. Secy.	
D.M. (P&D)	
S.M.A.	

Handwritten signatures and initials:
Amir
Chaff
7/14

Handwritten notes and stamps:
4215
57-4-13
31/03/2011

Handwritten notes and signatures:
Dor (CPC)
8/4
up for decision
24/4/2011



National Transmission And Despatch Company

Central Power Purchase Agency (CPPA), WAPDA House, Lahore

NTDC GST No. 93-00-2716-005-73

Supplemental Charges

Name and Address
Faisalabad Electric Supply Company (FESCO)
GST No. 24-00-2716-001-19

Year	2013-14
Issue Date	18.09.2014

Description
Supplementary Charges, re-allocation of Interest/Markup paid to IPPs on the basis of Avg. Outstanding Balance for the year 2013-14
Total:-

Amount (Rs.)
120,417,359
120,417,359

11/1/14
Addl. DGM Finance (CPPA)

Annexure K - Supplementary Charges



NATIONAL TRANSMISSION & DESPATCH COMPANY LTD.

Office of the
COO/General Manager (CPPA)

16
21-10-14

No. GM(CPPA)/ADL.DGMF(B&R)/Sale of Power/136-3 Dated 14/10/2014

- Chief Executive Officer (LLSCO)
- Chief Executive Officer (GEPSCO)
- Chief Executive Officer (ILSCO)
- Chief Executive Officer (PESCO)
- ✓ Chief Executive Officer (FESCO)
- Chief Executive Officer (MIPSCO)
- Chief Executive Officer (SEPCO)
- Chief Executive Officer (HESCO)
- Chief Executive Officer (QESCO)

6780
20-10-14

Subject: **SUPPLEMENTAL CHARGES INVOICE ON ACCOUNT OF RE ALLOCATION OF INTEREST /MARK-UP PAID TO IPPs FOR THE YEAR 2013-14.**

Subject cited invoice is sent herewith for further necessary action in the matter please

D A/As above

(Signature)
(S. Khalid Ali Shah)
Addl Dy GM Finance(B&R)CPPA
6/1

Copy for information.

- 1- Finance Director (NIDCI)
- 2- Finance Directors(All DISCOs)
- 3- Manager Finance (Treasury)

HR&A Dir.	
GMO/COO	
CE/CTO	
CE/CS	
CE/EL	
CE/EN	
CE/EP	
CE/ES	
CE/ET	
Finance Dir.	✓
Mgr. (B)	
Mgr. (E)	
Mgr. (A)	
Secretary	
DO (Vig.)	
DM (PR)	
SOPA	

2012
22-10-2014

AM (Consolidation)

Mr. Anwar
Please

Copy to AM (Consolidation)
22/10/14

14185
22-10-14

18/10/14

6

Annexure J - MEPCO's claim regarding Use of System Charge



MULTAN ELECTRIC POWER COMPANY (MEPCO)

Chief Executive Office (Khanawal Road Multan)

Phone # 031-5220163 Fax # 031-3771283 E-mail: commercial@mepeco.com

No. 732 MEC-UCSC/ 20-113-12

Date: 28 MAR 2012

Chief Executive Officer,
Faisal Abad Electric Supply Company
FESCO, Faisal Abad.

MEPCO

Subject: INVOICE FOR USE OF SYSTEM CHARGE.

Updated claim of MEPCO for Use of System Charge for the period of 12th Dec 11 to 11th Jan 12 pursuant to the order of NEPRA given dated 1st Feb 12.

Abstract of Data

Period	Units Exported	11th Dec 11 to 11th Jan 12	Amount
12th Dec 11 to 11th Jan 12	2,111,840.00	12th Dec 11 to 11th Jan 12	1,111,840.00
Total	2,111,840.00		1,111,840.00

Amount of 1,111,840.00 is payable to MEPCO.

It is stated that MEPCO is providing electricity to the area of Faisal Abad, which is under the jurisdiction of the Authority. The area of Faisal Abad is not under the jurisdiction of the Authority. The Authority is not responsible for the electricity supply to the area of Faisal Abad. The Authority is not responsible for the electricity supply to the area of Faisal Abad.

MEPCO
Chief Executive Officer
Khanawal Road
Multan
Phone # 031-5220163
Fax # 031-3771283
E-mail: commercial@mepeco.com

MEPCO
Chief Executive Officer
Khanawal Road
Multan
Phone # 031-5220163
Fax # 031-3771283
E-mail: commercial@mepeco.com

MEPCO
Chief Executive Officer
Khanawal Road
Multan
Phone # 031-5220163
Fax # 031-3771283
E-mail: commercial@mepeco.com

Adjustment of Other Income

(Rs. In Millions)

FY	Determined	Actual	Adjusted
2009-10	1,070	2,535	1,465
2010-11	1,080	2,100	1,020
TOTAL			<u>2,485</u>

Other Income was fixed @ Rs. 0.1230 per Kwh
NEPRA adjusted other income as per actual



	<u>As determined by Authority</u>	<u>As per Actual CPI</u>
TO&M0	= Rs.0.6029/Kwh	
TO&M0 (Adjusted for variation in sales below target)	= $0.6029 * 8,779 / 8,596$ = 0.6158	
TO&M1	= $TO\&M0(adj) * [1 + (CPI - X)]$	$TO\&M0 * [1 + (CPI - X)]$
TO&M1	= $0.6158 * [1 + (12.50\% - 4\%)]$	$0.6158 * [1 + (13.13\% - 4\%)]$
TO&M1	= $0.6158 * 1 + (8.50\%)$	$0.6158 * 1 + (9.13\%)$
TO&M1	= $0.6158 * 1.0850$	$0.6158 * 1.0913$
TO&M1	= 0.6681/ Kwh	0.6720 / Kwh
TO&M1	= $0.6681 * 8,596$	$0.6720 * 8,596$
TO&M1	= Rs.5,743 Million	5,777 Million

5

	<u>Adjusted</u>	<u>Unadjusted</u>
TRN11(Ref)	= Rs. 0.2443 / Kwh	Rs. 0.3758/Kwh
TRN11(Ref)(Adjusted for Sale below Target)	= $0.2443 * 8,779 / 8,596 = 0.2495$	$0.3758 * 8,779 / 8,596 =$ 0.3838
TRN12	= $0.2495 * RABa11 / RABa10$	$0.3838 * RABa11 / RABa10$
TRN12	= $0.2495 * (12,773 / 11,362) = 0.2805$	$0.3838 * (18,878 / 17,470) =$ 0.4147
TRN12	= Rs./Kwh 0.2805	Rs./ Kwh 0.4147
TRN12	= Rs. $0.2805 * 8,596$	Rs. $0.4147 * 8,596$
TRN12	= Rs. 2,411 Million	Rs. 3,565 Million
Target Units to be Sold for FY 2011-12	= 8,921 Mkwh	8,921 Mkwh
TRN12/Kwh	= Rs. $2,411 / 8,921 = 0.2703$	Rs. $3,565 / 8,921 = 0.3996$

b

Adjustment for Return on Rate Base FY 2010-11

	Adjusted	Un-Adjusted
TRN10 (Ref)	= Rs. 0.3532/Kwh	Rs. 0.3532/kWh
TRN10 (Ref) (Adjusted)	= 0.3532 x RABa09(Adj)/RABa09(Ref)	
TRN10 (Ref) (Adjusted)	= Rs. 0.3532 x 10,154/16,264	
TRN10 (Ref) (Adjusted)	= Rs. 0.2205/kWh	
TRN10 (Ref) (Adjusted for Sales below target)	= 0.2205 x 8,697/8,317=0.2306	0.3532 x 8,697/8,317=0.3693
TRN11	TRN10(Adj) x RABa10/RABa09)	(TRN11 x RABa10/RABa09)
TRN11	= 0.2306 x 11,355/10,154	0.3693 x (17,470/16,264)
TRN11	= 0.2306 x 1.1183 = 0.2579	0.3693 x 1.074 = 0.3699
TRN11	= Rs./kWh 0.2579	Rs./kWh 0.3966
TRN11	= Rs. 0.2579 x 8,317	Rs. 0.3966 x 8,317
TRN11	= Rs. <u>2,145 Million</u>	Rs. <u>3,299</u> Million
	= Rs./kWh. 2,145/8,779=0.2443	Rs./kWh 3,299/8,779=0.3758

Abstract Of Return On Rate Base (RORB)

Rs. in Million			
FY	As determined by Authority after adjustment	Un-Adjusted	Difference
2010-11	2,145	3,299	(1,154)
2011-12	2,411	3,565	(1,154)
TOTAL	4,556	6,864	<u>(2,308)</u>



ANNEXURE I. Impact of Inconsistent Application of Multi Year Tariff

Sr. No.	Description	Rs. in Million
1	RORB for FY 2010-11	1,154
2	RORB for FY 2011-12	1,154
3	O & M for FY 2011-12	34
4	Other Income of FY 2009-10 adjusted in Tariff for FY 2010-11	1,465
5	Other Income of FY 2010-11 adjusted in Tariff for FY 2011-12	1,020
TOTAL		<u>4,827</u>

5

ANNEXURE H. Prior Year Adjustments

Total Prior year adjustment	
	Rs. In Millions
PYA due to inconsistent application of MYT [E]	4,827
MEPCO USC Claim [F]	5,022
Impact of Retirement Benefits of Pre-Unbundling Pensioners [G]	190
Supplementary Charges [H]	6186
Total Prior year adjustment[A+B+C+D+E+F+G+H]	(4,090)



ANNEXURE H. Prior Year Adjustments

Consumer Mix Variance [D]	
	Rs. In Millions
Consumer Mix for the 1st Qrt	
Notified rate during the qrt (Rs./kWh)	14.39
Actual Units sold for the Quarter (MkWh)	2,976
Recovery on notified rate	42,827
Actual revenue for the qrt	44,097
Consumer mix Variance Under/(Over Recovery)	(1,270)
Consumer Mix for the 2nd Qrt	
Notified rate during the qrt (Rs./kWh)	12.93
Actual Units sold for the Quarter (MkWh)	2,335
Recovery on notified rate	30,191
Actual revenue for the qrt	30,600
Consumer mix Variance Under/(Over Recovery)	(409)
Consumer Mix for the 3rd Qrt	
Notified rate during the qrt (Rs./kWh)	12.93
Actual Units sold for the Quarter (MkWh)	1,973
Recovery on notified rate	25,518
Actual revenue for the qrt	24,619
Consumer mix Variance Under/(Over Recovery)	899
Consumer Mix for the 4th Qrt	
Notified rate during the qrt (Rs./kWh)	12.93
Actual/Estimated Units sold for the Quarter (MkWh)	2,550
Recovery on notified rate	34,848
Actual revenue for the qrt	34,897
Consumer mix Variance Under/(Over Recovery)	(48.82)
Total Consumer Mix Variance under/(Over) for the Year	(829.22)



ANNEXURE H. Prior Year Adjustments

Recovery of PPP through Quarterly Adjustments [A1]

	Rs. In Millions
at notified tariff 12-13	956
at notified tariff 13-14	(474)
at notified tariff 2014-15	14
Total	496

Excess Recovery of Distribution Margin [B]

Distribution Margin (DM)	Rs. In Millions
Annual Distribution Margin allowed	12,045
Recovered through notified tariff during FY 2014-15	10,017
Unrecovered DM/(Excess Recovery)	2,028

Un-Recovered Prior Year Adjustment [C]

Prior Year Adjustment	Rs. In Millions
Annual Prior Period Adjustment allowed	(18,854)
Less: Recovered through notified rates for the Year	(54)
Total	(18,800)

Un-Recovered Power Purchase Price [A]	
Cost of Power	Rs. In Millions
Notified Assessed reference PPP	104,071
Add Quarterly Adjustments	
1st qtr 's Adjustment Other than fuel	5,968
2nd qtr 's Adjustment Other than fuel	2,496
3rd qtr 's Adjustment Other than fuel	3,021
4th qtr 's Adjustment other than fuel	5,151
Total	16,636
Add Monthly Fuel Adjustment	
1st qtr 's Fuel Adjustment	597
2nd qtr 's Fuel Adjustment	(4,284)
3rd qtr 's Fuel Adjustment	(5,410)
4th qtr 's Fuel Adjustment Estimated (Determined/ Estimated)	(5,140)
Total	(14,236)
Total Adjustments	2,399
Total PPP with Adjustments	106,470
Power Purchase Cost as per CPPA	105,627
Disallowed Power Purchase Cost	843
Recovery of P P Cost/ Adjustment Given	
1st qtr 's monthly Adjustment	597
Recovery Through 2nd qtr 's monthly Adjustment	(4,284)
Recovery Through 3rd qtr 's monthly Adjustment	(5,410)
4th qtr 's monthly Adjustment	(5,140)
Total Adjustment	(14,236.49)
Recovered through notified rate 1st qtr	35,250
Recovered through notified rate 2nd qtr	29,174
Recovered through notified rate 3rd qtr	24,658
Est to be Recovered through notified rate 4th qtr	33,842
Total	122,925
Recovered through qtrly adjustment (1st & 2nd Qtrs 2012-13, 1st qtr 2013-14) (A1)	496
Total Recovered PPP	109,184
Total assessed PPP with adjustments	106,470
Unrecovered PPP/(over recovered)	(2,714)



Sl.No	Comparable companies	Country	Period Yrs 2 Beta	Frequency Weekly R Square	Data points 104 Observations	Period Yrs 5 Beta	Frequency Monthly R Square	Data points 60 Observations	Period Yrs 2 D/E ratio	Period Yrs 5 D/E ratio	Tax %	Period Yrs 2 Unlevered Beta	Period Yrs 5 Unlevered Beta	Combined Selection 2yr 5yr	Beta	DE Ratio	Unlevered Beta	
1	AB Inter RAO Lietuva	Lithuania	(0.02)	0.01%	104	-	-	60	0.18	-	15.00%	(0.02)	-	No	No	-	-	-
2	Astrakhan Power Sale Company Open Joint-Stock Company	Russia	0.45	0.69%	104	(0.48)	11.98%	60	12.79	6.34	20.00%	0.04	(0.08)	No	No	-	-	-
3	CEZ Distribution Bulgaria AD	Bulgaria	0.02	0.02%	104	-	-	60	0.13	-	10.00%	0.02	-	No	No	-	-	-
4	CEZ Electro Bulgaria AD	Bulgaria	(0.43)	2.80%	104	-	-	60	0.00	-	10.00%	(0.43)	-	No	No	-	-	-
5	Chelyabinsk Power Sale Company OJSC	Russia	0.69	4.11%	104	0.43	1.36%	60	6.04	3.42	20.00%	0.12	0.12	No	No	-	-	-
6	Dagestan Power Sale Company Open Joint-Stock Company	Russia	0.36	0.28%	104	0.17	0.03%	60	3.44	2.42	20.00%	0.10	0.06	No	No	-	-	-
7	Dhaka Electric Supply Company Limited	Bangladesh	0.74	33.18%	104	-	-	60	0.35	0.32	27.50%	0.59	-	Yes	No	0.74	0.35	0.59
8	Energo-Pro Grid AD	Bulgaria	0.09	0.40%	104	-	-	60	0.00	-	10.00%	0.09	-	No	No	-	-	-
9	Energy and Electrification Joint-Stock Company Saratovenergo	Russia	0.39	0.77%	104	-	-	60	6.14	-	20.00%	0.07	-	No	No	-	-	-
10	India Power Corporation Limited	India	0.49	3.00%	104	0.39	1.15%	60	0.31	0.20	34.61%	0.41	0.34	No	No	-	-	-
11	Interregional Distribution Grid Company of Centre Joint-Stock Company)	Russia	0.31	2.86%	104	0.75	11.01%	60	3.50	2.06	20.00%	0.08	0.28	No	Yes	0.75	2.06	0.28
12	Interregional Distribution Grid Company of Northern Caucasus Joint-Stock Company	Russia	(0.02)	0.01%	104	-	-	60	2.86	3.26	20.00%	(0.01)	-	No	No	-	-	-
13	Interregional Distribution Grid Company of South Joint-Stock Company	Russia	0.64	10.61%	104	1.22	38.46%	60	14.87	10.56	20.00%	0.05	0.13	Yes	Yes	1.22	10.56	0.13
14	Joint-Stock Company Far-Eastern Energy	Russia	0.06	0.05%	104	0.31	1.83%	60	3.15	1.44	20.00%	0.02	0.14	No	No	-	-	-
15	Joint-Stock Company Volga-Don Energy	Russia	1.47	5.25%	104	-	-	60	0.57	-	20.00%	1.01	-	Yes	No	1.47	0.57	1.01
16	JSC ROSSETI	Russia	0.04	0.01%	104	1.44	6.87%	60	6.92	5.21	20.00%	0.01	0.28	No	Yes	1.44	5.21	0.28
17	Kostroma Power Sale Company Open Joint-Stock Company	Russia	0.17	0.13%	104	0.57	4.07%	60	3.43	2.21	20.00%	0.04	0.21	No	No	-	-	-
18	Krasnoyarskenergosbyt OAO	Russia	0.60	5.13%	104	0.64	10.05%	60	0.59	0.25	20.00%	0.41	0.53	Yes	Yes	0.64	0.25	0.53
19	Lesto AB	Lithuania	0.11	1.19%	104	-	-	60	0.85	1.20	15.00%	0.06	-	No	No	-	-	-
20	Lipetsk Energy Retail Company	Russia	(0.90)	0.62%	104	-	-	60	0.00	-	20.00%	(0.90)	-	No	No	-	-	-
21	Manila Electric Co.	Philippines	(0.11)	0.51%	104	0.07	0.16%	60	0.10	-	30.00%	(0.11)	-	No	No	-	-	-
22	North Hungarian Electricity Supply plc	Hungary	(0.29)	2.20%	104	(0.23)	1.44%	60	0.00	0.04	19.00%	(0.29)	(0.22)	No	No	-	-	-
23	OAO Ryazan Energy Retail Company	Russia	(0.08)	0.07%	104	0.08	0.05%	60	0.00	0.00	20.00%	(0.08)	0.08	No	No	-	-	-
24	OJSC Energobyt Rostovenergo	Russia	(0.53)	3.89%	104	0.02	0.00%	60	1.58	1.52	20.00%	(0.23)	0.01	No	No	-	-	-
25	OJSC Marienenergobyt	Russia	(0.02)	0.01%	104	-	-	60	1.08	-	20.00%	(0.01)	-	No	No	-	-	-
26	OJSC Ternopiloblenergo	Ukraine	-	-	104	-	-	60	-	-	18.00%	-	-	No	No	-	-	-
27	Open Joint-Stock Company interregional Distribution Grid Company of Volga	Russia	(0.22)	0.43%	104	0.54	3.30%	60	3.62	1.81	20.00%	(0.06)	0.22	No	No	-	-	-
28	Perm Power Sale Company Open Joint-Stock Company	Russia	(0.02)	0.01%	104	-	-	60	0.62	0.42	20.00%	(0.02)	-	No	No	-	-	-
29	PJSC Zakarpattiaoblenergo	Ukraine	-	-	104	-	-	60	-	-	18.00%	-	-	No	No	-	-	-
30	Public Joint-Stock Company PJSC	Ukraine	-	-	104	-	-	60	0.00	-	18.00%	-	-	No	No	-	-	-
31	S.C. Electrica S.A.	Romania	-	-	104	-	-	60	-	-	16.00%	-	-	No	No	-	-	-
32	Saratovenergosbyt Open Joint-Stock Company	Russia	0.10	0.40%	104	0.42	2.03%	60	8.15	5.10	20.00%	0.01	0.08	No	No	-	-	-
33	Tambov Power Sale Company Open Joint-Stock Company	Russia	0.96	4.22%	104	0.71	4.18%	60	0.00	0.05	20.00%	0.96	0.69	No	No	-	-	-
34	Torrent Power SEC Limited	India	-	-	104	-	-	60	-	-	34.61%	-	-	No	No	-	-	-
35	Vladimir Power Sale Company Open Joint-Stock Company	Russia	0.58	0.64%	104	0.61	5.42%	60	5.05	2.54	20.00%	0.12	0.20	No	Yes	0.61	2.54	0.20
36	Vologdaenergosbyt Open Joint-Stock Company	Russia	1.02	3.35%	104	0.52	0.85%	60	0.00	0.73	20.00%	1.02	0.32	No	No	-	-	-

Average	0.98	3.08	0.43
Tax Rate	0%		
Unlevered Beta	1.76		

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PDC for proper load management, but also can be utilized for analyzing transmission losses. PDC should be equipped by FESCO with a data server as well as communication media required for such data transmission.

- I. SCADA system should be installed for FESCO transmission system at the earliest as suggested in other DISCOs which will not only provide remote monitoring and control functions, but will also provide facility of storage and remote communication of energy meters data as per specified time schedule, thus overcoming many bottlenecks as well as human errors being encountered presently.

7.3 Proposed Investment Plan for Up-gradation

All the replacements, up gradation and new installations of energy meters and CTs/PTs of high accuracy class may be implemented in two phases as follows:

7.3.1 Phase-1

- a. Installation of new PTs, CTs and energy meters at grid stations where none of these is existing. All of these would be of accuracy class 0.2.0
- b. Replacement of electromechanical meters and those static meters having accuracy class other than 0.2. (e.g. poorer class of 0.5 or 1.0) by new meters of accuracy class 0.2
- c. Procurement of testing sets and lap top computers

This phase will cost Rs. 131.665 Million.

7.3.2 Phase-2

Installation of dedicated PTs and CTs of class 0.2 or replacement of existing CTs/PTs with metering core of class 0.2.

This phase will be completed at a cost of Rs. 223.971 Million.

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It is recommended that a separate section **dedicated for Metering only** should be formed under Manager GSO, which should be headed by a Dy. Manager and it should have two Assistant Managers, each having one testing crew. This Metering section will be responsible for testing of energy meters and their associated PTs and CTs as well as attending to any faults of the metering system. Each crew should have one test inspector, two technicians and one ASA. With existing arrangement of joint meter testing by a team consisting of three members from different sections, schedule of routine testing of meters is not being followed due to non-availability of all members of committee, who are preoccupied with their other routine jobs. This committee can be used for retest of certain %age of meters for audit of performance of meter testing section.

- i. Since proper energy accounting is of extreme importance, it is proposed that a dedicated section be established under Manager GSO, headed by a Dy. Manager. This section will perform following functions:
 - Collection of monthly energy data from all AETs/REs of FESCO as well as from CPPA and other DISCOs, import and export from FESCO through 132kV/11kV feeders.
 - Downloading of energy data from stations having meters with down load facility, on monthly basis.
 - Preparation of monthly energy statements and working out of consolidated transmission losses for entire FESCO
 - Reconciliation of energy figures with CPPA as well as FESCO grids and other DISCOs.
 - Follow up and coordination with P&I and other departments for implementation of up-gradation plan of metering system.
 - Pursue for immediate attendance of any faults with metering system of any FESCO grid.
 - To ensure that testing of energy meters and allied equipment is executed as per schedule given by the concerned section.
 - Review meter test results to ensure that %age errors are as per accuracy class of meters and in case of deviation initiate and follow up for remedial measures.
- j. Lines emanating from some of the IPPs have no energy meters installed on these, CPPA is purchasing energy on the basis of energy meters installed on 132kV side of their step up transformers. In order to work out transmission losses of individual lines coming from these IPPs to FESCO grids, energy meters should be installed on these lines at IPPs, at FESCO's cost, for which matter has to be taken up with concerned IPPs, through CPPA and WPPO.
- k. Early commissioning of SMS at NTDC grids feeding FESCO should be ensured. Furthermore, CPPA be asked to make arrangement for supply of data of their main server relating to these grids to FESCO, so that not only real time load of FESCO is available to



- Duties of Resident Engineer/SSO of grid station
 - Importance of correct recording of readings of different meters, including energy meters and their utilization for monitoring of equipment performance as well as working out different operating parameters, like energy import/export, transmission and transformation losses, etc.
 - Recording of meter readings of energy meters installed at each grid station, highlighting details of individual meters, especially meters recording multiple values like phase currents, MW, import, export etc. and recording frequency of different parameters.
 - Supply and collection of data from other grids regarding export/import on transmission lines along with specific timings for what data is to be supplied and received.
 - Calculation of different losses i.e. Individual transmission line loss, transformation loss, over all grid loss, etc.
 - Scrutiny of data supplied by grid stations at levels of Assistant Manager, Deputy Manager and Manager of GSO formation
 - Compilation of reports relating to energy import/export, transmission and transformation losses, etc. of FESCO by GSO circle based on reports received from CPPA and FESCO Grid stations as well as reconciliation of any discrepancies found either with CPPA data or FESCO grid data.
 - Testing and calibration procedures/protocols for different type of installed energy meters, along with the testing frequency, format of test result reports, etc.
- f. Apart from preparing and distributing SOP, all the staff and engineers associated with working out of losses should be trained to work out these losses in the prescribed manner.
- g. Testing of energy meters, CTs and PTs should be carried out on regular basis. Concerned P&I division should prepare a detailed testing schedule in respect of all grid stations in advance on a quarterly basis and should ensure that it is followed strictly. Manager GSO should issue a fortnightly report on the implementation of this schedule.
- h. FESCO system has around 1300 energy meters installed on 132/66 kV lines, power transformers and 11kV feeders. This figure is going to increase once the transmission lines and HT side of transformers having no meters are also equipped with meters. Similarly new 11kV feeders and grids are being added on regular basis causing further load to the existing staff of P&I and M&T deputed for testing of meters. It needs to be highlighted here that this staff is not exclusively responsible for the mammoth task of meter testing but they are also responsible to attend other faults in addition to routine works.



Chapter 7

Recommendations

7.1 Introduction

Shortcomings in the metering system, data logging, and loss calculation procedures have lead to inconsistent and inaccurate values of transmission losses. During discussion with grid operators and with GSO engineers some bottlenecks and problems being faced in connection with metering system and loss calculations were highlighted. To overcome these bottlenecks and shortcomings and to ratify the prevailing wrong practices, some measures in the form of recommendations are proposed, which are explained below.

7.2 Recommendations

- a. Each transmission line should have energy meters at its both ends. Similarly all transformers should have energy meters on their HT side and LT side. This will enable FESCO to work out transmission line loss and transformation loss for each transmission line and transformer respectively and thus consolidated transmission and transformation losses of FESCO can be worked out. These meters should be of class 0.2 and should have features of storage of time tagged data, as well as of remote data communication.
- b. Dedicated PTs and CTs of class 0.2 should be installed for energy meters at FESCO grids as well as at consumer grids. If installation of dedicated PTs and CTs is not possible, then existing PTs and CTs should be replaced with class 0.2 to reduce error of recorded energy.
- c. All future FESCO grid stations, should have dedicated PTs/CTs for metering of transmission lines as well as transformers, having accuracy class 0.2. In case installation of dedicated PTs and CTs is not possible due to space or financial constraints, then at least common PTs and CTs should have metering core of class 0.2. Standard design specifications for new grids as well as for procurement of PTs, CTs and energy meters should be prepared, if not already existing, or be modified to include detailed specifications with this accuracy class as well as additional features of data storage, data transmission of energy meters (considering SCADA and remote metering).
- d. At stations, where PTs or CTs or both are not installed, these should be installed, so that energy meters become operational following their installation.
- e. Standard Operating Procedures (SOPs) should be formalized for each activity being done in FESCO to have uniform and clear cut procedure all over the utility. Since this study is confined to transmission loss study, some of the required SOPs are given below for the purpose of illustration:
 - Duties of operator on duty at grid station



- 135 numbers PTs
 - 90 numbers CTs
- b. Replacement of existing energy meters**
- In all 109 energy meter of accuracy class 1.0 (electro-mechanical meters) will be replaced,
- c. Procurement of Testing & Maintenance Equipment**

This includes procurement of tests sets for PTs (one number), CTs (one number), energy meters (2 numbers), calibration software, lap tops (3 numbers) and miscellaneous material.

Completion Time

Material procurement can be done in two separate lots, one of energy meters and of PTs, CTs. Energy meters procurement can be completed in short time, and upon their receipt, installation of these can be started immediately, for the locations, where already PTS and CTs are installed as well as where existing meters require replacement because of lower accuracy or of electromechanical type. Taking six months as expected procurement and delivery time, installation of energy meters can be completed within three months, by deputing two dedicated crews for this job.

With one year as expected procurement and delivery time for PTs and CTs installation of the same can be completed within next three months.

Consequently, Phase 1 can be completed within 15 months at an estimated cost of Rs. 131.665 Million.

6.4.2 Phase 2

In this phase, work involve installation of around 582 dedicated CTs and PTs or replacement of existing CTs and PTs with the ones having metering core of class 0.2 (in case of installation of dedicated CTs and PTs is not possible due to space constraints) Total cost of this project will be Rs. 223.971 Million.

Procurement and delivery time for this part will not be less than 3 years owing to the huge quantity. Similarly installation and commissioning time will be much more, since it will involve shut down of lines and transformers. Total completion time for this phase of the project can be taken as minimum five years.

Quantum of CTs & PTs to be replaced has been worked out with the following assumptions:

- a. The new PTs and CTs which were installed under phase 1 are not included since these had already been of accuracy class 0.2.
- b. Dedicated PTs will be installed on Bus-Bars only.

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as the same is supposed to be borne by the owners of consumer grids. The cost estimate is given in Appendix 2.6 Abstract of the cost estimates is under;

1. Cost of PTs	Rs. 102.000 Million
2. Cost of CTs	Rs 182.160 Million
3. Cost of Energy Meters	Rs. 25.600 Million
4. Cost of Test & Maint.Equipments	Rs. 12.500 Million
5. Cost of Laptop computers	Rs. 0.150 Million
6. Cost of Miscellaneous Items,	Rs. 32.226 Million

Transportation charges at the
rate of 10% if items 1 to 4:

Total Cost **Rs.355.636 Million say Rs.356 Million**

While working out the cost, it has been assumed that cost of meters to be installed or replaced at NTDC grids or IPPS will have to be borne by FESCO since it will be as per requirement of FESCO.

6.4 Implementation Options

A proper and state of the art metering system along with manpower and tools for its operation and maintenance, is in fact the backbone for the financial health of any utility. As such any investment made in this system is in fact a source of dividend for the utility as is to be regarded as a long time investment. However in some utilities because of financial constraints, such investment can't be made in a stretch. FESCO may also face financial problem in implementing the metering improvement project.

Details of two phases for the execution of up gradation project of metering system of FESCO are given below.

6.4.1 Phase 1

Execution of this phase will be under taken for following objectives;

- Complete energy computation with respect to transmission lines and transformers by having energy meters on all lines and transformers, where these have not been already installed.
- Upgrading of existing meters, wherever these are either electromechanical or of accuracy class other than 0.2.

The main component of this project will be as under;

a. Installation of missing metering equipment

Quite a few locations do not have either PTs or CTs or energy meters, details of which are given in section 6.2.1 and 6.2.2. Following missing components will be installed:

- 211 numbers energy meters on transmission lines and power transformers



6.2.4 Installation of PTs/CTs

At some of the grid stations, PTs and CTs are not installed. The no. of PTs/CTs to be installed comes out as under;

No. of PTs to be installed: 90 No. (Set of three for 30 locations)

No. of CTs to be installed: 135 No. (Set of three for 45 locations)

The above figure includes 66kV grid stations also, which are understood to be phased out shortly by upgrading these grids. In that case, new upgraded grids should have independent PTs/CTs for metering system. For existing 132kV grids having no PT/CT, it is not only essential to have Circuit Breakers along with PT and CT from protection as well as system operation point of view, but at the same time, independent PTs/CTs for metering system should be installed.

6.2.5 Installation of independent PT/CT for metering/ Replacement of Existing PTs/CTs

In order to remove doubts about metering errors, it is essential that not only energy meters should be reliable, but should have independent PT/CT and of accuracy class 0.2. This will require installation of independent PTs/CTs for energy meters of transmission lines and power transformers, like is being done for SMS in NTDC. In case replacement of all existing PTs and CTs is not possible due to space constraint, then existing multi core PTs/CTs should be replaced with the ones having metering core of accuracy class 0.2, since almost all the existing PTs and CTs are of Class 0.5 and at one station, even of class 1 has been found.

6.2.6 Additional Equipments for Testing and Maintenance of Metering System

As informed by Deputy Manager (P&I), P&I division has neither energy meter testing set nor any test equipments for testing of PTs and CTs. However, some testing sets are available with M&T division. P&I division should have its own testing sets for meters and Instrument transformers. Accordingly new test sets for testing of energy meters as well as instrument transformers should be procured for P&I Division. Along with these, software for calibration of energy meters should be procured.

6.2.7 Laptop Computers for Downloading of Data from Energy Meters

In order to remove errors caused by manual recording of readings from energy meters as well as to have same reading timings for all the system, Laptop computers along with requisite data cables should be provided for downloading of related data from the energy meters.

6.3 Cost Estimates

Cost estimates for undertaking tasks mentioned above have been prepared on the basis of costs obtained from concerned departments of FESCO and NTDC of same or similar items purchased most recently, and rounded off on higher side to cater for price escalation. Replacement of Billing meters at consumer grids having accuracy class other than 0.2 is not included in these estimates



The position of meters installed against total requirement for transmission lines and transformers is given below in table 6.1. Number of meters installed given in table 6.1 does not include quantity of meters installed on those lines of NTDC grids and IPPS which are not connected to FESCO. The quantity of installed meters on transmission lines include the meters installed in NTDC grids, IPPs, and other DISCOs, on the lines coming to FESCO grids.

Table 6.1 Energy Meters Requirements

Equipment	Total No.	Required No. of Meters	No. of Meters Installed	Deficit	No. of Meters to be installed
Transmission Lines	138	276 *	174	102	102
Power Transformers	184	184	75	109	109
		460	249	211	211

*For both sides of Transmission lines

The above table shows that 211 energy meters are required to be installed on transmission lines and Power Transformers in order to have complete account of energy transmitted and transformed.

6.2.2 Replacement of Existing Electromechanical Energy Meters

As per Annexure-4 there are 109 electromechanical energy meters installed on transmission lines and transformers in FESCO system. All these meters are required to be replaced as, as these have not only become obsolete, but they are of class-1 accuracy and as such significantly contribute towards wrong account of

6.2.3 Replacement of Existing Static Energy Meters having accuracy class more than 0.2 and no communication as well as data storage facility

Transmission lines and transformers in FESCO grids as well as at NTDC grids having static energy meters of accuracy class 0.5 are 144, which needs replacement with class 0.2 meters.



Except items d and e, other items require augmentation of existing infrastructure of metering system. Items d and e require some administrative actions as well as augmentation of manpower as well as additional testing and recording equipments for which recommendations have been made in chapter 7.

Items to be undertaken for enhancement of infrastructure as well as for maintenance of metering system are described below;

6.2.1 Installation of Energy Meters, Where Missing

In order to work out transmission lines losses, energy meters are required at both ends of lines, similarly for transformation losses, energy meters are needed at HT side and LT side of power transformers. Requirement of additional energy meters for monitoring of all transmission lines and transformers of FESCO system has been worked out, details of which are given below;

a. Transmission Lines

Total No. of transmission Lines is 138, for which 276 Nos. meters are required on both ends whereas only 174 meters installed only and thus 102 more meter are required to be installed.

b. Power transformers

There are 184 power transformers in FESCO system, which include 134 no. 132/11kV transformers, 9 no. 132/66kV transformers and 41 no. 66/11kV transformers. Total requirement of energy meters for these transformers come out to 184 for HT side and LT side of transformers. Presently 75 meters are installed against this requirement, thus giving a short fall of 109.

c. Total Energy meter requirements

Total energy meters installed at FESCO grids, NTDC grids and IPPs as per field data provided by FESCO is detailed below:

i.	On Transmission Lines in FESCO grids	138
ii.	On Transmission Lines in NTDC grids	39
iii.	On Transmission Lines in IPPs	06
iv.	On HT side of Power transformers in FESCO grids	184
v.	On HT side of Power transformers in NTDC grids	18
vi.	On LT side of Power transformers in FESCO grids	175




Chapter 6

Cost Estimates for Upgrading Metering System of FESCO Transmission System

6.1 Introduction

Determination of technical losses correctly for any utility is not only important for working out a justified tariff, but also plays important role in pointing out the weaknesses of its infrastructure as well as shortcomings of its operational and maintenance practices. This cannot be accomplished in the absence of a complete and reliable metering system. As established during the study carried out for loss study of Transmission system of FESCO, that while there are procedural flaws in determination of transmission system losses, one major factor is absence of metering system altogether at many places, while the one installed at many places is outdated as well as with low accuracy. These shortcomings make it impossible to work out transmission system losses accurately. This can be overcome only by having complete and accurate metering system since proper metering system enable the utility to earn more by having proper tariff as well as by removing shortcomings and weaknesses of its infrastructure. In fact expenditure incurred on metering system is a long term investment for the utility, which pays dividend in the coming days. In the following sections details are given for making existing metering system of FESCO complete, more reliable and efficient so as to improve financial health of the utility as well as to improve its performance.

6.2 Improvement of Metering System

Existing Metering system of FESCO has following shortcomings;

- a. No energy meters have been installed on 102 transmission lines at both ends whereas 276 meters are required to be installed at both ends of these transmission lines, Similarly 109 power transformers have no meters on their HT side. In NTDC grids, 18 power transformers which are feeding FESCO have meters of class 0.2.
- b. Some of existing meters are of electromechanical type, which have become obsolete as well as have low accuracy i.e. of class 1.
- c. Meters of different accuracy class are installed at different locations, which vary from class 1 to class 0.2.
- d. Testing of Energy meters not being carried out regularly. At some places, meters have not been tested since installation.
- e. PTs/CTs never tested since their installation.
- f. Static energy meters can't be calibrated.
- g. Accuracy class of PT/CT not matching with meters of class 0.2.



can be calculated for such lines and transformers, of course accuracy of such depends upon accuracy class as well as actual accuracy of such meters.

- f. Since readings of energy meters installed at a grid are recorded manually by the operator on duty. It takes around 10 minutes on average depending upon punctuality of individual operators and clock time difference. There is certain time lag between the readings recorded at both ends of a particular line. This time difference also contributes towards incorrect transmission losses, calculated for individual circuits having meters on both side.
- g. Factors affecting correct working out of transmission and transformation losses can be summarized as under:
 - Non-existence of energy meters on both sides of all transmission lines, on HT side of all power transformers
 - Difference of accuracy class of installed meters as well as type of meters
 - actual percentage error of meters beyond specified accuracy class
 - Improper accounting of import/export on transmission lines with the change of feeding ends
 - Incorrect working out of T&T losses

All these factors are contributing towards working out of incorrect T&T losses of FESCO, which are not giving correct picture of these losses

- h. Other Meter Errors sources, apart from accuracy of meter itself, can be following;
 - Instrument transformers' phase angle and ratio errors
 - Improper connections such as cross phasing and reverse polarity
 - Broken or high resistance connections and short circuits in meter wiring and at terminal blocks
 - Improper grounding
 - Imbalance phase voltages due to system unbalance or problems with PT itself
 - Possibility of meter readings affected by all or some of these sources of error, apart from other factors mentioned earlier, cannot be ruled out as there is no practice in FESCO to carry out such checks in routine for the entire system. Under such circumstances, results of any calculations made on such readings cannot be accurate




- Transmission losses are being calculated wrongly by subtracting export from import, which not only resulted in negative losses, but also incorrect value.
- There are instances where losses are calculated in correct manner, however, negative values are being reflected due to meter error/difference in reading time of both ends.

5.3 Conclusions

From the scrutiny of available technical data of equipments installed for metering purposive. CTs, PTs, Energy meters, analysis of energy data collected from FESCO and grids, field visits of IPPS, NTDC grids and FESCO grids, meetings with field formations of GSO, following conclusions are made;

- Existing procedure of calculating transmission and transformation (T&T) losses is not correct. Instead of existing practice of calculating these on 11kV outgoing units, these should be calculated on 11kV incoming units. 11kV bus bar losses should be calculated separately and included in T&T losses to show complete transmission network losses, right from CDPs to 11kV outgoing feeders.
- The value of 11kV bus-bar losses as worked out on the basis of recorded meter readings is 0.53% during 2013-14 which is on higher side and may be due to difference of accuracy class meters installed on incoming and outgoing side/feeders.
- The installed metering equipments i.e. CTs, PTs and energy meters are not having same accuracy class and this is one contributor toward in accurate transmission and transformation losses.
- Testing of installed energy meters specially the ones installed on 132kV and 66kV lines/transformers are not being carried out on regular basis. In most of the cases these have not been carried out during last one and half years. In the absence of regular periodic testing of these meters, accuracy of readings recorded by these meters can't be ensured, since in one of grid station, where energy meter of 132kV line as well as the one installed on 132kV side of transformer were found to have %age error more than accuracy class of meter.
- Calculation of transmission losses and transformation losses separately for entire FESCO transmission system is not possible as energy meters are not installed on all 132kV, 66kV lines and power transformers. Against total requirement of 460 meters for all transmission lines and power transformers, 249 meters have been installed. Until the installation of all energy meters is completed, transmission loss and transformation loss cannot be calculated for entire FESCO. However, where ever energy meters are installed on both sides of lines and on HT side of transformers, Transmission loss and transformation loss




Annexure-4 shows No. of energy meters installed at different location as well as different tiers of the system, along with their breakup according to type as well as accuracy class.

Annexure-7 gives class wise % of installed meters as well as % age of installed meters against total requirement for FESCO end only. This table shows that class 1 meter installed on transmission lines & power transformer are 50.00% & 29.30%, for class 0.5 are 47.12% & 70.60% and for class 0.2 are 28.70% & 0% only.

Transmission losses up to consumer grid are to FESCO account, since billing meters are installed at consumer grids.

- d. Dedicated CTs/PTs for metering are not installed except for SMS at some CDPS of NTDC system and IPPs Metering core of multi core CTs are being used for energy meters, wherever installed.
- e. Except few (installed for SMS and at some IPPS), almost all PTs and CTs are of accuracy class 0.5.
- f. At some places, CTs have been found with oil leakage.
- g. Energy meters installed on 132kV system have not been tested for quite some time, except at very few places. Main stress is of testing 11kV energy meters, which are being tested bi-annually, which is also not being followed very strictly due to lack of adequate no. of staff as well as test sets. Sometimes testing of meters had to be postponed due to defective sensor of test set.
- h. During testing, Energy meters found having %age error more than accuracy class is not being calibrated, as no software is available for calibrating these, and as such these meters are kept in operation till their replacement.
- i. Generally, no notice is being taken of meters found having %age error more than accuracy class, by even 1%. Generally, it was noticed that meters of 11kV side having %age error more than accuracy class and of electro-mechanical type were being given preference for replacement, but digital meters even error beyond their accuracy class were not being replaced.
- j. At quite few places some energy meters were not being read due to non-availability of multiplication factors.
- k. Transmission losses are being calculated at some grid-stations and at sub division level, where energy meters are installed at both ends of lines. However in some cases, these were not being calculated due to T-offs, either to consumer grids or to FESCO's own grids and having no metering facility.
- l. While checking transmission losses at few grid stations during field visits, following discrepancies were noticed.



Chapter 5

Findings and Conclusions

5.1 Introduction

Correct determination of Transmission and Transformation losses is essential because of its importance while calculating Tariff for any electrical utility. In fact, financial viability of utility is dependent upon correct tariff determination. Unfortunately FESCO is suffering financially because of low tariff, which apart from other reason is due to inclusion of very low Transmission and Transformation losses in their tariff petition. Findings and conclusions made during Study for these low T&T losses are discussed below.

5.2 Findings

As a result of Scrutiny of data received and collected from FESCO, information collected through field visits and discussions with field staff, following findings were made;

- a. Present method of calculation of T&T losses is not correct. The losses are being calculated with Summation of all outgoing 11kV feeders' readings, instead of summation of 11kV incoming meters only. In this fashion, meter errors of around 414 (present no. of 11kV outgoing feeders) against meter errors of 104 meters (No. of power transformers) is affecting the calculations.
- b. Existing transmission network of FESCO is not fully equipped with metering system as under:

On Transmission Lines in FESCO grids	174
On Transmission Lines in NTDC grids	39
On Transmission Lines in IPPS	06
On Transmission Lines in DISCOs	20
On HT side of Power Transformers in FESCO Grids	75
On HT/LT side of Power Transformers in NTDC Grids	18
Total No. of Meters Installed for T&T system of FESCO	305

The above detail indicates that only 249 points are being metered out of required 460 points. Thus 211 points are unmetered in the system, out of which 102 are of transmission lines and 109 are of power transformers.

- c. Installed meters are of different types i.e. electromechanical type and static type as well as have different accuracy class. Accuracy class varies from 0.2 to 1.

b



4.3.3 Bus Bar Losses

Presently bus bar losses are not being calculated separately. Since 132kV or 66kV bus-bar losses are negligible, these can be ignored. 11kV-bus bar losses can be worked out with unit readings available for 11kV incoming on 11kV bus-bars and 11kV outgoing feeders from 11kV bus-bars. From the data received from FESCO, 11kV bus-bar losses have been worked out as shown in table 4.2.

From the above, it can be easily stated that working out of 11kV bus bar and auxiliary losses on the basis of recorded readings give incorrect picture and as such cannot be used to work out total transmission system losses, including 11kV bus-bar. This fact is further confirmed from the results shown in part 1 of this study, where 11kV bus-bar losses worked on the basis of bus-bar data supplied by FESCO and peak loading condition are very nominal and in fact can be ignored for the purpose of working out of total utility losses.



4.3.1 Transmission Line Losses

Transmission Line Losses in FESCO are not calculated separately. However, even if the same are calculated, it cannot give true picture as only 174 Nos. meters are installed at both end of transmission line against required total of 276 Nos. which indicates that only 63.04% meters are installed.

The reasons for incorrect calculations are detailed as under;

- i. Meters are having errors much beyond the accuracy class. It is worth mentioning that most of energy meters of 132kV and 66kV lines have not been tested for many years and as such this may be true.
- ii. Time difference of recording readings at both ends can also be a contributing factor. Annexure-5 shows the effect of 10 minutes time lag as 0.022% for energy received. Transmission losses for individual lines can also be affected in similar fashion
- iii. Due to Operational requirements, sometime import /export pattern of lines changes. Non accounting of such import/export can result in calculation error for calculation of transmission loss for that particular grid.
- iv. PTs and CTs can contribute towards errors of recording by energy meters due to following factors;
 - a. Mismatch of accuracy class of PTs and CTs with that of energy meters
 - b. Ratio error and phase angle error
 - c. External electromechanical fields
 - d. Burden
 - e. Temperature

4.3.2 Transformation Losses

Transformation loss is not being calculated separately in FESCO as a formation, even for grid stations where energy meters are installed on 132kV or 66kV sides of transformers and only combined Transmission and transformation losses are being calculated as discussed in section 4.3.1 above.

Since meters on all power transformers are not installed, transformation losses cannot be worked out properly. However on the average, these should be around 0.6%. Transformation loss of complete utility cannot be worked out until all power transformers are equipped with energy meters on its HV side i.e. 132kV or 66kV.




- From data received from FESCO it is also revealed that at many places, meters found having error beyond its accuracy class during testing, have not yet been replaced. Readings of such meters is obviously another source for wrong T&T losses.
- Another important contributing factor is difference of reading time. It is understood that Energy meters installed at most of CDPs have facility of retrieving readings at exact 24:00hrs or any other time and thus figure of units sold to FESCO (Import figure of FESCO) are being invoiced by CPPA are of 24:00hrs at end of each calendar month. On the other hand, in FESCO, figure of units on outgoing feeders is based on readings recorder manually by operators on duty. During field visits, it transpired that on average it takes about 10 minutes to record readings of all energy meters installed in any grid. Taking into account time difference of grid clocks, time punctuality for recording and genuine time taken in recording readings, average time lag of around 10 minutes can be safely assumed between reading time of CDPs. Taking the figure of units imported in 2012-13, calculations have been made to work out effect of reading time lag on system losses as well as its economic repercussions. Annexure-5 contains the calculations are made, assuming an average time lag of 10 minutes from unit import readings of 24:00hrs at CDPs, for whole FESCO grids, while recording readings of 11kV incoming and outgoing feeders at the end of each month. These calculation shows that additional units to the tune of about 0.96 million were recorded on 11kV incoming or out going with this assumed time lag of 10 minutes every month for year 2013-14 and it could have caused reduction of T&T losses by about 0.02%, thus tariff determination by NEPRA on lower side.
- On monthly basis, individual grids prepare reports containing units recorded on individual transmission lines (in case meters are installed on them) as well as units on 11kV incoming of individual transformers and 11kV outgoing feeders. On the basis of these reports, as well as units Import/Export statement received from CPPA, GSO formation of FESCO work out T&T losses. The possibility of any mistake in manual data entry cannot be ruled out altogether, which can result in wrong figure of T&T losses. However, no discrepancy was found in the data reviewed, except the one pointed out above.
- Accuracy of CTs and PTs is also another source of meter error. As per discussion with Dy. Manager (P&I), CTs and PTs have not been tested since their installation. In fact P&I division don't have requisite test equipments for this factor. Ratio test of suspected CTs are carried out in case any abnormal meter error is noticed and no problem with meter itself or circuitry is found. In fact phase angle and ratio errors of instrument transformers can result in metering errors, even if meter accuracy is correct.
- Human error in recording meter readings can also contribute towards working out of inaccurate T&T losses. Such errors affect readings greatly for meters having high multiplication factors.



both ends whereas only bus-bar losses calculated through which are negligible (Ref: Final Draft Report, Part-1). Table 4.2 shows the figures of these losses for fiscal years 2013-14

Table 4.2: T&T and 11kV Bus-bar losses

Fiscal Year	Import (Net Units Received At CDPs)	Units on 11kV Side of Power Transformers (11kV Incoming) MKWh	Units Sent-out on 11kV Outgoing Feeders (Export) MKWh	T&T Losses (w.r.t. 11kV Out-Going)	11kV Bus Bar & Aux. Losses
2013-14	10894.8	9560.8	9510.3	1.81	0.53%

The above table shows that over all T&T losses calculated on 11kV outgoing basis were 1.81%. The bus-bar losses are on higher side due to metering error of 867 feeders of outgoing side, compared to only 184 meters of incoming and reading time lag as explained in Annexur-5.

- It is also worth noting that accuracy class of meters installed at CDPs is 0.2, as such figure of units received i.e. import is of higher accuracy than the figures of units on 11kV incoming or 11kV outgoing, where most of the meters are of lower accuracy than of Import meters. In other words, it can be stated that energy meter readings recorded are not correct and cannot be used for calculation of losses. Any losses calculated with such readings will obviously not reflect a true picture.
- Accuracy of energy meters as well as their type is also one major contributor towards incorrect readings. Data received from FESCO, reveals that installed energy meters have different accuracy classes. The accuracy class varies from class 1 to 0.2. Annexure-4 gives details about Energy meters, CTs, PTs installed at different grid stations of FESCO as well as at CDPs and visited by consultant team. At most of CDPs, Energy meters are static type and of class 0.2, whereas in FESCO grids, some of energy meters are not only of electromechanical type, but also have with different accuracy class ranging from 1 to 0.2 accuracy class. This variance of accuracy can affect the meter readings, even if the meters have been properly calibrated to have %age error within its accuracy limits.
- Apart from different accuracy classes, field visits revealed that at quite few places, meters have not been tested for quite some period, especially the ones installed on 132kV transmission lines as well as on HT side of power transformers. In some cases even 11kV meters are not being tested regularly. In such situation the accuracy of readings being recorded from such meters can't be confirmed.

June	1.87
%age T&T Losses (2013-14)	1.81

The scrutiny of the above table shows that the Losses varies between 1.44% to 2.64% and the average of 1.81% for the fiscal year 2012-13. Moreover, value given for March 2014 is 0.16% which is abnormal and might be due intermixing of meter readings during this month.

This data was scrutinized in detail for which field visits were carried out to check metering arrangement as well as recording practices of energy of transmission lines and transformers. Also discussions were held with field people to arrive at conclusions about this issue. Reasons for wrong and unreasonable figures of presently worked out transmission and transformation losses are as under;

- Transmission and transformation losses are being calculated on the basis of net Import and units transformed i.e. sum of units on all outgoing 11kV feeders. Which gives wrong picture of T&T losses because of the following reasons:
 - 11kV bus-bar and auxiliary losses are being added to transformation losses,
 - Meter error of around 867 meters (present on 11kV outgoing feeders from grids feeding FESCO area) while comparing consumption with 75 meters (present on 132/11kV, 66/11kV power transformers feeding FESCO system).
- In the first place method for calculation of Transmission and transformation losses, in itself, is not correct. Transmission and transformation losses are to be calculated on the basis of net Import and units transformed i.e. sum of units on 11kV side of all 132/11kV and 66/11kV transformers installed at FESCO grids (sum of 11kV incoming of all Grids). While presently, these losses are being calculated on the basis of sum of units sent on all outgoing 11kV feeders. In this way not only 11kV bus-bar losses are being added to transformation losses, but also meter error of around 867 meters (existing on 11kV outgoing feeders from FESCO and NTDC grids feeding FESCO area) instead of 184 meters (present on 132/11kV, 66/11kV power transformers feeding FESCO system). This wrong calculation has alone affected the figure of T&T losses to a great extent.
- Calculation of losses as above is in fact calculation of grid losses of entire FESCO system, which includes transmission line losses, 132kV and 66kV bus-bar losses, transformation losses and 11kV bus bar losses. Further analysis of the data reveals that while overall T&T losses are 1.81%. Losses of 11kV bus-bar including auxiliary are 0.53% for fiscal year 2013-14. Losses of 11kV bus-bar (calculated as the difference in units received at incoming and outgoing end) are due to difference in accuracy class of meters installed at




Unfortunately, in FESCO working out of transmission losses has not been given due importance. This is quite evident from the fact that most of 132kV and 66kV transmission lines didn't have energy meters till recent past. Even now about 102 lines don't have any energy meters. Same is the situation for transformation losses and out of total 109 power transformers, only 75 have energy meters on their HT side. Apart from this, replacement of existing obsolete electromagnetic meters or even digital meters having accuracy beyond their accuracy limits have not been given priority. Although process of installation of meters on lines having no meter previously and replacement of defective meters is there, but it is at very slow pace. Paucity of funds is the main reason for this slow progress, but keeping in view that proper metering is going to add revenue to FESCO justify top priority for this process even with limited funds.

In fact, FESCO do not have all required data for calculating Transmission as well as transformation losses separately due to non-availability of energy meters installed on all the lines and on 132kV sides of power transformers. From the available data, whatever transmission and transformation losses are being calculated, these are also not giving any representative picture for transmission and transformation losses. Present practice adopted by FESCO for calculating transmission and transformation losses is explained below.

Table 4.1: Month-wise Transmission and Transformation (T&T) Losses

Month	Year 2013-14 % age T&T Losses
July	2.64
August	1.78
September	1.67
October	1.94
November	1.63
December	1.77
January	2.53
February	2.49
March	0.16
April	1.44
May	1.74



4.2.2 Transformation Losses

These losses are losses in power transformers and mainly comprises of iron losses & copper losses, while iron losses are dependent upon Construction of core, quality of material as well as of construction. Copper losses are dependent of current as well as harmonics. Transformer cooling also plays an important role in the magnitude of these losses. These losses vary from 0.5 to 0.6% of the system losses keeping in view the loading position of power transformer & quality of material used in cores.

4.2.3 Bus Bar Losses

These are the losses occurring on 132kV, 66kV and 11kV bus bar losses. Since these losses are negligible, these are ignored for working out utility losses as these constitute quite low %age of total losses.

4.2.4 Distribution Losses

These losses are the losses encountered in the distribution system i.e. 11kV lines, distribution Transformers, LT lines and service cables till the meters installed at Consumers' end. These losses depend upon loading & length of 11kV feeders, distribution transformer loading condition, LT lines/cables & service connections. Generally in DISCOs, technical distribution losses are around 8% and 12% (varying with length and feeders' load) for urban and rural feeders respectively.

4.2.5 Commercial or Administrative Losses

These losses can be because of various reasons, which can be as under;

- i. Defective meters
- ii. Non –reading /wrong reading of meters.
- iii. Un-metered connection
- iv. Theft of energy
- v. Unauthorized connections.
- vi. Consumption at grid stations for auxiliaries, control room, yard and maintenance works.

4.3 Transmission System Losses in FESCO

Transmission system losses consist of losses in transmission lines, HV bus-bars and in Power Transformers. HT bus-bars losses being quite negligible are ignored while working out transmission losses of a utility.



CHAPTER 4

Reasons for Incorrect Measurements of Transmission Losses in FESCO

4.1 Introduction

For any electric utility, losses in its transmission and distribution system constitute an important component, while working out its tariff for its energy sales. Magnitude of such losses, in fact plays an important role in making the utility profitable or otherwise. Regulating Authorities always allow certain magnitude of such losses on keeping in view the technical limits for different components of transmission and distribution system. As such, it is essential that utility should work out all its losses correctly component wise, so as not only to justify these before Regulators, but also for taking corrective measures for areas, where losses are more than standard values.

Before analyzing the reasons for incorrect measurement of losses in FESCO system, it will not be out of place to give a background of losses in any utility.

4.2 Losses in an Electric Utility

For any utility, while working out tariff for its energy sales, losses in its system are of prime importance which in turn profitability of the organization is to be ascertained along with other components like cost of purchased energy, fixed & variable O&M cost, financial changes/deprivations which effects revenue generation of utility. The losses comprises of the following components:

1. Transmission losses
2. Transformation losses
3. Bus Bar losses
4. Distribution losses
5. Commercial or administrative losses

Losses from Sr. 1 to 3 are only technical whereas Distribution Losses have two parts i.e. Technical and commercial or administrative Losses.

4.2.1 Transmission Losses

These losses are the losses encountered in transmission system of the utility which may be operating at voltage level of 500kV, 220kV, 132kV & 66kV. These losses are dependent upon voltage level, length of lines loading of lines, type of conductor & condition of line.

These losses vary from 1.5% to 3% keeping in view the condition of transmission lines, voltage levels, power factor and line loading.



3.4 Existing Practice of Recording of Energy Meters Readings

Hourly readings of all energy meters installed in a grid station are being recorded by operator on duty. In addition, at 2400Hrs. energy meter readings are recorded for recording daily energy received/sent-out on 132kV/66kV lines (where ever line meters are installed) and 11kV feeders. In addition, if energy meters on other side of 132kV lines, energy sent out on individual 11kV outgoing feeders as well as readings from other end, wherever meters are installed. At the end of month, SSO in-charge calculates transmission lines losses as well as grid losses. However, because of absence of any written SOP or standing instructions, readings of transmission lines/132kV side energy meters of transformers as well as calculations of transmission /grid losses are not being done.

3.5 Existing Practice of Testing of PTs, CTs and Energy Meters

Presently there is no practice of testing of PTs/CTs installed in FESCO grid station periodically. In case of any suspected problem with any CT or PT, only its ratio test is carried out, for which also, no meters of high accuracy also available.

Checking/testing and sealing of all incoming and outgoing meters in 132kV grid stations should be carried out once a year and 11kv feeders' meters should be checked twice a year, by a committee headed by Dy. Manager SS&T concerned with following members;

1. Dy. Manager Tech. M&T (concerned)
2. Dy. Manager Operation (concerned)
3. Dy. Manager /Assistant Manager (P&I)

As per P&I and M&T no specific orders exists for 132kV meters testing, therefore, most of 132kV meters have not been tested over the years.

During testing, any meter found having accuracy beyond its accuracy class is recommended for replacement. Concerned Resident Engineer or SSO In charge initiate request for issuance of new meters for replacement, however, which takes quite time due to non-availability of new meters.

Billing energy meters installed at 132kV consumer grids are tested biannually. The team comprises of followings;

1. Manager M&T
2. Manager GSO
3. Manager Operation
4. Concerned Dy. Manager SS&T
5. Concerned Dy. Manager Operation
6. Dy. Manager P&I



meters are installed on them as depicted by CPPA monthly statements of metering data of CDPs. 132kV consumer-grid was also visited to review the metering system being used for billing. Detail of Energy meters installed at different locations as collected through GSO formation of FESCO is given below;

i. FESCO

FESCO has 138 Transmission Lines and 184 nos. 132/66kV, 132/11kV and 66/11kV Power Transformers respectively.

276 Meters are required to be installed on both ends of these Transmission Lines circuits. Out of which only 174 Nos. are installed.

Similarly 184 Meters are required to be installed with Power Transformer whereas only 75 meters are installed

Main and backup energy meters are installed in each of grid station visited in separate locked metering room, key of which is with the concerned Dy. Manager Operation who record himself the reading of these meters at the end of each month.

ii. NTDC

Three NTDC grid stations are feeding FESCO and revenue energy meters have been installed on 132kV side of 220/132kV power transformers, and CPPA is billing FESCO on the basis of these meters. Number of such meters is 39. There is One 500kv NTDC grid-station at Gatti and Seven numbers 220kV Grid-stations at Sumandri Road, Nishatabad, Jaranwala Road, Ludewala, Daud Khail, Toba Tak Sing and Bandala.

iii. IPPs

Through 132kV circuits, FESCO is getting power from Six IPPs. Energy meters are installed on the emanating lines and are being used by CPPA for payment to these IPPs as well as for invoicing energy sent from these to FESCO.

3.3 Data of Installed Metering System

Annexure-4 contains the information about PTs, CTs and energy meters at FESCO grids, NTDC grids and IPPs. All the meters installed at these places are mostly of accuracy class 0.2.

Annexure-4 also gives the details of energy meters, installed on transmission lines and power transformers, location wise as well as Accuracy class wise and type wise. Number of Energy meters installed on 220/132kV transformers in NTDC grids as well as the ones installed in IPPs, on their step up transformers, have not been included in this list, since these are not required for calculation of transmission losses of FESCO. The meters installed in other DISCOs have also not been included because their details are not available.



Chapter 3

Existing Metering System of FESCO Transmission Network

3.1 Introduction

In any electrical utility, proper accounting of energy purchased and sold is of paramount importance, as it is the basis for establishing the profitability or loss of the entity. To achieve this objective, it is essential that arrangements be made to measure accurately energy at all intake and outlet points of the utility. This can be ascertained by installing a reliable and accurate metering system, proper recording of these at specified time intervals and then accurate working out figures of energy purchased and sold. FESCO has also established a metering system to achieve this objective, although it lacks in certain aspects, details of which will be explained in forthcoming chapters. This chapter gives details of existing metering system of FESCO.

3.2 Details of Installed Metering System

Metering system comprise of following three elements;

- i. Potential Transformers (PT)
- ii. Current Transformers (CT)
- iii. Energy Meters

The details of these as installed in FESCO transmission network is as under;

3.2.1 Potential Transformers (PTs)

In almost all the grid stations no independent PTs for metering are installed. Only in NTDC grid stations (CDP for FESCO) and having Secured Metering System (SMS), some IPPs have independent PTs for energy meters. Otherwise, metering core of Bus-bar PTs is being utilized for this purpose. Most of the PTs are Oil-filled with accuracy class 0.5. These are of different make and grid wise details, for the ones visited by the consultant team, are given in Annexure-3.

3.2.2. Current Transformers (CTs)

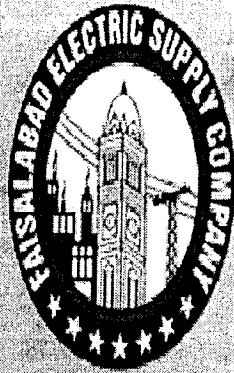
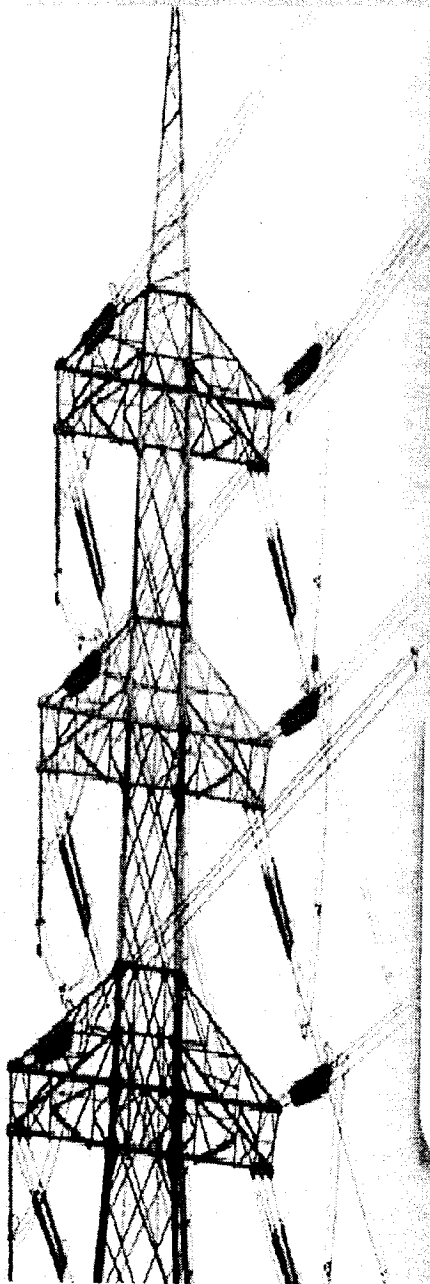
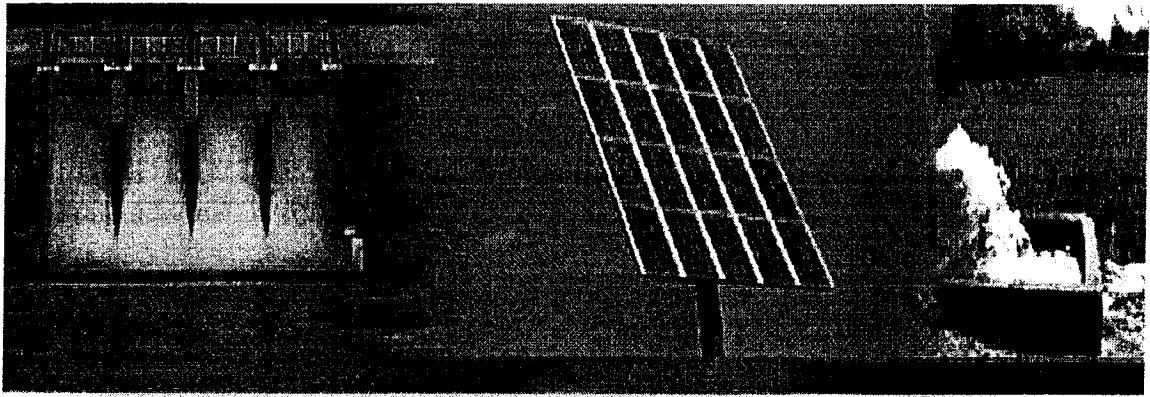
Independent CTs for metering have not been installed in any grid station except at some of NTDC grids for SMS. Metering core of CTs is being used for energy meter, wherever installed on 132kV lines or 132kV sides of transformers. These CTs are Oil-filled and of accuracy class 0.5, but of different makes. For SMS the accuracy class of CTs is 0.2. Details of CTs installed at different grid stations and noted during field visits are given in Annexure-3.

3.2.3. Energy Meters

Energy meters of various types and makes, having different Accuracy class are installed at FESCO grid stations as well as at NTDC grid stations feeding FESCO system. No information about the meters installed on lines terminating in adjoining DISCOs is available, except that



FESCO INTEGRATED INVESTMENT PLAN



5-YEAR INTEGRATED
GENERATION TRANSMISSION
AND DISTRIBUTION PLAN (IGTDP)
2015-16 TO 2019-20

P&D DEPARTMENT FESCO HQ CANAL ROAD FAISALABAD

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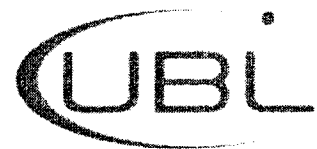
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Technical Report on 5-Year Integrated
Generation, Transmission & Distribution Plan
for
**FAISALABAD ELECTRIC SUPPLY COMPANY
LIMITED (FESCO)**

Client / Owner:

**United Bank Limited – UBL Islamabad,
Pakistan**



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TECHNICAL REPORT ON 5-YEAR INTEGRATED GENERATION, TRANSMISSION & DISTRIBUTION PLAN FOR FESCO

Prepared for:

United Bank Limited - UBL
Attn. Mr. Ali Adnan
8th Floor, State Life Building # 1
Chundrigar Road, Karachi
PAKISTAN
Tel.: +92 21 990332949
Fax: +92 21 32412410

Prepared by:

Lahmeyer International GmbH
Friedberger Strasse 173
61118 Bad Vilbel
Germany
Inspection status: In process
Project GE2 20-21-00101

Revision History:

Rev.	Date	Author	Checked by	Approved by
R0	31.07.2015	Dusan Bankovic Hans-Karl Dorn	Hans-Karl Dorn	
R1	07.08.2015	Dusan Bankovic Hans-Karl Dorn	Hans-Karl Dorn	

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BOQ	Bill of Quantity
CPPA	Central Power Purchasing Agency
ELR	Energy Loss Reduction
FIRR	Financial Internal Rate of Return
IGTD	Integrated Generation Transmission and Distribution Plan
PDEIP	Power Distribution Enhancement Investment Program
PEPCO	Pakistan Electric Power Company
PKR	Pakistan Rupees
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency index
DISCO	Power Distribution Company
FESCO	Faisalabad Electric Supply Company Limited
GENCO	Power Generation Company
GOP	Government of Pakistan
IPP	Independent Power Producer
LDC	Load Dispatch Centre
HV	High Voltage
IEC	International Electrotechnical Commission
kV	Kilovolts
MV	Medium Voltage
LV	Low Voltage
MW	Megawatt
TL	Power Transmission Line
LI	Lahmeyer International GmbH
NTDC	National Transmission and Dispatch Company
O&M	Operation and Maintenance



PC	Privatisation Commission
PES	Pakistan Engineering Services
PPA	Power Purchase Agreement
TA	Technical Advisor (Lahmeyer International)
TDD	Technical Due Diligence
UBL	United Bank Limited
USD	Dollar of the United States of America
WAPDA	Water and Power Development Authority of Pakistan
NEPRA	National Electric Power Regulatory Authority

1 Introduction

1.1 General

The Government of Pakistan (GOP) is implementing a comprehensive reform and restructuring programme of Pakistan Power Sector as part of the approved Power Sector Strategic Plan for corporatisation, commercialization and subsequent privatisation.

Whereas previous reforms have already led to an unbundling of the vertically integrated power wing of WAPDA into fifteen independent companies, i.e. four Thermal Generation Companies (GENCOs), one National Transmission and Dispatch Company (NTDC), and ten Distribution Companies (DISCOs) as an essential preparatory step for corporatisation, commercialization and subsequent privatisation of the assets of these companies, the privatisation of these state-owned entities has to be carried out in further steps to complete the restructuring process.

Faisalabad Electric Supply Corporation Limited (FESCO) is a power distribution company (DISCO) with headquarters located in Faisalabad, a major city in the northern part of province of Punjab. FESCO has been established after the decision to segregate the power generation, transmission and distribution functions of WAPDA. The company was registered as public limited company on March 21 1998, and is wholly-owned by GOP.

FESCO is supplying electricity to approximately 3.3 million customers within the region of Faisalabad under an independent Distribution License granted by National Electric Power Regulatory Authority (NEPRA), pursuant to the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (NEPRA Act). Geographical service area of FESCO covers 36,122 sq. km and comprises of Faisalabad, Sargodha, Mianwali, Khushab, Jhang, Bhakker, T.T Singh and Chiniot districts. FESCO service area is adjoining GEPCO in the north, LESCO in the east and MEPCO in the south.

TA was informed that an Investor will be sought through public tendering and he shall operate and maintain the system according to the stipulations set by NEPRA, national, partly

international standards and laws of Pakistan and has to invest in FESCO's power system according to the framework identified by the 5-year IGTDP.

Although the main focus of this Report is the 5-year IGTDP as received in July 2015, additional information provided by FESCO has also been considered and is respectively referenced where applicable.

1.2 Background

For a number of years FESCO has made significant investments in order to connect new customers, extend the system, rehabilitate the existing assets, reduce losses, optimise operation and maintenance, and improve reliability and services. Consequently, 5 year plans are prepared on regular basis, approved by relevant Governmental Authorities and finally implemented. This iteration of "5 Year Integrated Generation, Transmission and Distribution Plan" (IGTDP, so-called "Optimal version") has been prepared by FESCO in July 2015 and covers the period of the financial years 2014-15 to 2018-19. This update of July 2015 supersedes previous version issued in June 2015 and takes into account latest developments in the power generation and transmission sector. The document presents a thorough and comprehensive overview and analysis of the present situation, outlines necessary works to be performed and provides justifications of need, volume and costs of FESCO investment plans, and FESCO intends to use it as basis and justification for submission of Multi-Year Tarif Petition. At first glance the IGTDP may give the impression that FESCO's power system is in poor shape, however the good performance and indicators are not detailed and Report is emphasising the weak points and comprehensively presents remedial actions with justification. Main system deficiencies identified in the IGTDP that also correspond to the consultant's findings are:

- Heavily loaded or overloaded transmission lines and power transformers of all voltage levels
- Certain equipment is not overloaded only due to long lasting load shedding
- A number of old and obsolete switchgear, control and protection equipment and meters
- Increased losses due to low power factor

1.3 Executive Summary

This report has been prepared by Lahmeyer International (LI) together with the local partner Pakistan Engineering Services (PES) in the role as Technical Advisor (TA) to United Bank Limited (UBL), acting as the Financial Advisor for the Privatisation Commission (PC) of GOP during the restructuring and privatization of Faisalabad Electric Supply Corporation Limited (FESCO). This report covers technical review and issues of relevance identified in the IGTDP.

The main focus of this Report is to provide an overall assessment of completeness and plausibility of the measures proposed by FESCO by IGTDP for the next 5 years, with emphasis on estimated costs of capital investments not covered by already planned/budgeted works, technical staffing needs and performance indicators. Although this Report has been prepared based on information provided in the IGTDP, additional information and data available in other related documents has also been considered and the report in hand contains all relevant information and assessment results considering the information known and made available to the TA.

One of the biggest challenges FESCO is continuously facing is shortfall in available power to be supplied to its consumers. Furthermore, it is very difficult to reliably estimate the volume of available energy in the future since FESCO does not possess any power generation facilities of its own and is primarily purchasing power from NTDC pursuant to the Electricity Supply Agreement, signed between FESCO and WAPDA in 1998. Relatively small power quantities (less than 50 MW) are also being procured from independent power producers (IPPs) in the area. IGTDP contains Generation Plan for NTDC system up to 2021-22, however there is no clear confirmation of the ratio of new generation to be made available to FESCO, and IGTDP assumes that their share will remain similar to present ones. This fact is critical for any kind of reliable estimate on FESCO's income and detailed financial analysis. Based on available information, IGTDP assumptions and plans appear justified and reasonable, taking into account identified constraints and uncertainties.

Another important development is proposed creation of additional organizational units, namely 1 new Operation Circle, 3 new Operation Divisions and 42 new Sub-Divisions in sev-

eral stages. Major tangible impact of reorganization is expected in the short-term by reducing administrative losses, and in medium-term by reducing technical losses by improving maintenance and repairs as well as providing timely and accurate information needed for further system planning. Non-tangible effects like improvement of customer services are also expected. Since establishment of these additional organizational units has been put on temporary hold by NEPRA the details have not been elaborated in the IGTDP, however based on information contained in FESCO Tarif Petitions for 2013-14 and 2014-15 this proposal appears justified.

Overall, IGTDP contains full scope of works to be undertaken by FESCO in the next 5 years to achieve optimal system performance with reasonable investments.

2 Review of Planned Works

2.1 General

FESCO service territory covers Civil Districts of Faisalabad, Jhang, Chiniot, Toba Tek Singh, Bhakkar, Mianwali, Khushab and Sargodha. FESCO jurisdiction covers an area of approximately 47,000 km² of these districts. Presently FESCO has 4 Operation Circles, 21 Operation Divisions and 118 Operation Sub Divisions. The electrification rate of the service area is more than 90 %.

Table 1 – FESCO Facilities as of 2014-15

TOTAL GRID STATIONS	102	Nos.
132KV Grid Stations	62	Nos.
66KV Grid Stations	23	Nos.
132KV Consumer (Private) Grid Stations	17	Nos.
TOTAL TRANSMISSION LINE LENGTHS	3125	Km
132KV Transmission Lines – Single Circuit	606	Km
132KV Transmission Lines – Double Circuit	1259	Km
66KV Transmission Lines – Single Circuit	1147	Km
66KV Transmission Lines – Double Circuit	113	Km
TOTAL MV AND LV DATA (AS OF 2013)		
11kV Transmission Lines	37643	Km
LV Line (400/230 Volts)	25436	Km
Distribution Transformers	88,671	Nos.

2.2 Ongoing Projects

In planning period covered by IGTDP 3 projects are now in the phase of implementation, funded by the Asian Development Bank (ADB) with local contribution. Some of the revenues from the present IGTDP and from the years thereafter need to be used to pay back the loans. In case of Privatisation of FESCO, details of the repayment scheme and relationships between Investor, GOP and ADB must be agreed upon and formalized.

Table 2 – Committed and ongoing ADB Projects of the Power Distribution Enhancement Investment Program (PDEIP)

NO.	DESCRIPTION	COMPLETION DATE	ESCALATED AMOUNT (MIL. LION RS)
1	PDEIP Tranche-II	June 2016	1353
2	PDEIP Tranche-III	June 2016	2076
3	PDEIP Tranche-IV	December 2016	1699
Total Committed Projects			5128

Table 3 – Scope of PDEI Projects

NO.	DESCRIPTION	UNIT	2015-16	2016-17	TOTAL
1	New grid stations 132/11 kV	No.	-	2	2
2	Conversion of grid stations (66 KV to 132 KV)	No.	-	4	4
3	Extension of power transformers 132/11 kV	No.	4	16	22
4	Augmentation of power transformers 132/11 kV	No.	14	15	19
5	New 132 KV double circuit transmission lines with one circuit strung	No.	-	5	5

Since these projects are already approved and committed they are not further analysed in this Report.

2.3 Load Flow and Loss Reduction

On 30.06.2015 document titled "Draft Study of Transmission and Transformation Losses of FESCO" has been submitted to FESCO by M/s Power Planners International. The study examined the 132 kV and 66 kV networks through network calculations for maximum and minimum load of each month of 2013 – 2014 period and verified the results with measurements at site. This allowed identifying accurate measures to reduce losses in the HV power grid and calculate the possible savings. Statistical evaluation brought out annual average power loss of the HV grid as 37.22 MW with a standard deviation of 13.17 MW.

The aforementioned Study proposes an almost identical scope of necessary works in the 132 kV and 66 kV grids compared to measures identified in IGTDP. It should be mentioned that the losses in 11 kV and 0.4 kV grids are far higher than those of the HV network but the principle recommendations of the Study can also be translated into the distribution grids. Separate study dedicated to distribution system losses has been commissioned and is under preparation.

Furthermore actions are already undertaken to purchase the software and network planning tools for MV/LV grids as well as to train the FESCO staff in its use, thus enabling proper and continuous monitoring and analysis of losses in FESCO network.

2.4 Identified IGTDP Projects

The IGTDP studies the state of the different assets in order to define necessary replacements of old and defective items. Load flow calculations, based on the latest demand forecasts defined further assets that need to be constructed in order to comply with set rules for operation of the system. Finally, the requirements to connect new consumers led to the definition of further equipment to be purchased. Apart from above-mentioned ADB funded works, IGTDP identifies 16 projects and the respective quantities where activities are necessary in order to eliminate present and future weak points of FESCO system. Table 4 below outlines the said works:

These works have been further divided into 6 projects that are analysed in detail

1. Transmission Expansion Project
2. Transmission Rehabilitation Project
3. Distribution Expansion Project
4. Distribution Rehabilitation Project
5. Vehicles, Tools and Plants (T&P)
6. Civil Works

Table 4 – Works identified in IGTDP

NO.	DESCRIPTION	QTY	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	TOTAL
1	New Grid Stations	No.	3	4	3	4	1	15
2	Conversion of Substations from 66 KV to 132 KV)	No.	3	1	1	0	0	5
3	Extension of Power Trans- formers	No.	2	4	1	1	5	13
4	Augmentation of Power Trans- formers	No.	1	10	4	9	9	33
5	Extension of Line Bays	No.	13	10	6	4	2	35
6	New double circuit 132 KV Line with one circuit strung	No.	9	7	6	7	2	31
	2nd Circuit Stringing	No.	2	3	2	1	0	8
7	Reconductoring of HV Lines	No.	3	2	1	0	0	6
8	Installation of 132 KV Capaci- tors at Substations	No.	1	0	1	0	0	2
9	Rehabilitation of 11 kV Feed- ers	No.	30	35	40	45	50	200
10	Rehabilitation of LV Feeders	No.	700	750	800	850	900	4,000
11	New 11 KV Lines	Km	529	730	642	700	765	3366
12	Reconductoring of 11 KV Lines	Km	285	305	325	345	365	1625
13	New LV Lines	Km	580	630	680	730	780	3400
14	Reconductoring of LV Lines	Km	13	14	15	16	17	75
15	New Service Connections	No. (000)	150	162	177	195	216	900
16	Replacement of Distribution Transformers	No.	1,200	1,100	1,000	900	800	5,000
17	Replacement of Energy Me- ters	No. (000)	78	90	102	111	119	500

3 Analysis of Projects Identified in IGTDP

3.1 Transmission Expansion Project

3.1.1 Load Flow Studies

In order to identify overloaded elements FESCO performed load flow studies and determined the necessary extension works and related costs for each planning year. Each calculation provided as well the total losses for each case, so that the difference between the cases without and with extension shows the savings achieved by the extension works. For the last year of planning some minor recommended changes were not taken into account, so that few hours of load shedding will still be necessary. This is fully acceptable, since many modifications in the grid will be carried out till 2019, demand figures are uncertain and the availability of power is not guaranteed.

FESCO's practice for load flow calculations was found to be in accordance to international industry standards. FESCO stated that the load flows were carried out with the maximum demand of power available from generation in accordance with the latest forecast of available power. This means that the actual situation might change with the calculated load forecast and achieved savings but it is not realistic to reduce the prevailing present bottlenecks according to an energy that will not be provided. All new extension works will provide sufficient spare capacity for additional power after the drop of load shedding, only the existing equipment is heavily loaded and cannot overcome a complete stop of load shedding.

The load flow studies calculated the following savings for the assumed available maximum power demands; actual load shedding figures will alter these results:

Table 5 - Energy savings due to IGTDP

YEAR	LOSS REDUCTION (MW)		POTENTIAL SAVING IN ENERGY (MWH)	
	CURRENT	CUMULATIVE	CURRENT	CUMULATIVE
2015-16	1.2	1.2	5.8	5.8
2016-17	4.6	5.8	22.28	28.08
2017-18	1.7	7.5	8.23	36.31
2018-19	8.9	16.4	43.11	79.42
2019-20	2.4	18.8	11.63	91.05

3.1.2 Short-Circuit Analysis

The TA checked the performed studies and has no remarks or objections.

3.1.3 Scope of Works and Costs

The load flow studies identified which additional equipment is needed, i.e. 132 kV transmission lines, 132/11 kV substations, reconductoring, additional 2nd circuit, power transformer, capacitor banks and related control equipment. The material is presented in numerous long and detailed Excel lists in Annex A of the IGTDP. The TA checked the lists on plausibility, discussed the lists with FESCO engineers and could not detect deficiencies.

The project list of costs was also verified on plausibility and discussions took place with FESCO engineers concerning doubtful amounts. All queries have been cleared by FESCO engineers and TA does not have further comments.

3.2 Distribution Expansion Project

3.2.1 Scope of Works

This project envisages expansion of Distribution network during the years 2015-2016 to 2018-2019 consisting of the following works:

- a) Providing 900,000 new electricity connections to the prospective customers.
- b) Addition of 1,585 km 11 kV line.
- c) Addition of 892 km LT line.
- d) Installation of 24,397 distribution transformers of different capacities

The connection of 900,000 new customers seems a high number compared with the present number of 3.5 million customers; FESCO has installed 451,590 connections (both rural and urban) during the period 2008-09 to 2012-13, giving an average connections installed per year of 90,318. In view of the aim to expand the electrification in the coming years the high estimate could be justified. However, a slow connection rate in the first years, followed by a higher in a later planning period might be more useful, since people without public electrici-

ty are transferred to customers with load shedding of numerous hours and public and the community will not understand this development.

For 900,000 customers FESCO determines with data of the new electrification data of the last 5 Year Plan and general load data the necessary

- 11 kV lines
- 0.4 kV lines
- distribution transformers
- service connections

The TA checked the performed estimations and has no remarks or objections.

3.2.2 Project Costs

The costs of the project were also taken from the ongoing projects. Therefore data of average length of LT and 11 kV lines, demand per consumer, necessary transformer capacity, and needed kWh meters were derived from past figures. FESCO assumed that 30 % of the new customers will not require an 11 KV line and can be connected with a LT line. If a lower percentage is reached, the cost will rise accordingly.

The cost of the necessary 132/11 kV transformers, 132/11 kV substations and 132 kV lines were not taken into consideration. FESCO explained that respective costs are included, since the received contribution for connection fee by the 11 kV and higher kV customers was reduced accordingly. The losses due to the new connections were also included in the cost estimate.

3.3 Rehabilitation of the Existing 132 kV Transmission Network

Rehabilitation is required on equipment at various grid stations and transmission lines which have exceeded their useful life, have become deteriorated due to excess wear and tear or have become outdated and their spares are not available in local market. Due to these reasons, they cause frequent faults and loss of energy in the shape of leakages etc.

Concerning 132/11 kV grid stations, the IGTDP lists on page 49 and in the Annex in more detail 19 elements of grid stations that shall be replaced in the coming years. The list contains complete equipment, such as 11 kV bus couplers as well as small individual items such as 11 kV lightning arrestors.

Concerning the replacement/reconductoring of 132 kV transmission lines, the IGTDP lists on page 50 (in the Annex in more detail) 6 lines with a total length of 119 km to be refurbished in the coming years.

The TA checked the presented lists and has no doubt on the necessity of the identified works. In addition we are convinced that delays in performing the identified works would not be beneficial to the reliability of FESCO 132 kV system.

3.4 Distribution Rehabilitation Project

3.4.1 Scope of Works

The objective of the Distribution Rehabilitation Project is to reduce technical losses, resulting from power losses and overloads in the distribution conductors and equipment including losses due to additional current flowing in the system on account of poor power factor of customer loads. The reduction of these losses will release additional power to the distribution system, simultaneously the different rehabilitation measures will contribute in improving the distribution system supply voltage, continuity of supply, system stability, reliability and safety.

Presently the losses during the maximum supply periods are high, and are reduced to a more acceptable level in the minimum supply periods. This proves that the system must be improved in order to cope with higher demands.

The selection of candidate feeders for Distribution Rehabilitation was made on the basis of ranking by Loss Index, developed through the WAPDA Energy Loss Reduction Programme. The highest loss feeders are expected to yield the best return on capital investment in rehabilitation. Through references to the technical loss database about 200 highest technical

loss feeders out of over 825 feeders in the FESCO Faisalabad 11 KV networks and 4,000 0,4 kV feeders have been selected.

In addition, various materials are selected to be installed within the planning period including,

- New 3-Phase 11 KV Lines
- 11 KV and 0.4 kV Line Reconductoring
- 11 KV Capacitors 450 KVAR
- Replacement of Over Loaded Transformers 50, 100 and 200 kVA
- New Transformer Sub Stations
- New 3 and 1 Phase LT Lines (Wasp, Ant)
- 11 KV Panels
- Energy Meters
- PVC Cables
- Connectors
- Replacement of Earthings
- 11 KV 500 mm² Power Cable

The TA checked the presented lists and has no doubt on the necessity of the identified works. In addition we are convinced that a delay of the identified works would not be beneficial to the reliability of FESCO distribution system. A spreading of the works over a longer time horizon seems only possible in the last years of the planning period, since the present deficiencies need immediate actions.

3.4.2 Project Costs

The cost is presented in numerous long and detailed Excel lists. The TA checked the lists on plausibility, discussed the lists with FESCO engineers and could not detect doubtful amounts.

3.5 Operation and Maintenance

FESCO estimated the requirements for the following:

- Operating staff
- Vehicles
- Tools and Plants
- Civil works

Based on the staffing of the existing substations, the number of persons and their qualifications are listed and finally multiplied with the present salary and allowances for analysis purposes.

Similarly the number of necessary vehicles are determined on the experience with the present O&M practices and valued with the present price level for vehicles.

Based on the number of maintenance staff and the planned substations and transmission lines the necessary tools and plants, including the safety equipment, are also determined.

The extensive and widespread lists are logic and comprehensive and the plausibility of prices has been checked and can be accepted.

3.6 Civil Works

IGTDP contains the additional requirements for civil works for the new substations and the construction of the transmission lines, covering the following:

- Cost of land
- Cost of civil works for substations
- Cost of civil material for substations
- Engineering costs
- Environment mitigation resettlement cost
- Residential / Non Residential buildings and boundary walls
- Parking sheds
- Underground water tank
- Transmission line tower foundation

FESCO civil engineers appear very experienced and competent, since the established lists of civil works and costs are voluminous and very detailed. The documentation can be accepted.

4 Environmental and Social Safeguards

FESCO is committed and follows the environmental laws, has set up the internal specifications to pursue these and controls the implementation. For all activities the respective guidelines and rules exist. The envisaged program will expand the ongoing activities for distribution of electric power and will remain within the already practised requirements of EIA and IEE.

The main task concerning the environmental policy of the company is that the existing rules and regulations are strictly followed.

5 Implementation Schedule

The indicated implementation schedules may be too ambitious; it is unlikely that FESCO in-house teams can complete the envisaged projects within the given timeframe. Small electrical works will need about 12 months and the construction of 132/11 kV substations and the construction of 132 kV transmission line about 12 months. In particular the procurement of big power transformers has long delivery times. This can be partially remedied by engaging independent Contractors to work in parallel on certain projects.

6 Constraints of the Project

The proposed scope of rehabilitation and extension works seems appropriate and well balanced for the expenditure in the short and longer term. The rehabilitation works are justified given the age of some installations and the degrading over the years.

The most important risk of the project is based on non-availability of energy and ongoing load shedding.

If less power is available, smaller revenues are achieved, and the complete organization suffers from this and personnel are blocked from handling the deficiencies. In addition customers are prevented from the use of electric appliances since they cannot rely on this technology, resulting in reduced sale of kWhs. FESCO is assuming that the deficit will remain throughout the coming 5 years of the IGTDP with power deficit between about 600 and 400 MW. However, the reduced supply will keep the losses at a low level.

If more power is available, more power is sold and bigger revenues are achieved. Due to the already fully loaded assets, the load factor reaches almost 80 %; higher losses will be recorded than presently recorded. Thus the actions for reductions for loss reductions are offset by higher losses due to bigger supply from NTDC. However, FESCO indicated that the increased revenues offset the higher cost of greater losses. The higher load has technical consequences, since damages due to overload occur, equipment is switched off, due to overload or transformers are ageing due to higher temperatures.

The coming load shedding cannot be predicted, since they depend of many outside parameter, such as demand of other discos, construction of power plants, outages of generation plants, outages of HV transmission system and even weather conditions with more or less water for hydro plants.

Another risk lies in the forecast of the loss reductions. It cannot precisely be predicted what loss reduction the different investments will achieve and what measure the most effective loss reduction will provide. The different measures can be judged but the comparison between the different activities is difficult. For example, is it better to install a capacitor or shall a LV line be doubled. In addition the losses interact with the available amount of power and the load shedding.

7 Availability of Energy and Load Shedding

FESCO experienced a tremendous rise in electricity demand starting in 2006. Since then, increase in demand was setting up new record, which eventually culminated at 2748 MW in 2012-13. Unavailability of power resulted in long-lasting, widespread and often unscheduled load shedding, resulting in economic losses to the customers and inconvenience to the public due to load shedding.

This constant deficit of power severely affects the value of FESCO's assets, their performance and the estimate of the necessary refurbishment and uprating to meet future demand. The dimensioning of FESCO assets is influenced in a manifold way.

At the beginning of a load shedding period, demand is higher than under normal supply conditions since customers try to catch up the use of electricity that was interrupted. However even during normal supply periods, demand would be much higher since consumers are prevented using electric appliances, machines and they substitute the use of electric power since it is not a reliable source of energy. Consequently, it is difficult to assess if the present installations are sufficient or are under dimensioned. The present load does not provide sufficient gauge for judgement for a theoretical undisturbed present nor for the future situation. Especially the assessment for the future supply situation is difficult, since consumer composition and their requirements vary significantly.

A further uncertainty lays in future supply from common delivery points. It is expected that the bulk of energy to cover the present load deficit will be injected into FESCO grid from NTDC substations. 40 % to 50 % of additional power needs to be distributed by FESCO from NTDC substations and detailed analysis is necessary, how the new energy flow will pass through FESCO grid. It is likely that additional NTDC substations will be constructed and FESCO has to integrate them in the present grid. Consequently reliable planning data must be available first from the GENCOs and private enterprises which are constructing new power plants and secondly, as a consequence from NTDC transmitting additional power to FESCO's common supply points. Reinforcement of FESCO grids will be necessary, however

comprehensive estimate and recommendation is not possible without detailed information on both scope and timelines for reinforcement of NTDC/GENCO facilities.

IGTDP presents the following expected power demand in FESCO system, by considering the Generation Expansion Plan, as well as existing and proposed IPPs in FESCO service areas:

Table 5 – Expected power demand, available supply allocation and deficit (in MW)

YEAR	DEMAND		SUPPLY - NTDC		DEFICIT/GAP		GENERATION - IPPs		NET DEFICIT	
	PEAK	OFF PEAK	PEAK	OFF PEAK	PEAK	OFF PEAK	PEAK	OFF PEAK @ 70% OF PEAK	PEAK	OFF PEAK
2015-16	3261	2446	2130	1598	1131	848	432.7	302.9	-698.3	-545.1
2016-17	3474	2606	2290	1718	1184	888	532.7	399.5	-651.3	-488.5
2017-18	3728	2796	2486	1865	1242	931	588.7	441.5	-653.3	-489.5
2018-19	4009	3007	2703	2027	1306	980	618.7	433	-687.3	-547
2019-20	4314	3020	2971	2079	1343	941	710	497	-633	-444

As shown above, peak power deficit is expected to shrink from 21.4% of peak demand in 2015-16 to 14.67% of peak demand in 2019-20. This will have positive effects in loss reductions, performance indices and consequently on energy sales and income.

It should be kept in mind, however, that available power from NTDC has been derived from NTDC Generation Expansion Plan assuming identical share assigned to FESCO as for 2014-15, and that all power from new IPPs in FESCO area will be 100% available to FESCO. This may change depending on NTDC needs with corresponding effects on energy sales and system performance.

8 Technical Staffing and HR

Although the IGTDP does not contain consolidated and comprehensive elaboration of present and future number of employees and staff, this information can be compiled from the following documents:

- a) Tariff Petition of FESCO for FY 2013-14
- b) Tariff Petition of FESCO for FY 2014-15
- c) FESCO Annual Report for 2012-13 (the latest available version)
- d) Draft Multi-Year Tariff Petition

These documents should also be read in conjunction with other Reports prepared by the Consortium, particularly HR Issues and Proposed Strategies and HR Due Diligence Report prepared by M/s Excelerate Private Limited and dated February and March 2015, respectively. Minor discrepancies are due to different cut-of/survey dates used in preparation of said reports.

Several key observations can be made based on available documents:

1. As of March 2015 approximately 52% of FESCO employees are in technical positions (11,874 out of 19,780).
2. In the next five years (2015-2020) 3,047 employees are expected to retire due to age, followed by another 2,672 in the next year (2021). Depending on post-Privatization Business Development Strategy, FESCO manpower can be reduced by closing the positions made vacant by retirements.
3. Also dependant on post-Privatization Business Development Strategy is the possibility to outsource non-core and/or non-critical activities and reduce the number of employees.
4. Another opportunity for manpower reduction can be the proposed/mandated automation of FESCO operation (use of ERP systems, installation of automated energy meters etc.), especially in non-core non-technical positions. However it would be advisable to introduce such changes gradually in order to both ensure business continuity as well as reduce social implications of manpower reduction both within FESCO and within wider community.
5. On the other hand, considering creation of additional Operational Circles, Divisions and Sub-Divisions together with FESCO plans to add further 900,000 consumers by

2020 (increase of approx. 27% compared to 2014-15) it is expected that additional technical staff for system operation and repair would be required.

According to current data and provided information, FESCO is optimally staffed at present in terms of manpower. There are certain variations and gaps in terms of positions and levels which could be managed through internal transfers and training. For details please refer aforementioned HR Due Diligence Report prepared by M/s Excelerate.

The exact headcount and manpower required up to 2020 cannot be deduced from the information presently available, since it is dependent on timeline for establishment of additional organization units and post-Privatization Business Development Strategy which is unknown.

9 System Performance Indices

The system-wide performance indices set by NEPRA for DISCOs and FESCO results for 2013-14 are:

1. System Average Interruption Duration Index (SAIDI) of supply of power per consumer per annum shall not exceed (14) fourteen (OS2).

FESCO: 132 KV - 0; 66 KV – 1574; 11 KV – 1279; 400/230 V – 1137;

2. System Average Interruption Frequency Index (SAIFI) of supply of power per consumer per annum shall not exceed (13) thirteen (OS1).

FESCO: 132 KV - 0; 66 KV – 4; 11 KV – 26.82; 400/230 V – 35.4;

3. Power is to be supplied to at least 95% of its consumers within the range of $\pm 5\%$ of the nominal voltage (OS4).

FESCO: In 2013-14 no consumers on 66 kV and 132 kV levels reported low voltages; on 11 kV and LV levels total of 13,169 requests for power supply voltage to be checked have received and remedial action followed in 8,961 cases.

4. Reliability of supply: following table shows performance standards set by NEPRA for long duration (lasting more than three minutes) power supply interruptions (GS1

through GS5) and short duration (lasting less than three minutes) power supply interruptions (GS6) for each and every individual consumer of a DISCO:

Table 6 – NEPRA Standards on Reliability of supply

GS #	AFFECTED CONSUMERS	PERFORMANCE STANDARDS			
GS-1	In Urban Areas	10 Hours			
	In Rural Areas	16 Hours			
	Consumer Voltage →	132/66	33/11	400/230 Volts	
	Standard ↓	KV	KV	Urban	Rural
GS-2	Max: number of un-planned interruptions for each individual consumer per annum	6	30	60	80
GS-3	Max: aggregate duration (Hrs.) of un-planned interruptions for each consumer per annum	26	44	88	175
GS-4	Max: number of planned interruptions for each individual consumer per annum	4	8	16	16
GS-5	Max: aggregate duration (Hrs.) of planned interruptions for each consumer per annum	36	64	80	96
GS-6	Max: number of un-planned short duration interruptions for each consumer per annum	4	140	275	300

FESCO: In 2013-14 FESCO performance for consumers on 11 kV and above is well within above standards; on LV levels number indices are above required.

- Customer Services – DISCO shall provide electric power service to at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria, with time limits between 30 calendar days for supply at 400V and load up to 15 kW and 496 calendar days for supply at 66 kV and above voltage levels.

FESCO: In 2013-14 FESCO managed to provide connections within time limits to 72.3% of eligible consumers on LV levels and 75% of eligible consumers on 11 kV level. No requests for connection on 132 kV level has been received.

6. Losses (Technical & Administrative) - NEPRA has allowed (1.9 % + 9.5 %) T&D losses for FESCO vide tariff determination for the year 2014-15.

FESCO: losses in 2013-14 were 11.3 %, out of which technical losses 10.8 % and administrative Losses 0.5 %

Although FESCO has not been able to meet the performance indices set by NEPRA, especially SAIFI and SAIDI, the following summary of justifications detailed in Item 8 of IGTDP should also be considered:

1. Widespread load sheddings have a major negative impact on performance indices. Assets are becoming intermittently overloaded when power is restored following load shedding.
2. Automation of data collection and recording is not implemented in FESCO; currently it is recorded and compiled manually as handwritten statements.
3. Time delimitation of 3 minutes between long and short interruptions does not take into account certain technical and physical limitations of FESCO system (discharge times for capacitors and cables, long radial lines in rural areas etc.)
4. Consumers' loads are exceeding the approved and installed connection capacities, resulting in service interruptions
5. A number of major assets are past their useful life span

Considering system-wide enhancements already under way and proposed by IGTDP significant improvements in performance indices are expected, however set targets are unlikely to be achieved without extraordinary investments and complete system overhaul, which is not feasible.

10 Conclusions and Recommendations

After thorough review of the IGTDP, the following conclusions can be made:

1. The IGTDP covers the full scope of services to be rendered by a utility during the next 5 years.
2. Recently submitted "Draft Study of Transmission and Transformation Losses of FESCO" confirms and agrees with findings and information in the IGTDP.
3. The necessary equipment and works has been specified, and quantities as well as implementation timelines are reasonable. The necessary expenses have also been taken into consideration and are plausible.
4. Existing manpower is adequate for operation and envisaged expansions, based on presently available information.
5. The IGTDP in its current state is at the most optimal level. However, poor data-retention systems, e.g. the data at grid stations is recorded on paper by hand may affect the accuracy of estimates.
6. Unforeseen/unforeseeable equipment replacement, which may occur due to asset age, may slow down the progress of the IGTDP.
7. It is not possible to forecast hidden load growth which will affect the Plan's vision of closing the demand-supply gap.
8. Potential right-of-way and security issues may also impact implementation timelines of the Plan.
9. The investment expenditure is expected to be revised as per the strategy of post-Privatization Management.
10. The future Investor will study FESCO system on his own and will identify the volume, timeline and costs of necessary works; in particular he might specify a different sequence of works or stipulate priority actions in order to achieve fast results and security of supply.

In addition, the following recommendations should be taken into account during preparation of Transaction Bid Documents:

- a. Availability of energy to FESCO should be firmly confirmed.
- b. Extension of existing Load Dispatch Center with the integration of the 132 kV and 66 kV equipment should be considered, subject to feasibility study.
- c. Results and findings of Distribution Losses Study should be consolidated with results of Transmission and Transformation Losses Study once they are finalized. These findings will help to establish achievable targets for reduction of losses.
- d. Similar to previous item, mentioned Studies will enable detailed review of system performance indices set by NEPRA.

SECTION –I

EXECUTIVE SUMMARY

i. INTRODUCTION

Faisalabad Electric Supply Company was incorporated as non-listed Public limited Company under Companies Ordinance 1984 on March 21, 1998. FESCO service territory covers Civil Districts viz Faisalabad, Jhang, Chiniot, Toba Tek Singh, Bhakkar, Mianwali, Khushab and Sargodha. FESCO jurisdiction covers approximately 44,247 sq. KM area of these districts. FESCO distributes and supplies electricity to 3.45 Million customers within a territory having a population of 27.5 Million peoples.

In-order to achieve the economic growth and poverty reduction in the areas under FESCO Jurisdiction, it is essential to ensure a Reliable & Stable Electric Supply to these areas to meet the increasing demand in an Industrial, Agricultural, Commercial, and Domestic sector. Electricity demand is expected to grow by around 6% per annum during the coming years. In order-to cope this growth, it is estimated / average that 150-200 MW additional capacities would be required annually to achieve the aforesaid goals, the expansion of FESCO network is urgently required. The proposed plan has therefore been prepared to meet the requirement of system efficiency and stability to deliver adequate & quality power to the customers. This project will also help in meeting the requirements of the National Electric Power Regulatory Authority (NEPRA).

ii. PURPOSE AND GOAL OF INVESTMENT PLAN

FESCO's existing Distribution System is mostly overloaded and overextended. Consequently, the quality of supply is poor due to high voltage drops (10 — 15% in most cases) in certain areas. The technical losses of these areas are high. The high technical losses are due to inadequate conductor, cable and transformer sizes, un-planned growth of the distribution network, poor power factor of appliances and motors' poor joints, inadequate voltage regulation at different levels of the system and substantial lack of funding for system rehabilitation.

The objective of power development program for the five year plan and subsequent years is to provide adequate generation, transmissions and distribution facilities in the system to fulfil the targets fixed in the industrial agricultural and social sectors of the

economy. This can be achieved by increasing the system generation, transmission and distribution capability. Considerable additional power can be released by rehabilitating the existing poor state of the distribution system: the release of capacity will substitute the costly additional thermal generation tied down in feeding the distribution system technical losses.

The main objectives of the project are summarized as under:

- a) To maintain and upgrade existing system
- b) To Plan, Design & Implement system expansion to increase the capacity to cope the higher load demand(s).
- c) To reduce the technical losses and
- d) To improve the Reliability and Quality of electric supply.
- e) To improve customer services function
- f) The extension of power to new localities will improve the social structure of the society and will help ameliorate the standard of life. Power provision will help in setting up of health care units, education centers and proper housing units to the inhabitants of the area. Over and above this provision of electricity will general masses to set up industrial, thus boosting the overall economy.

iii. MAJOR PLANNING SITUATION

The Ministry of Water and Power, Government of Pakistan has developed an ambitious power policy to support the current and future energy needs of the country. This bold strategy will set Pakistan on a trajectory of rapid economic growth and social development. Simultaneously, it will address the key challenges of the power sector in order to provide much needed relief to the citizens of Pakistan.

Pakistan's power sector is currently afflicted by a number of challenges that have led to a crisis, specially:

- 1. A yawning supply-demand gap.
- 2. Highly expensive generation of electricity (~Rs 12 / unit) due to an increased dependence on expensive thermal fuel sources (44% of total generation).
- 3. A terribly inefficient power transmission and distribution system that currently records losses of 23-25% due to poor infrastructure, mismanagement, and theft of electricity.

FESCO INTEGRATED INVESTMENT PLAN

As such, a vision has been set *"To develop the most efficient and consumer centric power generation, transmission, and distribution system that meets the needs of its population and boosts its economy in a sustainable and affordable manner."*

For achieving this goal, Ministry of Water and Power, Government of Pakistan has planned to prepare a (05) year Integrated Generation, Transmission & Distribution Plan.

The Integrated Generation & Transmission Plans are prepared by GENCOs and NTDC Lahore respectively besides WAPDA's Water Vision-2025 regarding development of National Water and Hydropower Resource by which 16,000 MW of hydroelectricity are expected to generated(Refer Annex: "G" & "H").

The Distribution Plan of FESCO, which is integrated with the 132 KV network studies, envisages expansion and rehabilitation of FESCO network during the years 2015-16 to 2019-20 which consists of the following works:

iv. COMPANY'S INVESTMENT PLAN

As per direction of the Regulator (NEPRA) Company has prepared two investment plans. One is for best case scenario and other is optimally achievable case. The salient features of optimally achievable case are follows. It is based on the procurement and execution capacity which is optimally achievable.

ABSTRACT OF WORKS FOR IGTDP PLAN

DIIP-1: PLANNED PROJECTS UNDER ADB LOAN (TRANCHE-II, TRANCHE-III & IV)

Sr. #	Description	Unit	2015-16	2016-17	2017-18	2018-19	2019-20	Total
1	New Grid Stations	No.	-	2	-	-	-	2
2	Conversion of G/Station (66 KV to 132 KV)	No.	-	4	-	-	-	4
3	Extension of Power T/F	No.	4	16	-	-	-	22
4	Augmentation of Power T/F	No.	14	15	-	-	-	19
5	New 132 KV T/Lines (373.5 K.M S/D 290 K.M D/C)	No.	-	5	-	-	-	5

FESCO INTEGRATED INVESTMENT PLAN

DIIP-2 (A): PROPOSED PROJECTS (OPTIMALLY ACHIEVABLE)

Sr. #	Description	Unit	2015-16	2016-17	2017-18	2018-19	2019-20	Total
1	New Grid Stations	No.	3	4	3	4	1	15
2	Conversion of G/Station (66 KV to 132 KV)	No.	3	1	1	0	0	5
3	Extension of Power T/F	No.	2	4	1	1	5	13
4	Augmentation of Power T/F	No.	1	10	4	9	9	33
5	Extension of Line Bay	No.	13	10	6	4	2	35
6	New 132 KV T/Lines (373.5 SDT+290 D/C)	No.	9	7	6	7	2	31
7	2 nd Circuit Stringing	No.	2	3	2	1	0	8
8	Reconductoring of T/L	No.	3	2	1	0	0	6
9	Installation of 132 KV Capacitors at G/Stations	No.	1	0	1	0	0	2
10	Re-habilitation of H.T Feeders	No.	30	35	40	45	50	200
11	Rehabilitation of L.T Feeders	No.	700	750	800	850	900	4000
12	New 11 KV Line	KM	528.5	729.7	642.6	700.0	764.8	3365.7
13	Reconductoring of 11 KV Lines	KM	285	305	325	345	365	1625
14	New LT Line	KM	580	630	680	730	780	3400
15	Reconductoring of LT Lines	KM	13	14	15	16	17	75
16	New Service Connections	No.	150000	162000	177000	195000	216000	900000
17	Distribution T/Fs Replacement	No.	1200	1100	1000	900	800	5000
18	Energy Meters Replacement	No.	78000	90000	102000	111000	119000	500000

FESCO INTEGRATED INVESTMENT PLAN

DIIP-2 (B): PROPOSED PROJECTS (BEST CASE)

Sr. #	Description	Unit	2015-16	2016-17	2017-18	2018-19	2019-20	Total
1	New Grid Stations	No.	4	5	4	5	4	22
2	Conversion of G/Station (66 KV to 132 KV)	No.	3	3	1	1	1	9
3	Extension of Power T/F	No.	2	5	2	1	5	15
4	Augmentation of Power T/F	No.	2	15	4	9	13	43
5	Extension of Line Bay	No.	13	10	7	6	2	38
6	New 132 KV T/Lines (125KM SDT+466.5 KM D/C)	No.	10	10	9	8	6	43
7	2 nd Circuit Stringing (190.3 KM SDT)	No.	2	3	2	2	0	8
8	Reconductoring of T/L (116 KM D/C)	No.	3	2	2	2	0	9
9	Installation of 132 KV Capacitors at G/Stations	No.	1	0	1	1	0	3
10	Re-habilitation of H.T Feeders	No.	30	35	40	45	50	200
11	Rehabilitation of L.T Feeders	No.	700	750	800	850	900	4000
12	New 11 KV Line	KM	541.5	743.7	657.6	717.0	774.8	3434.6
13	Reconductoring of 11 KV Lines	KM	285	305	325	345	365	1625
14	New LT Line	KM	580	630	680	730	780	3400
15	Reconductoring of LT Lines	KM	13	14	15	16	17	75
16	New Service Connections	No.	150000	162000	177000	195000	216000	900000
17	Distribution T/Fs Replacement	No.	1200	1100	1000	900	800	5000
18	Energy Meters Replacement	No.	78000	90000	102000	111000	119000	500000

FESCO INTEGRATED INVESTMENT PLAN

YEAR WISE BREAKUP FOR REQUIREMENT OF FUNDS (RS. IN MILLION) FOR OPTIMALLY ACHIEVABLE PLAN

DIIP-3:ALREADY PLANNED

Description	2015-16	2016-17	2017-18	2018-19	2019-20	Total
PDIEP Tranche-II	1353	-	-	-	-	1353
PDEIP Tranche-III	1661	415	-	-	-	2076
PDEIP Tranche-IV	1200	499	-	-	-	1699
Sub Total (A)	4214	914	-	-	-	5128

FESCO INTEGRATED INVESTMENT PLAN

DIIP-4: SUMMARY OF CAPITAL COST FOR PROPOSED PROJECTS (OPTIMALLY ACHIEVABLE)

Item		2015-16			2016-17			2017-18			2018-19			2019-20			Total		
		LCC	FEC US\$	Total	LCC	FEC US\$	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total
A	STG	2828	-	2828	3252	-	3252	2722	-	2722	2616	-	2616	1637	-	1637	13056	-	13056
B	Distribution	994	-	994	1210	-	1201	1443	-	1443	1670	-	1670	1993	-	1993	7309	-	7309
C	Vehicles and T&P	104	-	104	119	-	119	90	-	90	68	-	68	49	-	49	430	-	430
D	Civil works	530	-	530	1045	-	1045	680	-	680	400	-	400	210	-	210	2865	-	2865
E	ERP Implementation	300	-	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sub Total	4756	-	4756	5626	-	5617	4935	-	4935	4754	-	4754	3889	-	3889	23960	-	23960
	ADB Funded Plan	2825	16.86	4214	548	3.66	914	-	-	-	-	-	-	-	-	-	5128	-	5128
	Total	7581	16.86	8970	6174	3.66	6531	4935	-	4935	4754	-	4754	3889	-	3889	29088	-	29088

FESCO INTEGRATED INVESTMENT PLAN

DIIP-5: SUMMARY OF CAPITAL COST FOR PROPOSED PROJECTS (BEST CASE)

Item		2015-16			2016-17			2017-18			2018-19			2019-20			Total		
		LCC	FEC US\$	Total	LCC	FEC US\$	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total
A	STG	3003		3003	4196		4196	3174		3174	3346		3346	2664		2664	16386		16386
B	Distribution	1099		1099	1335		1335	1564		1564	1825		1825	2181		2181	8005		8005
C	Vehicles and T&P	254		254	269		269	240		240	218		218	199		199	1180		1180
D	Civil works	530		530	1045		1045	680		680	400		400	210		210	2865		2865
E	ERP Implementation	300		300															
F	*Others	42		42	450		450	450		450	980		980	1290		1290	3212		3212
	Sub Total	5228		5228	7295		7295	6108		6108	6769		6769	6544		6544	31648		31648
	ADB Funded Plan	2825	16.86	4214	548	3.66	914	-	-	-	-	-	-	-	-	-	5128	-	5128
	Total	8053	16.86	9442	7843	3.66	8209	6108		6108	6769		6769	6544		6544	36776		36776

*This include the cost of AMR/AMI system and cost of HHU

FESCO INTEGRATED INVESTMENT PLAN

It is obvious from the results that the project is feasible on said assumptions and facts. The Benefit Cost ratio comes out 4.96 with 12 % Discount rate and 4.39 with 14 % Discount Rate and Financial Internal rate of return (FIRR) is expected as 59.28 %. The Pay Back period calculated as 4.54 years (04-Years, 7-Months). The overall reduction losses will be 1.2 % i.e. 9.8 % from 11.0 %. Therefore proper monitoring of benefits & costing is essential.

With implementation of this plan FESCO has to compromise with system requirement envisaged in best case plan, and over loading problem at following Grid Stations have to be faced. That may require 4-6 hours load shedding

DIIP-6: Overload Grid Station

S/No.	Name of Grid Station	S/No.	Name of Grid Station
1	132 KV OTP FSD	6	132 KV Jauharabad
2	132 KV Agri University FSD	7	132 KV Chiniot Road FSD
3	132 KV Jhang Rd. FSD	8	132 KV Nishatabad New
4	132 KV Gojra	9	132 KV Jhang-II
5	132 KV Nia Lahore	10	132 KV Pathan Kot

Consumers connected through 66 KV transmission network will face low voltage problem and voltage at following 132 KV Buses will be less than prescribed limit i.e. $\pm 5\%$.

DIIP-7: Grid Stations Facing low voltage Problem

S/No.	Name of Grid Station	S/No.	Name of Grid Station
1	132 KV Pir Mahal	6	132 KV Khewa
2	132 KV ShorKot City	7	132 KV Jauharabad
3	132 KV Shor Kot Road	8	132 KV ABC
4	132 KV 18-Hazari	9	132 KV Bhumb
5	132 KV Garh Maharaja	10	132 KV Kud Lathi

The SAIFI and SAIDI of 66 KV network will be more due to being obsolete system.

Keeping in view the vision of Govt of Pakistan that 2017-18 will be load shedding free year more investment is required for dispersal of power. The summary of this investment is as under:-

FESCO INTEGRATED INVESTMENT PLAN

EXPANSION AND REHABILITATION (BEST CASE)

DIIP-8: GRID STATIONS (BEST CASE)

S/ No.	Description	Total No.	Total Capacity (MVA)	2015-16 (Nos.)	2016-17 (Nos.)	2017-18 (Nos.)	2018-19 (Nos.)	2019-20 (No.)
1.	New							
a.	132 KV	22	1057	4	5	4	5	4
2.	Conversion							
a.	66 to 132 KV	9	102.3	3	3	1	1	1
3.	Augmentation							
a.	132 KV	39	530	2	11	4	9	13
b.	66 KV	4	27.9	-	4	-	-	-
4.	Extension (T/Bay)							
a.	132 KV	14	312	2	4	2	1	5
b.	66 KV	1	13		1			
5.	Extension (L/Bay)	-	-	-	-	-	-	-
a.	132 KV	38	-	13	10	7	6	2
b.	66 KV	-	-	-	-	-	-	-

TRANSMISSION LINES (BEST CASE)

DIIP-9: NEW LINE (BEST CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	466.5	69.5	159	103	100	35
2.	132 KV SDT	125	31	-	34	45	15

DIIP-10: 2ND CIRCUIT STRINGING OF EXISTING SDTT/LINES (BEST CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	-	-	-	-	-	-
2.	132 KV SDT	190.3	49.3	135	4	2	-

DIIP-11: RECONDUCTORING/ UP-GRADATION OF EXISTING T/LINES (BEST CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	116	50	16	38	12	-
2.	132 KV SDT	-	-	-	-	-	-

FESCO INTEGRATED INVESTMENT PLAN

DIIP-12: CAPACITORS (BEST CASE)

S/ No.	Description	Total MVAR	2015-16	2016-17	2017-18	2018-19	2019-20
1.	11 KV Fixed capacitors	534	103	161	88	97	85
2.	11 KV Switched Capacitors	-	-	-	-	-	-
3.	132 KV Fixed Capacitors	108	36	-	36	36	-
4.	132 KV Switched Capacitors	-	-	-	-	-	-

FESCO INTEGRATED INVESTMENT PLAN

DIIP-12: CAPACITORS (BEST CASE)

S/ No.	Description	Total MVAR	2015-16	2016-17	2017-18	2018-19	2019-20
1.	11 KV Fixed capacitors	534	103	161	88	97	85
2.	11 KV Switched Capacitors	-	-	-	-	-	-
3.	132 KV Fixed Capacitors	108	36	-	36	36	-
4.	132 KV Switched Capacitors	-	-	-	-	-	-

FESCO INTEGRATED INVESTMENT PLAN

BENEFITS AND FINANCIAL ANALYSIS(OPTIMALLY ACHIEVABLE PLAN)

A. EXPANSION AND REHABILITATION OF SECONDARY TRANSMISSION AND DISTRIBUTION SYSTEM

i.. TANGIBLE BENEFITS

DIIP-13: ABSTRACT OF MVA CAPACITY TO BE ADDED AND ADDITIONAL ENERGY TO BE SUPPLIED UNDER TRANSMISSION EXPANSION PLAN							
Description		Fiscal Year (Million Rs.)					
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
MVA Capacity to be added	Current Year	257.2	437.45	262	329	267	
	Cumulative	257.2	694.65	956.65	1285.65	1552.65	
Additional Energy could be supplied @ 0.9 P.F 0.7 L.F and 50 % Loading (Million KWH)	Current Year		709.72	1207.1	722.96	907.84	736.76
	Cumulative		709.72	1916.82	2639.78	3547.62	4284.38

DIIP-14: REDUCTION IN LOSSES AND SAVINGS INTERMS OF ENERGY (STG)

S/ No.	Description		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1	Reduction in Losses (MW)	Current Year	0	1.2	4.6	1.7	8.9	2.4
		Cumulative	0	1.2	5.8	7.5	16.4	18.8
2	Energy Savings* @ 0.7 L.F (Million KWH)	Current Year	0	5.8	22.28	8.23	43.11	11.63
		Cumulative	0	5.8	28.08	36.31	79.42	91.05

*Reduction in Energy Loss/year = MW x 8760 x Loss Factor**

**Loss Factor = $0.3 \times \text{Load Factor} + 0.7 \times (\text{Load Factor})^2$

Loss Factor @ 0.7 L.F

0.553

FESCO INTEGRATED INVESTMENT PLAN

DIIP-15: INCREASE IN REVENUE AS RESULT OF ENERGY CONSUMPTION OF CONSUMERS TO BE ADDED UNDER DISTRIBUTION EXPANSION PROGRAM

Sr. #	Energy Consumption of Customers To Be Added (Million KWH)								Av. Energy Purchase Price (Rs. / KWH)	Av. Energy Sales Price (Rs. / KWH)	Attributable Benefit (Rs. / KWH)	Potential Increase in Revenue (Million Rs.)
	Year	Domestic	Commer.	Industrial	Tube well	Others	Total	Cumulative				
1	2016-17	75.773	9.19	24.88	149	4.6	263.44	263.44	9.823	12.722	2.9	763.71
2	2017-18	140	16.99	39.23	275.41	8.67	480.3	743.74	9.948	12.741	2.79	2077.27
3	2018-19	204.25	24.78	81.75	401.73	12.56	725.07	1468.81	10.08	13.133	3.05	4484.28
4	2019-20	268.49	32.58	88.13	528.05	16.45	933.7	2402.51	10.2	13.4	3.2	7688.03
5	2020-21	332.72	40.37	109.22	654.37	20.52	1157.2	3559.71	10.34	13.64	3.3	11747.04

Note : Please Update Sales and Purchase prices as per your Tariff

DIIP-16: INCREASE IN REVENUES AS RESULT OF POTENTIAL SAVING IN ENERGY UNDER DISTRIBUTION REHABILITATION PROGRAM

No	Year	No. of 11 KV Feeders To Be Rehabilitated		No. of LT Proposals To Be Rehabilitated		Ave. Saving / Proposal (MKWH)		Potential Saving In Energy (MKWH)			Energy Rate / KWH (RS.) *	Potential Increase In Revenue
		Current	Cumulative	Current	Cumulative	H.T	L.T	H.T	L.T	TOTAL		
1	2016-17	30	30	700	700	1.069	0.031	32.07	21.7	53.77	12.722	684.062
2	2017-18	35	65	750	1450	0.962	0.028	62.53	40.6	103.13	12.741	1313.979
3	2018-19	40	105	800	2250	0.866	0.025	90.93	56.25	147.18	13.133	1932.915
4	2019-20	45	150	850	3100	0.779	0.023	116.85	71.3	188.15	13.4	2521.21
5	2020-21	50	200	900	4000	0.701	0.02	140.2	80	220.2	13.64	3003.528

Note : Please Update Per unit prices as per your Tariff

FESCO INTEGRATED INVESTMENT PLAN

DIIP-17:

PROJECTED LOSSES

Fiscal Year	Energy Purchase	Energy Sale	Units Lost	%age Projected Losses	%age Increase/ Decrease
2014-15	11243	10006	1237	11.00%	
2015-16	11960	10657	1303	10.89%	0.11%
2016-17	12689	11349	1340	10.56%	0.33%
2017-18	13489	12087	1402	10.39%	0.17%
2018-19	14326	12873	1453	10.14%	0.25%
2019-20	15230	13709	1521	9.99%	0.16%
2020-21	16195	14601	1594	9.84%	0.14%
Total %age Increase/ Decrease					1.16%

SECTION-II

THE COMPANY'S BASE LINE

i. GENERAL INFORMATION

Faisalabad Electric Supply Company was incorporated as non-listed Public limited Company under Companies Ordinance 1984 on March 21, 1998. FESCO service territory covers Civil Districts viz Faisalabad, Jhang, Chiniot, Toba Tek Singh, Bhakkar, Mianwali, Khushab and Sargodha. FESCO jurisdiction covers approximately 44,247 sq. KM area of these districts. FESCO distributes and supplies electricity to 3.445 Million customers within a territory having a population of 27.5 Million peoples.

FESCO purchased 11022.88 Million Units during FY 2014-15 and sold 1006.23 Million Units with a loss of 1016.65 Million Units (11 %) in its network.

In-order to achieve the economic growth and poverty reduction in the areas under FESCO Jurisdiction, it is essential to ensure a Reliable & Stable Electric Supply to these areas to meet the increasing demand in an Industrial, Agricultural, Commercial, and Domestic sector. Electricity demand is expected to grow by around 6% per annum during the coming years. In order-to cope this growth, it is estimated / average that 150-200 MW additional capacities would be required annually to achieve the aforesaid goals, the expansion of FESCO network is urgently required. The proposed plan has therefore been prepared to meet the requirement of system efficiency and stability to deliver adequate & quality power to the customers. This project will also help in meeting the requirements of the National Electric Power Regulatory Authority (NEPRA).

FESCO INTEGRATED INVESTMENT PLAN

STATISTICAL AND FINANCIAL INFORMATION

DIIP-18: PHYSICAL ASSETS OF FESCO

The physical assets (Electrical) of FESCO as on 30th April, 2015 are briefed as under:

Description	Units	Quantity.
A. Grid Stations		
• 132 KV Grid Stations	Nos.	62
• 66KV Grid Stations	Nos.	23
• 132 KV Consumer Grid Stations	Nos.	18
• Power Transformers Installed (Different Capacity)	Nos.	177
• Total Installed Capacity of Power Transformers	MVA	4073.45
B. Transmission Lines 132 KV& 66KV		
• Total Length of Transmission Line	K.Ms	3125
C. Distribution System		
• 11 KV Feeders	Nos.	874
• Total Length of 11 KV (H.T) Line	K.Ms	38600
• Total Length of LT Line	K.Ms	25850
• Distribution Transformers Installed (Different Capacity)	Nos.	91776
• Total Installed Capacity of Distribution Transformers	MVA	5621
D. Service Connections		
• Domestic	Nos.	2,975,160
• Commercial	Nos.	342,106
• Industrial	Nos.	46,407
• Tube-well	Nos.	39,341
• Bulk	Nos.	217
• Others	Nos.	1611
• Total Consumers	Nos.	3,404,842

FESCO INTEGRATED INVESTMENT PLAN

DIIP-19: LENGTH OF DISTRIBUTION LINES:

By 30-04-2015, the total length of HT (11 KV) and LT (0.4 KV, 3-phase and 0.23 KV, 1-phase) lines in the FESCO Faisalabad system was 38600 km and 25850 km respectively. Circle wise distribution of the length of lines (Table 3.4. Annex-3) is as follows:

Name of Circle	Length		Percentage	
	H.T	L.T	H.T	L.T
Faisalabad-I	4782	3138	12.39	12.14
Faisalabad-II	3677	2776	9.53	10.74
Jhang	17801	12312	46.12	47.63
Sargodha	12340	7624	31.97	29.49

TRANSFORMERS INSTALLED.

91776 distribution transformer substations of sizes ranging between 10 KVA and 630 KVA have been installed in the FESCO system in both urban and rural areas as on 30-04-15.

The total installed transformer capacity is about 5621 MVA

POWER DEMAND AND SUPPLY

The load forecast is being done through Power Market Survey Division functioning under the Planning Department of the Power Wing and required information is collected by the Power Market Survey personnel by actual visits to sites. This forecast is based on past experience to extend power facilities to areas of the FESCO. The future loads of all types of communities are projected on the basis of present pattern of power consumption, taking into consideration the industrial and agricultural development programs. The demand of districts in each division and then of all the divisions located in the entire system are worked out after accounting for transmission and distribution losses and applying appropriate diversity factors at different stages. The power requirements of medium and large industries are determined on the basis of information collected for the sanctioned industrial projects as well as from existing undertakings; for their expansion plans by the survey staff. For pumping load the program regarding salinity schemes, along with the installation of private tube-wells are taken into account. The load of villages is included as per envisaged village electrification program for the period.

FESCO INTEGRATED INVESTMENT PLAN

On the basis of this Power Market Survey (Annex: "C") jointly prepared by FESCO under supervision of Planning (Power) NTDC, FESCO Demand Forecast is given as under:

COMPUTED PEAK DEMAND

CHARACTERISTICS OF FESCO SYSTEM

The characteristics of integrated FESCO system (during 2014-15) are given below

DIIP-20: CHARACTERISTICS OF FESCO SYSTEM

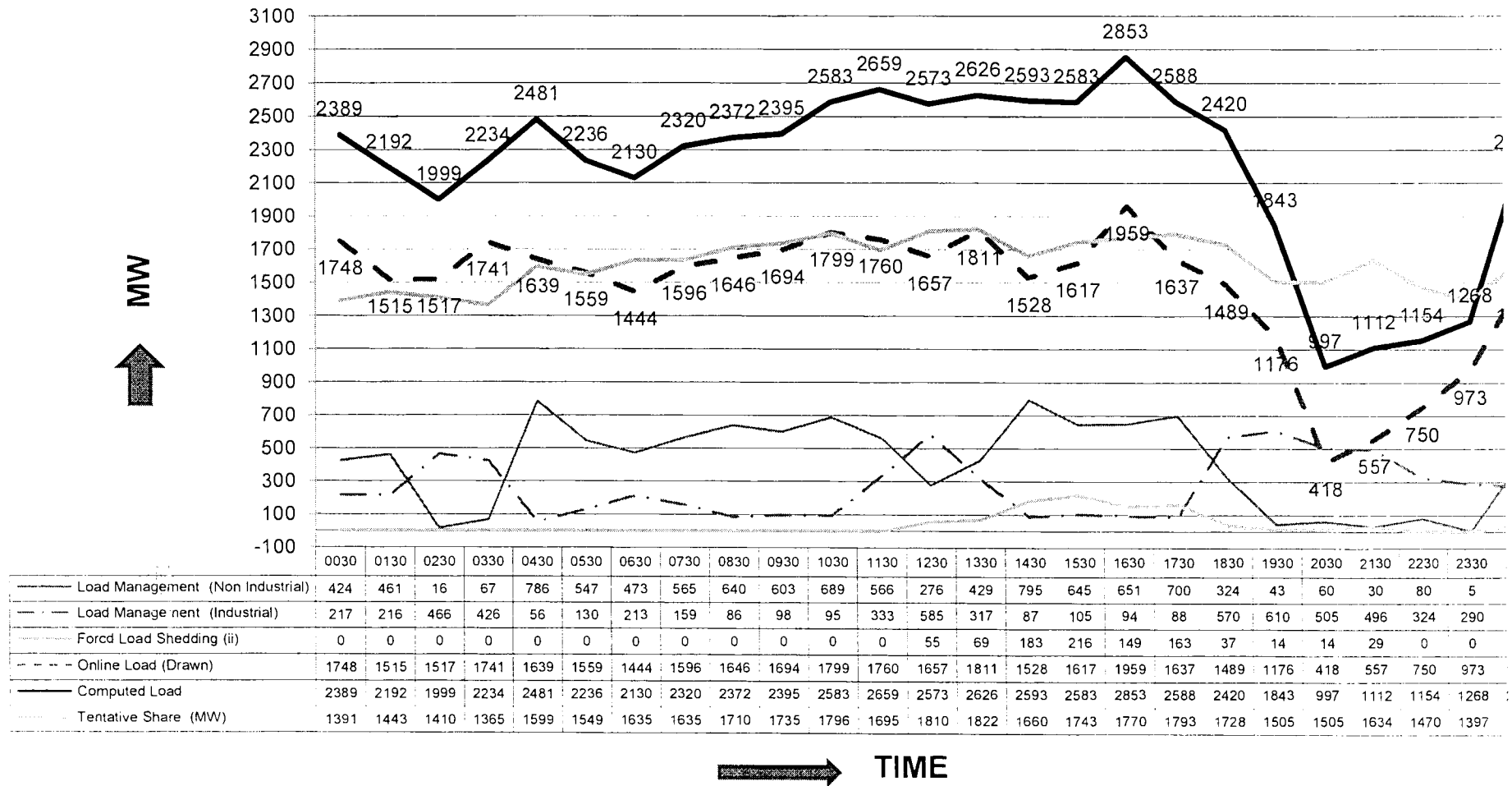
A	Seasonal variations of the maximum demand	
1	Sumer Season	Recorded = 1694 MW Computed = 3091MW
2	Winter Season	Recorded= 1668 MW Computed = 1211 MW
B	Power Factor	90%
C	Annual load factor(on Min: Demand)	Recorded = 79.5% Computed = 50.95 %
D	Diversity Factor(Used for different type of loads in the Power Market Survey)	
	In villages:	= 1.05
	In towns:	= 1.11
	cities:	= 1.18
	B/W Districts/Cities/Towns & Villages:	= 1.05
	In Divisions:	= 1.18
F	Transmission & Distribution losses	11.0 % during 2014-15

DIIP-21: COMPUTED PEAK DEMAND

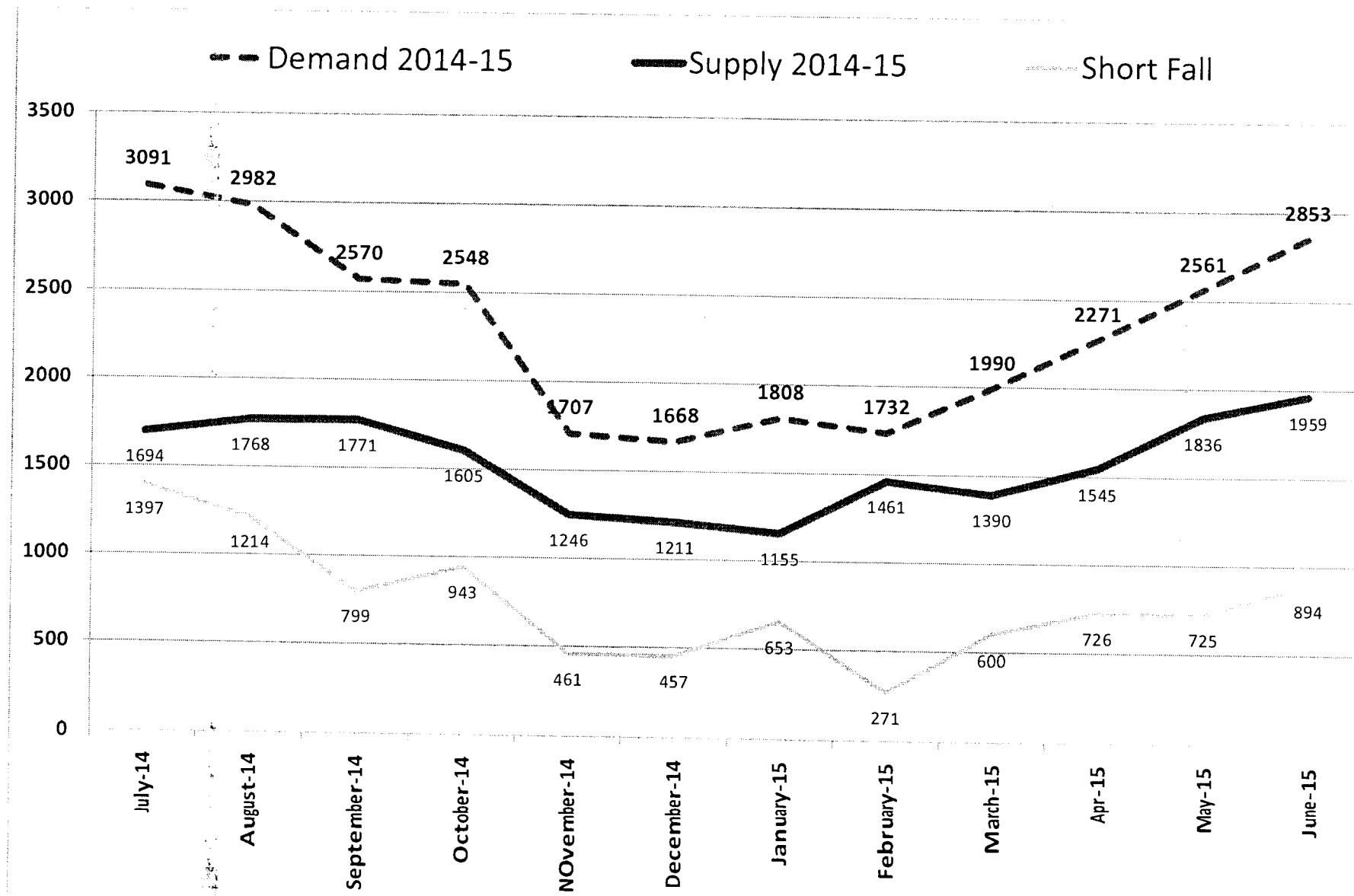
Year	Computed Peak Demand (MW)					
	Including Load Shedding	% G.R	Excluding Load Shedding	% G.R	Difference/ Load Shedding	LS (%age of Demand)
2015-16	3293	5.8	2136	6.9	1157	35%
2016-17	3482	5.7	2277	6.8	1205	35%
2017-18	3699	6.2	2440	7.5	1259	34%
2018-19	3925	6.1	2610	7.2	1315	34%
2019-20	4161	6.0	2788	7.0	1373	33%

FESCO INTEGRATED INVESTMENT PLAN

Graphical Representation of FESCO Load, on 20.06.2015



FESCO INTEGRATED INVESTMENT PLAN



SECONDARY TRANSMISSION AND DISTRIBUTION NETWORK CONDITIONS

The Grid Station system has a prime role in Transmission and distribution of energy the lengthy 132 KV and 66 KV Lines are used for transfer of power to Grid Stations in for flung areas of FESCO jurisdiction. Generally Transmission Lines and Grid Station equipment is in good condition and being maintained properly. There is vast distribution network the general condition of the distribution network is satisfactory for existing demand but likely to be overloaded when there will be load shedding free era as being planned by the Gov of Pakistan and this network require investment for dispersal of additional power required by the costumers. The existing 11 KV and L.T system also required rehabilitation in more than 30% cases where poles are not in good condition and augmentation of conductors is required.

FINANCIAL MANAGEMENT

- At present Internal financial, material management, HR and Project related processes are being managed partially manually and partially computerized. However Company has started its ERP implementation Project and expected to automate these processes within two years.
- It takes 03 months to close the financial books.
- On average cash and transit is approximately 500 to 600 Million.
- The O&M expenses, Rs. / kWh is 1.16

HR MANAGEMENT

- At present the sanctioned Officers strength is 477 and occupancy ratio is 62.68%
- At present Staff strength is 19454 and occupancy ratio is 77.92%
- Disciplinarily cases are being disposed off promptly in accordance with the Efficiency and Disciplinarily Rules (E&D) of the company.
- On average 12%of Officers are trained during the year.
- On average 10% of staff is trained during the year.
- Rs. 55 Million were spent during the FY year 2014-15 for training.
- FESCO has four Line Man training centers and facilities of WAPDA Staff College Islamabad and WAPDA Engineering Academy Faisalabad are being used for Officers.

FESCO INTEGRATED INVESTMENT PLAN

IT-MIS

IT Department is primarily responsible for billing to consumers and provides other IT related services to FESCO. This department has three Computer centers at three different places with headquarter at Faisalabad and others at Jhang and Sargodha.

It provides Service Excellence by FESCO through the use of Information and Communications Technology.

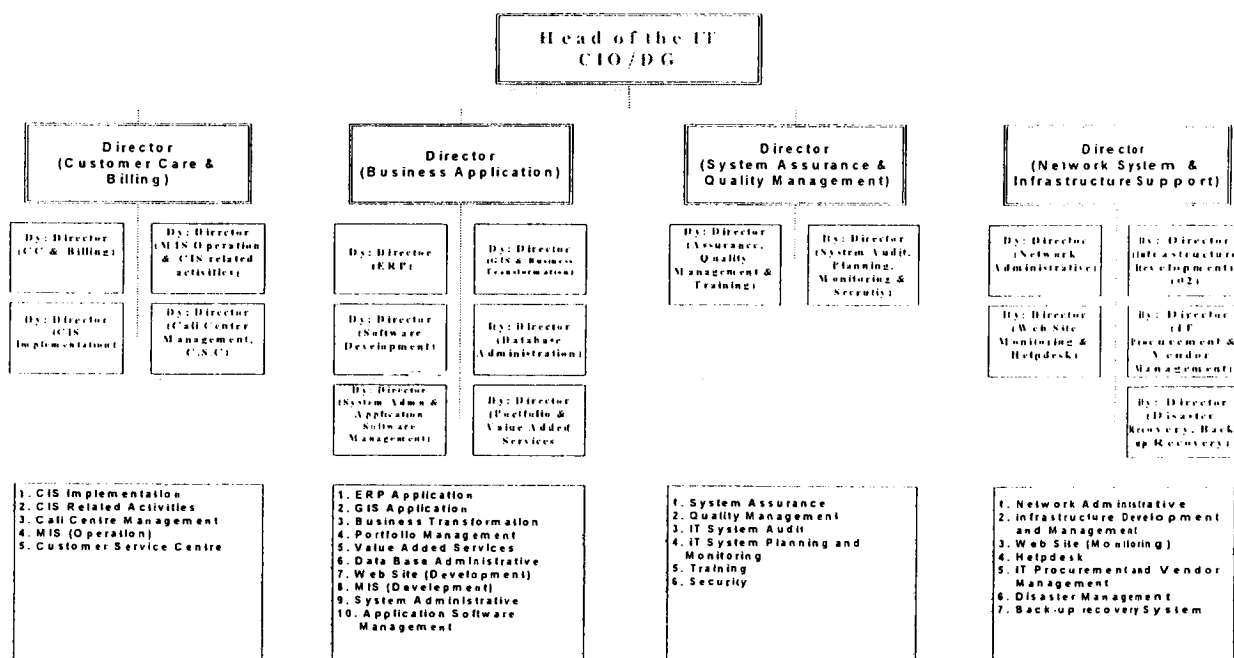
A simple challenge for the department, by setting itself a target for the new millennium by which it will have built up the Information Technology infrastructure, data and information processing capability for the Government to use and produce the most excellent level of service for its customer, the general public

It promotes, facilitate and Deliver High Quality Information Technology Services to Executives and other Departments on Cost effective Basis to Support FESCO's Strategic and Operational Needs.

The goal of IT Department is to provide cost-effective means to achieve business results and improve operating efficiency. Accordingly the following strategies have been formulated:

- Using IT as efficiency improvement tool
- Integrating IT and Business Planning
- Evolving Efficient Structures
- Developing Hybrid Skills

APPROVED ORGANOGRAM FOR IT SET UP IN DISCOs



FESCO INTEGRATED INVESTMENT PLAN

COMMERCIAL MANAGEMENT

- During the year 2014-15 11022.88kWh units were purchased and 10006.23kWh units were billed.
- The % age collection of FESCO is 100.1. The %age collection at Circle, division and Sub division level is being annexed as **Annex-A**.
- Billing related complaint and adjustment made in 2014-15 are 6.5 Million kWh units amounting to Rs. 107.26 Million.
- The technology for meter reading is manual. However reading with mobile Phone with the photograph of meter reading has been started in FESCO in 2014-15.
- No. Of defective meters at the end of 2014-15 were 10793 which is 0.32% of the total customers.
- No. Of pending new connections are 49273 for all tariff.
- No. Of electromechanical meters are 17,04,163
- No. Of meter reader strength and sanctioned post 1594 (working 1459)
- Amount pending against dead defaulters is Rs. 534.55 Million.

INTERNAL CONTROL

- Expenditures are incurred after the Admin approval of the Competent Authorities to whom the financial powers has been delegated by the Board of Directors (BOD).
- All the investment approvals are accorded by the Competent Authorities to whom the Board of Directors has delegated the financial powers.
- All the payments of the projects and material procurement are pre audited by Finance department.
- FESCO has very effective Internal Audit system and follow the audit manual devised with the help of USAID.

LEGAL AND CONTRACTUAL FRAME WORK

FESCO was incorporated as a non-listed public limited company under Companies Ordinance, 1984 on March 21, 1998. Certificate of Commencement of Business was issued on March 26, 1998. In compliance of the Ordinance and corporate governance rules 2013, the

FESCO INTEGRATED INVESTMENT PLAN

Board of Director's has been nominated by Govt of Pakistan. The composition of Board of Director's is as under.

COMPOSITION OF BOD

1.	Mr. Khurram Mukhtar	Chairman/Director
2.	Mr. Rashid Ahmed Aslam	CEO/Director
3.	Mr. Noor Ahmad	Director
4.	Mr. Ihsaan Afzal Khan	Director
5.	Mr. Faiq Jawed	Director
6.	Mian Zahid Aslam	Director
7.	Khawaja Shahid Razak Sikka	Director
8.	Mr. Abdul Hameed Chaudhry	Director
9.	Syed Zia Alamdar Hussain	Director
10.	Chaudhry Javed Kamal	Director
11.	Syed Ali Ahsan	Director
12.	Rana Tariq Pervaiz	CFO
13.	Engr. Masood Salah Ul Din	Company Secretary
14.	Mr. Waqar A Sheikh	Legal Adviser
15.	Mr. Khadim Hussain Baloach	Chief Internal Audit

CHARTERED ACCOUNTANTS

MS Ernst & Young Ford Rhodes Sidat Hyder Chartered Accountants Mall View Building 4-Bank Square P.O Box No. 104, Lahore 54000 with reference to his consents to act as Auditor for Financial Year, ending 30TH June, 2014.

WEBSITE

<http://www.fesco.com.pk/>

All the financial and administrative powers rest with the Board of Director's which have been delegated to Company's functionaries in accordance with the hierarchy.

GOVERNANCE AND DESCRIPTION OF THE RELATIONSHIP AMONG THE GOVERNMENTS

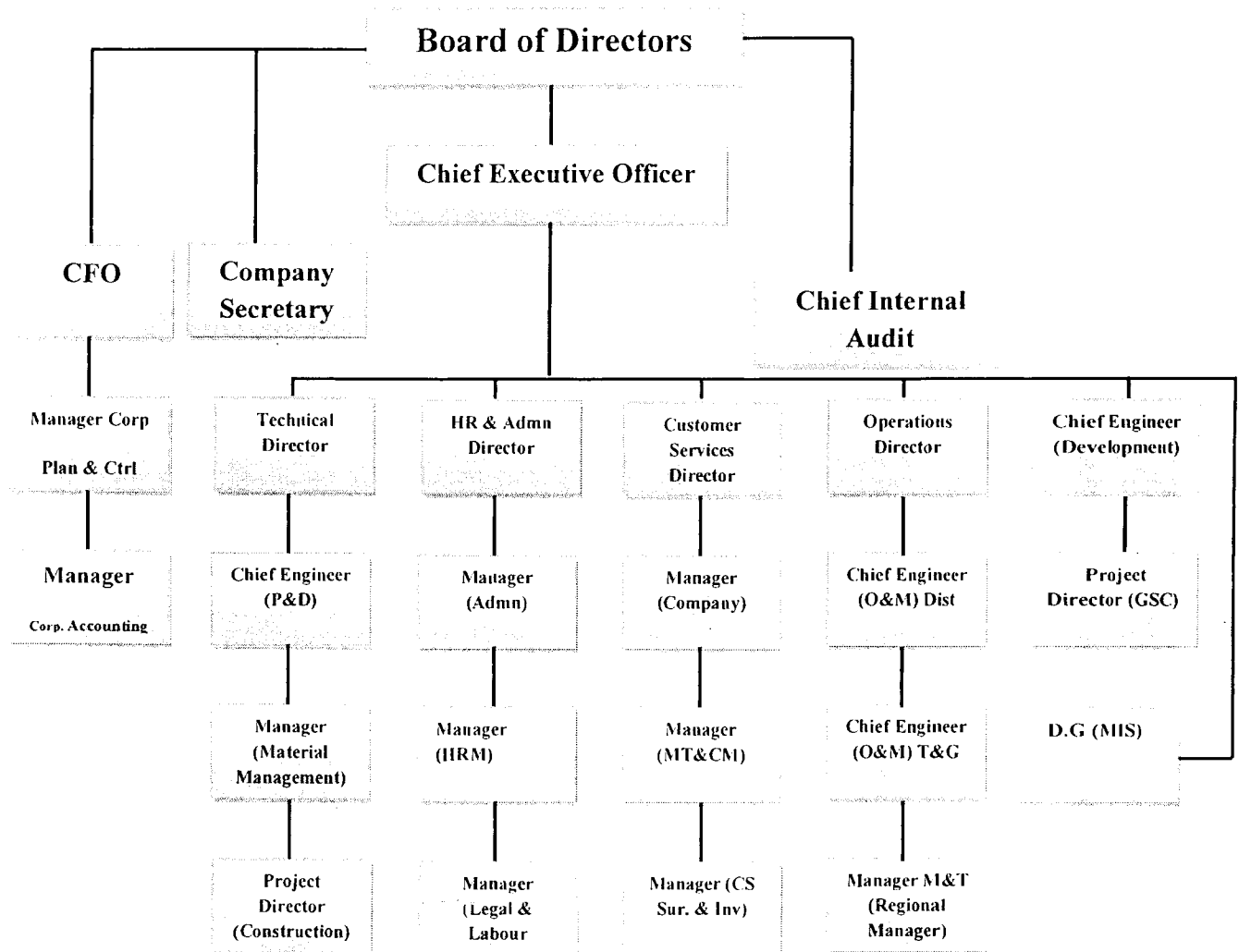
In compliance with the Code of Corporate Governance, among other things FESCO has ensured that;

- ❖ As BOD has effective representation of Independent Non-Executive Director so that the Board as a group includes relevant core competencies.
- ❖ All financial statements are prepared in conformity with the provision of the Companies Ordinance 1984 adhering to International Financial Reporting Standards.

FESCO INTEGRATED INVESTMENT PLAN

- ❖ Proper books of accounts have been prepared and maintained with estimates based on reasonable and prudent judgment.
- ❖ The statement of compliance with the best practices of corporate governance is reviewed and certified by statutory auditors before publication.
- ❖ There is implementation and monitoring of an effective system of internal controls.
- ❖ All the Govt policies are followed and adopted to be implemented in FESCO in the interest of customers.

CORPORATE ORGANIZATIONAL STRUCTURE



FESCO INTEGRATED INVESTMENT PLAN

ANALYSIS OF THE MAIN ISSUES FACING THE COMPANY

- **FINANCIAL ISSUES**

In order to meet with the agreed standard for safe and reliable electric power system, huge investment is required which has been associated with the distribution margin of the Company. Budget deficit under PSDP head is not allowing FESCO to meet with the rehabilitation targets.

- **INVESTMENT NEEDS**

The objective of power development program for the five year plan and subsequent years is to provide adequate generation, transmissions and distribution facilities in the system to fulfil the targets fixed in the industrial agricultural and social sectors of the economy. This can be achieved by increasing the system generation, transmission and distribution capability. Considerable additional power can be released by rehabilitating the existing poor state of the distribution system; the release of capacity will substitute the costly additional thermal generation tied down in feeding the distribution system technical losses.

- **OTHER ISSUES**

The existing transport fleet of the company is very old and also insufficient. Huge funds are required for replacement of old vehicles with new ones as well as availability of power vehicles and power tools for working on Transmission & distribution lines.

SECTION-III

FORECASTS FOR NEXT FIVE YEARS

DIIP-22: CONSUMER GROWTH BY CATEGORY

(Nos. in Million)

Description	2016	2017	2018	2019	2020
Domestic	3.0900	3.2000	3.3100	3.4600	3.5900
Commercial	0.3500	0.3600	0.3700	0.3800	0.3900
Industrial	0.0480	0.0500	0.0520	0.0540	0.0560
Agriculture	0.0410	0.0430	0.0440	0.0470	0.0047
Other	0.0017	0.0018	0.0019	0.0018	0.0019
Total	3.5307	3.6548	3.7779	3.9428	4.0426
Growth %	3.73	3.42	3.38	4.51	3.82

DIIP-23: ENERGY AND DEMAND FORECASTS

(GWh)

Description	2016	2017	2018	2019	2020
Domestic	4736.3	5063.1	5412.4	5775.1	6162.0
Commercial	533.4	578.7	626.8	678.2	733.8
Industrial	4230.0	4492.2	4883.1	5278.6	5679.8
Agriculture	887.9	994.4	1107.8	1228.5	1357.5
Other	331.1	338.4	345.9	353.5	361.2
Total	10718.63	11466.85	12375.87	13313.78	14294.26
Growth %	7.1	7.0	7.9	7.6	7.4

(MW)

Description	2016	2017	2018	2019	2020
Total Demand	3293	3482	3699	3925	4161

GENERATION FORECAST AND POWER ACQUISITION PROGRAM

The Generation forecast and NTDC Expansion Plan has been attached as **Annex-B**

DIIP-24: ANTICIPATED LOAD SHEDDING

Description	2016	2017	2018	2019	2020
Total Demand (MW)	3293	3482	3699	3925	4161
Generation Available (MW)	2218	2821	3373	3430	3944
Shortfall (MW)	1075	661	326	495	217

Power Market Survey Study (PMS) is attached as **Annex-C**

OTHER CHANGES INCLUDING TECHNOLOGICAL ADVANCES

- FESCO has distributed 4.2 Million Compact Fluorescent Lamp (CFLs) for energy conservation for demand side management. Moreover technical audit of big consumers is encouraged by FESCO.
- The installation of TOD meters is also the part of demand side load management.

FESCO INTEGRATED INVESTMENT PLAN

- Installation of capacitors at Grid Station and 11 KV Feeders has also helped to improve the power quality which in turn conserves the electricity.

ANALYSIS

- More than 100 MW is being saved by the use of 4.2 Million CFLs.
- By applying the demand side load management would have saved considerable amount of energy and during 2014-15 the assets of FESCO against the theft of electricity also contributed towards the efficient use of power.

SECTION –IV

NEXT FIVE YEARS GOALS AND OBJECTIVES

Goals and objectives in five year plan has been set keeping in view the directions of the Regulator (NEPRA) regarding performance standards and in light of Grid Code, Distribution Code, Consumer Service Manual and Distribution Planning Code, so that following goals can be achieved.

- a. Reliable dispersal of power
- b. Acceptable performance standards specified in guideline of NEPRA
- c. Loss reduction and improving connections
- d. Improving internal control
- e. Capacity building of employee
- f. Introducing corporate culture
- g. Improving safety
- h. Improve socio economic conditions of customers

FESCO INTEGRATED INVESTMENT PLAN

GOALS AND OBJECTIVES MATRIX

DIIP-25: FESCO STRATEGIC GOALS AND OBJECTIVES

Strategic Goals	Strategic Objectives	Leading Directorate	Coordinating Directorate	Target Measurement	Measurement as of FY 2015	Five Year Objectives FY 2016 to FY 2020					Project Manager	Supporting Plan
						FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20		
1.0 Improve Operational Efficiency	Losses	Operation Circle	Commercial	%age	11%	11.2	11.1	11.2	11.1	11.2	Director Commercial	
	Collections	Operation Circle	Commercial	%age	101.1%	100	100	100	100	100	Director Commercial	
	SAIFI	Operation Circle	C.E (Op)	Numbers	35	31	29	26	21	18	T.O of Operation Circle	
	SAIDI	Operation Circle	C.E (Op)	Hours	1137	1050	990	966	850	720	T.O of Operation Circle	
	Others											
2. Improve Customer care and Service	Reducing Billing Complaints	Operation Circle	Chief Commercial Officer	Numbers	3984	3200	2500	2100	1600	1250	DCM of Operation Circle	
	Others											
3. Improve DISCOs Infrastructure	Humanware	Director (HR&A)	D.G (HR&A)	Quality of support services will be improved								
	Infoware	D.G (MIS)	CCO	Consumer satisfaction and quality assurance								
	Orgoware	Director (HR&A)	DG (HR&A)	Coordination between directorate will be improved								
	Technoware	Chief Technical Services	CTO	Reliability of the power supply and improvement in efficiency								
4. Comply with applicable Laws & Regulations	NEPRA Rules, Codes etc	All Management Directors with relevant codes	D.G (HR&A)	Implementation of codes, rules and policies of the company								
	Others											
5. Make DISCOs Socially responsible		Director (HR&A)	D.G (HR&A)	Implementation of codes, rules and policies of the company								

Section –V

PROJECTS AND PROGRAMS

PLAN FOR EXPANSION AND REHABILITATION OF SECONDARY TRANSMISSION SYSTEM

- EXPANSION AND REHABILITATION (BEST CASE)

DIIP-26:GRID STATIONS (BEST CASE)

S/ No.	Description	Total No.	Total Capacity (MVA)	2015-16 (Nos.)	2016-17 (Nos.)	2017-18 (Nos.)	2018-19 (Nos.)	2019-20 (No.)
1.	New							
a.	132 KV	22	1057	4	5	4	5	4
2.	Conversion							
a.	66 to 132 KV	9	102.3	3	3	1	1	1
3.	Augmentation							
a.	132 KV	39	530	2	11	4	9	13
b.	66 KV	4	27.9	-	4	-	-	-
4.	Extension (T/Bay)							
a.	132 KV	14	312	2	4	2	1	5
b.	66 KV	1	13		1			
5.	Extension (L/Bay)	-	-	-	-	-	-	-
a.	132 KV	38	-	13	10	7	6	2
b.	66 KV	-	-	-	-	-	-	-

TRANSMISSION LINES (BEST CASE)

DIIP-27:NEW LINE (BEST CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	466.5	69.5	159	103	100	35
2.	132 KV SDT	125	31	-	34	45	15

DIIP-28:2ND CIRCUIT STRINGING OF EXISTING SDTT/LINES (BEST CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	-	-	-	-	-	-
2.	132 KV SDT	190.3	49.3	135	4	2	-

FESCO INTEGRATED INVESTMENT PLAN

DIIP-29: RECONDUCTORING/ UP-GRADATION OF EXISTING T/LINES (BEST CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	116	50	16	38	12	-
2.	132 KV SDT	-	-	-	-	-	-

DIIP-30: CAPACITORS (BEST CASE)

S/ No.	Description	Total MVAR	2015-16	2016-17	2017-18	2018-19	2019-20
1.	11 KV Fixed capacitors	534	103	161	88	97	85
2.	11 KV Switched Capacitors	-	-	-	-	-	-
3.	132 KV Fixed Capacitors	108	36	-	36	36	-
4.	132 KV Switched Capacitors	-	-	-	-	-	-

List of works along with the scope of work is attached as **Annex-F**

▪ EXPANSION AND REHABILITATION (OPTIMALLY ACHIEVABLE CASE)

DIIP-31: GRID STATIONS (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Total No.	Total Capacity (MVA)	2015-16 (Nos.)	2016-17 (Nos.)	2017-18 (Nos.)	2018-19 (Nos.)	2019-20 (No.)
1.	New							
a.	132 KV	15	719.00	3	4	3	4	1
2.	Conversion							
a.	66 to 132 KV	5	81.22	3	1	1	0	0
3.	Augmentation							
a.	132 KV	33	459.00	1	10	4	9	9
b.	66 KV	-	13.80	-	-	-	-	-
4.	Extension (T/Bay)							
a.	132 KV	13	261.00	2	4	1	1	5
b.	66 KV	-	-	-	-	-	-	-
5.	Extension (L/Bay)							
a.	132 KV	35	-	13	10	6	4	2
b.	66 KV	-	-	-	-	-	-	-

FESCO INTEGRATED INVESTMENT PLAN

TRANSMISSION LINES (OPTIMALLY ACHIEVABLE CASE)

DIIP-32:NEW LINE (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	367.5	68.5	91	100	98	10
2.	132 KV SDT	80	31	-	34	-	15

DIIP-32:2ND CIRCUIT STRINGING OF EXISTING SDT T/LINES (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	-	-	-	-	-	-
2.	132 KV SDT	186.3	49.3	135	2	-	-

DIIP-33:RECONDUCTORING/ UP-GRADATION OF EXISTING T/LINES (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Total Length (KM)	2015-16 (KM)	2016-17 (KM)	2017-18 (KM)	2018-19 (KM)	2019-20 (KM)
1.	132 KV D/C	73	50	16	7	-	-
2.	132 KV SDT	-	-	-	-	-	-

DIIP-34:CAPACITORS (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Total MVAR	2015-16 (MVAR)	2016-17 (MVAR)	2017-18 (MVAR)	2018-19 (MVAR)	2019-20 (MVAR)
1.	11 KV Fixed capacitors	414	88.8	121.2	67.2	75.6	61.2
2.	11 KV Switched Capacitors	-	-	-	-	-	-
3.	132 KV Fixed Capacitors	72	36	-	36	-	-
4.	132 KV Switched Capacitors	-	-	-	-	-	-

List of works along with the scope of work is attached as **Annex-G**

FESCO INTEGRATED INVESTMENT PLAN

▪ LOAD FLOW STUDY FOR BEST CASE AND OPTIMALLY ACHIEVABLE CASE

Load flow studies for best case and optimally achievable cases are attached herewith as **Annexure-D**.

▪ SHORT CIRCUIT STUDIES FOR BEST CASE AND OPTIMALLY ACHIEVABLE CASE

Short circuit studies for best case and optimally achievable case is attached as **Annexure-E**.

PLAN FOR EXPANSION AND REHABILITATION OF DISTRIBUTION SYSTEM

DIIP-35: EXPANSION AND RE-HABITATION (BEST CASE)

S/ No.	Description	Unit	Quantities					
			2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Scope of work for 11 KV Expansion								
1.	New HT Lines							
	Number of Proposals	Nos.						
	Length of New H.T Lines	KM	278	304	330	362	380	1664
2.	Transformers							
	a. 10 KVA	Nos.	451	451	501	551	551	2505
	b. 15 KVA	Nos.	350	351	401	451	451	2004
	c. 25 KVA	Nos.	2004	2005	2505	2505	3005	12024
	d. 50 KVA	Nos.	910	950	1000	1050	1100	5010
	e. 100 KVA	Nos.	350	351	401	451	451	2004
	f. 200 KVA	Nos.	140	145	150	155	161	751
	g. 400 KVA	Nos.	12	14	15	16	17	75
	h. 630 KVA	Nos.	4	5	5	5	6	24
	i. Other KVA	Nos.	-	-	-	-	-	-
	Sub Total							24397
3.	Reliability Equipment							
	a. Sectionalizer	Nos.	40	45	40	50	60	235
	b. Auto Reclosers	Nos.	10	10	10	11	12	53
	c. Voltage Regulators (Single Phase Unit)	Nos.	15	15	15	15	15	75
	d. Fault Locator	Nos.	320	400	400	500	550	2170
	Sub Total		-	-	-	-	-	
4.	11 KV Panel	Nos.	Already included in STG Expansion					
B. Scope of work for LT Expansion								
1.	New LT Lines							
	Number of Proposals	Nos.	-	-	-	-	-	-
	Length of New L.T Lines	KM	166	176	187	197	210	936
2.	LT Capacitors							
	a. Different KVARs	Nos.						

FESCO INTEGRATED INVESTMENT PLAN

C. Service Connections								
1.	Single phase	Nos.	127410	132310	137210	142410	145416	684756
2.	Three Phase	Nos.	22454	29554	39654	52454	70448	214564
3.	TOU Meter	Nos.	136	136	136	136	136	680
Sub Total		Nos.	150000	162000	177000	195000	216000	900000

S/ No.	Description	Unit	Quantities					
			2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Scope of work for 11 KV Distribution system Rehabilitation								
1.	New HT Lines							
	Number of Proposals	Nos.	30	35	40	45	50	200
	Bifurcation	KM	340	330	320	360	400	1750
	Reconductoring	KM	300	335	320	320	350	1625
	Re-Routing	KM	10	-	-	-	-	10
2.	Replacement of Over Loaded Transformers							
	a. 50 KVA	Nos.	150	175	200	225	250	1000
	b. 100 KVA	Nos.	150	175	200	225	250	1000
	c. 200 KVA	Nos.	100	100	100	100	100	500
	d. Other KVA	Nos.						
	Sub Total		400	475	500	550	600	2500
3.	Replacement of defective/ burnt Transformers							
	a. 50 KVA	Nos.	535	490	450	410	350	2235
	b. 100 KVA	Nos.	613	550	505	435	365	2468
	c. 200 KVA	Nos.	555	490	450	400	300	2195
	d. Other KVA	Nos.	200	180	150	120	100	750
	Sub Total	Nos.	1903	1710	1555	1365	1115	7648
4.	11 KV Panels for replacement and Bifurcation of feeders	Nos.	20	17	16	17	15	85
B. Scope of work for LT Rehabilitation								
1.	LT Line Rehabilitation							
	Number of Proposals	Nos.	700	750	800	850	900	4000
	Reconductoring / New LT Lines	KM	530	557	592	629	666	2974

The detailed scope of work is attached as **Annex-H**

FESCO INTEGRATED INVESTMENT PLAN

DHP-36: Vehicles

Sr. #	Description	Unit	QUANTITIES											
			2015-16		2016-17		2017-18		2018-19		2019-20		TOTAL	
1.	Single Cabin Pick-up	NO.	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP
			02	18	06	14	06	04	04	06	02	08	20	50
2.	Double Cabin Pick-up	NO.	01	01	0	01	01	01	0	0	0	0	02	03
3	Suzuki Cultus Car	NO.	02	03	02	03	01	04	0	0	0	0	05	10
4.	Toyota Car (XLI)	NO.	0	0	1	1	1	1	0	0	0	1	02	03
5.	Mehran	NO.	0	0	2	3	1	4	1	4	2	3	06	14
6.	Motor Cycle	NO.	0	20	10	10	05	05	0	0	0	0	15	35
7.	Bucket Mounted Truck	NO.	01	01	01	0	01	01	0	01	0	01	03	04
8.	Trucks	NO.	02	03	04	06	04	06	04	06	02	03	16	24
9.	Crane 20 Tons	NO.	0	01	0	0	0	0	0	0	0	0	0	01
10.	Crane 40 Tons	NO.	01	0	0	0	0	0	0	0	0	0	01	0
11.	Trailer 60 Tons	NO.	0	0	01	0	0	0	0	0	0	0	01	0
	TOTAL	NO.	09	47	27	38	20	26	09	17	06	16	71	144
Vehicles for Operation														
S/ N	Description	Unit	2015-16		2016-17		2017-18		2018-19		2019-20		Total	
12	Bucket mounted Vehicle for Operation sub division	NO.	30		30		30		30		30		150	
Sr. #	Description					2015-16	2016-17	2017-18	2018-19	2019-20	Total			
2.	Tools & Plants													
	a. Instrument and Test Equipment				Nos.	85	90	85	90	90	440			
	b. Special Tools				Nos.	40	45	39	40	50	214			
	c. Mechanical Plants (Generators, welding Plants etc)				Nos.	15	15	17	18	15	80			
	d. LM tools other than PPE				Nos.	300	390	390	420	500	2000			
	e. Others													
	Sub Total										2734			
3.	List of New Offices and Buildings													
	a. New Grid Stations				Nos.	6	5	4	4	1	20			
	b. New GSO Circle				Nos.	0	0	1	0	0	1			
	c. P&I Division				Nos.	0	1	2	0	0	3			

FESCO INTEGRATED INVESTMENT PLAN

d.	SS&T Division	Nos.	0	1	1	0	0	2
e.	Operation Sub Divisions	Nos.	9	10	10	0	0	29
f.	Operation Divisions	Nos.	3	2	3	0	0	8
g.	Revenue offices	Nos.	3	2	3	0	0	8
h.	Operation circles	Nos.	0	1	1	0	0	2
i.	Construction circles	Nos.	0	0	0	0	0	0
j.	Construction Divisions GSC	Nos.	0	1	0	0	0	1
k.	Construction Sub Divisions (GSC)		0	3	0	0	0	3
l.	Other Offices	Nos.						
Sub Total		Nos.						77

DIIP-37: EXPANSION AND RE-HABITATION (OPTIMALLY ACHIEVABLE)

S/ No.	Description	Unit	Quantities					
			2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Scope of work for 11 KV Expansion								
1.	New HT Lines							
	Number of Proposals	Nos.						
	Length of New H.T Lines	KM	265	290	315	345	370	1585
2.	Transformers							
	j. 10 KVA	Nos.	451	451	501	551	551	2505
	k. 15 KVA	Nos.	350	351	401	451	451	2004
	l. 25 KVA	Nos.	2004	2005	2505	2505	3005	12024
	m. 50 KVA	Nos.	910	950	1000	1050	1100	5010
	n. 100 KVA	Nos.	350	351	401	451	451	2004
	o. 200 KVA	Nos.	140	145	150	155	161	751
	p. 400 KVA	Nos.	12	14	15	16	17	75
	q. 630 KVA	Nos.	4	5	5	5	6	24
	r. Other KVA	Nos.	-	-	-	-	-	-
	Sub Total							24397
	3.	11 KV Capacitors						
e. Fixed 450 KVAR		Nos.	-	-	-	-	-	-
f. Switched 450 KVAR		Nos.	-	-	-	-	-	-
g. Others		Nos.	-	-	-	-	-	-
Sub Total			-	-	-	-	-	-
4.	11 KV Panel	Nos.	Already included in STG Expansion					
B. Scope of work for LT Expansion								
1.	New LT Lines							
	Number of Proposals	Nos.	-	-	-	-	-	-
	Length of New L.T Lines	KM	158	168	178	188	200	892
2.	LT Capacitors							
	b. Different KVARs	Nos.						
C. Service Connections								
1.	Single phase	Nos.	127410	132310	137210	142410	145416	684756
2.	Three Phase	Nos.	22454	29554	39654	52454	70448	214564
3.	TOU Meter	Nos.	136	136	136	136	136	680
Sub Total		Nos.	150000	162000	177000	195000	216000	900000

FESCO INTEGRATED INVESTMENT PLAN

S/ No.	Description	Unit	Quantities					
			2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Scope of work for 11 KV Distribution system Rehabilitation								
1.	New HT Lines							
	Number of Proposals	Nos.	30	35	40	45	50	200
	Bifurcation	KM	340	330	320	360	400	1750
	Reconductoring	KM	300	335	320	320	350	1625
	Re-Routing	KM	10	-	-	-	-	10
2.	Replacement of Over Loaded Transformers							
	e. 50 KVA	Nos.	150	175	200	225	250	1000
	f. 100 KVA	Nos.	150	175	200	225	250	1000
	g. 200 KVA	Nos.	100	100	100	100	100	500
	h. Other KVA	Nos.						
	Sub Total		400	475	500	550	600	2500
3.	Replacement of defective/ burnt Transformers							
	e. 50 KVA	Nos.	535	490	450	410	350	2235
	f. 100 KVA	Nos.	613	550	505	435	365	2468
	g. 200 KVA	Nos.	555	490	450	400	300	2195
	h. Other KVA	Nos.	200	180	150	120	100	750
	Sub Total	Nos.	1903	1710	1555	1365	1115	7648
4.	11 KV Panels for replacement and Bifurcation of feeders	Nos.	20	17	16	17	15	85
B. Scope of work for LT Rehabilitation								
1.	LT Line Rehabilitation							
	Number of Proposals	Nos.	700	750	800	850	900	4000
	Reconductoring / New LT Lines	KM	530	557	592	629	666	2974

The detailed scope of work is attached as **Annex-I**

FESCO INTEGRATED INVESTMENT PLAN

DIIIP-38: Vehicles

Sr. #	Description	Unit	QUANTITIES											
			2015-16		2016-17		2017-18		2018-19		2019-20		TOTAL	
			STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP	STG	ELR/DOP
1.	Single Cabin Pick-up	NO.	02	18	06	14	06	04	04	06	02	08	20	50
2	Double Cabin Pick-up	NO.	01	01	0	01	01	01	0	0	0	0	02	03
3	Suzuki Cultus Car	NO.	02	03	02	03	01	04	0	0	0	0	05	10
4.	Toyota Car (XLH)	NO.	0	0	1	1	1	1	0	0	0	1	02	03
5.	Mehran	NO.	0	0	2	3	1	4	1	4	2	3	06	14
6	Motor Cycle	NO.	0	20	10	10	05	05	0	0	0	0	15	35
7.	Bucket Mounted Truck	NO.	01	01	01	0	01	01	0	01	0	01	03	04
8.	Trucks	NO.	02	03	04	06	04	06	04	06	02	03	16	24
9.	Crane 20 Tons	NO.	0	01	0	0	0	0	0	0	0	0	0	01
10.	Crane 40 Tons	NO.	01	0	0	0	0	0	0	0	0	0	01	0
11.	Trailer 60 Tons	NO.	0	0	01	0	0	0	0	0	0	0	01	0
	TOTAL	NO.	09	47	27	38	20	26	09	17	06	16	71	144

Sr. #	Description		2015-16	2016-17	2017-18	2018-19	2019-20	Total
2.	Tools & Plants							
	f. Instrument and Test Equipment	Nos.	85	90	85	90	90	440
	g. Special Tools	Nos.	40	45	39	40	50	214
	h. Mechanical Plants (Generators, welding Plants etc)	Nos.	15	15	17	18	15	80
	i. LM tools other than PPE	Nos.	300	390	390	420	500	2000
	j. Others							
	Sub Total							2734
3.	List of New Offices and Buildings							
	m. New Grid Stations	Nos.	6	5	4	4	1	20
	n. New GSO Circle	Nos.	0	0	1	0	0	1
	o. P&I Division	Nos.	0	1	2	0	0	3
	p. SS&T Division	Nos.	0	1	1	0	0	2
	q. Operation Sub Divisions	Nos.	9	10	10	0	0	29
	r. Operation Divisions	Nos.	3	2	3	0	0	8
	s. Revenue offices	Nos.	3	2	3	0	0	8
	t. Operation circles	Nos.	0	1	1	0	0	2
	u. Construction circles	Nos.	0	0	0	0	0	0
	v. Construction Divisions GSC	Nos.	0	1	0	0	0	1
	w. Construction Sub Divisions (GSC)		0	3	0	0	0	3
	x. Other Offices	Nos.						
	Sub Total	Nos.						77

FESCO INTEGRATED INVESTMENT PLAN

DIIP-39: STATUS OF STUDY BASED DISTRIBUTION SYSTEM PLANNING BASED ON GIS MAPPING AND THE TRANSITION PLAN

S/ No.	Description	Unit	Quantities					Total
			2015-16	2016-17	2017-18	2018-19	2019-20	
GIS Mapping								
1.	HT Mapping							
	Number of 11 KV Feeders	Nos.	165	331	83	83	83	898
	Length of HT Lines mapped	KM	9600	19200	4800	4800	4800	48083
2.	LT Mapping							
	Number of LT Lines	Nos.	-	-	4500	5600	8400	18500
	Length of LT Lines mapped	Nos.	-	-	1900	2400	3600	7900
3.	Tools Required							
	GIS mapping software Licences	Nos.	1	1	1	-	-	3
	Hardware including plotters, computers, GPS devices etc.	Nos.	1	1	1	-	-	3
S/ No.	Description	Unit	Quantities					Total
			2015-16	2016-17	2017-18	2018-19	2019-20	
Study Based Planning using GIS Maps with Modern Planning Tools- Transition Plan								
1.	HT							
	Circles	Nos.	165	331	83	83	83	898
2.	LT Mapping							
	Number of LT Lines	Nos.	-	-	4500	5600	8400	18500
3.	Tools Required							
	Simulation software Licences	Nos.	2	2	2	2	2	10
	Hardware including plotters, computers etc.	Nos.	1	1	1	1	1	5

OTHER FUNCTIONAL IMPROVEMENT PLANS

COMMERCIAL IMPROVEMENT PLANS (BEST CASE)

Following plan is being designed keeping in view the directions of NEPRA in the tariff petition of FY 2014-15 which states *"that Authority therefore directs all DISCOs as follows:*

- ❖ To install AMR and AMI at all of their CDPs by December 31, 2015.
- ❖ To install AMR and AMI on the receiving end of at least 30% of their 11 kV feeders (as existing on 30 June 2014) by 31st December 2015 and remaining 70% till June, 2016.
- ❖ To initiate and install AMR/AMI at the consumer level in at least 10% of their high loss making subdivision by 31st December, 2015 and remaining 70% by 30th June 2016".
- ❖ FESCO has started reading with Mobile phone units which takes photograph of the reading also. After three years there is plan to replace these mobile units with HHU.

FESCO INTEGRATED INVESTMENT PLAN

DIIP-40:

S/ No.	Description	Quantities					Total
		2015-16	2016-17	2017-18	2018-19	2019-20	
A	AMR /AMI Metering	10000	150000	150000	300000	400000	1010000
B	Electronic Metering	-	-	-	-	-	-
C	New CIS system	Legacy system will be modernized taking care of CRM and complaint management automation			Modernization of existing system		
D	HHUs for meter reading (Mobile Unit for Meter Reading)	600 Mobile Units	0	0	800 HHU	900 HHU	2300
E	Consumer Census		Census of 1 st circle consumer		Census of remaining consumers		4.3Million consumer
F	Anti-theft efforts	Checking of 100% Industrial connection & 25% others through FESCO staff.					
G	IT infrastructure to support new initiatives	Setting of control for reading of AMR/AMI meters					
H	Others etc.						
	Total						

DIIP-41: FINANCIAL MANAGEMENT IMPROVEMENT PLANS

S/ No.	Description	Quantities					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A	ERP system Implementation Phase-I Phase-II	70 % 10 %	30% 70%	20%	Modernization		100%
B	Revamping the Internal Audit	Additional staff will be recruited		Due to ERP implementation improvement in Internal Audit is expected.			
C	Other Studies and models preparation. Phase-I Phase-II		50%	50%	50%	50%	
D	IT Infrastructure to support new initiatives		I.T Infrastructure support will be required in software and hardware for improvement of Internal Audit and implementation of ERP.				
E	Others etc.						
	Total						

FESCO INTEGRATED INVESTMENT PLAN

DIIP-42: HUMAN RESOURCE IMPROVEMENT PLANS, INCLUDING STAFFING PLAN ALIGNED WITH THE INVESTMENT PLAN.						
HR Improvement Plan items (Illustrations below)	Define Scope					
	FY2015-16	FY2016-17	FY2017-18	FY2018-19	FY2019-20	Total
A Revamping of Training Centers	- AC Computer Lab., Projector, Multimedia. Updating the curriculum as per current need of Company at RTC Faisalabad - Capacity of RTC will be enhanced to accommodate double of the existing number of employees	- Training yards with full Line Practices will be established at CTC Jhang and CTC Sargodha - Furniture, fixture alongwith other training aid instruments.	- New proper building for CTC Jhang will be constructed. - AC Computer Lab., Projector, Multimedia at CTC Jhang Capacity CTC Jhang will be enhanced to accommodate double of the existing number of employees	- New proper building for CTC Sargodha will be constructed. - AC Computer Lab., Projector, Multimedia at CTC Sargodha Capacity of CTC Sargodha will be enhanced to accommodate double of the existing number of employees	- RTC, CTC, CTC Jhang, CTC Sargodha will be connected through computer network. - Facility of On line Training will also be provided to the employees Company will ensure training of 100% employees on the rule of the Company	All three Centers will be revamped
B Provision of safety T&P and promoting safety Culture	- T&P will be provided to 12236 No. Technical Staff - T&P Parade of Line Staff. Safety Seminars & Safety Trainings will be conducted in both internal & external training institutions for promoting the Safety Culture	- T&P will be provided to 12236+1040=13276 No. Technical Staff - T&P Parade of Line Staff. Safety Seminars & Safety Trainings will be conducted in both internal & external training institutions for promoting the Safety Culture	- T&P will be provided to 13276+1829=15105 No. Technical Staff - T&P Parade of Line Staff. Safety Seminars & Safety Trainings will be conducted in both internal & external training institutions for promoting the Safety Culture	- T&P will be provided to 15105+732=15837 No. Technical Staff - T&P Parade of Line Staff. Safety Seminars & Safety Trainings will be conducted in both internal & external training institutions for promoting the Safety Culture	- T&P will be provided to 15837+732=16569 No. Technical Staff - T&P Parade of Line Staff. Safety Seminars & Safety Trainings will be conducted in both internal & external training institutions for promoting the Safety Culture	16569
C Training of employees through external training institutions	Staff = 60 Officer = 21	Staff = 70 Officer = 25	Staff = 80 Officer=35	Staff =90 Officer= 50	Staff= 100 Officer=60	591

FESCO INTEGRATED INVESTMENT PLAN

D	Human Resources Information Systems Implementation	MIS of 18347 (existing + to be hired manpower during 2015-16) out of total sanctioned manpower 21522	MIS of 21347 (existing 18347+ 3000 to be hired manpower during 2016-17) out of total sanctioned manpower 23565	MIS of 25347 (existing 21347+ 4000 to be hired manpower during 2017-18) out of total sanctioned manpower 27493	MIS of 28347 (existing 25347+ 3000 to be hired manpower during 2018-19) out of total sanctioned manpower 29030	MIS of 30564 (existing 28347+ 2217 to be hired manpower during 2019-20) to complete the MIS i.e: 30564	30564
E	Conducting the yardstick study	Yardstick of each category of staff will be reviewed in view of prevailing demand of manpower against the quantum of work, number of consumers, number of grids, length of distribution and transmission lines and number of Offices.	Yardstick of each category of staff will be reviewed in view of prevailing demand of manpower against the quantum of work, number of consumers, number of grids, length of distribution and transmission lines and number of Offices.	Yardstick of each category of staff will be reviewed in view of prevailing demand of manpower against the quantum of work, number of consumers, number of grids, length of distribution and transmission lines and number of Offices.	Yardstick of each category of staff will be reviewed in view of prevailing demand of manpower against the quantum of work, number of consumers, number of grids, length of distribution and transmission lines and number of Offices.	Yardstick of each category of staff will be reviewed in view of prevailing demand of manpower against the quantum of work, number of consumers, number of grids, length of distribution and transmission lines and number of Offices.	05 O&M Studies of yardstick
F	IT infrastructure to support new initiatives	Modern software and hardware support is required.					
G	Improving the working environment	Repair of Company owned Office buildings	Repair of Company owned Office buildings	Construction of new office buildings for shifting from rented buildings	Construction of new office buildings for shifting from rented buildings	Construction of new office buildings for shifting from rented buildings	
H	Others etc...	-	-	-	-	-	
Total							

FESCO INTEGRATED INVESTMENT PLAN

Description	2015 (Baseline)	2016	2017	218	2019	2020
Staff Trained	1710+108 = 1818	5300	5500	6000	6300	6400
Officer Trained	55	70	80	90	100	110
Officer Trained in Mgt: Courses	22	32	42	52	62	72

FESCO INTEGRATED INVESTMENT PLAN

DIIP-43: STAFFING PLAN ALIGNED WITH INVESTMENT PLAN

S/ No.	Description	Quantities					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Staff Required for Future Expansion							
1	Director/ Chief Engineer						
2	Manager						
3	Deputy Manager		5		7	2	14
4	Assistant Manager	4	9	2	12	4	31
5	Line Superintendent	26	33	12	37	19	127
6	Line Man	38	214	32	214	48	546
7	Assistant Line Man	52	228	48	230	72	630
8	SDC/UDC	0	18	0	21	2	41
9	Clerks	5	47	4	50	25	131
10	Driver	10	50	6	52	12	130
11	N/Qasid	3	19	2	26	10	60
12	Security Guards	15	54	15	54	19	157
13	Sweepers	3	15	2	16	6	42
14	Drafts Men	0	4	0	4	3	11
15	Tracers	0	3	0	2	3	8
16	Surveyors	0	4	0	4	0	8
17	Mali	3	6	3	7	2	21
18	Data Control Supervisors	2	5	2	5	5	19
19	Others	75	124	69	129	69	466

FESCO INTEGRATED INVESTMENT PLAN

SECTION -VI

COSTS AND FINANCING PLAN

A. CAPITAL EXPENDITURE AND ADDITIONAL OPERATING COSTS FOR EXPANSION AND REHABILITATION OF SECONDARY TRANSMISSION AND DISTRIBUTION SYSTEM (FOR BEST AND OPTIMALLY IMPLEMENTABLE SCENARIOS)

DIIP-44:SUMMARY OF CAPITAL EXPENDITURE COST (OPTIMALLY ACHIEVABLE CASE)

Item		2015-16			2016-17			2017-18			2018-19			2019-20			Total		
		LCC	FEC US\$	Total	LCC	FEC US\$	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total
A	STG	2828	-	2828	3252	-	3252	2722	-	2722	2616	-	2616	1637	-	1637	13056	-	13056
B	Distribution	994	-	994	1210	-	1201	1443	-	1443	1670	-	1670	1993	-	1993	7309	-	7309
C	Vehicles and T&P	104	-	104	119	-	119	90	-	90	68	-	68	49	-	49	430	-	430
D	Civil works	530	-	530	1045	-	1045	680	-	680	400	-	400	210	-	210	2865	-	2865
	Misc. Charges @ 1%	Already included in Subproject costs																	
	Authority Supervisory Charges @ 0.5 %	-do-																	
	Contingencies: @ 5 %	-do-																	
	Dismantling Charges: @ 5 % of Equipment cost against Rehabilitation	-do-																	
	I.D.C. @ 11.21 % per Annum on Local and 12 % per Annum on FEC	-do-																	
	Escalation (Separately for LCC and FEC)																		
	Sub Total	4456	-	4456	5626	-	5626	4935	-	4935	4754	-	4754	3889	-	3889	23660	-	23660
	Previously Plan	2825	16.86	4214	548	3.66	914	-	-	-	-	-	-	-	-	-	5128	-	5128
	Total	8670	-	8670	6540	-	6540	4935	-	4935	4754	-	4754	3889	-	3889	28788	-	28788

FESCO INTEGRATED INVESTMENT PLAN

DIIP-45: SUMMARY OF ANNUL RECURRING COSTS

S/ No.	Description	Unit	Quantities					Total
			2015-16	2016-17	2017-18	2018-19	2019-20	
O&M Cost for FESCO Expansion & Rehabilitation –Best Case								
1.	Existing O&M Cost	Rs. Million						
	O&M Cost for New Schemes	Rs. Million						
	Total							
O&M Cost for FESCO Expansion & Rehabilitation – Optimally Achievable Case								
2.	Existing O&M Cost	Rs. Million	10432	11267	12284	13446	14448	61877
	O&M Cost for New Schemes	Rs. Million	347	608	806	996	1152	3909
	Total		10,779	11,875	13,090	14,442	15600	65786

- **DETAILS OF COSTING**
- **STG EXPANSION AND REHABILITATION (BEST CASE)**

DIIP-46: GRID STATIONS

Rs. In Million								
S/ No.	Description	Total Cost	Total Capacity (MVA)	2015-16	2016-17	2017-18	2018-19	2019-20
1.	New							
a.	132 KV	4379.54	1057	722.17	1041.8	836.42	981.42	797.73
2.	Conversion							
a.	66 to 132 KV	1298.01	102.3	420.28	419.78	183.03	126.50	148.42
3.	Augmentation							
a.	132 KV	1919.89	530	76.42	465.19	213.99	384.51	779.78
b.	66 KV	50.19	27.9		50.19			
4.	Extension (T/Bay)							
a.	132 KV	782.28	312	99.92	166.56	205.64	51.37	258.79
b.	66 KV	25.27	13		25.27			
5.	Extension (L/Bay)		-					
a.	132 KV	850.14	-	175.36	176.59	178.9	283.85	35.44
b.	66 KV		-					

TRANSMISSION LINES (BEST CASE)

DIIP-47: NEW LINE

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	132 KV D/C	3934.87	830.72	1212.06	813.82	792.57	285.7
2.	132 KV SDT	724.1	153.24	-	198.93	269.8	102.13

DIIP-48:2ND CIRCUIT STRINGING OF EXISTING SDT T/LINES (BEST CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	132 KV D/C						
2.	132 KV SDT	216.9	52.68	158.55	3.14	2.53	-

DIIP-49: RECONDUCTORING/ UP-GRADATION OF EXISTING T/LINES (BEST CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	132 KV D/C	655.64	292.13	111.49	147.60	104.42	-
2.	132 KV SDT						

DIIP-50: CAPACITORS (BEST CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	11 KV Fixed capacitors		Cost included in Grid Station Cost				
2.	11 KV Switched Capacitors						
3.	132 KV Fixed Capacitors	108.23	31.52		35.42	41.29	
4.	132 KV Switched Capacitors						

The detail of cost of Subprojects is attached as **Annex-J**

FESCO INTEGRATED INVESTMENT PLAN

▪ STG EXPANSION AND REHABILITATION (OPTIMALLY ACHIEVABLE CASE)

DIIP-51: GRID STATIONS

Rs. In Million								
S/ No.	Description	Total Cost	Total Capacity (MVA)	2015-16	2016-17	2017-18	2018-19	2019-20
1.	New							
a.	132 KV	2411.51	719.00	546.6	846.16	594.21	204.46	220.08
2.	Conversion							
a.	66 to 132 KV	883.16	81.22	420.28	279.85	183.03		
3.	Augmentation							
a.	132 KV	1566.32	459.00	76.42	323.68	213.99	348.51	603.72
b.	66 KV	18.87	13.80		18.87			
4.	Extension (T/Bay)							
a.	132 KV	678.18	261.00	99.92	166.56	101.54	51.37	258.79
b.	66 KV		-					
5.	Extension (L/Bay)							
a.	132 KV	867.71	-	175.36	176.59	178.9	283.85	53.01
b.	66 KV		-					

TRANSMISSION LINES (OPTIMALLY ACHIEVABLE CASE)

DIIP-52: NEW LINE (OPTIMALLY ACHIEVABLE CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	132 KV D/C	3332.45	823.05	803.06	795.75	767.26	143.33
2.	132 KV SDT	454.3	153.24		198.93		102.13

DIIP-53: 2ND CIRCUIT STRINGING OF EXISTING SDT T/LINES (OPTIMALLY ACHIEVABLE CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	132 KV D/C						
2.	132 KV SDT	216.9	52.68	158.55	3.14	2.53	

DIIP-54: RECONDUCTORING/ UP-GRADATION OF EXISTING T/LINES (OPTIMALLY ACHIEVABLE CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	132 KV D/C	463.26	292.13	111.49	59.64		
2.	132 KV SDT						

FESCO INTEGRATED INVESTMENT PLAN

DIIP-55: CAPACITORS (OPTIMALLY ACHIEVABLE CASE)

Rs. in Million							
S/ No.	Description	Total Cost	2015-16	2016-17	2017-18	2018-19	2019-20
1.	11 KV Fixed capacitors	Cost of 11 KV capacitors is included in Grid Station Cost					
2.	11 KV Switched Capacitors						
3.	132 KV Fixed Capacitors	66.94	31.52		35.42		
4.	132 KV Switched Capacitors						

The detail of cost of Transmission Expansion & Transmission Rehabilitation plan is attached as Annex-K

DIIP-56: DISTRIBUTION SYSTEM-EXPANSION AND REHABILITATION (BEST CASE)

S/ No.	Description	Rs. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Scope of work for 11 KV Expansion							
1.	New HT Lines	152	211	203	221	236	1025
	Number of Proposals						
	Length of New H.T Lines						
2.	Transformers						
	i. 50 KVA	270.53	282.42	297.29	312.15	327.02	1489.42
	ii. 100 KVA	154.99	155.43	177.57	199.72	199.72	887.43
	iii. 200 KVA	92.86	96.18	99.50	102.81	106.79	498.14
	iv. Other KVA	570.10	574.22	696.96	714.21	822.29	3377.78
	Sub Total	1088.48	1108.25	1271.32	1328.89	1455.82	6252.77
S/ No.	Description	Rs. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
3.	Reliability Equipment						
	Sectionalizer	56	63	56	70	84	329
	Auto Reclosers	20	20	20	22	24	106
	Voltage Regulators (Single Phase Unit)	15	15	15	15	15	75
	Fault Locator	3.2	4	4	5	5.5	21.7
4.	11 KV Panel						
B. Scope of work for LT Expansion							
1.	New LT Lines	60.47	64.24	67.67	71.44	76.06	339.89
	Number of Proposals						
	Length of New H.T Lines						
2.	LT Capacitors						
	Different KVARs						
C. Service Connections							
1.	Single Phase	509.64	529.24	548.84	569.64	581.66	2739.02
2.	Three Phase	336.81	443.31	594.81	786.81	1056.72	3218.46
3.	TOU Meter	4.49	4.49	4.49	4.49	4.49	22.43
Sub Total		850.94	977.04	1148.14	1360.94	1642.87	5979.91

FESCO INTEGRATED INVESTMENT PLAN

S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Scope of work for 11 KV Distribution system Rehabilitation							
1.	New HT Lines						
	Number of Proposals						
	Bifurcation	31.41	37.70	43.98	50.26	56.54	219.89
	Reconductoring	26.55	32.45	38.35	44.25	50.15	191.75
	Re-Routing						
S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2017-18	2019-20	Total
2.	Replacement of Over Loaded Transformers						
	i. 50 KVA	34.29	40.01	45.73	51.44	57.16	228.63
	ii. 100 KVA	49.90	58.22	66.53	74.85	83.17	332.67
	iii. 200 KVA	62.75	62.75	62.75	62.75	62.75	313.73
	iv. Other KVA						
	Sub Total	146.94	160.97	175.00	189.04	203.07	875.02
3.	Replacement of defective/ burned Transformers						
	i. 50 KVA	34.29	40.01	45.73	51.44	57.16	228.63
	ii. 100 KVA	99.80	99.80	116.43	133.07	149.70	598.80
	iii. 200 KVA	21.96	25.10	25.10	25.10	28.24	125.49
	iv. Other KVA						
	Sub Total	156.06	164.91	187.26	209.61	235.09	952.92
4.	11 KV Panel for Replacement/ Bifurcation of feeders	11.39	14.50	17.61	20.72	23.83	88.06
B. Scope of work for LT Rehabilitation							
1.	LT Line Rehabilitation						
	New L.T Line	80.80	90.56	10.11	11.09	12.22	50.56
	Reconductoring of LT Lines	4.42	4.42	4.42	4.42	4.42	22.08

The detail of cost of distribution Expansion and distribution rehabilitation plan for Best Case is attached as **Annex-L**

FESCO INTEGRATED INVESTMENT PLAN

DIIP-57: Vehicles

S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
1.	Vehicles	32.00	32.00	16.00	16.00	16.00	112.00
	Single Cabin Pick-up	6.00	3.00	6.00	0	0	15.00
	Double Cabin Pick-up	6.00	6.00	6.00	0	0	18.00
	Suzuki Cultus Car	0	4.0	4.0	0	2.0	10.0
	Toyota Car (XLI)	0.0	3.5	3.5	3.5	3.5	14.0
	Mehran	2.0	2.0	1.0	0	0	5.0
	Motor Cycle	11.00	5.50	11.00	5.50	5.50	38.50
	Bucket Mounted Truck	20.00	40.00	40.00	40.0	20.00	160.00
	Trucks	11.00	0.00	0.00	0.00	0.00	11.00
	Crane 20 Tons	13.00	0.00	0.00	0.00	0.00	13.00
	Crane 40 Tons	0.00	20.00	0.00	0.00	0.00	20.00
	Trailor 60-Ton	101.00	116.00	87.50	65.00	47.00	416.5
	Sub Total	32.00	32.00	16.00	16.00	16.00	112.00
Vehicles for Operation							
S/N	Desertion	2015-16	2016-17	2017-18	2018-19	2019-20	Total
1	Bucket Mounted trucks	150	150	150	150	150	750
		182	182	166	166	166	862
S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
2.	Tools & Plants						
1	EARTHING SET	155346	155346	155346	155346	109656	731040
2	EARTH TESTER	44251	44251	44251	44251	31236	208240
3	MAGGER (1000 VOLTS)	290462	290462	290462	290462	205032	1366880
4	MEASURING TAPE	22049	22049	22049	22049	15564	103760
5	FIBER GLASS EXTENSION LADDER	881739	881739	881739	881739	622404	4149360
6	CUFFING HOIST (1500 KG)	167637	167637	167637	167637	118332	788880
7	CUFFING HOIST (750 KG)	125358	125358	125358	125358	88488	589920
8	GALVANIZED STEEL BUCKET	19224	17088	19224	17088	10680	83304
9	FIRE EXTINGUISHER	9764	12205	9764	9764	7323	48820
10	CLIP ON VOLT AMPT METER	131804	164755	131804	131804	98853	659020
11	CLIP ON KW METER	131804	164755	131804	131804	98853	659020
12	STOP WATCH	26860	26860	26860	26860	18960	126400
12	BLACK SMITH ANVIL (76 KG)	38896	38896	38896	38896	27456	183040
13	CHAIN PULLEY BLOCK (3 TON)	25942	25942	25942	25942	18312	122080
14	CHAIN PLLEY BLOCK (5 TON)	124335	110520	124335	110520	69075	538785
15	NYLON ROPE (19MM DIA)	351458	351458	351458	351458	248088	1653920
16	PICK AXES	2482	2482	2482	2482	1752	11680
17	KASSIES	6222	6222	6222	6222	4392	29280
18	FIRST AID BOX	23341	23341	23341	23341	16476	109840
19	D.E.O J SPANNER 9/6" X 5/8")	16864	16864	16864	16864	11904	79360
20	D.E.O J SPANNER 5/8" X 3/4")	16864	16864	16864	16864	11904	79360
21	PULLING GRIP (6-10")	47243	47243	47243	47243	33348	222320

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22	PULLING GRIP (12-15')	62067	62067	62067	62067	43812	292080
23	HAMMERS	2074	2074	2074	2074	1464	9760
24	ADJUSTABLE SCREW WRENCH	13498	13498	13498	13498	9528	63520
25	LINE MAN TOOL BAG	9860	9860	9860	9860	6960	46400
26	LINE MAN KNIFE	884	884	884	884	624	4160
27	TORCH 3 CELLS	4862	4862	4862	4862	3432	22880
B) PERSONAL PROTECTIVE T & P							
1	SAFETY HAT INSULATED	12975	12975	12975	12975	10380	62280
2	LINE MAN SAFETY BELT	18250	18250	18250	18250	14600	87600
3	PROTECTIVE RUBBER GLOVES (PAIR)	26925	26925	26925	26925	21540	129240
4	PROTECTIVE LATHER GLOVES (PAIR)	15975	15975	15975	15975	12780	76680
5	LINE MAN SAFETY BOOTS (8.9.10 SIZE)	28650	28650	28650	28650	22920	137520
6	LIVE WIRE TESTER (4000 VOLTS)	368	368	460	368	276	1840
7	INSULATED SCREW DRIVER	1975	1975	1975	1975	1580	9480
8	RAIN COAT	63920	63920	63920	79900	47940	319600
9	D-OPERATING ROD	29288	29288	36610	29288	21966	146440
10	INSULATED PLYER	5725	5725	5725	5725	4580	27480
Sub Total (Rs.)		2957241	3009633	2964655	2957270	2092470	13981269
In Millions		2.96	3.01	2.96	2.96	2.01	13.9

S/ No.	Description	Rs. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
GIS Mapping							
1.	HT Mapping						
	Number of 11 KV Feeders	19.2	38.4	9.6	9.6	9.6	96.2
	Length of HT Lines mapped						
2.	LT Mapping						
	Number of LT Lines	-	-	15.4	19.2	28.8	63.4
	Length of LT Lines mapped						
3.	Tools Required						
	GIS mapping software Licences	0.3	0.3	0.3	-	-	0.9
	Hardware including plotters, computers, GPS devices etc.	2.8	2.8	2.8	2.8	2.8	14

S/ No.	Description	Rs. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Study Based Planning using GIS Maps with Modern Planning Tools- Transition Plan							
1.	HT						
	Circles	4.8	9.6	2.4	2.4	2.4	24
2.	LT Mapping						
	Number of LT Lines	-	-	1.0	1.2	1.8	4
3.	Tools Required						
	Simulation software Licences	1.5	1.5	1.5	1.5	1.5	7.5
	Hardware including plotters, computers etc.	0.3	0.3	0.3	0.3	0.3	1.5

FESCO INTEGRATED INVESTMENT PLAN

DHIP-58: DISTRIBUTION SYSTEM-EXPANSION AND REHABILITATION (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Rs. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
D. Scope of work for 11 KV Expansion							
1.	Cost of New HT Lines	144.97	201.88	193.65	210.52	225.43	976.46
2.	Transformers						
	i. 50 KVA	270.53	282.42	297.29	312.15	327.02	1489.42
	ii. 100 KVA	154.99	155.43	177.57	199.72	199.72	887.43
	iii. 200 KVA	92.86	96.18	99.50	102.81	106.79	498.14
	iv. Other KVA	570.10	574.22	696.96	714.21	822.29	3377.78
	Sub Total	1088.48	1108.25	1271.32	1328.89	1455.82	6252.77
S/ No.	Description	Rs. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
4.	11 KV Panel						
E. Scope of work for LT Expansion							
1.	New LT Lines	60.47	64.24	67.67	71.44	76.06	339.89
	Number of Proposals						
	Cost of New H.T Lines						
2.	LT Capacitors						
	Different KVARs						
F. Service Connections							
1.	Single Phase	509.64	529.24	548.84	569.64	581.66	2739.02
2.	Three Phase	336.81	443.31	594.81	786.81	1056.72	3218.46
3.	TOU Meter	4.49	4.49	4.49	4.49	4.49	22.43
	Sub Total	850.94	977.04	1148.14	1360.94	1642.87	5979.91

S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
C. Scope of work for 11 KV Distribution system Rehabilitation							
1.	Cost of New HT Lines						
	Cost of Bifurcation	31.41	37.70	43.98	50.26	56.54	219.89
	Cost of Reconductoring	26.55	32.45	38.35	44.25	50.15	191.75
	Re-Routing						
S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2017-18	2019-20	Total
2.	Replacement of Over Loaded Transformers						
	i. 50 KVA	34.29	40.01	45.73	51.44	57.16	228.63
	ii. 100 KVA	49.90	58.22	66.53	74.85	83.17	332.67
	iii. 200 KVA	62.75	62.75	62.75	62.75	62.75	313.73
	iv. Other KVA						
	Sub Total	146.94	160.97	175.00	189.04	203.07	875.02

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3.	Replacement of defective/ burnt Transformers						
	i. 50 KVA	34.29	40.01	45.73	51.44	57.16	228.63
	ii. 100 KVA	99.80	99.80	116.43	133.07	149.70	598.80
	iii. 200 KVA	21.96	25.10	25.10	25.10	28.24	125.49
	iv. Other KVA						
	Sub Total	156.06	164.91	187.26	209.61	235.09	952.92
4.	11 KV Panel for Replacement/ Bifurcation of feeders	11.39	14.50	17.61	20.72	23.83	88.06
D. Scope of work for LT Rehabilitation							
1.	LT Line Rehabilitation						
	New L.T Line	80.80	90.56	10.11	11.09	12.22	50.56
	Reconductoring of LT Lines	4.42	4.42	4.42	4.42	4.42	22.08

The detail of cost of distribution Expansion and distribution rehabilitation plan for Optimally achievable Case is attached as **Annex-M**.

DIIP-59: Vehicles

S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
1.	Vehicles	32.00	32.00	16.00	16.00	16.00	112.00
	Single Cabin Pick-up	6.00	3.00	6.00	0	0	15.00
	Double Cabin Pick-up	6.00	6.00	6.00	0	0	18.00
	Suzuki Cultus Car	0	4.0	4.0	0	2.0	10.0
	Toyota Car (XLI)	0.0	3.5	3.5	3.5	3.5	14.0
	Mehran	2.0	2.0	1.0	0	0	5.0
	Motor Cycle	11.00	5.50	11.00	5.50	5.50	38.50
	Bucket Mounted Truck	20.00	40.00	40.00	40.0	20.00	160.00
	Trucks	11.00	0.00	0.00	0.00	0.00	11.00
	Crane 20 Tons	13.00	0.00	0.00	0.00	0.00	13.00
	Crane 40 Tons	0.00	20.00	0.00	0.00	0.00	20.00
	Trailor 60-Ton	101.00	116.00	87.50	65.00	47.00	416.5
	Sub Total	32.00	32.00	16.00	16.00	16.00	112.00
S/ No.	Description	RS. in Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
2.	Tools & Plants						
1	EARTHING SET	155346	155346	155346	155346	109656	731040
2	EARTH TESTER	44251	44251	44251	44251	31236	208240
3	MAGGER (1000 VOLTS)	290462	290462	290462	290462	205032	1366880
4	MEASURING TAPE	22049	22049	22049	22049	15564	103760

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5	FIBER GLASS EXTENSION LADDER	881739	881739	881739	881739	622404	4149360
6	CUFFING HOIST (1500 KG)	167637	167637	167637	167637	118332	788880
7	CUFFING HOIST (750 KG)	125358	125358	125358	125358	88488	589920
8	GALVANIZED STEEL BUCKET	19224	17088	19224	17088	10680	83304
9	FIRE EXTINGUISHER	9764	12205	9764	9764	7323	48820
10	CLIP ON VOLT AMPT METER	131804	164755	131804	131804	98853	659020
11	CLIP ON KW METER	131804	164755	131804	131804	98853	659020
12	STOP WATCH	26860	26860	26860	26860	18960	126400
12	BLACK SMITH ANVIL (76 KG)	38896	38896	38896	38896	27456	183040
13	CHAIN PULLEY BLOCK (3 TON)	25942	25942	25942	25942	18312	122080
14	CHAIN PLEY BLOCK (5 TON)	124335	110520	124335	110520	69075	538785
15	NYLON ROPE (19MM DIA)	351458	351458	351458	351458	248088	1653920
16	PICK AXES	2482	2482	2482	2482	1752	11680
17	KASSIES	6222	6222	6222	6222	4392	29280
18	FIRST AID BOX	23341	23341	23341	23341	16476	109840
19	D.E.O J SPANNER 9/6" X 5/8"	16864	16864	16864	16864	11904	79360
20	D.E.O J SPANNER 5/8" X 3/4"	16864	16864	16864	16864	11904	79360
21	PULLING GRIP (6-10')	47243	47243	47243	47243	33348	222320
22	PULLING GRIP (12-15')	62067	62067	62067	62067	43812	292080
23	HAMMERS	2074	2074	2074	2074	1464	9760
24	ADJUSTABLE SCREW WRENCH	13498	13498	13498	13498	9528	63520
25	LINE MAN TOOL BAG	9860	9860	9860	9860	6960	46400
26	LINE MAN KNIFE	884	884	884	884	624	4160
27	TORCH 3 CELLS	4862	4862	4862	4862	3432	22880
B) PERSONAL PROTECTIVE T & P							
1	SAFETY HAT INSULATED	12975	12975	12975	12975	10380	62280
2	LINE MAN SAFETY BELT	18250	18250	18250	18250	14600	87600
3	PROTECTIVE RUBBER GLOVES (PAIR)	26925	26925	26925	26925	21540	129240
4	PROTECTIVE LATHER GLOBES (PAIR)	15975	15975	15975	15975	12780	76680
5	LINE MAN SAFETY BOOTS (8.9.10 SIZE)	28650	28650	28650	28650	22920	137520
6	LIVE WIRE TESTER (4000 VOLTS)	368	368	460	368	276	1840
7	INSULATED SCREW DRIVER	1975	1975	1975	1975	1580	9480
8	RAIN COAT	63920	63920	63920	79900	47940	319600
9	D-OPERATING ROD	29288	29288	36610	29288	21966	146440
10	INSULATED PLYER	5725	5725	5725	5725	4580	27480
Sub Total (Rs.)		2957241	3009633	2964655	2957270	2092470	13981269
In Millions		2.96	3.01	2.96	2.96	2.01	13.9

FESCO INTEGRATED INVESTMENT PLAN

A. CAPITAL EXPENDITURE AND ADDITIONAL OPERATING COSTS FOR OTHER FUNCTIONAL IMPROVEMENT PLANS

• SUMMARY OF ANNUAL CAPITAL EXPENDITURES COSTS

DIIP-60: COMMERCIAL IMPROVEMENT PLANS (BEST CASE)

S/ No.	Description	Rs. In Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A	AMR /AMI Metering	30.00	450.00	450.00	900.00	1200.00	3030.00
B	Electronic Metering	-	-	-	-	-	-
C	New CIS system	Cost is included in ERP					
D	HHUs for meter reading (Mobile Unit for Meter Reading)	12.00 Mobile Units	0	0	80.00 HHU	90.00 HHU	182
E	Consumer Census		Census of 1 st circle consumer		Census of remaining consumers		4.3Million consumer
F	Anti-theft efforts	Checking of 100% Industrial connection & 25% others through FESCO staff.					
G	IT infrastructure to support new initiatives	Setting of control for reading of AMR/AMI meters					
H	Others etc.						
	Total						

DIIP-61: FINANCIAL MANAGEMENT IMPROVEMENT PLANS (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Rs. In Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A	ERP system Implementation Phase-I Phase-II	Financial module is included in ERP implementation plan of 2014-15 & 2015-16					
B	IT Infrastructure to support new initiatives	Included in ERP Implementation Plan					
C	Others etc.						
	Total						

Note:-The costs of financial management has been included in Summary of Cost of Capital Expenditure

FESCO INTEGRATED INVESTMENT PLAN

DHP-62: HUMAN RESOURCE IMPROVEMENT PLANS CAPITAL EXPENDITURE COSTS (OPTIMALLY ACHIEVABLE CASE)

S/ No.	Description	Rs. In Million					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A	Revamping of Training Centres	30	100	20	-	-	150
B	Provision of Safety T&P and Promoting Safety Culture	0.2	0.2	0.21	0.22	0.16	1.00
C	Training of Employees through external training Institutions	-	-	-	-	-	-
D	Human Resource Information system Implementation	ERP Module of HR. cost included in Capital Expenditure Summary					
E	Conducting the Yard stick Study	-	-	-	-	-	-
F	IT Infrastructure to support new initiatives	ERP Implementation is under progress					
G	Improving the working Environment	250	660	440	250	100	1700
H	Others etc.	-	-	-	-	-	-
	Total						

Note:-These costs are included in Summary of capital expenditure.

DHP-63: SUMMARY OF ANNUAL RECURRING COSTS

S/ No.	Description	Unit	Rs. In Million					
			2015-16	2016-17	2017-18	2018-19	2019-20	Total
Opex for FESCO other Improvement Plans								
	Financial Improvement Plan		O&M costs included in summary of Annual Recurring Costs					
	HR Improvement Plan							
	Communications Improvement Plan							

B. SUMMARY OF COSTS FOR THE INTEGRATED INVESTMENT PLAN (TRANSMISSION, DISTRIBUTION AND OTHER FUNCTIONAL PLAN)

FESCO INTEGRATED INVESTMENT PLAN

DIIP-64: SUMMARY OF COSTS FOR OPTIMALLY IMPLEMENTABLE CASE

Item		2015-16			2016-17			2017-18			2018-19			2019-20			Total		
		LCC	FEC US\$	Total	LCC	FEC US\$	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total	LCC	FEC	Total
A	STG	2828	-	2828	3252	-	3252	2722	-	2722	2616	-	2616	1637	-	1637	13056	-	13056
B	Distribution	994	-	994	1210	-	1201	1443	-	1443	1670	-	1670	1993	-	1993	7309	-	7309
C	Vehicles and T&P	104	-	104	119	-	119	90	-	90	68	-	68	49	-	49	430	-	430
D	Civil works	530	-	530	1045	-	1045	680	-	680	400	-	400	210	-	210	2865	-	2865
	Misc. Charges @ 1%	Already included in Subproject costs																	
	Authority Supervisory Charges @ 0.5 %	-do-																	
	Contingencies: @ 5 %	-do-																	
	Dismantling Charges: @ 5 % of Equipment cost against Rehabilitation	-do-																	
	I.D.C. @ 11.21 % per Annum on Local and 12 % per Annum on FEC	-do-																	
	Escalation (Separately for LCC and FEC)																		
	Sub Total	4456	-	4456	5626	-	5626	4935	-	4935	4754	-	4754	3889	-	3889	23660	-	23660
	Previously Plan	2825	16.86	4214	548	3.66	914	-	-	-	-	-	-	-	-	-	5128	-	5128
	Total	8670	-	8670	6540	-	6540	4935	-	4935	4754	-	4754	3889	-	3889	28788	-	28788

FESCO INTEGRATED INVESTMENT PLAN

DIIP-65:SUMMARY OF ANNUAL RECURRING COSTS

O&M Cost for FESCO Expansion & Rehabilitation – Optimally Achievable Case								
2.	Existing O&M Cost	Rs. Million	10432	11267	12284	13446	14448	61877
	O&M Cost for New Schemes	Rs. Million	347	608	806	996	1152	3909
	Total		10.779	11.875	13.090	14.442	15600	65786

SECTION-VII

BENEFITS AND FINANCIAL ANALYSIS

B. Expansion and Rehabilitation of Secondary Transmission and Distribution system

i. TANGIBLE BENEFITS

DIIP-66 :ABSTRACT OF MVA CAPACITY TO BE ADDED AND ADDITIONAL ENERGY TO BE SUPPLIED UNDER TRANSMISSION EXPANSION PLAN

Description		Fiscal Year (Million Rs.)					
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
MVA Capacity to be added	Current Year	257.2	437.45	262	329	267	
	Commulative	257.2	694.65	956.65	1285.65	1552.65	
Additional Energy could be supplied @ 0.9 P.F 0.7 L.F and 50 % Loading (Million KWH)	Current Year		709.72	1207.1	722.96	907.84	736.76
	Commulative		709.72	1916.82	2639.78	3547.62	4284.38

DIIP-67:REDUCTION IN LOSSES AND SAVINGS INTERMS OF ENERGY (STG)

S/ No.	Description		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1	Reduction in Losses (MW)	Current Year	0	1.2	4.6	1.7	8.9	2.4
		Commulative	0	1.2	5.8	7.5	16.4	18.8
2	Energy Savings* @ 0.7 L.F (Million KWH)	Current Year	0	5.8	22.28	8.23	43.11	11.63
		Commulative	0	5.8	28.08	36.31	79.42	91.05

*Reduction in Energy Loss/year = MW x 8760 x Loss Factor**

**Loss Factor = $0.3 \times \text{Load Factor} + 0.7 \times (\text{Load Factor})^2$

Loss Factor @ 0.7 L.F

0.553

FESCO INTEGRATED INVESTMENT PLAN

DIHP-15: INCREASE IN REVENUE AS RESULT OF ENERGY CONSUMPTION OF CONSUMERS TO BE ADDED UNDER DISTRIBUTION EXPANSION PROGRAM

Sr. #	Energy Consumption of Customers To Be Added (Million KWH)								Av. Energy Purchase Price (Rs. / KWH)	Av. Energy Sales Price (Rs. / KWH)	Attributable Benefit (Rs. / KWH)	Potential Increase in Revenue (Million Rs.)
	Year	Domestic	Commer.	Industrial	Tube well	Others	Total	Cumulative				
1	2016-17	75.773	9.19	24.88	149	4.6	263.44	263.44	9.496	12.209	271	714.79
2	2017-18	140	16.99	39.23	275.41	8.67	480.3	743.74	9.606	12.787	318	2,365.32
3	2018-19	204.25	24.78	81.75	401.73	12.56	725.07	1468.81	9.715	12.942	323	4,739.79
4	2019-20	268.49	32.58	88.13	528.05	16.45	933.7	2402.51	9.833	13.061	323	7,755.46
5	2020-21	332.72	40.37	109.22	654.37	20.52	1157.2	3559.71	9.951	13.171	322	11,459.3

DIHP-16: INCREASE IN REVENUES AS RESULT OF POTENTIAL SAVING IN ENERGY UNDER DISTRIBUTION REHABILITATION PROGRAM

No	Year	No. of 11 KV Feeders To Be Rehabilitated		No. of LT Proposals To Be Rehabilitated		Ave. Saving / Proposal (MKWH)		Potential Saving In Energy (MKWH)			Energy Rate/ KWH (RS.)*	Potential Increase In Revenue
		Current	Cumulative	Current	Cumulative	H.T	L.T	H.T	L.T	TOTAL		
1	2016-17	30	30	700	700	1.069	0.031	32.07	21.7	53.77	12.209	656.49
2	2017-18	35	65	750	1450	0.962	0.028	62.53	40.6	103.13	12.787	1,318.68
3	2018-19	40	105	800	2250	0.866	0.025	90.93	56.25	147.18	12.942	1,904.84
4	2019-20	45	150	850	3100	0.779	0.023	116.85	71.3	188.15	13.061	2,457.37
5	2020-21	50	200	900	4000	0.701	0.02	140.2	80	220.2	13.171	2,900.18

FESCO INTEGRATED INVESTMENT PLAN

DIIP-70:	PROJECTED LOSSES				
Fiscal Year	Energy Purchase	Energy Sale	Units Lost	%age Projected Losses	%age Increase/ Decrease
2014-15	11243	10006	1237	11.00%	
2015-16	11960	10657	1303	10.89%	0.11%
2016-17	12689	11349	1340	10.56%	0.33%
2017-18	13489	12087	1402	10.39%	0.17%
2018-19	14326	12873	1453	10.14%	0.25%
2019-20	15230	13709	1521	9.99%	0.16%
2020-21	16195	14601	1594	9.84%	0.14%
	Total %age Increase/ Decrease				1.16%

NON TANGIBLE BENEFITS

FINANCIAL ANALYSIS FOR THE ENTIRE TRANSMISSION AND DISTRIBUTION INVESTMENTS

SENSITIVITY ANALYSIS

The sensitivity analysis for following cases are attached as Annex-O

1. 10% Cost increase
2. 10% benefit reduction
3. 10% Cost increase and 10% benefit reduction
4. 25 % cost increase.

FESCO INTEGRATED INVESTMENT PLAN

SECTION-VIII

FINANCIAL PROJECTIONS FOR FY 2016 TO 2020

DIIP-71:PROFIT & LOSS STATEMENT								
		2014-15	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
		Determined	Actual/Un-Aud.	Projected				
Power Balances								
Units Received	[MkWh]	10.938	11.243	11.976	12.706	13.505	14.338	15.242
Units Lost	[MkWh]	1.039	1.237	1.305	1.342	1.404	1.455	1.522
Units Lost	[%age]	9.50%	11.00%	10.90%	10.56%	10.40%	10.15%	9.99%
Units Sold	[MkWh]	9,899	10,006	10,671	11,364	12,101	12,883	13,720
Revenue								
Sales Revenue	[Mln Rs]	107.434	112.310	112.063	119.341	127.089	135.303	144.090
Subsidy	[Mln Rs]		22.423	17.552	24.277	26.849	29.172	31.575
Fuel Price Adjustment	[Mln Rs]		(7.888)	-	-	-	-	-
Reversal of FPA/impact of cut off units	[Mln Rs]		664					
Total Sales Revenue	[Mln Rs]	107,434	127,509	129,615	143,618	153,938	164,475	175,664
Rental & Service Income	[Mln Rs]		48	48	48	48	48	48
Amortization of Def Credits	[Mln Rs]		1.118	1.233	1.375	1.530	1.701	1.890
Other Income	[Mln Rs]	2.502	2.362	1.268	1.286	1.308	1.362	1.377
Total Revenue	[Mln Rs]	109,935	131,036	132,165	146,327	156,823	167,586	178,980

FESCO INTEGRATED INVESTMENT PLAN

Operating Cost								
Power Purchase Cost	[Mln Rs]	113,415	105,627	113,673	122,003	131,156	140,941	151,641
O&M Expenses	[Mln Rs]	9,112	11,603	15,945	17,013	18,103	19,142	20,128
Depreciation	[Mln Rs]	1,997	2,937	3,324	3,580	3,788	3,971	4,129
Amortization	[Mln Rs]	-	-	-	-	-	-	-
1st Quarter PPP Adj.	[Mln Rs]	797	-					
Provision for Bad Debts	[Mln Rs]	-	-	406	106	112	119	128
Total Operating Cost	[Mln Rs]	125,321	120,167	133,348	142,702	153,159	164,174	176,025
EBIT	[Mln Rs]	(15,386)	10,869	(1,183)	3,625	3,664	3,412	2,955
Financial Charges	[Mln Rs]	-	205	958	810	646	464	261
Bank Charges	[Mln Rs]	-	15	16	17	18	19	20
EBT	[Mln Rs]	(15,386)	10,649	(2,157)	2,798	3,000	2,930	2,675
Tax	[Mln Rs]	-	-	-	-	-	-	-
EAT	[Mln Rs]	(15,386)	10,649	(2,157)	2,798	3,000	2,930	2,675
WPPF	[Mln Rs]	-	-	-	-	-	-	-
Profit for the period	[Mln Rs]	(15,386)	10,649	(2,157)	2,798	3,000	2,930	2,675

FESCO INTEGRATED INVESTMENT PLAN

DIIP-72: BALANCE SHEET										
	Description			FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
				(Previous)	(Current)	(Projected)				
Intangible Fixed Assets			-	-	-	-	-	-	-	-
Net Fixed Assets in Operations			74.156	76.073	80.733	84.385	86.606	87.974		88.385
Total Net Fixed Assets in Operations			74,156	76,073	80,733	84,385	86,606	87,974		88,385
Capital Work in Progress			5.863	6.161	7.147	6.455	5.381	4.796		4.145
Long Term Loans to Employees			156	119	142	164	164	164		164
Deferred Cost & Long Term Deposits			2	2	2	2	2	2		2
Current Assets										
Stores & Spares			1.163	908	984	1.053	1.110	1.160		1.203
Trade Debts			9.510	9.538	10.804	11.506	12.253	13.044		13.892
Short Term Advances			58	38	177	162	137	123		106
Balance with Statutory Authorities			12.189	11.043	11.005	12.194	13.070	13.965		14.915
Tariff Differential Subsidy			6.393	8.864	5.104	5.677	6.285	6.851		7.425
Receivable from Associated Companies			2.628	3.320	2.988	2.656	2.324	1.992		1.660
Interest Accrued			43	-	-	-	-	-		-
Current portion of the long term loan			51	40	48	56	56	56		56

FESCO INTEGRATED INVESTMENT PLAN

Short Term Investments	3.896	3.652	9.748	11.904	16.873	22.645	29.775
Other Receivables	18.301	29.557	29.959	30.621	31.241	31.869	32.446
Cash & Bank Balances	1.546	2.543	2.592	2.872	3.079	3.289	3.513
Total Current Assets	55,777	69,503	73,409	78,701	86,426	94,994	104,990
Total Assets	135,955	151,858	161,433	169,707	178,580	187,930	197,686
Equity including Revaluation Surplus	52.668	52.668	52.668	52.668	52.668	52.668	52.668
Unappropriated Profit	20.084	31.779	29.634	32.446	35.460	38.405	41.095
Total Equity	72,752	84,447	82,302	85,114	88,128	91,073	93,763
Long Term Liability							
Security Deposits	3.872	4.455	4.649	4.858	5.087	5.339	5.619
Employee Retirement Benefits	24.707	25.679	28.320	31.232	34.445	37.987	41.894
TFCs /Development loan	1.156	1.207	1.073	940	806	673	673
Deferred Credits	24.702	26.364	29.382	32.590	36.062	39.868	44.078
Long Term financing/ Payable	-	-	4.233	2.989	1.585	-	(0)
Total Long Term Liability	54,437	57,704	67,657	72,609	77,984	83,868	92,263
Current Liability							
Current Maturity on Long Term Loans	383	134	1.236	1.378	1.538	1.718	(0)
Subsidy Received in Advance from GoP	-	-	-	-	-	-	-

FESCO INTEGRATED INVESTMENT PLAN

Markup payable	435	19	479	405	323	232	130
Payable to NTDC	383	1,091	1,174	1,260	1,355	1,456	1,566
Payable to Associated Companies	911	892	892	892	892	892	892
Other Liabilities	(6,654)	(7,571)	(7,618)	(7,985)	(8,309)	(8,671)	(9,062)
Total Current Liability	(4,542)	(5,435)	(3,836)	(4,050)	(4,201)	(4,373)	(6,473)
Total Liabilities and Commitments	49,895	52,269	63,821	68,560	73,783	79,495	85,791
Total Liabilities and Equity	122,647	136,716	146,123	153,673	161,911	170,567	179,553

FESCO INTEGRATED INVESTMENT PLAN

DIIP-73: CASH FLOW STATEMENT [IN MILLION RUPEES]								
			Current	Projected	Projected	Projected	Projected	Projected
			for FY ending	for FY ending	for FY ending	for FY ending	for FY ending	for FY ending
			30-06-2015	30-06-2016	30-06-2017	30-06-2018	30-06-2019	30-06-2020
			(Act/Proj)	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)
Average Monthly Demand Index (MDI)	[MW]		2.249	2.361	2.480	2.604	2.734	2.870
Units Purchased	[GWh]		11.243	11.976	12.706	13.505	14.338	15.242
Transmission Losses (132 kV)	[GWh]		220	240	241	250	280	297
Distribution Losses	[GWh]		1.017	1.065	1.101	1.154	1.175	1.225
Units Sold to Customers	[GWh]		10.006	10.671	11.364	12.101	12.883	13.720
Average Tariff Required	[Rs/unit]		10.915	12.147	12.638	12.721	12.766	12.803
Average Tariff Existing	[Rs/unit]		10.915	10.915	10.915	10.915	10.915	10.915
<i>Tariff Difference</i>	<i>[Rs/unit]</i>		<i>0.000</i>	<i>1.232</i>	<i>1.723</i>	<i>1.806</i>	<i>1.851</i>	<i>1.888</i>
Revenue from Sales			127.509	129.615	143.618	153.938	164.475	175.664
Collection from Required	[%]		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<i>Inflows from Operations</i>								
Collection from Current Sales			105.058	128.350	142.917	153.191	163.683	174.817
<i>Total Inflows from Operations</i>			105,058	128,350	142,917	153,191	163,683	174,817
<i>Outflow from Operations</i>								
Payment against Provisions			2.956	3.363	3.564	3.778	3.986	4.185
Payment for electricity (to CPPA)			104.919	113.590	121.917	131.061	140.840	151.530
Distribution Service Cost (=DMC)			8.816	12.599	13.466	14.343	15.175	15.962
Taxes paid								
Increase in long term deposits			0	2	0	0	0	0
<i>Total Outflow from Operations</i>			116,692	129,554	138,947	149,182	160,001	171,678

FESCO INTEGRATED INVESTMENT PLAN

Surplus/Deficit from Operations		(11,634)	(1,204)	3,970	4,009	3,681	3,140
Inflows from Other Sources							
Capital Contributions		2,409	3,753	4,053	4,428	4,879	5,404
Consumer Security Deposits		583	499	403	438	481	531
Other Incomes		3,170	2,151	2,285	2,434	2,630	2,803
GOP Subsidy (Actual and Estimated)		19,953	21,312	23,704	26,241	28,606	31,001
Long Term Loan / Redeemable Capital		-	6,313	-	-	-	-
Additional Equity Investment							
Total Inflows from Other Sources		26,115	34,028	30,445	33,542	36,596	39,740
Outflow Others							
Financial Charges		640	498	884	728	555	362
Repayment of Long Term Loans		187	1,111	1,236	1,378	1,538	1,718
Investment Program		3,842	15,067	8,696	9,904	10,525	11,019
Working Capital & Other Changes		1,539	13,719	15,575	16,421	17,780	19,213
Total Outflow Others		6,209	30,394	26,391	28,431	30,398	32,312
Surplus/Deficit Others		19,906	3,633	4,054	5,111	6,198	7,428
Total Inflows (Operations + Others)		131,172	162,377	173,362	186,733	200,279	214,557
Total Outflows (Operations + Others)		122,900	159,948	165,338	177,613	190,399	203,990
Opening Balance		5,442	13,714	16,143	24,167	33,286	43,166
Surplus/Deficit for Fiscal Year		8,272	2,429	8,024	9,120	9,879	10,567
Deficit from Financing/Loans		-	-	-	-	-	-
Closing Balance		13,714	16,143	24,167	33,286	43,166	53,733
		11171	13551	21295	30208	39876	50220
While submitting Quarterly Petitions, this form should be submitted with actual cash flow of previous quarters and projected cash flow of next quarter.							

FINANCIAL ANALYSIS

Financial analysis for STG, distribution expansion, distribution rehabilitation and PDEIP is attached as **Annex-N**

SECTION-IX

INVESTMENT PLANS IMPLEMENTATION

I. BUSINESS PLANNING ORGANIZATION FOR PREPARATION OF INVESTMENT PLANS

Planning and Engineering Directorate of FESCO is mainly responsible for preparation of Investment plan by getting the needs of the system from various Departments of the FESCO. Informations collected are analyzed commercially and technically. Feasibility studies are prepared and Planning process is started.

II. PLANNING AND DESIGN

Planning & Engineering Department of FESCO contains separate Sections for Transmission System Designing and Distribution System Designing headed by Chief Engineer Planning & Engineering. Load Flow, Short circuit and System Analysis studies are carried out using internationally acceptable softwares in Planning & Design Directorate.

III. PROGRAM MANAGEMENT

Designed Projects after complete analysis and administratively approved from competent authorities are transmitted to the executing agencies of the FESCO, which are responsible for the final execution of the sub projects according to the Designed parameters.

IV. PROJECTS IMPLEMENTATION

Subprojects regarding Secondary Transmission and Grids are executed by the Project Monitoring Unit which is headed by Chief Engineer. This unit include Manager (Procurement) Manager (Planning & Scheduling), Manager (Grid System Construction), Manager (Environment & Social Safeguard) and Manager (Project Financing).

Regarding the Subprojects of distribution expansion and rehabilitation, execution is done by Technical Directorate headed by G.M/Chief Engineer. This directorate include Manager (Project Construction), Manager (Procurement).

FESCO INTEGRATED INVESTMENT PLAN

DIIP-74: SUMMARY OF MANPOWER REQUIREMENTS TO IMPLEMENT THESE PLANS

S/ No.	Description	Quantities					
		2015-16	2016-17	2017-18	2018-19	2019-20	Total
A. Staff Required for Future Expansion							
1	Director/ Chief Engineer						
2	Manager						
3	Deputy Manager		5		7	2	14
4	Assistant Manager	4	9	2	12	4	31
5	Line Superintendent	26	33	12	37	19	127
6	Line Man	38	214	32	214	48	546
7	Assistant Line Man	52	228	48	230	72	630
8	SDC/UDC	0	18	0	21	2	41
9	Clerks	5	47	4	50	25	131
10	Driver	10	50	6	52	12	130
11	N/Qasid	3	19	2	26	10	60
12	Security Guards	15	54	15	54	19	157
13	Sweepers	3	15	2	16	6	42
14	Drafts Men	0	4	0	4	3	11
15	Tracers	0	3	0	2	3	8
16	Surveyors	0	4	0	4	0	8
17	Mali	3	6	3	7	2	21
18	Data Control Supervisors	2	5	2	5	5	19
19	Others	75	124	69	129	69	466

SECTION –X

DIIP-75: LINKAGE WITH PERFORMANCE STANDARDS

Description	2015 (Baseline)	2016	2017	2018	2019	2020
SAIDI (Minutes)	1137	950	800	750	700	650
SAIFI (Nos.)	36	30	25	21	18	15
Voltage (Kilo)	132/66/11/0.4					
Supply Restoration (hours)	2 hrs	2.00	2.00	2.00	2.00	2.00
Fatal accident	9	0	0	0	0	0
Non fatal accident	12	0	0	0	0	0
No. Of meters read manually	Remaining are being read by Mobile unit 1918146	0	0	0	0	0
New connections installation durations (day)	35 days	35 days	35 days	35 days	35 days	35 days
Reduction in billing related complaints (%)	3984					
Transmission loss%	2%	1.9%	1.9%	1.9%	1.8%	1.8%
Distribution loss %	9.2	9.3	9.2	9.3	9.2	9.3
Technical loss %	10.9	10.9	10.9	10.9	10.9	10.9
Non technical losses %	0.3	0.3	0.2	0.3	0.2	0.3
Service to supply related complaints (hours)	½ to 1 depending upon site					
No. of electro machinal meters	17,04,163					
Meters replacement		3,40,833	3,40,832	3,40,832	3,40,834	3,40,832
% amount in dead defaulters	48%	50%	50%	50%	50%	50%
Time taken to close financial books	03 months	03 months	03 months	02 months	02 months	02 months
Status of back office system automation	-	Finance, PS& material	HR	Billing	Remaining	
Staff trained	1818	5300	5500	6000	6300	6400
Officer trained	55	70	80	90	100	110
Officers trained in management courses	22	32	42	52	62	72

FESCO INTEGRATED INVESTMENT PLAN

TIME FRAME

Type of complaint	Response time
Damaged Transformer Replacement	6 House
Installation of New Connection	07 days
Replacement of defective meters	24 Hours
Billing Complaints	48 Hours
Low Voltage	24 Hours
New connection delayed Billing	24 Hours
Type of complaint	Response time
Unscheduled Load Shedding	30 Minutes
Tripping	30 Minutes
Fault on Line	02 Hours
Non Delivery of Bill	24 Hours
Miscellaneous	24 Hours

SECTION –XI

ENVIRONMENTAL AND SOCIAL ASSESSMENT MITIGATION PLAN

11. ENVIRONMENT AND SOCIAL SAFEGUARDS

11.1 ENVIRONMENTAL SAFEGUARDS

Pakistan has had laws that contain provisions for environmental protection. These laws which were partially inherited from pre-independence days dealt with air and water quality, canal irrigation, land tenure and use, forest conservation, wildlife protection, energy development, pesticide use, noise, public health etc. Not only did these laws prove ineffective, punishment for violation was mild and easy to circumvent, but these laws also did not adequately cover the subject areas and several of these laws became outdated. Many aspects of environment degradation remained uncontrolled and under-regulated. Pakistan therefore responded to its environmental concerns by introducing laws, establishing environmental protection institutions and developing human resources and technical capability through local resources and foreign assistance.

To cope with above mentioned requirements, **The Pakistan Environmental Protection Act (PEPA-97)** which provides national policy on the subject was promulgated in December 1997, which is single comprehensive law that provides the protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution and promotion of sustainable development. The Act cover air, water, soil and noise pollution, also including hazardous waste disposal and motor vehicular pollution.

Section 12 of The Pakistan Environmental Protect Act (PEPA-97) lays down the requirements of Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA). This section states as under:

1. No proponent of a project shall commence construction or operation unless he has filed with the Government Agency designated by Federal Environmental Protection Agency or Provincial Environmental Protection Agencies, as the case may be, or, where the projects likely to cause an adverse environmental effect an environmental impact assessment, and has obtained from the Government Agency approval in respect thereof.

2. The Government Agency shall subject to standards fixed by the Federal Environmental Protection Agency.
 - a. Review the *Initial Environmental Examination (IEE)* and accord its approval, or require submission of an environmental impact assessment by the proponent; or
 - b. review the *Environmental Impact Assessment(EIA)* and accord its approval subject to such conditions as it may deem fit to impose, require that the environmental impact assessment be re-submitted after such modifications as may be stipulated or reject the project as being contrary to environmental objectives.
- “Filing, Review and Approval of Environmental Assessment-Govt. of Pakistan November 1997”* containing schedule A, B & C which lists the requirement of IEE or EIA. Federal Government Notification titled *“Guidelines for Preparation, Review of Environmental Reports Govt. of Pakistan November 1997”* has been consulted in this regard. **FESCO has prepared its own Environmental Policy and is enforced since 2014.**

11.1.1. EIA/IEE REQUIREMENTS

Pak-EPA in August 2000 issued *“Policy and Procedures for Filling, Review and Approval of Environmental Assessment”*, which includes schedules A, B & C defining projects in terms of the requirement of EIA and IEE .

- a. **Schedule A** defines projects which require an EIA. It deals with the list of major projects which have potential to affect a large number of peoples. The impact of such project may be irreversible and could lead to significant changes in land use and in social, physical and biological environment. Schedule A projects relating to Energy Sector are *“Major power transmission lines (above 66 KV) including grid stations”*.
- b. **Schedule B** defines projects which require an IEE. It deals with the projects where the range of environmental issues is comparatively narrow and issues can be understood and managed through less extensive mitigation measures. Schedule B Projects relating to Energy Sector are *“Electrical transmission lines (11 KV and smaller) and large distribution project”*.

- c. **Schedule C** combines everything not in Schedule A and B. Illustrative examples given in Schedule C projects are “*Project promoting energy efficiency*”

Thus IGTDP FESCO Project is covered by Schedule A which requires preparation of a full EIA Report. Therefore Environmental Impact Assessment Report will be submitted to EPA Punjab for the Approval on the format given below (Reference: clause 2.3 Guide lines for Preparation review of Environmental Reports).

11.1.2 FORMAT OF EIA REPORT

A. EXECUTIVE SUMMARY

B. INTRODUCTION OF THE PROJECT

- Brief description of nature, size and location of project and other pertinent background information

C. DESCRIPTION OF PROJECT

- Type & category of Project
- Objectives of the Project
- Alternatives
- Location, project site layout, land use, road access, topography, population, road access, topographic and vegetation
- Size or magnitude of operation including capital cost and associated risks.
- Proposed schedule of Implementation
- Detail of restoration and rehabilitation plan
- Government Approval

D. DESCRIPTION OF ENVIRONMENT

- Physical resources, topography, soil, climate, surface water, groundwater, geology/seismology
- Ecological resources, fisheries, aquatic biology, wild life, forest, rare or endangered species
- Human life and economic development –population and communities, industries, infrastructure, institutions, transportation, land use, power sources and transmission, agricultural and mineral development

- Quality of life value –Socioeconomic , public health , recreational resources , aesthetic value , archaeological or historical treasures and cultural values

E. **SCREENING OF POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

- Environmental Problems due to project location , design , construction, operation , enhancement measures and additional consideration
- Environmental Monitoring (Internal & External) program and institutional requirement
- Environmental Audit by third party

F. **CONCLUSION**

For similar Scope of Works of Tranche-III ADB Loan 2972-Pak, an Environmental Impact Assessment (EIA) Report was prepared by PMU FESCO and submitted to Environmental Protection Department (EPD) Punjab Lahore. EPD after site inspection of concerned District Officer Environment and **public hearing** granted the environmental approval. *As per approval, no Environmental Risk and Hazards are associated with the construction of new Grid Stations & Transmission Lines , conversion of 66 KV existing Grid Station to 132 KV and Augmentation/Extension Sub-Project.* The same process would be adopted for preparation of EIA Report. Site inspection of concern District Officers Environment will be arranged. After Public hearing, EPD will consider granting of Environmental approval.

As per requirement of Environmental Management & Monitoring Plan (EMMP), periodic monitoring for implementation of EMMP is required. Lump sum provision for Environmental Mitigation Measures is provided in report and detail will be provided in contract documents. From this type of provision , expenditure on testing of NEQS , Plantation of Trees as per requirement of Environmental Protection Department's approval, waste management, erosion control Environmental /Social Trainings , External & internal Monitoring and other associated measures , can be incurred.

Environment & Social Internal Monitoring Mechanism will be strengthened to monitor the envisaged goals. Monitoring Reports be prepared quarterly for review of competent forum. These reports will include comparison of base line data of water Air and noise and monitoring data of NEQS parameters.

FESCO INTEGRATED INVESTMENT PLAN

Monitoring Staff will be equipped with requisite monitoring equipment e.g. Digital Camera, pH Meter, Noise Meter, Digital Location Meter (longitude & latitude) . Ambient Air Quality Sampler/Tester . E&SS Cell be provided independent transportation and other facilities for frequent field visits.

Following Environmental concerns will be taken care of during implementation of IGTDP project:-

- No waste solvents, petroleum product, toxic chemicals or solutions will be disposed of in city drainage system. These types of wastes shall be taken to an approved disposal facility.
- Construction activities will not cause the release of Sulphur Hexafluoride SF₆
- Hazardous and toxic waste will be collected as per FESCO Waste Management Plan. Suitable Metal Containers will be used to collect the waste.
- Approved site Specific Environmental Management Plan (SSEMP).
- Construction activities will be executed in such a way that no blasting at project site is required to control noise level.
- All stakeholders including contractor will be trained to deal with environmental hazardous. Awareness campaign regarding NEQS will be launched for all stakeholders.
- Labour/work force will be required to use PPEs.
- Labour/work force will be provided safe drinking water
- All Occupational Health and Safety (OHS) measures will be considered during construction activities. First Aid Box be made available at site. Construction Area will be cordoned off with reflecting tapes to avoid OHS hazardous. Safety instruction sign boards will be erected at site of work
- Environmental Grievances Redressal Mechanism will be enforced.
- Training of Labour/workforce and FESCO staff will be arranged for effective implementation of EMMP and other environmental mitigation measures.

11.2 SOCIAL SAFEGUARDS

Objective of Social Safeguards are “Avoid, minimize or mitigate Land Acquisition and Resettlement (LAR)”.

- Avoid : Implement the project on freely available land
- Minimize:- Seek Project or design alternatives
- Mitigation: - Enhance, at least restore, livelihood of displaced persons (DPs) and improve living standard of DPs.

Minimal land acquisition and resettlement or livelihood impacts are expected from construction of new substations or transmission lines, conversion of 66 KV Existing Grid Stations to 132 KV, Augmentation & Extension Projects.

11.2.1 NEW GRID STATIONS: -

Efforts will be made to construct the new Grid Stations on Government / FESCO land and voluntary donations from FESCO's clients. In case of non-availability of Govt. land in the vicinity, land acquisition and resettlement for such substations is expected to be carried out through mechanism of willing buyer and willing seller that will not trigger Govt and Donors Policy. In these cases, a Due Diligence Report (DDR) will be prepared by providing evidence that the land was acquired through the mechanisms specified above, but no LARP will be required.

In case land for construction of substation, is to be acquired through the provision of Land Acquisition Act 1894, then Land Acquisition and Resettlement Plans (LARPs) will be prepared and implemented by making compensation to affected persons. LARPs will be updated for any change in design and scope of work.

11.2.2 CONVERSION OF GRID STATIONS:-

Conversion of 66 KV to 132 KV Grid Stations will take place within walled boundaries of existing grid stations. As such no Land Acquisitions and Resettlement will be involved. No LARPs will be prepared and implemented. Only **Due Diligence Report (DDR)** will be prepared by providing evidence of land.

11.2.3 AUGMENTATION & EXTENSION SUB PROJECTS:-

Augmentation & Extension Sub Project of existing Grid Stations will take place within walled boundaries of existing grid stations. In case of

Augmentation. procured Power Transformers will be replaced on existing foundations where as in case of extension. additional foundation bays will be constructed. As such no Land Acquisitions and Resettlement will be involved. No LARPs will be prepared and implemented. Only **Due Diligence Report (DDR)** will be prepared by providing evidence of land on which existing grid station is to be constructed.

11.2.4 132 KV TRANSMISSION LINE SUB PROJECTS:

According to provisions of Telegraph Act & existing practice by Government, no land compensation will be paid for land falling under the towers. Affected Persons will be compensated through crop/tree/infrastructure compensation. For sub-projects entailing the construction of Transmission lines where poles are to be sited within public road corridors—no land acquisition and resettlement will be needed, nor allowed under the Land Acquisition and Resettlement Framework (LARF) .

11.2.4.1 132 KV TRANSMISSION LINES PASSING THROUGH CULTIVATED AREAS.

For each Transmission Lines passing through cultivated area, LARPs are to be prepared, implemented and monitored through vigorous monitoring. LARPs on the specified format be prepared, updated & implemented for payment of compensation to affected persons.

11.2.4.2 DISPLACED PERSONS:-

Displaced persons are those who are physically displaced (relocation, loss of residential land, or loss of shelter) and/or economically displaced (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.

11.2.4.3 REPLACEMENT COST:-

The calculation of replacement cost will based on the following (i) fair market value (ii) transaction costs (iii) interest accrued (iv) transitional and restoration costs and (v) other applicable payments if any. Where market

conditions are absent or in a formative stage, the borrower/client will consult with the displaced persons and host populations to obtain adequate information about recent land transactions, land value by types, land titles, land use, cropping patterns and crop production, availability of land in the project area and region and other related information. The borrower/client will also collect baseline data on housing, house types, and construction materials. Qualified and experienced experts will undertake the valuation of acquired assets in applying method of valuation, depreciation of structures and assets should not be taken into account.

11. 2.4.4 BASE LINE SURVEY CONSIDERATIONS:

During Base Line Surveys, assessment of damages of assets will be made for the following:-

Built-up Property i.e Residential Houses/Dera, Tube wells, Peter Engine Pumps, Hand Pumps,

Commercial Assets i.e Brick Kiln, Poultry Farms, Fish Farms, Shops, Flour Machines

Economic Trees. Trees having height 4 meter or more & girth 15-20 cm coming in corridor of influence of Transmission Lines will be removed. Kikar, Shisham, Sufaida, Beri, Simble etc. have low economic values and treated as fire wood. A single tree yield on average about 400 kg of firewood. Firewood value differs from kind of trees. Cost of compensation of fire wood will be paid on the basis of prevailing market rates. Bohr Tree has a high cultural value & will be avoided as possible.

Fruit Trees e.g. Mango, Dates, Jamin, Citrus, bears high economic value and will be paid on the rates provided by Govt Agencies.

Infrastructure. During base line survey possible damages to infrastructure e.g. Metaled Road, Katcha Village Track , Water Courses, Canal/Distributaries, Drainage Channel , Railway Line , Gas Pipelines, Telephone Lines & , Transmission Lines will be made . Damaged infrastructure will be rehabilitated.

Cultural Property. Grave yards, mosques, shrine or site of archaeological importance comes under cultural property and will be avoided.

EXHIBIT-2018- 1.5

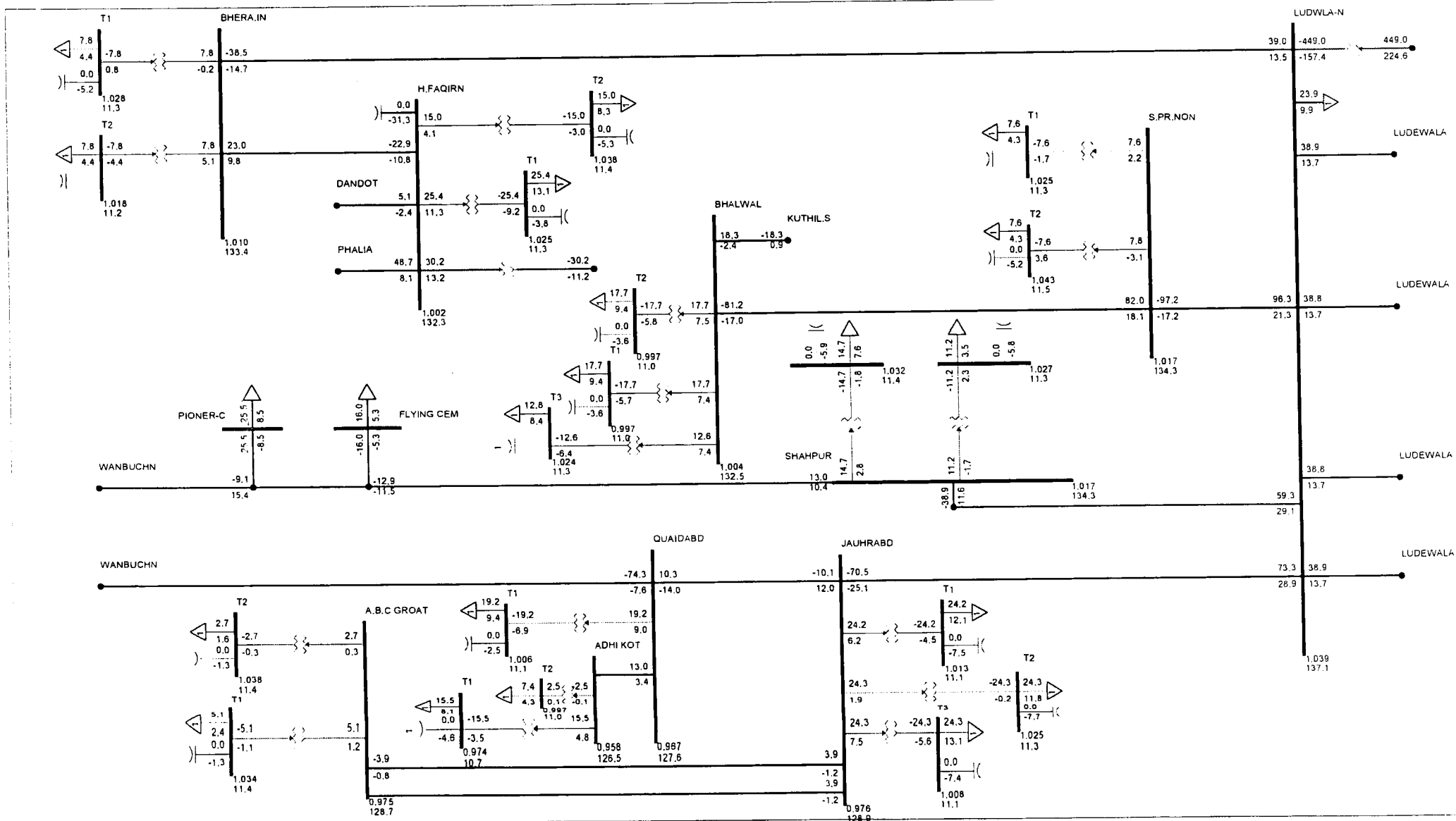
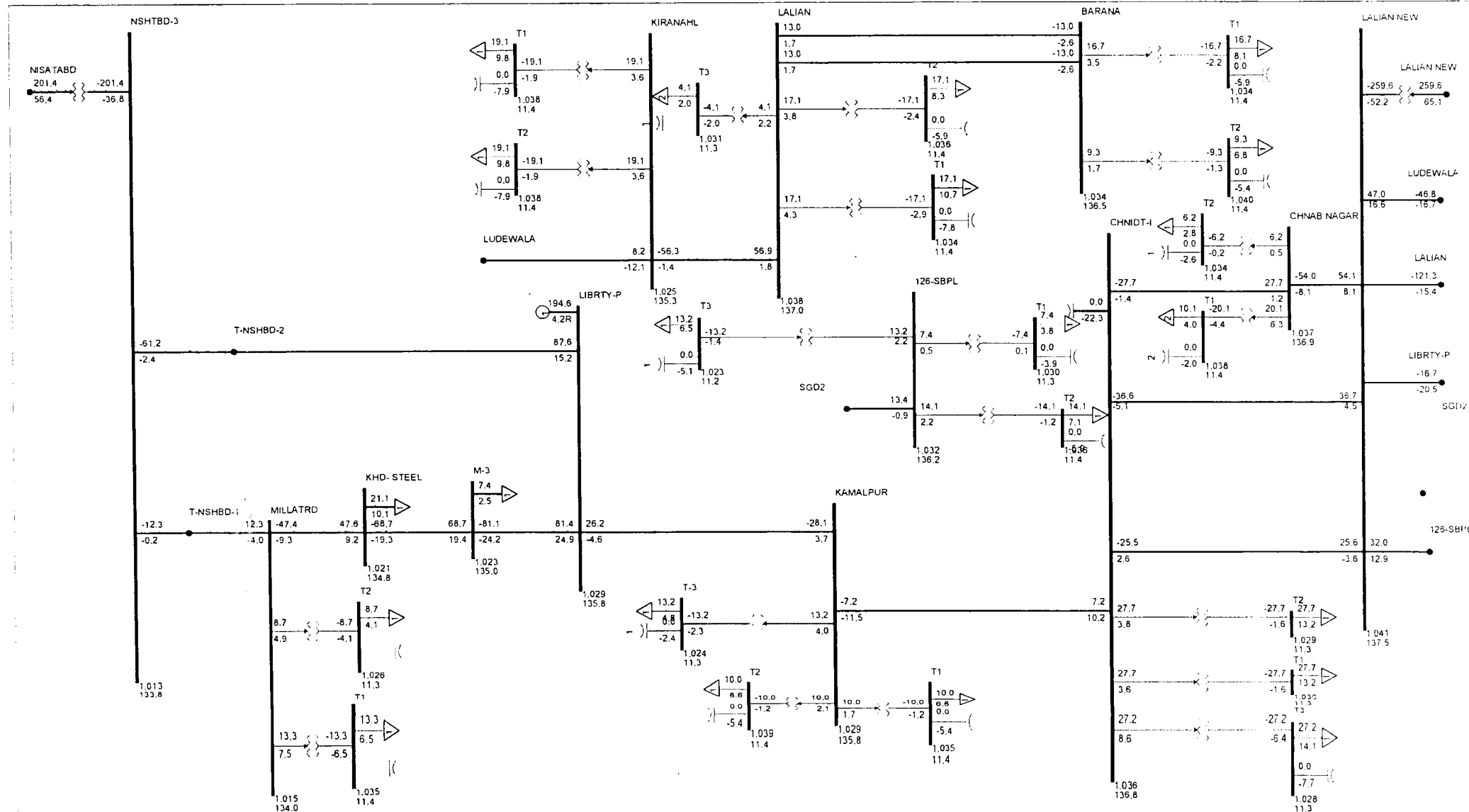


EXHIBIT-20189- 1.4



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2018: WITOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 1.3

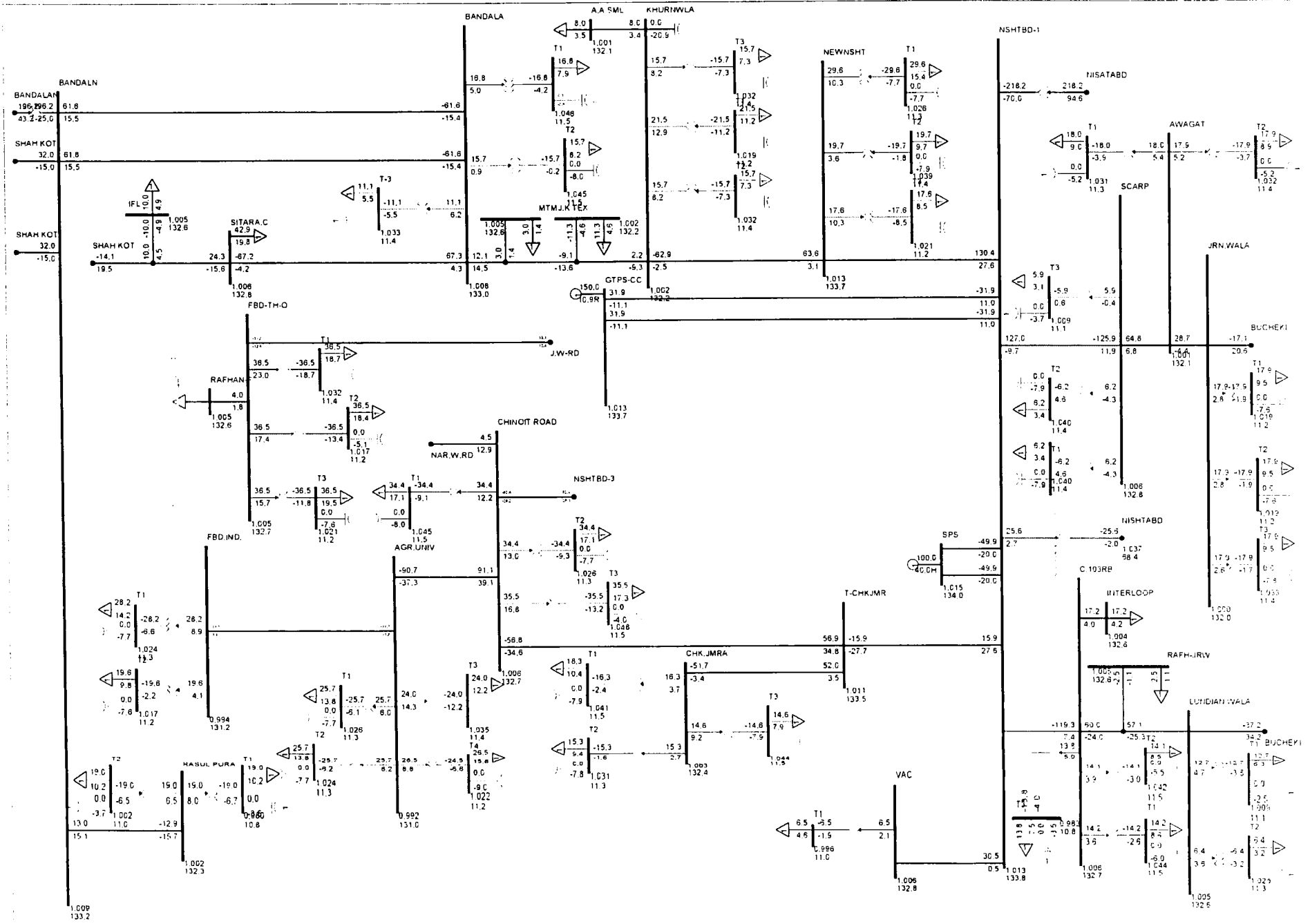
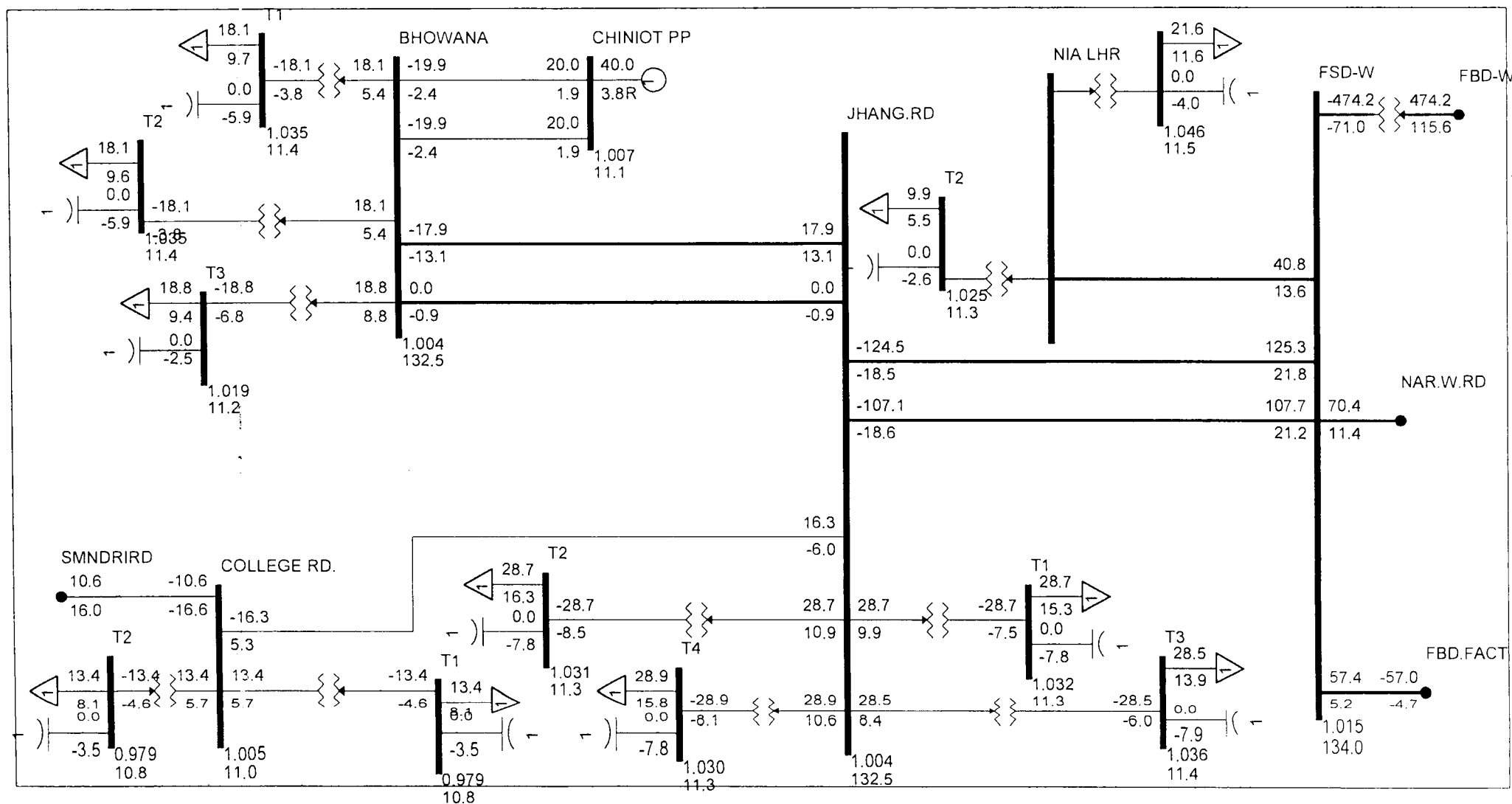
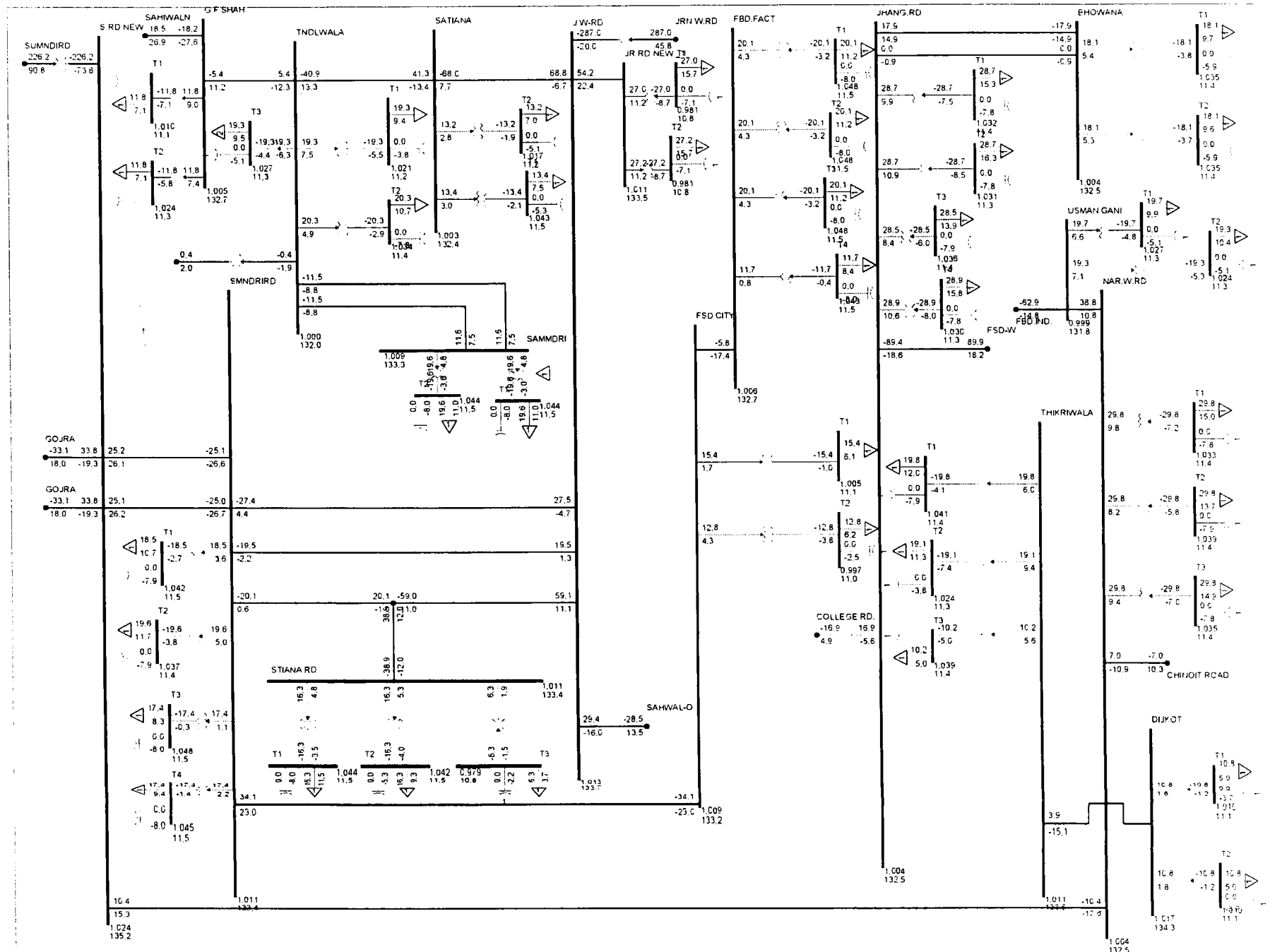


EXHIBIT-2018- 1.3,1



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2018: WITOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 1.2



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2018: WITOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 1.1

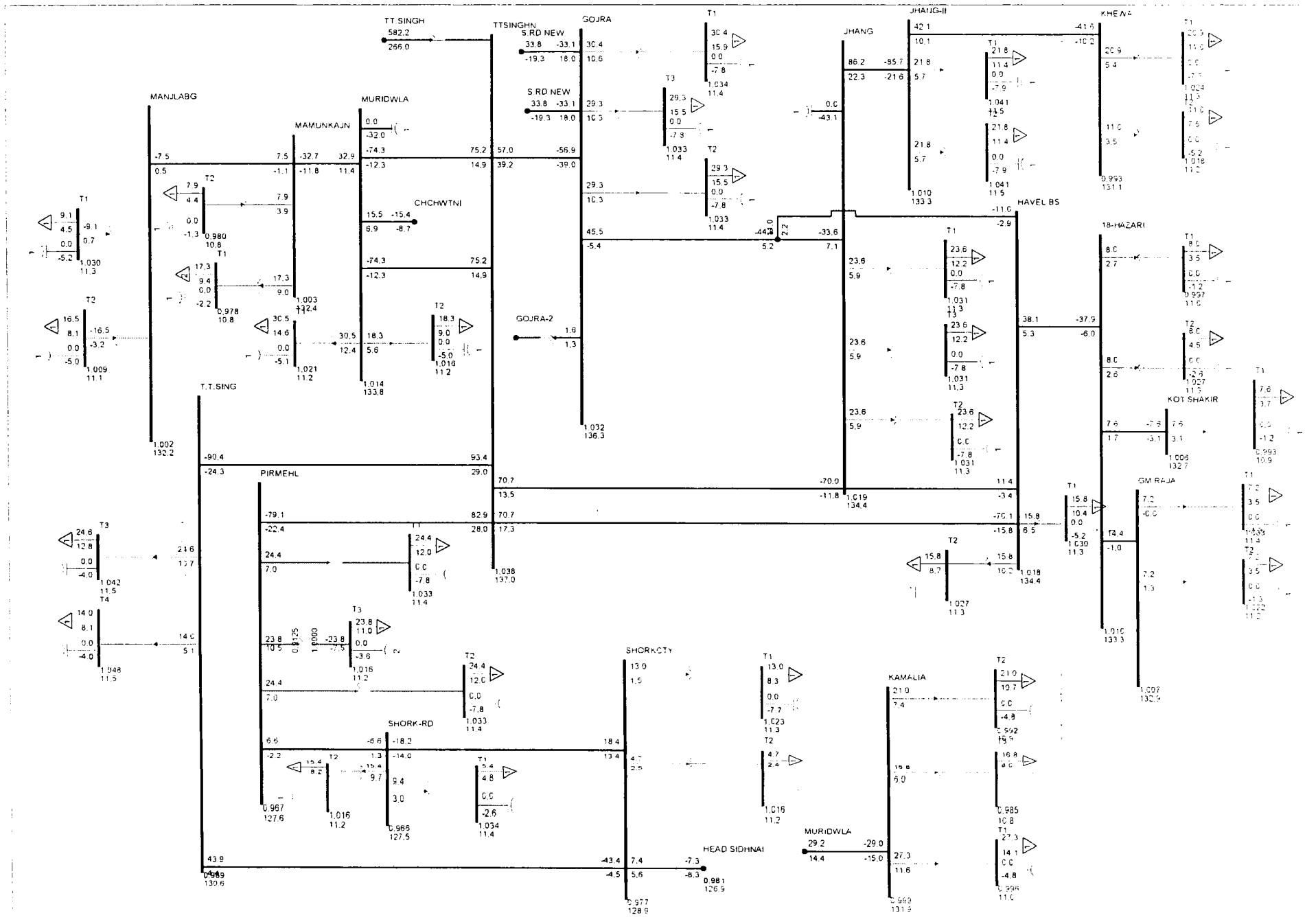
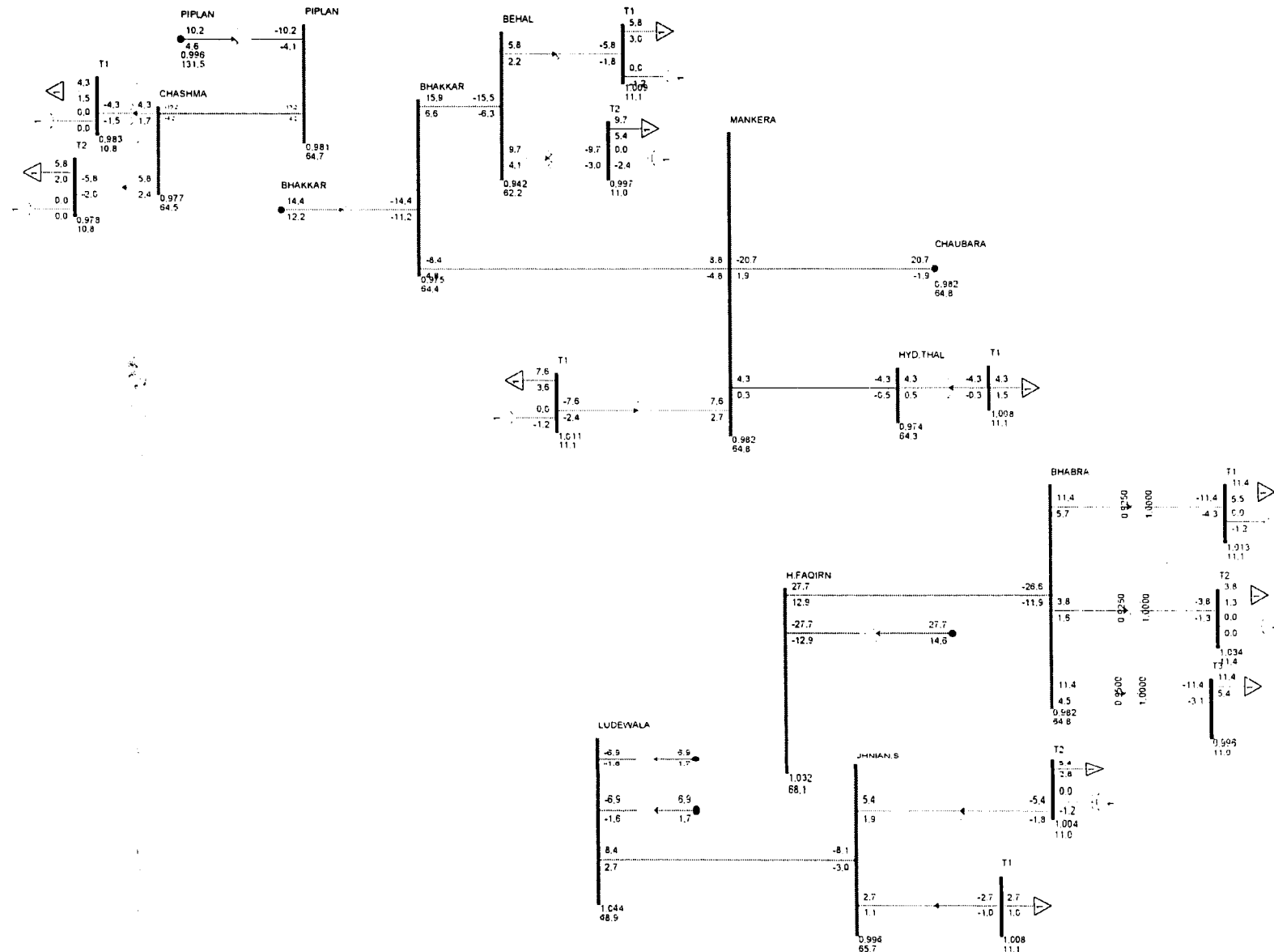


EXHIBIT-2017- 2.9



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.8

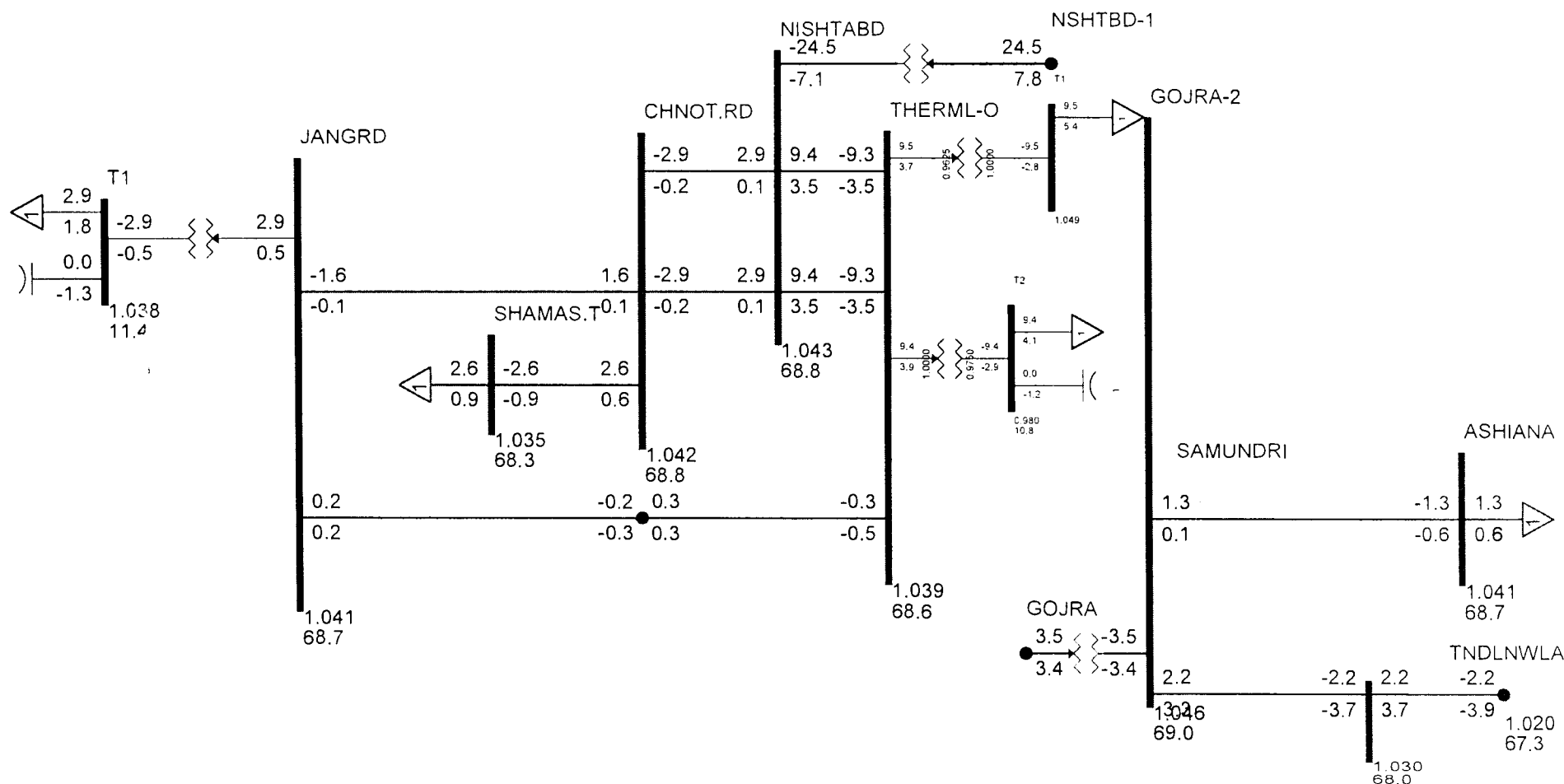
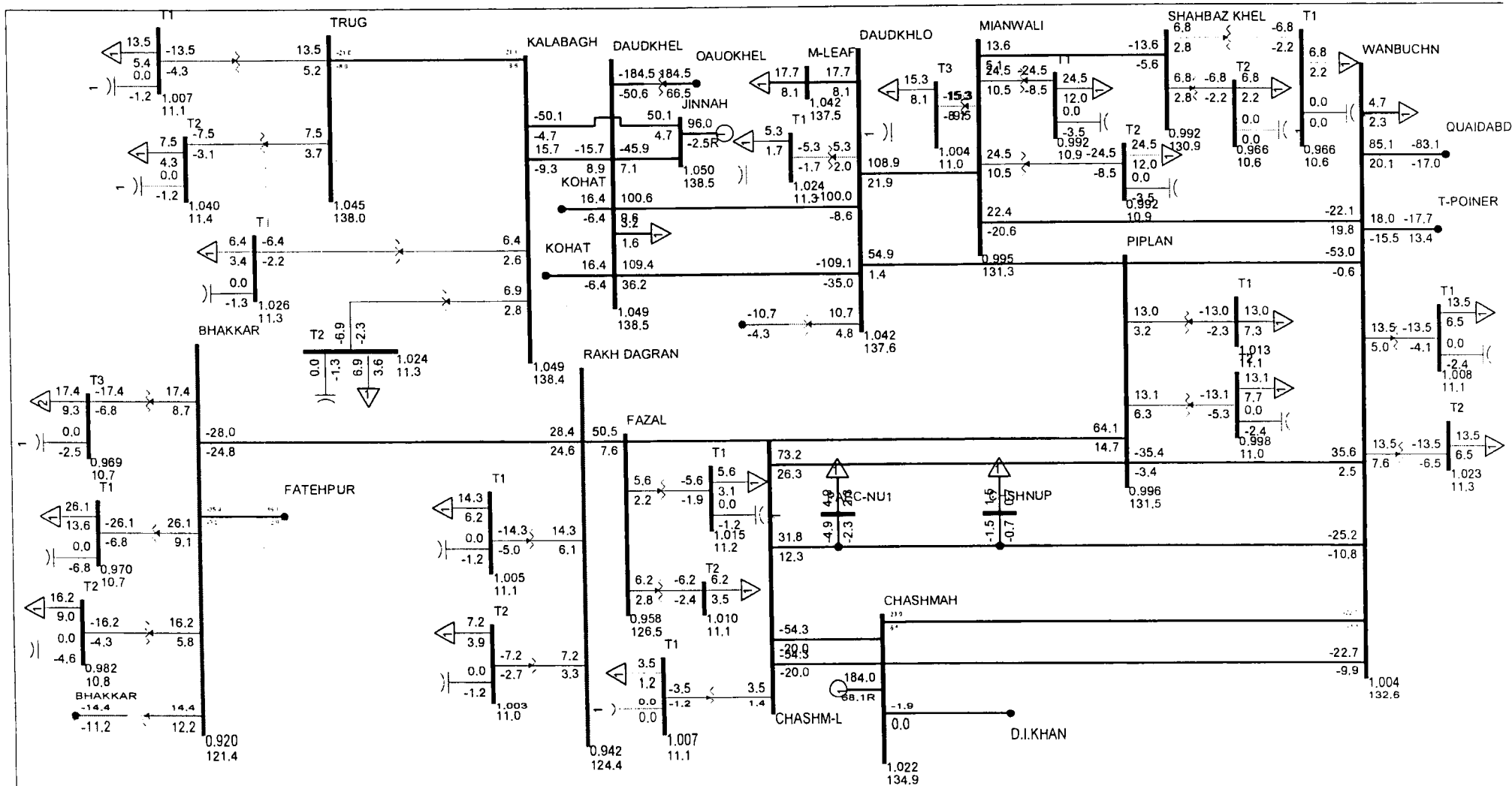


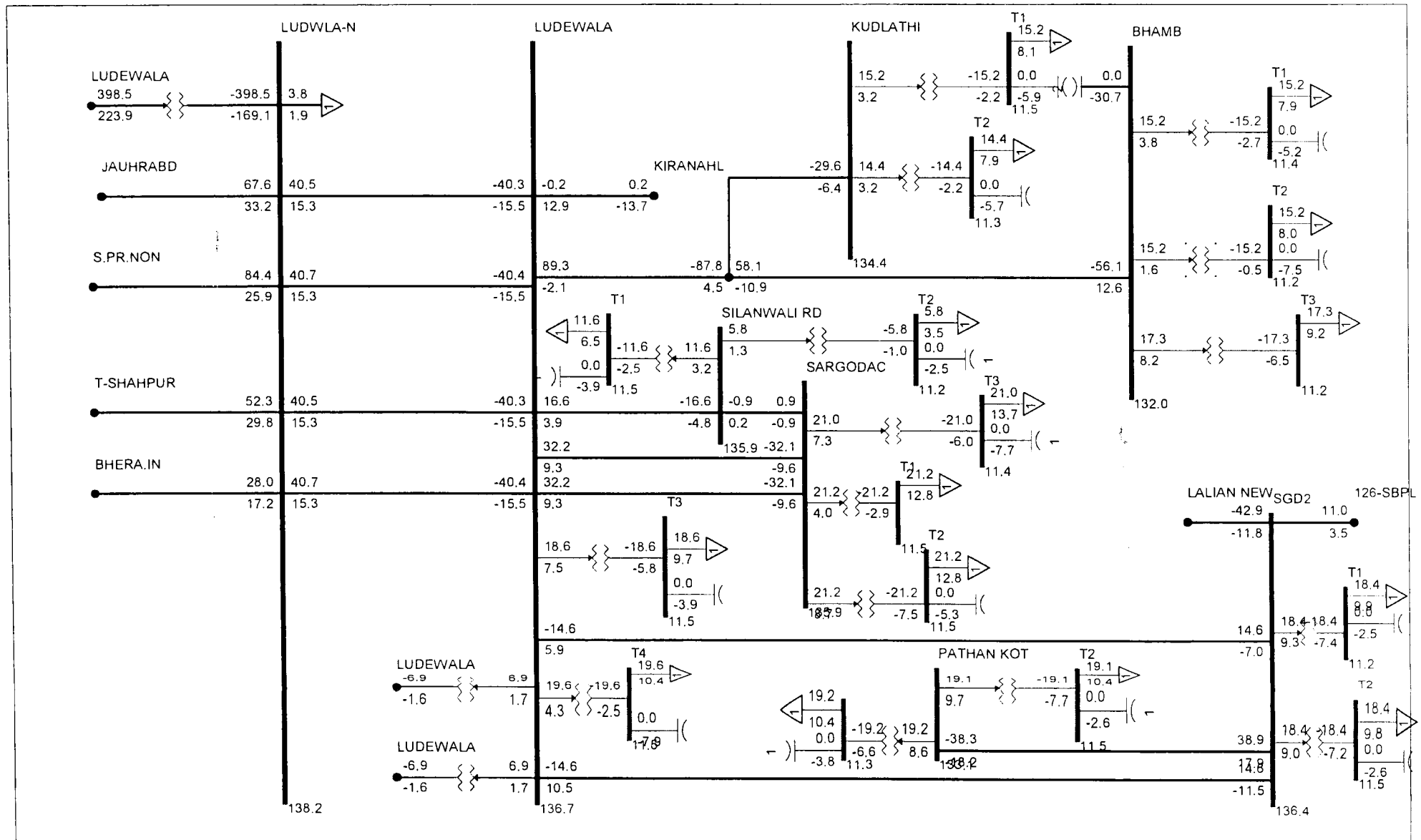
EXHIBIT-2017- 2.7



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.6



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.5

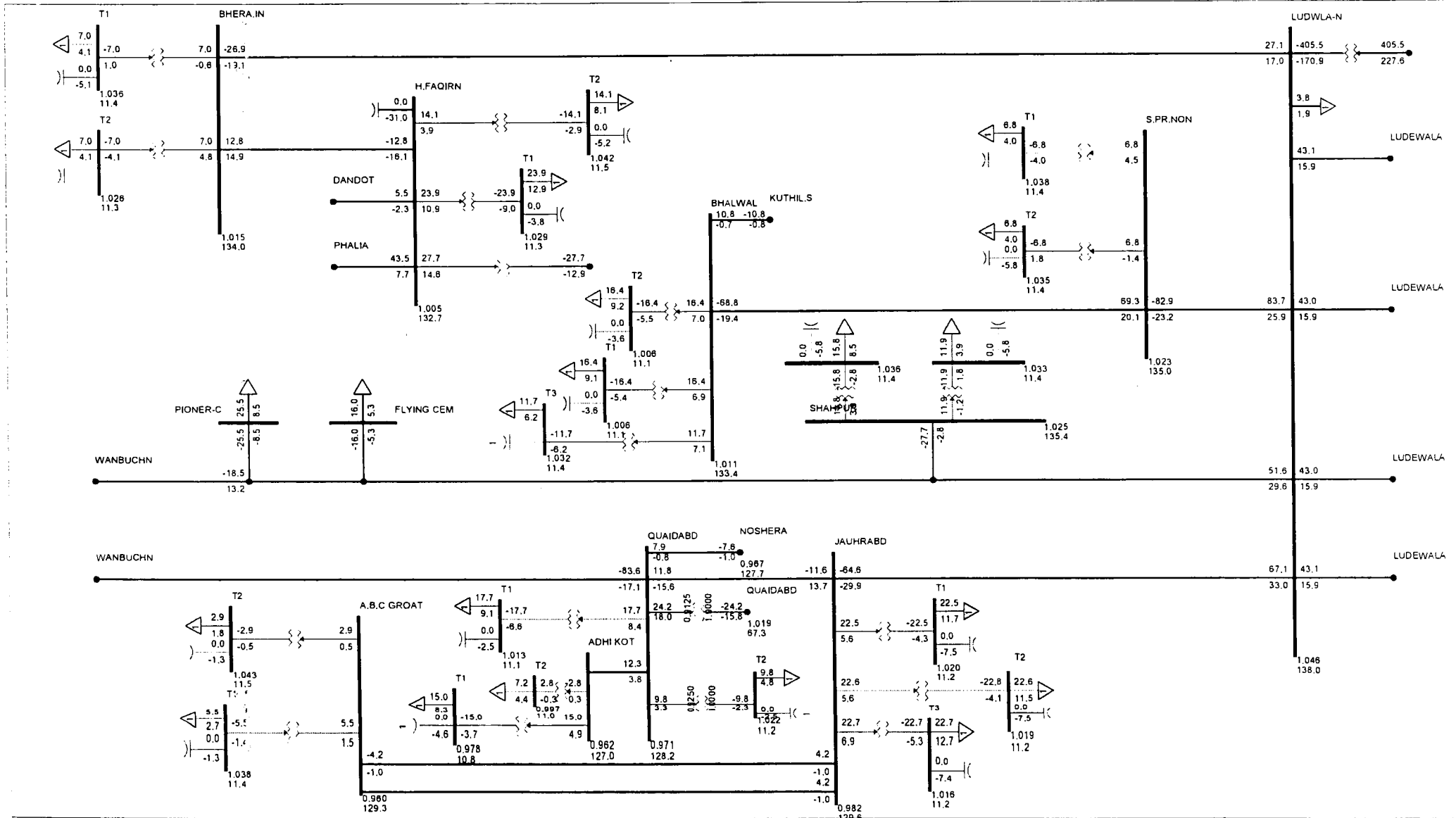


EXHIBIT-2017- 2.4

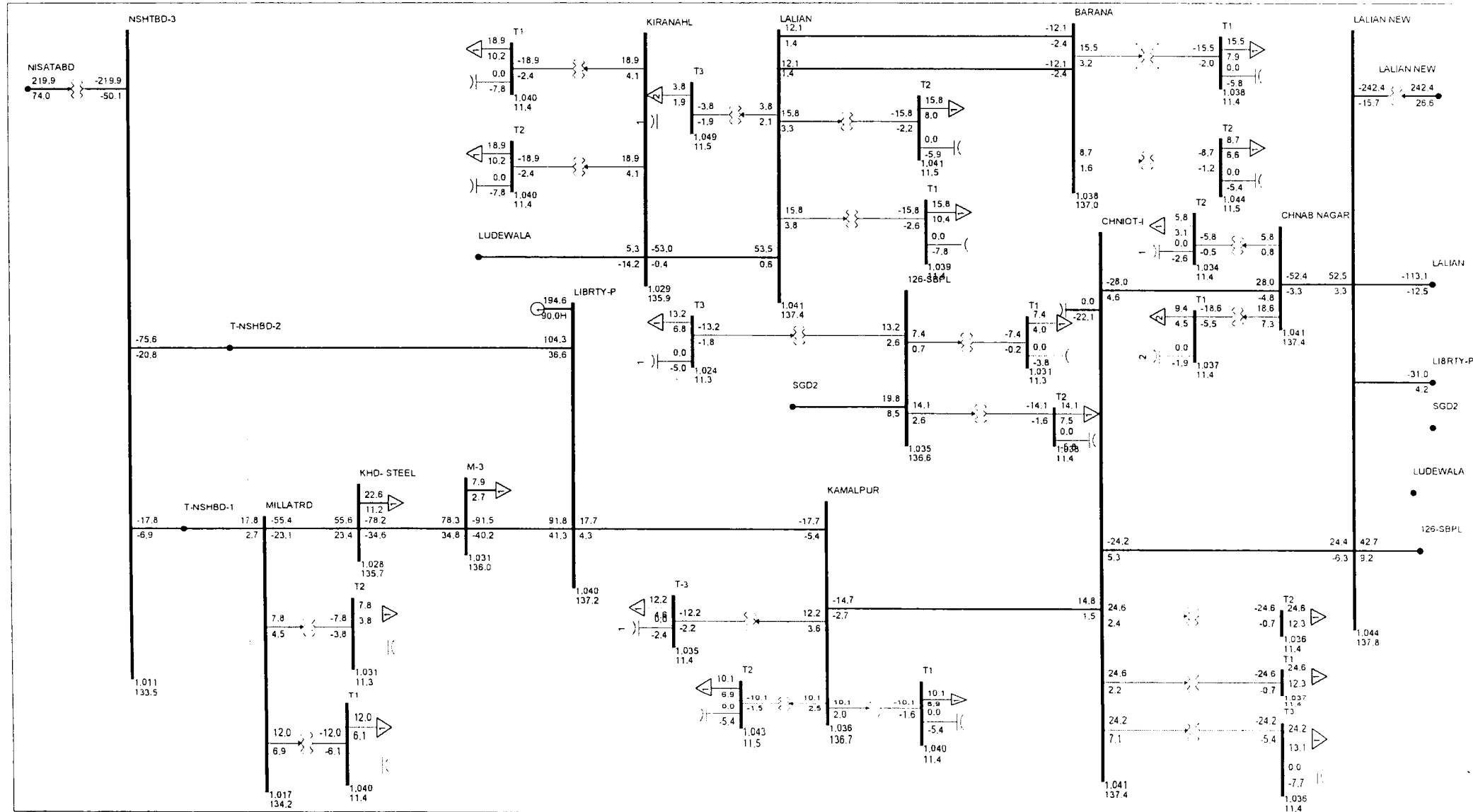


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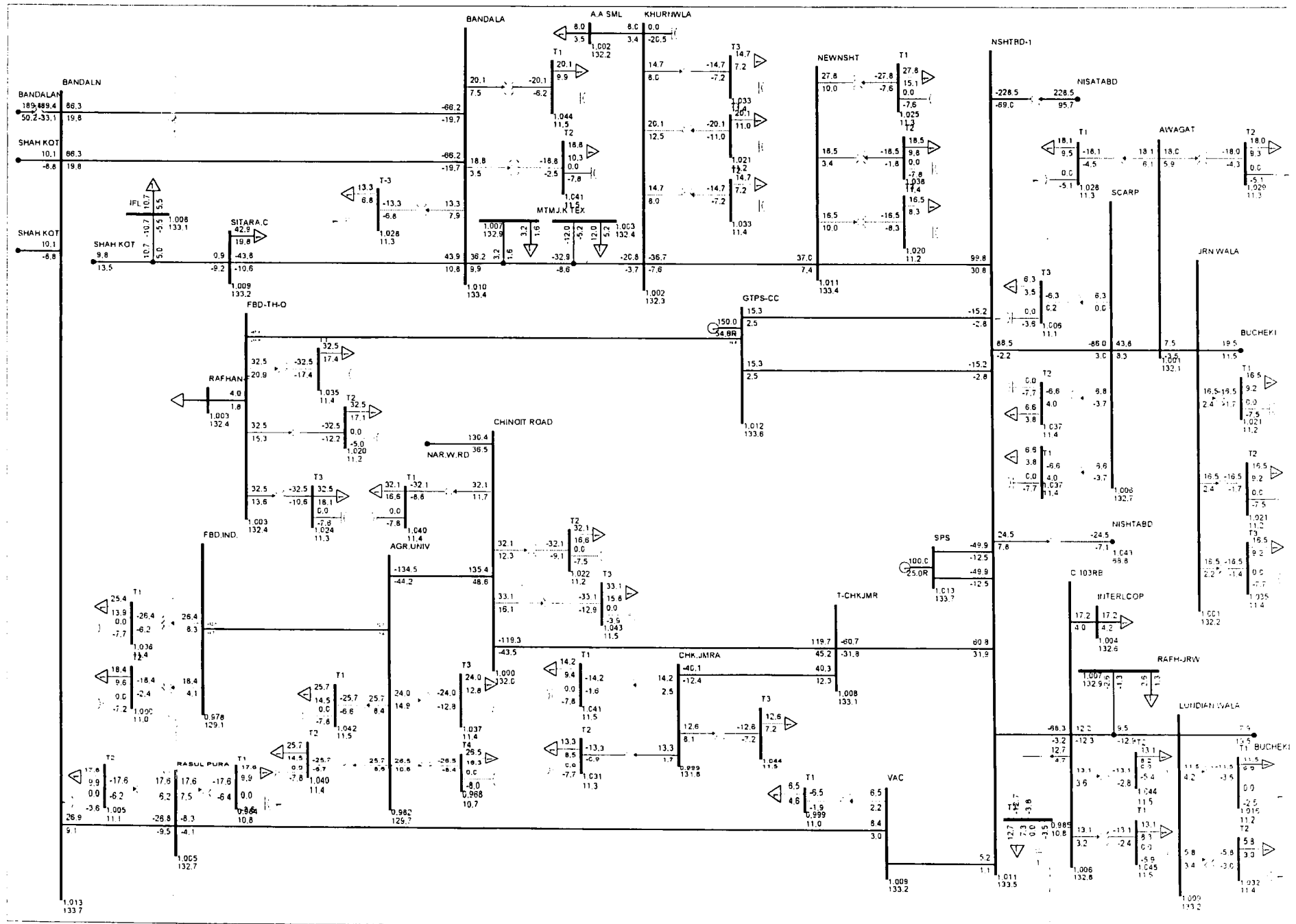
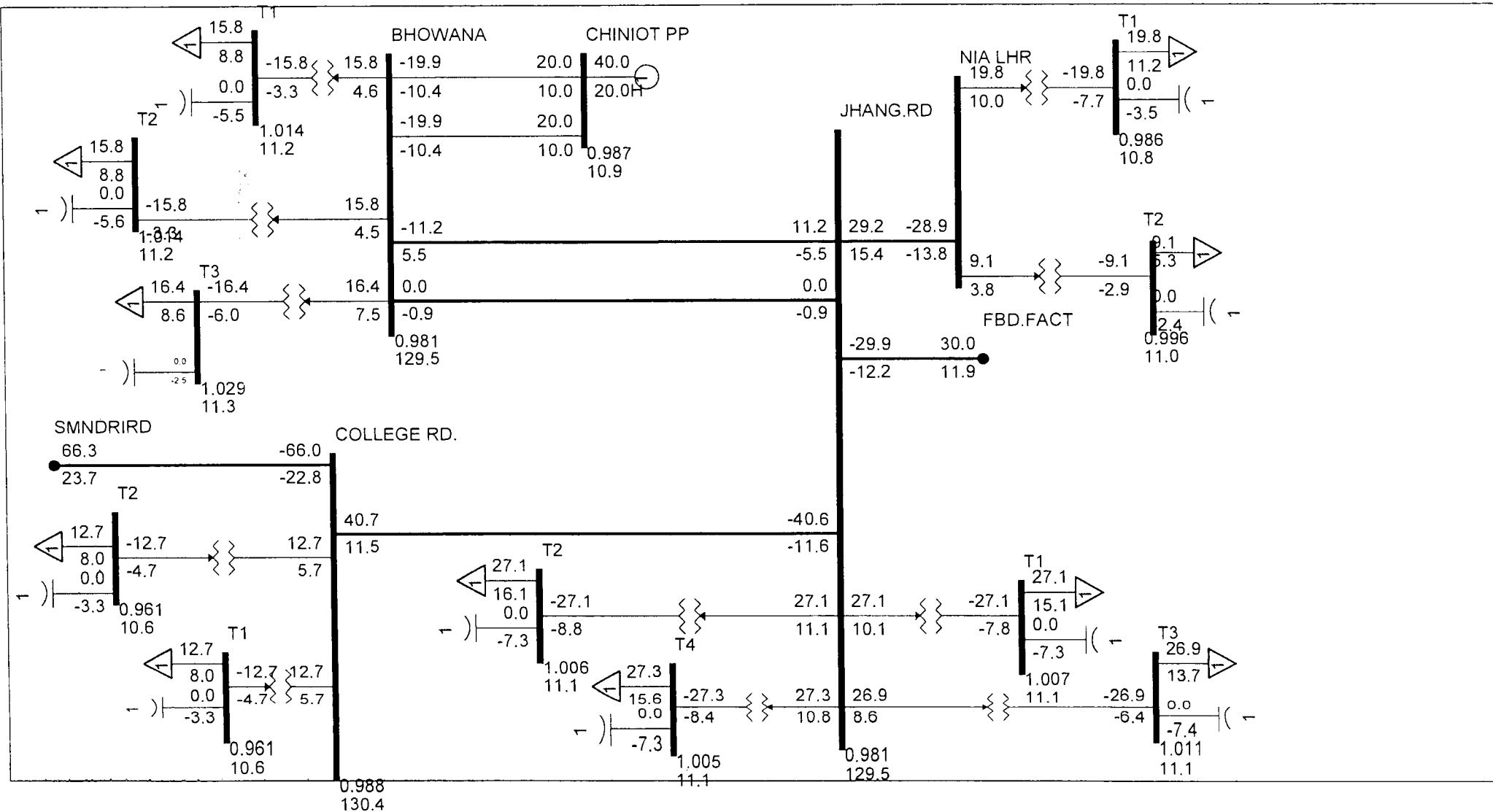


EXHIBIT-2017- 2.3.1



PEAK LOAD-YEAR 2017: WIT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.2

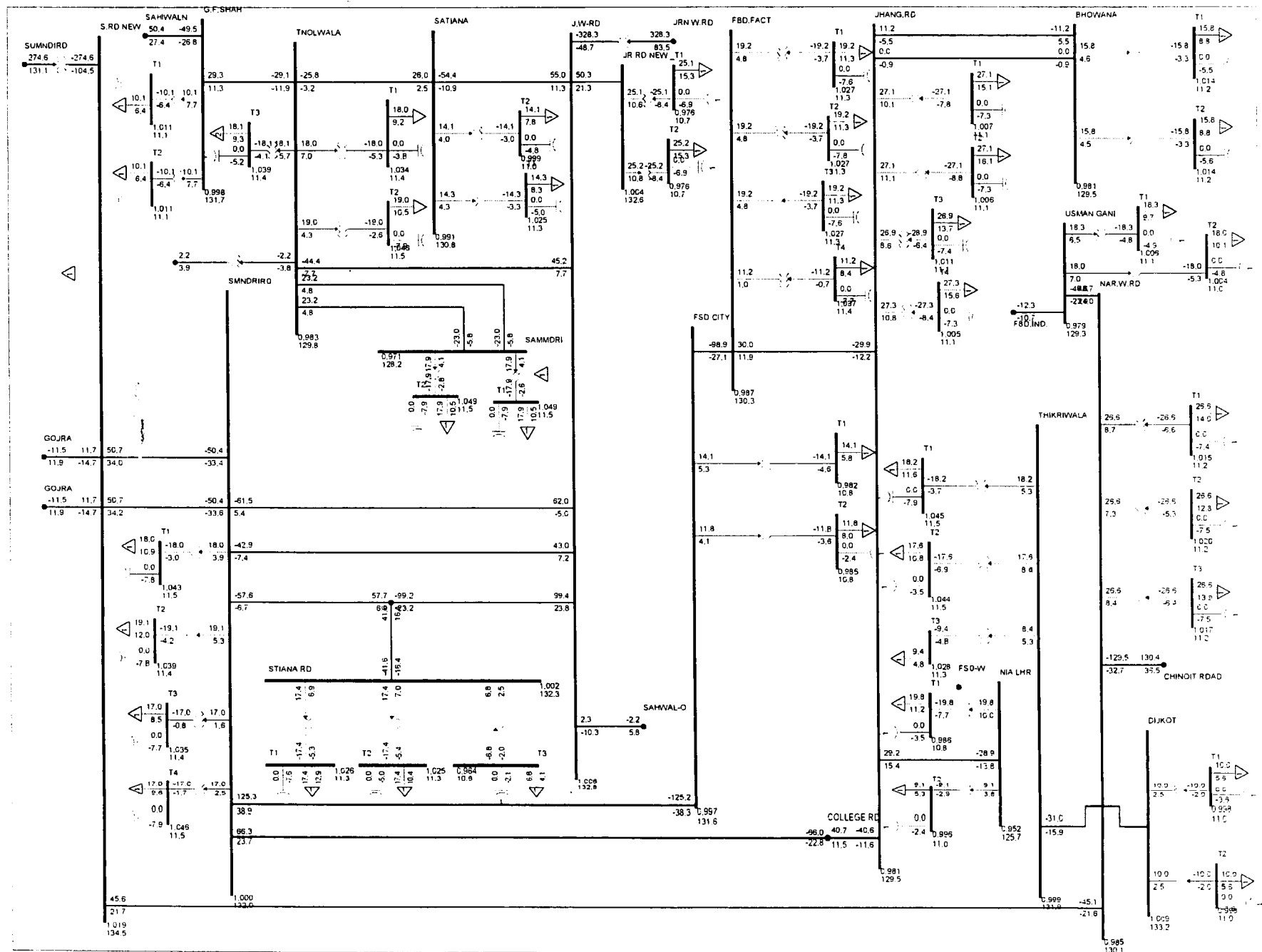


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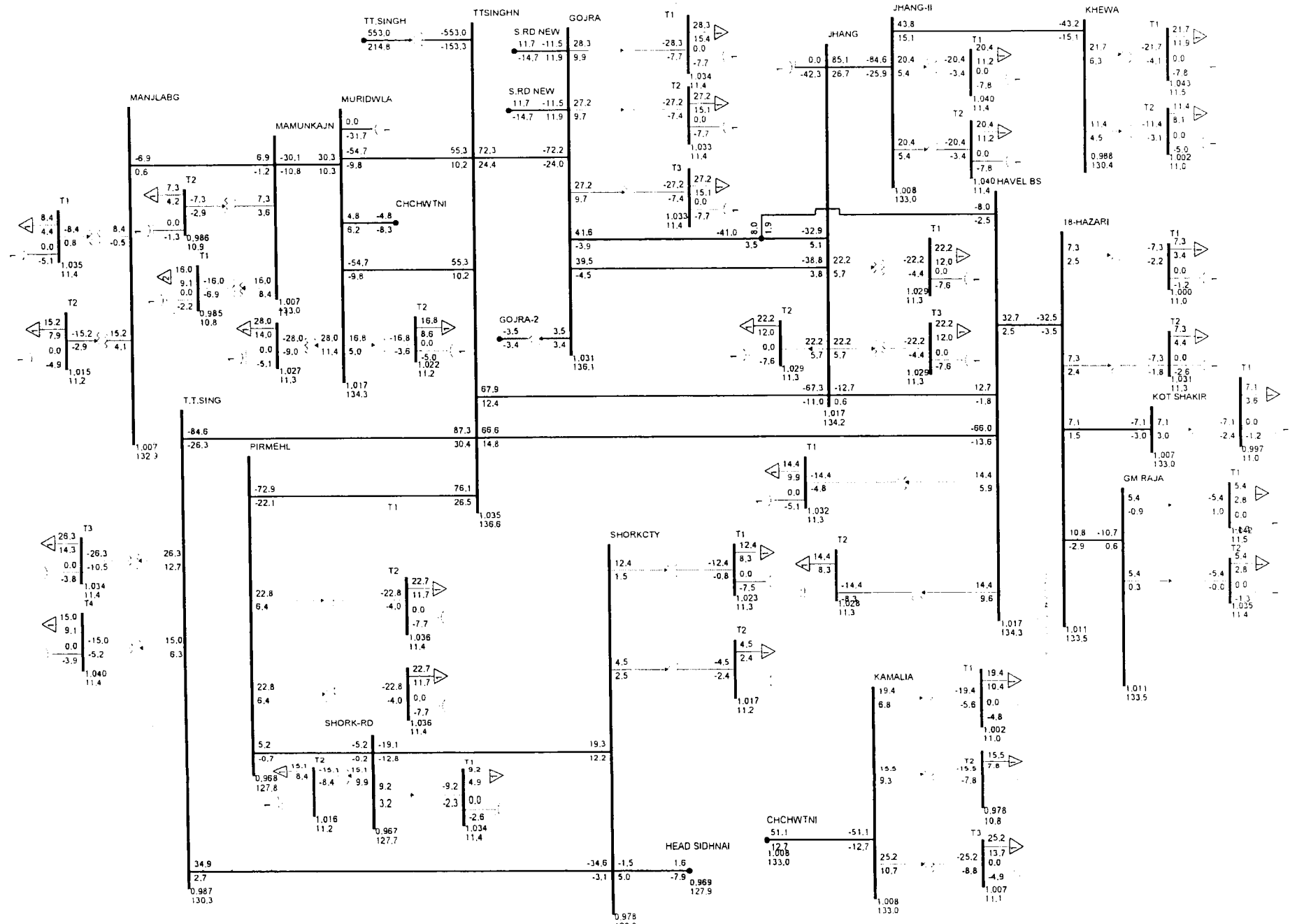
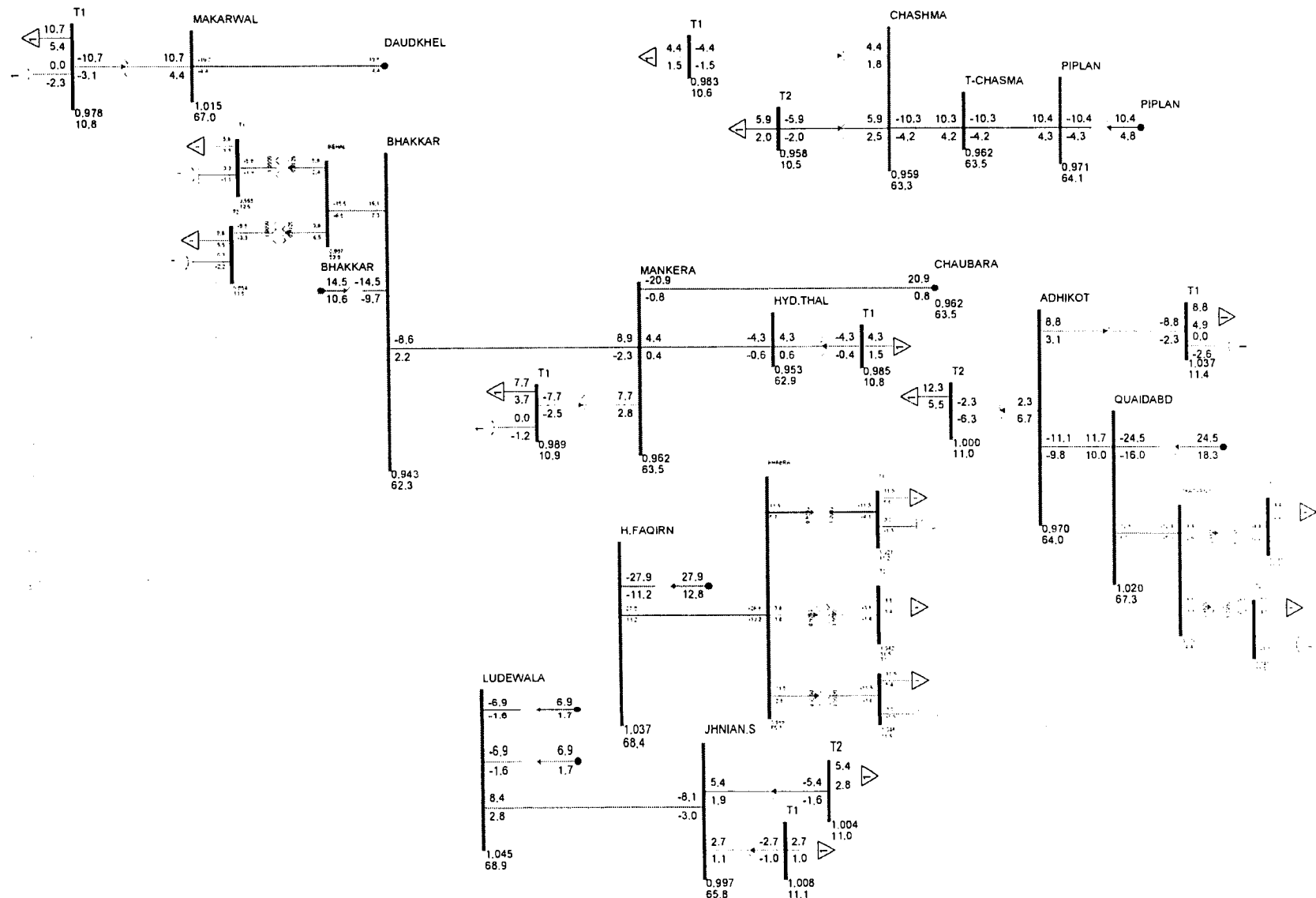


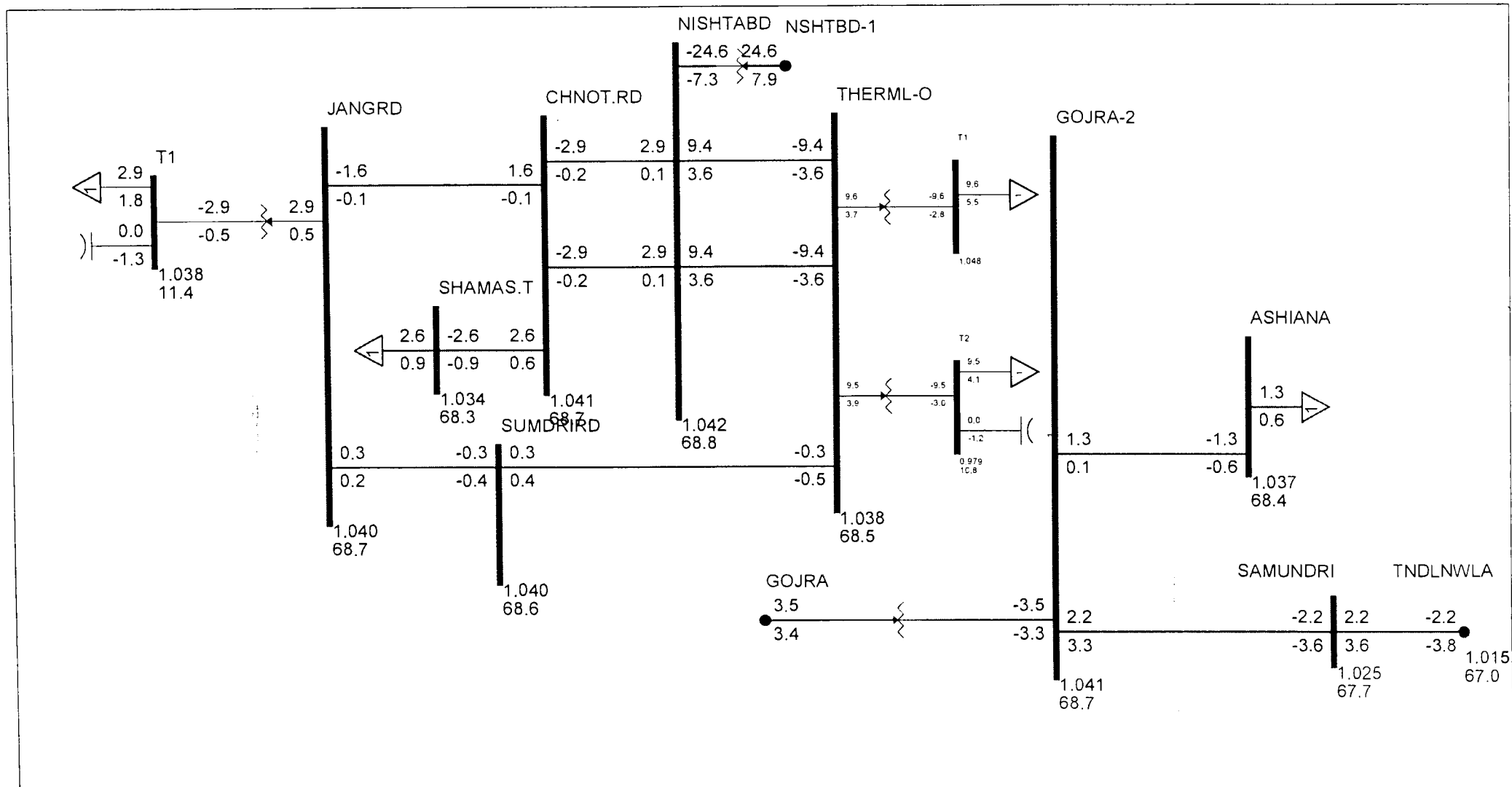
EXHIBIT-2017- 1.9



LOAD FLOW STUDY OF FESCO 7th STG PROJECT(OPTIMAL)

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

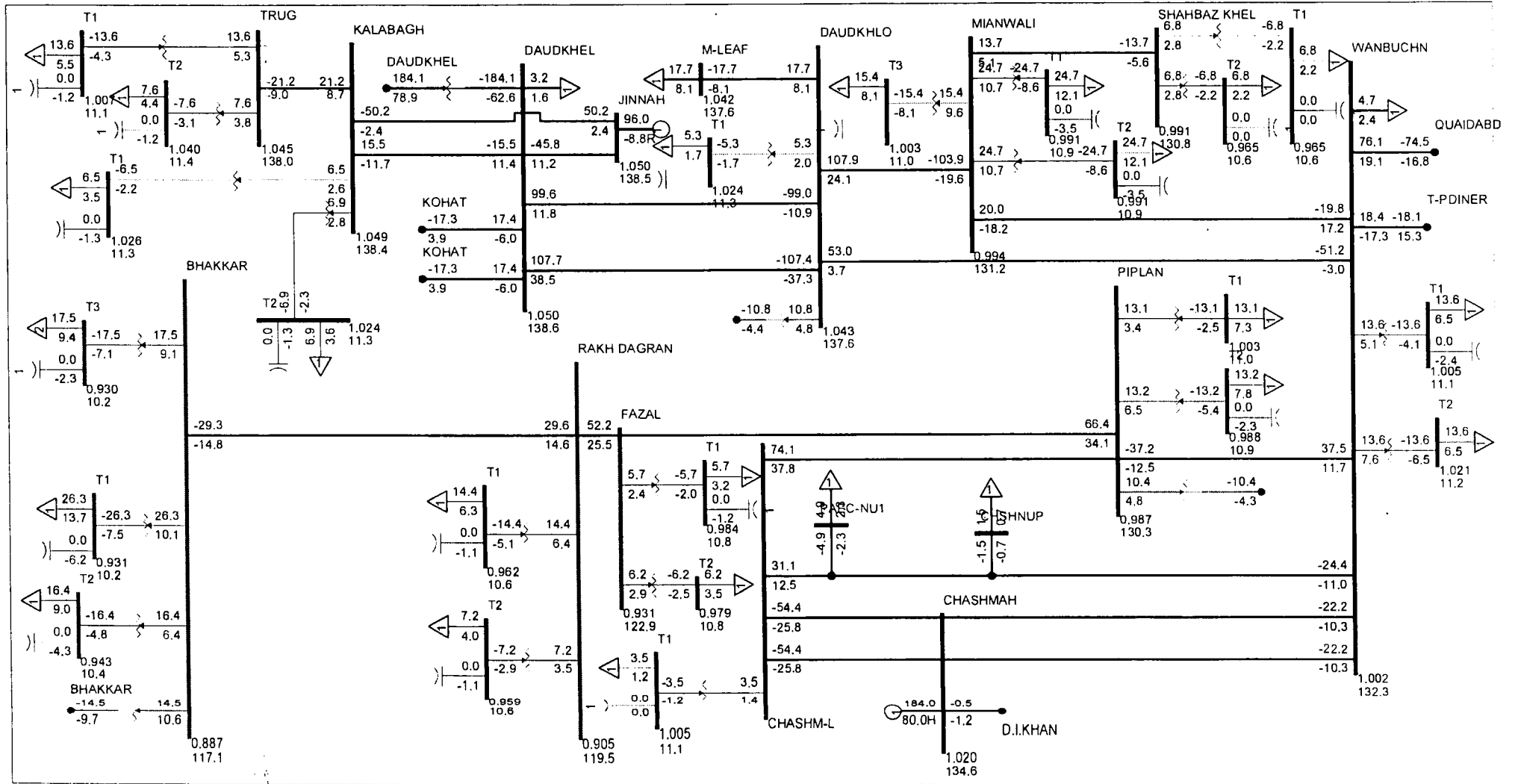
EXHIBIT-2017- 1.8



LOAD FLOW STUDY OF FESCO 7th STG PROJECT

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.7



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.6

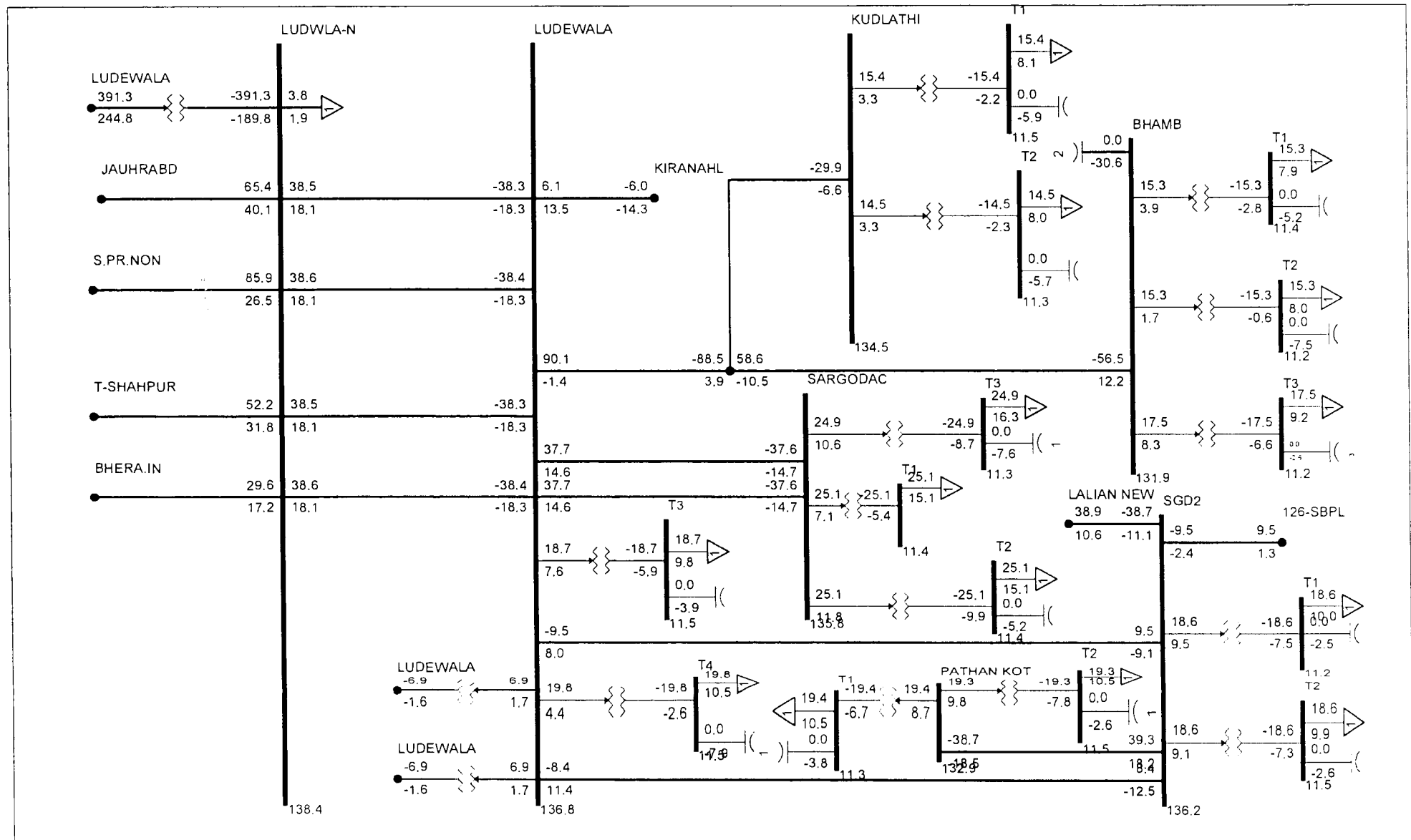
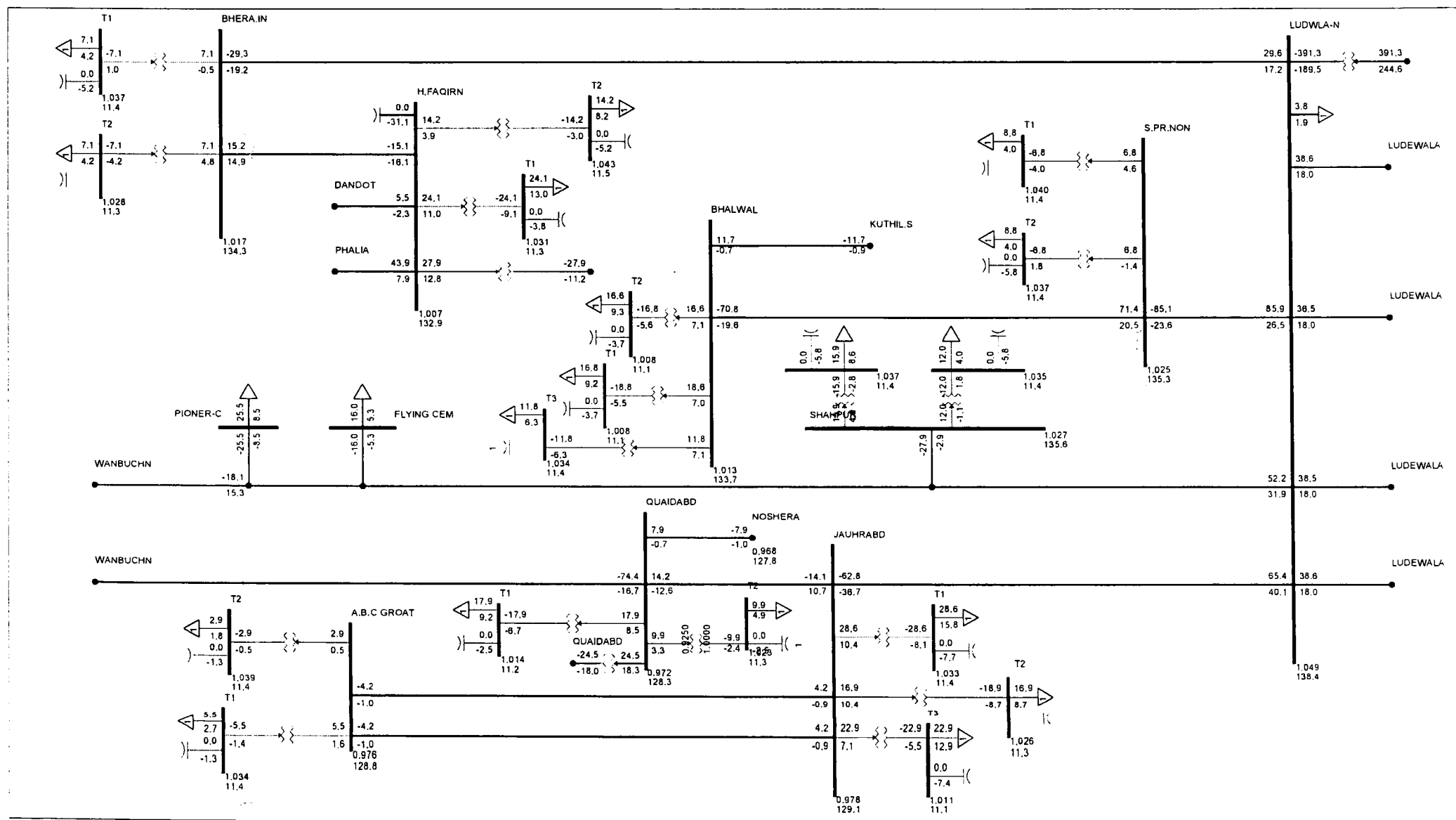


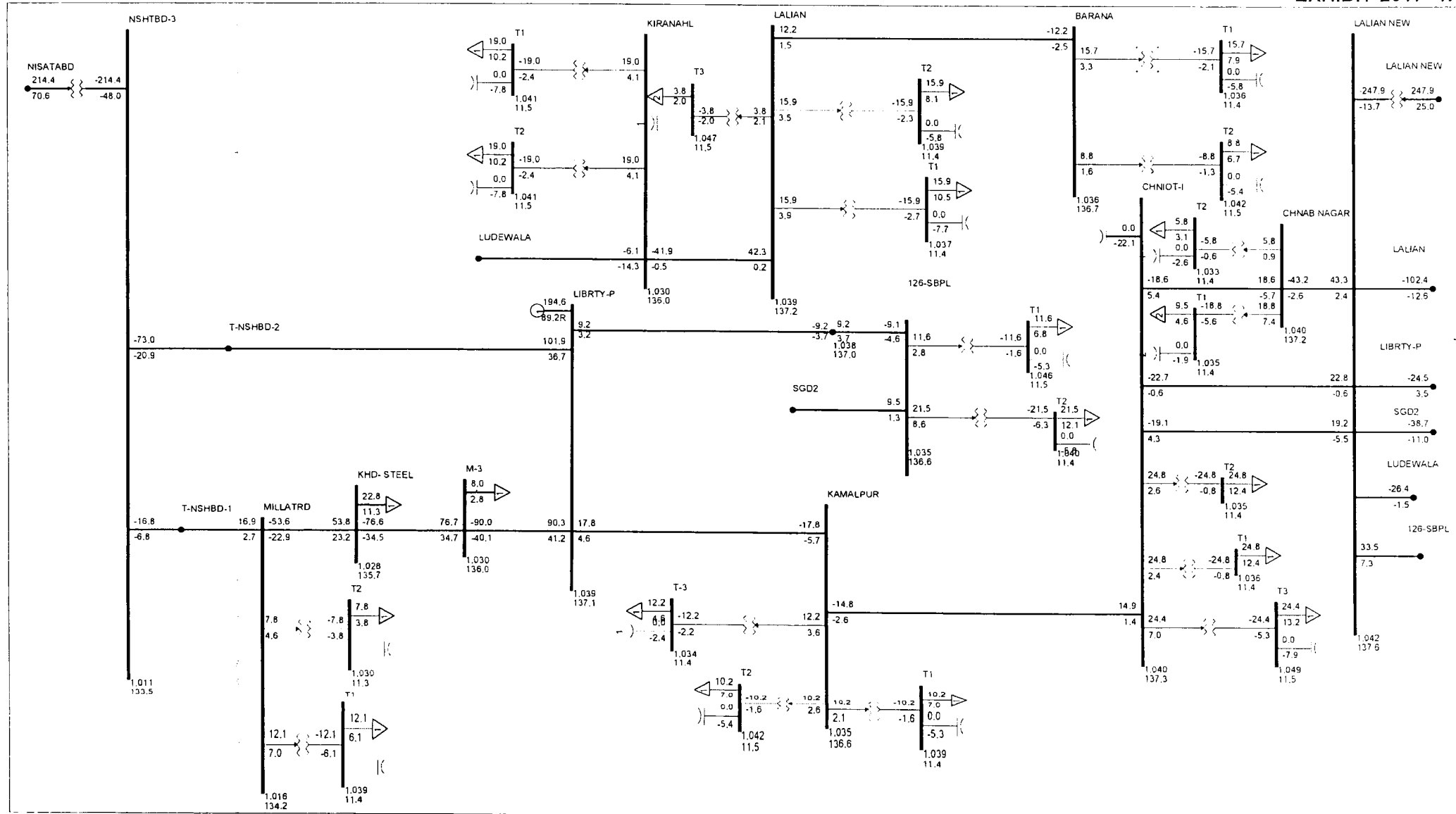
EXHIBIT-2017- 1,5



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.4



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.3

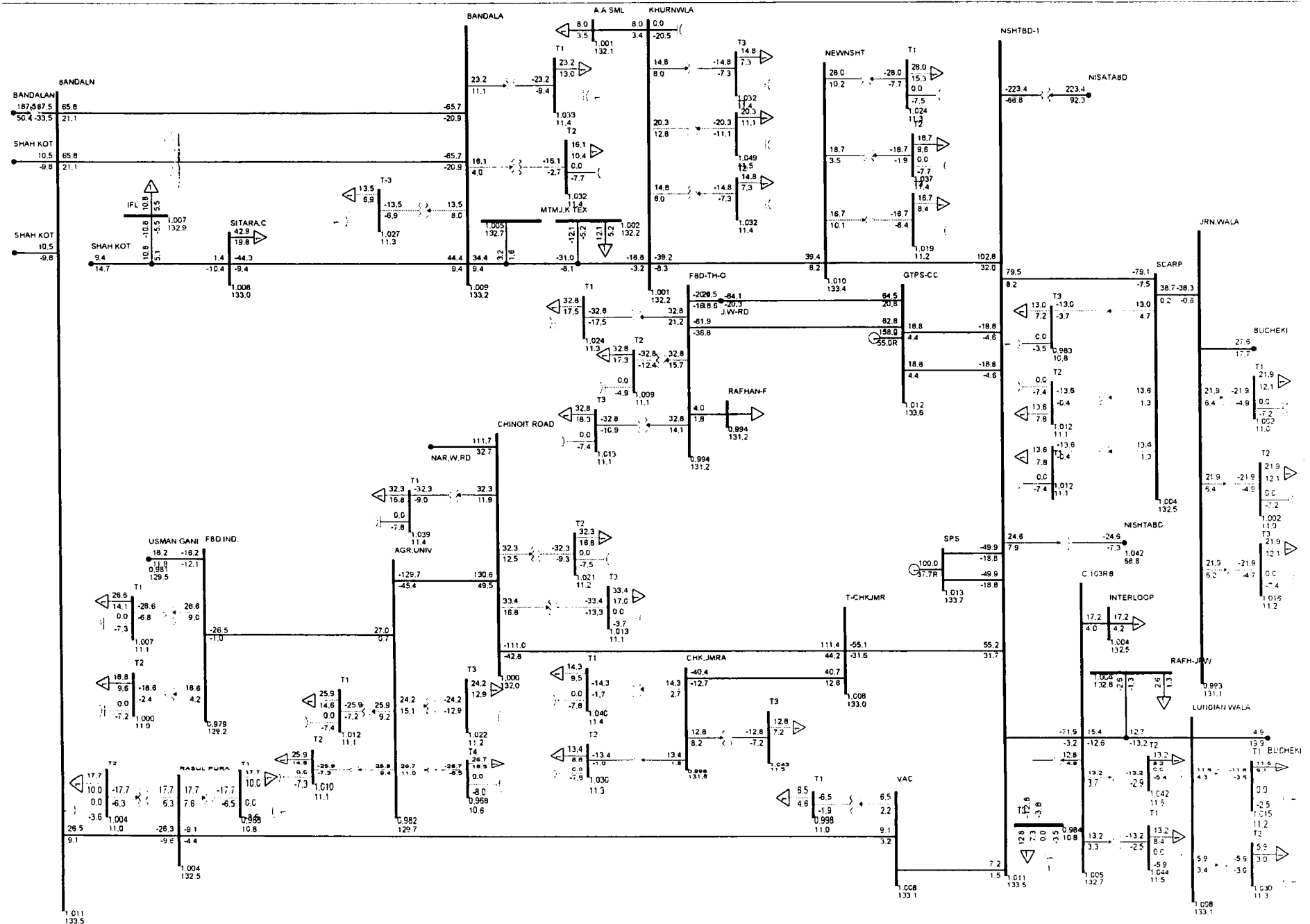
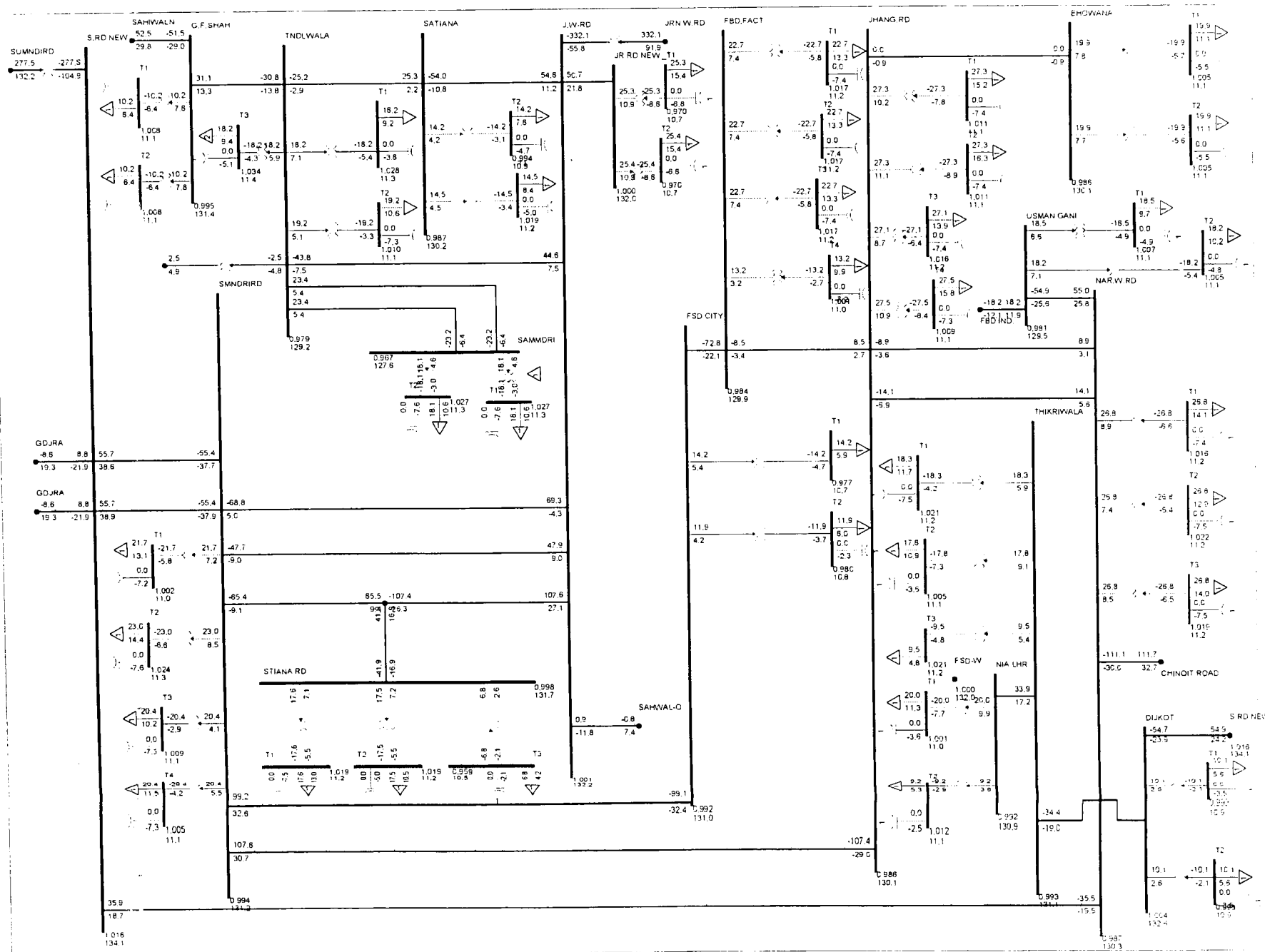
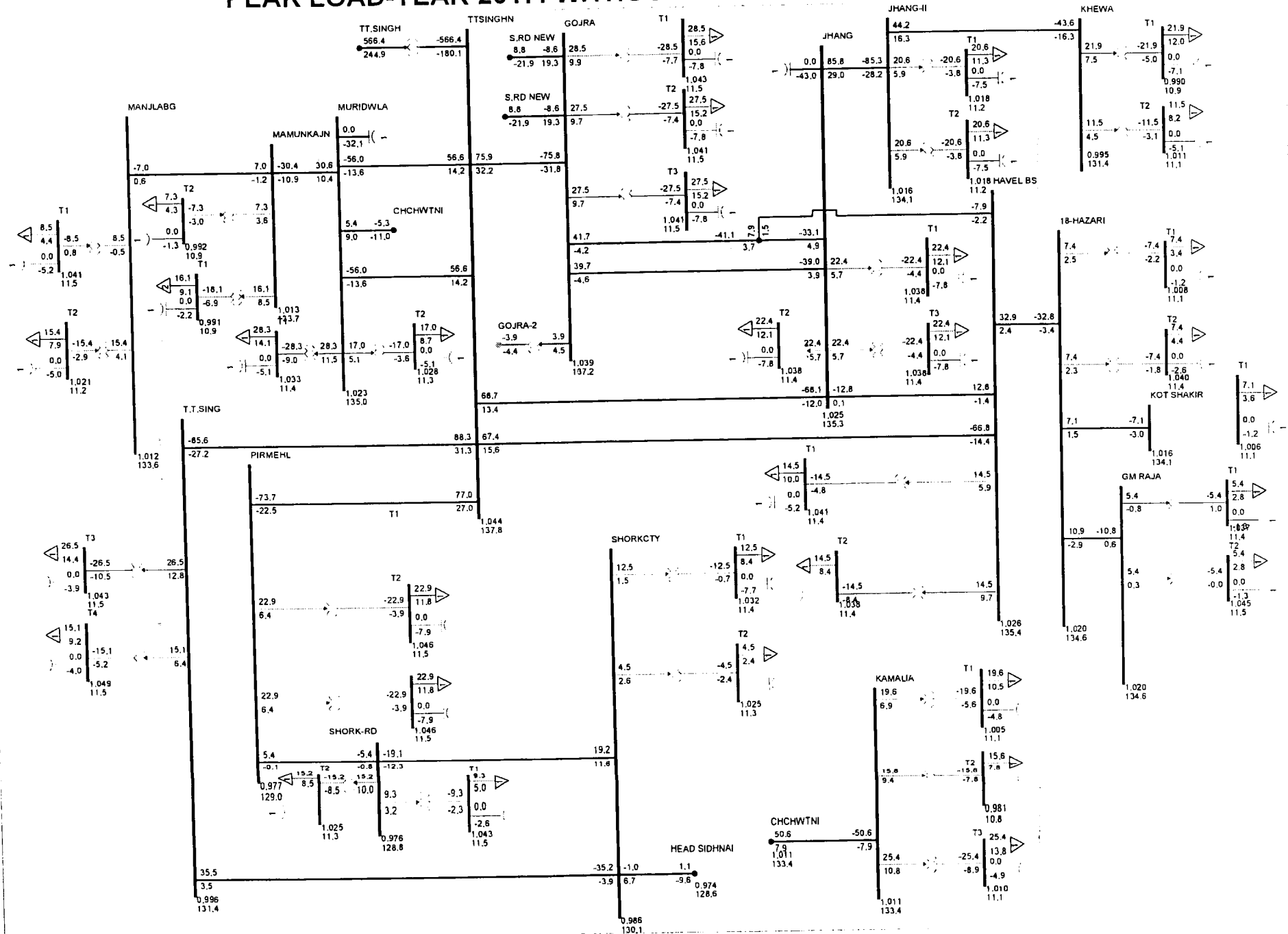


EXHIBIT-2017- 1.2



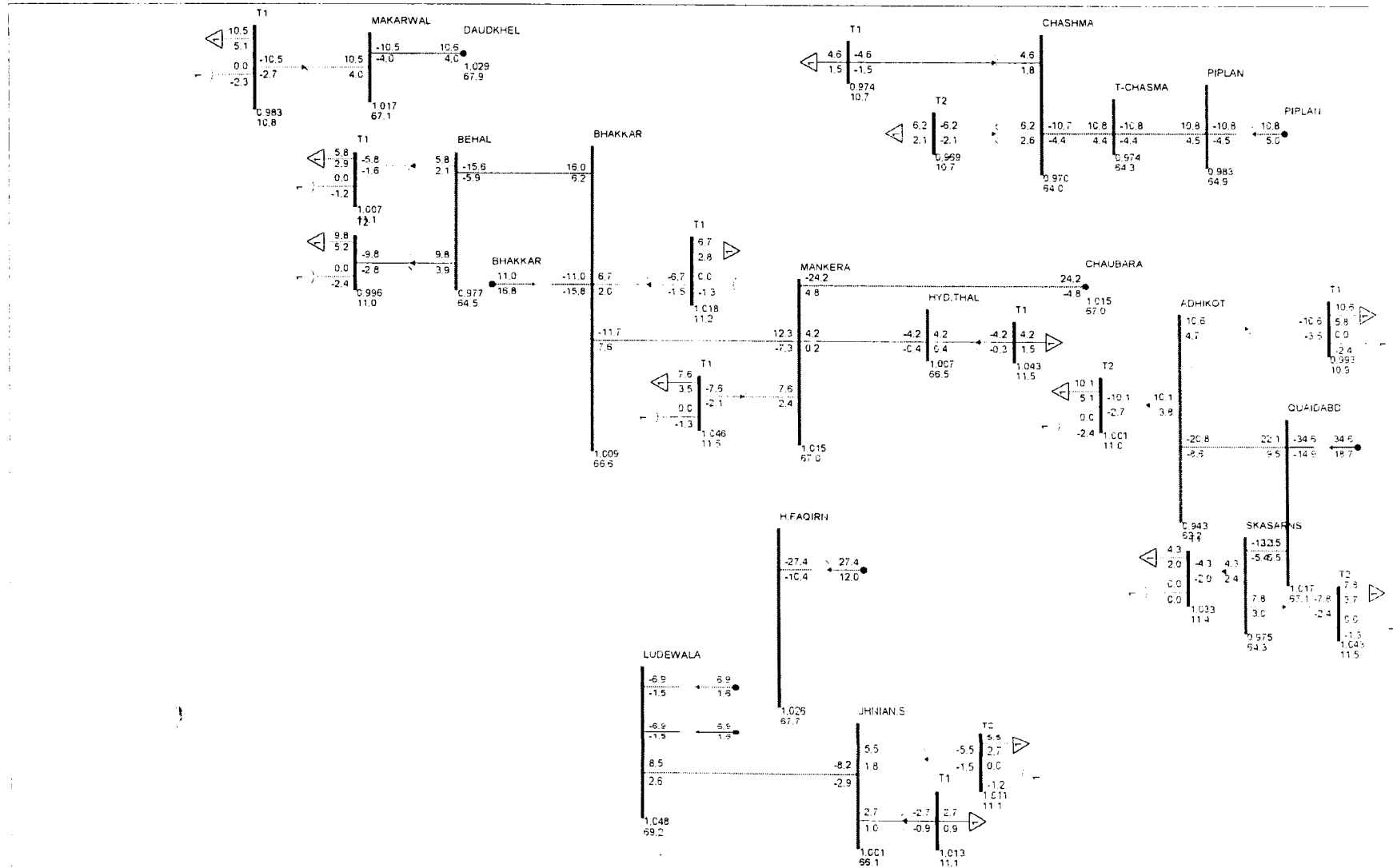
LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.1



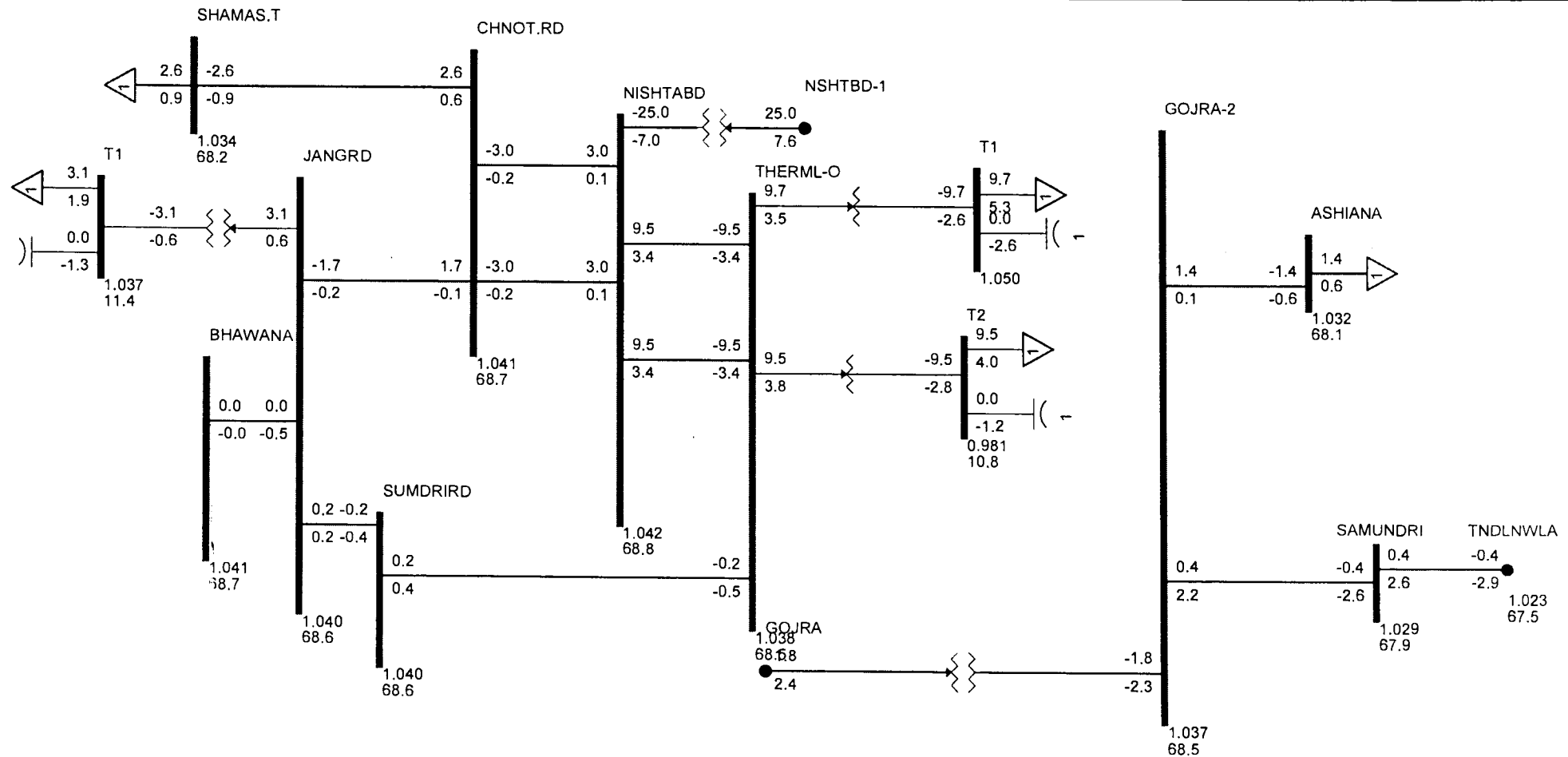
LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.9



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) FESCO-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.8



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.7

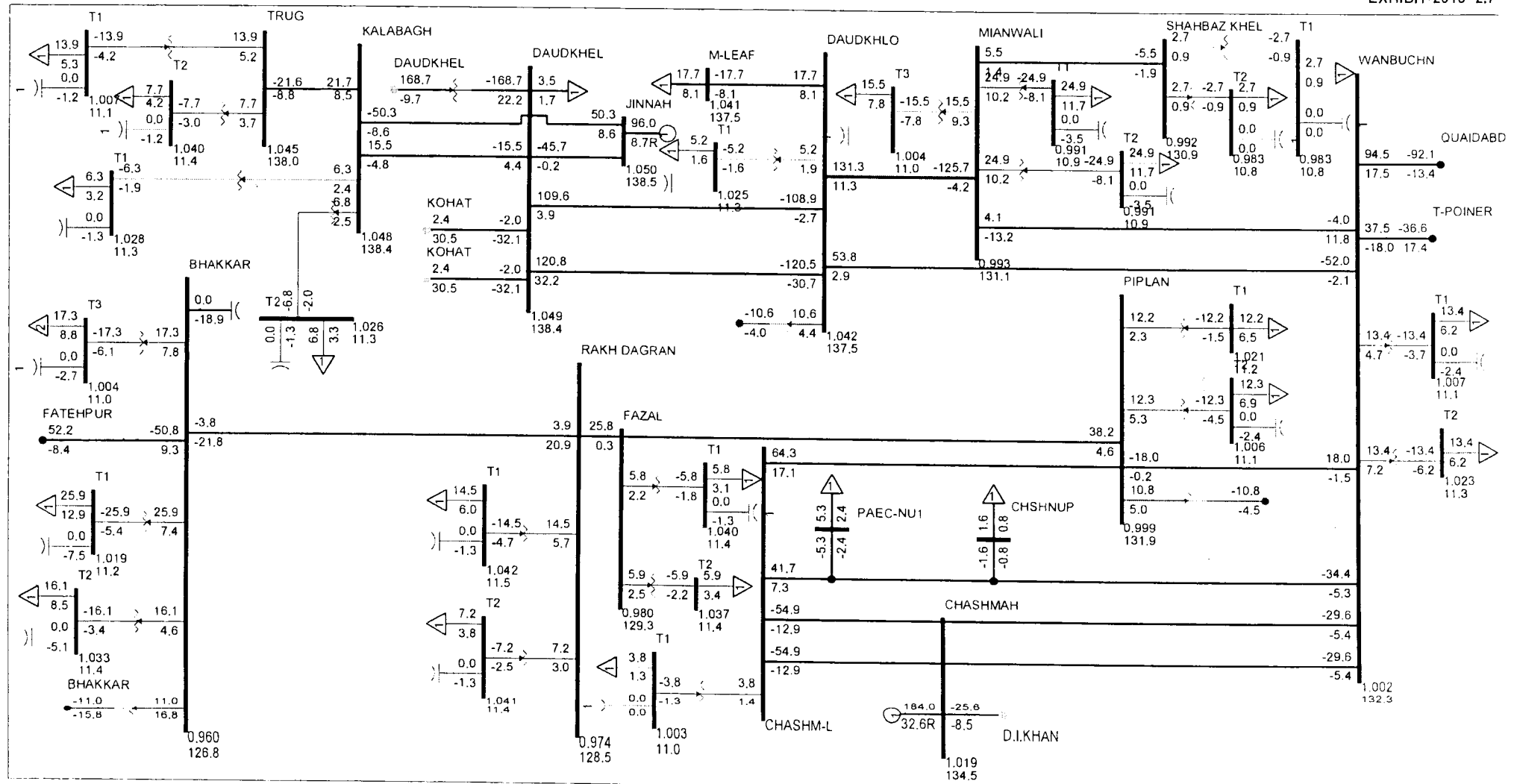
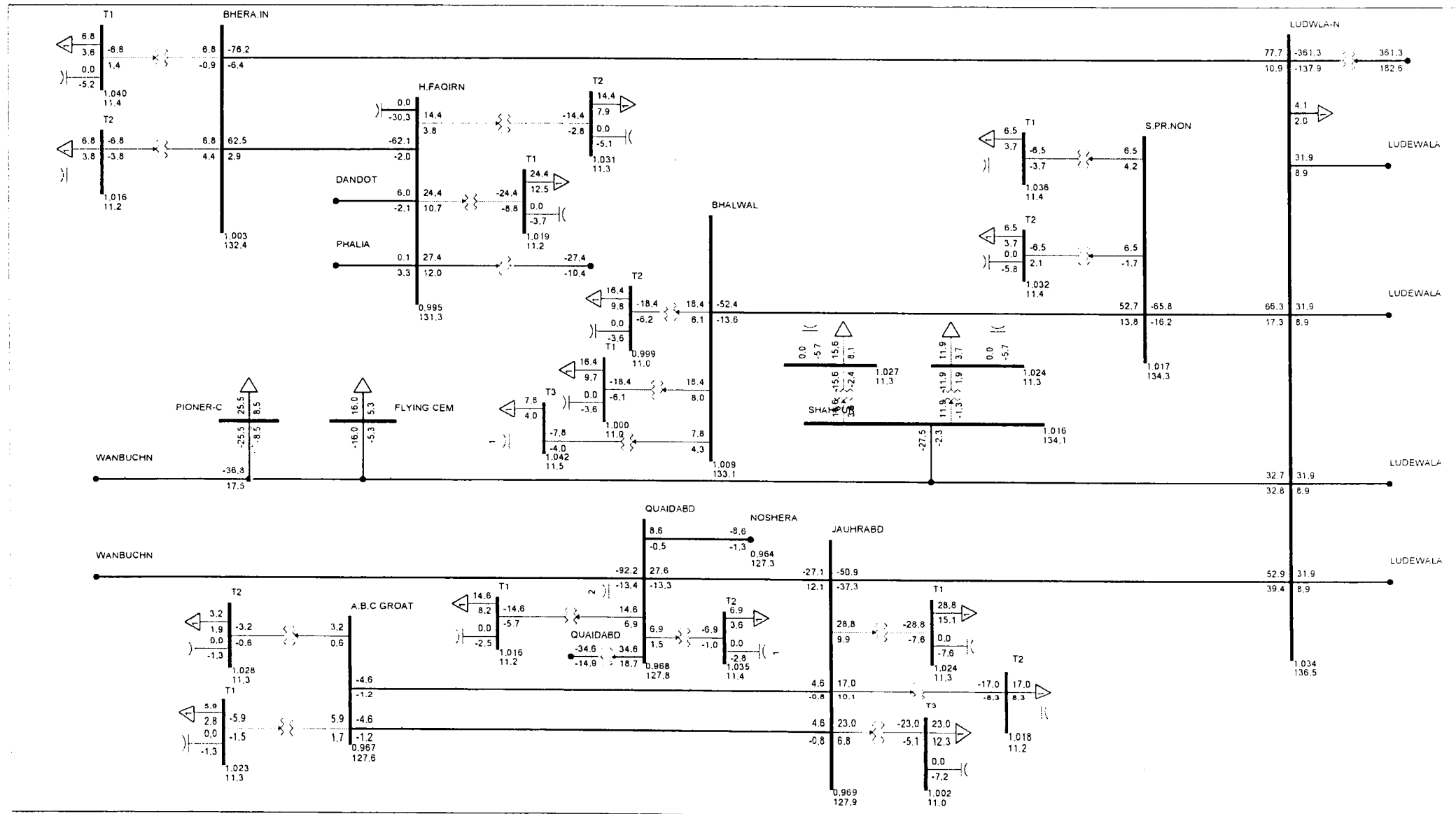
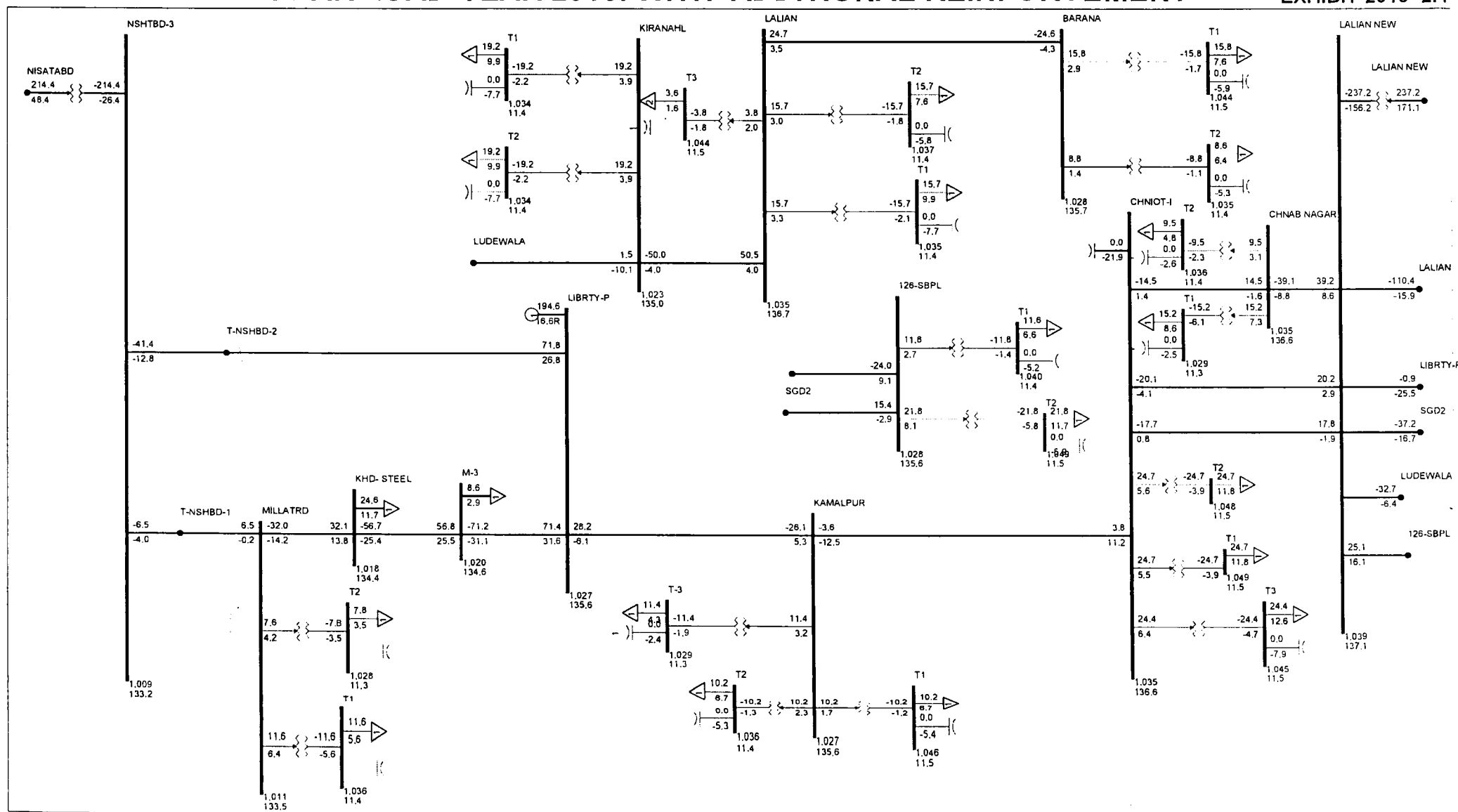


EXHIBIT-2016- 2.5



PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

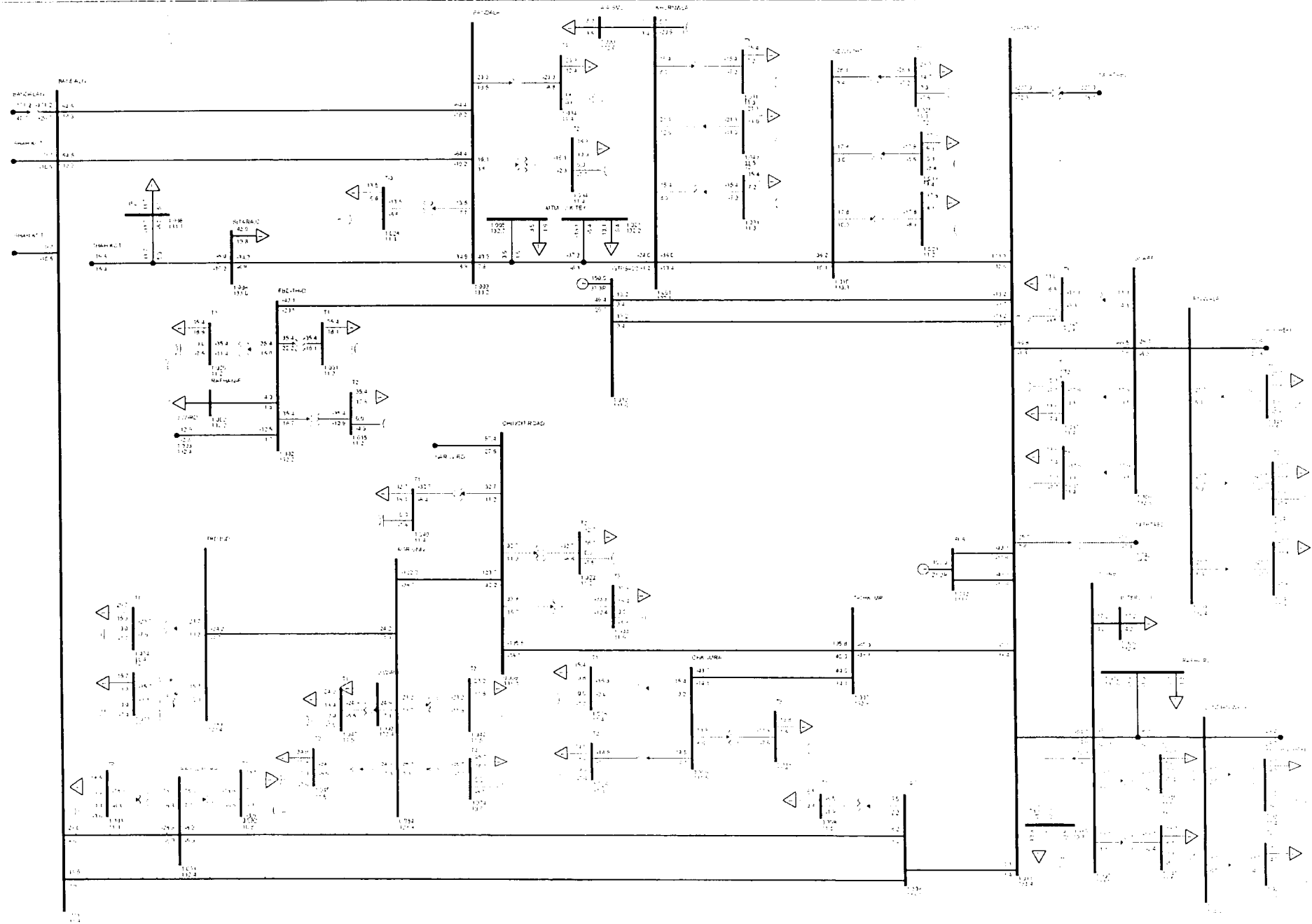
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

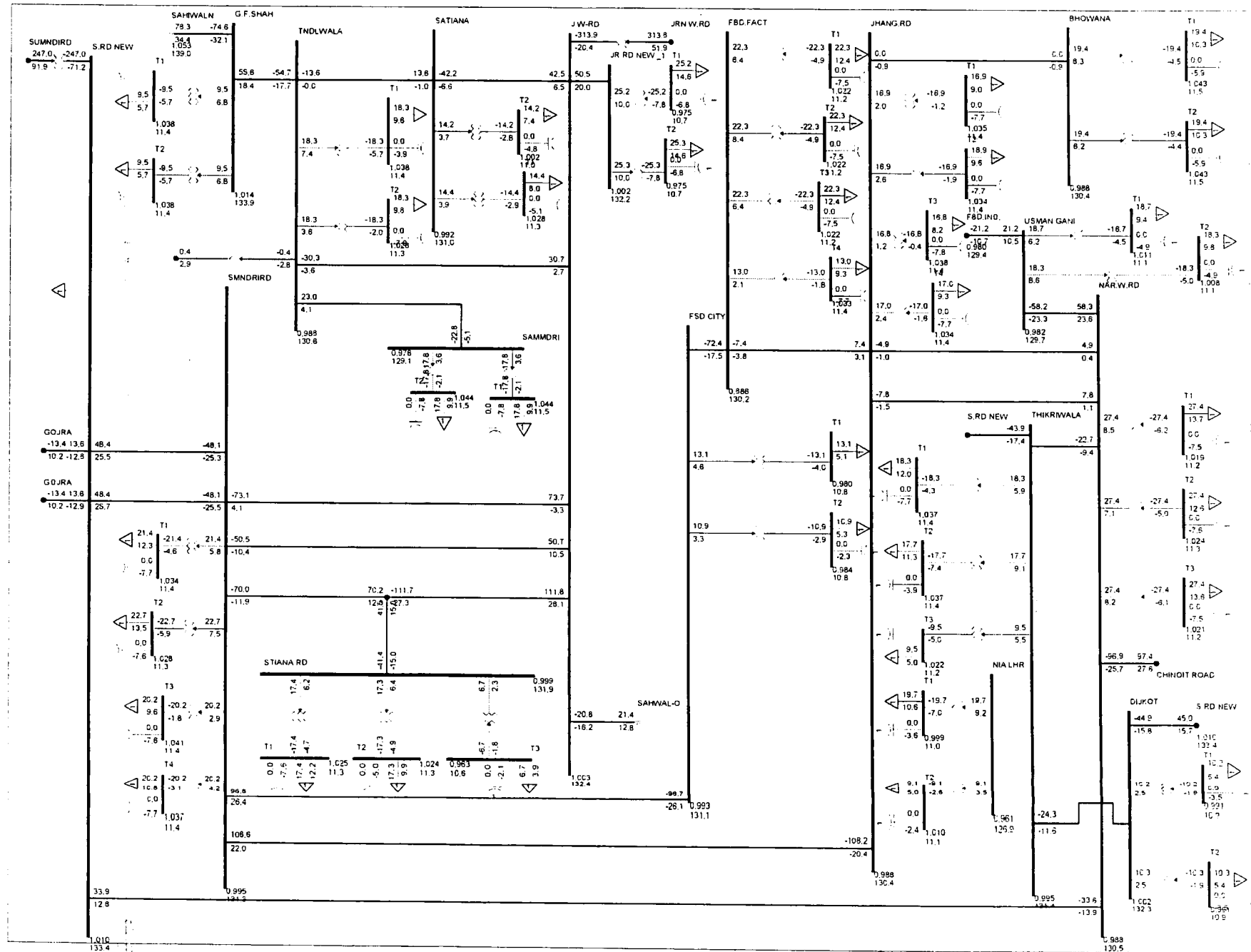
PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.3



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

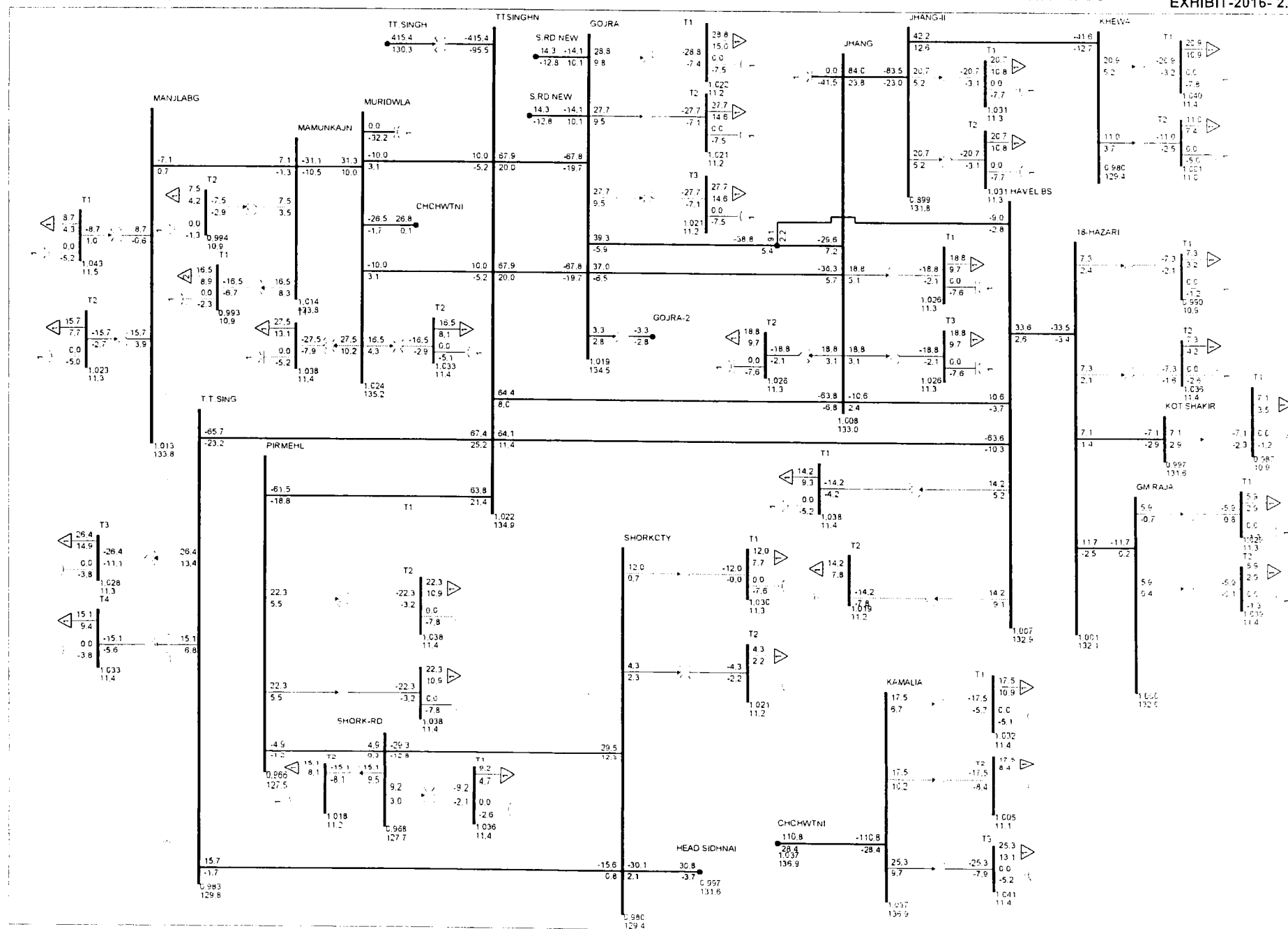
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

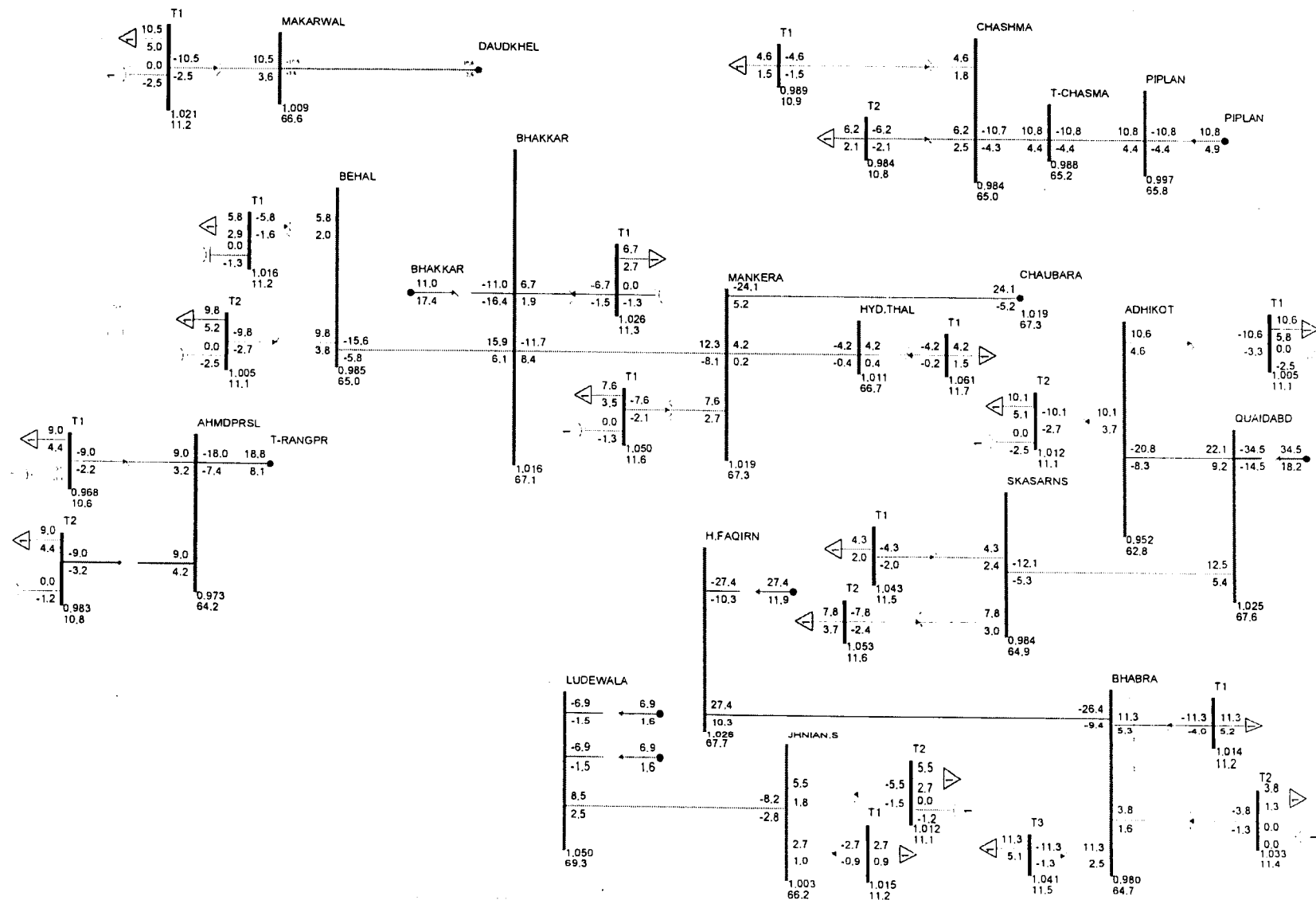
PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016-2.1



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

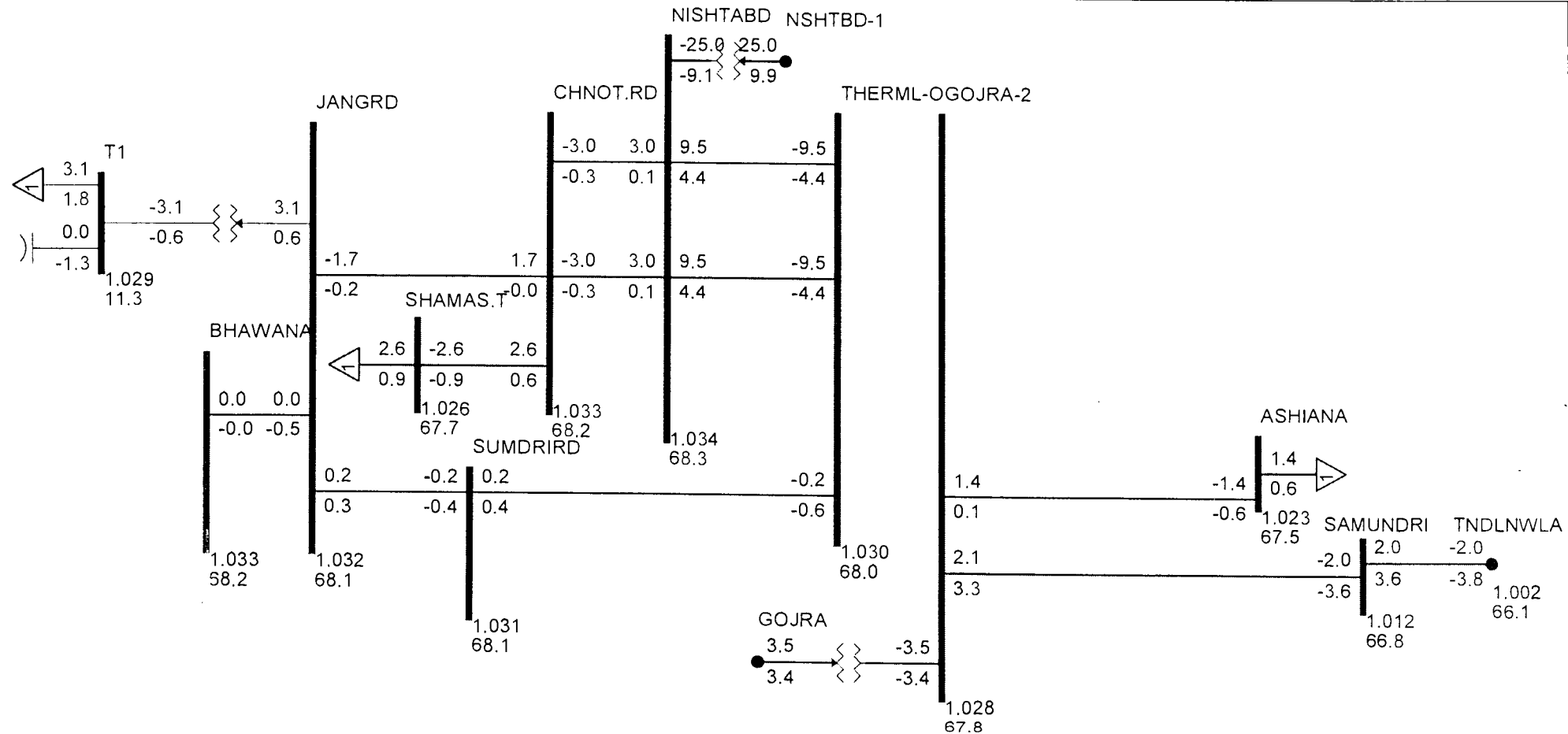
EXHIBIT-2016- 1.9



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

FESCO-YEAR 2016: WITHOUT ADDITIONAL REINFORCEMENT

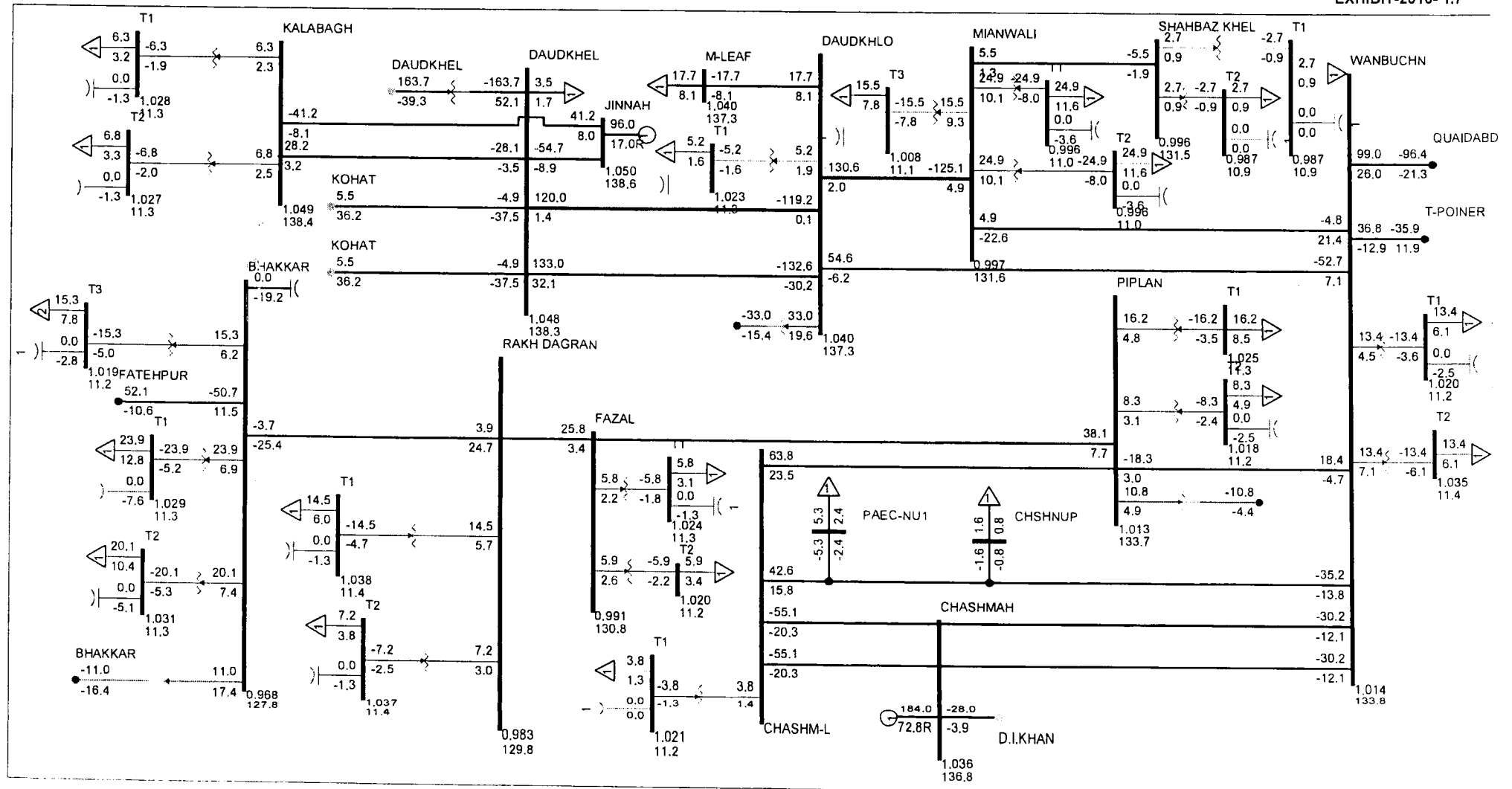
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

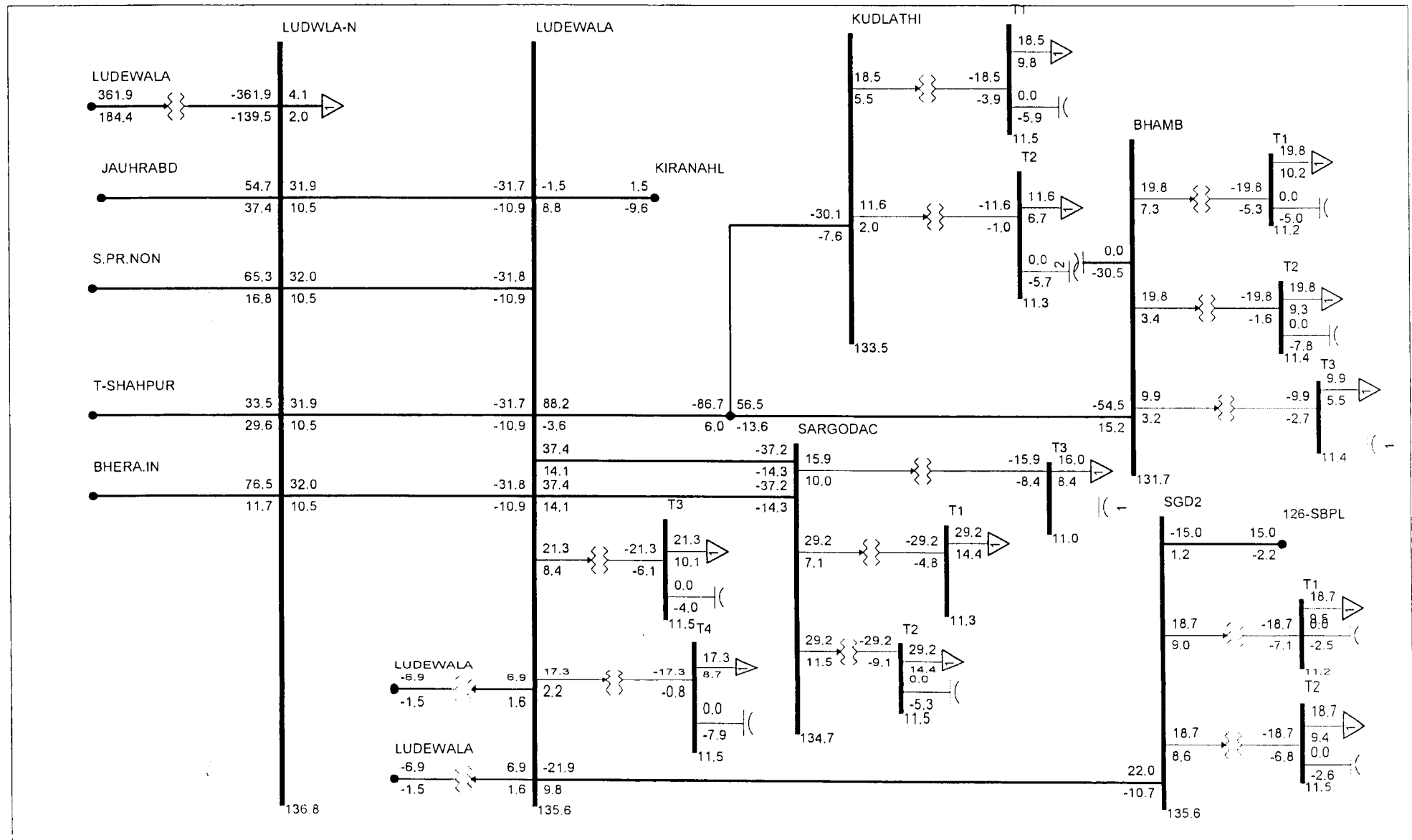
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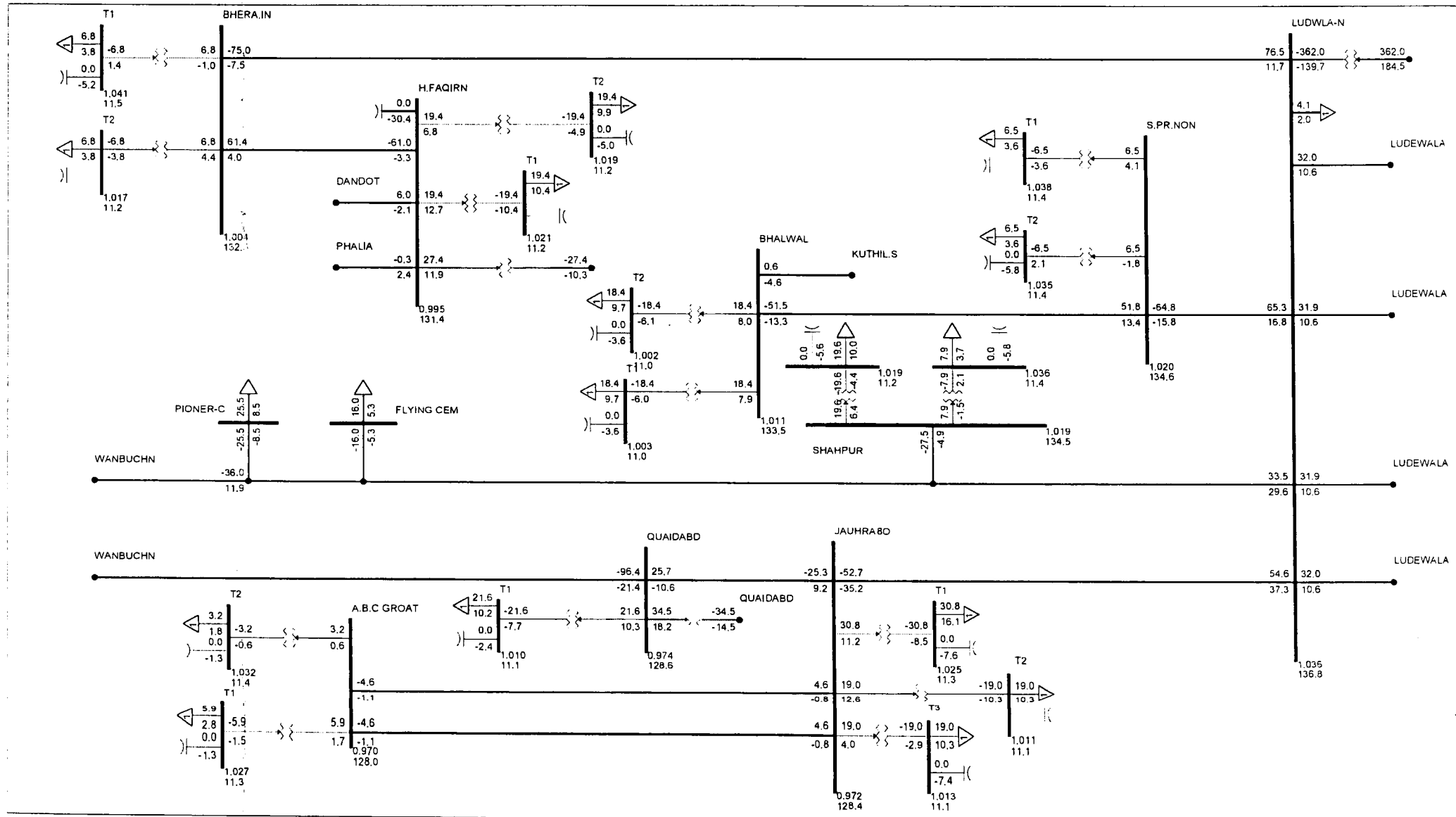
PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 1.6



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

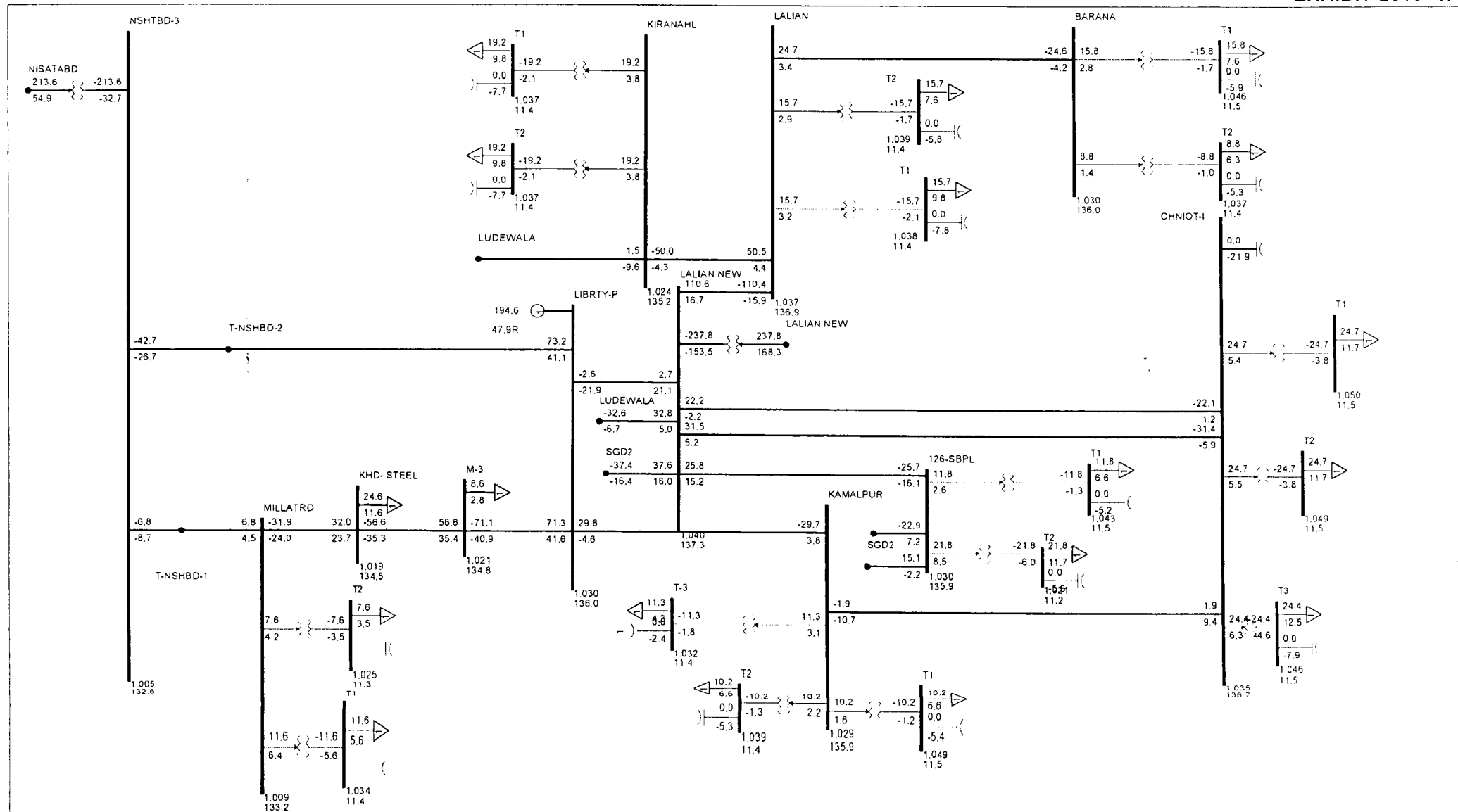
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

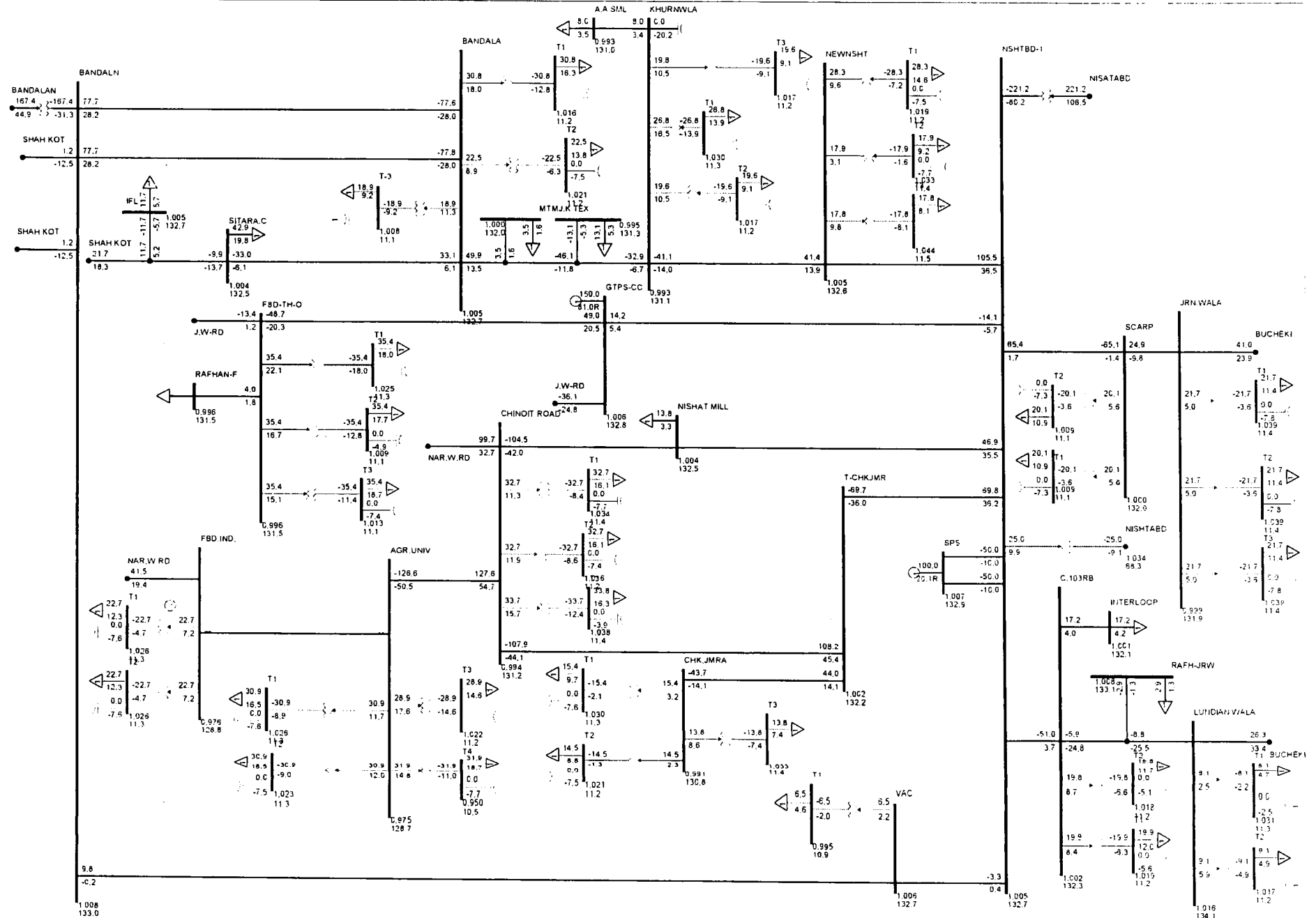
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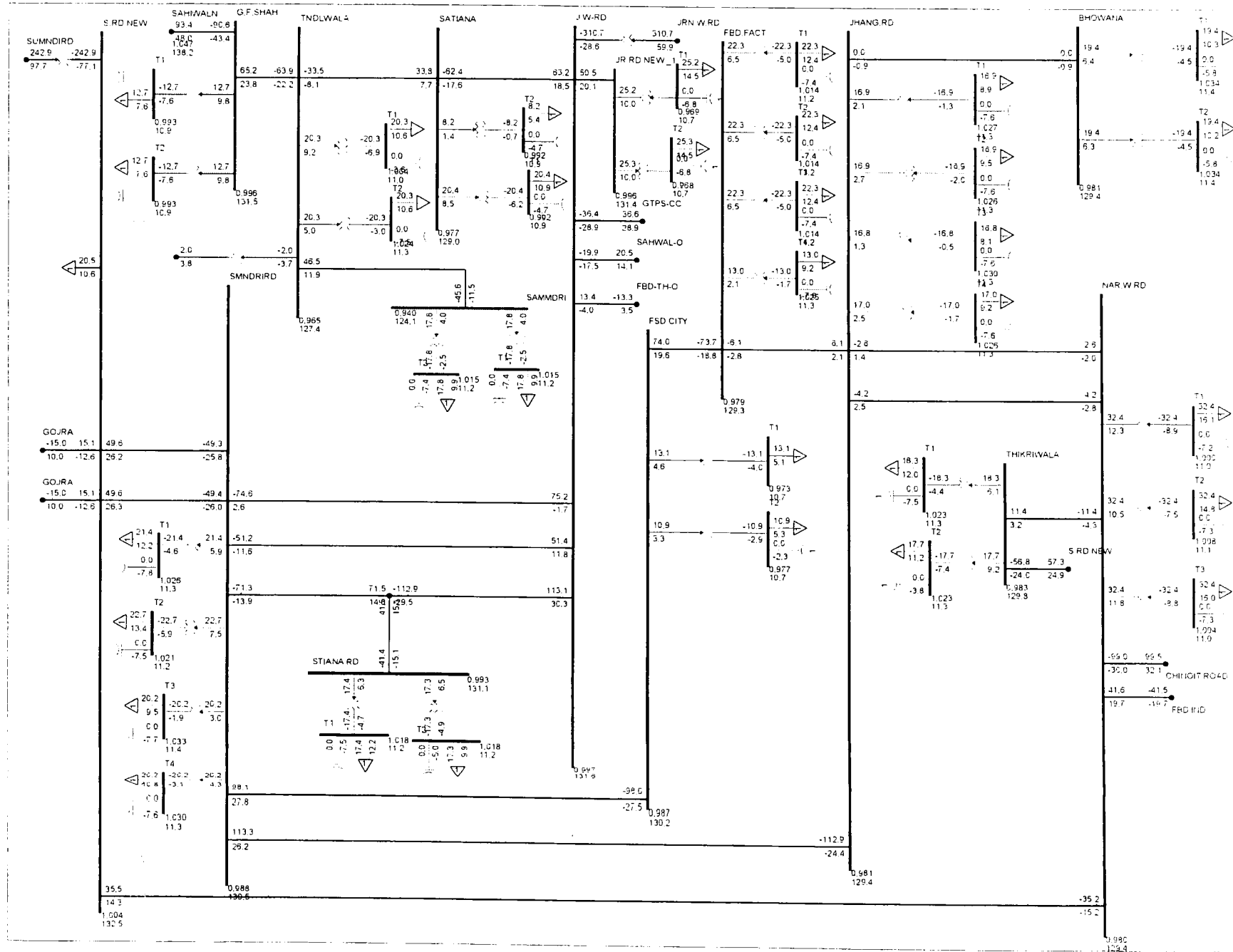
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EXHIBIT-2016- 1.3



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2016: WITHOUT ADDITIONAL REINFORCEMENT

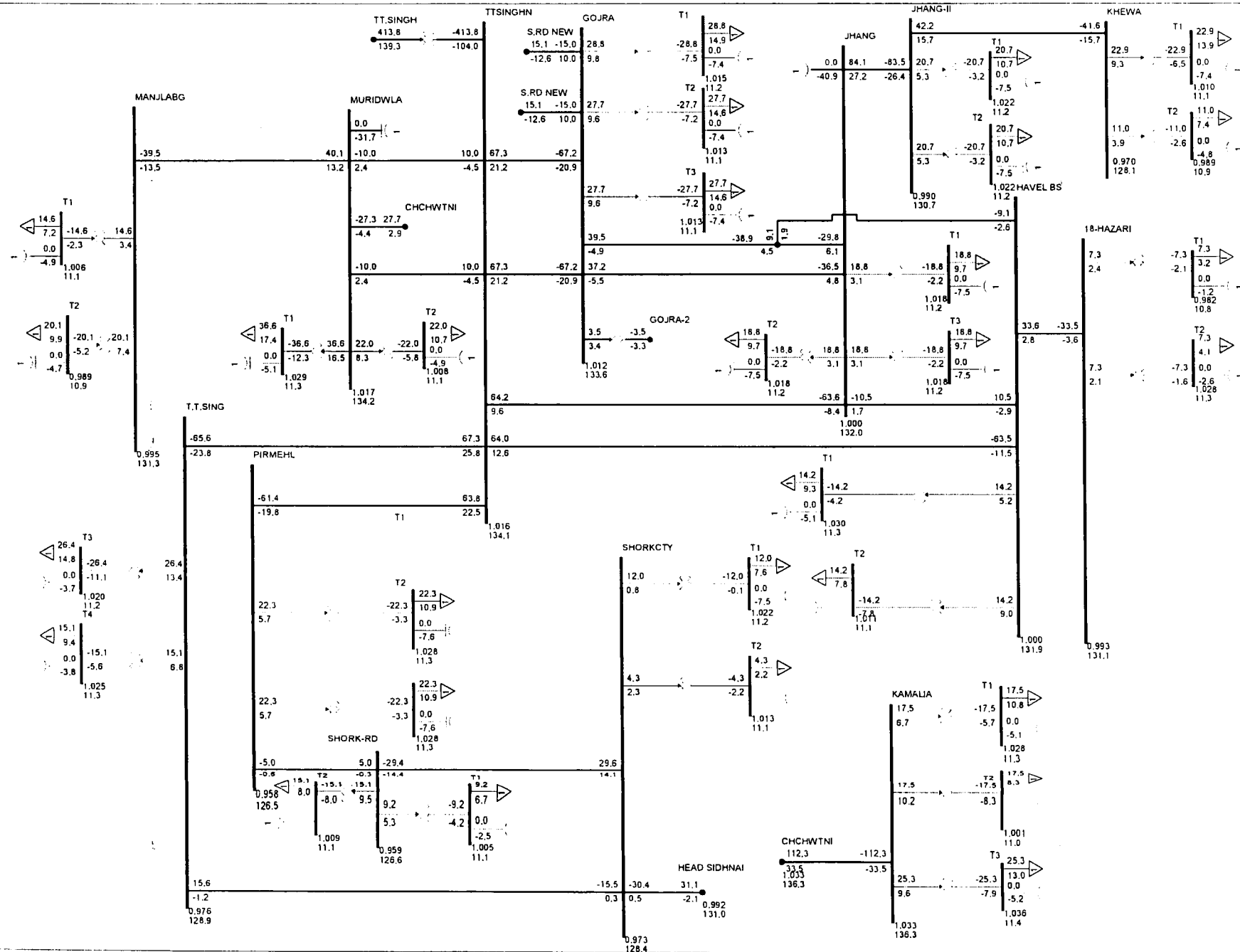
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2016: WITHOUT ADDITIONAL REINFORCEMENT

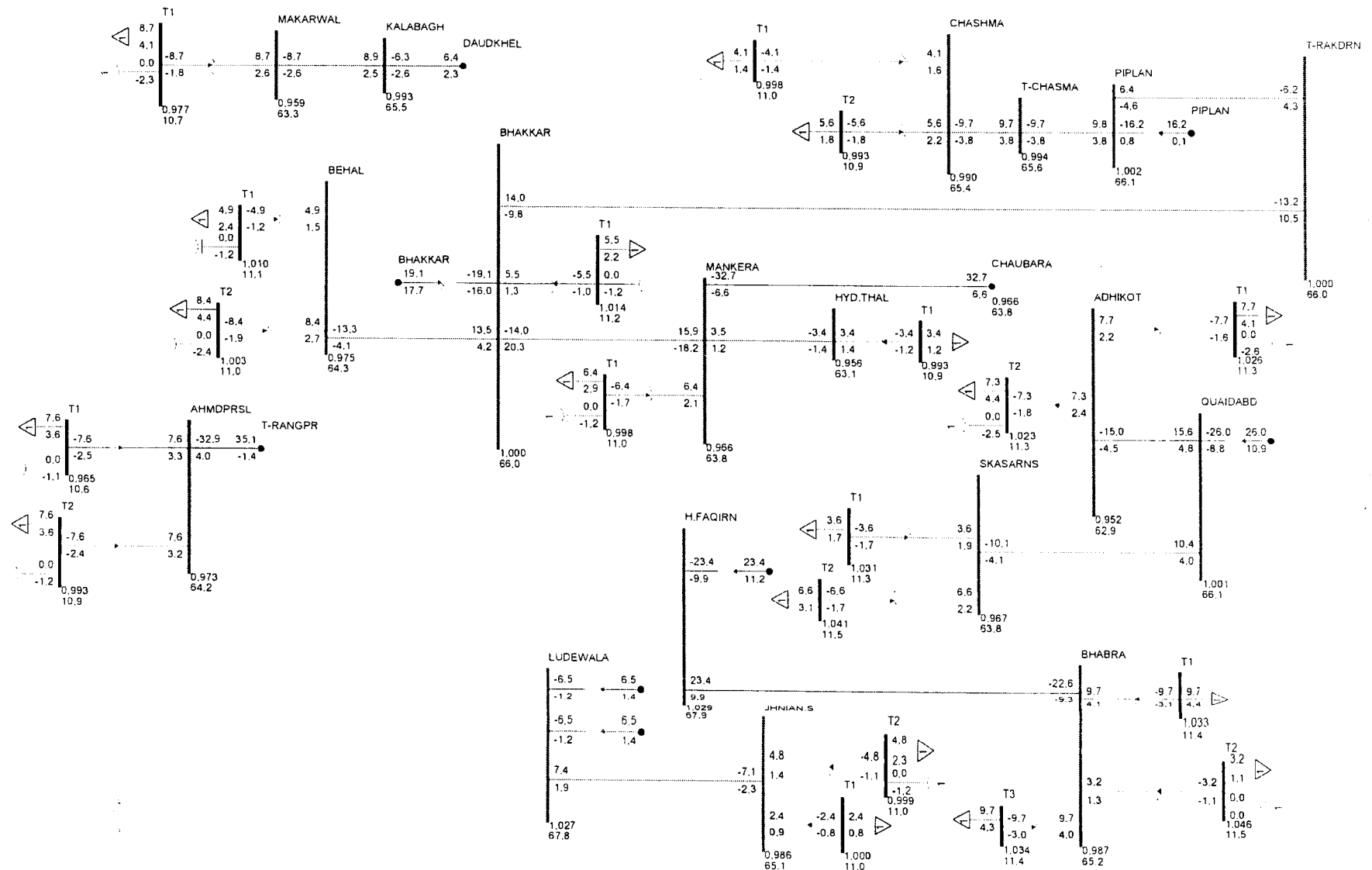
EXHIBIT-2016- 1.1



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD JUNE, 2015

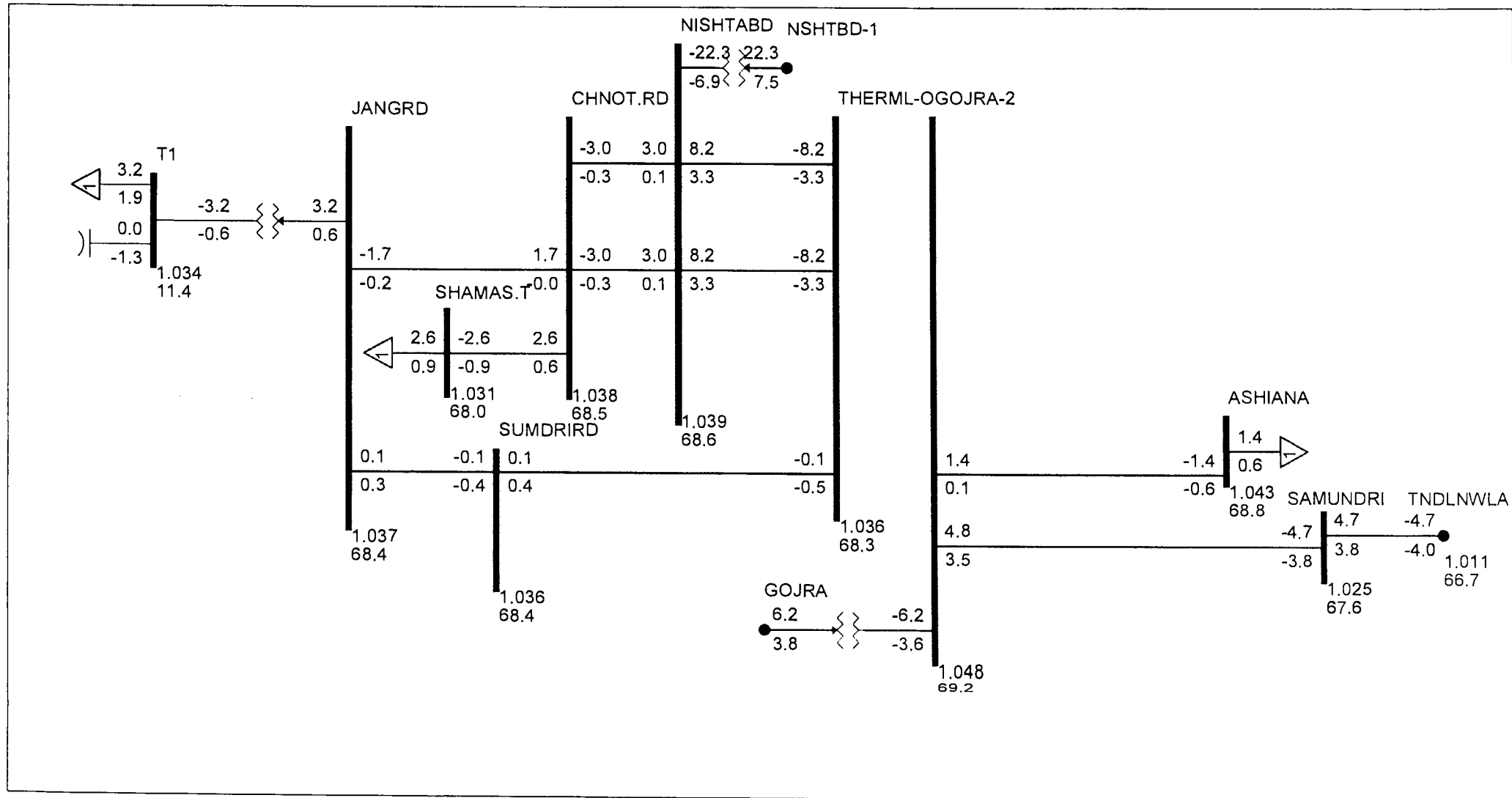
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

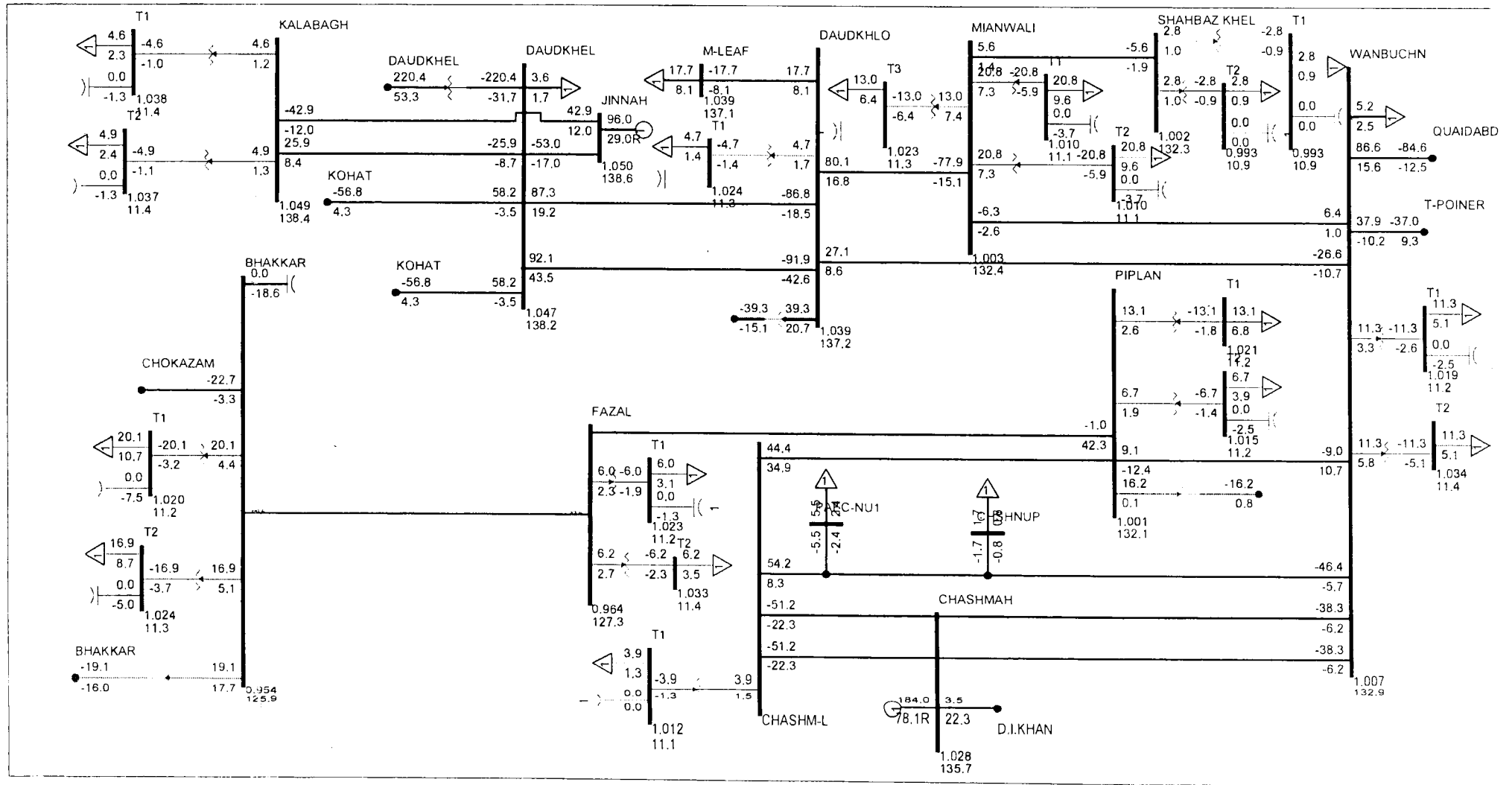
PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.8



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

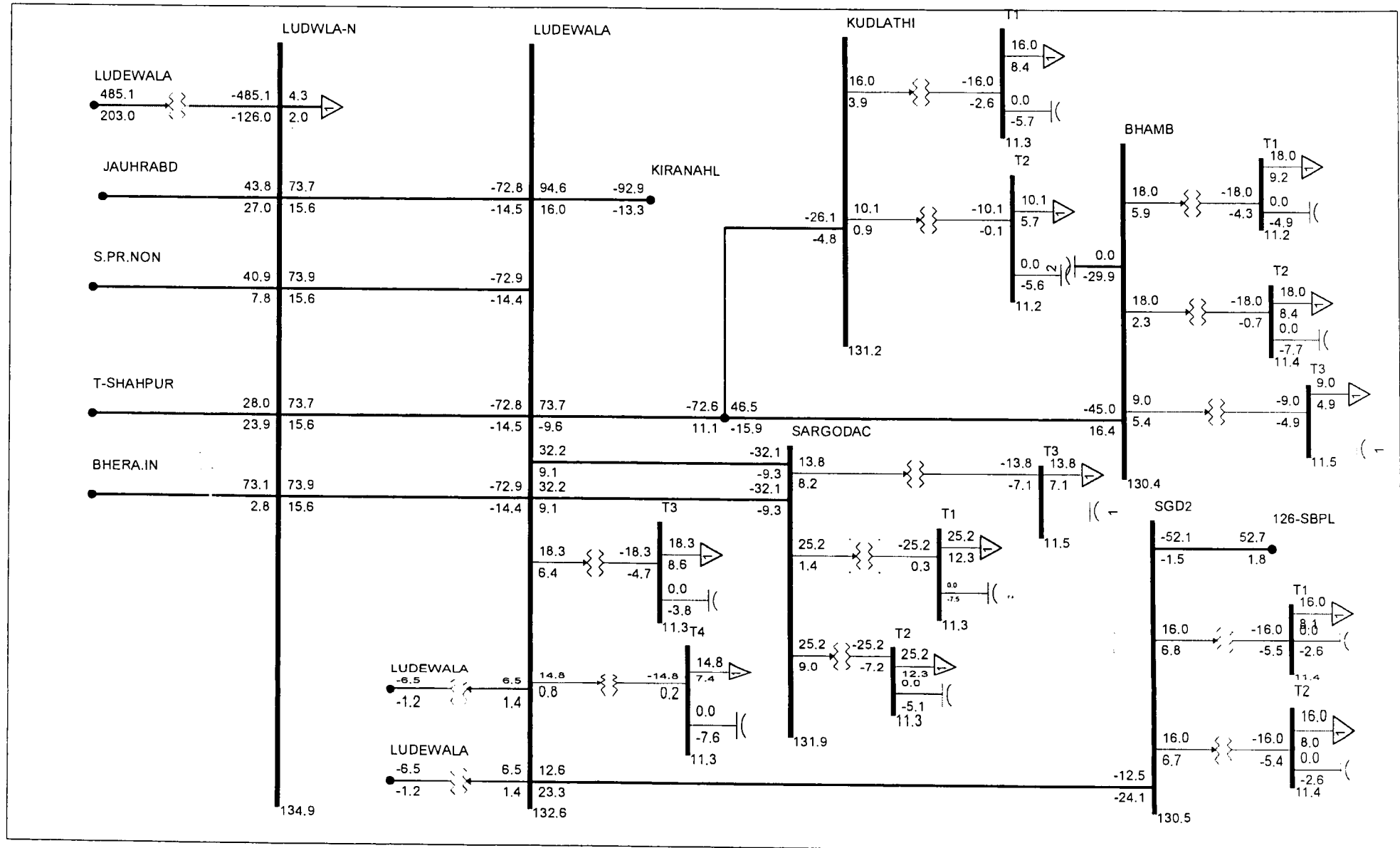
EXHIBIT-2015- 2.7



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.6



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.5

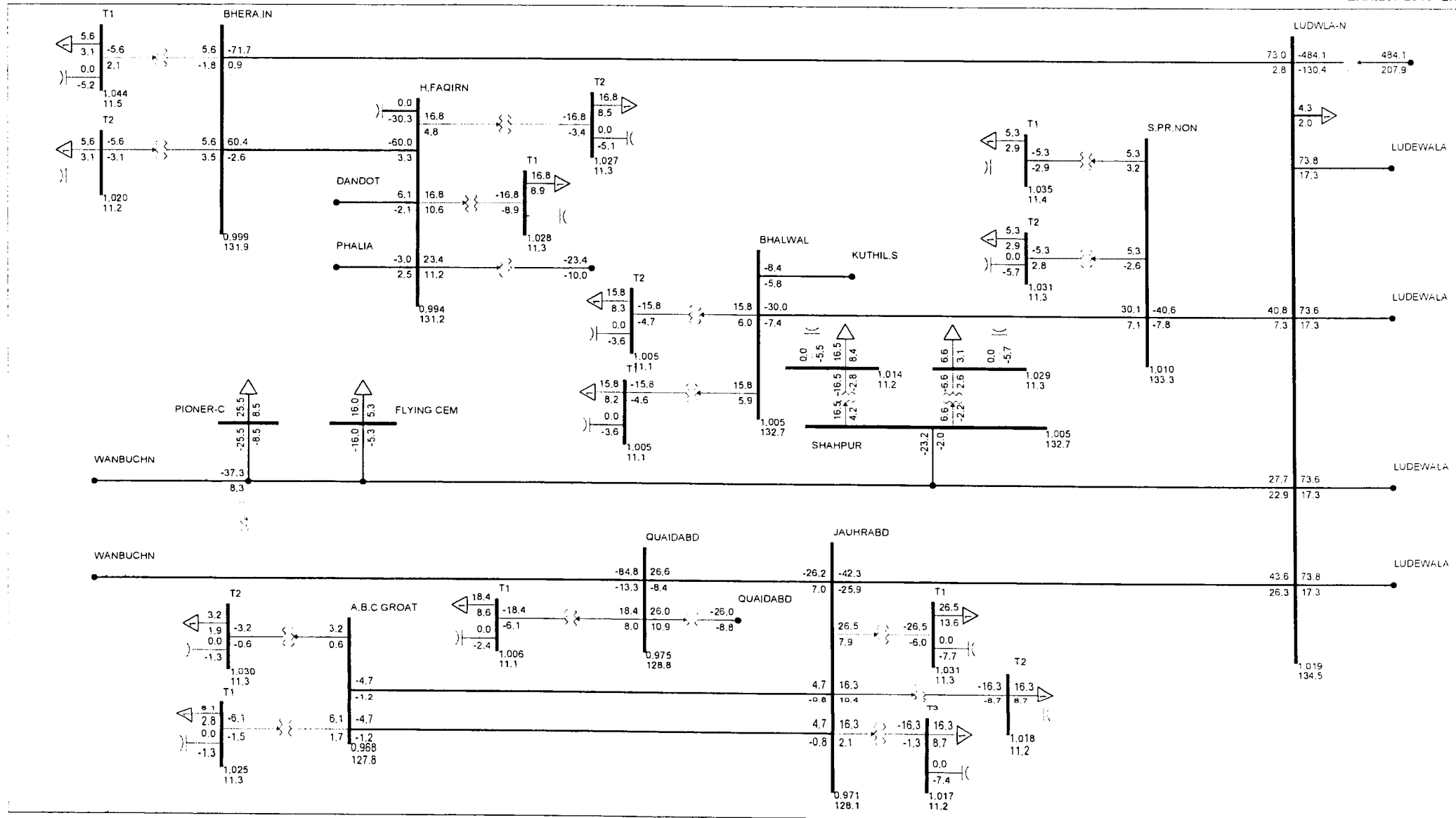


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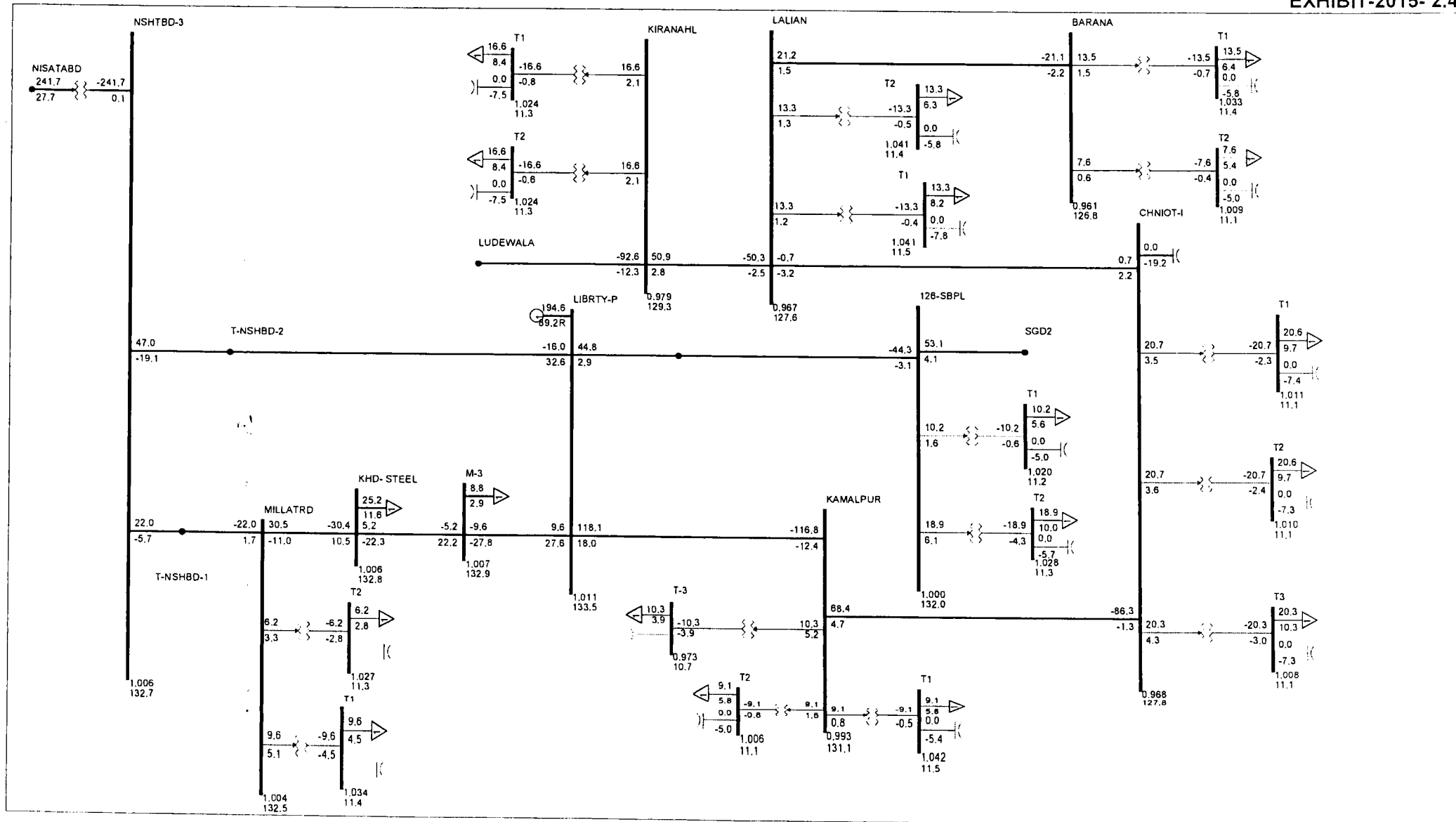


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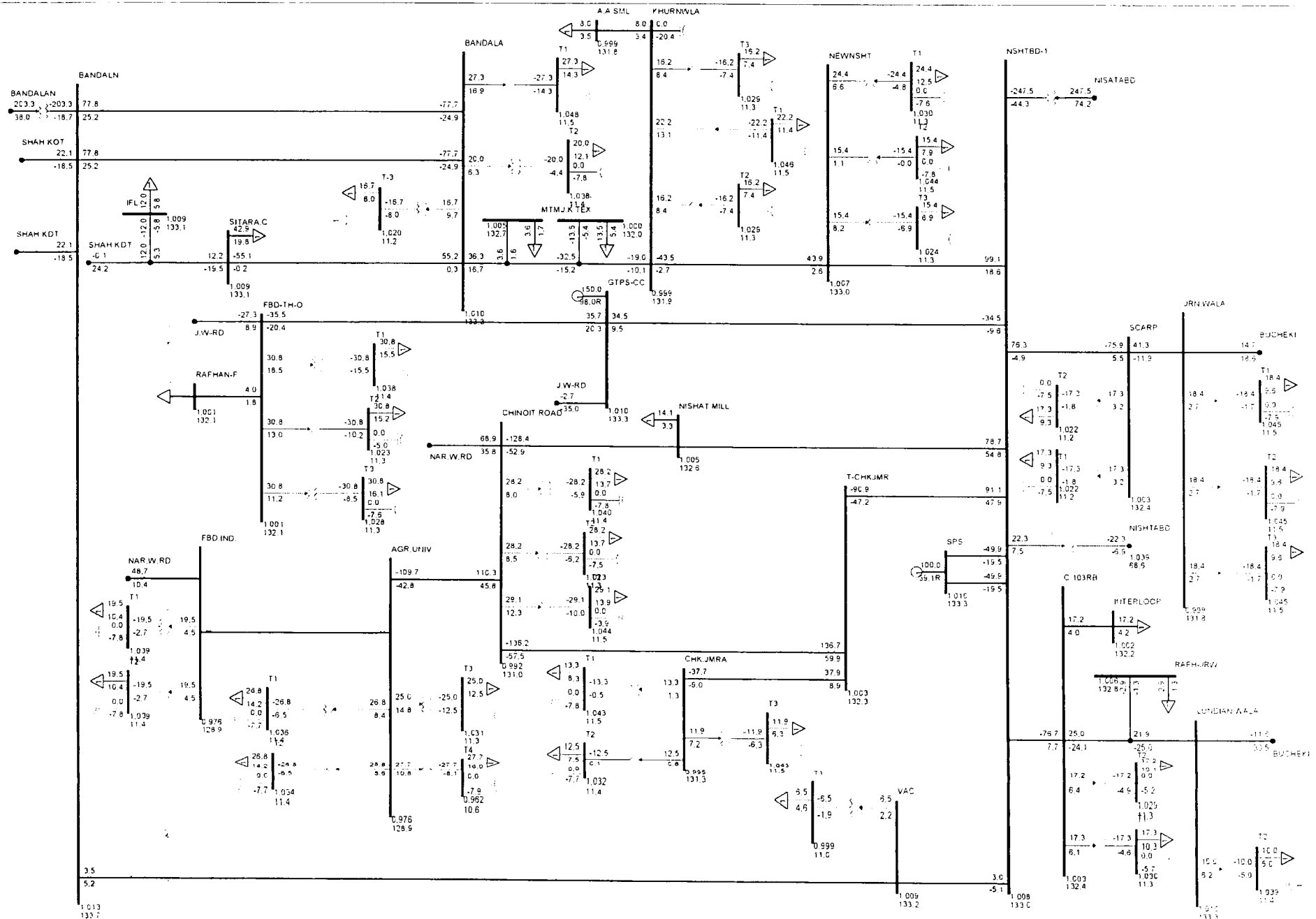
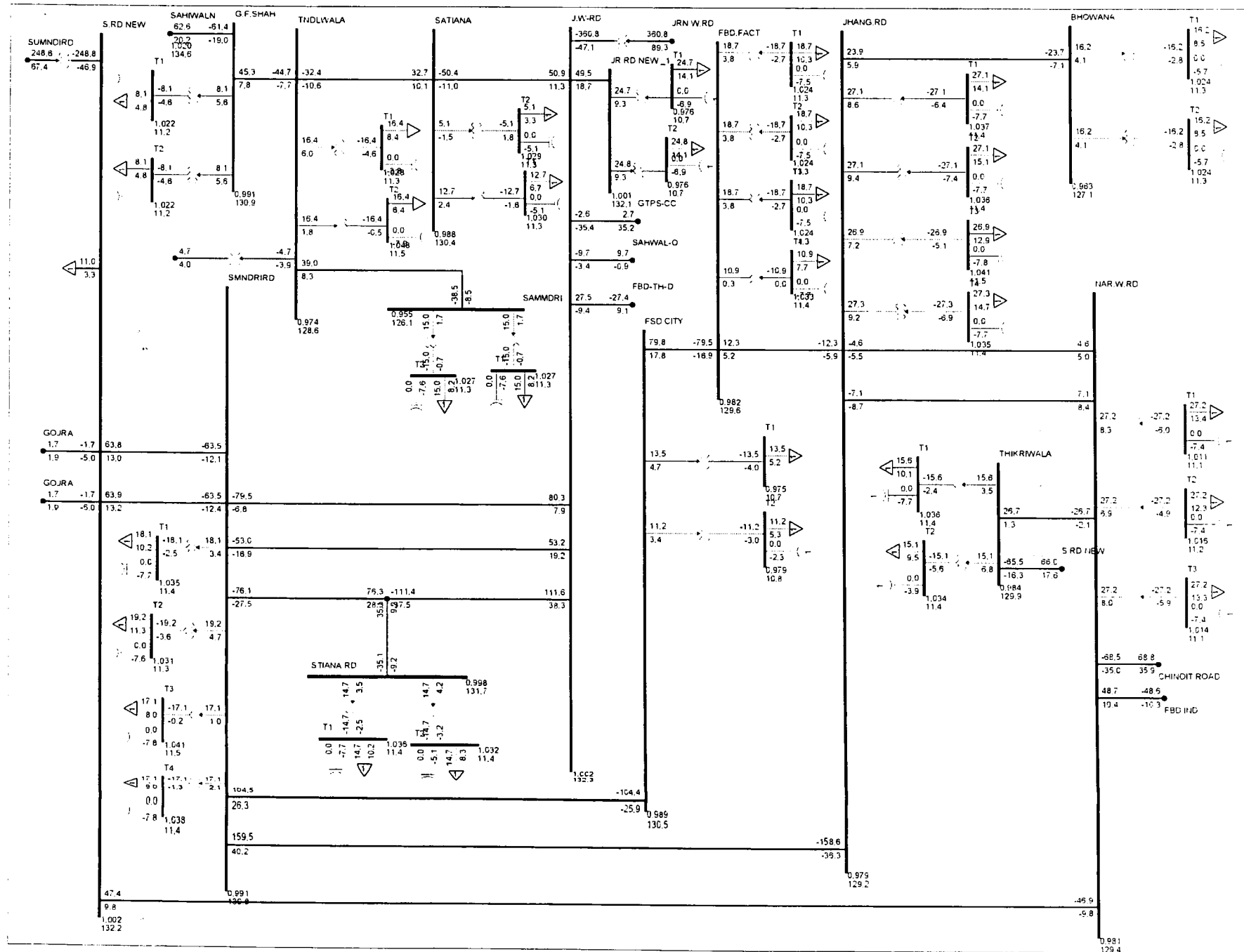


EXHIBIT-2015- 2.2



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.1

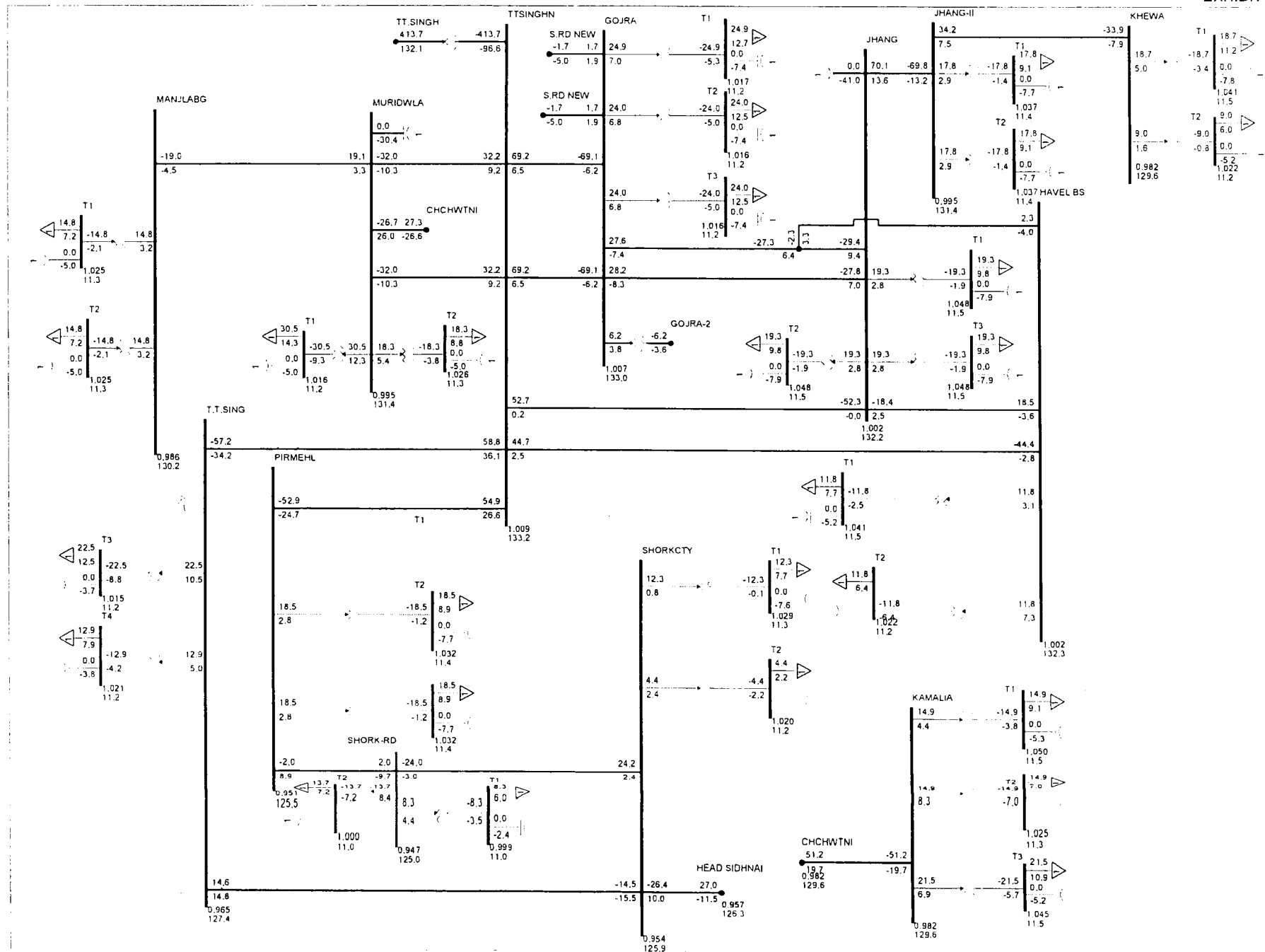
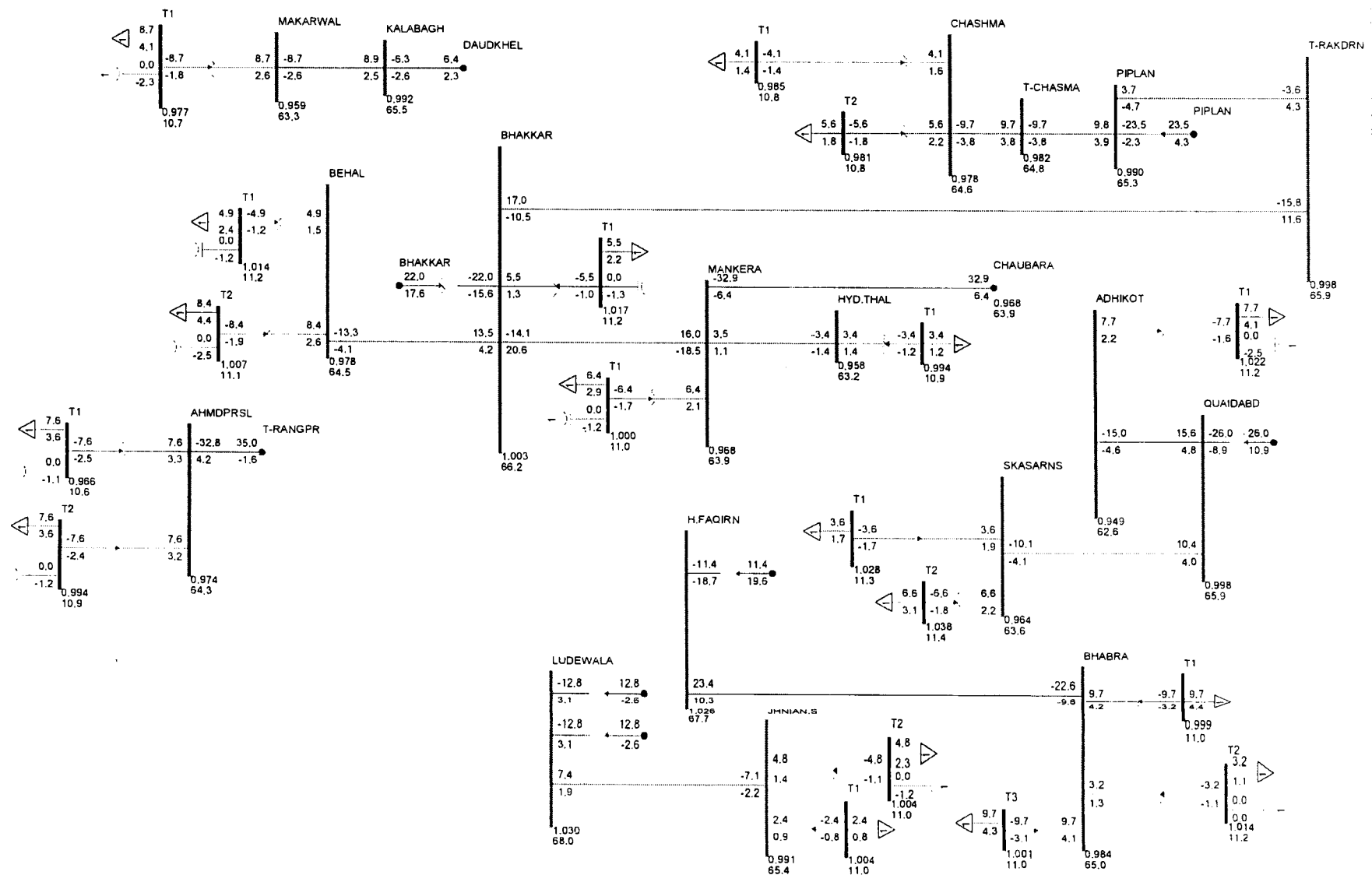


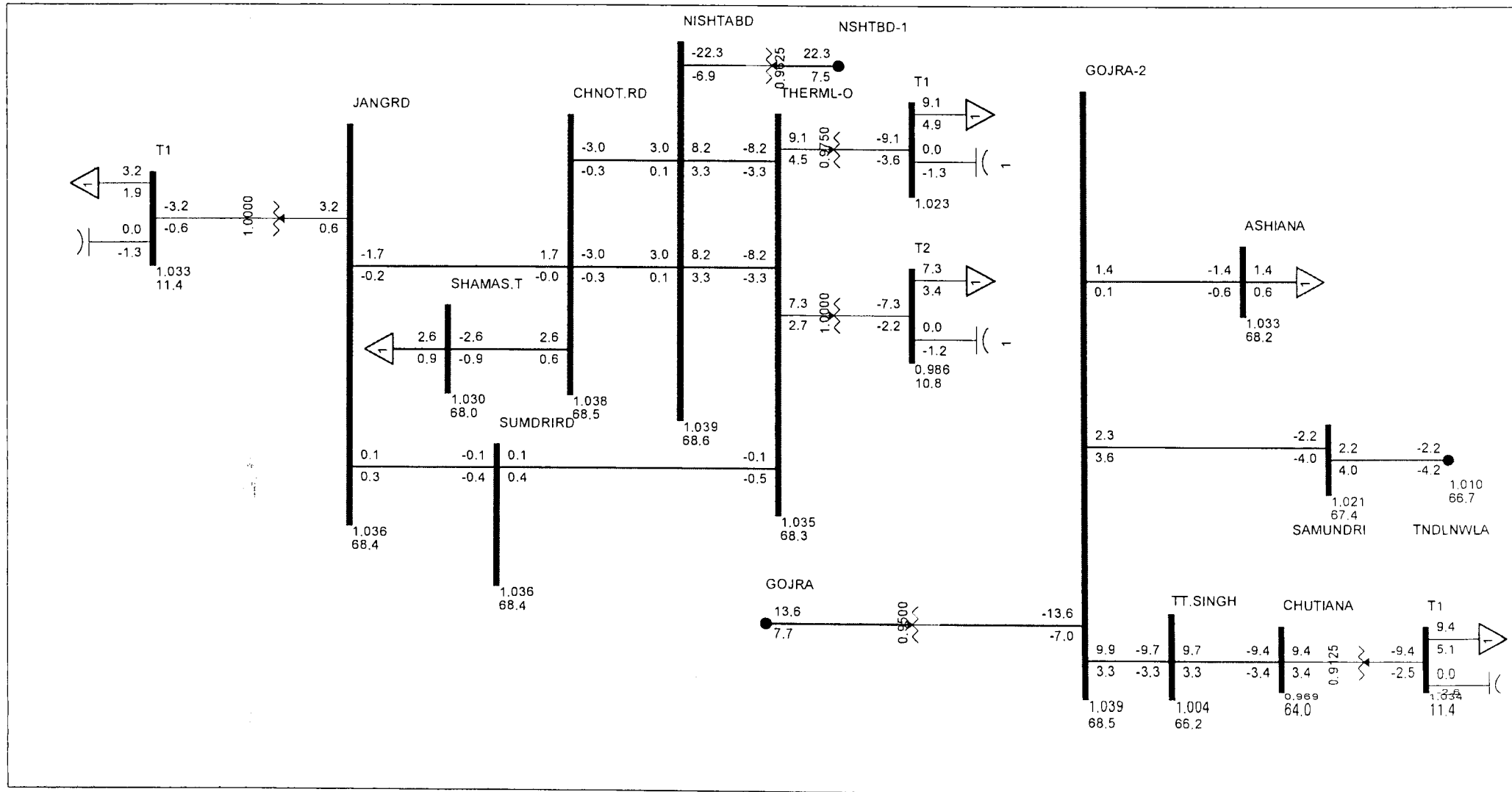
EXHIBIT-2015- 1.9



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

FESCO-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

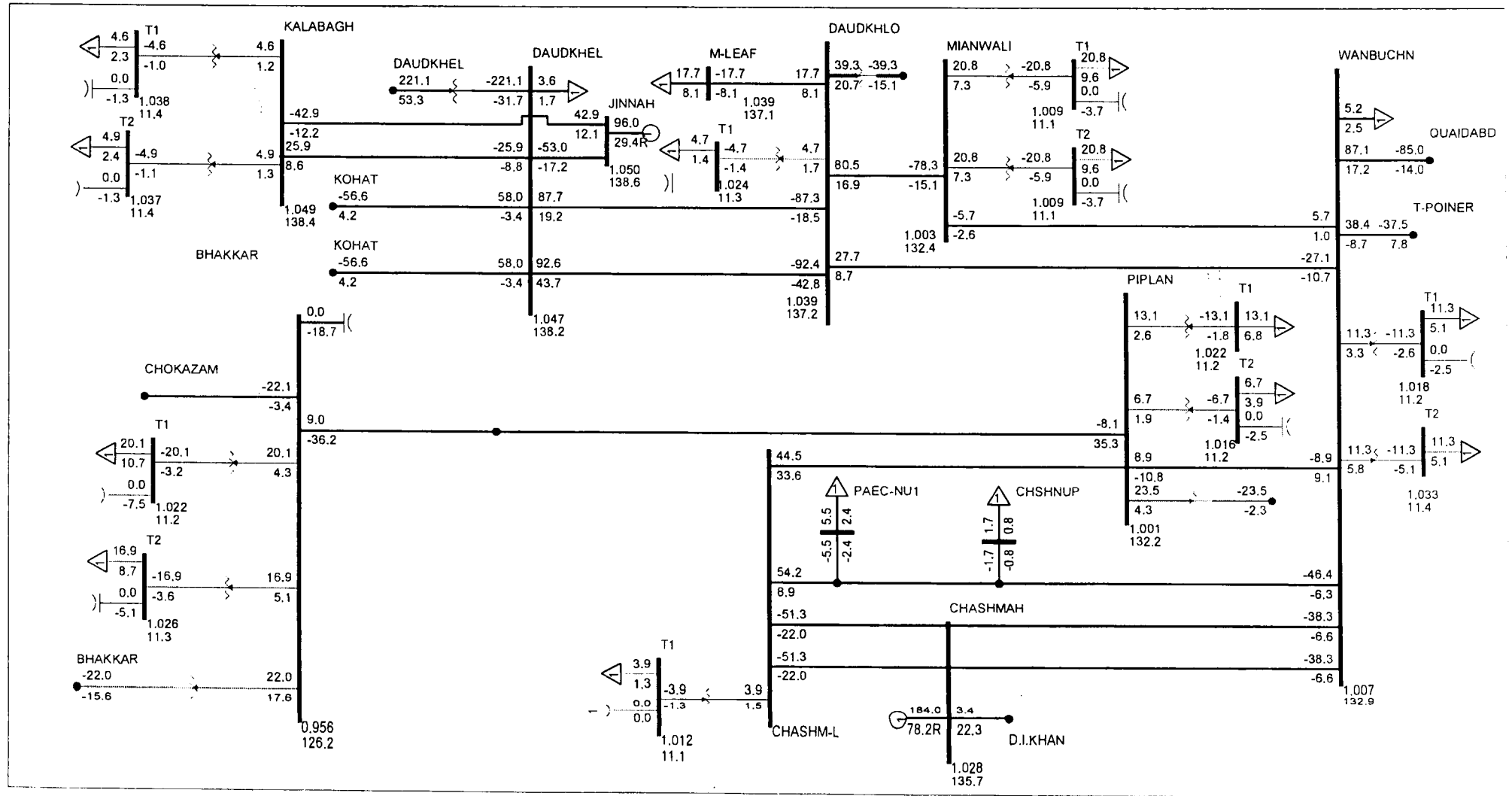
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

PEAK LOAD-YEAR 2015: WITH OUT ADDITIONAL REINFORCEMENT

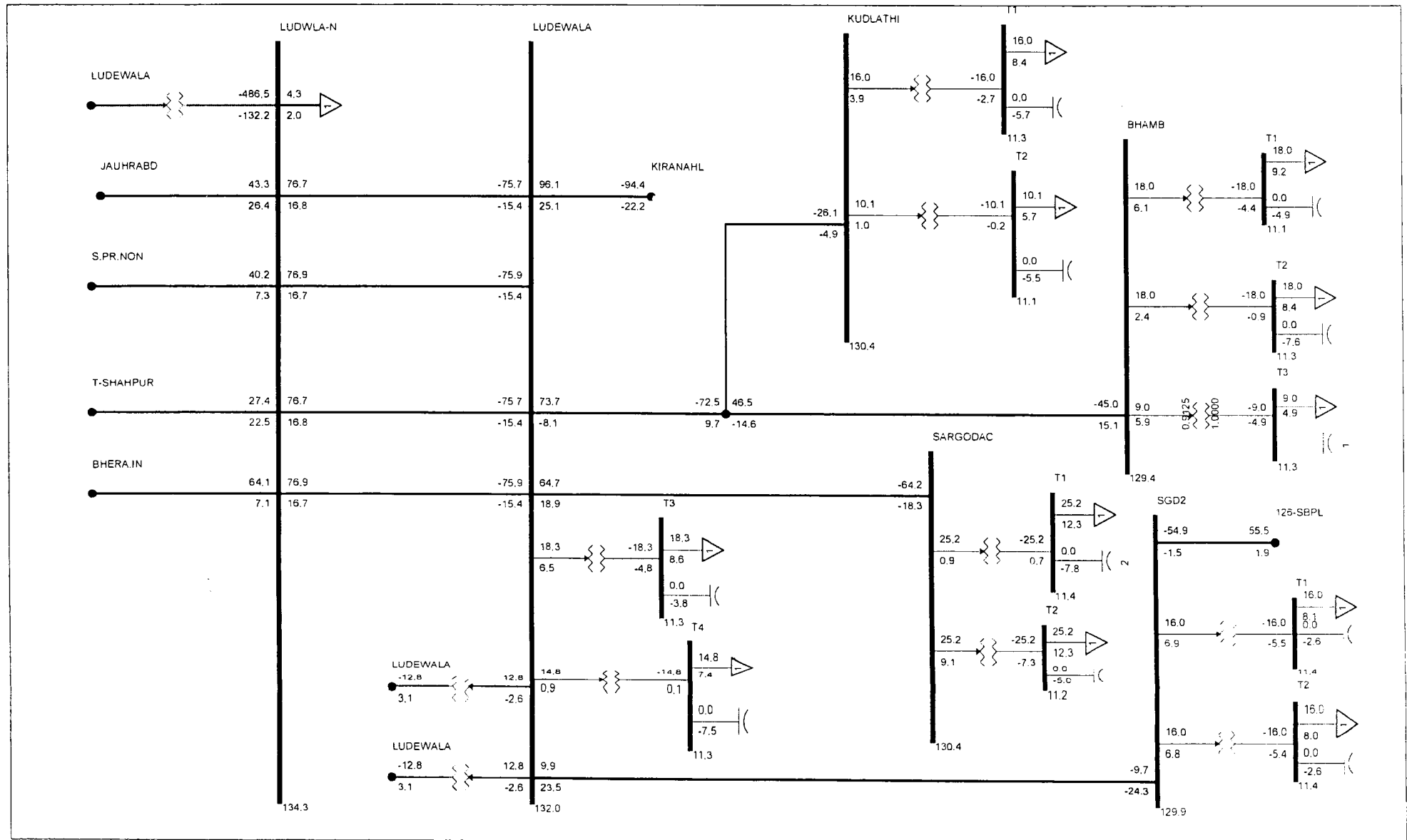
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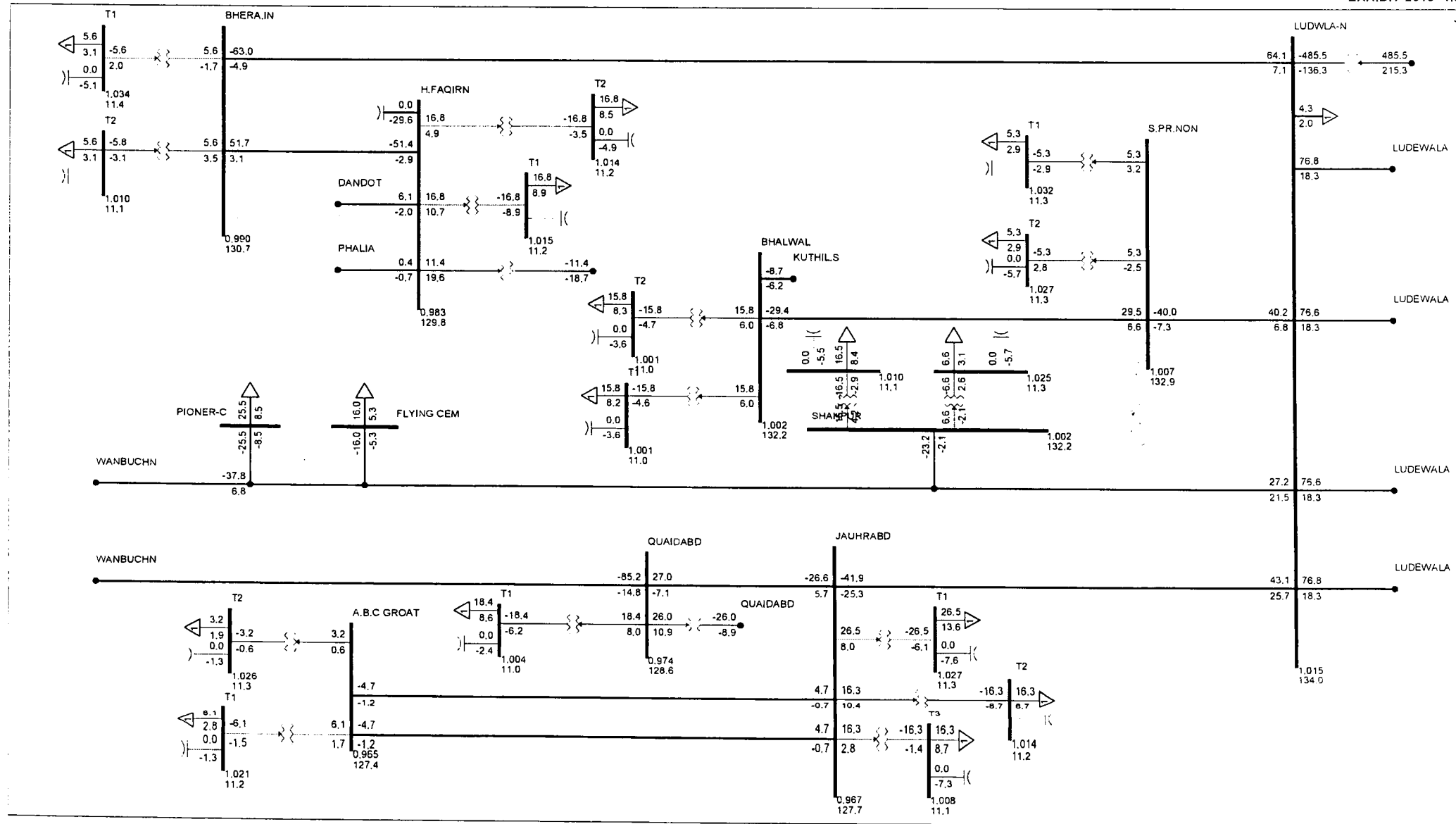
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EXHIBIT-2015- 1.6



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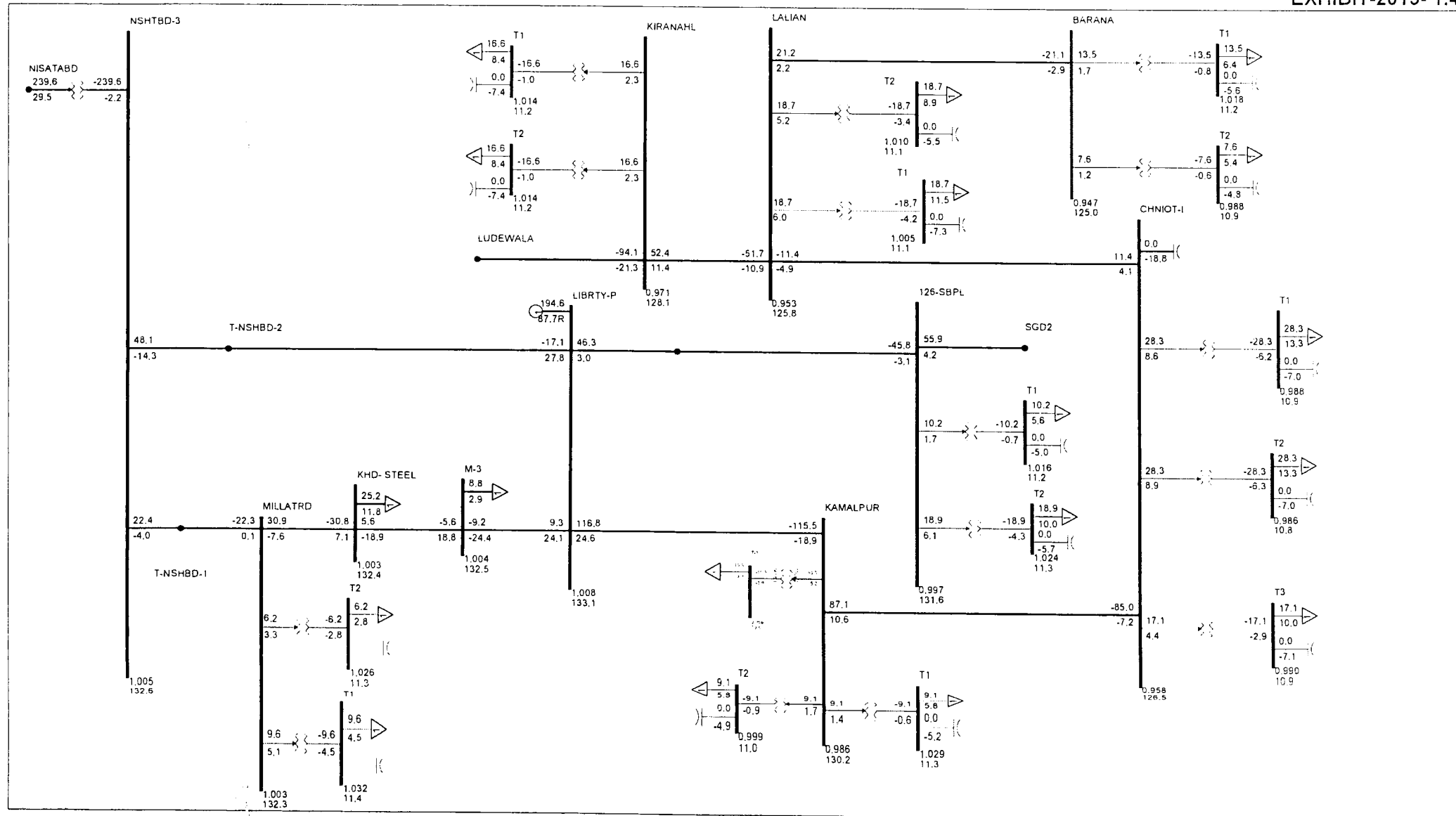
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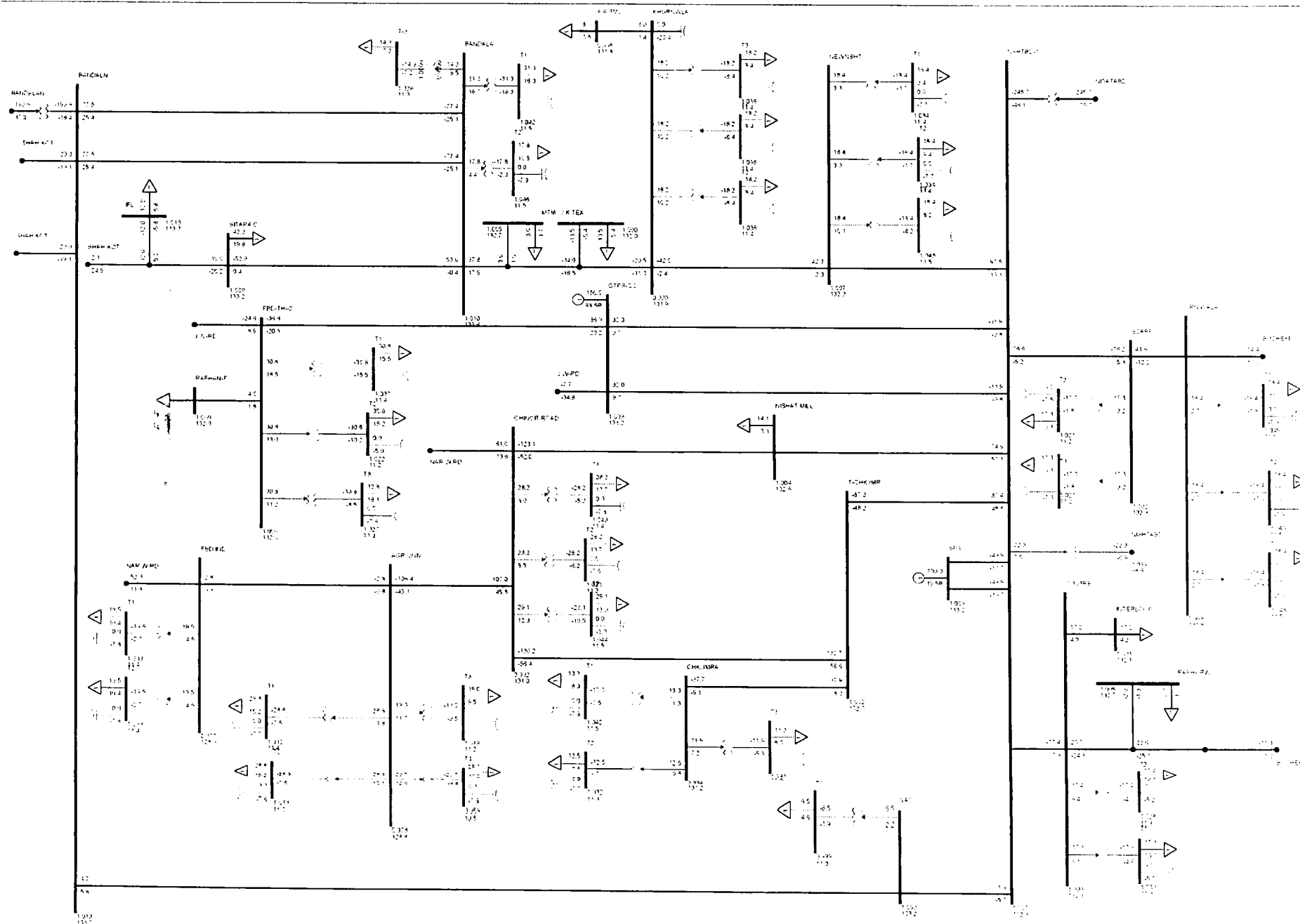
PEAK LOAD-YEAR 2015: WITH OUT ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 1.4



LOAD FLOW STUDY OF FESCO 7th STG PROJECT(OPTIMAL) PEAK LOAD-YEAR 2015: WITH OUT ADDITIONAL REINFORCEMENT

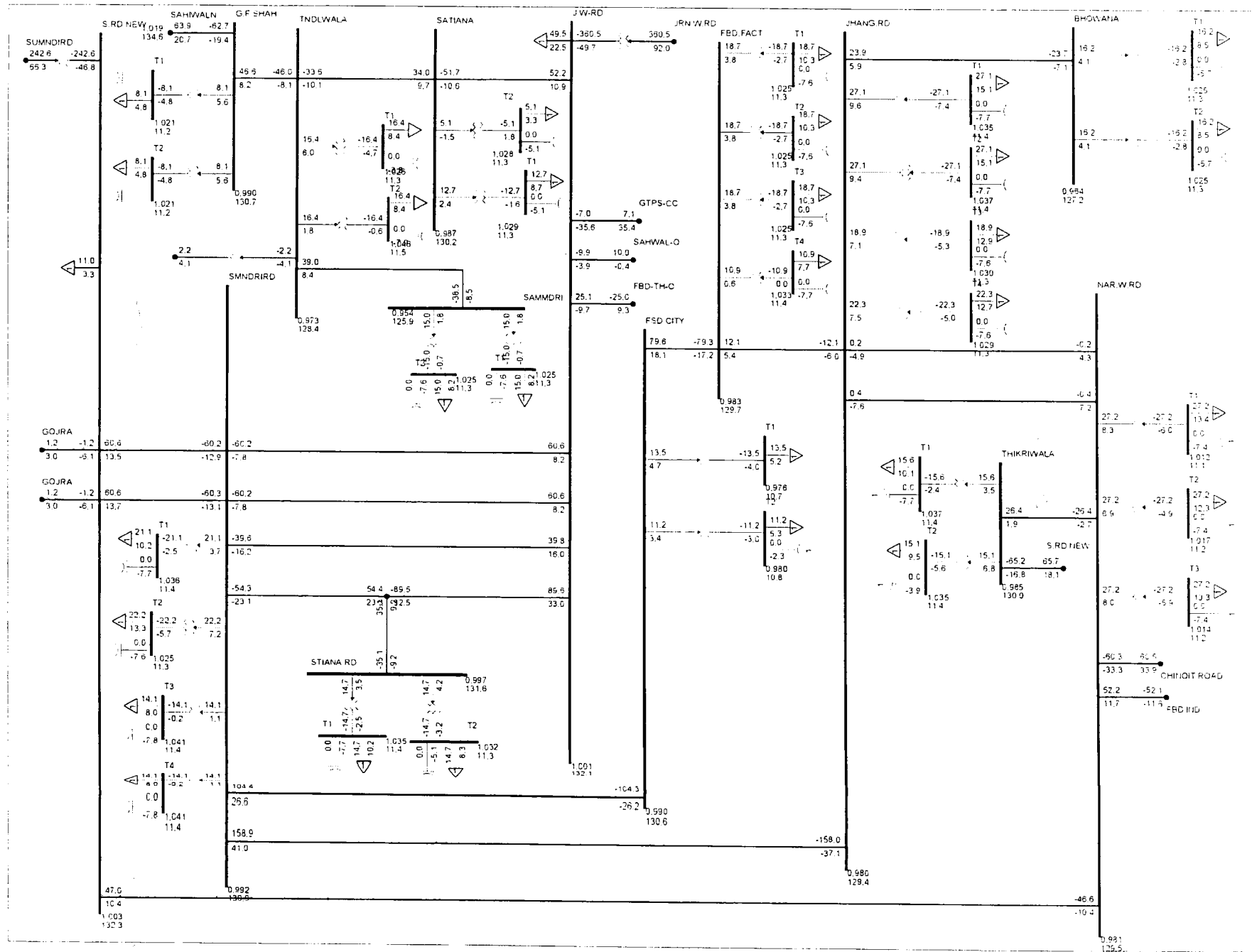
EXHIBIT-2015- 1.3



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL)

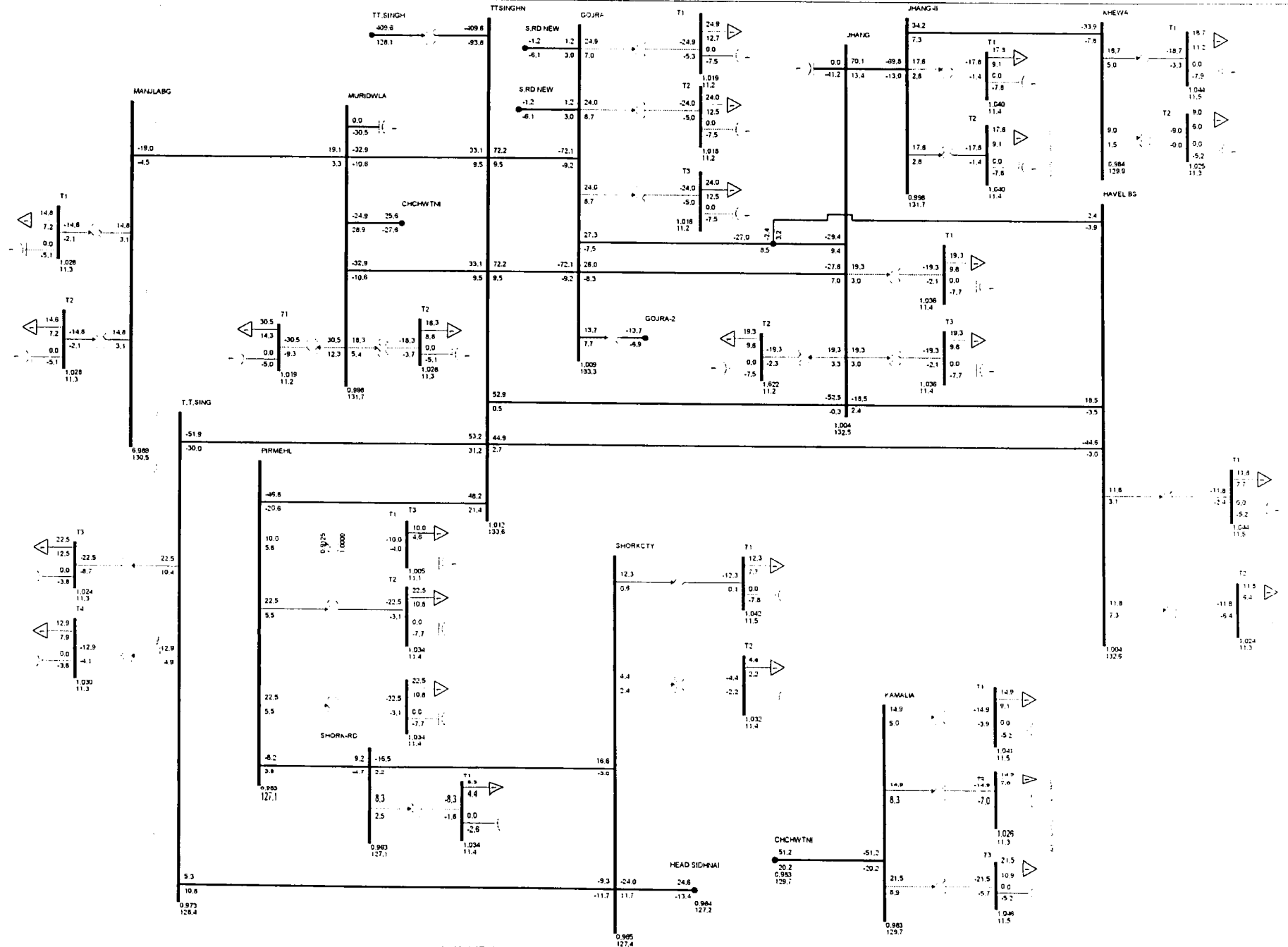
PEAK LOAD-YEAR 2015: WITH OUT ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 1.2



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (OPTIMAL) PEAK LOAD-YEAR 2015: WITH OUT ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 1.1



Annex-D

LOAD FLOW STUDY

BEST CASE &

OPTIMALLY ACHIEVABLE CASE

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
122	2206	TARIQABAD (P)	132	0	0.0	7.0	7.3	7.5	7.8	8.1	8.4	8.8	9.4	10.0
123	2207	BANDALA-II	132	0	0.0	37.1	38.3	40.7	41.0	42.6	44.3	46.8	50.1	53.6
124	2208	208 RB (P)	132	0	0.0	11.7	12.1	24.0	27.2	13.5	14.0	14.7	15.7	16.8
125	2209	AWAGAT (P)	132	0	0.0	0.0	37.1	38.3	39.7	41.2	42.9	45.2	48.3	51.6
126	2210	College Road	132	0	0.0	0.0	25.4	28.7	16.5	17.1	17.8	18.7	19.9	21.2
129	2213	Shaheen Abad	132	0	0.0	0.0	17.0	20.2	18.2	18.9	19.7	20.7	22.1	23.6
130	2214	Bukharian	132	0	0.0	0.0	0.0	26.8	7.9	8.2	8.6	9.1	9.7	10.3
132	2216	Sidhar By P	132	0	0.0	0.0	0.0	20.9	21.6	22.4	23.3	24.6	26.3	28.1
136	2220	Bagh TT Sing	132	0	0.0	0.0	0.0	0.0	15.3	16.0	16.8	17.7	18.9	20.2
		Total Load		3388.1	3631.8	3871.4	4136.9	4410.1	4704.7	5080.2	5489.6	5964.9	6435.2	6938.7

NOTE: IT IS TENTATIVE FORECAST.

FINAL IS EXPECTED UPTO 10-2015 FROM GM PLANNING(P) LAHORE.

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
77	995	VAC	132	3.3	3.5	3.7	3.9	4.2	4.5	4.8	5.1	5.6	6.1	6.7
78	581	WAN BUCHRAN	132	24.0	25.7	27.5	29.4	31.3	33.5	35.9	38.5	41.6	45.2	49.1
79	442	18 HAZARI	66	19.6	14.0	15.0	16.0	17.0	18.2	19.5	21.1	23.0	25.3	27.8
80	226	ADHI KOT	66	18.5	19.9	21.3	22.8	24.5	26.1	28.1	30.3	33.0	36.4	40.1
81	227	AHMAD PUR SIA	66	16.1	17.3	18.5	19.9	21.2	22.7	24.3	26.2	28.4	31.4	34.6
82	231	ASHIANA MILL	66	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
83	525	BEHAL	66	14.2	15.1	16.0	16.9	18.0	19.0	20.2	21.5	23.0	25.0	27.0
84	242	BHABRA	66	24.4	25.7	27.1	29.0	31.0	27.4	29.0	30.9	33.0	35.8	38.9
85	439	BHAKKAR	66	5.7	6.3	6.9	7.6	8.2	8.9	9.7	10.6	11.6	12.7	14.0
86	250	CHASHMA	66	10.9	11.0	11.0	11.1	11.1	11.3	11.3	11.4	11.4	11.5	11.6
87	255	CHUTIANA	66	9.9	10.7	24.4	26.5	26.8	14.4	15.5	16.8	18.3	20.1	22.1
88	275	FAZIL	66	10.6	11.1	11.6	12.3	12.9	13.5	14.3	15.1	16.0	17.4	18.8
89	686	HYDER ABAD TH	66	3.5	3.9	4.3	4.7	5.2	5.7	6.1	6.8	7.5	8.3	9.3
90	422	JAHANIAN SHAH	66	7.7	8.1	8.4	8.8	9.2	9.8	10.3	10.8	11.4	12.3	13.3
91	298	KALA BAGH	66	11.3	12.3	13.4	14.5	15.8	17.1	18.5	20.2	22.0	24.3	26.7
92	352	MAKAR WAL	66	9.0	9.8	10.8	11.6	12.6	13.6	14.8	16.1	17.5	19.2	21.0
93	322	MANKERA	66	6.8	7.3	7.8	8.3	8.8	7.6	8.2	8.8	9.6	10.5	11.6
94	441	MEHMOOD KOT	66	11.1	12.1	13.0	14.2	15.3	16.6	17.9	19.5	21.4	23.7	26.2
95	334	NIA LAHORE	66	25.8	27.6	29.5	31.5	33.7	35.9	38.5	41.5	44.9	49.0	53.6
96	423	NUSHERA SAKES	66	10.6	11.5	12.4	13.4	14.4	15.5	16.7	18.1	19.8	21.8	24.0
97	339	OLD THERMAL	66	20.4	18.7	19.7	20.6	21.6	22.6	23.9	25.1	26.6	28.7	30.9
98	425	PATHAN KOT	66	33.5	36.5	39.6	41.8	42.3	45.7	49.4	53.8	58.9	65.1	72.0
99	333	RAKH DAGRAN	66	20.2	21.3	22.3	23.4	15.6	16.5	14.3	15.3	16.4	17.7	19.2
100	371	SHAMAS	66	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
101	373	SHOR KOT CITY	66	9.1	9.6	10.2	10.8	11.4	12.1	12.9	13.8	14.9	16.2	17.7
102	395	TRAG	66	19.4	20.5	21.6	22.9	24.1	25.5	26.9	28.7	30.6	33.2	36.1
104	1963	KOT SHAKIR	132	0	7.0	7.3	7.7	8.1	8.5	9.0	9.5	10.1	10.9	11.8
105	1966	USMAN-E-GHANI	132	0	0.0	37.6	39.6	41.7	43.8	46.3	48.9	52.1	56.2	60.6
106	1969	FIEDMC M3 IC	132	2.3	23.8	47.5	95.0	142.5	190.0	285.0	380.0	475.0	475.0	475.0
107	1982	LUNDIANWALA	132	9.5	12.5	17.6	18.9	20.4	21.9	23.6	25.4	27.4	29.8	32.4
109	1988	CHENAB NAGAR	132	0	24.0	25.3	26.6	28.1	29.5	31.3	33.0	35.2	38.0	41.0
110	1989	MAMUKANIAN	132	0	0.0	23.9	25.3	26.9	28.5	30.4	32.3	34.5	37.0	39.7
112	1991	AMIN PUR ROAD	132	0	0.0	0.0	0.0	24.7	26.3	28.2	30.1	32.3	35.0	37.9
113	1992	SPS COLONY	132	0	27.0	28.6	30.8	33.0	35.8	31.5	33.1	35.2	37.9	40.8
114	1993	BHAKKAR-II D	132	0	0.0	0.0	0.0	25.4	8.8	9.3	9.8	10.4	11.2	12.1
115	1997	SARGODHA-III	132	0	0.0	0.0	0.0	24.3	25.5	27.0	28.5	30.4	32.9	35.6
116	1998	FDA CITY	132	0	0.0	0.0	3.4	6.8	10.3	13.7	17.1	20.5	23.9	27.9
118	2202	JARANWALA RD	132	0	48.9	51.8	54.8	57.9	61.2	64.8	68.9	73.9	80.3	80.3
119	2203	GULISTAN COL	132	0	0.0	33.0	37.0	40.8	6.9	7.2	7.5	7.9	8.4	8.9
120	2204	DUKOT (P)	132	0	0.0	20.5	21.8	23.1	24.4	26.0	27.8	30.0	32.7	32.7
121	2205	ADHA	132	0	0.0	18.3	19.0	19.8	20.6	21.5	22.4	23.6	25.2	26.9

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
36	93	KAMALIA	132	54.8	58.2	61.8	65.5	69.5	73.6	78.2	83.2	89.1	96.2	103.8
37	1070	KHADAM STEEL	132	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
38	108	KHEWA	132	34.6	38.5	42.7	47.1	44.5	47.6	62.4	68.9	76.0	84.0	92.9
39	673	KHURRIANWALA	132	59.4	62.0	51.6	54.0	56.4	59.8	62.0	65.3	69.8	75.5	81.6
40	908	KIRANA	132	45.3	47.4	49.7	49.0	51.4	53.8	56.7	60.0	64.0	69.1	74.6
41	115	KUD LATHI	132	28.3	29.6	30.9	32.3	33.7	35.3	37.0	38.9	41.1	44.3	47.7
42	976	LALIAN	132	43.2	33.8	36.1	38.5	40.9	43.6	46.6	49.8	53.6	58.2	63.3
43	649	M.T.M. MILLS	132	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
44	421	MANJALA BAGH	132	35.3	37.5	28.0	29.7	31.5	33.3	35.3	37.5	40.1	43.1	46.4
45	793	MARI INDUS	132	2.7	2.9	3.2	3.4	3.5	3.8	4.1	4.5	4.8	5.3	5.8
46	134	MIANWALI	132	69.5	75.1	65.3	70.0	74.0	77.8	108.4	117.1	127.0	139.0	152.2
47	1077	MILLAT ROAD	132	16.3	17.9	19.7	21.5	23.5	25.5	27.8	30.3	33.1	36.8	40.9
48	331	MURID WALA	132	52.3	55.4	58.6	48.9	52.1	55.3	37.6	40.3	43.5	47.3	51.5
49	143	NARWALA ROAD	132	87.5	92.7	82.2	87.0	68.9	72.5	76.3	80.7	86.3	93.2	100.7
50	853	NISHATABAD	132	59.9	44.0	47.3	50.5	53.4	56.2	77.2	80.1	83.2	86.5	89.6
51	597	NOOR PUR SETH	132	4.2	0.0	0.0	0.0	0.0	13.1	13.6	14.1	14.9	15.9	17.0
52	431	OLD THERMAL	132	104.8	85.2	89.7	93.7	86.7	121.4	113.4	120.4	129.0	139.8	151.5
53	779	PAEC CHASHMA	132	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
54	983	PAEC-C-II	132	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
55	703	PIONEER CEMEN	132	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
56	160	PIPLAN	132	34.1	22.5	25.2	28.4	30.8	32.2	51.0	54.8	59.5	65.4	71.9
57	948	PIR MAHAL	132	57.2	62.4	68.1	73.8	77.5	66.3	72.5	79.7	87.7	97.3	107.9
58	598	QUAID ABAD	132	25.1	26.6	28.1	30.0	31.8	33.7	35.8	38.3	41.3	44.8	48.7
59	701	RAFHAN	132	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
60	890	REFHAN MAIZE	132	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
61	523	S.PUR NOON	132	10.8	12.0	13.4	14.8	16.3	14.2	15.8	17.7	19.8	22.6	25.7
62	984	SAMUNDRI	132	40.7	43.7	46.8	50.1	53.6	57.2	61.5	66.6	72.5	80.0	88.2
63	205	SAMUNDRI ROAD	132	97.7	81.2	86.5	73.2	78.0	115.7	121.8	128.7	137.4	148.6	160.8
64	363	SARGODHA	132	69.6	72.9	76.3	65.1	68.3	71.8	75.8	80.1	85.6	92.6	100.1
65	524	SAR-LUDEWALA	132	35.8	37.6	39.6	41.6	43.7	45.2	16.4	17.4	18.6	20.1	21.8
66	947	SATIANA	132	26.3	27.8	29.3	31.0	32.6	34.4	36.4	38.6	41.5	45.1	49.1
67	1012	SATIANA ROAD	132	37.5	39.9	42.5	45.3	48.0	51.1	54.6	58.7	63.7	70.0	76.9
68	867	SCARP COLONY	132	37.5	39.3	41.2	21.2	22.5	24.0	25.6	27.4	29.8	32.6	35.7
69	957	SHAH PUR	132	24.6	26.3	28.2	30.2	32.2	25.6	27.7	30.1	33.0	36.6	40.7
70	192	SHAHKOT	132	25.5	26.4	27.3	28.2	29.1	30.1	31.2	32.5	34.4	36.7	39.2
71	648	SITARA CHEMIC	132	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
72	1013	SITARA ENERGY	132	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	918	T.T.SINGH	132	45.7	48.4	51.3	54.2	57.3	60.7	64.5	68.7	73.8	80.3	87.3
74	601	TALIB WALA	132	34.7	36.4	38.3	40.2	42.4	44.5	46.9	49.6	53.0	57.4	62.1
75	459	TANDLIAN WALA	132	43.4	48.6	54.3	60.1	63.0	73.1	80.4	89.0	98.7	110.0	122.6
76	953	THEKRIWALA	132	41.6	44.0	46.6	49.3	52.5	40.0	42.7	45.9	49.9	54.7	60.0

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
1	1018	103/RB CHUDRI WALA	132	37.7	39.2	40.7	42.4	45.0	48.3	47.8	50.0	53.3	57.4	61.8
2	1010	126 S.B SARGODHA	132	31.7	33.0	34.4	35.7	37.1	38.7	40.4	42.4	45.1	48.5	52.1
3	420	220KV JARANWA ROAD	132	46.8	49.5	52.4	55.4	58.5	61.8	65.5	69.6	74.7	81.0	87.8
4	873	220KV LUDEWALA	132	6.5	6.9	7.2	7.6	8.0	8.4	8.9	9.4	10.1	10.9	11.8
5	790	220KV SUMMANDRI ROAD	132	19.7	20.9	22.2	23.6	25.0	26.4	28.1	30.1	32.5	35.4	38.6
6	915	A.A. SPINNING	132	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
7	704	A.E.C. CHASHM	132	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
8	475	AGRI UNIVERSITY	132	116.8	120.8	98.6	104.6	108.9	113.8	56.4	61.3	66.9	73.6	81.1
9	862	BANDALA	132	66.9	70.0	39.9	42.1	46.7	50.6	49.1	52.2	56.2	61.2	66.5
10	526	BARANA	132	22.8	24.0	25.2	26.4	27.8	29.2	30.8	32.6	34.9	37.7	40.7
11	759	BHAKKAR	132	52.9	56.7	60.8	65.0	52.4	55.6	71.1	76.7	83.3	91.5	100.6
12	243	BHALWAL	132	41.4	43.5	45.7	48.5	51.2	54.5	43.3	46.0	49.5	53.7	58.3
13	16	BHAMB	132	46.2	51.1	55.9	61.1	66.9	72.6	79.0	86.9	95.8	106.4	118.1
14	244	BHAWANA	132	41.4	44.9	48.5	52.4	44.0	47.0	57.8	62.8	68.5	75.3	82.8
15	1065	BHERA INDUSTR	132	11.6	12.8	14.0	15.3	16.6	18.2	19.7	21.4	23.3	25.7	28.3
16	595	CHAK JHUMRA	132	40.7	42.8	44.8	47.1	49.3	51.8	54.6	57.8	61.9	67.1	72.7
17	641	CHINIOT	132	79.9	70.0	75.7	79.9	70.0	73.7	66.7	76.0	82.4	90.1	98.5
18	28	CHINIOT ROAD	132	92.7	97.0	101.6	70.0	111.5	117.0	123.1		139.5	151.1	163.7
19	458	DAUD KHEL	132	14.2	15.2	16.3	17.4	18.7	20.0	21.5	23.0	25.0	27.5	30.2
20	1874	DAUD KHEL CEMENT	132	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
21	618	FACTORY AREA	132	96.2	76.3	81.9	70.8	76.8	81.2	96.6	103.7	137.5	148.6	160.7
22	1015	FLYING CEMENT	132	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
23	1079	GARH FATEH SHAH	132	11.1	15.0	19.0	22.0	25.2	27.5	61.8	72.2	83.4	95.5	109.5
24	47	GOJRA	132	78.1	82.7	86.0	90.2	95.1	99.3	91.6	98.0	105.9	115.7	126.5
25	674	GROAT	132	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
26	61	HAVELI B.SHAH	132	24.9	26.9	29.1	31.3	33.7	36.2	39.0	42.1	45.7	50.0	54.7
27	585	HEAD FAQIRIAN	132	36.5	38.1	39.7	41.4	43.2	45.1	47.2	49.6	52.7	56.6	60.9
28	824	INDUSTRIAL-ES	132	42.3	44.3	46.5	48.8	51.1	53.7	56.6	60.0	64.4	69.8	75.7
29	739	J.K.TECH MILL	132	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
30	73	JARANWALA	132	75.7	62.8	66.7	53.9	57.4	61.2	65.7	70.8	77.0	84.6	93.0
31	79	JHANG ROAD	132	103	108.3	113.9	118.1	122.6	126.6	107.6	114.2	122.5	132.8	144.0
32	78	JHANG-1	132	62	65.6	69.3	72.5	75.5	59.7	63.7	68.1	73.6	80.2	87.4
33	856	JHANG-2	132	38.6	40.4	42.4	44.5	46.6	48.8	51.3	54.0	57.4	61.8	66.5
34	76	JOHARABAD	132	64	67.2	70.6	73.9	77.8	82.2	80.1	84.6	90.3	97.6	105.6
35	1021	KAMAL PUR	132	29.5	30.9	32.5	34.2	35.9	37.6	39.7	42.1	45.3	49.1	53.1

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
125	2209	AWAGAT (P)	132	0	0.0	0.0	37.1	38.3	39.7	41.2	42.9	45.2	48.3	51.6
126	2210	College Road	132	0	0.0	0.0	25.4	28.7	16.5	17.1	17.8	18.7	19.9	21.2
129	2213	Shaheen Abad	132	0	0.0	0.0	17.0	20.2	18.2	18.9	19.7	20.7	22.1	23.6
130	2214	Bukharian	132	0	0.0	0.0	0.0	26.8	7.9	8.2	8.6	9.1	9.7	10.3
136	2220	Bagh TT Sing	132	0	0.0	0.0	0.0	0.0	15.3	16.0	16.8	17.7	18.9	20.2
		Total Load		3388.1	3631.8	3871.4	4136.9	4410.1	4704.7	5080.2	5489.6	5964.9	6435.2	6938.7

NOTE: IT IS TENTATIVE FORECAST.
FINAL IS EXPECTED UPTO 10-2015 FROM GM PLANNING(P) LAHORE.

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
76	953	THEKRIWALA	132	41.6	44.0	46.6	49.3	52.5	40.0	42.7	45.9	49.9	54.7	60.0
77	995	VAC	132	3.3	3.5	3.7	3.9	4.2	4.5	4.8	5.1	5.6	6.1	6.7
78	581	WAN BUCHRAN	132	24.0	25.7	27.5	29.4	31.3	33.5	35.9	38.5	41.6	45.2	49.1
79	442	18 HAZARI	66	19.6	14.0	15.0	16.0	17.0	18.2	19.5	21.1	23.0	25.3	27.8
80	226	ADHI KOT	66	18.5	19.9	21.3	22.8	24.5	26.1	28.1	30.3	33.0	36.4	40.1
81	227	AHMAD PUR SIA	66	16.1	17.3	18.5	19.9	21.2	22.7	24.3	26.2	28.4	31.4	34.6
82	231	ASHIANA MILL	66	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
83	525	BEHAL	66	14.2	15.1	16.0	16.9	18.0	19.0	20.2	21.5	23.0	25.0	27.0
84	242	BHABRA	66	24.4	25.7	27.1	29.0	31.0	27.4	29.0	30.9	33.0	35.8	38.9
85	439	BHAKKAR	66	5.7	6.3	6.9	7.6	8.2	8.9	9.7	10.6	11.6	12.7	14.0
86	250	CHASHMA	66	10.9	11.0	11.0	11.1	11.1	11.3	11.3	11.4	11.4	11.5	11.6
87	255	CHUTIANA	66	9.9	10.7	24.4	26.5	26.8	14.4	15.5	16.8	18.3	20.1	22.1
88	275	FAZIL	66	10.6	11.1	11.6	12.3	12.9	13.5	14.3	15.1	16.0	17.4	18.8
89	686	HYDER ABAD TH	66	3.5	3.9	4.3	4.7	5.2	5.7	6.1	6.8	7.5	8.3	9.3
90	422	JAHANIAN SHAH	66	7.7	8.1	8.4	8.8	9.2	9.8	10.3	10.8	11.4	12.3	13.3
91	298	KALA BAGH	66	11.3	12.3	13.4	14.5	15.8	17.1	18.5	20.2	22.0	24.3	26.7
92	352	MAKAR WAL	66	9.0	9.8	10.8	11.6	12.6	13.6	14.8	16.1	17.5	19.2	21.0
93	322	MANKERA	66	6.8	7.3	7.8	8.3	8.8	7.6	8.2	8.8	9.6	10.5	11.6
94	441	MEHMOOD KOT	66	11.1	12.1	13.0	14.2	15.3	16.6	17.9	19.5	21.4	23.7	26.2
95	334	NIA LAHORE	66	25.8	27.6	29.5	31.5	33.7	35.9	38.5	41.5	44.9	49.0	53.6
96	423	NUSHERA SAKES	66	10.6	11.5	12.4	13.4	14.4	15.5	16.7	18.1	19.8	21.8	24.0
97	339	OLD THERMAL	66	20.4	18.7	19.7	20.6	21.6	22.6	23.9	25.1	26.6	28.7	30.9
98	425	PATHAN KOT	66	33.5	36.5	39.6	41.8	42.3	45.7	49.4	53.8	58.9	65.1	72.0
99	333	RAKH DAGRAN	66	20.2	21.3	22.3	23.4	15.6	16.5	14.3	15.3	16.4	17.7	19.2
100	371	SHAMAS	66	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
101	373	SIHOR KOT CITY	66	9.1	9.6	10.2	10.8	11.4	12.1	12.9	13.8	14.9	16.2	17.7
102	395	TRAG	66	19.4	20.5	21.6	22.9	24.1	25.5	26.9	28.7	30.6	33.2	36.1
104	1963	KOT SHAKIR	132	0	7.0	7.3	7.7	8.1	8.5	9.0	9.5	10.1	10.9	11.8
105	1966	USMAN-E-GHAN	132	0	0.0	37.6	39.6	41.7	43.8	46.3	48.9	52.1	56.2	60.6
106	1969	FIEDMC M3 IC	132	2.3	23.8	47.5	95.0	142.5	190.0	285.0	380.0	475.0	475.0	475.0
107	1982	LUNDIANWALA	132	9.5	12.5	17.6	18.9	20.4	21.9	23.6	25.4	27.4	29.8	32.4
109	1988	CHENAB NAGAR	132	0	24.0	25.3	26.6	28.1	29.5	31.3	33.0	35.2	38.0	41.0
110	1989	MAMU KANJAN	132	0	0.0	23.9	25.3	26.9	28.5	30.4	32.3	34.5	37.0	39.7
112	1991	AMIN PUR ROAD	132	0	0.0	0.0	0.0	24.7	26.3	28.2	30.1	32.3	35.0	37.9
114	1993	BHAKKAR-II D	132	0	0.0	0.0	0.0	25.4	8.8	9.3	9.8	10.4	11.2	12.1
115	1997	SARGODHA-III	132	0	0.0	0.0	0.0	24.3	25.5	27.0	28.5	30.4	32.9	35.6
116	1998	FDA CITY	132	0	0.0	0.0	3.4	6.8	10.3	13.7	17.1	20.5	23.9	27.9
118	2202	JARANWALA RD	132	0	48.9	51.8	54.8	57.9	61.2	64.8	68.9	73.9	80.3	80.3
120	2204	DIJKOT (P)	132	0	0.0	20.5	21.8	23.1	24.4	26.0	27.8	30.0	32.7	32.7
123	2207	BANDALA-II	132	0	0.0	37.1	38.3	40.7	41.0	42.6	44.3	46.8	50.1	53.6

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
36	93	KAMALIA	132	54.8	58.2	61.8	65.5	69.5	73.6	78.2	83.2	89.1	96.2	103.8
37	1070	KHADAM STEEL	132	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
38	108	KHEWA	132	34.6	38.5	42.7	47.1	44.5	47.6	62.4	68.9	76.0	84.0	92.9
39	673	KHURRIANWALA	132	59.4	62.0	51.6	54.0	56.4	59.8	62.0	65.3	69.8	75.5	81.6
40	908	KIRANA	132	45.3	47.4	49.7	49.0	51.4	53.8	56.7	60.0	64.0	69.1	74.6
41	115	KUD LATHI	132	28.3	29.6	30.9	32.3	33.7	35.3	37.0	38.9	41.1	44.3	47.7
42	976	LALIAN	132	43.2	33.8	36.1	38.5	40.9	43.6	46.6	49.8	53.6	58.2	63.3
43	649	M.T.M. MILLS	132	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
44	421	MANJALA BAGH	132	35.3	37.5	28.0	29.7	31.5	33.3	35.3	37.5	40.1	43.1	46.4
45	793	MARI INDUS	132	2.7	2.9	3.2	3.4	3.5	3.8	4.1	4.5	4.8	5.3	5.8
46	134	MIANWALI	132	69.5	75.1	65.3	70.0	74.0	77.8	108.4	117.1	127.0	139.0	152.2
47	1077	MILLAT ROAD	132	16.3	17.9	19.7	21.5	23.5	25.5	27.8	30.3	33.1	36.8	40.9
48	331	MURID WALA	132	52.3	55.4	58.6	48.9	52.1	55.3	37.6	40.3	43.5	47.3	51.5
49	143	NARWALA ROAD	132	87.5	92.7	82.2	87.0	68.9	72.5	76.3	80.7	86.3	93.2	100.7
50	853	NISHATABAD	132	59.9	62.7	65.7	68.5	71.4	74.4	77.2	80.1	83.2	86.5	89.6
51	597	NOOR PUR SETH	132	4.2	0.0	0.0	0.0	0.0	13.1	13.6	14.1	14.9	15.9	17.0
52	431	OLD THERMAL	132	104.8	104.9	109.0	113.0	117.0	121.4	113.4	120.4	129.0	139.8	151.5
53	779	PAEC CHASHMA	132	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
54	983	PAEC-C-11	132	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
55	703	PIONEER CEMEN	132	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
56	160	PIPLAN	132	34.1	22.5	25.2	28.4	30.8	32.2	51.0	54.8	59.5	65.4	71.9
57	948	PIR MAHAL	132	57.2	62.4	68.1	73.8	77.5	66.3	72.5	79.7	87.7	97.3	107.9
58	598	QUAID ABAD	132	25.1	26.6	28.1	30.0	31.8	33.7	35.8	38.3	41.3	44.8	48.7
59	701	RAFHAN	132	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
60	890	REFHAN MAIZE	132	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
61	523	S.PUR NOON	132	10.8	12.0	13.4	14.8	16.3	14.2	15.8	17.7	19.8	22.6	25.7
62	984	SAMUNDRI	132	40.7	43.7	46.8	50.1	53.6	57.2	61.5	66.6	72.5	80.0	88.2
63	205	SAMUNDRI ROAD	132	97.7	81.2	86.5	73.2	78.0	115.7	121.8	128.7	137.4	148.6	160.8
64	363	SARGODHA	132	69.6	72.9	76.3	65.1	68.3	71.8	75.8	80.1	85.6	92.6	100.1
65	524	SAR-LUDEWALA	132	35.8	37.6	39.6	41.6	43.7	45.2	16.4	17.4	18.6	20.1	21.8
66	947	SATIANA	132	26.3	27.8	29.3	31.0	32.6	34.4	36.4	38.6	41.5	45.1	49.1
67	1012	SATIANA ROAD	132	37.5	39.9	42.5	45.3	48.0	51.1	54.6	58.7	63.7	70.0	76.9
68	867	SCARP COLONY	132	37.5	39.3	41.2	21.2	22.5	24.0	25.6	27.4	29.8	32.6	35.7
69	957	SHAH PUR	132	24.6	26.3	28.2	30.2	32.2	25.6	27.7	30.1	33.0	36.6	40.7
70	192	SHAHKOT	132	25.5	26.4	27.3	28.2	29.1	30.1	31.2	32.5	34.4	36.7	39.2
71	648	SITARA CHEMIC	132	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
72	1013	SITARA ENERGY	132	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	918	T.T.SINGH	132	45.7	48.4	51.3	54.2	57.3	60.7	64.5	68.7	73.8	80.3	87.3
74	601	TALIB WALA	132	34.7	36.4	38.3	40.2	42.4	44.5	46.9	49.6	53.0	57.4	62.1
75	459	TANDLIAN WALA	132	43.4	48.6	54.3	60.1	63.0	73.1	80.4	89.0	98.7	110.0	122.6

MAXIMUM DEMAND (MW) OF GRID STATIONS

Sr. No.	GRID NO.	NAME OF GRIDSTATION	KV	YEAR										
				2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
1	1018	103/RB CHUDRI WALA	132	37.7	39.2	40.7	42.4	45.0	48.3	47.8	50.0	53.3	57.4	61.8
2	1010	126 S.B SARGODHA	132	31.7	33.0	34.4	35.7	37.1	38.7	40.4	42.4	45.1	48.5	52.1
3	420	220KV JARANWA ROAD	132	46.8	49.5	52.4	55.4	58.5	61.8	65.5	69.6	74.7	81.0	87.8
4	873	220KV LUDEWALA	132	6.5	6.9	7.2	7.6	8.0	8.4	8.9	9.4	10.1	10.9	11.8
5	790	220KV SUMMANDRI ROAD	132	19.7	20.9	22.2	23.6	25.0	26.4	28.1	30.1	32.5	35.4	38.6
6	915	A.A. SPINNING	132	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
7	704	A.E.C. CHASHM	132	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
8	475	AGRI UNIVERSITY	132	116.8	120.8	98.6	104.6	108.9	113.8	56.4	61.3	66.9	73.6	81.1
9	862	BANDALA	132	66.9	70.0	39.9	42.1	46.7	50.6	49.1	52.2	56.2	61.2	66.5
10	526	BARANA	132	22.8	24.0	25.2	26.4	27.8	29.2	30.8	32.6	34.9	37.7	40.7
11	759	BHAKKAR	132	52.9	56.7	60.8	65.0	52.4	55.6	71.1	76.7	83.3	91.5	100.6
12	243	BHALWAL	132	41.4	43.5	45.7	48.5	51.2	54.5	43.3	46.0	49.5	53.7	58.3
13	16	BHAMB	132	46.2	51.1	55.9	61.1	66.9	72.6	79.0	86.9	95.8	106.4	118.1
14	244	BHAWANA	132	41.4	44.9	48.5	52.4	44.0	47.0	57.8	62.8	68.5	75.3	82.8
15	1065	BHERA INDUSTR	132	11.6	12.8	14.0	15.3	16.6	18.2	19.7	21.4	23.3	25.7	28.3
16	595	CHAK JHUMRA	132	40.7	42.8	44.8	47.1	49.3	51.8	54.6	57.8	61.9	67.1	72.7
17	641	CHINIOT	132	79.9	70.0	75.7	79.9	70.0	73.7	66.7	76.0	82.4	90.1	98.5
18	28	CHINIOT ROAD	132	92.7	97.0	71.6	106.4	111.5	117.0	123.1		139.5	151.1	163.7
19	458	DAUD KHEL	132	14.2	15.2	16.3	17.4	18.7	20.0	21.5	23.0	25.0	27.5	30.2
20	1874	DAUD KHEL CEMENT	132	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
21	618	FACTORY AREA	132	96.2	76.3	81.9	70.8	76.8	81.2	96.6	103.7	137.5	148.6	160.7
22	1015	FLYING CEMENT	132	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
23	1079	GARH FATEH SHAH	132	11.1	15.0	19.0	22.0	25.2	27.5	61.8	72.2	83.4	95.5	109.5
24	47	GOJRA	132	78.1	82.7	86.0	90.2	95.1	99.3	91.6	98.0	105.9	115.7	126.5
25	674	GROAT	132	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
26	61	HAVELI B.SHAH	132	24.9	26.9	29.1	31.3	33.7	36.2	39.0	42.1	45.7	50.0	54.7
27	585	HEAD FAQIRIAN	132	36.5	38.1	39.7	41.4	43.2	45.1	47.2	49.6	52.7	56.6	60.9
28	824	INDUSTRIAL-ES	132	42.3	44.3	46.5	48.8	51.1	53.7	56.6	60.0	64.4	69.8	75.7
29	739	J.K.TECH MILL	132	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
30	73	JARANWALA	132	75.7	62.8	66.7	53.9	57.4	61.2	65.7	70.8	77.0	84.6	93.0
31	79	JHANG ROAD	132	103	108.3	113.9	118.1	122.6	126.6	107.6	114.2	122.5	132.8	144.0
32	78	JHANG-1	132	62	65.6	69.3	72.5	75.5	59.7	63.7	68.1	73.6	80.2	87.4
33	856	JHANG-2	132	38.6	40.4	42.4	44.5	46.6	48.8	51.3	54.0	57.4	61.8	66.5
34	76	JOHARABAD	132	64	67.2	70.6	73.9	77.8	82.2	80.1	84.6	90.3	97.6	105.6
35	1021	KAMAL PUR	132	29.5	30.9	32.5	34.2	35.9	37.6	39.7	42.1	45.3	49.1	53.1

Energy and Demand Forecasts

(GWh)

Description	2016	2017	2018	2019	2020
Domestic	4736.3	5063.1	5412.4	5775.1	6162.0
Commercial	533.4	578.7	626.8	678.2	733.8
Industrial	4230.0	4492.2	4883.1	5278.6	5679.8
Agricultural	887.9	994.4	1107.8	1228.5	1357.5
Other	331.1	338.4	345.9	353.5	361.2
TOTAL	10718.63	11466.85	12375.87	13313.78	14294.26
Growth %	7.1	7.0	7.9	7.6	7.4

(MW)

Description	2016	2017	2018	2019	2020
Total Demand	3293	3482	3699	3925	4161

Description	2015	2016	2017	2018	2019	2020
Total Demand (MW)	3091	3293	3482	3699	3925	4161
Generation available (MW)	1959	2218	2821	3373	3430	3944
Shortfall (MW)	1132	1075	661	326	495	217

Annex-C
PMS STUDY

NTDC TRANSMISSION EXPANSION PLAN

Sr. No.	New Substation	220 kV Transmission Line/ 220/132 kV Transformer Description	No. of D/C Lines	Length of D/C Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
50	220 kV Shadman	Shadman – Bund Road	1	15	2 x 250	2019-20
51	220 kV Jauhrabad	In/Out of C-1/C-2/C-3/C-4 – Ludewala D/C at Jauharabad	2	5	2 x 250	2019-20
52	220 kV H.Faqirian	H.Faqirian – Ludewala	1	58	2 x 250	2019-20
53	Munda HPP	Munda HPP—Mardan	1	50		2019-20
54		Munda HPP – Peshawar-2	1	40		2019-20

NTDC TRANSMISSION EXPANSION PLAN

New Substation	220 kV Transmission Line/ 220/132 kV Transformer Description	No. of D/C Lines	Length of D/C Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
Faisalabad West 500/220/132 kV	Faisalabad West – T.T. Singh	1	45	3 x 250	2017-18
	Faisalabad West – Lalian New	1	80		2017-18
Mastung	Sibbi – Mastung	1	120	2 x 250	2017-18
Lahore North	In/Out of Ghazi Road/Ravi – K.S.K D/C at Lahore North	2	5		2019-20
	In/Out of Lahore Old – Ravi S/C at Lahore North	1	10		2019-20
	In/out of Peshawar – Shahibagh D/C at Peshawar New	2	12		2019-20
220kV Kohat	Peshawar New – Kohat	1	50	2 x 250	2019-20
220kV Jamrud	Peshawar – Jamrud	1	10	2 x 250	2019-20
220kV Kamra	In/Out of Islamabad West–ISPR S/C at Kamra	1	5	2 x 250	2019-20

NTDC TRANSMISSION EXPANSION PLAN

r. o.	New Substation	220 kV Transmission Line/ 220/132 kV Transformer Description	No. of D/C Lines	Length of D/C Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
2		600 MVAR SVS at Quetta Ind. 220 kV G/S				2016-17
3	Nowshera Ind.	G.Brotha – Shahibagh D/C In/Out at Nowshera Ind.	2	5	3 x 250	2016-17
4	D.I. Khan	In & Out of C1/C-2 – C/3 S/C at D.I. Khan	1	100	2 x 250	2016-17
5	Lalian New	Gatti – Ludewala D/C In/Out at Lalian New.	2	4	3 x 250	2016-17
6	2nd Source of supply to 220 kV GIS Islamabad University	In & Out of Manshera – ISPR S/C at Islamabad University	1	40		2016-17
7	Chakdara New	Mardan – Shahi Bagh New S/C In/Out at Chakdara New	1	85	2 x 250	2016-17

Future Development Projects

8		Augmentation of 2 x 160 MVA T/Fs with 2x250 MVA capacity and Extension of 1x250MVA at Rewat 500 kV G/S			2 x 250 + 1 x 250	2017-18
9	2nd Source of supply to 220 kV Hala Road	In & Out of Jamshoro – T.M.Khan S/C at Hala Road	1	10		2017-18
0	Mirpurkhas New	Hala Road – T.M.Khan Road S/C In/Out at MirpurKhas New.	1	70	2 x 250	2017-18

NTDC TRANSMISSION EXPANSION PLAN

	New Substation	220 kV Transmission Line/ 220/132 kV Transformer Description	No. of D/C Lines	Length of D/C Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
1		In & Out of C-1/C-2 – Ludewala S/C at C-3	1	2		2015-16
2		C-3/C-4 to Bannu	1	127		2015-16
3		Uch II – Sibbi	1	125		2015-16
4	Lal Suhanra	Lal Suhanra – Bahawalpur	1	40	3 x 250	2015-16
5	Jhimpir	Jhimpir – T.M. Khan Road	1	70	3 x 250	2016-17
6	Ghazi Road	N. Kotlakhpat – Sarfraznagar S/C In/Out at Ghazi Road	1	45	3 x 160	2016-17 (one T/F of 3 has been in operation)

Ready For Implementation Projects

7		Reconductoring of 220 kV Tarbela – ISPR D/C on twin bundled Rail conductor	1	62.5		2016-17
8		Reconductoring of 220 kV Tarbela – Burhan D/C on twin bundled Rail conductor	1	35.1		2016-17
9		Jhimpir – Gharo	1	75	2 x 250	2016-17
10		In & Out of Jamshoro – KDA-33 S/C at NBT-1	1	5		2016-17
11		In & Out of NBT-1 – KDA-33 S/C at NBT-2	1	5		2016-17

NTDC TRANSMISSION EXPANSION PLAN

Sr. No.	New Substation	220 kV Transmission Line/ 220/132 kV Transformer Description	No. of D/C Lines	Length of D/C Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
1		Augmentation of 2x160 MVA T/F with 2x250 MVA capacity at Quetta Industrial 220 kV G/S			2 x 250	2014-15
2	Chistian New	Vehari – Chistian New	1	65	2 x 250	2014-15
3	R.Y. Khan 500/220/132 kV				2 x 250	2014-15
4		Uch I – Guddu S/C In/Out at Shikarpur New	1	50		2014-15
5		450 MVAR SVC at New Kot Lakhpat 220kV G/S				2015-16
6	Gujrat New	Mangla – Gujranwala S/C & Mangla – Gakkhar S/C In/Out at Gujrat	2	4	3 x 250	2015-16
7	D.M. Jamali	Uch – Guddu S/C In/Out at D.M. Jamali	1	5	1 x 160 + 1 x 100	2015-16
8	Lahore New (South) 500/220 kV	Kot Lakhpat New – Wapda Town S/C In/Out at Lahore New	1	45		2015-16
9		Kot Lakhpat New – Ghazi Road S/C In/Out at Lahore New	1	50		2015-16
10	Mansehra	Allai Khwar – ISPR double circuit In/Out at Mansehra	2	1	2 x 250	2015-16

NTDC TRANSMISSION EXPANSION PLAN

220 kV TRANSMISSION EXPANSION PLAN

New Substation	220 kV Transmission Line/ 220/132 kV Transformer Description	No. of D/C Lines	Length of D/C Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
Ongoing Projects					
	2 nd T/F at Bandala			1 x 160	2014-15
	2 nd T/F at Rohri			1 x 250	2014-15
	2 nd & 3 rd T/F at Okara			2 x 250	2014-15
T.T. Singh	Multan – Samundri Rd D/C In/Out at T.T.Singh	2	1	3 x 250	2014-15 (T/L completed)
Kassowal	Vehari – Yousafwala D/C In/Out at Kassowal	2	30	2 x 160	2014-15 (T/L completed)
	Augmentation of 4x160 MVA T/F with 4x250 MVA capacity at Sheikh Muhammadi 500 kV G/S			4 x 250	2014-15
	Augmentation of 2x160 MVA T/F with 2x250 MVA capacity at Mardan 220 kV G/S			2 x 250	2014-15
	Augmentation of 4x160 MVA T/F with 4x250 MVA capacity at Burhan 220 kV G/S			4 x 250	2014-15
	Augmentation of 4x160 MVA T/F with 4x250 MVA capacity at Bund Road 220 kV G/S			4 x 250	2014-15
	Augmentation of 2x160 MVA T/F with 2x250 MVA capacity at Bahawalpur 220 kV G/S			2 x 250	2014-15

NTDC TRANSMISSION EXPANSION PLAN

New Substation	500 kV Transmission Line/ 500/220 kV Transformer Description	No. of S/C Lines	Length of each Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
	K-2/K-3 Power Plant – Matiari	2	200		2019-20
	Port Qasim Coal Power Plant – HUBCO New S/C In/Out at K-2/K-3	2	5		2019-20
	± 600 kV HVDC Bi-pole from Matiari – Lahore South		1000		2019-20
	Alliot – Gujranwala S/C In/Out at Azad Pattan	2	2		2019-20
	Alliot – Gujranwala S/C In/Out at Kaot	2	2		2021-22

NTDC TRANSMISSION EXPANSION PLAN

r. o.	New Substation	500 kV Transmission Line/ 500/220 kV Transformer Description	No. of S/C Lines	Length of each Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
2	Switching Station at Mansehra	Dasu HPP to Mansehra	2	140		2018-19
3		Mansehra to Islamabad West	2	100		2018-19
4		Mansehra to Faisalabad West with 40% series compensation	2	375		2018-19
5		Tarbela 5 th Extension Switch Yard—Islamabad West	2	65		2018-19
6	Peshawar New	In/out of existing 500 kV Tarbela – Peshawar S/C at Peshawar New	2	15	2 x 750	2018-29
7	Ludewala	Ludewala – Peshawar New	2	325		2018-19
8	± 500kV HVDC Convertor Station at Peshawar New	± 500 kV HVDC Bipole to Peshawar New (CASA- 1000)				2019-20
9	Switching Station at Alliot	Suki Kinari HPP – Alliot	2	100		2019-20
0		Neelum Jhelum HPP – Gujranwala D/C In/Out at Alliot.	4	2		2019-20
1		Alliot – Islamabad West	2	96		2019-20

NTDC TRANSMISSION EXPANSION PLAN

r. o.	New Substation	500 kV Transmission Line/ 500/220 kV Transformer Description	No. of S/C Lines	Length of each Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
1	Matari	Engro Thar Coal – Matari	2	250		2017-18
2	Faisalabad West	M. Garh – Gatti circuit In/Out at Faisalabad West	2	2	2 x 750	2017-18
3		Multan – Gatti circuit In/Out at Faisalabad West	2	30		2017-18
4		Port Qasim Coal Power Plant – Matari	2	180		2017-18
5	Chakwal New	In/Out of Ghazi Barotha – Gatti D/C at Chakwal New	4	2	2x250	2017-18
6	Islamabad West	Ghazi Brotha – Rewat S/C In/Out at Islamabad West	2	15	2x750	2017-18
7		Tarbela-Rewat In/Out S/C at Islamabad West	2	12		2017-18
8		Port Qasim – Matari S/C In/Out at HUBCO New	2	20		2018-19
9		Siddiqson – 500kV South New	2	20		2018-19
0		Siddiqson – 500kV South New S/C In/Out at Lucky	2	3		2018-19
1		± 600 kV HVDC Bi-pole from 500kV South New Switching station – FSD WEST		1000		2018-19

NTDC TRANSMISSION EXPANSION PLAN

	New Substation	500 kV Transmission Line/ 500/220 kV Transformer Description	No. of S/C Lines	Length of each Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning

Ready For Implementation Projects

		Jamshoro – Moro	1	200		2016-17
		Dadu – Moro	1	55		2016-17
		Moro – R.Y. Khan	1	335		2016-17
		Ext. at Jamshoro, 3rd 500/220 kV T/F			1 x 450	2016-17
		Guddu New Power Plant – M. Garh	1	256		2016-17
		D.G. Khan – Multan S/C In/Out at M. Garh	2	10		2016-17
		Lahore South – Sahiwal S/C In/Out at Sahiwal Coal Power Plant	2	0.5		2016-17
		Ext. at Sahiwal, 3rd 500/220 kV T/F			1 x 600	2016-17

Future Development Projects

		Lahore Old – Gatti S/C In/Out at 1200 MW Bhikki	2	5		2016-17
		Lahore South – 1200 MW Balloki	2	40		2016-17
		Faisalabad West – M.Garh S/C In/Out at 1200 MW Haveli Bahadur Shah	2	5		2016-17
		Faisalabad West – Multan S/C In/Out at 1200 MW Haveli Bahadur Shah	2	15		2016-17
		Augmentation of 3x237 MVA T/Fs with 3x450 MVA capacity at Tarbela 500 kV G/S			3x 450	2016-17

NTDC TRANSMISSION EXPANSION PLAN

500 kV TRANSMISSION EXPANSION PLAN

Sr. No.	New Substation	500 kV Transmission Line/ 500/220 kV Transformer Description	No. of S/C Lines	Length of each Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
Ongoing Projects						
	R.Y. Khan	Guddu – Multan 3rd Circuit In/Out at R.Y. Khan	2	30	2 x 600	2015-16
	Shikarpur New	Guddu – Dadu 1st circuit In/Out at Shikarpur New	2	20	2 x 600	2015-16
		Guddu – Dadu 2 nd circuit In/Out at Shikarpur New	2	22		2015-16
	Lahore New (South)	Sahiwal – Lahore single circuit In/Out at Lahore New	2	15	2 x 750	2015-16
		Gujranwala – Lahore single circuit In/Out at Lahore New	2	50		2015-16
		Augmentation of 1x450 MVA T/F with 1x750 MVA capacity at Rewat 500 kV G/S			1 x 750	2015-16
		Neelum Jhelum HPP - Gakkhar (Gujranwala)	2	275		2015-16

Summary of Generation Addition

Sr. #	Fiscal Year	Name of Project	Agency	Fuel	Location	Installed Capacity (MW)	Commissioning Date	Total Installed Capacity (MW)
29	2017-18	Keyal Khwar	WAPDA	Hydel	Dasu District, KPK	120	Oct. 2017	
30		Coal Plant at Sahiwal	PPDB	Coal	Sahiwal, Punjab	1320	Dec. 2017	
31		Port Qasim Power Plant	PIB	Coal	Port Qasim Karachi, Sindh	1320	Dec. 2017	
32		Engro Thar Coal (unit-1)	PIIB	Coal	Thar, Sindh	330	Dec. 2017	
33		Nooriabad Gas Plant	GoS	Gas	Nooriabad, Sindh	100	Dec. 2017	
34		Engro Thar Coal (unit-2)	PIIB	Coal	Thar, Sindh	330	Apr. 2018	
35		LNG Based Plants (Phase-I)	PIIB	LNG	Haveli Bahadur Shah (Jhang), Punjab	1200	Apr. 2018	
36		Coal Plant at Salt Range	PPDB	Coal	Salt Range, Punjab	300	Jun. 2018	
37		Tarbela 5th Ext. Project	WAPDA	Hydel	Tarbela, KPK	1320	Jun. 2018	
38		SSRL	TCEB	Coal	Thar, Sindh	1320	Jun. 2018	
		Total Generation Addition in 2017-18				7668		38859
39	2018-19	Golden Gol HPP	WAPDA	Hydel	Chitral, KPK	106	Jul. 2018	
40		HUB Power Company Ltd.	PIIB	Coal	HUB, Baluchistan	1320	Jul. 2018	
41		Siddiqsons Limited	TCEB	Coal	Port Qasim, Sindh	350	Jun. 2019	
42		Lucky Electric Power Company Ltd.	TCEB	Coal	Port Qasim, Sindh	660	Jun. 2019	
43		Grange Holding	PIIB	Coal	Arifwala, Punjab	163	Jun. 2019	
44		Gulpur Poonch river	PIIB	Hydel	Poonch River/Gulpur, AJK	100	Jun. 2019	
		Total Generation Addition in 2018-19				2699		41558
45	2019-20	CASA	GoP	Import	Cross Border Interconnection	1000	Jul. 2019	
46		TPS Jamshoro (Phase-1)	GENCOs	Coal	Jamshoro, Sindh	660	Dec. 2019	
47		TPS Jamshoro (Phase-2)	GENCOs	Coal	Jamshoro, Sindh	660	Mar. 2020	
48		Azad Pattan HPP	PIIB	Hydel	Jhelum River/Sudhnoti, AJK	640	Jun. 2020	
49		Suki Kinari HPP	PIIB	Hydel	Kunhar River/Mansehra, KPK	840	Jun. 2020	
50		Dasu HPP-1	WAPDA	Hydel	7km upstream of Dasu Village on Indus River, KPK	2160	Jun. 2020	
			Total Generation Addition in 2019-20				5960	
51	2020-21	Karachi Coastal Power Plant (unit-1)	PAEC	Nucl	Karachi	1100	Aug. 2020	
52		Karachi Coastal Power Plant (unit-2)	PAEC	Nucl	Karachi	1100	Jun. 2021	
		Total Generation Addition in 2020-21				2200		49718
53	2021-22	Karot HPP	PIIB	Hydel	Jhelum River, Distt. Rawalpindi, Punjab	720	Jun. 2022	
54		Kotli	AJKHEB	Hydel	Poonch River/Kotli, AJK	100	Jun. 2022	
55		Coal Plant at Lakhra	GENCOs	Coal	Lakhra, Sindh	660	Jun. 2022	
		Total Generation Addition in 2021-22				1480		51198
Total Generation Addition upto 2021-22						36121		

References:
As per data provided by WAPDA Hydel, GENCOs, AJKHEB, PHYOD, PIB, AEDB, PPDB, TCEB and PAEC information

Summary of Generation Addition

Sr. #	Fiscal Year	Name of Project	Agency	Fuel	Location	Installed Capacity (MW)	Commissioning Date	Total Installed Capacity (MW)
		Grand Total						23574.5
1	2015-16	Nandipur (Remaining Unit-CC)	GENCO	RFO	Gujranwala, Punjab	140	Jul. 2015	
2		Sapphire Wind Power Co. Ltd.	AEDB	Wind	Jhampir, Sindh	49.5	Oct. 2015	
3		Apollo Solar Development Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Dec. 2015	
4		Best Green Energy Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Dec. 2015	
5		Crest Energy Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Dec. 2016	
6		CHASNUPP-III	PAEC	Nucl	Chashma, KPK	340	Mar. 2016	
		Total Generation Addition in 2015-16				829.5		23574.5
7	2016-17	Elbel Green Energy Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Jul. 2016	
8		Flare Solar Development Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Jul. 2016	
9		Golden Eye Solar Development Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Jul. 2016	
10		Yunus Energy Ltd.	AEDB	Wind	Jhampir, Sindh	50	Jul. 2016	
11		Metro Power Co. Ltd.	AEDB	Wind	Jhampir, Sindh	50	Jul. 2016	
12		Tenaga Generasi Limited	AEDB	Wind	Gharo/Bhambore/Kuttikun, Sindh	49.5	Jul. 2016	
13		Gul Ahmed Energy Limited	AEDB	Wind	Jhampir, Sindh	50	Jul. 2016	
14		Master Wind Energy Limited	AEDB	Wind	Jhampir, Sindh	49.5	Jul. 2016	
15		HydroChina Dawood Power Ltd.	AEDB	Wind	Gharo/Bhambore/Kuttikun, Sindh	49.5	Jul. 2016	
16		Tapal Wind	AEDB	Wind	Jhampir, Sindh	30	Jul. 2016	
17		United Energy Pakistan Limited	AEDB	Wind	Jhampir, Sindh	99	Jul. 2016	
18		Zephyr Power Pvt. Ltd.	AEDB	Wind	Gharo/Bhambore/Kuttikun, Sindh	50	Jul. 2016	
19		Nuclear Jhelum Hydel	WAPDA	Hydel	Nauseri/Muzaffarabad, AJK	969	Nov. 2016	
20		CHASNUPP-IV	PAEC	Nucl	Chashma, KPK	340	Dec. 2016	
21		Other Wind Power Plants	AEDB	Wind	Jhampir/Gharo/Bhambore/Kuttikun, Sindh	97.3	Dec. 2016	
22		High Flying Solar Development Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Jan. 2017	
23		Indigo Solar Development Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Feb. 2017	
24		King Rider Solar Development Pakistan Limited (Zonergy)	PPDB	Solar	Lal Sohna (Cholistan), Punjab	100	Feb. 2017	
25		Tarbela 4th Ext. Project	WAPDA	Hydel	Tarbela, KPK	1410	Mar. 2017	
26		Patind HPP	PPDB	Hydel	Kunhar River, KPK/AJK	147	Apr. 2017	
27		LNG Based Plants (Phase-I)	PPDB	LNG	Bhikki/Baloki, Punjab	2400	Apr. 2017	
28		Solar Power Plants near Chishtian	PPDB	Solar	Chishtian, Punjab	300	Jun. 2017	
		Total Generation Addition in 2016-17				7616.5		31191

Annex-B

**Generation Plan and NTDC
Expansion Plan**

MARKET CATEGORY	CURRENT MONTH				PROGRESSIVE				SALE RATE			
	VALUE	PERCENT	PERCENT	PERCENT	VALUE	PERCENT	PERCENT	PERCENT	CURR MONTH	PROGRESSIVE	CURR MONTH	PROGRESSIVE
DOMESTIC A-1a (01)	1,186,515,728	36.7	41,856,496,090	32.7	7,156,222	8.7	9,143	7.786	11,234	9.705		
DOMESTIC A-1a (02)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
TMP DOMESTIC E-1a(55)	722,055	0.0	7,656,308	0.0	1315	0.0	17,558	16.314	21,804	20.063		
DOMESTIC A-1b (03)T	124,374,395	0.9	848,074,837	0.7	93,776	0.8	12,103	12.076	15,181	14.907		
01 TOTAL DOMESTIC	5,313,992,262	37.6	42,812,227,435	33.4	7,290,313	68.5	9,188	7.843	11,293	9.773		
COMMERCIAL A-2a (04)	758,597,509	5.4	6,846,391,588	5.3	523,334	4.9	17,398	17.132	25,201	24.675		
COMMERCIAL A-2b (05)	8,918,354	0.1	80,584,359	0.1	5,371	0.0	16,395	16.812	21,964	22.828		
COMMERCIAL A-2c (06)T	375,313,730	2.7	3,948,200,393	3.1	224,819	2.1	14,727	14.378	20,891	19.918		
TMP COMMERC. E-1a(56)	26,820,440	0.2	207,491,153	0.2	15,026	0.1	17,413	16.501	24,335	23.036		
02 TOTAL COMMERCIAL	1,169,650,033	8.4	11,082,667,493	8.7	768,550	7.1	16,492	15.996	23,708	22.694		
INDUSTRIAL B1 (07)	149,939,814	1.1	2,001,189,636	1.6	95,382	0.8	13,727	13.449	18,988	17.523		
INDUSTRIAL B1 (08)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
INDUSTRIAL B1 (09)T	331,511,980	2.3	4,382,801,899	3.4	230,767	2.1	11,639	11.580	17,216	15.471		
INDUSTRIAL B-2a (10)	25,907,284	0.2	305,276,982	0.2	33,209	0.3	15,357	14.398	18,434	17.153		
INDUSTRIAL B-2A (11)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
INDUSTRIAL B-2b (12)T	2,357,579,497	16.7	23,744,646,287	18.5	836,214	7.8	13,581	12.995	16,337	15.616		
INDUSTRIAL B-3 (13)	0	0.0	13,430	0.0	9,818	0.0	0.000	0.000	0.000	0.000		
INDUSTRIAL B-3 (14)T	1,605,287,512	11.3	16,890,124,365	13.2	436,836	4.1	12,840	12.029	13,830	13.162		
INDUSTRIAL B-4 (16)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
INDUSTRIAL B-4 (17)T	1,120,328,392	7.9	10,834,821,164	8.4	256,671	2.4	12,637	11.829	14,763	14.347		
TMP INDUSTRIAL E-2(58)	225,772	0.0	3,718,389	0.0	1,921	0.0	13,612	13.701	19,238	17.747		
03 TOTAL INDUSTRIAL	5,590,780,251	39.5	58,162,592,152	45.3	1,900,818	17.5	13,052	12.376	15,380	14.711		
BULK C-1a (19)	324,961	0.0	4,051,148	0.0	153	0.0	15,000	14.215	17,706	16.958		
BULK C-1b (25)	3,719,322	0.0	46,206,190	0.0	2,861	0.0	16,721	15.977	20,012	19.100		
BULK C-1c (26)T	32,317,027	0.2	243,345,975	0.2	11,908	0.1	13,756	13.634	16,417	16.532		
BULK C-2a (28)	8,835,980	0.1	276,149,642	0.2	2,068	0.0	15,157	14.510	17,885	17.262		
BULK C-2b (29)T	190,026,860	1.3	1,413,591,967	1.1	40,990	0.3	13,322	13.028	15,910	15.621		
BULK C-3a (37)	35,133,413	0.2	154,789,773	0.1	89,800	0.8	15,109	15.982	17,463	18.120		
BULK C-3b (38)T	265,973,609	1.9	2,739,930,660	2.1	38,900	0.3	12,761	12.395	15,024	14.803		
BULK C-1a (59)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
BULK C-2a (60)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
BULK C-3a (61)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
04 TOTAL BULK SUPPLY	536,331,172	3.7	4,878,065,355	3.7	186,680	1.5	13,203	12.858	15,618	15.357		
A.J.K. K-1a (35)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
RAWAT K-2 (15)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
A.J.K. K-1b (36)T	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
05 TOTAL BULK SUPPLY	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
AGRI. SCARP. D-1a (46)	14,767,552	0.1	243,637,810	0.2	22,682	0.2	14,380	13.391	16,884	15.904		
AGRI. D-1a (41,42)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
AGRI. D-1a (43,44)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
AGRI. D-1b (45)T	63,232,404	0.4	522,554,437	0.4	28,492	0.2	12,308	12.424	14,926	15.013		
AGRI. D-2 (47)	7,616,661	0.1	64,448,905	0.1	2,533	0.0	13,863	12.379	16,750	15.112		
AGRI. D-2 (48)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
AGRI. D-2 (49)	2,028,239	0.0	18,884,393	0.0	6,368	0.0	13,120	12.417	15,004	15.150		
AGRI. D-1b (50)T	1,291,041,458	9.1	9,135,973,846	7.1	358,237	3.3	9,826	10.545	12,449	12.814		
AGRI. D-1b (51)T	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
AGRI. D-2 (52)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
AGRI. D-1b (53,54)T	128,306,523	0.9	1,063,101,007	0.8	33,058	0.3	9,630	10.554	12,000	12.648		
06 TOTAL AGRI. T/WELL	1,506,992,837	10.6	11,048,600,398	8.6	451,370	4.0	10,011	10.698	12,358	12.993		
PUBLIC LIGHT G-1 (72)	15,024,313	0.1	117,582,618	0.1	9,971	0.0	17,497	16.732	21,555	21.319		
PUBLIC LIGHT G-2 (73)	2,115,580	0.0	27,384,547	0.0	879	0.0	15,687	14.563	18,311	18.128		
07 TOTAL PUBLIC LIGHT	17,139,893	0.1	144,967,165	0.1	10,850	0.0	17,224	16.294	21,508	20.674		
RESI. COLONY H-1 (76)	3,420,720	0.0	29,337,860	0.0	3,013	0.0	14,945	13.903	17,135	16.553		
RESI. COLONY H-2 (79)	5,676,700	0.0	44,301,285	0.0	3,710	0.0	15,007	14.267	17,570	17.268		
08 TOTAL RESI. COLONY	9,097,420	0.0	73,639,145	0.0	6,723	0.0	14,983	14.120	17,518	17.870		
RAILWAY TRACTION I(82)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
CO-GENERATION J (85)	0	0.0	0	0.0	0	0.0	0.000	0.000	0.000	0.000		
UNIDENTIFIED CASH	2,347,450	0.0	52,637,334	0.0	0	0.0	0.000	0.000	0.000	0.000		
GRAND TOTAL:-	14,146,331,318	100.0	128,255,396,477	100.0	10,615,304	100.0	11,134	10.436	13,657	12.910		

TARIFF CATEGORY	NO.OF CONSUMERS	%AGE	UNITS SOLD				ASSESSMENT			
			CURRENT MONTH	%AGE	PROGRESSIVE	%AGE	CURRENT MONTH	%AGE	PROGRESSIVE	%AGE
DOMESTIC A-1a (01)	3,004,267	87.1	495,722,665	49.2	4,368,007,972	43.6	5,569,089,420	40.7	42,389,685,465	33.0
DOMESTIC A-1a (02)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
TMP.DOMESTIC E-1i (55)	219	0.0	33,032	0.0	396,639	0.0	720,220	0.0	7,957,781	0.0
DOMESTIC A-1b (03)T	8270	0.2	7,457,216	0.7	57,794,594	0.5	113,209,413	0.8	861,554,108	0.6
01 TOTAL DOMESTIC	3,012,756	87.3	503,212,913	49.9	4,426,199,205	44.1	5,683,019,053	41.5	43,259,197,354	33.6
COMMERCIAL A-2a (04)	334,711	9.7	31,470,520	3.1	278,892,242	2.7	793,099,204	5.7	6,881,913,310	5.3
COMMERCIAL A-2b (05)	53	0.0	389,657	0.0	3,514,796	0.0	8,558,373	0.0	80,237,098	0.0
COMMERCIAL A-2c (06)T	8,744	0.2	16,679,706	1.6	200,523,882	2.0	348,463,206	2.5	3,994,132,631	3.1
TMP.COMMERC. E-1ii(56)	1134	0.0	1,050,556	0.1	9,129,602	0.0	25,565,550	0.1	210,308,218	0.1
02 TOTAL COMMERCIAL	344,842	9.9	49,590,439	4.8	492,060,522	4.7	1,175,686,333	8.3	11,166,591,257	8.5
INDUSTRIAL B1 (07)	15,104	0.4	10,092,691	1.0	117,620,334	1.1	191,640,077	1.4	2,061,052,396	1.6
INDUSTRIAL B1 (08)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
INDUSTRIAL B1 (09)T	21,121	0.6	22,690,027	2.2	291,126,869	2.9	390,642,311	2.8	4,503,969,747	3.5
INDUSTRIAL B-2a (10)	310	0.0	1,362,030	0.1	17,655,044	0.1	25,107,437	0.1	302,837,351	0.2
INDUSTRIAL B-2A (11)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
INDUSTRIAL B-2b (12)T	9,729	0.2	144,021,611	14.3	1,504,333,985	15.0	2,352,926,678	17.2	23,793,130,572	18.5
INDUSTRIAL B-3 (13)	4	0.0	0	0.0	0	0.0	0	0.0	0	0.0
INDUSTRIAL B-3 (14)T	283	0.0	113,196,262	11.2	1,278,308,786	12.7	1,565,506,347	11.4	16,824,467,243	13.1
INDUSTRIAL B-4 (16)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
INDUSTRIAL B-4 (17)T	13	0.0	72,469,760	7.2	762,555,381	7.6	1,069,874,493	7.8	10,940,584,780	8.5
TMP.INDUSTRIAL E-2(58)	38	0.0	5,352	0.0	207,378	0.0	102,961	0.0	3,680,240	0.0
03 TOTAL INDUSTRIAL	46,602	1.2	363,837,733	36.0	3,971,807,777	39.4	5,595,800,304	40.7	58,429,722,329	45.4
BULK C-1a (19)	26	0.0	19,458	0.0	178,968	0.0	344,533	0.0	3,034,865	0.0
BULK C-1b (25)	29	0.0	183,222	0.0	2,423,904	0.0	3,666,641	0.0	46,295,861	0.0
BULK C1-c (26)T	117	0.0	1,668,940	0.1	13,868,926	0.1	27,399,036	0.2	229,275,433	0.1
BULK C-2a (28)	5	0.0	503,952	0.0	15,889,529	0.1	9,013,362	0.0	274,280,940	0.2
BULK C-2b (29)T	35	0.0	11,884,610	1.1	90,979,878	0.9	189,085,335	1.3	1,421,215,249	1.1
BULK C-3a (37)	4	0.0	2,011,880	0.2	8,130,340	0.0	35,133,413	0.2	147,324,405	0.1
BULK C-3b (38)T	2	0.0	17,703,240	1.7	185,087,040	1.8	265,973,609	1.9	2,739,930,660	2.1
BULK C-1a (59)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
BULK C-2a (60)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
BULK C-3a (61)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
04 TOTAL BULK SUPPLY	218	0.0	33,975,302	3.1	316,558,585	2.9	530,615,929	3.6	4,861,357,413	3.6
A.J.K. K-1a (35)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
RAWAT K-2 (15)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
A.J.K. K-1b (36)T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
05 TOTAL BULK SUPPLY	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
AGRI.SCARP. D-1a (46)	1,444	0.0	672,293	0.0	13,411,299	0.1	11,350,956	0.0	213,293,950	0.1
AGRI. D-1a (41,42)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
AGRI. D-1a (43,44)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
AGRI. D-1b (45)T	1338	0.0	2,439,724	0.2	37,451,049	0.3	36,416,303	0.2	562,244,804	0.4
AGRI. D-2 (47)	643	0.0	336,351	0.0	4,823,077	0.0	5,633,775	0.0	72,885,113	0.0
AGRI. D-2 (48)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
AGRI. D-2 (49)	706	0.0	103,817	0.0	1,469,991	0.0	1,661,538	0.0	22,270,382	0.0
AGRI. D-1b (50)T	32,055	0.9	46,410,973	4.6	649,829,906	6.4	563,838,211	4.1	8,326,859,291	6.4
AGRI. D-1b (51)T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
AGRI. D-2 (52)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
AGRI. D-1b (53,54)T	3,336	0.0	4,100,621	0.4	80,821,443	0.8	49,227,770	0.3	1,038,252,093	0.8
06 TOTAL AGRI. TWELL	39,522	0.9	54,063,779	5.2	787,806,765	7.6	668,128,553	4.6	10,235,805,633	7.7
PUBLIC LIGHT G-1 (72)	1,345	0.0	582,685	0.0	5,937,775	0.0	12,760,087	0.0	126,588,318	0.0
PUBLIC LIGHT G-2 (73)	155	0.0	103,592	0.0	1,502,923	0.0	2,000,490	0.0	27,242,006	0.0
07 TOTAL PUBLIC LIGHT	1,500	0.0	686,277	0.0	7,440,698	0.0	14,760,577	0.0	153,830,324	0.0
RESI. COLONY H-1 (76)	54	0.0	203,742	0.0	1,763,593	0.0	3,613,468	0.0	29,262,523	0.0
RESI. COLONY H-2 (79)	63	0.0	319,696	0.0	2,600,348	0.0	5,713,088	0.0	44,357,786	0.0
08 TOTAL RESI. COLONY	117	0.0	523,438	0.0	4,363,941	0.0	9,326,556	0.0	73,620,309	0.0
RAILWAY TRACTION J(82)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
CO-GENERATION J (85)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
GRAND TOTAL:-	3,445,357	100.0	1,005,889,881	100.0	10,006,237,493	100.0	13,677,337,305	100.0	128,180,124,619	100.0

CIRCLE WISE METER REPLACED FOR 06/2015 FESCO.

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MONTH	IST FAISALABAD					
	OTHER THAN CP-90		OUT OF CP-90		TOTAL	
	S/PHASE	3/PHASE	S/PHASE	3/PHASE	S/PHASE	3/PHASE
JUL-14	1114	48	2799	21	3913	69
AUG-14	1001	47	1551	24	2552	71
SEP-14	1383	42	3485	47	4868	89
OCT-14	1053	49	6897	38	7950	87
NOV-14	906	56	8818	83	9724	139
DEC-14	1054	33	15756	105	16810	138
JAN-15	1052	31	1704	115	2756	146
FEB-15	2159	47	1307	87	3466	134
MAR-15	4905	49	2194	42	7099	91
APR-15	4204	46	1467	38	5671	84
MAY-15	1701	38	1557	37	3258	75
JUN-15	2245	300	1759	37	4004	337
TOTAL	22777	786	49294	674	72071	1460
2ND FAISALABAD						
MONTH	OTHER THAN CP-90		OUT OF CP-90		TOTAL	
	S/PHASE	3/PHASE	S/PHASE	3/PHASE	S/PHASE	3/PHASE
JUL-14	1194	64	2350	19	3544	83
AUG-14	868	41	1481	13	2349	54
SEP-14	1409	56	2123	11	3532	67
OCT-14	1236	44	4039	26	5275	70
NOV-14	933	79	19164	111	20097	190
DEC-14	852	68	1681	32	2533	100
JAN-15	847	69	1681	20	2528	89
FEB-15	969	35	1418	16	2387	51
MAR-15	1858	43	1571	15	3429	58
APR-15	5306	41	1635	25	6941	66
MAY-15	2083	35	1619	13	3702	48
JUN-15	3012	35	1891	22	4903	57
TOTAL	20567	610	40653	323	61220	933
JHANG						
MONTH	OTHER THAN CP-90		OUT OF CP-90		TOTAL	
	S/PHASE	3/PHASE	S/PHASE	3/PHASE	S/PHASE	3/PHASE
JUL-14	1872	46	3501	5	5373	51
AUG-14	1762	32	2631	3	4393	35
SEP-14	1521	31	3443	3	4964	34
OCT-14	1659	20	5028	9	6687	29
NOV-14	1998	30	8846	5	10844	35
DEC-14	2017	27	19502	19	21519	46
JAN-15	2076	18	3974	7	6050	25
FEB-15	33112	36	1501	3	34613	39
MAR-15	20235	28	2538	4	22773	32
APR-15	8488	33	2353	3	10841	36
MAY-15	3724	16	1878	9	5602	25
JUN-15	4053	22	2336	5	6389	27
TOTAL	82517	339	57531	75	140048	414
SARGODHA						
MONTH	OTHER THAN CP-90		OUT OF CP-90		TOTAL	
	S/PHASE	3/PHASE	S/PHASE	3/PHASE	S/PHASE	3/PHASE
JUL-14	1068	15	3275	7	4343	22
AUG-14	4077	13	2436	28	6513	41
SEP-14	1687	15	3860	24	5547	39
OCT-14	950	11	4050	9	5000	20
NOV-14	1337	3	22252	19	23589	22
DEC-14	1214	19	6381	29	7595	48
JAN-15	6118	26	2708	15	8826	41
FEB-15	45256	37	2066	7	47322	44
MAR-15	6687	13	3346	15	10033	28
APR-15	8789	13	2361	17	11150	30
MAY-15	5189	16	3272	16	8461	32
JUN-15	6945	11	3730	10	10675	21
TOTAL	89317	192	59737	196	149054	388
FESCO						
MONTH	OTHER THAN CP-90		OUT OF CP-90		TOTAL	
	S/PHASE	3/PHASE	S/PHASE	3/PHASE	S/PHASE	3/PHASE
JUL-14	5248	173	11925	52	17173	225
AUG-14	7708	133	8099	68	15807	201
SEP-14	6000	144	12911	85	18911	229
OCT-14	4898	124	20014	82	24912	206
NOV-14	5174	168	59080	218	64254	386
DEC-14	5137	147	43320	185	48457	332
JAN-15	10093	144	10067	157	20160	301
FEB-15	81496	155	6292	113	87788	268
MAR-15	33685	133	9649	76	43334	209
APR-15	26787	133	7816	83	34603	216
MAY-15	12697	105	8326	75	21023	180
JUN-15	16255	368	9716	74	25971	442
TOTAL	215178	1927	207215	1268	422393	3195

TRANSMISSION AND DISTRIBUTION LOSSES 2014-15 INCOMPARISON WITH 2013-14

FESCO

Page No. 01

Page No. 01																
MONTH/ PROG:	PERIOD						MONTH/ PROG:	PERIOD						INC/ DEC	INC/ DEC	INC/ DEC
	2014 - 2015							2013 - 2014								
	U/REC: 132 KV	U/REC: 11 KV	UNIT/ SOLD	%AGE LOSS 132 KV	%AGE LOSS 11 KV	%AGE LOSS TOT:		U/REC: 132 KV	U/REC: 11 KV	UNIT/ SOLD	%AGE LOSS 132 KV	%AGE LOSS 11 KV	%AGE LOSS TOT:	%AGE LOSS 132 KV	%AGE LOSS 11 KV	%AGE LOSS TOT:
07/2014	1175.65	1154.47	916.43	1.8	20.6	22.0	07/2013	1095.51	1066.34	884.97	2.7	17.0	19.2	-0.9	3.6	2.8
PROG:	1175.65	1154.47	916.43	1.8	20.6	22.0	PROG:	1095.51	1066.34	884.97	2.7	17.0	19.2	-0.9	3.6	2.8
08/2014	1199.35	1176.59	1077.60	1.9	8.4	10.2	08/2013	1123.45	1102.80	961.77	1.8	12.8	14.4	0.1	-4.4	-4.2
PROG:	2375.01	2331.06	1994.03	1.9	14.5	16.0	PROG:	2218.96	2169.14	1846.74	2.2	14.9	16.8	-0.3	-0.4	-0.8
09/2014	1058.76	1036.40	981.72	2.1	5.3	7.3	09/2013	1081.66	1064.71	993.32	1.6	6.7	8.2	0.5	-1.4	-0.9
PROG:	3433.77	3367.46	2975.75	1.9	11.6	13.3	PROG:	3300.62	3233.84	2840.06	2.0	12.2	14.0	-0.1	-0.6	-0.7
10/2014	958.94	932.81	888.21	2.7	4.8	7.4	10/2013	957.29	940.64	888.98	1.7	5.5	7.1	1.0	-0.7	0.3
PROG:	4392.72	4300.27	3863.96	2.1	10.1	12.0	PROG:	4257.91	4174.48	3729.05	2.0	10.7	12.4	0.1	-0.6	-0.4
11/2014	755.30	739.42	730.21	2.1	1.2	3.3	11/2013	778.45	766.32	753.41	1.6	1.7	3.2	0.5	-0.5	0.1
PROG:	5148.01	5039.70	4594.17	2.1	8.8	10.8	PROG:	5036.36	4940.80	4482.46	1.9	9.3	11.0	0.2	-0.5	-0.2
12/2014	755.79	736.97	716.21	2.5	2.8	5.2	12/2013	804.50	790.94	760.20	1.7	3.9	5.5	0.8	-1.1	-0.3
PROG:	5903.80	5776.66	5310.38	2.2	8.1	10.1	PROG:	5840.86	5731.74	5242.66	1.9	8.5	10.2	0.3	-0.4	-0.1
01/2015	669.86	666.73	654.62	0.5	1.8	2.3	01/2014	706.10	689.82	661.70	2.3	4.1	6.3	-1.8	-2.3	-4.0
PROG:	6573.66	6443.39	5965.00	2.0	7.4	9.3	PROG:	6546.96	6421.56	5904.36	1.9	8.1	9.8	0.1	-0.7	-0.5
02/2015	694.20	677.51	644.15	2.4	4.9	7.2	02/2014	691.52	674.15	649.31	2.5	3.7	6.1	-0.1	1.2	1.1
PROG:	7267.87	7120.90	6609.15	2.0	7.2	9.1	PROG:	7238.49	7095.71	6553.66	2.0	7.6	9.5	0.0	-0.4	-0.4
03/2015	756.63	745.51	674.50	1.5	9.5	10.9	03/2014	759.93	740.95	671.99	2.5	9.3	11.6	-1.0	0.2	-0.7
PROG:	8024.49	7866.41	7283.65	2.0	7.4	9.2	PROG:	7998.41	7836.66	7225.65	2.0	7.8	9.7	0.0	-0.4	-0.5
04/2015	869.60	857.25	765.93	1.4	10.7	11.9	04/2014	825.92	813.46	727.83	1.5	10.5	11.9	-0.1	0.2	0.0
PROG:	8894.09	8723.65	8049.58	1.9	7.7	9.5	PROG:	8824.34	8650.12	7953.48	2.0	8.1	9.9	-0.1	-0.4	-0.4
05/2015	1171.62	1130.83	950.76	3.5	15.9	18.9	05/2014	1017.87	1000.17	836.21	1.7	16.4	17.8	1.8	-0.5	1.1
PROG:	10065.71	9854.48	9000.34	2.1	8.7	10.6	PROG:	9842.21	9650.30	8789.69	1.9	8.9	10.7	0.2	-0.2	-0.1
06/2015	1177.66	1168.40	1005.89	0.8	13.9	14.6	06/2014	1067.65	1047.71	892.02	1.9	14.9	16.5	-1.1	-1.0	-1.9
PROG:	11243.37	11022.88	10006.23	2.0	9.2	11.0	PROG:	10909.86	10698.04	9884.74	1.9	14.9	16.5	-1.1	-1.0	-1.9

ANALYSIS OF RECEIVABLES OF DIVISIONS
DAYS BILLING OUTSTANDING AS RECEIVABLES
FOR THE PERIOD ENDING 30-06-2015

Fig. In Min

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SR. NO.	CO DE	NAME OF DIVISION	06/2014		06/2015		%INC.DEC.		%SHARE	
			RECEIV-ABLES	BILING RECE. DAYS	RECEIV-ABLES	BILING RECE. DAYS	RECEIV-ABLES	BILING RECE. DAYS	DIV. JUN. 2015	CUMM LATVE DAYS
1	312	C/LINE	437	12	438	12	0	0	5	5
2	313	A/PUR	349	13	356	13	2	-1	4	10
3	314	J/WALA	349	27	341	26	-2	-3	4	14
4	315	CK.JHUMRA	354	10	331	8	-7	-17	4	18
5	316	CHINIOT	798	50	729	46	-9	-8	9	27
6	321	N/ABAD	345	15	411	18	19	16	5	33
7	322	G.M.ABAD	463	18	578	22	25	22	7	40
8	323	SAMUNDRI	706	63	678	58	-4	-8	8	48
9	324	P/COLONY	368	17	489	21	33	26	6	54
10	331	JHANG	825	47	831	48	1	2	10	65
11	332	T.T.SINGH	113	18	153	24	36	29	2	67
12	333	GOJRA	170	21	199	24	17	15	2	69
13	335	BHAKKAR	337	44	367	46	9	4	5	74
14	336	SUL/BAHOO	263	31	296	35	12	13	4	78
15	337	KAMALIA	365	44	385	45	5	3	5	82
16	341	SRG-1ST	82	10	108	13	32	20	1	84
17	342	SRG-2ND	208	18	193	16	-7	-13	2	86
18	343	BHALWAL	124	18	129	19	4	3	2	88
19	344	J/ABAD	336	14	328	14	-2	-2	4	92
20	345	MIANWALI	845	41	446	23	-47	-44	6	98
21	346	SRG-III	168	23	199	26	18	12	2	100
FESCO, FSD.			8006	23	7984	23	0	-3	100	

**ANALYSIS OF REVENUE, BILLING AND COLLECTION BY DIVISIONS
FOR THE PERIOD ENDING 30-06-2015**

Fig. In Mln

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SR. NO.	CO DE	NAME OF DIVISION	07/2013 TO 06/2014				07/2014 TO 06/2015				% INC./ DEC			
			REVE NUE. BILED MRS.	REVE NUE. COLL. MRS.	COLL. EFFICIENCY %	AVG. REVE BILED RS/KWH	REVE NUE. BILED MRS.	REVE NUE. COLL. MRS.	COLL. EFFICIENCY %	AVG. REVE BILED RS/KWH	REVE NUE. BILED	REVE NUE. COLL.	COLL. EFFICIENCY	AVG. REVE BILED /KWH
1	312	C/LINE	12941.04	12880.73	99.5	14.47	12981.22	13013.08	100.2	14.30	0.3	1.0	0.7	-1.2
2	313	A/PUR	9673.22	9710.64	100.4	13.93	9934.57	9927.61	99.9	13.98	2.7	2.2	-0.5	0.4
3	314	J/WALA	4683.40	4717.35	100.7	12.19	4730.75	4738.36	100.2	12.02	1.0	0.4	-0.6	-1.4
4	315	CK.JHUMRA	13236.57	13362.15	100.9	13.57	14852.80	14875.85	100.2	12.99	12.2	11.3	-0.8	-4.3
5	316	CHINIOT	5827.60	5827.22	100.0	12.41	5780.07	5851.72	101.2	12.50	-0.8	0.4	1.2	0.8
6	321	N/ABAD	8195.15	8137.31	99.3	13.65	8423.03	8357.98	99.2	13.57	2.8	2.7	-0.1	-0.5
7	322	G.M.ABAD	9285.28	9210.97	99.2	13.77	9540.86	9426.48	98.8	13.74	2.8	2.3	-0.4	-0.2
8	323	SAMUNDRI	4097.95	4093.33	99.9	10.97	4295.32	4324.36	100.7	11.19	4.8	5.6	0.8	1.9
9	324	P/COLONY	7975.10	7904.83	99.1	13.57	8364.39	8246.19	98.6	13.85	4.9	4.3	-0.5	2.1
10	331	JHANG	6374.28	6321.49	99.2	12.48	6263.75	6259.62	99.9	12.29	-1.7	-1.0	0.8	-1.5
11	332	T.T.SINGH	2240.86	2239.81	100.0	11.08	2350.01	2315.50	98.5	11.19	4.9	3.4	-1.4	1.0
12	333	GOJRA	2967.94	2965.52	99.9	11.26	3019.40	2991.27	99.1	11.08	1.7	0.9	-0.9	-1.6
13	335	BHAKKAR	2765.99	2709.58	98.0	10.24	2906.91	2876.30	98.9	10.30	5.1	6.2	1.0	0.6
14	336	SUL/BAHOO	3130.49	3104.50	99.2	11.33	3120.53	3089.13	99.0	11.58	-0.3	-0.5	-0.2	2.3
15	337	KAMALIA	3048.25	3043.17	99.8	11.31	3127.74	3108.97	99.4	11.43	2.6	2.2	-0.4	1.1
16	341	SRG-1ST	2866.09	2848.05	99.4	12.73	3148.14	3122.19	99.2	13.16	9.8	9.6	-0.2	3.4
17	342	SRG-2ND	4107.34	4036.08	98.3	12.55	4410.14	4425.59	100.4	12.96	7.4	9.7	2.1	3.3
18	343	BHALWAL	2485.53	2488.51	100.1	10.99	2500.54	2496.08	99.8	10.89	0.6	0.3	-0.3	-0.9
19	344	J/ABAD	8512.39	8759.42	102.9	13.27	8505.89	8514.22	100.1	12.88	-0.1	-2.8	-2.7	-2.9
20	345	MIANWALI	7593.50	7719.90	101.7	13.07	7106.33	7506.82	105.6	12.75	-6.4	-2.8	3.9	-2.4
21	346	SRG-III	2657.52	2647.74	99.6	11.33	2817.56	2787.81	98.9	11.67	6.0	5.3	-0.7	3.0
FESCO, FSD.			124665.47	124728.30	100.1	12.88	128179.95	128255.13	100.1	12.81	2.8	2.8	0.0	-0.5

ANALYSIS OF POWER DISTRIBUTION ENERGY LOSSES BY DIVISION
FOR THE PERIOD ENDING 30-06-2015

Fig. In Min

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SR. NO.	CO DE	NAME OF DIVISION	07/2013 TO 06/2014				07/2014 TO 06/2015				% INC./ DEC				%Share IN UNIT LOSS	
			UNITS RECE:	UNITS BILL	UNITS LOST	LOS SES	UNITS RECE:	UNITS BILL	UNITS LOST	LOS SES	UNITS RECE:	UNITS BILL	UNITS LOST	LOS SES	DIVI SION	CUMM- ULATIVE
			MKWH	MKWH	MKWH	%AGE	MKWH	MKWH	MKWH	%AGE	MKWH	MKWH	MKWH	%AGE		
1	312	C/LINE	960.98	894.11	66.87	7.0	971.29	907.58	63.70	6.6	10.31	13.47	-4.73	-5.74	6.27	6.27
2	313	A/PUR	736.61	694.44	42.17	5.7	753.88	710.66	43.22	5.7	17.27	16.22	2.49	0.14	4.25	10.52
3	314	J/WALA	437.09	384.29	52.80	12.1	446.13	393.52	52.61	11.8	9.04	9.23	-0.36	-2.38	5.17	15.69
4	315	CK.JHUMRA	1023.49	975.36	48.13	4.7	1186.29	1143.41	42.88	3.6	162.80	168.05	-10.92	-23.14	4.22	19.91
5	316	CHINIOT	550.50	469.72	80.78	14.7	540.22	462.41	77.81	14.4	-10.28	-7.31	-3.67	-1.84	7.65	27.56
6	321	N/ABAD	657.23	600.51	56.72	8.6	679.23	620.51	58.71	8.6	22.00	20.00	3.51	0.16	5.77	33.34
7	322	G.M.ABAD	742.21	674.31	67.90	9.1	768.34	694.59	73.75	9.6	26.13	20.28	8.61	4.92	7.25	40.59
8	323	SAMUNDRI	433.99	373.40	60.59	14.0	445.32	384.00	61.31	13.8	11.33	10.60	1.19	-1.38	6.03	46.62
9	324	P/COLONY	647.15	587.83	59.32	9.2	666.32	604.13	62.19	9.3	19.17	16.30	4.83	1.82	6.12	52.74
10	331	JHANG	574.66	510.61	64.05	11.1	570.69	509.56	61.13	10.7	-3.97	-1.05	-4.56	-3.89	6.01	58.75
11	332	T.T.SINGH	231.62	202.24	29.38	12.7	240.19	210.00	30.19	12.6	8.57	7.76	2.75	-0.92	2.97	61.72
12	333	GOJRA	291.73	263.56	28.17	9.7	301.53	272.62	28.91	9.6	9.80	9.06	2.62	-0.71	2.84	64.57
13	335	BHAKKAR	324.20	270.18	54.02	16.7	338.15	282.24	55.91	16.5	13.95	12.06	3.49	-0.78	5.50	70.06
14	336	SUL/BAHOO	317.29	276.35	40.94	12.9	308.22	269.37	38.86	12.6	-9.07	-6.98	-5.09	-2.30	3.82	73.89
15	337	KAMALIA	304.40	269.47	34.93	11.5	308.56	273.62	34.94	11.3	4.16	4.15	0.02	-1.33	3.44	77.32
16	341	SRG-1ST	243.28	225.16	18.12	7.4	258.12	239.22	18.90	7.3	14.84	14.06	4.30	-1.69	1.86	79.18
17	342	SRG-2ND	361.69	327.31	34.38	9.5	375.16	340.33	34.82	9.3	13.47	13.02	1.29	-2.35	3.43	82.61
18	343	BHALWAL	259.45	226.15	33.30	12.8	262.33	229.68	32.66	12.4	2.88	3.53	-1.93	-3.01	3.21	85.82
19	344	J/ABAD	681.30	641.24	40.06	5.9	698.81	660.19	38.62	5.5	17.51	18.95	-3.59	-6.01	3.80	89.62
20	345	MIANWALI	659.40	580.89	78.51	11.9	636.89	557.17	79.72	12.5	-22.51	-23.72	1.54	5.13	7.84	97.46
21	346	SRG-III	259.73	234.58	25.15	9.7	267.22	241.40	25.82	9.7	7.49	6.82	2.68	-0.20	2.54	100.00
		FESCO, FSD.	10698.01	9681.71	1016.30	9.5	11022.88	10006.23	1016.65	9.2	324.87	324.52	0.03	-2.91	100.00	

**LIST OF DIVISIONS OF
AVERAGE REVENUE BILLED PER KWH
FOR THE PERIOD ENDING 30-06-2015**

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SR. NO.	CO DE	NAME OF DIVISION	AV. REVENUE BILLED /KWH RS.		
			06/2014	06/2015	INC/ DEC
2	1312	C/LINE	14.47	14.30	-0.17
3	1313	A/PUR	13.93	13.98	0.05
4	1314	J/WALA	12.19	12.02	-0.17
5	1315	CK.JHUMRA	13.57	12.99	-0.58
6	1316	CHINIOT	12.41	12.50	0.09
7	1321	N/ABAD	13.65	13.57	-0.07
8	1322	G.M.ABAD	13.77	13.74	-0.03
9	1323	SAMUNDRI	10.97	11.19	0.21
1	1324	P/COLONY	12.48	12.29	-0.19
10	1331	JHANG	12.48	12.29	-0.19
11	1332	T.T.SINGH	11.08	11.19	0.11
12	1333	GOJRA	11.26	11.08	-0.19
13	1335	BHAKKAR	10.24	10.30	0.06
14	1336	SULTAN BAHO	11.33	11.58	0.26
15	1337	KAMALIA	11.31	11.43	0.12
16	1341	SRG-1ST	12.73	13.16	0.43
17	1342	SRG-2ND	12.55	12.96	0.41
18	1343	BHALWAL	10.99	10.89	-0.10
19	1344	J/ABAD	13.27	12.88	-0.39
20	1345	MIANWALI	13.07	12.75	-0.32
21	1346	SARGODHA-III	11.33	11.67	0.34
		FESCO, FSD.	12.88	12.81	-0.07

**LIST OF DIVISIONS OF
%AGE DISTRIBUTION ENERGY LOSSES
FOR THE PERIOD ENDING 30-06-2015**

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SR. NO.	CO DE	NAME OF DIVISION	%AGE LOSS			%AGE SHARE IN LOSS	
			06/2014	06/2015	INC/ DEC	% SHARE 06/2015	CUMMU LATIVE 06/2015
1	1312	C/LINE	7.0	6.6	-0.4	6.3	6.3
2	1313	A/PUR	5.7	5.7	0.0	4.3	10.5
3	1314	J/WALA	12.1	11.8	-0.3	5.2	15.7
4	1315	CHAK JHUMRA	4.7	3.6	-1.1	5.2	20.9
5	1316	CHINIOT	14.7	14.4	-0.3	5.2	26.0
6	1321	N/ABAD	8.6	8.6	0.0	5.8	31.8
7	1322	G.M.ABAD	9.1	9.6	0.5	7.3	39.1
8	1323	SAMUNDRI	14.0	13.8	-0.2	6.0	45.1
9	1324	P/COLONY	11.1	10.7	-0.4	6.1	51.2
10	1331	JHANG	11.1	10.7	-0.4	6.0	51.1
11	1332	T.T.SINGH	12.7	12.6	-0.1	3.0	54.1
12	1333	GOJRA	9.7	9.6	-0.1	2.8	56.9
13	1335	BHAKKAR	16.7	16.5	-0.1	5.5	62.4
14	1336	SULTAN BAHO	12.9	12.6	-0.3	3.8	66.2
15	1337	KAMALIA	11.5	11.3	-0.2	3.8	70.1
16	1341	SRG-1ST	7.4	7.3	-0.1	1.9	71.9
17	1342	SRG-2ND	9.5	9.3	-0.2	3.4	75.4
18	1343	BHALWAL	12.8	12.4	-0.4	3.2	78.6
19	1344	J/ABAD	5.9	5.5	-0.4	3.8	82.4
20	1345	MIANWALI	11.9	12.5	0.6	7.8	90.2
21	1346	SARGODHA-III	9.7	9.7	0.0	7.8	98.0
		FESCO, FSD.	9.5	9.2	-0.3	100.0	

CATEGORY WISE RECEIVABLES
ENDING 06/2014, 05/2015 & 06/2015
FESCO

(Fig. In Million)

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SR NO	CATEGORY	RECEIVABLES		
		06/2014	05/2015	06/2015
1-	F/GOVT AGENCIES	-7.67	-39.27	-36.86
2-	P/GOVT AGENCIES	-208.96	-42.04	-143.17
3-	TOTAL GOVT (1+2)	-216.63	-81.31	-180.03
4-	TOTAL PRIVATE	8222.10	8533.33	8164.53
5-	GRAND TOTAL (3+4)	8005.47	8452.02	7984.50
6-	RECE. AS %AGE OF ANNUAL ASSESS:	6.42	6.69	6.23
i-	SPILL OVER	2768.64	3248.03	3231.58
ii-	DEFERRED AMOUNT	958.32	1054.75	971.58
iii-	SUBSIDIES	2565.73	2772.36	2355.77
iv-	UN-IDENT: CASH	13.02	10.48	11.35
a-	P.DISCONNECTED	456.74	557.09	534.55
b-	RUN. DEFAULTERS	1002.03	837.74	1019.66
c-	UNPAID DEBT	483.65	73.83	62.77
v-	SUB TOTAL(a+b+c)	1942.43	1468.66	1616.98
d-	NET ARREARS (ii+v)	2900.75	2523.40	2588.56
e-	TOTAL (i+ii+iii-iv+v)	8222.10	8533.33	8164.53

CATEGORY WISE RECEIVABLES
ENDING 06/2014, 05/2015 & 06/2015
1ST CIRCLE FESCO

(Fig. In Million)

SR NO	CATEGORY	RECEIVABLES		
		06/2014	05/2015	06/2015
1-	F/GOVT AGENCIES	-3.33	-17.99	-18.19
2-	P/GOVT AGENCIES	-18.85	26.90	3.11
3-	TOTAL GOVT (1+2)	-22.18	8.91	-15.08
4-	TOTAL PRIVATE	2308.56	2330.82	2209.92
5-	GRAND TOTAL (3+4)	2286.38	2339.73	2194.84
6-	RECE. AS %AGE OF ANNUAL ASSESS:	4.93	4.91	4.55
i-	SPILL OVER	687.87	766.87	810.16
ii-	DEFERRED AMOUNT	617.54	501.04	440.94
iii-	SUBSIDIES	608.01	659.62	497.66
iv-	UN-IDENT: CASH	5.52	4.71	4.53
a-	P.DISCONNECTED	143.45	144.43	134.10
b-	RUN. DEFAULTERS	253.95	240.44	310.01
c-	UNPAID DEBT	3.24	23.12	21.54
v-	SUB TOTAL(a+b+c)	400.64	407.99	465.66
e-	NET ARREARS (ii+v)	1018.17	909.03	906.60
f-	TOTAL (i+ii+iii-iv+v)	2308.53	2330.79	2209.89

**DIVISION-WISE BREAK-UP OF RECEIVABLES
AGAINST RUNNING PRIVATE CONSUMERS**

Fig. In Million

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SR. NO	NAME OF DIVISION	RECEIVABLE			SPILL OVER			DEFERRED AMOUNT			PERMANENT DEFAULTERS			TOTAL ARREAR AGAINST RUNNING DEFAULTERS		
		05/2015	06/2015	06/2014	05/2015	06/2015	06/2014	05/2015	06/2015	06/2014	05/2015	06/2015	06/2014	05/2015	06/2015	06/2014
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	C/LINE	408.45	449.32	412.63	211.17	237.30	198.00	90.40	90.19	132.30	7.51	4.85	10.57	70.45	90.75	82.53
2	A/PUR	300.07	363.44	342.99	154.81	205.00	151.57	71.83	69.91	131.65	4.91	4.02	2.68	43.90	61.53	52.76
3	J/WALA	360.61	341.59	354.85	97.88	102.72	81.83	43.91	41.99	57.33	34.61	33.39	37.90	47.94	57.24	46.30
4	CK.JHUMRA	361.97	330.88	360.69	55.91	68.92	55.64	238.23	185.98	243.59	19.87	19.51	21.78	15.08	26.16	15.48
5	CHINIOT	899.72	724.69	814.60	247.10	196.22	209.54	56.67	52.88	52.67	77.53	72.34	70.51	63.07	74.32	56.88
1	1ST FSD	2330.82	2209.92	2285.74	766.87	810.16	696.58	501.04	440.94	617.54	144.43	134.10	143.45	240.44	310.01	253.95
6	N/ABAD	365.75	407.64	325.49	247.76	274.59	220.24	19.79	19.69	9.83	10.06	9.03	9.73	53.29	74.72	64.66
7	G.M.ABAD	458.19	575.21	436.30	289.56	403.19	288.54	22.92	20.13	13.28	12.76	12.75	8.93	67.36	86.52	69.46
8	SAMUNDRI	798.06	677.08	727.44	230.28	190.88	177.86	20.08	15.99	21.00	79.01	81.02	69.20	64.88	99.13	87.02
9	P/COLONY	398.82	488.02	328.24	214.52	275.25	199.19	47.27	45.12	19.62	32.26	32.88	17.84	75.10	106.28	84.40
2	2ND FSD	2020.82	2147.95	1817.46	982.12	1143.91	885.83	110.06	100.93	63.73	134.08	135.68	105.70	260.63	366.64	305.54
10	JHANG	920.38	829.39	840.29	277.90	211.20	221.70	57.97	58.42	109.27	73.27	69.49	50.45	68.31	90.13	67.27
11	T.T.SINGH	154.87	147.80	129.98	72.17	65.96	57.29	9.55	11.12	2.88	3.87	3.16	4.02	16.57	18.03	15.22
12	GOJRA	236.30	199.19	189.67	96.86	82.17	70.52	19.44	12.28	2.18	5.71	4.45	6.30	22.35	15.49	12.81
13	BHAKKAR	367.49	363.20	337.49	115.47	128.49	115.11	2.98	2.99	1.93	78.80	77.86	58.23	61.55	51.91	63.19
14	SULTAN-BAHU	331.70	295.78	285.81	132.96	116.05	109.78	4.53	3.64	1.66	23.86	21.05	15.96	39.21	33.65	31.75
15	KAMALIA	435.60	384.20	394.77	140.03	117.79	122.37	9.58	4.11	2.17	14.58	13.76	10.26	17.38	16.66	19.37
3	JHANG CIR:	2446.34	2219.56	2178.02	835.39	721.66	696.77	104.06	92.54	120.09	200.08	189.78	145.22	225.36	225.86	209.61
16	SRG-1ST	113.60	112.47	111.45	91.79	91.72	89.39	1.32	0.76	1.69	0.40	0.51	0.03	9.81	9.31	9.35
17	SRG-2ND	210.19	185.17	204.03	120.27	103.77	111.24	7.47	8.54	11.23	19.42	16.81	18.10	25.52	20.00	25.28
18	BHALWAL	147.77	129.14	152.70	73.07	57.72	71.43	4.52	3.04	3.76	12.68	12.51	13.23	19.58	19.29	21.63
19	J/ABAD	343.67	326.66	388.45	66.41	50.88	68.21	170.70	169.27	103.76	0.95	0.81	1.57	14.06	21.72	27.77
20	MIANWALI	728.22	639.63	1099.62	204.62	136.64	163.81	147.22	147.10	31.06	41.96	42.05	25.50	25.84	32.06	131.52
21	SRG-III	191.86	194.04	175.72	107.49	115.12	91.01	8.37	8.45	5.46	3.10	2.30	3.94	16.49	14.76	17.38
4	SRG: CIR:	1735.31	1587.11	2131.97	663.65	555.85	595.09	339.59	337.17	156.96	78.50	74.98	62.37	111.30	117.14	232.94
	FESCO	8533.33	8164.54	8413.21	3248.03	3231.58	2874.27	1054.75	971.58	958.32	557.09	534.55	456.74	837.74	1019.66	1002.03

222 B. J. G. R. M. J. G. R. M. J. G. R. M.

2010-01-15

DIVISION-WISE ANALYSIS OF ASSESSMENT, PAYMENT
AND PAYMENT % AGE FOR 05/2015. (PRIVATE CONSUMERS)

PAGE # 30

1	CATEGORY	REC	BILLING					PAYMENT RECEIVED AGAINST						REC	PAYMENT % AGE			
		EIV	BILL	SPILL	SPILL	CUR:	COM:		PRV:	DED:	CUR:	TOT-	COM:	EIV		COM:		TOTAL
		ABLE	ING	OVER	OVER	MON:	PTED	ARR	SPL:	AT	MON:	AL	ASS:	ABLE	TOT-	ASS:	ARR-	PAYMENT
		END	FOR			ASS:	ASS:	EAR	OV-	SO	ASS:	(C09+	IN	END	AL		EAR	AGAINST
		ING				(C4	(C4		ER	UR		C10+	(C10)	ING	(C13	(C14	C09/C7	COM:ASS
					-C6	-C6		IN	CE		C11+			/C4	/C08	*100	(C13/C08	
		05/2015	06/2015	05/2015	06/2015		+C5)		C5)		C12)		06/2015	*100)	*100)		*100)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	C/LINE	408.45	1316.37	211.17	237.30	1079.06	1290.23	75.24	194.09	6.81	999.55	1275.69	1193.64	449.32	96.91	92.51	18.42	98.87
2	A/PUR	300.07	1109.95	154.81	205.00	904.95	1059.77	51.94	142.08	18.51	834.17	1046.70	976.25	363.44	94.30	92.12	17.31	98.77
3	J/WALA	360.61	489.16	97.88	102.72	386.45	484.32	45.77	84.31	38.94	339.19	508.21	423.47	341.59	103.89	87.44	12.69	104.93
4	CHAK JHUMRA	361.97	1302.45	55.91	68.92	1233.51	1289.43	74.80	49.84	4.31	1204.61	1333.56	1254.44	330.88	102.39	97.29	20.66	103.42
5	CHINIOT	899.72	550.44	247.10	196.22	354.22	601.32	59.08	222.35	146.08	298.08	725.59	520.42	724.69	131.82	86.55	6.57	120.67
1	1ST FSD	2330.82	4768.37	766.87	810.16	3958.19	4725.07	306.83	692.67	214.65	3675.60	4889.75	4368.22	2209.92	102.55	92.45	13.16	103.49
6	N/ABAD	365.75	964.31	247.76	274.59	689.73	937.49	53.07	222.67	9.22	637.54	922.50	860.20	407.64	95.66	91.76	14.51	98.40
7	G.M.ABAD	458.19	1055.16	289.56	403.19	651.97	941.52	63.67	265.13	16.52	592.85	938.17	857.97	575.21	88.91	91.13	13.90	99.64
8	SAMUNDRI	798.06	456.98	230.28	190.88	266.11	496.39	53.39	193.83	132.98	197.78	577.98	391.61	677.08	126.48	78.89	6.69	116.44
9	P/COLONY	398.82	963.23	214.52	275.25	688.00	902.50	71.36	189.24	4.02	609.40	874.02	798.64	488.02	90.74	88.49	17.89	97
2	2ND FSD	2020.82	3439.68	982.12	1143.91	2295.81	3277.90	241.49	870.87	162.74	2037.57	3312.67	2908.42	2147.95	96.31	88.73	11.95	101.06
10	JHANG	920.38	613.28	277.90	211.20	402.08	679.97	60.94	240.21	62.99	340.34	704.48	580.55	829.39	114.87	85.38	6.62	103.60
11	T.T.SINGH	154.87	238.02	72.17	65.96	172.07	244.24	18.31	64.80	6.60	155.50	245.21	220.29	147.80	103.02	90.19	11.82	100.40
12	GOJRA	236.30	334.56	96.86	82.17	252.38	349.25	26.10	91.61	11.96	242.04	371.71	333.63	199.19	111.10	95.53	11.05	106.43
13	BHAKKAR	367.49	330.78	115.47	128.49	202.28	317.76	55.06	104.30	14.21	161.52	335.09	265.82	363.20	101.30	83.65	14.98	105.45
14	SULTAN BAHU	331.70	322.67	132.96	116.05	206.62	339.59	43.00	122.52	17.83	175.25	358.60	297.78	295.78	111.14	87.69	12.96	105.60
15	KAMALIA	435.60	317.64	140.03	117.79	199.86	339.89	28.21	134.30	32.70	173.99	369.20	308.28	384.20	116.23	90.70	6.48	108.62
3	JHANG CIR.	2446.34	2156.95	835.39	721.66	1435.29	2270.70	231.62	757.74	146.29	1248.64	2384.29	2006.35	2219.56	110.54	88.36	9.47	105.00
16	SRG-1ST	113.60	308.54	91.79	91.72	216.83	308.63	12.84	91.61	2.05	203.19	309.69	294.82	112.47	100.37	95.53	11.30	100.34
17	SRG-2ND	210.19	404.22	120.27	103.77	300.47	420.73	31.40	117.12	4.82	275.98	429.32	393.11	185.17	106.21	93.44	14.94	102.04
18	BHALWAL	147.77	263.65	73.07	57.72	205.94	279.00	30.02	67.41	4.84	180.06	282.33	247.48	129.14	107.09	88.70	20.32	101.19
19	J/ABAD	343.67	688.32	66.41	50.88	637.46	703.88	26.47	64.84	7.61	606.41	705.33	671.26	326.66	102.47	95.37	7.70	100.21
20	MIANWALI	728.22	562.56	204.62	136.64	425.91	630.53	38.75	195.02	42.39	375.20	651.36	570.22	639.63	115.78	90.44	5.32	103.30
21	SRG-3RD	191.86	328.45	107.49	115.12	213.33	320.82	21.03	105.50	9.03	190.71	326.27	296.22	194.04	99.34	92.33	10.96	104.70
4	SRG.CIR	1735.31	2555.74	663.65	555.85	1999.94	2663.59	160.51	641.50	70.74	1831.55	2704.30	2473.11	1587.11	105.81	92.85	9.25	104.53
	FESCO. FSD.	8533.33	12920.74	3248.03	3231.58	9689.23	12937.26	940.45	2962.78	594.42	8793.36	13291.01	11756.10	8164.54	102.87	90.87	11.02	102.73

**CATEGORY WISE ANALYSIS OF ASSESSMENT, PAYMENT AND PAYMENT % AGE FOR 06/2015.
IN RESPECT OF FESCO, FAISALABAD**

PAGE # 4

Fig.In Mln

	CATEGORY	REC	BILLING					PAYMENT RECEIVED AGAINST						REC	PAYMENT % AGE			
		EIV	BILL	SPILL	SPILL	CUR:	COM:		PRV:	DED:	CUR:	TOT-	COM:	EIV		COM:		TOTAL
		ABLE	ING	OVER	OVER	MON:	PTED	ARR	SPL:	AT	MON:	AL	ASS:	ABLE	TOT-	ASS:	ARR-	PAYMENT
		END	FOR			ASS:	ASS:	EAR	OV-	SO	ASS:	(C09+	IN	END	AL		EAR	AGAINST
		ING			(C4	(C4		ER	UR		C10+	(C10	ING	(C13	(C14	C09/C7	COM:ASS:	
					-C6	-C6		IN	CE		C11+			/C4	/C08	*100	(C13/C08	
		05/2015	06/2015	05/2015	06/2015	+C5)		C5)			C12)		06/2015	*100)	*100)		*100)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	FED/GOVT:																	
	DEPT:	-45.54	448.93	1.28	1.03	447.91	449.18	8.65	1.60	8.00	427.88	446.13	429.47	-42.76	99.38	95.61	-18.99	99.32
	A/BODIES	5.94	66.91	4.37	4.43	62.48	66.85	1.08	4.24	0.00	61.88	67.20	66.10	5.66	100.43	98.88	18.18	100.52
	L/BODIES	0.35	1.51	0.34	0.21	1.30	1.64	0.01	0.34	0.00	1.29	1.64	1.63	0.22	108.61	99.39	2.86	100.00
1	FED. GOVT	-39.25	517.35	5.99	5.67	511.69	517.67	9.74	6.18	8.00	491.05	514.97	497.20	-36.88	99.54	96.05	-24.82	99.48
2	A.J & K																	
3	PRV/GOVT:	-42.05	239.21	70.83	31.45	207.75	278.63	36.66	56.28	58.84	188.55	340.33	244.83	-143.17	142.27	87.87	-87.18	122.14
4	TOT: GOVT:	-81.30	756.56	76.82	37.12	719.44	796.30	46.40	62.46	66.84	679.60	855.30	742.03	-180.05	113.05	93.18	-57.07	107.41
	PRIVATE																	
	DOMESTIC	2750.51	6616.73	1275.62	1524.15	4092.60	5368.24	624.16	1133.53	78.96	3386.53	5223.18	4520.09	3143.87	92.99	84.20	22.69	97.30
	COMM:	525.30	141.12	368.76	370.91	770.24	1138.98	105.59	342.19	0.00	685.17	1132.95	1027.37	533.64	99.28	90.20	20.10	99.47
	AGRI:	3489.84	615.46	898.59	514.76	100.71	999.30	68.01	825.64	515.46	2.36	1411.47	827.98	2693.85	229.34	82.86	1.95	141.25
	INDUS:	1763.03	5524.20	694.81	812.83	4711.36	5406.18	141.38	651.52	0.00	4702.78	5495.68	5354.26	1791.59	99.48	99.04	8.02	101.66
	OTHERS	15.09	23.23	10.25	8.93	14.32	24.56	1.31	9.90	0.00	14.19	25.40	24.07	12.94	109.34	98.00	8.68	103.42
	UN-IDENT:	-10.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	2.33	2.33	-11.35	#DIV/0!	#DIV/0!	0.00	#DIV/0!
5	TOTAL PVT	8533.29	12920.74	3248.03	3231.58	9689.23	12937.26	940.45	2962.78	594.42	8793.36	13291.01	11756.10	8164.54	102.87	90.87	11.02	102.73
6	TOTAL	8451.99	13677.30	3324.85	3268.70	10408.67	13733.56	986.85	3025.24	661.26	9472.96	14146.31	12498.13	7984.49	103.43	91.00	11.68	103.01

DIVISION-WISE BILLING AND COLLECTION
FROM 07/2014 TO 06/2015 (PROGRESSIVE)
IN RESPECT OF FESCO, FAISALABAD.

(Fig. In Million)

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SR. NO.	NAME OF DIVISION	ASSESSMENT 07/2014 TO 06/2015.			PAYMENT 07/2014 TO 06/2015.			% PAYMENT 07/2014 TO 06/2015.			PREVIOUS PAYMENT %AGE 07/2013 TO 06/2014.		
		GOVT	PVT	TOTAL	GOVT	PVT	TOTAL	GOVT	PVT	TOTAL	GOVT	PVT	TOTAL
		3	4	5	6	7	8	9	10	11	12	13	14
1	C/LINE	902.77	12078.45	12981.22	901.96	12111.12	13013.08	99.91	100.27	100.25	102.52	99.33	99.53
2	A/PUR	138.85	9795.72	9934.57	140.29	9787.32	9927.61	101.04	99.91	99.93	102.56	100.36	100.39
3	J/WALA	72.46	4658.29	4730.75	70.84	4667.52	4738.36	97.76	100.20	100.16	108.91	100.63	100.72
4	CK.JHUMRA	35.28	14817.52	14852.80	34.99	14840.86	14875.85	99.18	100.16	100.16	102.76	100.94	100.95
5	CHINIOT	301.52	5478.55	5780.07	295.58	5556.14	5851.72	98.03	101.42	101.24	102.07	99.88	99.99
1	1ST FSD	1450.88	46828.53	48279.41	1443.66	46962.96	48406.62	99.50	100.29	100.26	102.67	100.22	100.29
6	N/ABAD	202.48	8220.55	8423.03	199.38	8158.60	8357.98	98.47	99.25	99.23	101.29	99.25	99.29
7	G.M.ABAD	83.42	9457.44	9540.86	82.31	9344.17	9426.48	98.67	98.80	98.80	100.14	99.19	99.20
8	SAMUNDRI	47.25	4248.07	4295.32	45.93	4278.43	4324.36	97.21	100.71	100.68	104.23	99.84	99.89
9	P/COLONY	140.75	8223.64	8364.39	139.79	8106.40	8246.19	99.32	98.57	98.59	103.82	99.04	99.12
2	2ND FSD	473.89	30149.68	30623.57	467.42	29887.64	30355.06	98.63	99.13	99.12	102.14	99.26	99.30
10	JHANG	88.82	6174.93	6263.75	87.08	6172.54	6259.62	98.04	99.96	99.93	102.88	99.12	99.17
11	T.T.SINGH	342.18	2007.83	2350.01	332.85	1982.65	2315.50	97.27	98.75	98.53	101.39	99.70	99.95
12	GOJRA	75.59	2943.81	3019.40	74.49	2916.78	2991.27	98.54	99.08	99.07	103.90	99.82	99.92
13	BHAKKAR	114.26	2792.65	2906.91	105.16	2771.14	2876.30	92.04	99.23	98.95	114.29	97.33	97.96
14	SULTAN-BAHU	88.56	3031.97	3120.53	87.16	3001.97	3089.13	98.42	99.01	98.99	101.69	99.10	99.17
15	KAMALIA	33.91	3093.83	3127.74	32.44	3076.53	3108.97	95.66	99.44	99.40	104.56	99.78	99.83
3	JHANG CIR:	743.32	20045.02	20788.34	719.30	19921.63	20640.93	96.77	99.38	99.29	103.90	99.14	99.30
16	SRG-1ST	216.65	2931.49	3148.14	210.01	2912.18	3122.19	96.94	99.34	99.18	100.60	99.28	99.37
17	SRG-2ND	651.87	3758.27	4410.14	652.33	3773.26	4425.59	100.07	100.40	100.35	95.76	98.74	98.27
18	BHALWAL	55.30	2445.24	2500.54	54.17	2441.91	2496.08	97.96	99.86	99.82	104.56	100.03	100.12
19	J/ABAD	2282.84	6223.05	8505.89	2279.28	6234.94	8514.22	99.84	100.19	100.10	100.02	103.88	102.90
20	MIANWALI	1399.57	5706.76	7106.33	1417.94	6088.88	7506.82	101.31	106.70	105.64	114.57	99.04	101.66
21	SRG-III	79.25	2738.31	2817.56	73.86	2713.95	2787.81	93.20	99.11	98.94	107.71	99.39	99.63
4	SRG: CIR:	4685.46	23803.12	28488.58	4687.44	24165.32	28852.76	100.04	101.52	101.28	103.83	100.45	100.98
	FESCO	7353.59	120826.42	128180.01	7318.22	120937.49	128255.71	99.52	100.09	100.06	103.50	99.85	100.05

DIVISION-WISE BILLING AND COLLECTION
FOR 06/2015
IN RESPECT OF FESCO, FAISALABAD.

(Fig. In Million)

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SR. NO.	NAME OF DIVISION	ASSESSMENT 06/2015			PAYMENT 06/2015			% PAYMENT 06/2015			PREVIOUS PAYMENT %AGE 06/2014		
		GOVT	PVT	TOTAL	GOVT	PVT	TOTAL	GOVT	PVT	TOTAL	GOVT	PVT	TOTAL
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	C/LINE	105.05	1316.37	1421.42	122.37	1275.69	1398.06	116.49	96.91	98.36	130.74	97.04	99.41
2	A/PUR	15.01	1109.95	1124.96	14.64	1046.70	1061.34	97.53	94.30	94.34	135.83	98.79	99.29
3	J/WALA	5.85	489.16	495.01	7.34	508.21	515.55	125.47	103.89	104.15	292.88	100.96	102.43
4	CK.JHUMRA	2.76	1302.45	1305.21	3.25	1333.56	1336.81	117.75	102.39	102.42	141.43	100.61	100.71
5	CHINIOT	24.19	550.44	574.63	29.25	725.59	754.84	120.92	131.82	131.36	125.02	103.19	104.16
1	1ST FSD	152.86	4768.37	4921.23	176.85	4889.75	5066.60	115.69	102.55	102.95	134.42	99.46	100.56
6	N/ABAD	26.20	964.31	990.51	25.97	922.50	948.47	99.12	95.66	95.76	111.95	97.50	97.91
7	G.M.ABAD	8.44	1055.16	1063.60	9.15	938.17	947.32	108.41	88.91	89.07	116.28	97.03	97.19
8	SAMUNDRI	4.34	456.98	461.32	7.10	577.98	585.08	163.59	126.48	126.83	169.03	105.51	106.29
9	P/COLONY	13.18	963.23	976.41	18.38	874.02	892.40	139.45	90.74	91.40	157.17	95.15	95.97
2	2ND FSD	52.16	3439.68	3491.84	60.60	3312.67	3373.27	116.18	96.31	96.60	129.59	97.72	98.22
10	JHANG	9.48	613.28	622.76	11.92	704.48	716.40	125.74	114.87	115.04	147.73	102.68	103.31
11	T.T.SINGH	37.68	238.02	275.70	31.41	245.21	276.62	83.36	103.02	100.33	100.53	106.98	105.99
12	GOJRA	7.12	334.56	341.68	9.13	371.71	380.84	128.23	111.10	111.46	161.94	107.09	108.35
13	BHAKKAR	12.82	330.78	343.60	28.06	335.09	363.15	218.88	101.30	105.69	314.06	98.60	105.85
14	SULTAN-BAHU	7.99	322.67	330.66	11.00	358.60	369.60	137.67	111.14	111.78	148.86	107.67	108.87
15	KAMALIA	3.56	317.64	321.20	3.61	369.20	372.81	101.40	116.23	116.07	202.69	111.27	112.06
3	JHANG CIR:	78.65	2156.95	2235.60	95.13	2384.29	2479.42	120.95	110.54	110.91	152.05	105.07	106.78
16	SRG-1ST	22.10	308.54	330.64	36.73	309.69	346.42	166.20	100.37	104.77	191.68	107.11	112.40
17	SRG-2ND	69.79	404.22	474.01	72.01	429.32	501.33	103.18	106.21	105.76	94.37	101.30	100.24
18	BHALWAL	4.95	263.65	268.60	7.10	282.33	289.43	143.43	107.09	107.76	186.55	113.55	114.94
19	J/ABAD	212.23	688.32	900.55	216.62	705.33	921.95	102.07	102.47	102.38	102.64	108.38	106.91
20	MIANWALI	156.13	562.56	718.69	177.88	651.36	829.24	113.93	115.78	115.38	234.62	115.31	142.22
21	SRG-III	7.69	328.45	336.14	12.38	326.27	338.65	160.99	99.34	100.75	250.20	102.57	106.45
4	SRG: CIR:	472.89	2555.74	3028.63	522.72	2704.30	3227.02	110.54	105.81	106.55	152.29	108.41	115.80
	FESCO	756.56	12920.74	13677.30	855.36	13291.01	14146.37	113.06	102.87	103.43	147.37	101.74	104.46

MONTH WISE BILLING ,COLLECTION ,GOVT & PVT 2014-15 INCOMPARISON WITH 2013-14 FESCO

Fig. In Million

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MONTH	BILLING			COLLECTION			%AGE			MONTH	BILLING			COLLECTION			%AGE		
	GOVT	PRIVATE	TOTAL	GOVT	PRIVATE	TOTAL	GOVT	PVT	TOTAL		GOVT	PRIVATE	TOTAL	GOVT	PRIVATE	TOTAL	GOVT	PVT	TOTAL
07/2014	734.03	11599.87	12,333.90	642.38	10385.1	11027.48	87.51	89.53	89.41	07/2013	543.18	9640.29	10183.47	558.09	8494.64	9052.73	102.74	88.12	88.90
08/2014	798.39	14740.39	15,538.78	793.98	13711.48	14505.46	99.45	93.02	93.35	08/2013	615.31	10713.52	11328.83	562.13	10267.76	10829.89	91.36	95.84	95.60
PROG:	1532.42	26340.26	27,872.68	1436.36	24096.58	25532.94	93.73	91.48	91.61	PROG:	1158.49	20353.81	21,512.30	1120.22	18762.40	19882.62	96.70	92.18	92.42
09/2014	801.30	13,597.12	14,398.42	733.23	13,956.37	14,689.60	91.51	102.64	102.02	09/2013	771.33	12431.18	13202.51	729.24	11887.01	12616.25	94.54	95.62	95.56
PROG:	2333.72	39937.38	42,271.10	2169.59	38052.95	40222.54	92.97	95.28	95.15	PROG:	1929.82	32784.99	34,714.81	1849.46	30649.41	32498.87	95.84	93.49	93.62
10/2014	717.78	11,685.13	12,402.91	682.54	12,500.74	13,183.28	95.09	106.98	106.29	10/2013	690.91	11392.57	12083.48	658.29	11922.31	12580.60	95.28	104.65	104.11
PROG:	3051.50	51622.51	54674.01	2852.13	50553.69	53405.82	93.47	97.93	97.68	PROG:	2620.73	44177.56	46798.29	2507.75	42571.72	45079.47	95.69	96.37	96.33
11/2014	589.43	9,956.94	10,546.37	574.58	10,507.48	11,082.06	97.48	105.53	105.08	11/2013	620.68	10604.84	11225.52	628.47	11037.40	11665.87	101.26	104.08	103.92
PROG:	3640.93	61579.45	65220.38	3426.71	61061.17	64487.88	94.12	99.16	98.88	PROG:	3241.41	54782.40	58023.81	3136.22	53609.12	56745.34	96.75	97.86	97.80
12/2014	496.38	9,160.70	9,657.08	478.91	9,846.00	10,324.91	96.48	107.48	106.92	12/2013	443.64	9,066.67	9,510.31	399.07	9,881.56	10,280.63	89.95	108.99	108.10
PROG:	4137.31	70740.15	74877.46	3905.62	70907.17	74812.79	94.40	100.24	99.91	PROG:	3,685.05	63,849.07	67,534.12	3535.29	63,490.68	67,025.97	95.94	99.44	99.25
01/2015	471.95	5,880.72	6,352.67	482.88	6,968.62	7,451.50	102.32	118.50	117.30	01/2014	470.89	7725.34	8196.23	529.00	7943.22	8472.22	112.34	102.82	103.37
PROG:	4609.26	76620.87	81230.13	4388.50	77875.79	82264.29	95.21	101.64	101.27	PROG:	4,155.94	71,574.41	75,730.35	4064.29	71,433.90	75,498.19	97.79	99.80	99.69
02/2015	534.85	7,871.72	8,406.57	516.88	6,988.80	7,505.68	96.64	88.78	89.28	02/2014	498.34	8592.62	9090.96	471.05	8478.38	8949.43	94.52	98.67	98.44
PROG:	5144.11	84492.59	89636.70	4905.38	84864.59	89769.97	95.36	100.44	100.15	PROG:	4,654.28	80,167.03	84,821.31	4535.34	79,912.28	84,447.62	97.44	99.68	99.56
03/2015	431.82	6,004.26	6,436.08	439.81	6,755.07	7,194.88	101.85	112.50	111.79	03/2014	441.33	7,776.63	8,217.96	444.12	7,945.85	8,389.97	100.63	102.18	102.09
PROG:	5575.93	90496.85	96072.78	5345.19	91619.66	96964.85	95.86	101.24	100.93	PROG:	5,095.61	87,943.66	93,039.27	4979.46	87,858.13	92,837.59	97.72	99.90	99.78
04/2015	479.68	8,205.89	8,685.57	552.47	8,133.92	8,686.39	115.17	99.12	100.01	04/2014	526.67	9,159.30	9,685.97	526.10	8,386.73	8,912.83	99.89	91.57	92.02
PROG:	6055.61	98702.74	104758.35	5897.66	99753.58	105651.24	97.39	101.06	100.85	PROG:	5,622.28	97,102.96	102,725.24	5505.56	96,244.86	101,750.42	97.92	99.12	99.05
05/2015	541.42	9,202.94	9,744.36	565.20	7,892.90	8,458.10	104.39	85.76	86.80	05/2014	609.82	9566.28	10176.10	637.57	10052.43	10690.00	104.55	105.08	105.05
PROG:	6597.03	107905.68	114502.71	6462.86	107646.48	114109.34	97.97	99.76	99.66	PROG:	6,232.10	106,669.24	112,901.34	6143.13	106,297.29	112,440.42	98.57	99.65	99.59
06/2015	756.56	12,920.74	13,677.30	855.36	13,291.01	14,146.37	113.06	102.87	103.43	06/2014	700.54	11063.48	11764.02	1032.37	11255.88	12288.24	147.37	101.74	104.46
PROG:	7353.59	120826.42	128180.01	7318.22	120937.49	128255.71	99.52	100.09	100.06	PROG:	6932.64	117732.72	124665.36	7175.50	117553.17	124728.66	103.50	99.85	100.05

Annex-A

**COMMERCIAL
STATEMENTS**

11.2.7

RECOMMENDATIONS

- PD (GSC) staff (Qanoongo, Patwari and LAO) is not well trained to carry out different types of social surveys which are essential to full fill the LARP. On job training need to be provided to FESCO staff.
- Compensation must be paid to displaced persons as soon as possible.
- After the start of civil work compensation must be paid to DPs for foundation stage at least.
- On the revision of profile & lay out, site specific Land Acquisition and Resettlement Plans (LARPs) be updated and got approved from Competent Authority.
- Environment & Social Safeguard Cell (E&SS) FESCO need strengthening in respect of logistics & staffing. E & SS Cell staff be provided meaningful trainings from reputed institutions and as well as on job training to improve the skills & capacity to perform high quality work.

J. Monitoring & Evaluation

11.2.6 CONSIDERATION FOR MINIMIZATION OF IMPACTS REGARDING FINALIZATION OF LAY OUT PLAN & PROFILE OF TRANSMISSION LINES

FESCO usually takes all possible steps to safeguard against and minimize the likely adverse impacts on local communities in the design and implementation of its STG Project, involving construction of grid stations and transmission lines. Accordingly, the following specific actions will be applied to avoid and minimize the likely resettlement impacts of Transmission Lines sub-projects

Alignment of the transmission line and tower to tower spans are altered slightly to avoid both the compact housing and commercial areas and scattered farm-houses;

A minimum clearance under the line required is 7 m, which is maintained for the whole line, even by providing 2 m to 6 m leg and/or body extension to the towers where required; and,

In urban reaches, the broad-based (7m x 7m) towers will be replaced by narrow-based (1m X 1m) tabular poles, which to be constructed along outer fringes of a road's ROW, to further minimize the impacts on people.

Any built-up structures falling in the outer fringes of the total 30mRoW are not removed, only those falling directly under the live power cables are removed and relocated.

Transmission Line should not pass through Abadies

Transmission Lines should be away from Mosque, School, Hospital, other sensitive Area of ecological importance.

Transmission Line rout should be away from locations of Archaeological importance

Transmission Line should not disturb ecology, wet land & Estuaries

Planted Forests be avoided so that minimum trees are involved.

Constructed Deras be avoided No Indigenous People are found in the proposed FESCO Subproject, however Indigenous People should not be disturbed during execution of Subprojects.

11.2.5 FORMAT OF LAND ACQUISITION & RESETTLEMENT PLAN

A. **Introduction of the Project** including background and description of project

B. **Project Compensation & Rehabilitation Frame Work**

i. Policy provisions, Eligibility and Entitlement

ii. Land Classification

iii. Assessment of compensation.

C. **Assessment of Impacts**

i. Resettlement Field Surveys

ii. Minimization of Impacts

iii. Impacts of the Sub Project – Impact of Towers & Transmission Lines

D. **Socio-Economic Profile of Affected Peoples**

i. Census of Affected Household –Field Methodology, indigenous Peoples.

ii. Data of affected households including housing, livelihood/income, poverty

E. **Institutional Arrangements**

i. Internal & External Monitoring

ii. Consultation & Disclosure

iii. Public Consultation for undertaking LARPs

iv. Compensation option discussed

F. **Conclusion & Disclosure of LARPs.**

G. **Grievance Redressal Mechanism**

H. **Budget & Estimate of LARPs**

i. Basis for compensation

ii. Determining the rate of compensation

iii. Rehabilitation

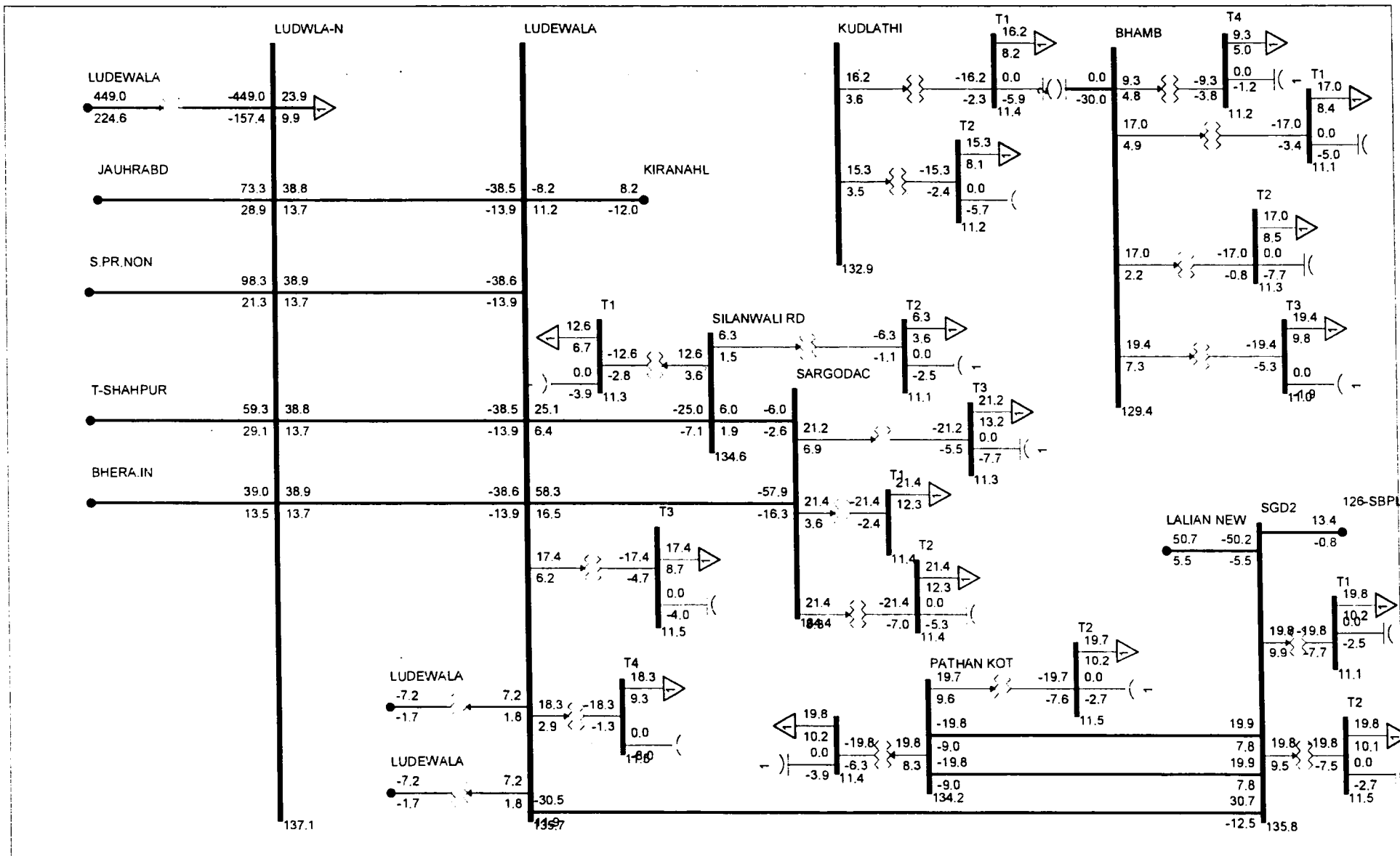
iv. Budget for Land & Assets Acquisition

I. **Implementing Schedule & Cut of Date:**-Compensation eligibility will be limited by the cut-off date on completion of the final census after the line route survey is finalized. The DHs (that settle in the affected areas and/or make changes in the land use patterns) after this cut-off-date will not be eligible for compensation. They will, however, be given a three months' notice requesting them to vacate the premises/corridor and dismantle the affected structures and/or other establishments (if any) prior to project implementation.

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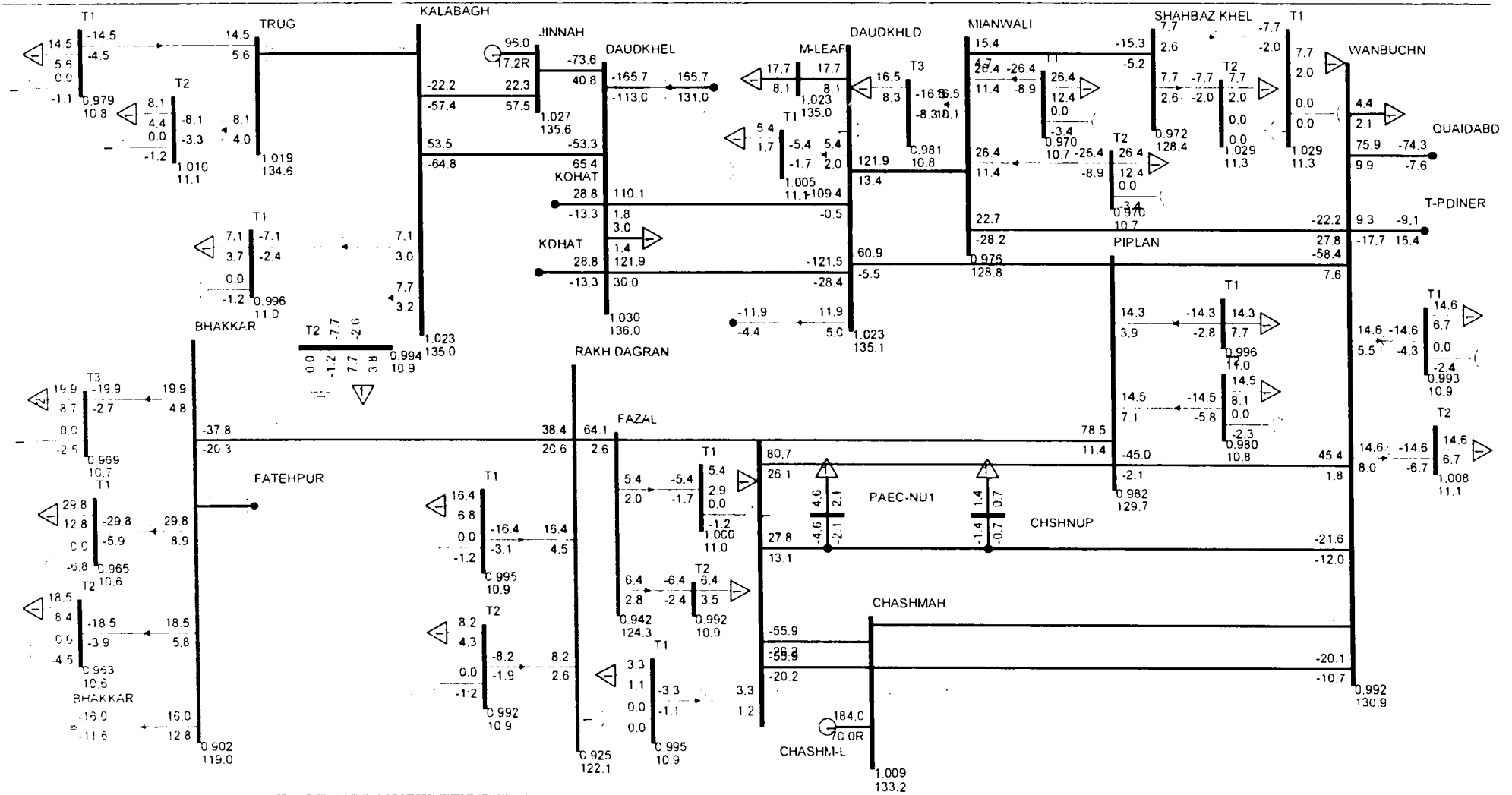
EXHIBIT-2018- 1.6



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PEAK LOAD-YEAR 2017: WIT ADDITIONAL REINFORCEMENT

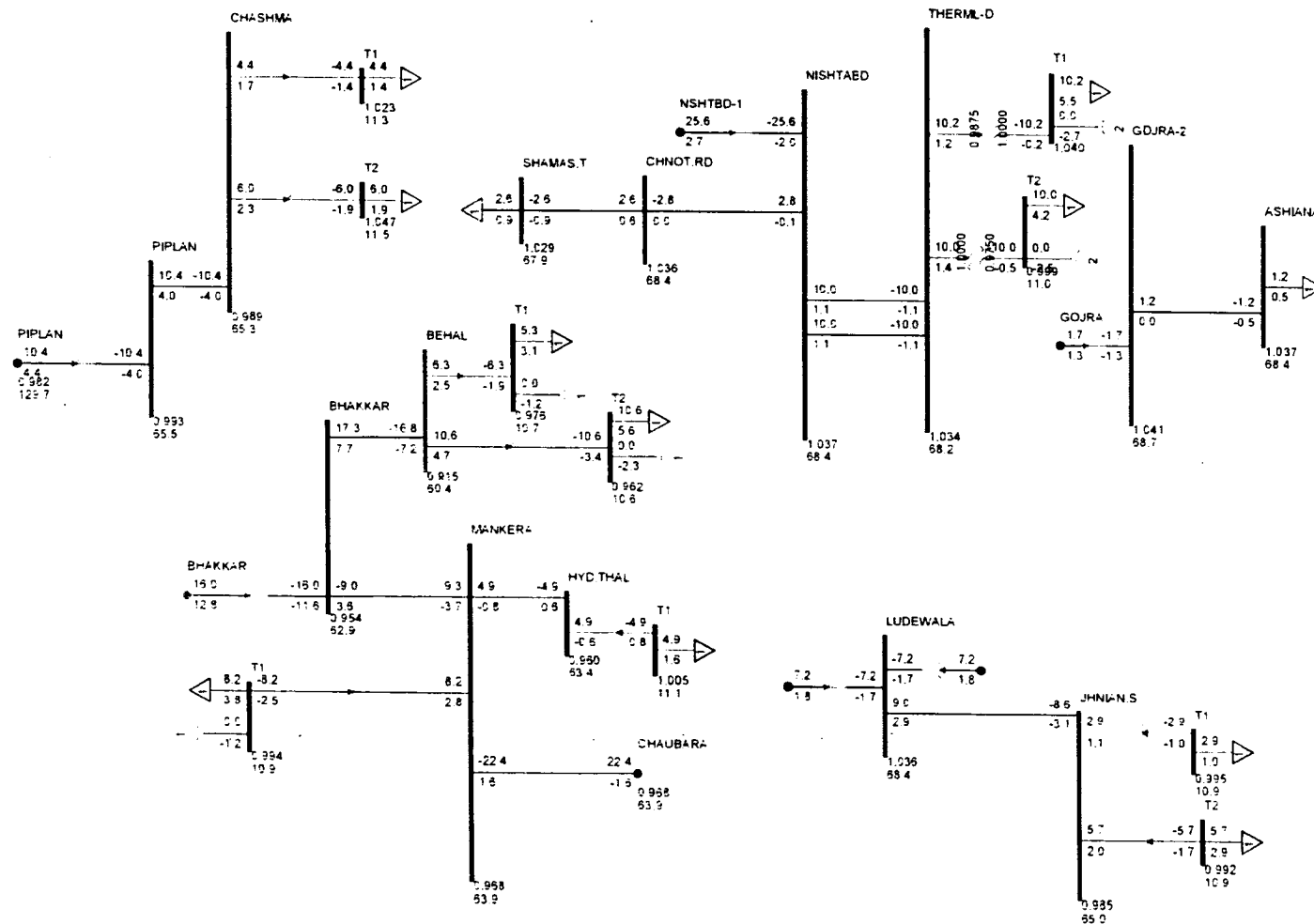
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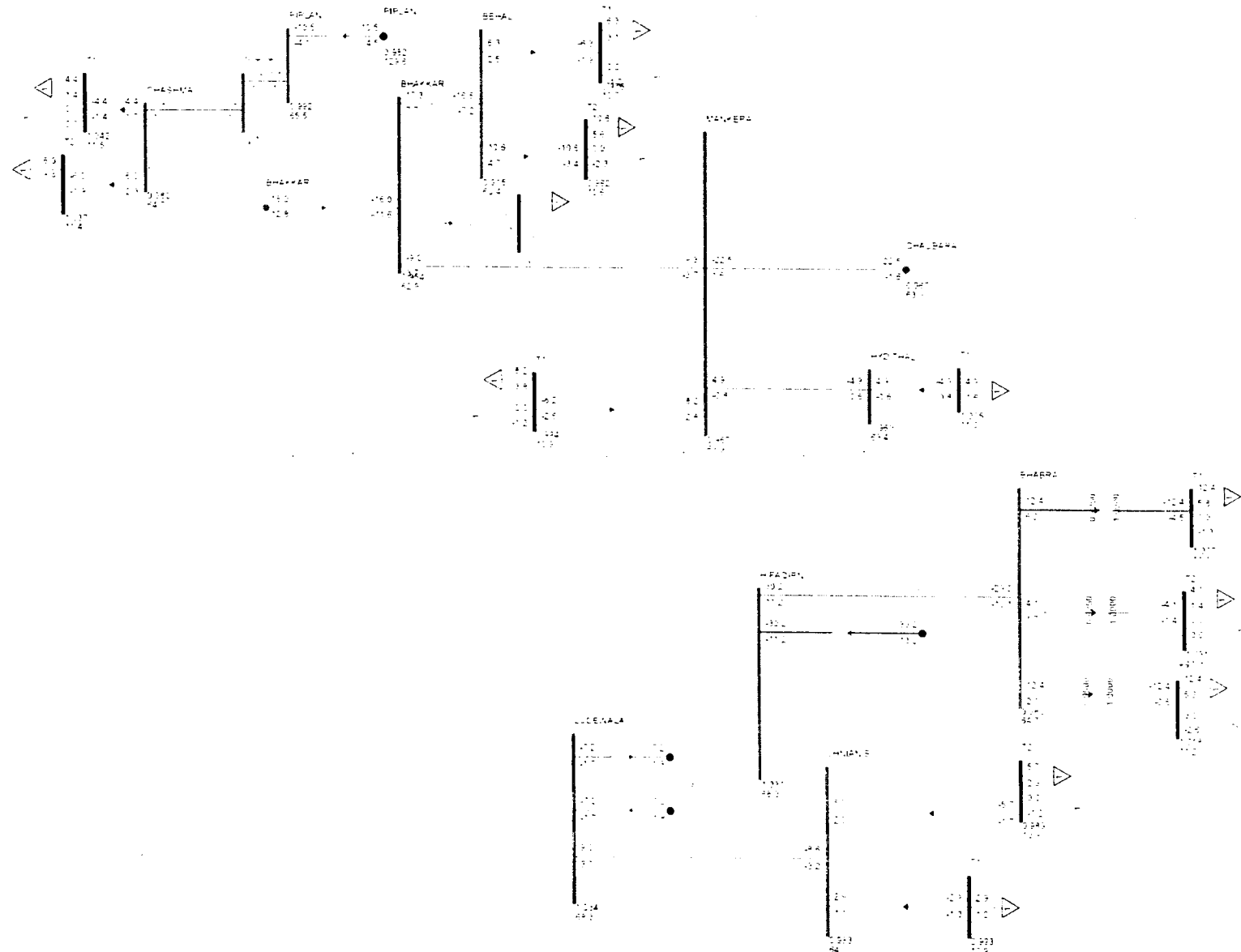
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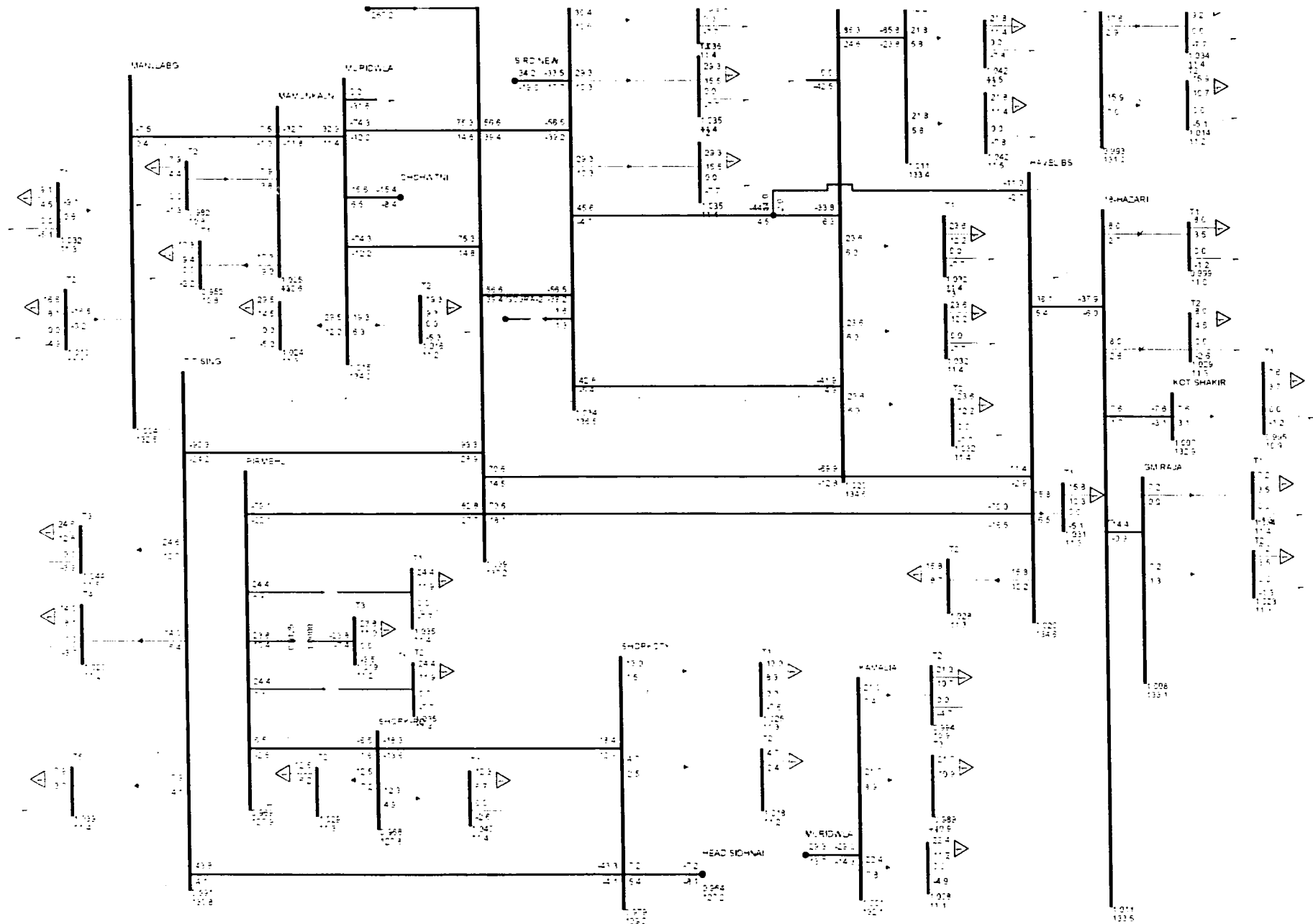
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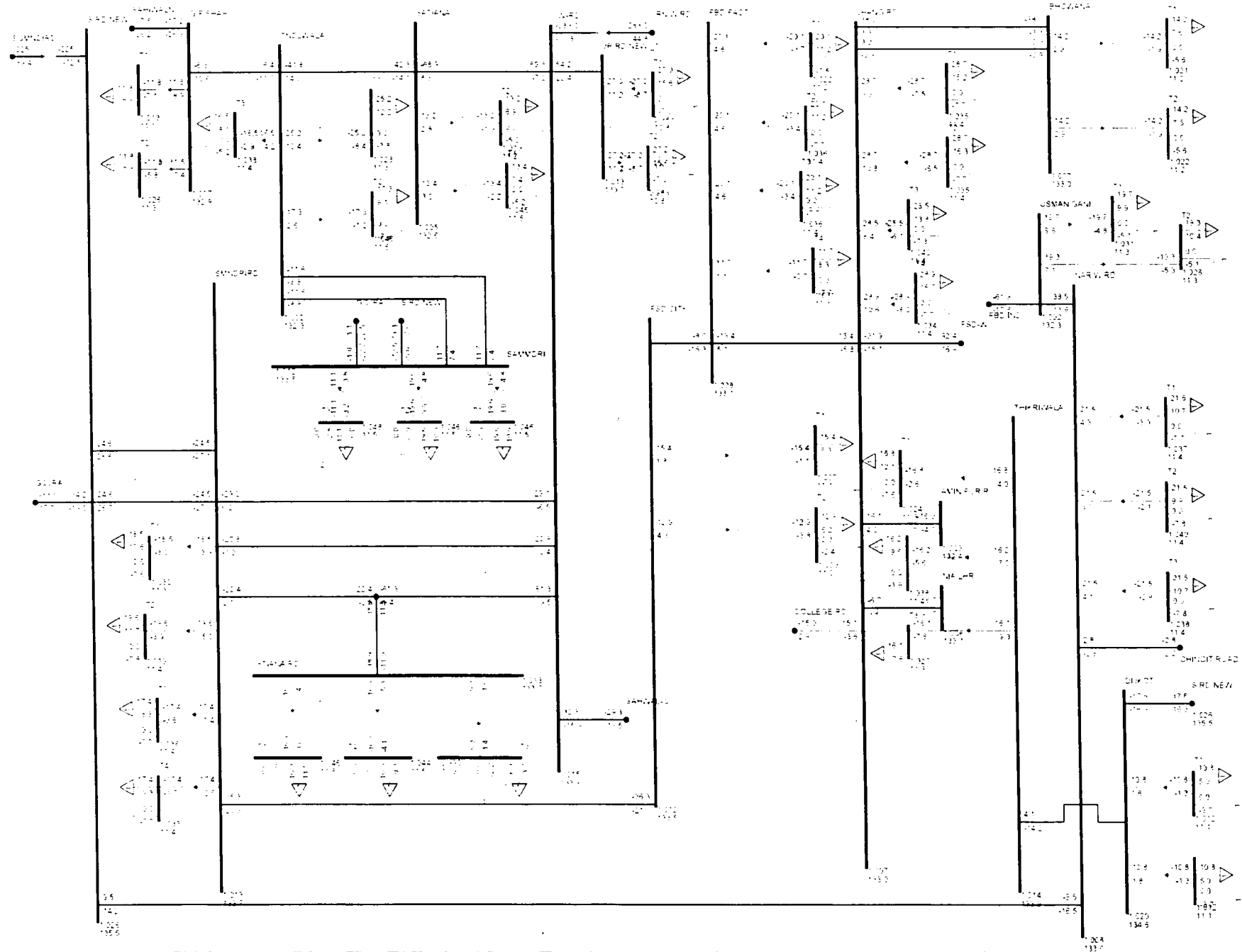
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EXHIBIT-2018- 2.2



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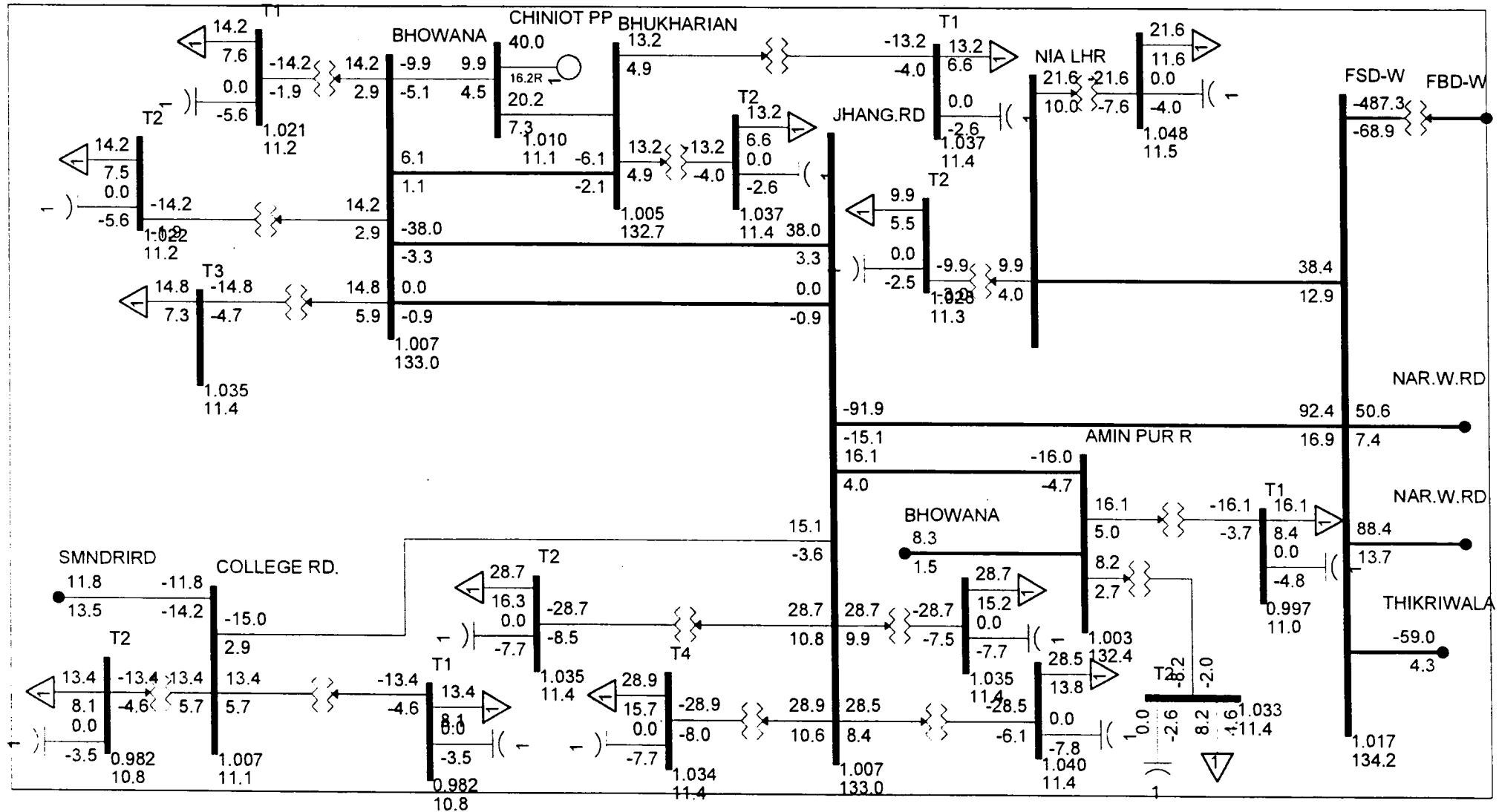


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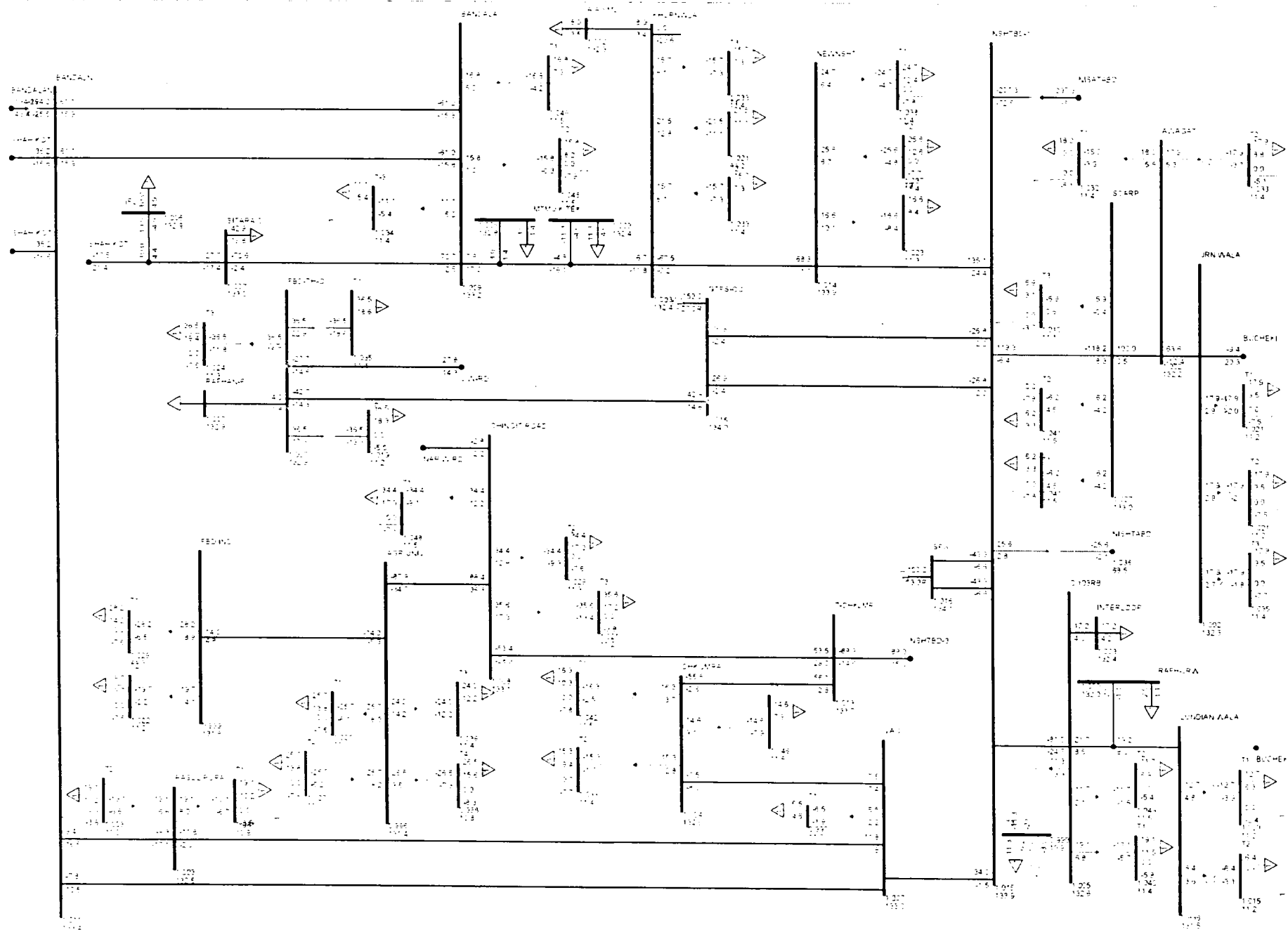
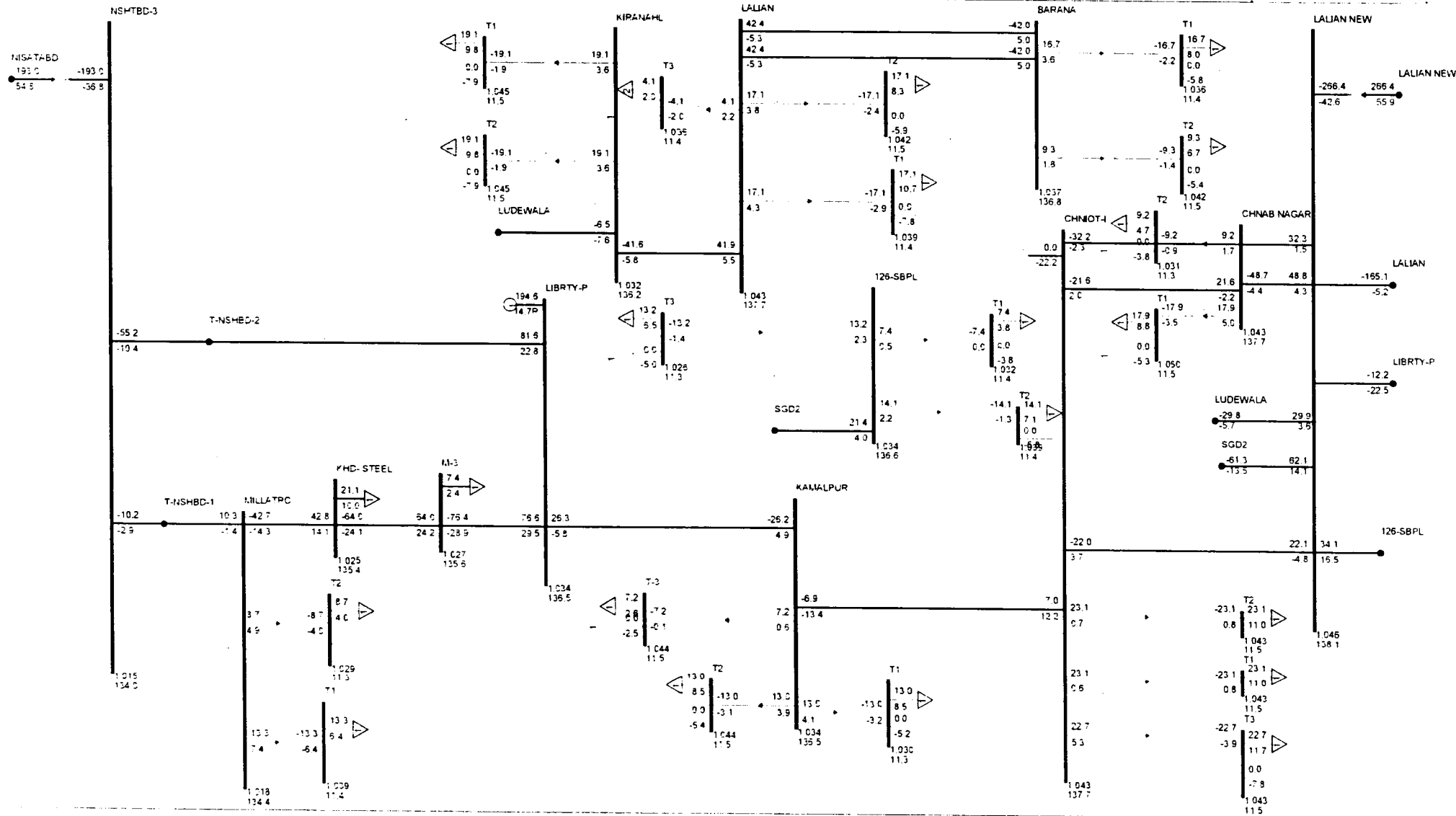
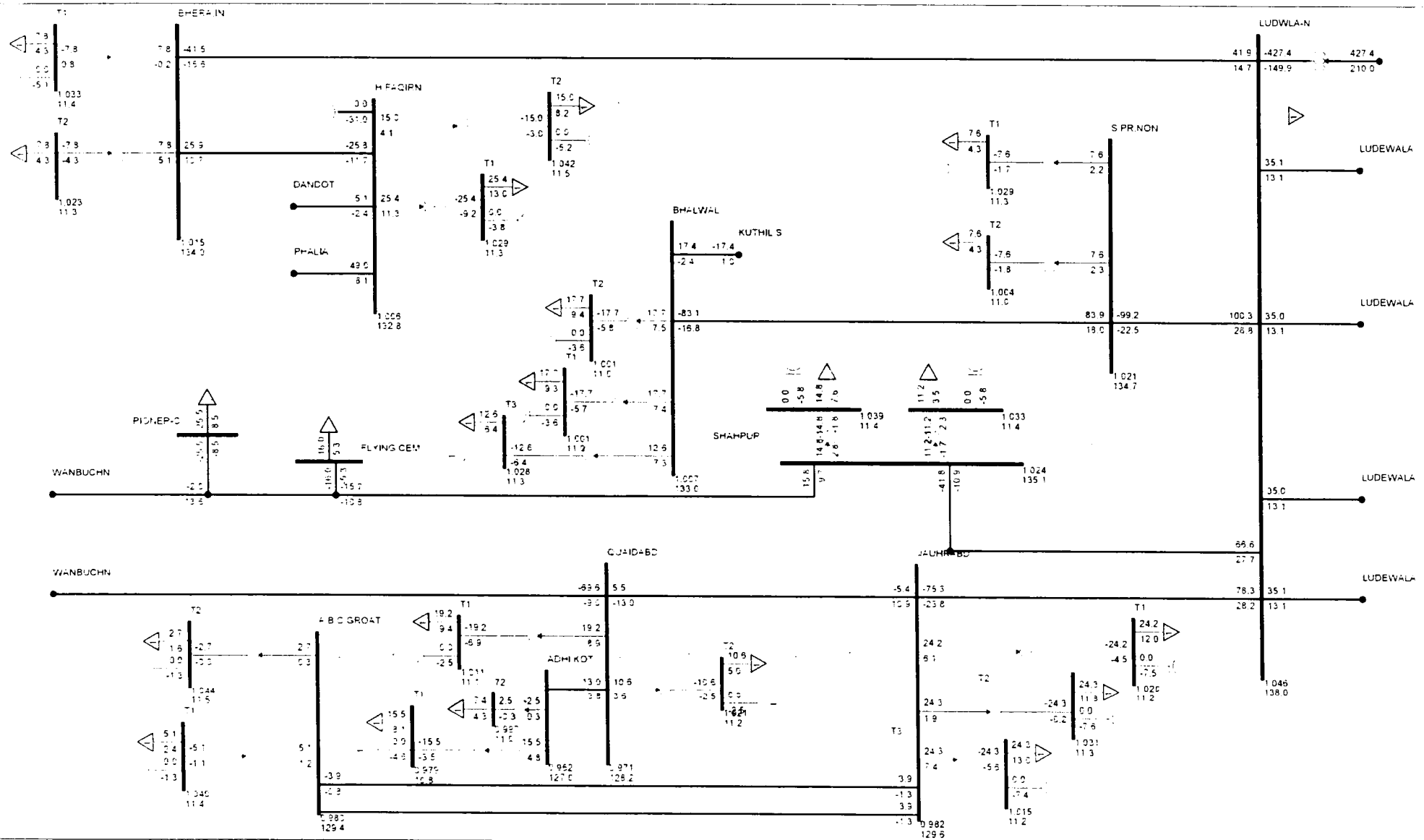


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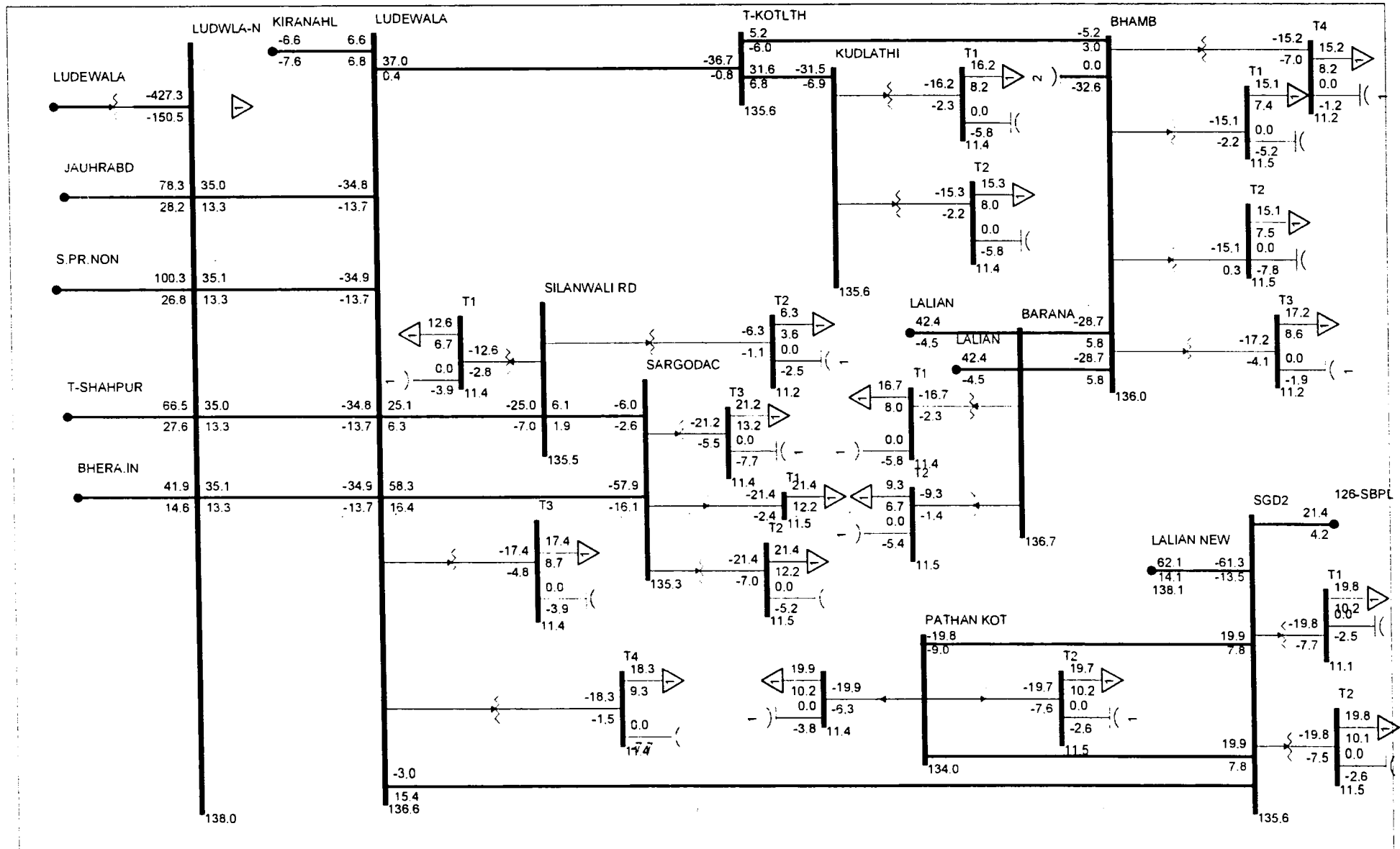
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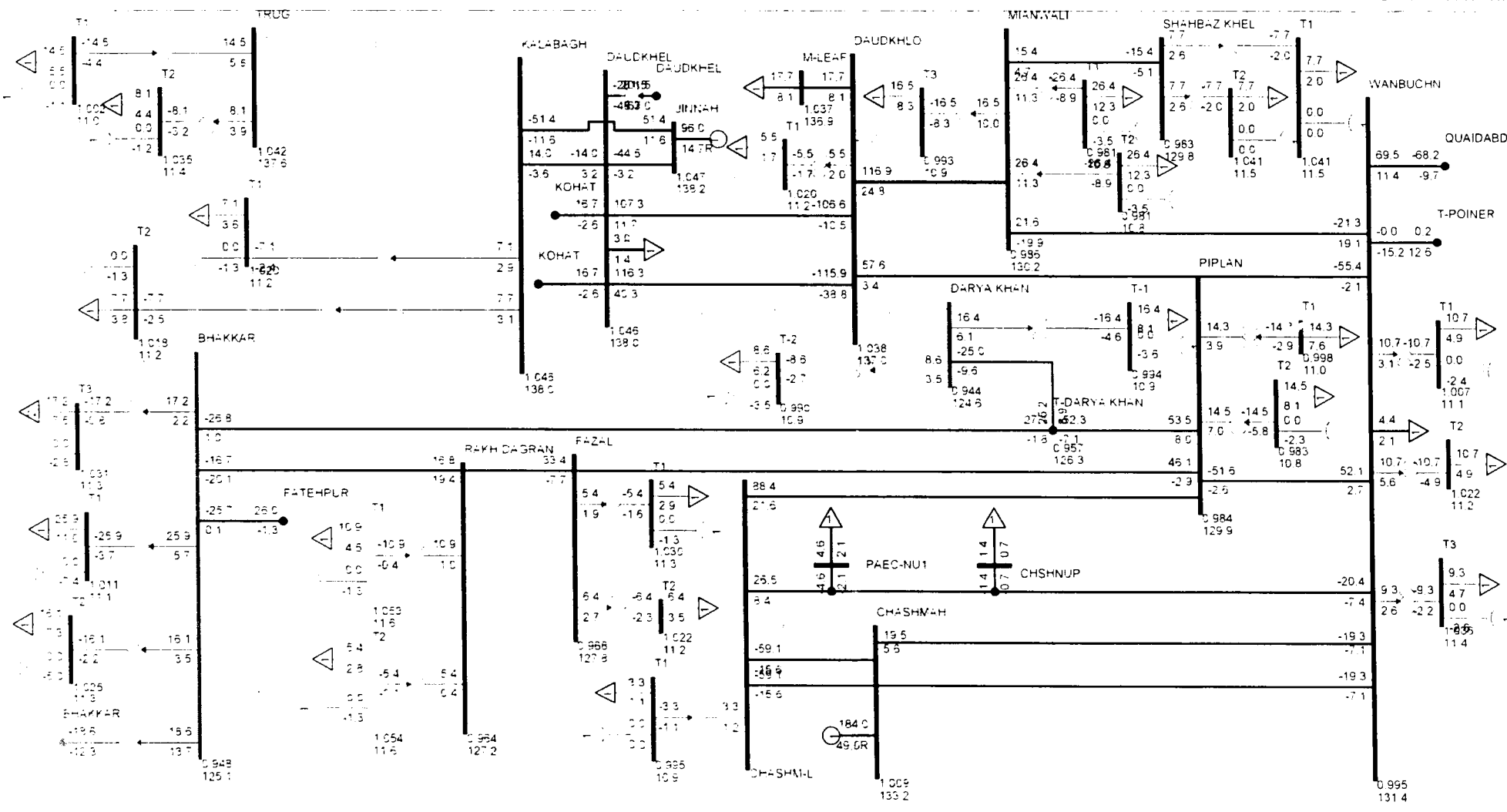
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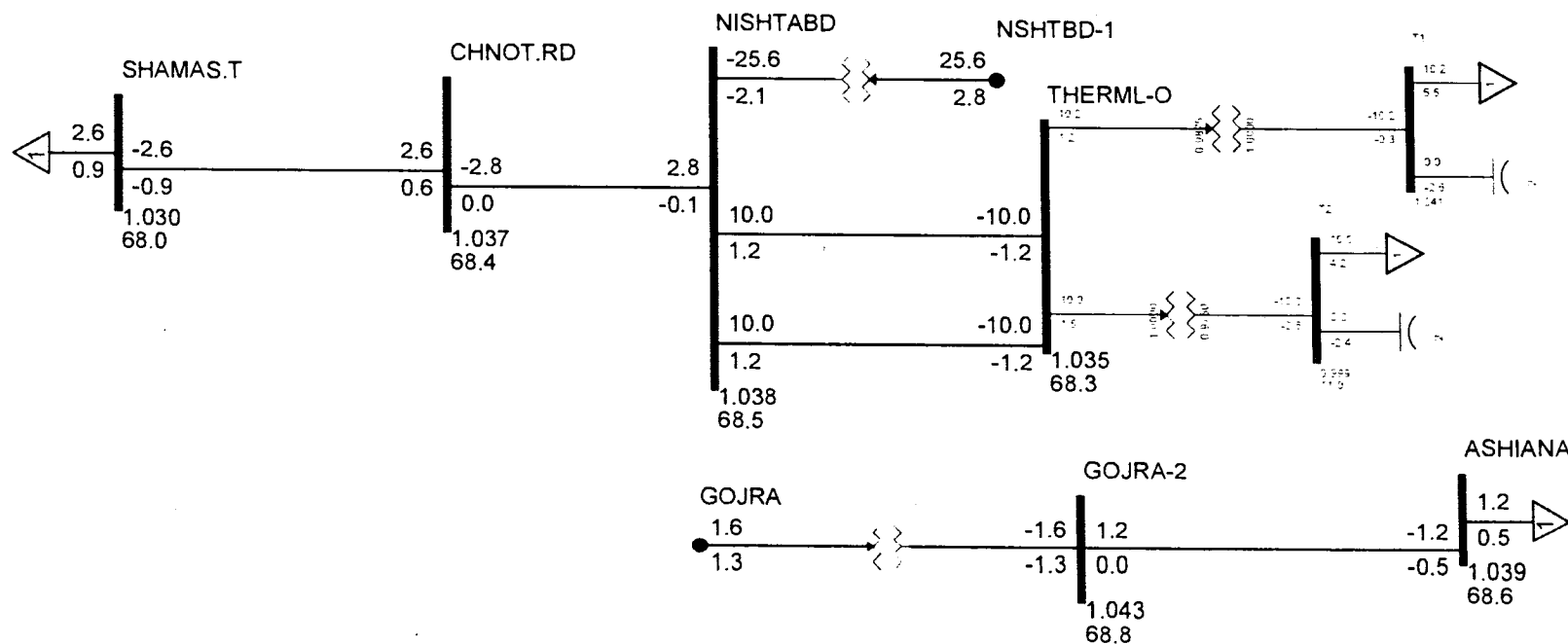
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EXHIBIT-2017- 2.7



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EXHIBIT-2017- 2.8



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EXHIBIT-2018- 2.9

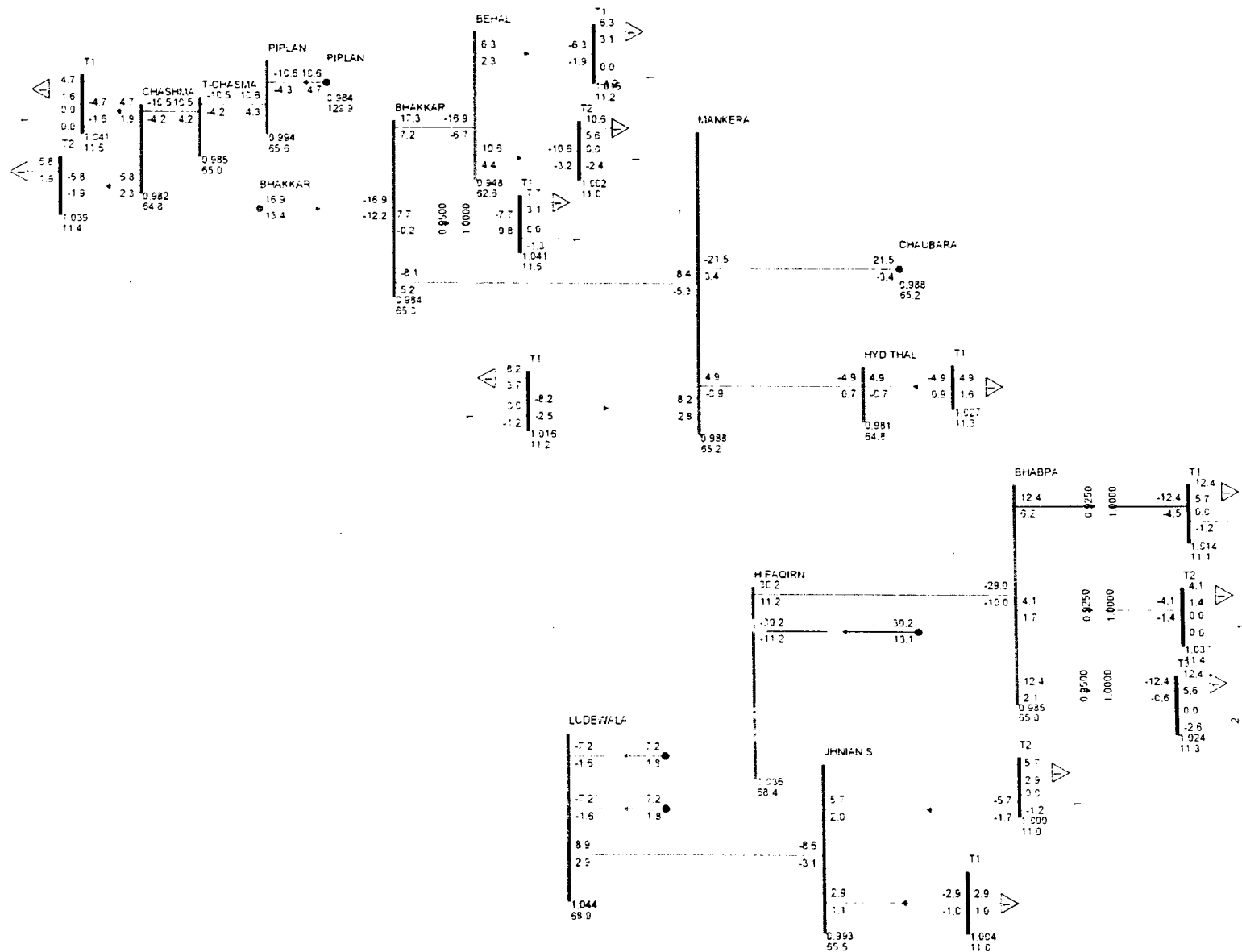
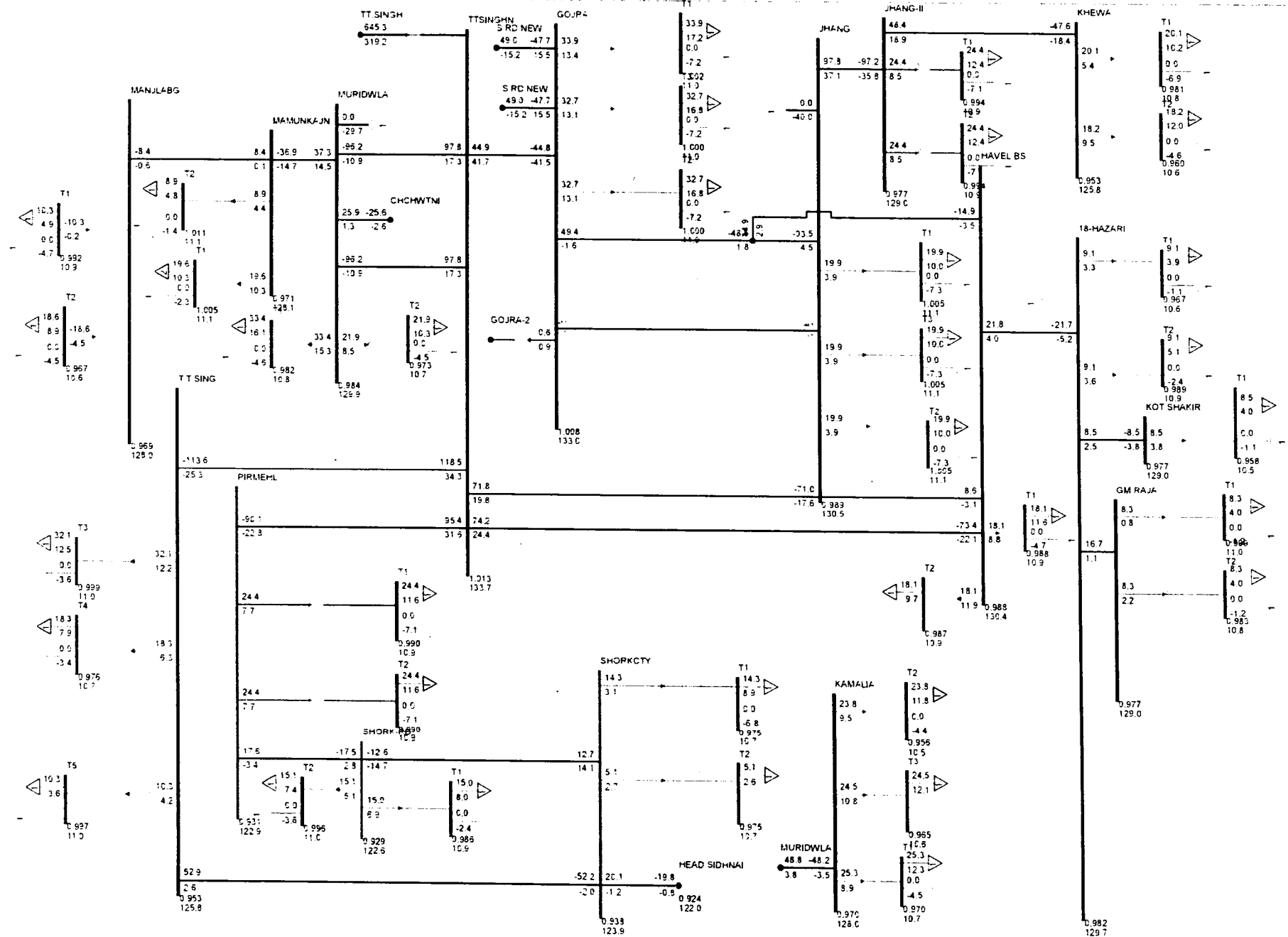
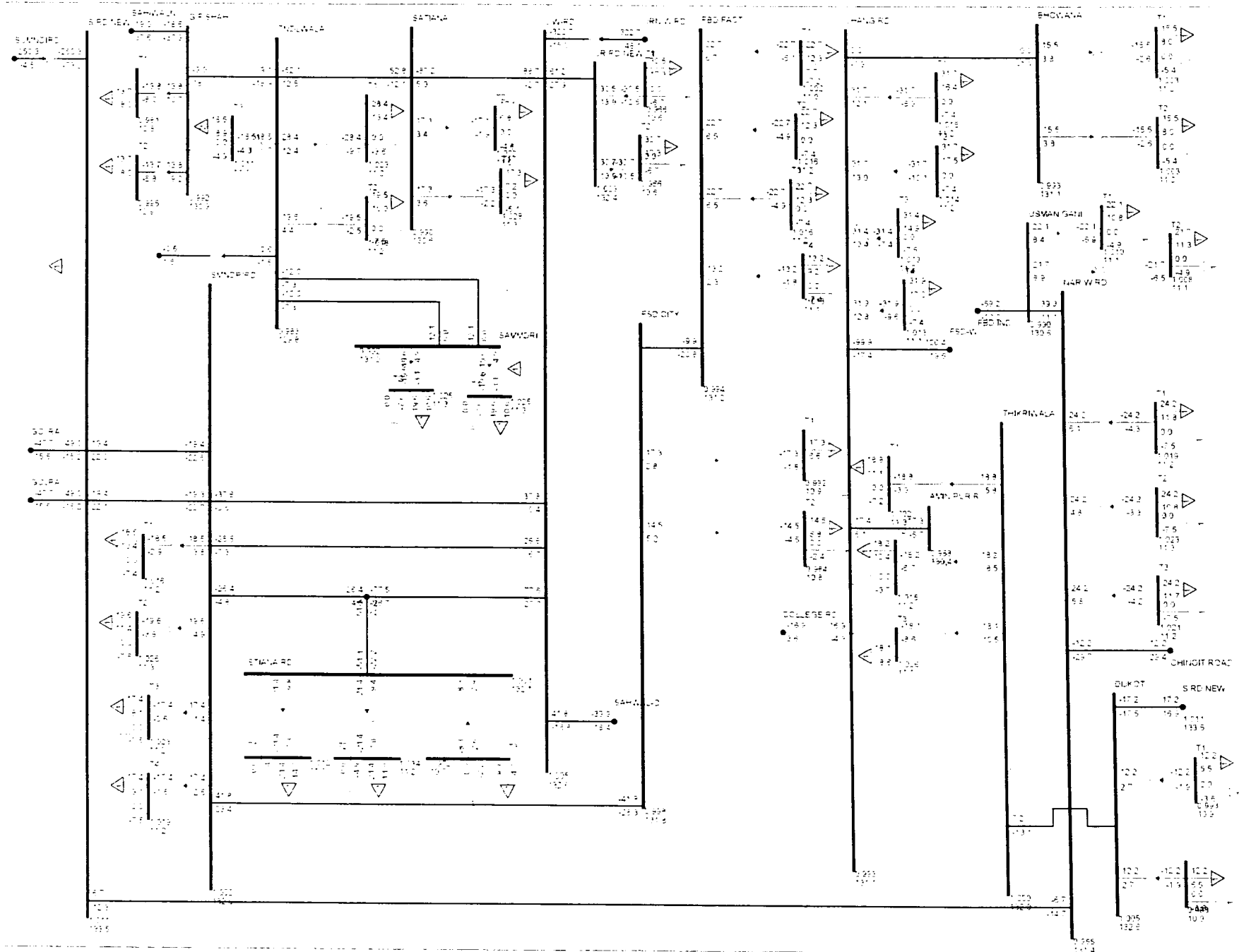


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EXHIBIT-2019-1.2



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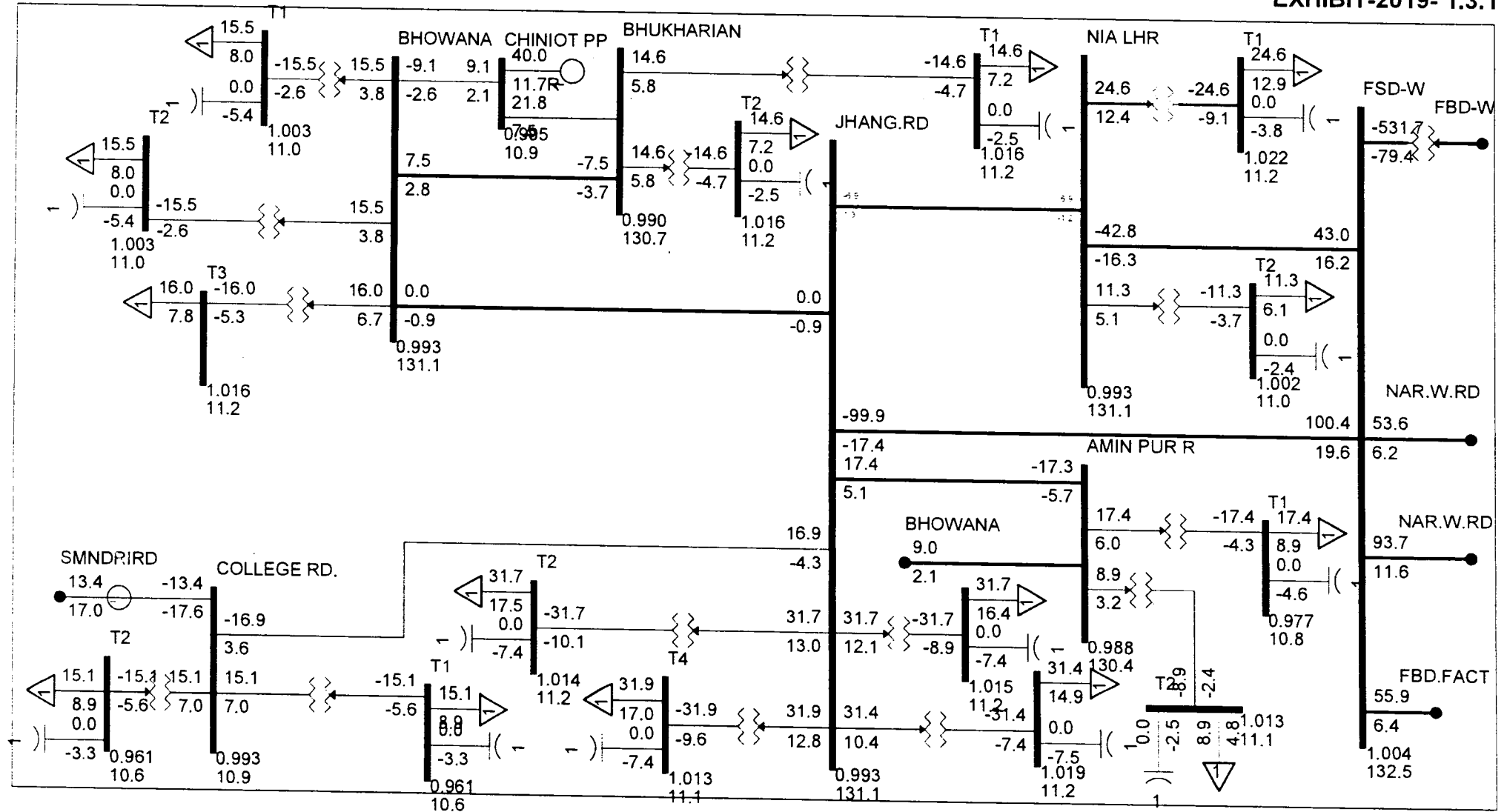
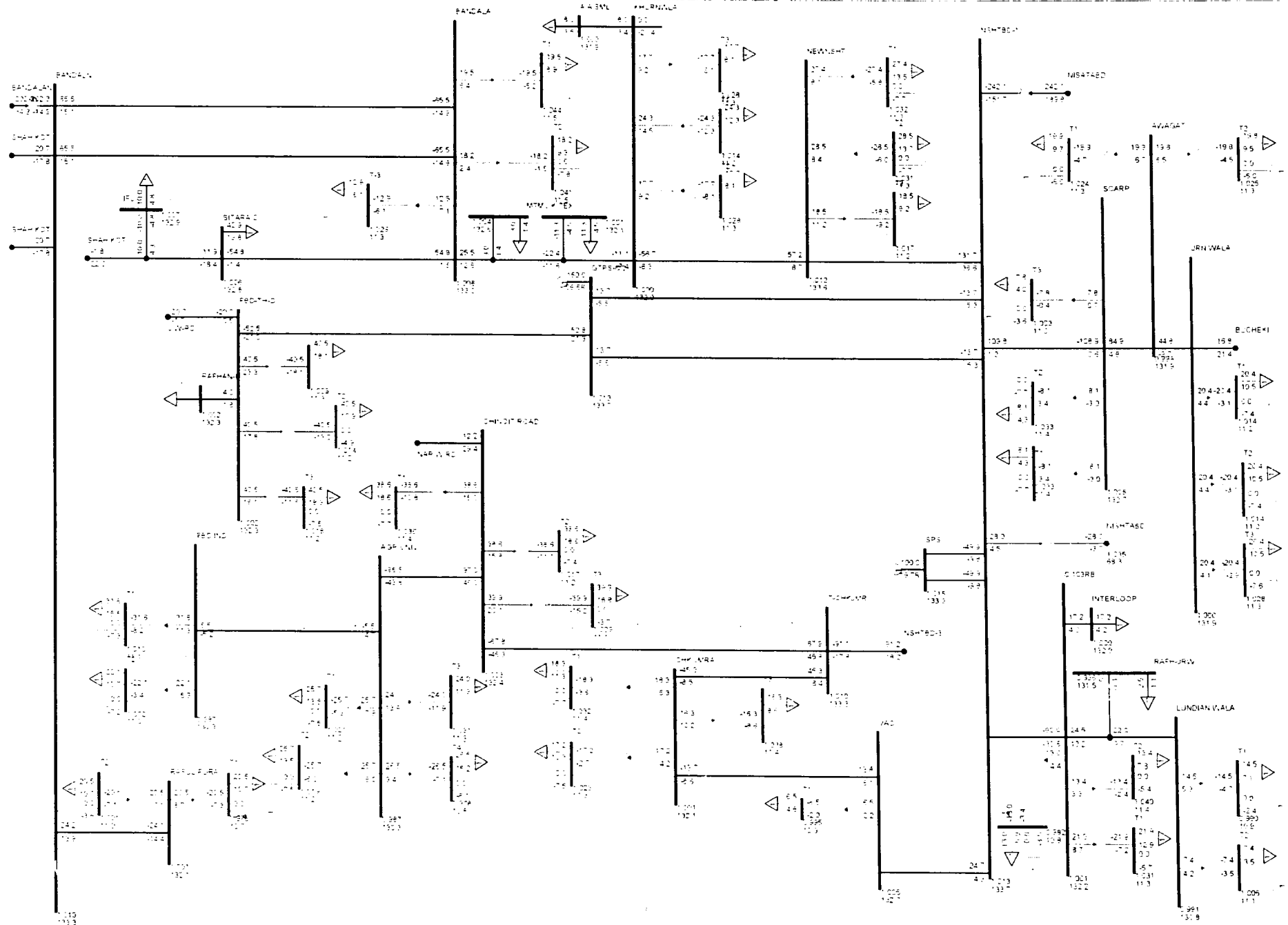


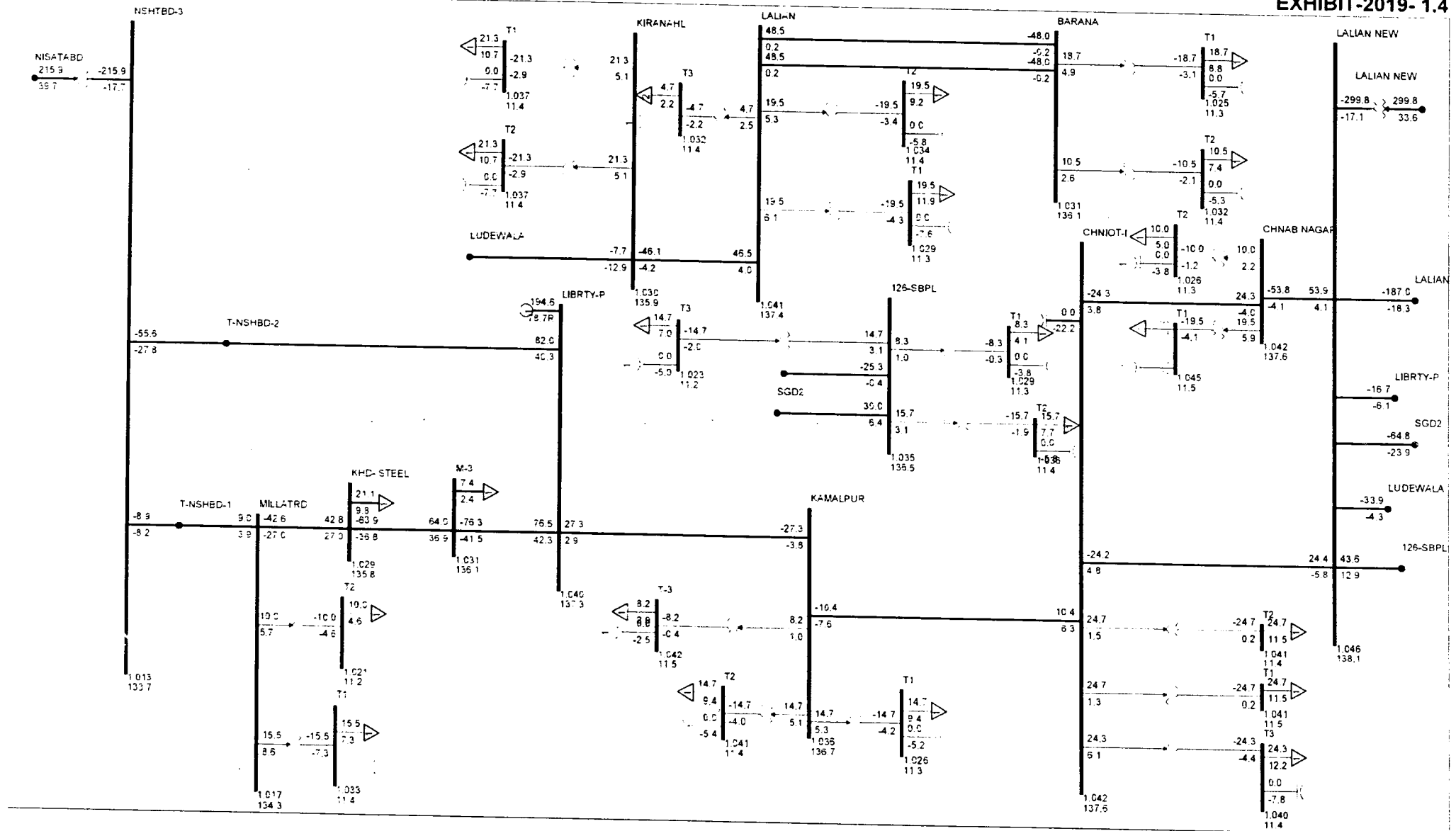
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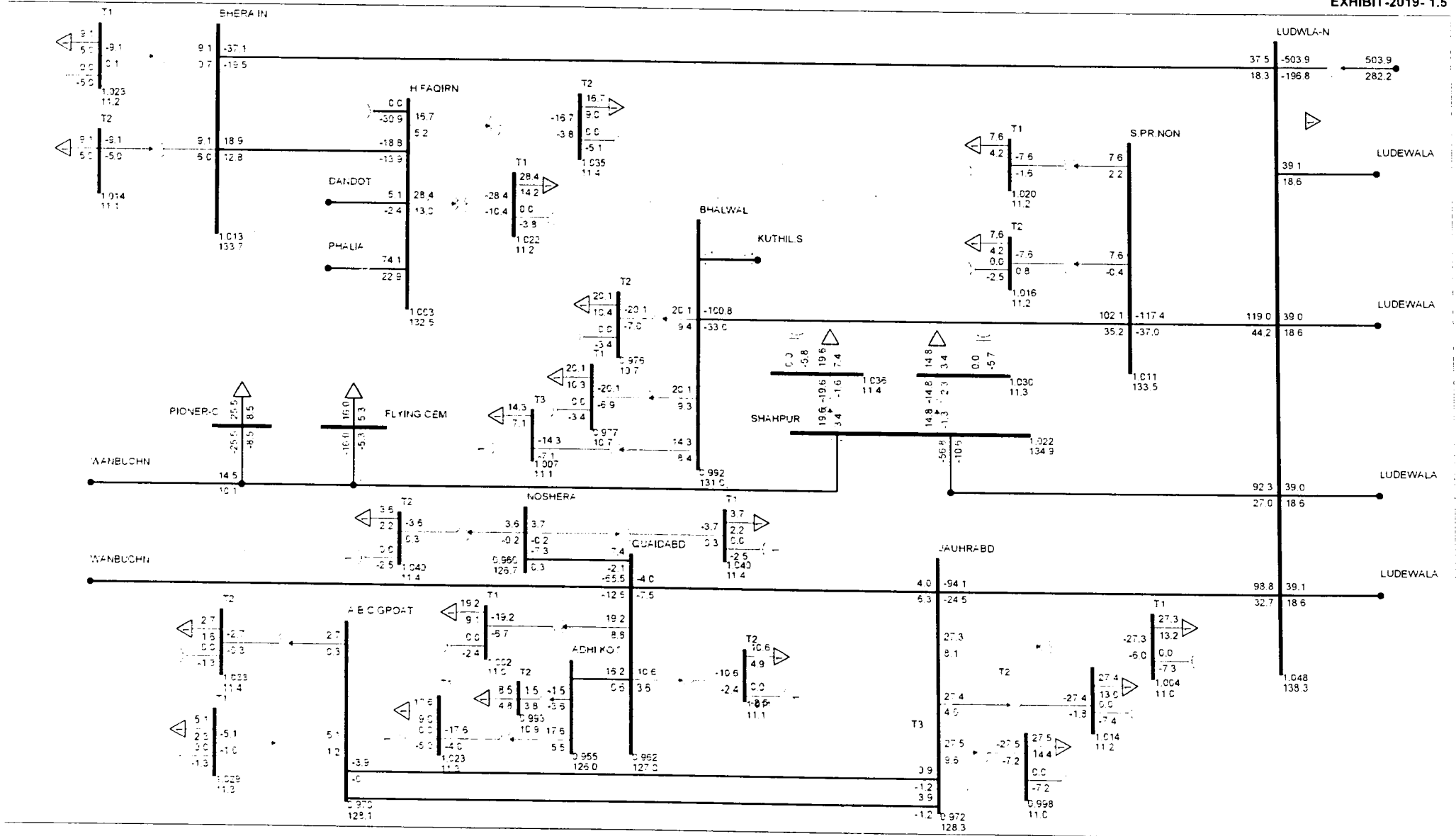
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EXHIBIT-2019- 1.5



PEAK LOAD-YEAR 2019: WITHOUT ADDITIONAL REINFORCEMENT

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LUDWLA-N KIRANAHL LUDEWALA T-KOTLTH BHAMB

LUDEWALA -503.0 -198.5

JAUHRABD 98.8 38.8 -38.5 32.5 19.3 -19.5

S.PR.NON 119.0 38.9 -38.6 44.1 19.3 -19.5

T-SHAHPUR 92.3 38.8 -38.5 26.7 19.3 -19.5

BHERA.IN 37.5 38.9 -38.6 18.1 19.3 -19.5

SILANWALI RD SARGODAC

LALIAN BARANA

PATHAN KOT

SGD2

126-SBPL

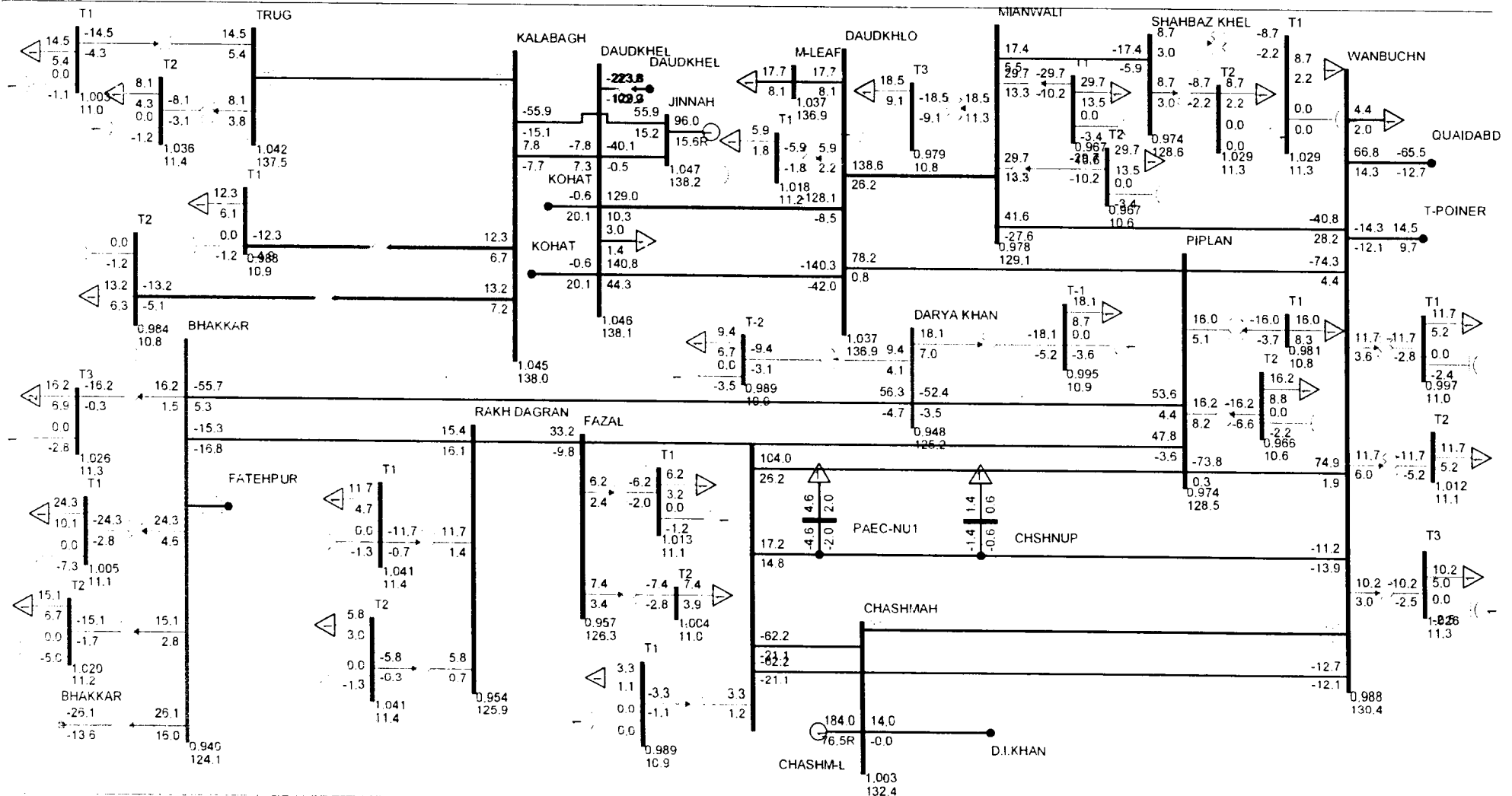
LALIAN NEW

138.2 136.5 135.4

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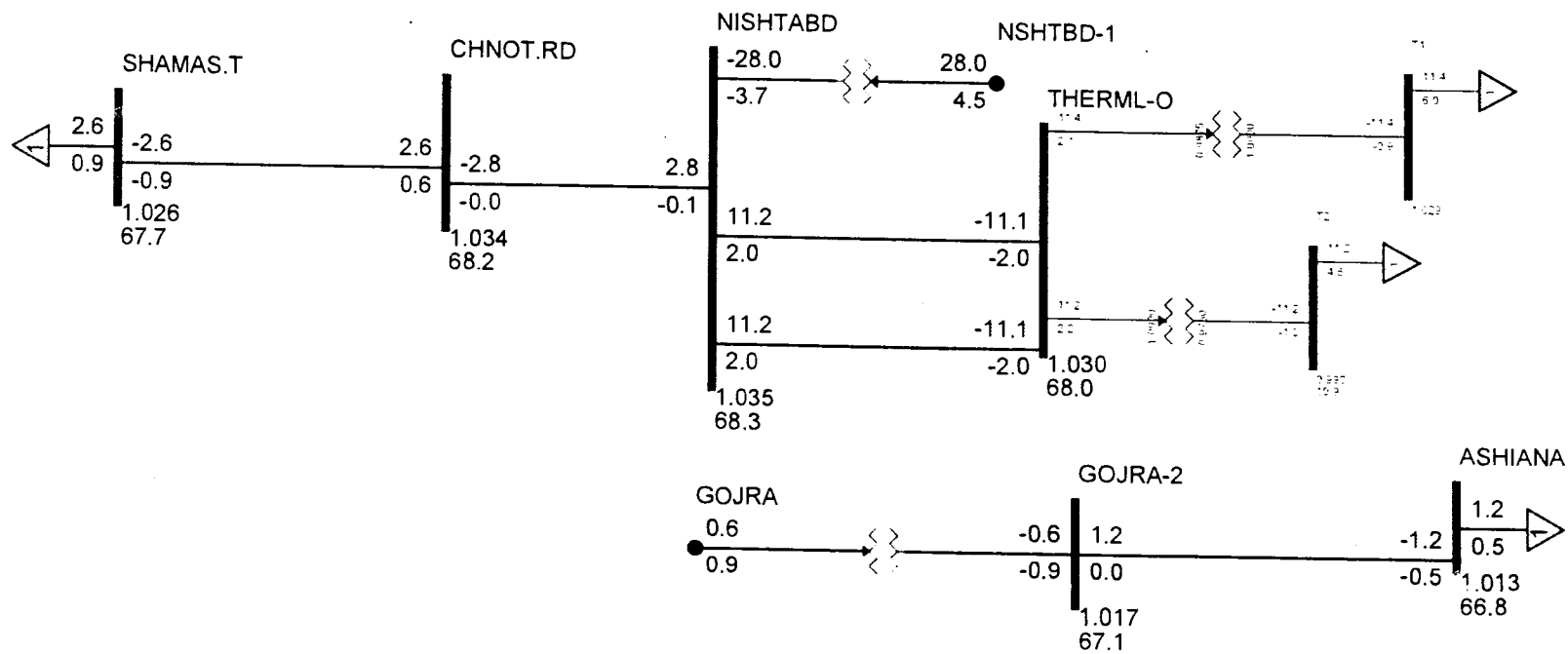
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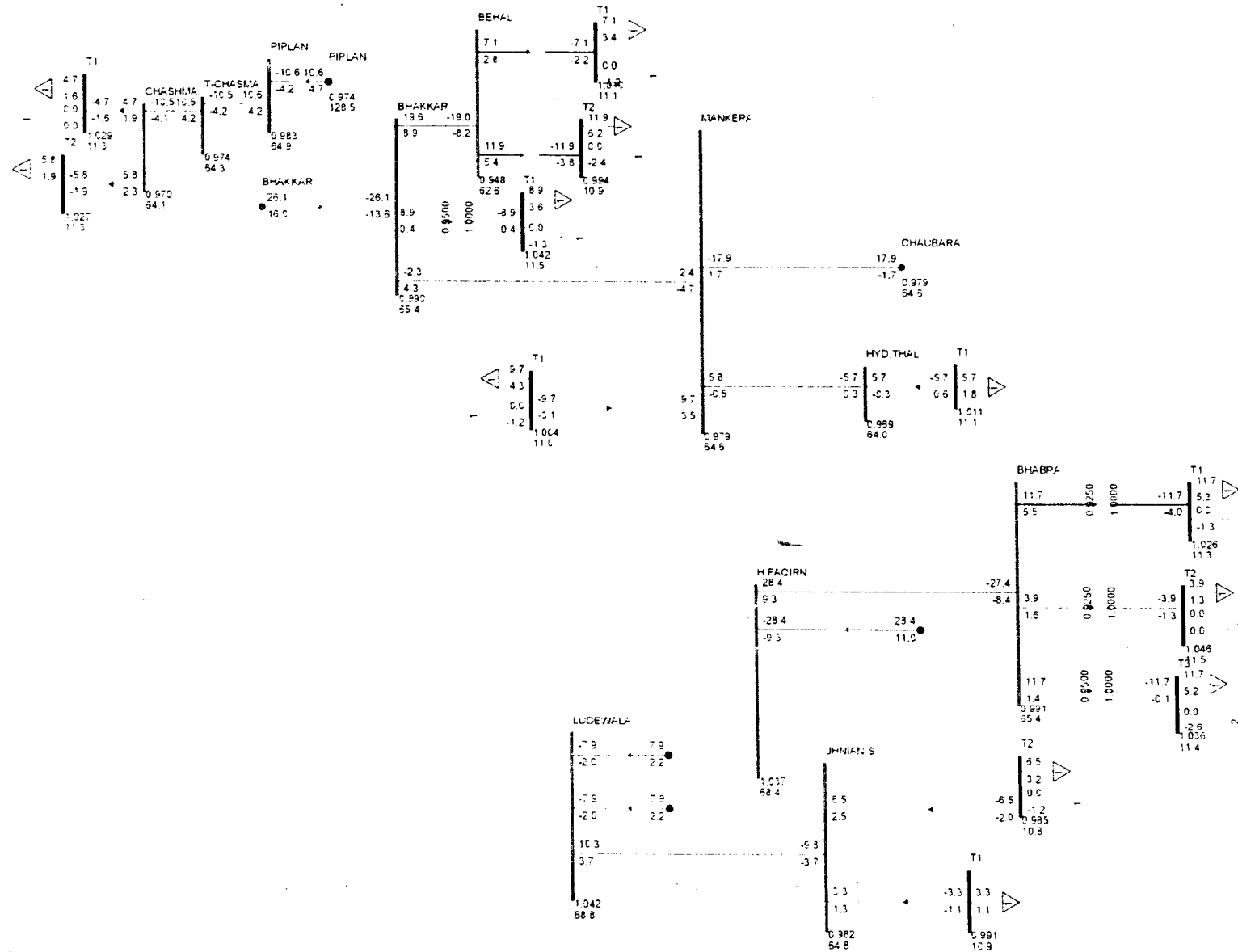
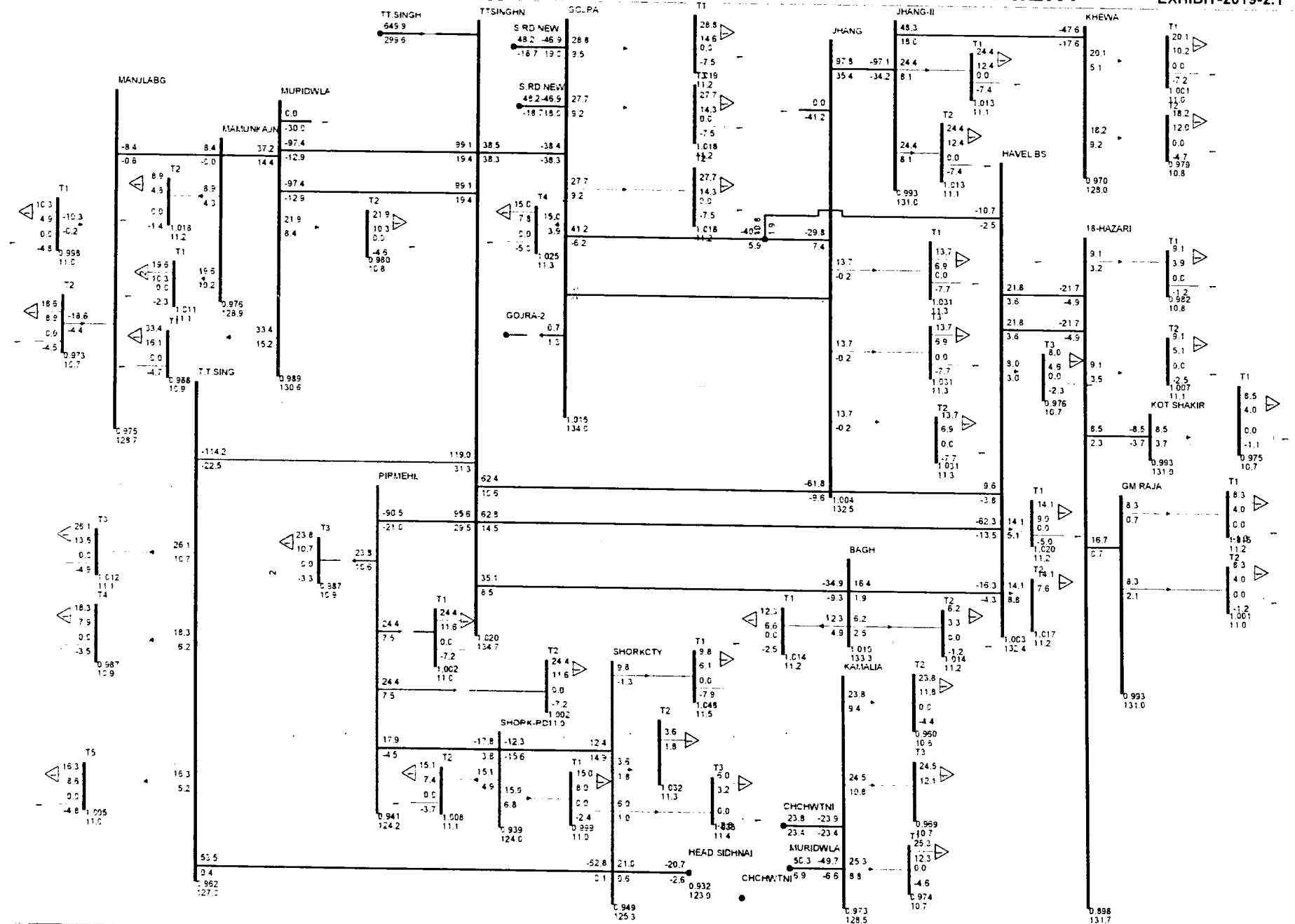
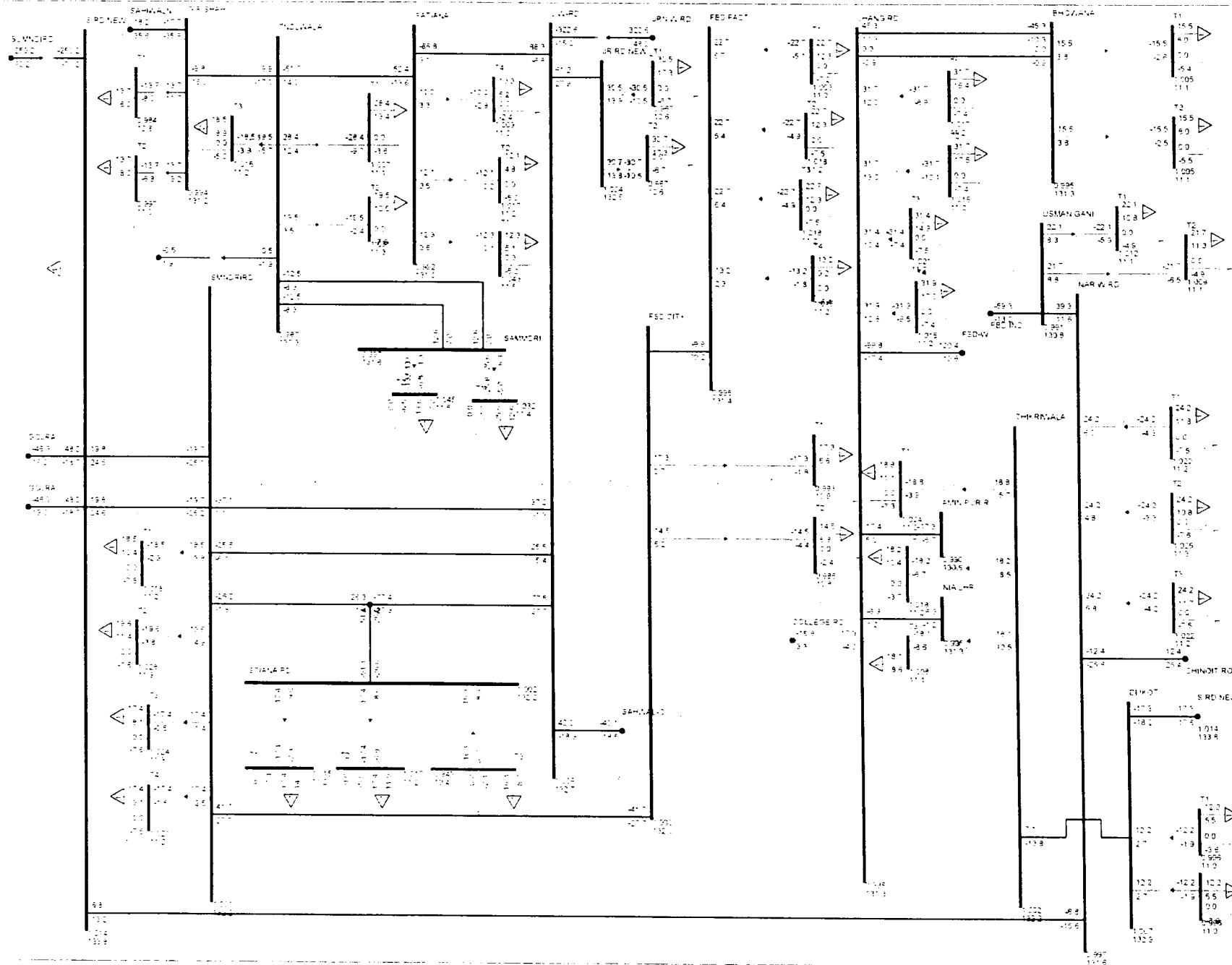


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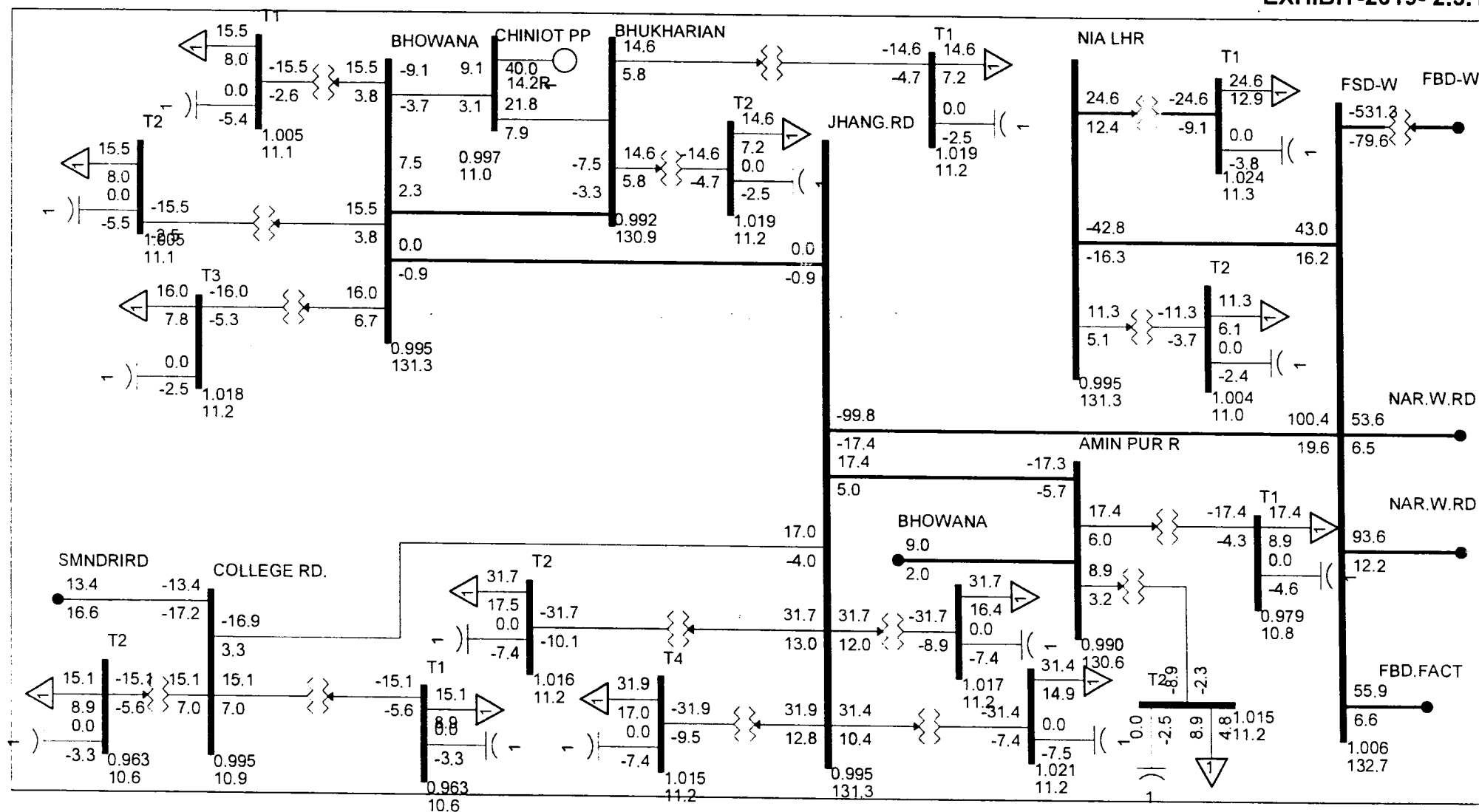
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EXHIBIT-2019- 2.2



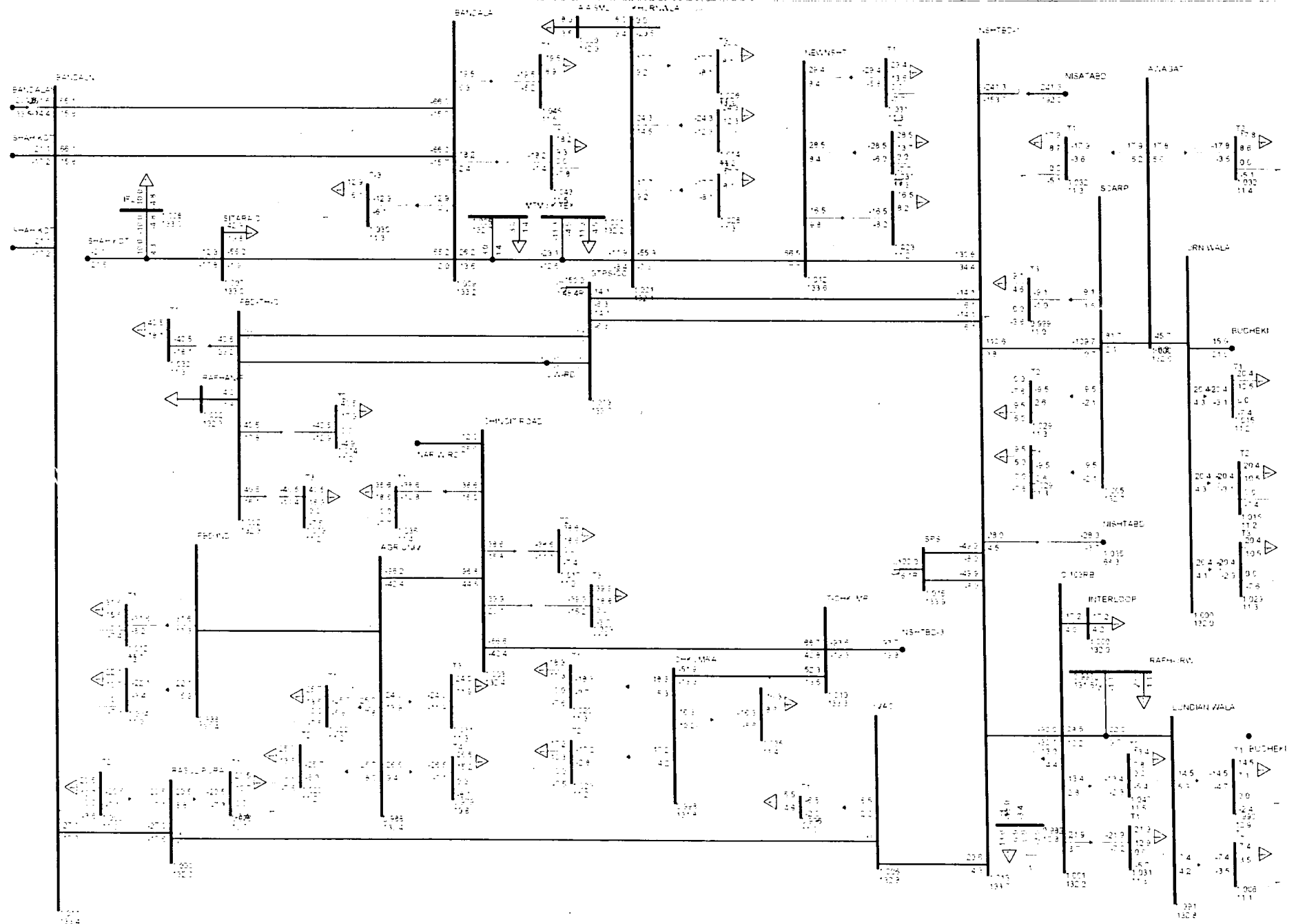
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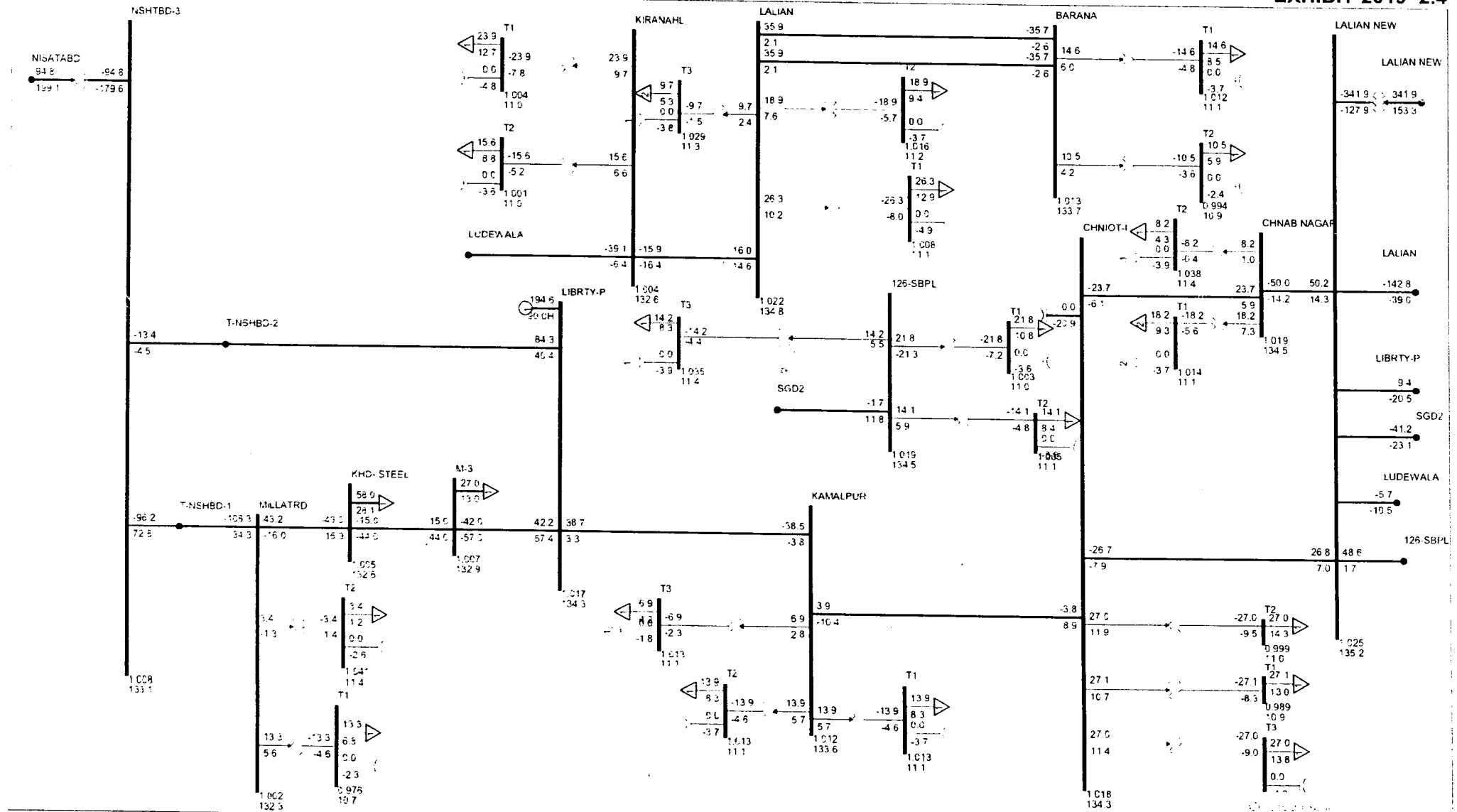
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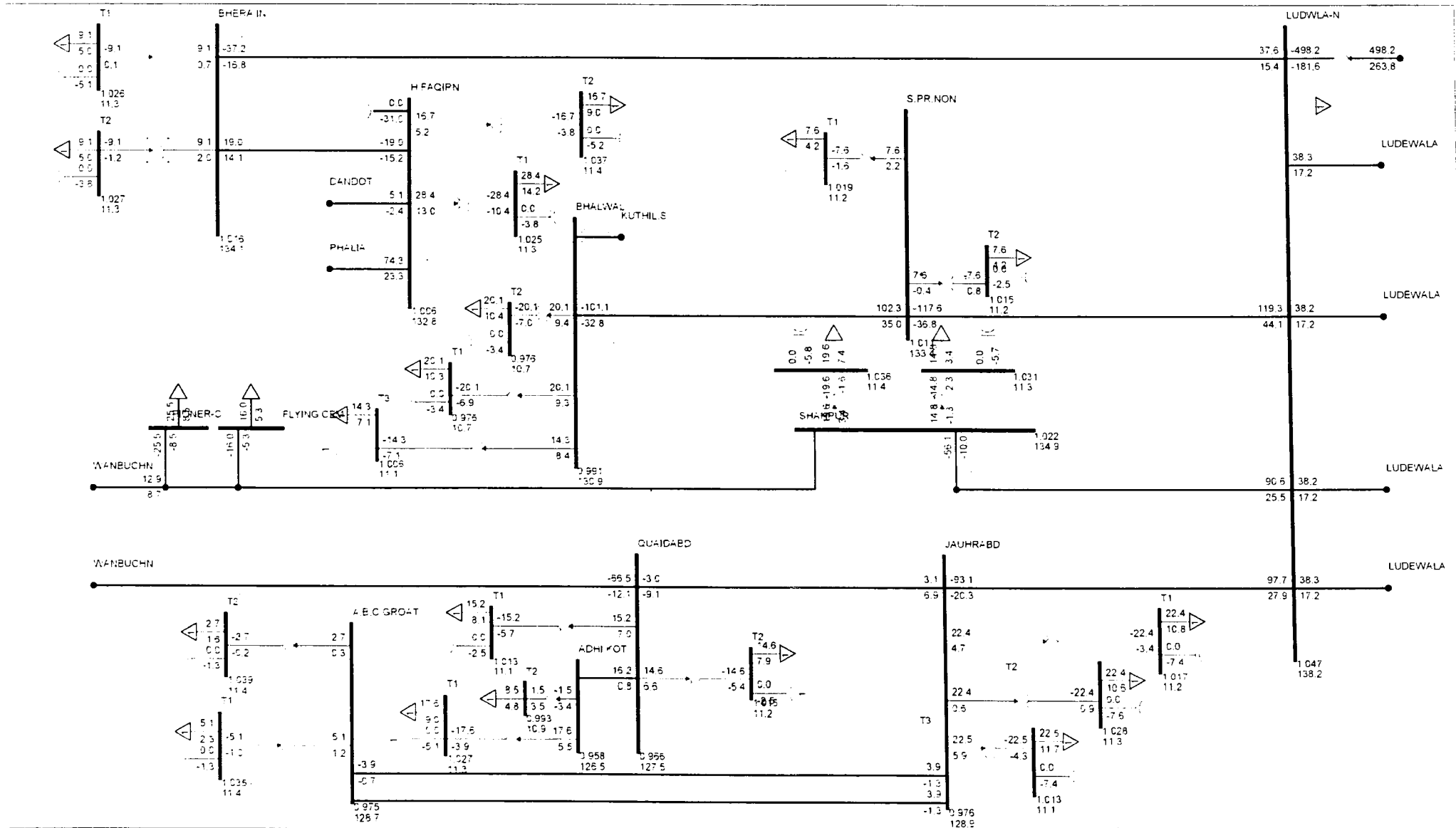
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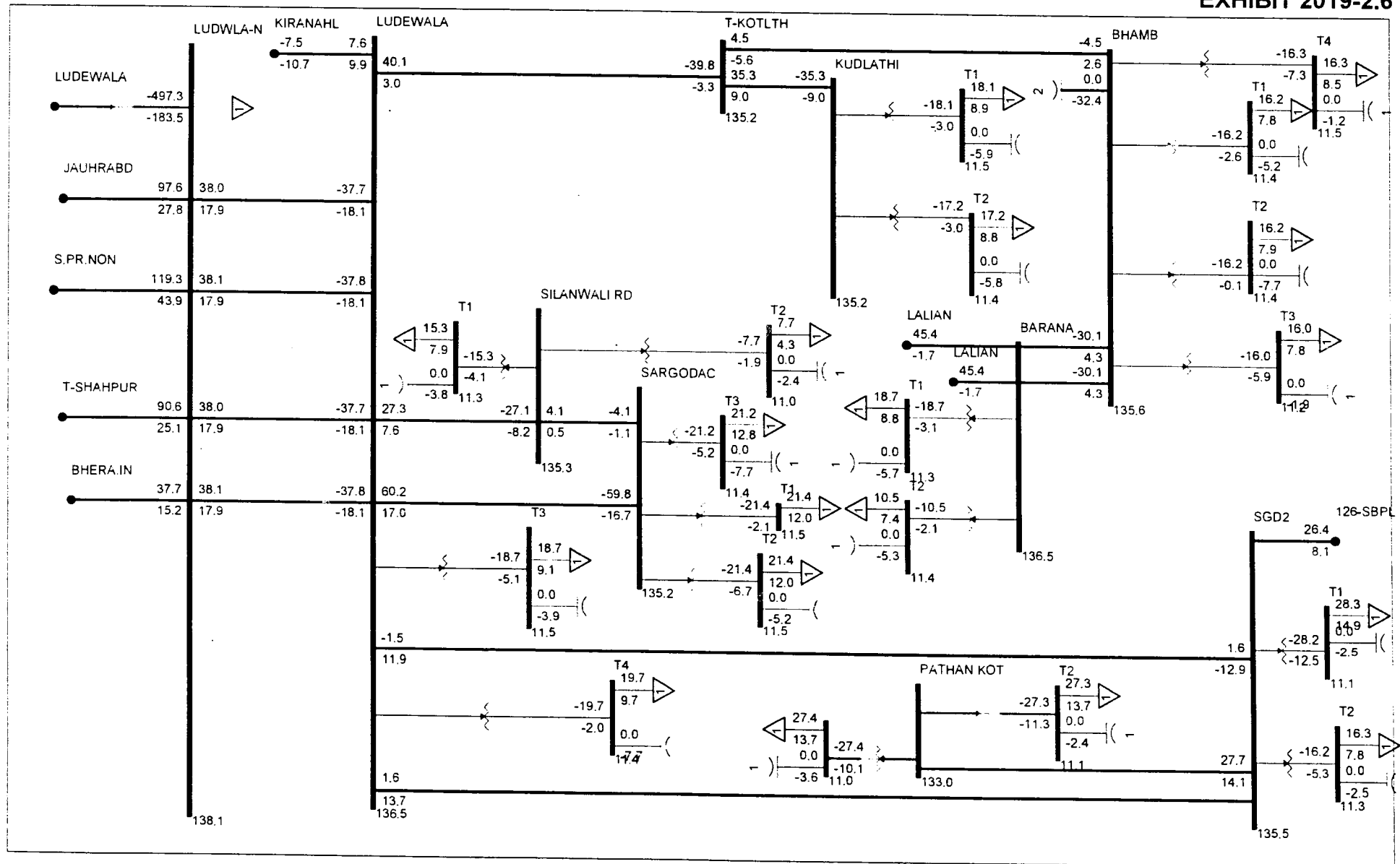
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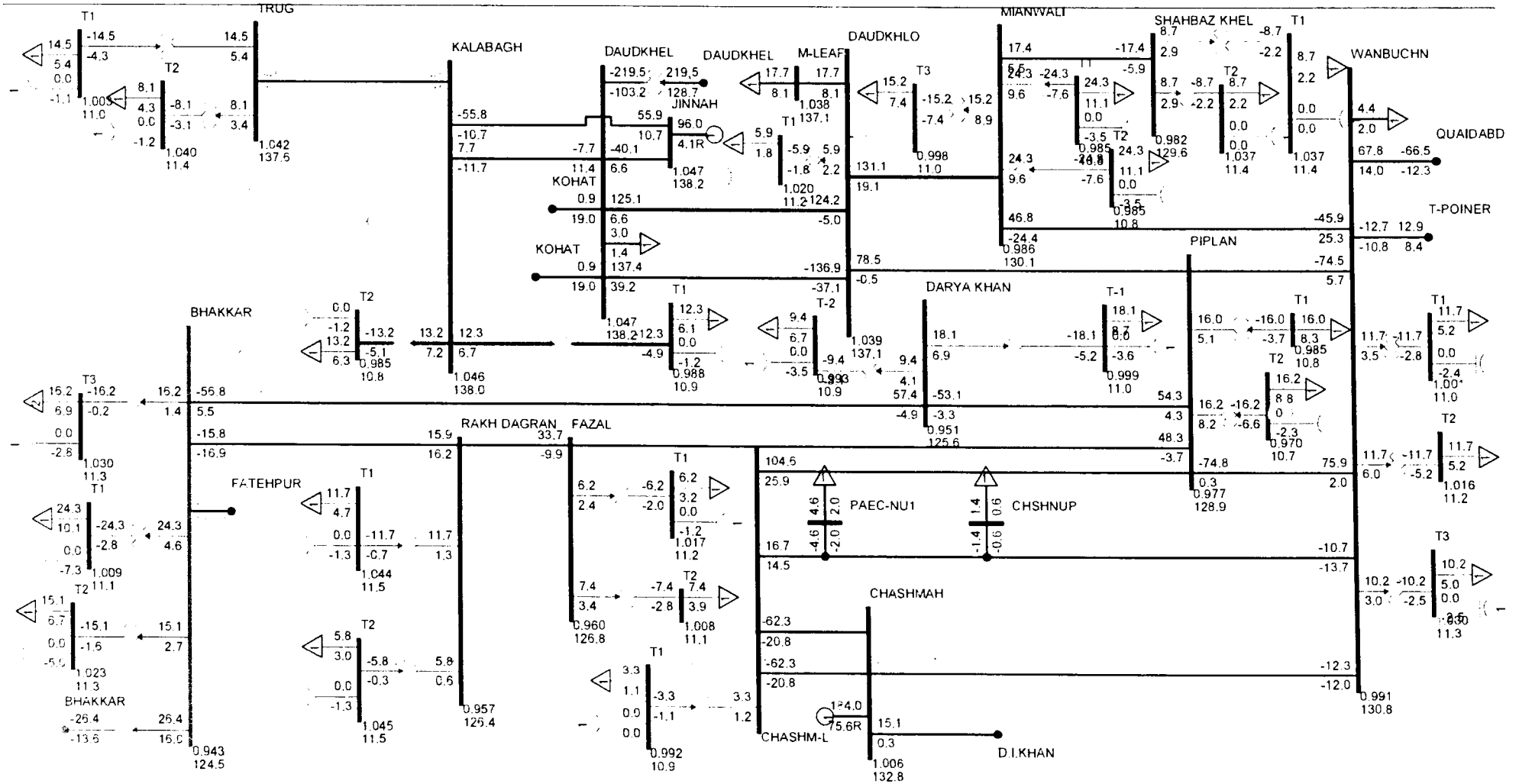
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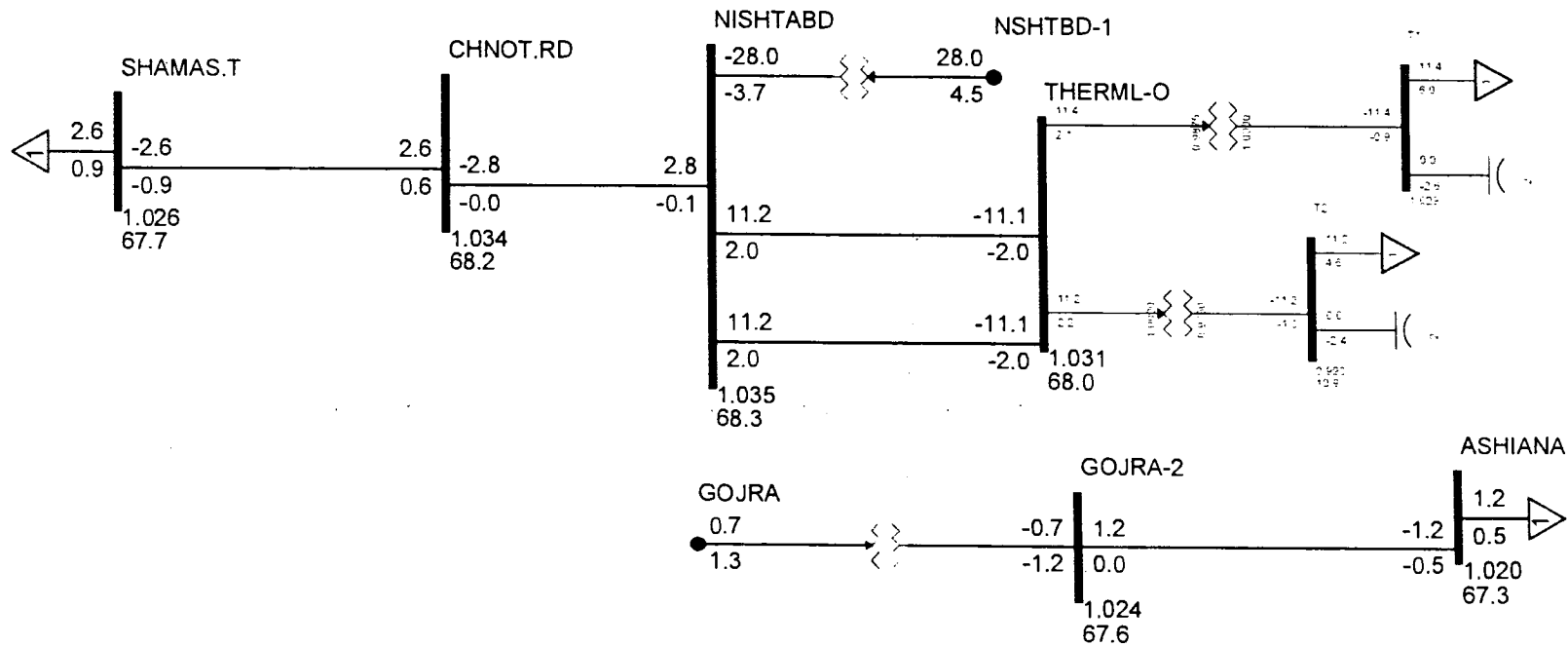
PEAK LOAD-YEAR 2019 WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2019- 2.7



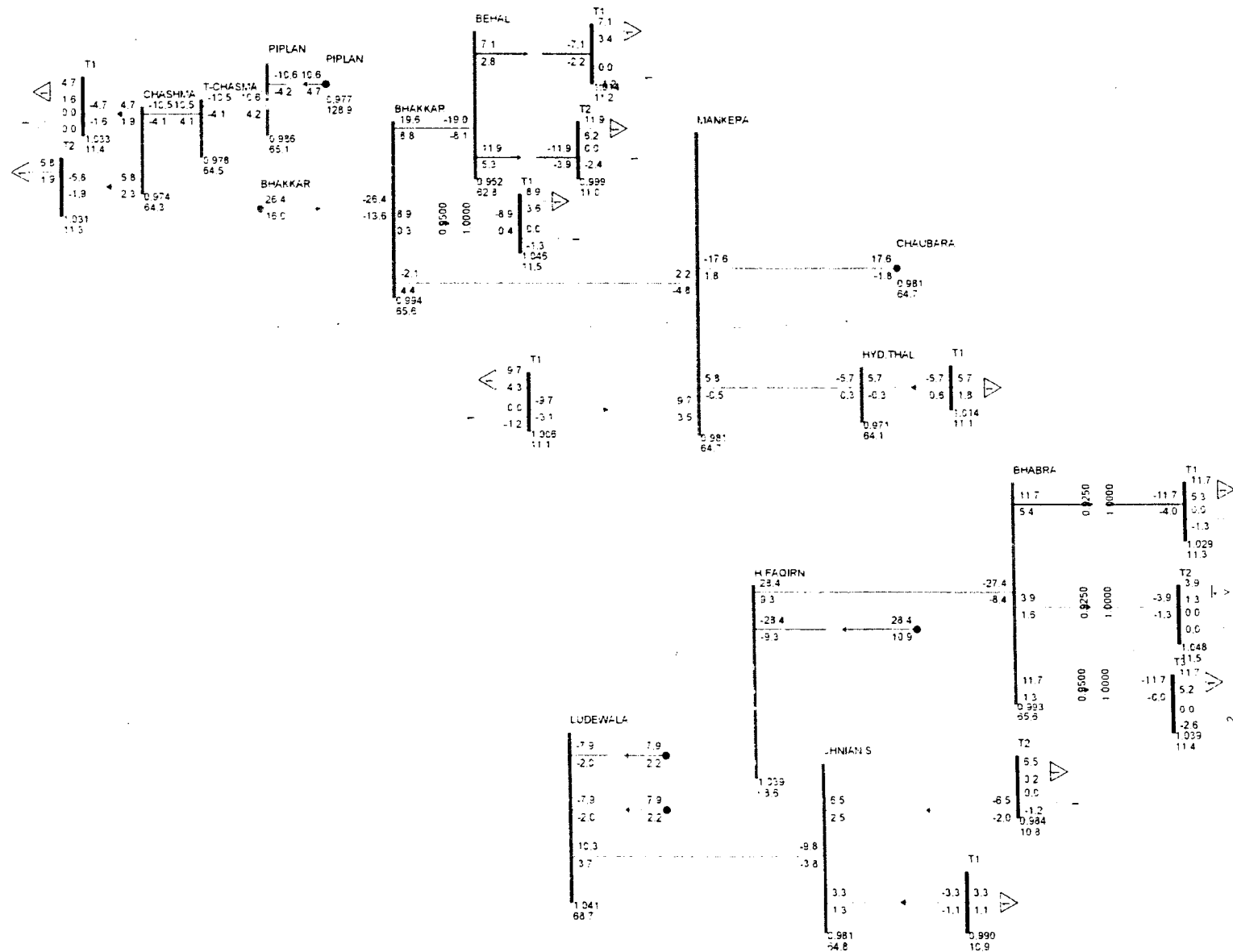
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EXHIBIT-2019- 2.8



LOAD FLOW STUDY OF FESCO 7th STG PROJECT(OPTIMAL) PEAK LOAD-YEAR 2019: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2019- 2.9



Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
		T2	13 MVA	11	8.1	9.2	
11	Behal	T1	13 MVA	11	7.3	8.7	Switchgear ratings of 25 kA are recommended to be used
		T2	13 MVA	11	7.3	8.7	
12	Noshera	T1	13 MVA	11	7.1	8.5	
		T2	13 MVA	11	7.1	8.5	
13	Chowk Rajana	T1	13 MVA	11	7.8	11.7	
		T2	13 MVA	11	7.8	11.7	
14	Chiniot-II	T1	13 MVA	11	8.3	9.6	
		T2	13 MVA	11	8.3	9.6	
15	Chashma-RB	T1	13 MVA	11	8.1	9.5	
		T2	13 MVA	11	8.1	9.5	
16	Adhi Kot	T1	13 MVA	11	7.2	8.6	
		T2	13 MVA	11	7.2	8.6	
17	Sargodha-III	T1	13 MVA	11	8.3	12.4	
		T2	13 MVA	11	8.3	12.4	
18	Bhakkar-II	T1	13 MVA	11	7.1	10.7	
		T2	13 MVA	11	7.1	10.7	
19	Mankera	T1	13 MVA	11	6.2	9.3	
		T2	13 MVA	11	6.2	9.3	
20	Hyderabad Thal	T1	13 MVA	11	6.7	10.1	

Short Circuit Study Results of 11 KV Bus Bars

Short Circuit Study Results of 11 kV Bus Bars of FESCO

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
1	Chenab Nagar	T1	26 MVA	11	13.2	14.52	Switchgear ratings of 25 kA are recommended to be used.
		T2	13 MVA	11	8.4	9.63	
2	Usman Ghanni	T1	26 MVA	11	13.1	14.42	
		T2	13 MVA	11	8.3	9.59	
3	Mamu Kanjan	T1	26 MVA	11	12.7	9.2	
		T2	13 MVA	11	7.8	11.7	
4	Pathan Kot	T1	26 MVA	11	11.37	12.95	
		T2	26 MVA	11	11.37	12.95	
5	Nia Lahore	T1	26 MVA	11	12.8	14.14	
		T2	26 MVA	11	12.8	14.14	
6	Bhabra	T1	26 MVA	11	11.4	13.0	
		T2	13 MVA	11	7.6	8.94	
7	A.P Sial	T1	13 MVA	11	6.1	7.5	
		T2	13 MVA	11	6.1	7.5	
8	SPS Colony	T1	26 MVA	11	13.7	14.9	
		T2	26 MVA	11	13.7	14.9	
9	Amin Pur Road	T1	26 MVA	11	12.6	14.0	
		T2	13 MVA	11	8.1	9.4	
10	Trug	T1	13 MVA	11	8.1	9.2	

Sr. No.	Name of Substation	Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
			3-phase	1-phase	
72	Kirana Hill	132	10.1	6.5	
73	Kud Lathi	132	6.1	3.9	
74	Bhamb	132	2.1	1.3	
75	Sargodha City	132	9.4	6.4	
76	Sargodha -II	132	1.3	9.6	
77	126 SB PL	132	8.8	5.7	Switchgear ratings of 40 kA are recommended to be used
78	SP Noon	132	6.9	5.3	
79	Bhalwal	132	5.7	5	
80	Bhera Ind.	132	4.5	2.8	
81	Head Faqirian	132	4.2	2.7	
82	Lalian	132	1.9	1.4	
83	Barana	132	6.4	4.2	
84	Shorkot city	132	5.9	3.9	
85	Bhakkar	132	4.9	3.9	
86	FSD city	132	27.4	19.2	

Sr. No.	Name of Substation	Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
			3-phase	1-phase	
48	Manjla Bagh	132	3.8	2.9	
49	Murid Wala	132	9.9	8	
50	Kamalia	132	4.7	3.1	
51	Kamal pur	132	11.2	7.8	Switchgear ratings of 40 kA are recommended to be used
52	Daud Khel old	132	14.8	13.9	
53	Daud Khel	132	16.8	16.7	
54	M-Leaf	132	13.6	12.2	
55	Mianwali	132	8.2	5.8	
56	PAEC- Nuc	132	7.8	6.4	
57	Chasnupp	132	6.9	5.4	
58	Wan Buchran	132	12.2	10	
59	Chashma-L	132	10.2	10	
60	Chashma-RB	132	9.2	8.7	
61	Piplan	132	7.6	5.6	
62	Fazal	132	4.2	2.8	
63	Rakh Dagan	132	4.1	2.7	
64	Jauharabad	132	1.2	1.1	
65	Shahpur	132	7.3	4.8	
66	ABC grout	132	5.4	3.6	
67	Quaidabad	132	7.1	4.9	
68	Ludewala N	132	2.1	1.7	
69	Ludewala	132	1.8	1.4	
70	PioneerCement	132	5.5	3.6	
71	Flying Cement	132	6.5	4.3	

Sr. No.	Name of Substation	Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
			3-phase	1-phase	
24	Chiniot Road	132	19.1	13.9	Switchgear ratings of 40 kA are recommended to be used
25	Satiana Road	132	23.8	17.6	
26	Agriuniversity	132	13	8.6	
27	Narwala Road	132	23.2	13.2	
28	Faisalabad Industrial Estate	132	14.2	9.3	
29	Jhang Road	132	26.6	18.8	
30	Thikriwala	132	13.3	8.6	
31	Bhowana	66	14	10	
32	Factory Area	132	16.7	11	
33	Sammundri Road	132	3	2	
34	Sammundri	132	3.5	2.2	
35	T.T Singh	132	6.4	4.3	
36	Haveli Bahadar Shah	132	9	6	
37	Pir Mahal	132	5.1	3.3	
38	18- Hazari	132	4	2.4	
39	Kot Shakir	132	2.4	1.5	
40	Jhang	132	9.8	6.6	
41	Jhang-II	132	7.4	4.9	
42	S.R.D New	132	2.5	1.9	
43	Shor Kot Road	132	5.3	3.2	
44	Khewa	132	3.8	2.4	
45	Jaranwala	132	3.2	2.5	
46	Tandlianwala	132	9.2	5.9	
47	G.F Shah	132	8	5.2	

Short Circuit Study Result of 132 KV Network

➤ Short Circuit Study Results of 132 kV Substations of FESCO

Sr. No.	Name of Substation	Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
			3-phase	1-phase	
1	Bhowana	132	34.7	22	Switchgear ratings of 40 kA are recommended to be used
2	Scarp Colony	132	11.2	7.6	
3	Jaranwala	132	8.7	5.6	
4	Rajhan-jrw	132	7.9	5.7	
5	Liberty-P	132	17.1	15	
6	Chinot-I	132	14.9	10.5	
7	Lalain new	132	23.4	18.7	
8	C.103	132	11.2	7.3	
9	Lundianwala	132	10.9	7.2	
10	New Nishatabad	132	28.6	24.1	
11	Khurianwala	132	31.4	20.1	
12	Millat Road	132	10.8	5.3	
13	Satiana	132	10.5	6.9	
14	J.K Tech	132	11.8	7.3	
15	MTM	132	14.3	8.3	
16	A.A SML	132	12.7	8.3	
17	Sitara Chemical	132	17.9	9.2	
18	Bandala	132	44.3	22.7	
19	IFL	132	29.5	10.2	
20	GTPS	132	30	27	
21	FSD old Thermal	132	18.7	3.4	
22	Relhan-F	132	17	12	
23	Chak Jhumra	132	8	5.4	

1.1.Methodology and Assumptions:

Short circuit studies have been carried out for the scenario of year 2019 of entire network to compute maximum 3-phase and 1-phase fault levels. However, in this report, the fault levels at only those substations are presented where the sub-Sub-projects under IGTDP have been proposed or substation which are directly connected with newly proposed Power plant or NTDC's Project (500 kV or 220 kV Grid Station). The computed fault levels have been compared with the short circuit rating of the installed switchgear equipment at the substations to identify any under-rated switchgear in the existing substation.

The Maximum fault currents have been calculated with following assumptions under IEC 909:

- Set Tap ratios to unity
- Set Line charging to zero
- Set shunts to zero in positive sequence
- Desired Voltage Magnitude at the Bus Bars set equal to 1.10 P.U i.e. 10 % higher than nominal, which is maximum permissible voltage under contingency condition.

For evaluation of Maximum short circuit levels we have assumed contribution in the fault currents from all the installed Generation capacity of Hydel, Thermal, Wind and Nuclear plants in the system in the year 2019 i.e. all the Generating units have been assumed on-bar in fault calculation's simulations.

The results of short circuit analysis along with any remarks are presented here under.

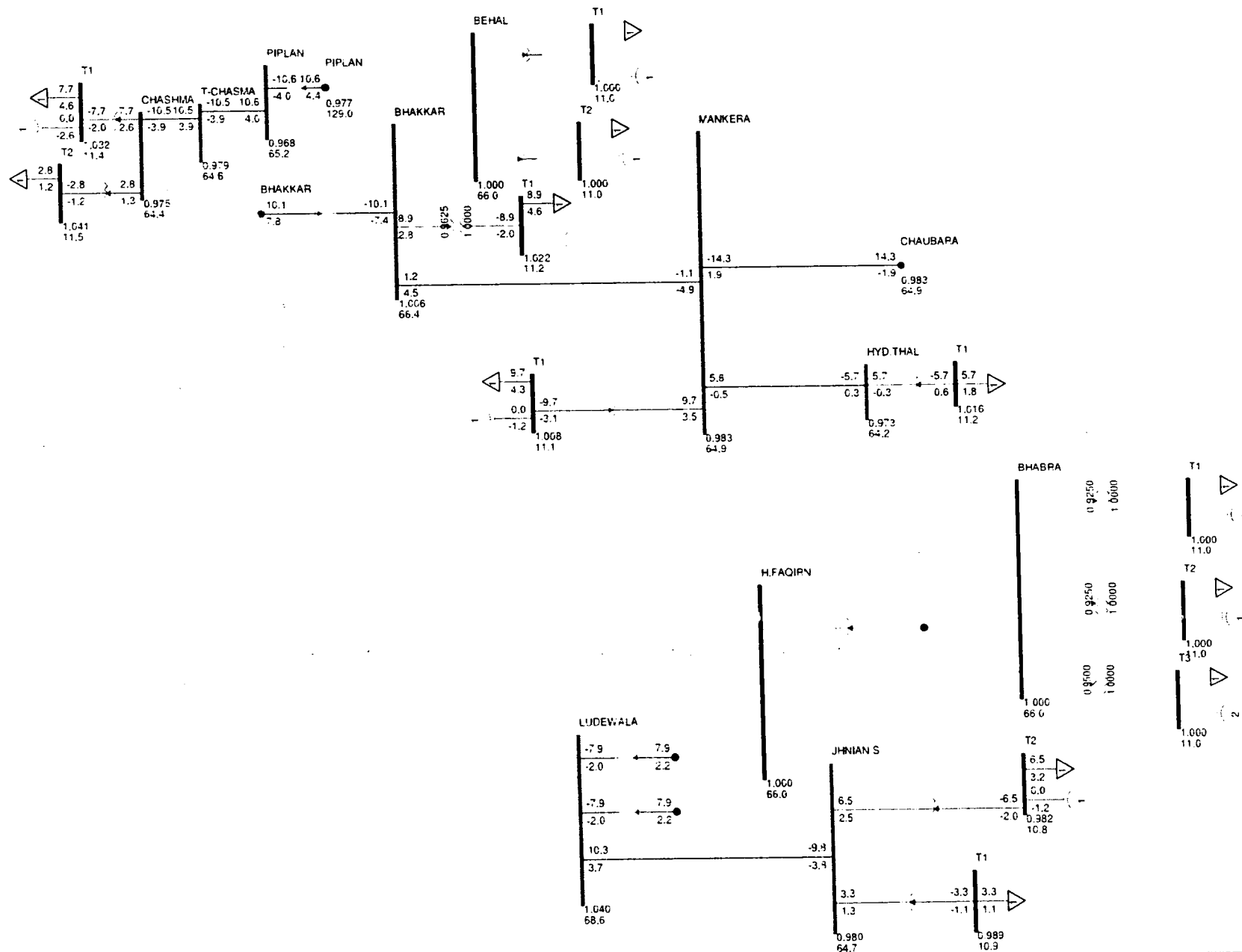
Annex-E

SHORT CIRCUIT STUDY

LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

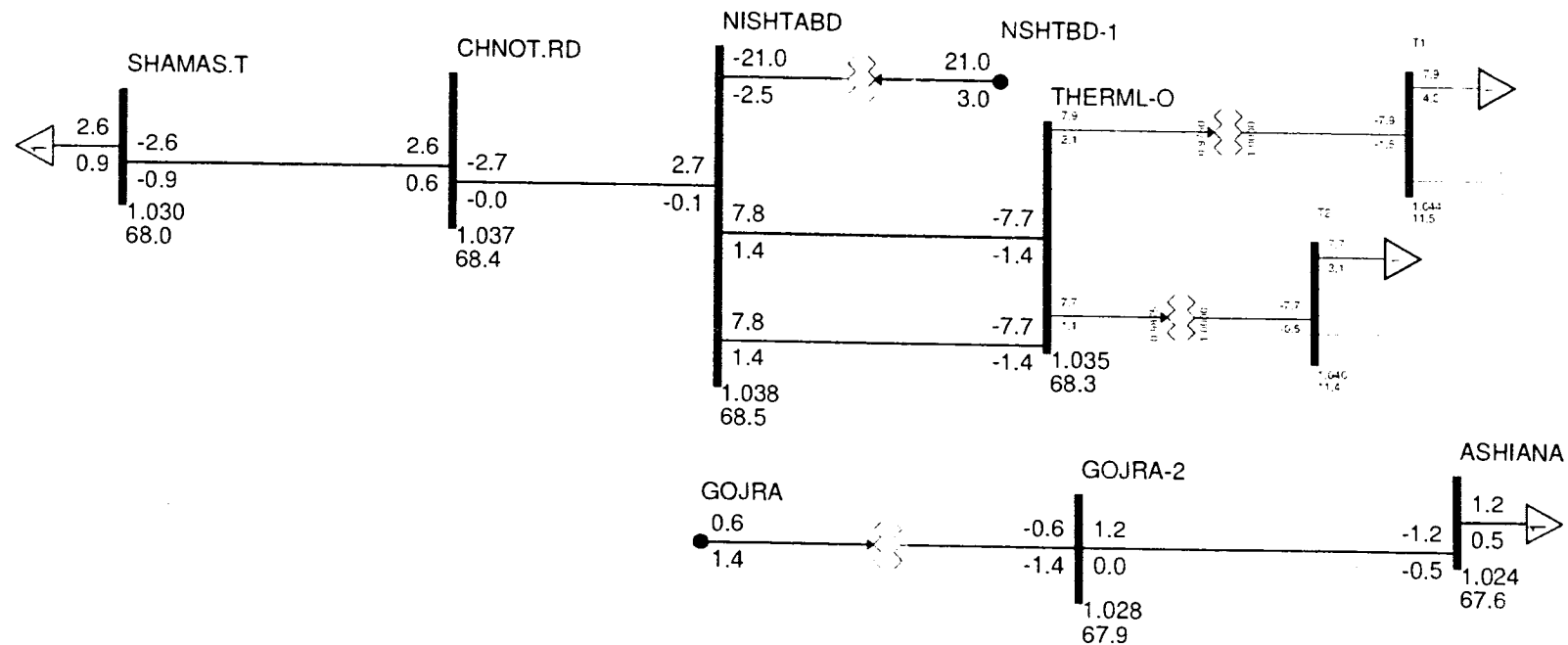
PEAK LOAD-YEAR 2019: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2019- 2.9



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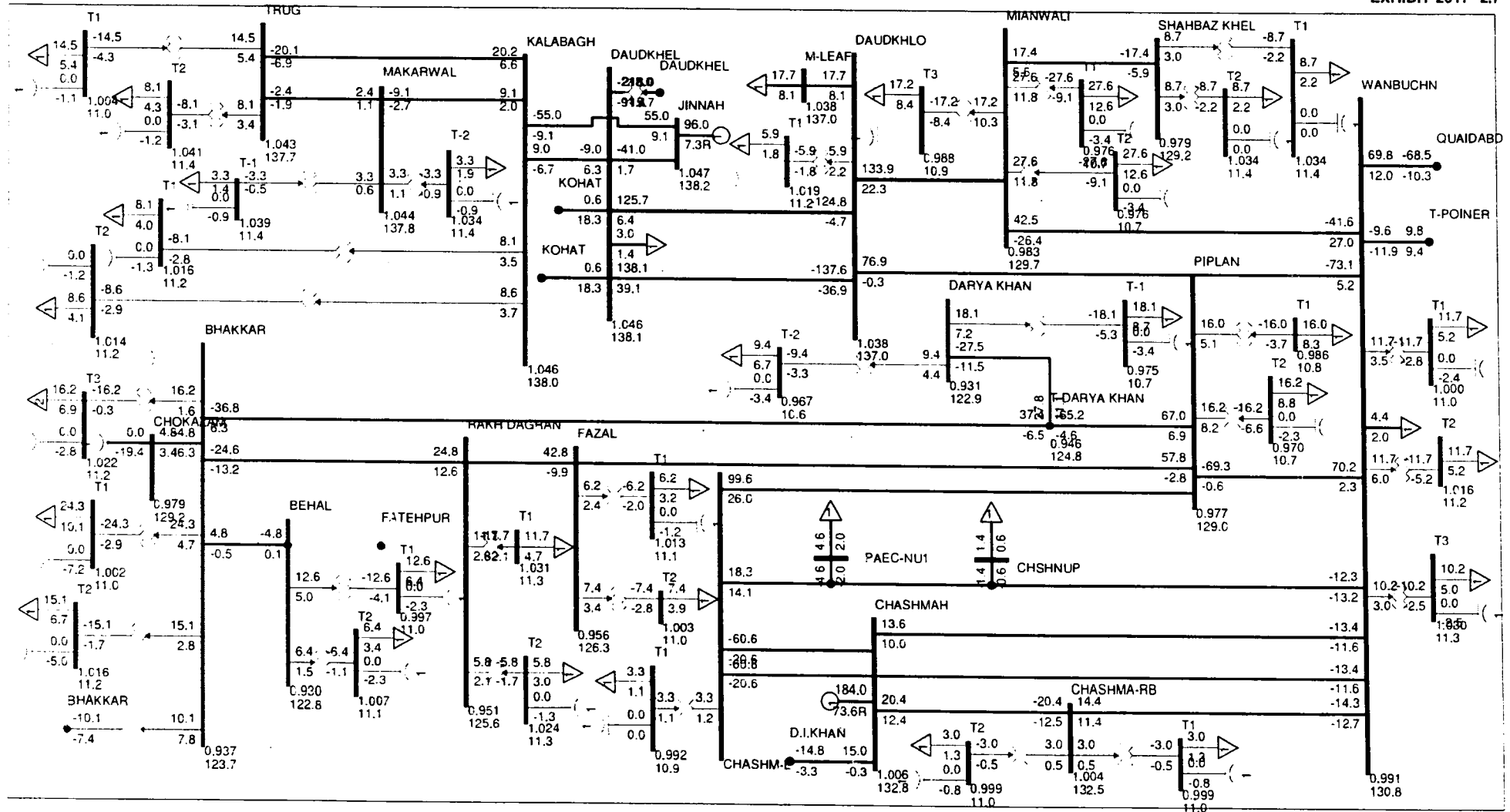
EXHIBIT-2019- 2.8



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2018: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.7



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST) **PEAK LOAD-YEAR 2019: WITH ADDITIONAL REINFORCEMENT**

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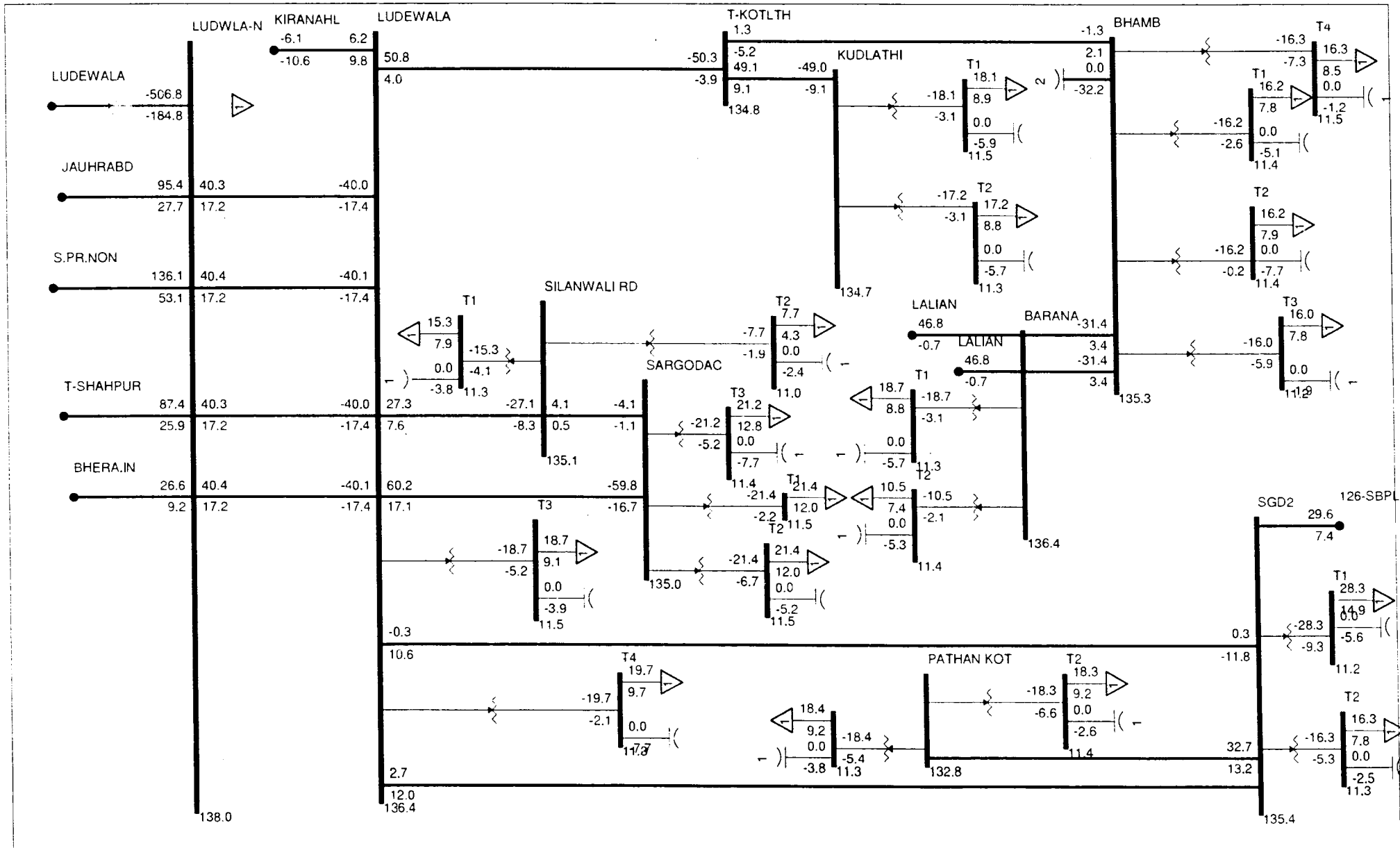


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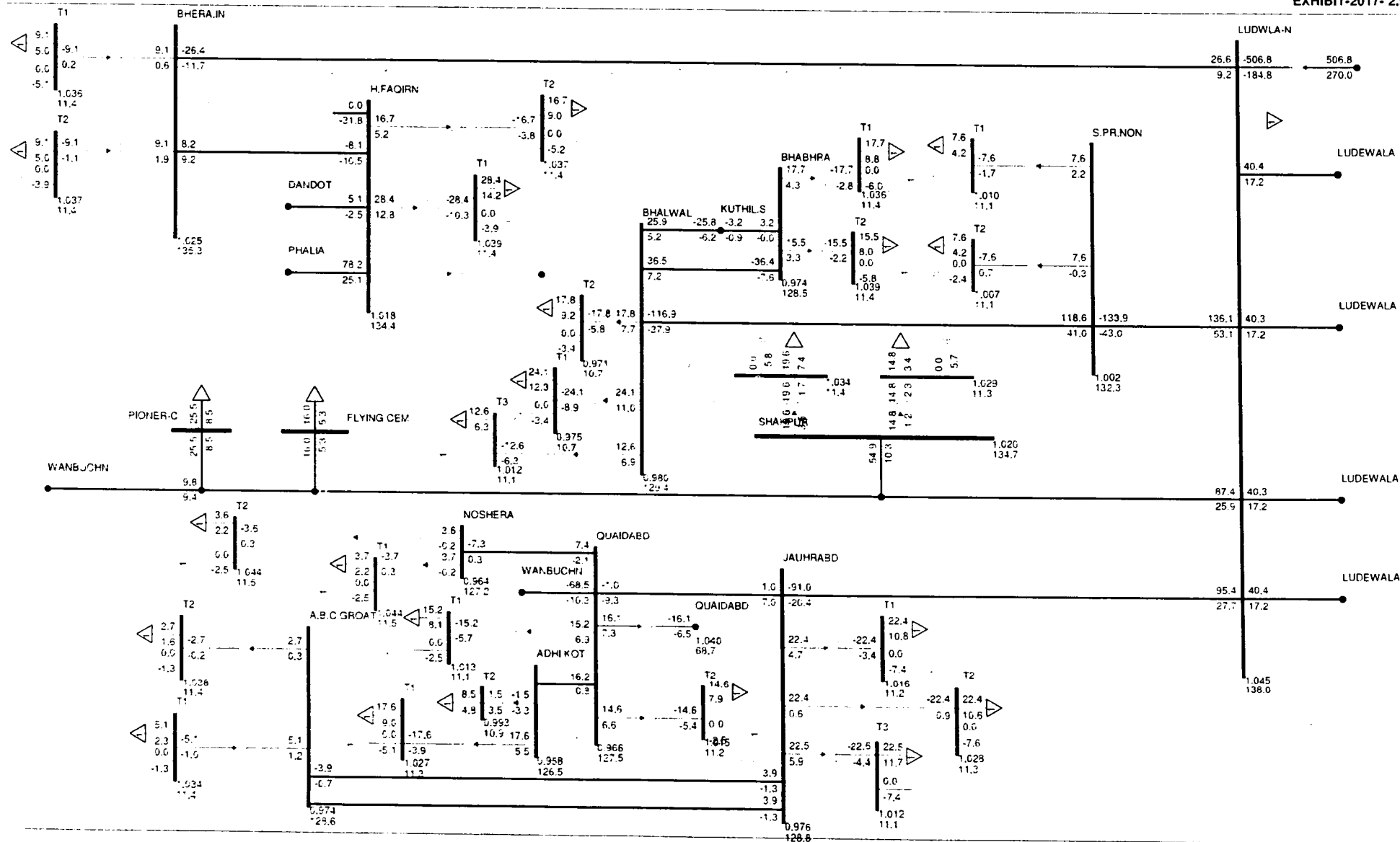
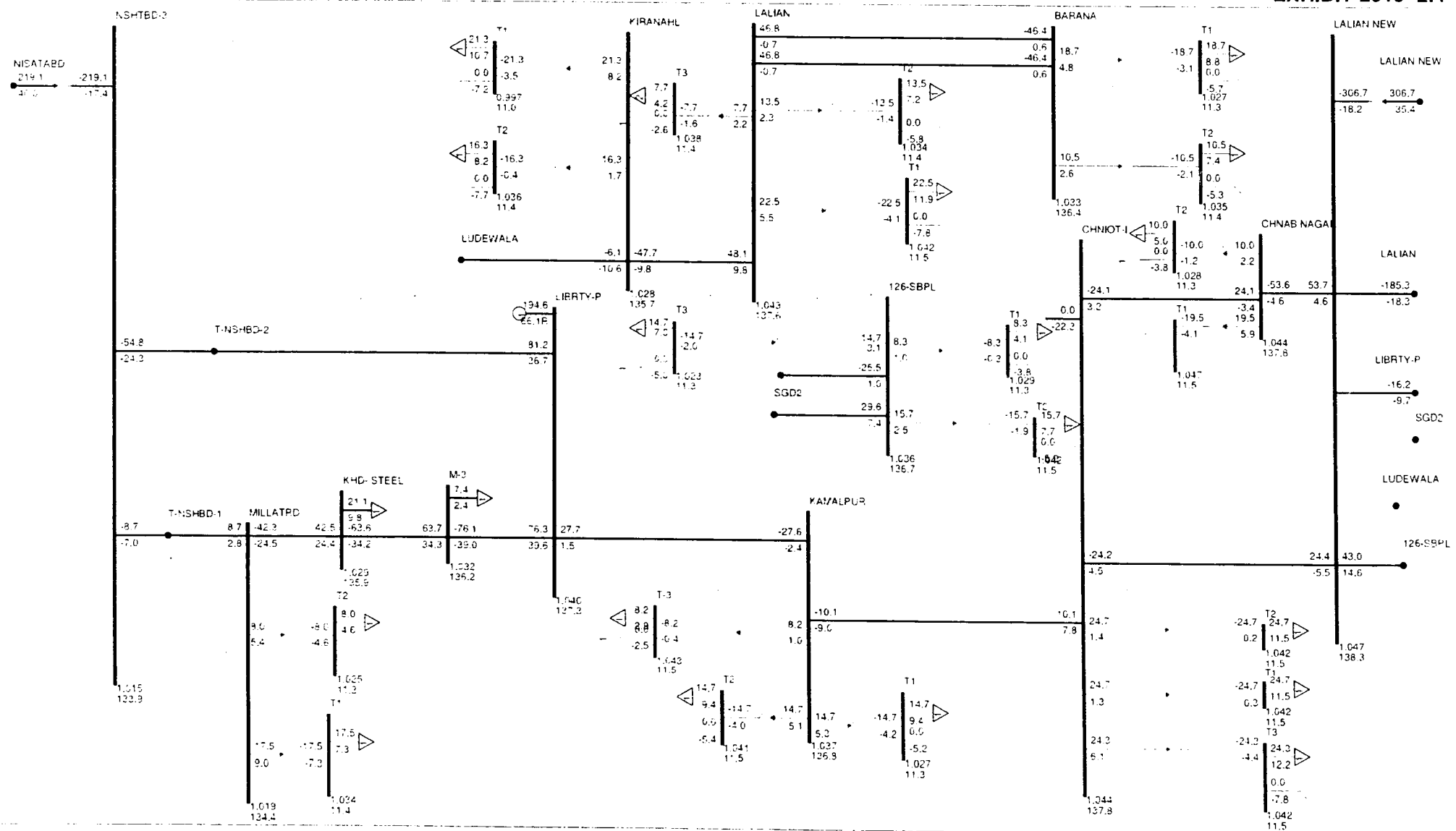


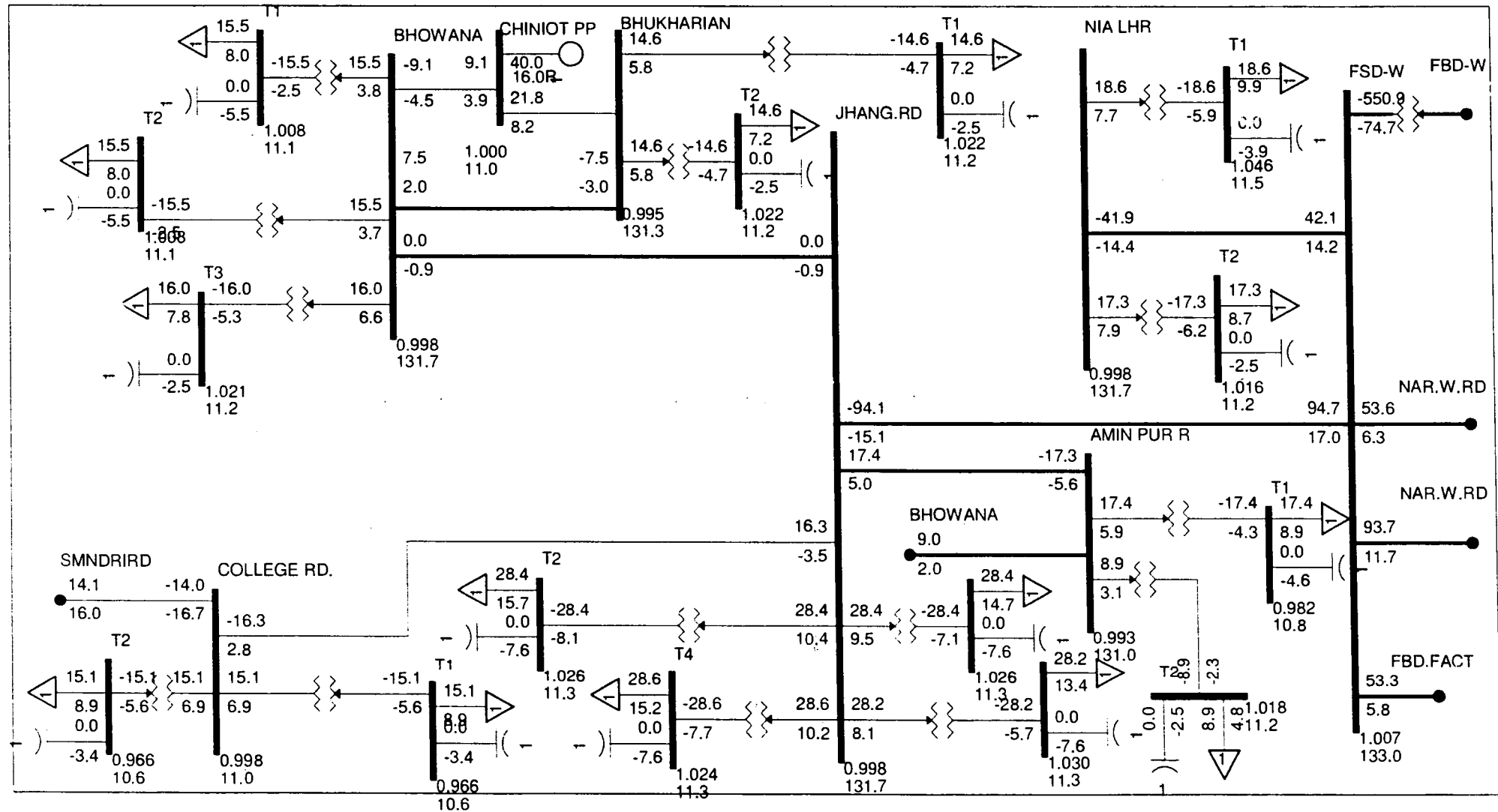
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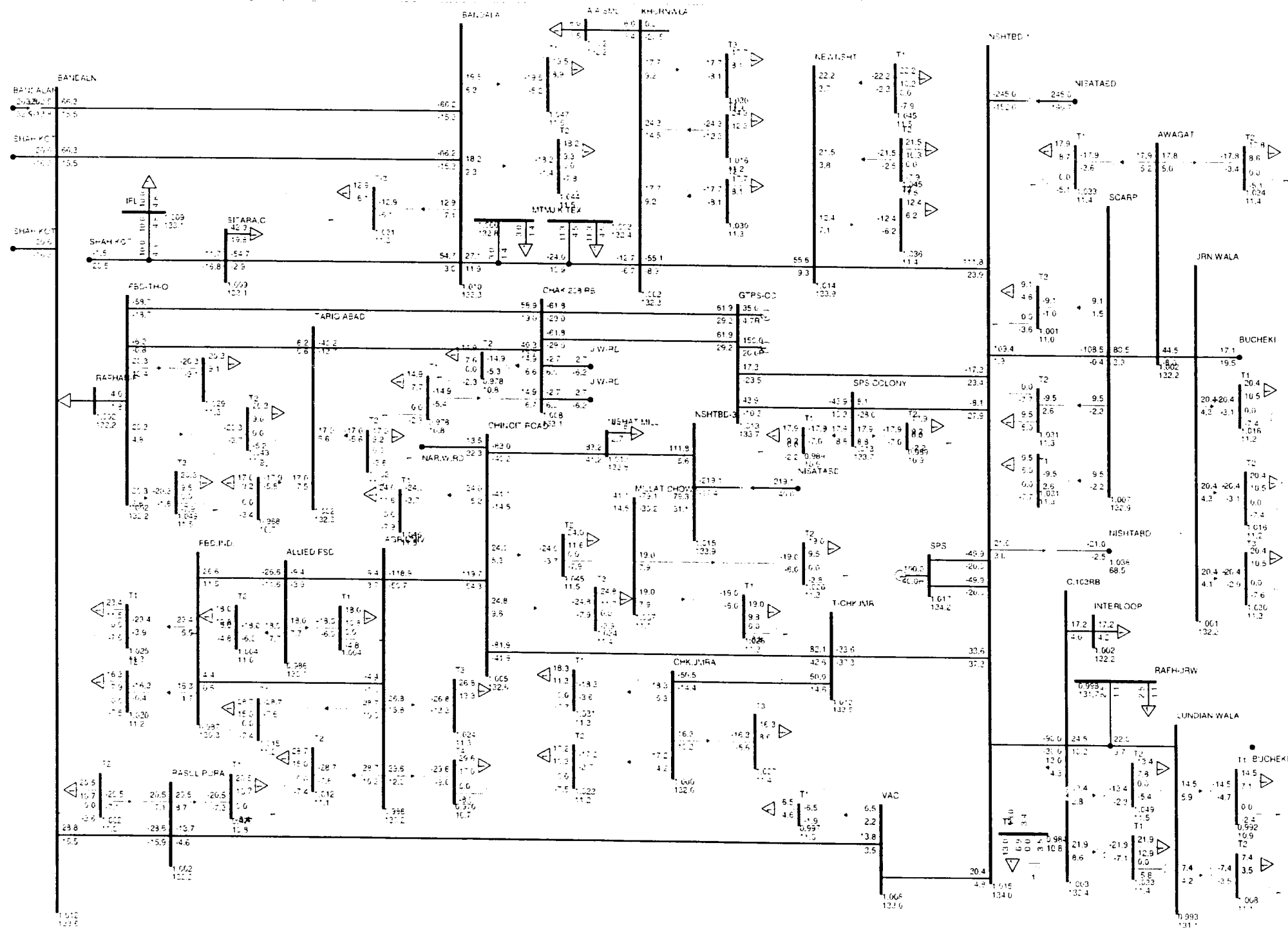
PEAK LOAD-YEAR 2019: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2019- 2.3.1



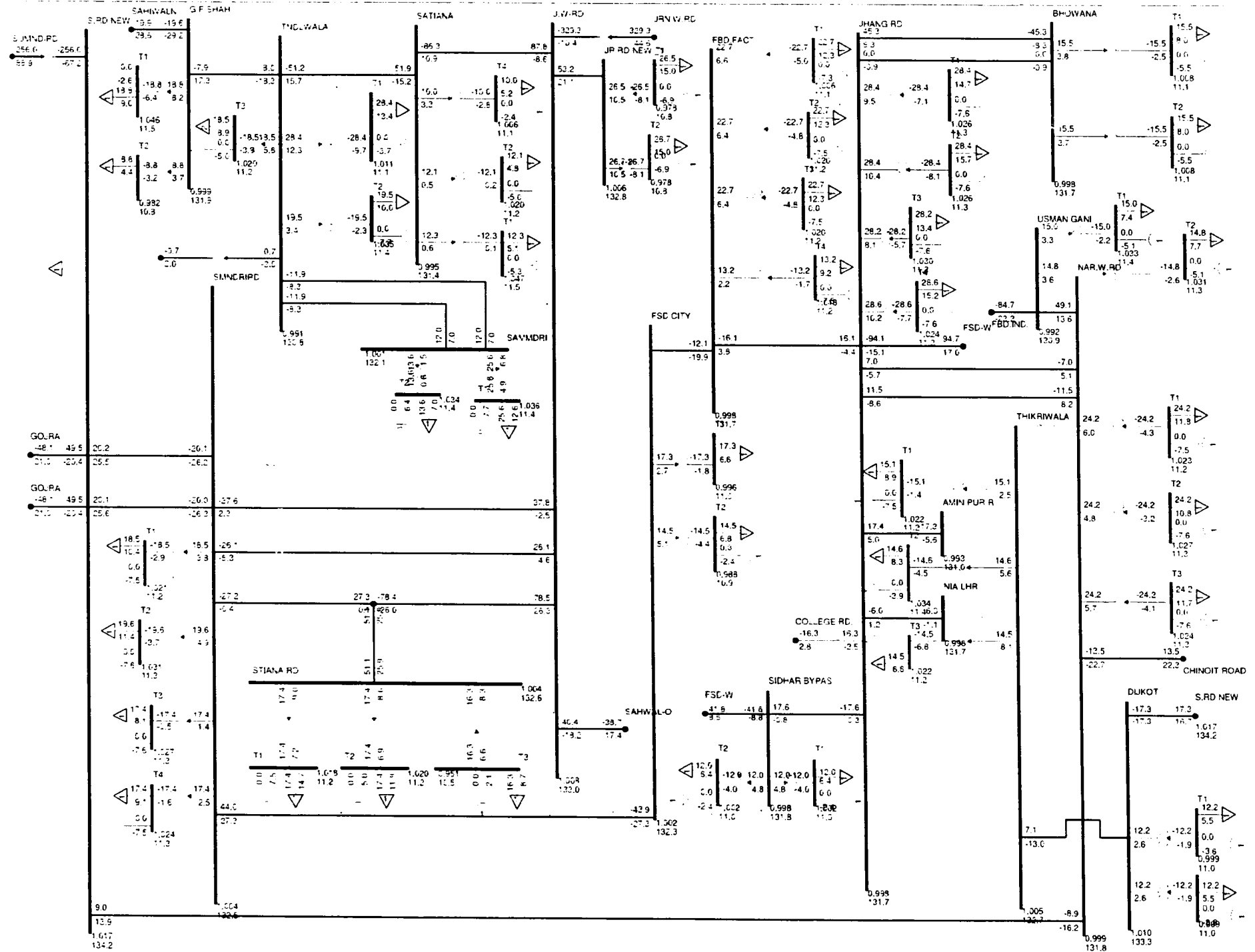
PEAK LOAD-YEAR 2017: WIT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.3



PEAK LOAD-YEAR 2019: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2019-2.2



PEAK LOAD-YEAR 2019: WITH ADDITIONAL REINFORCEMENT

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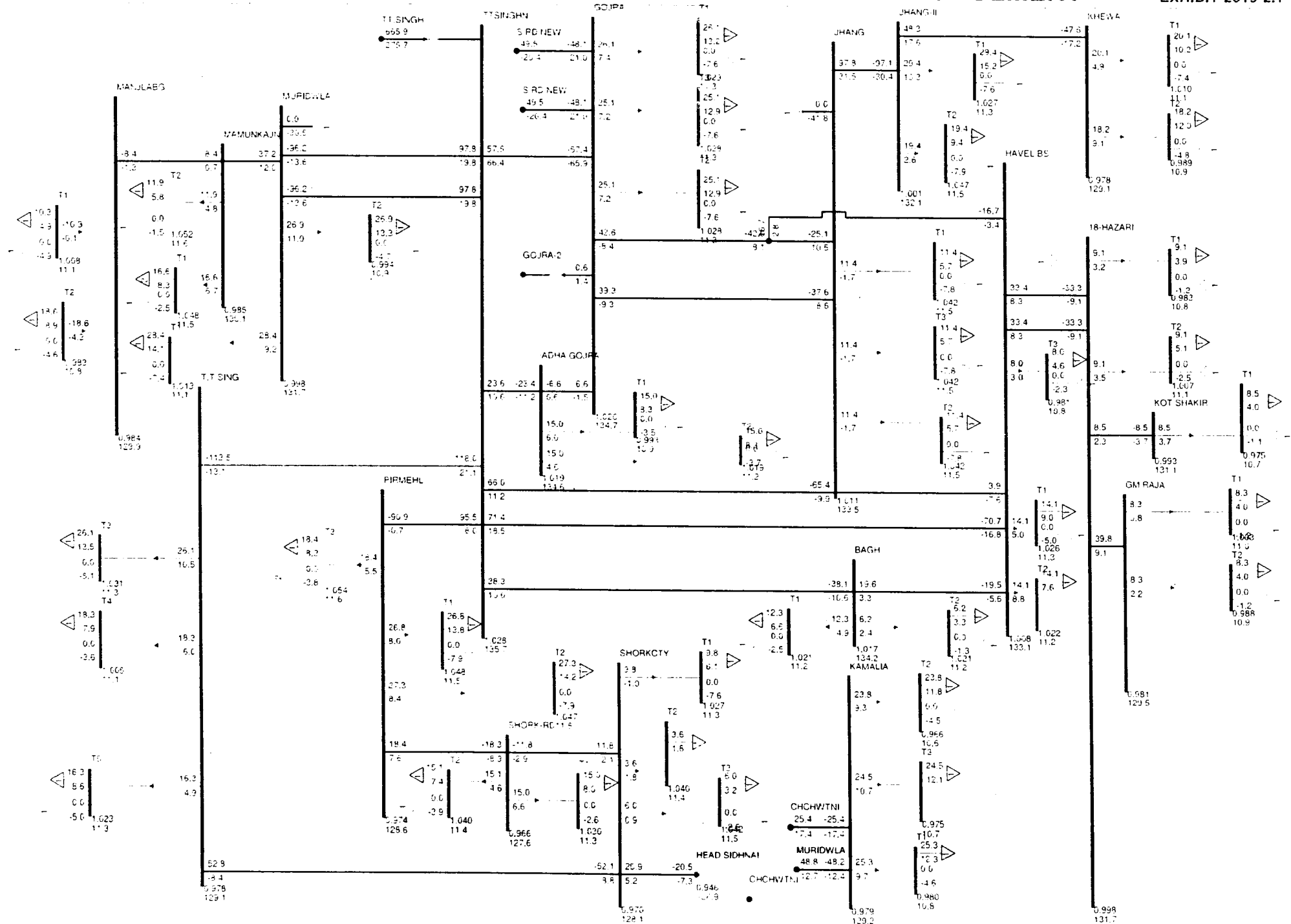
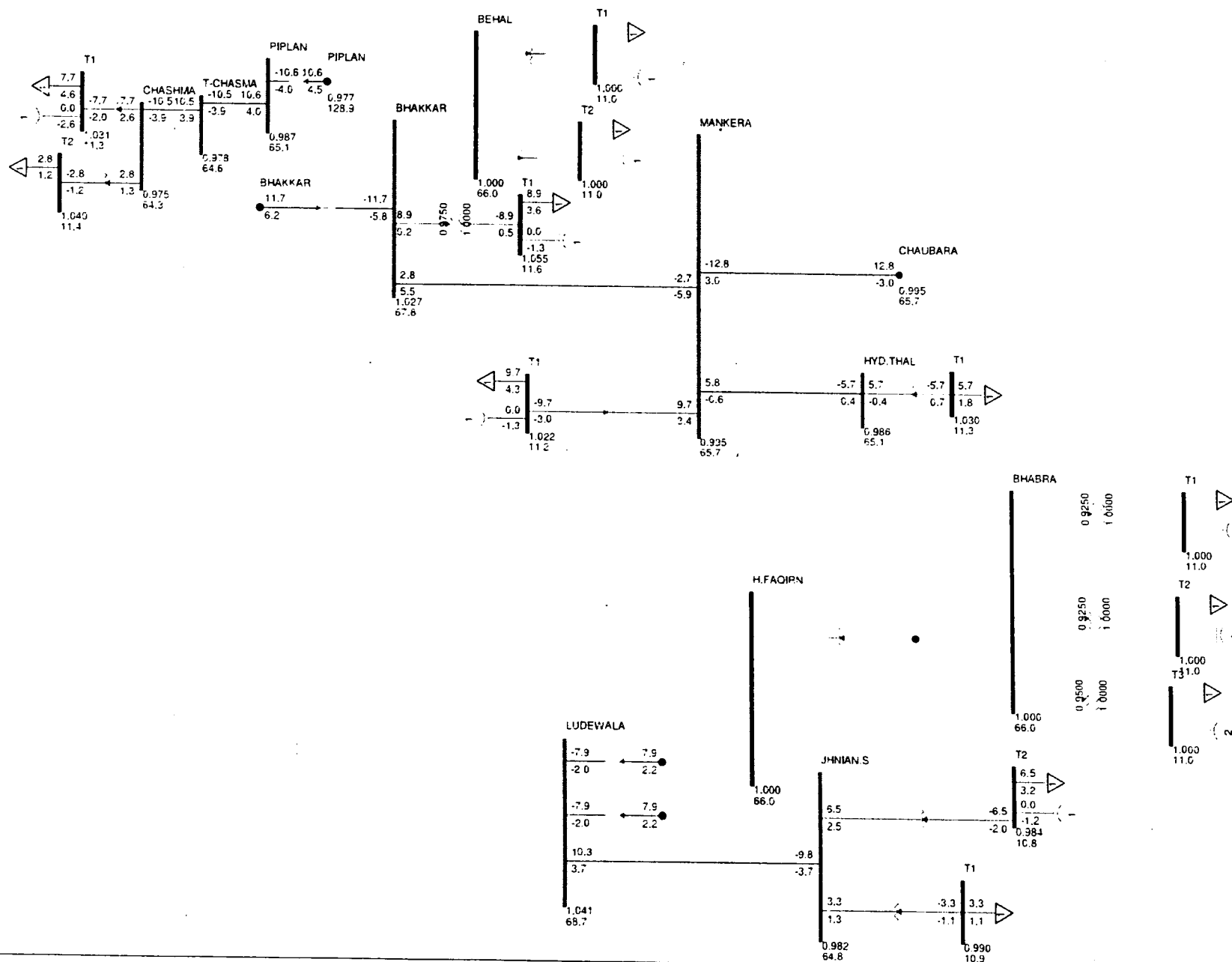


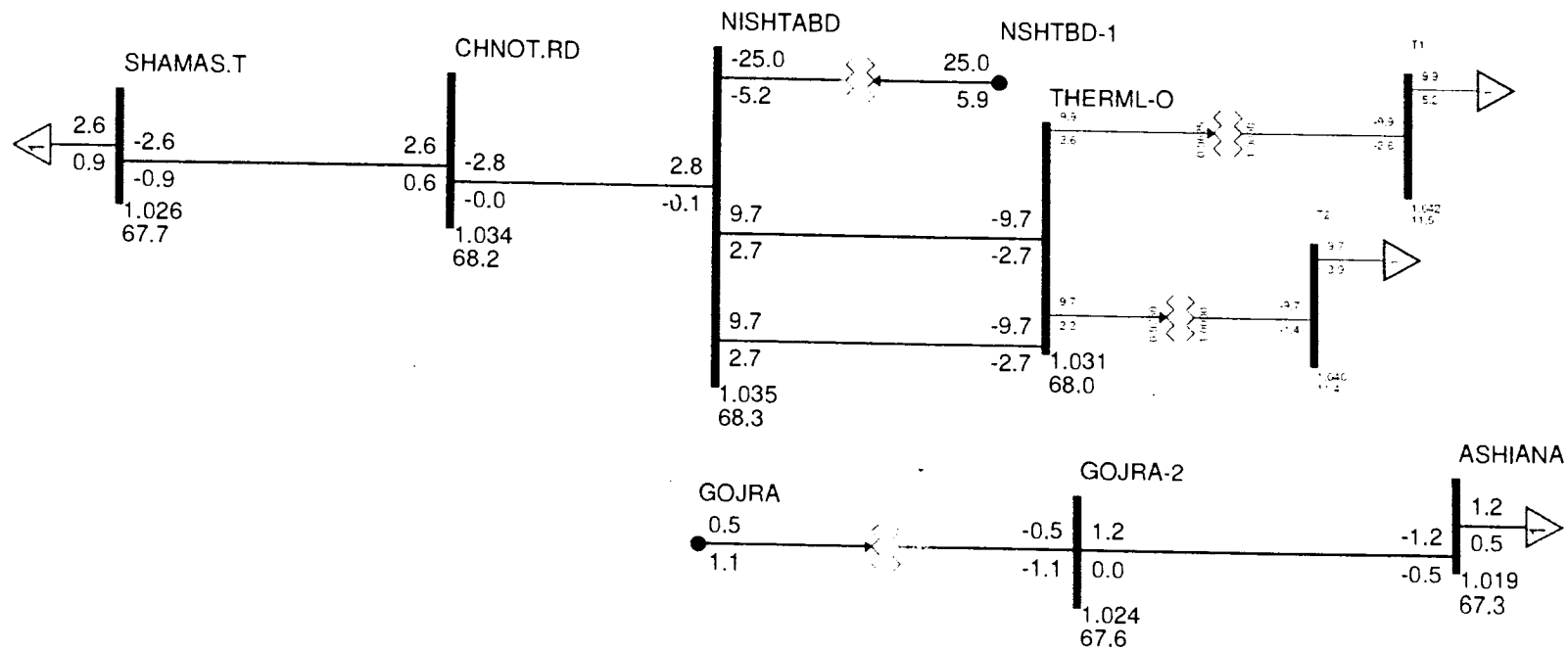
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PEAK LOAD-YEAR 2019: WITHOUT ADDITIONAL REINFORCEMENT

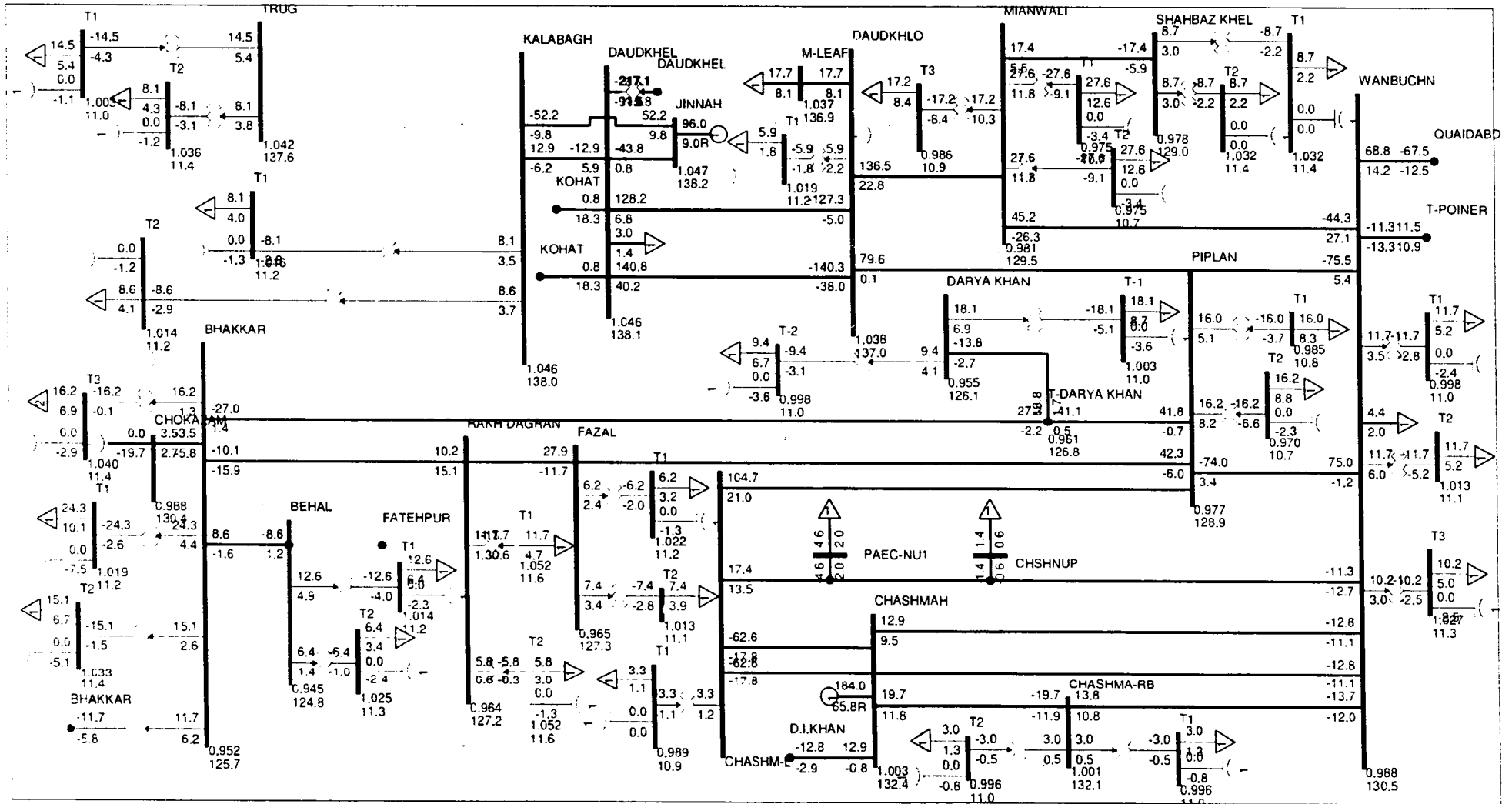
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2018: WITHOUT ADDITIONAL REINFORCEMENT

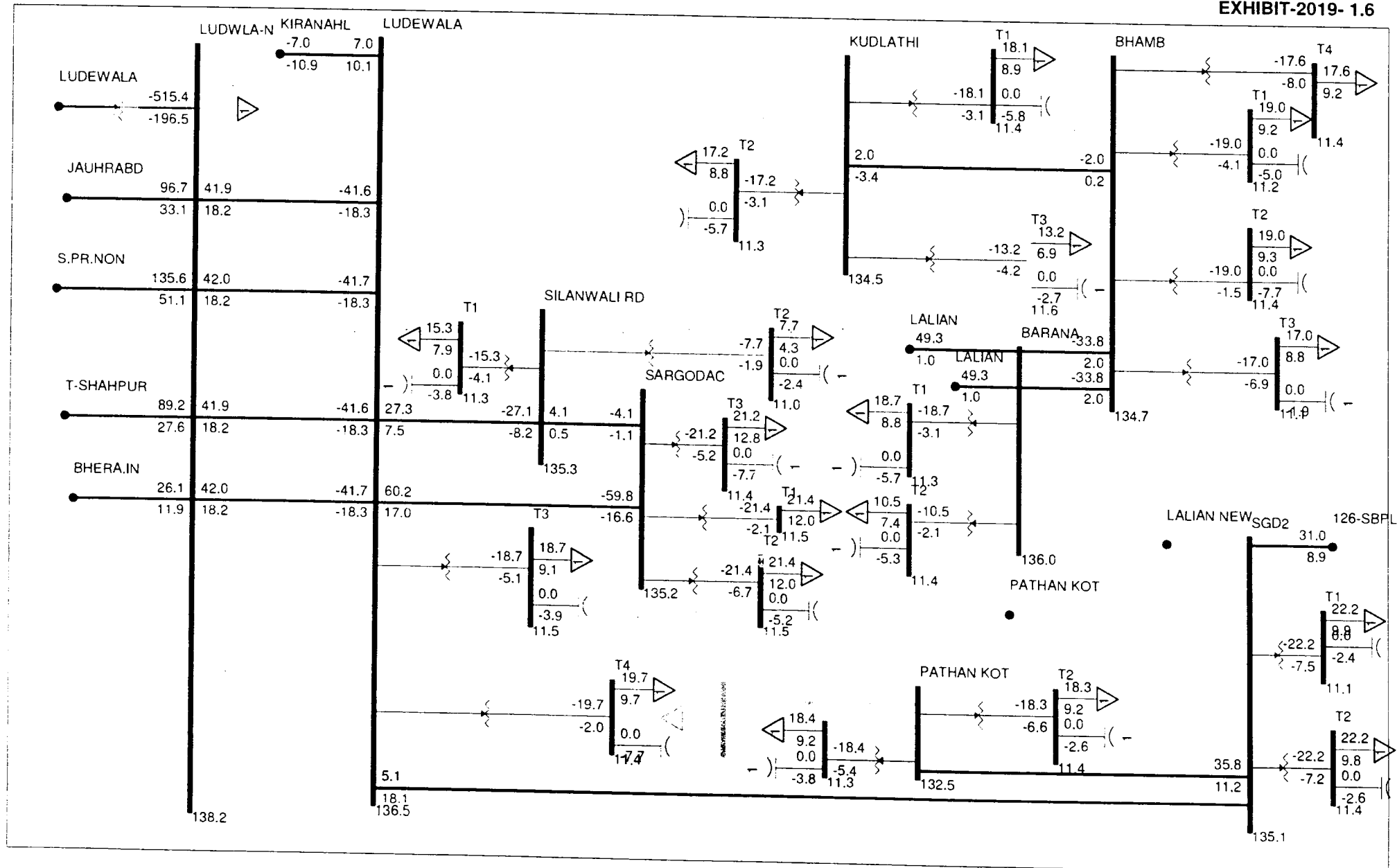
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PEAK LOAD-YEAR 2019: WITHOUT ADDITIONAL REINFORCEMENT

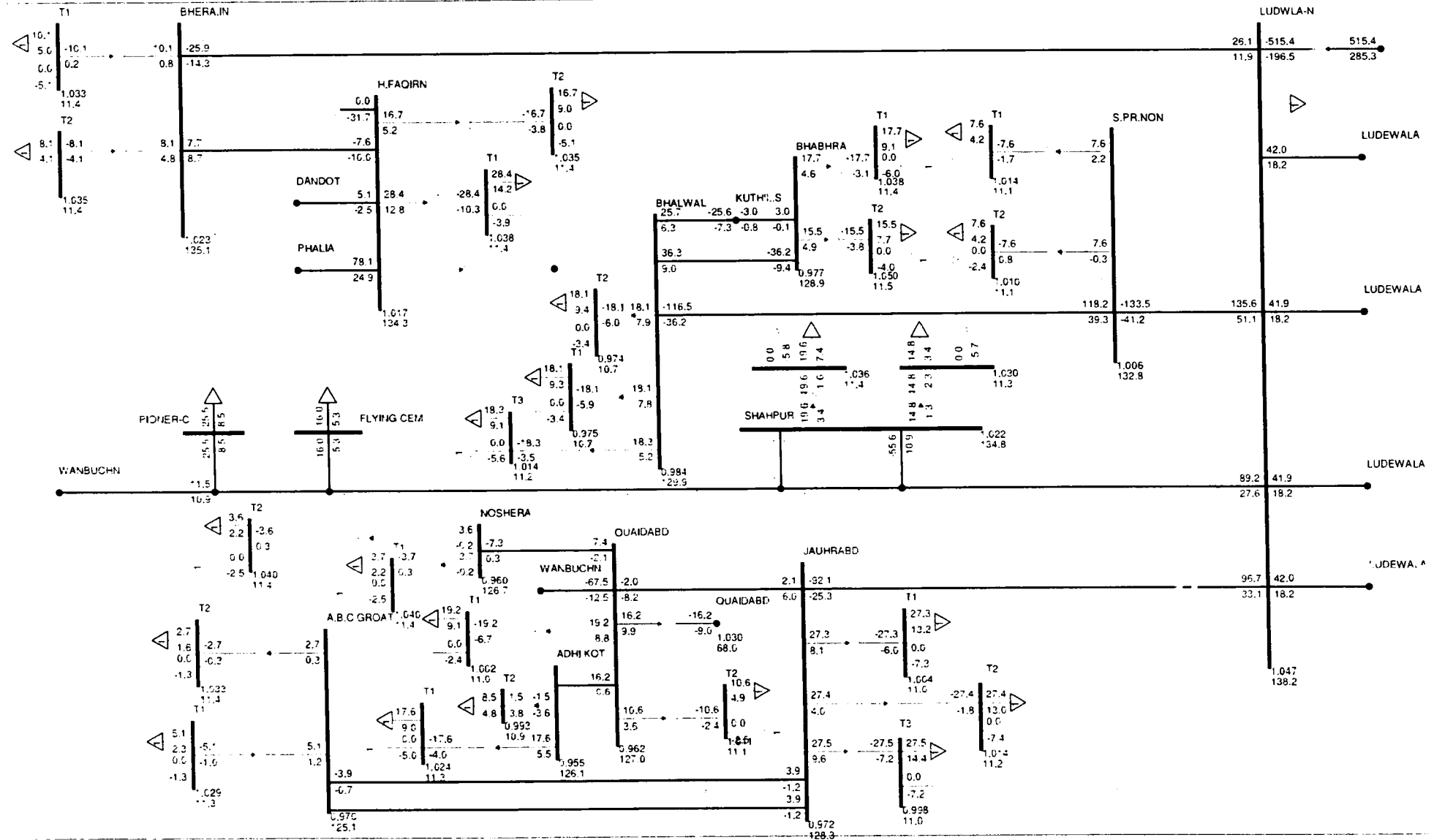
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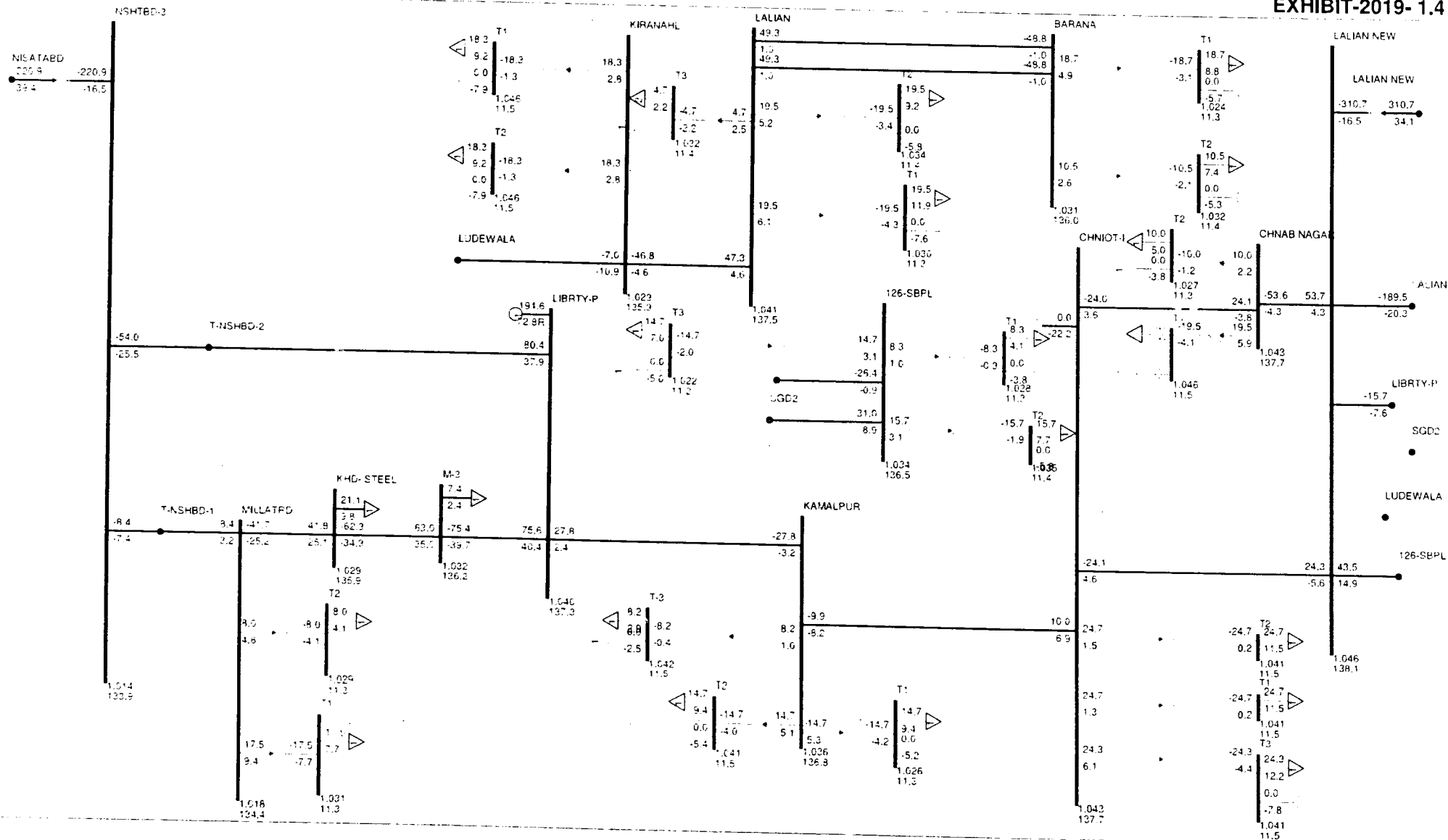
PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.5



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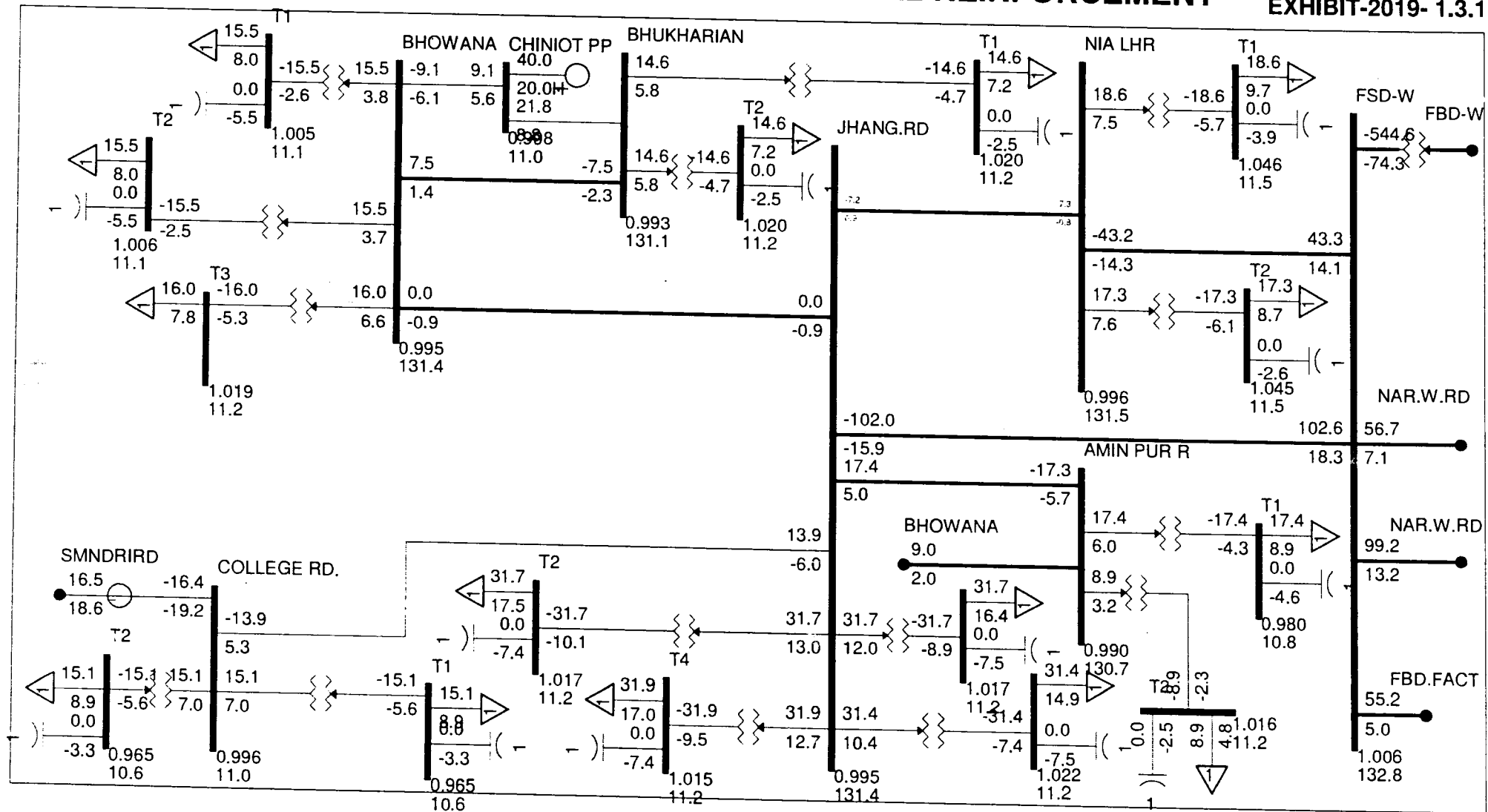
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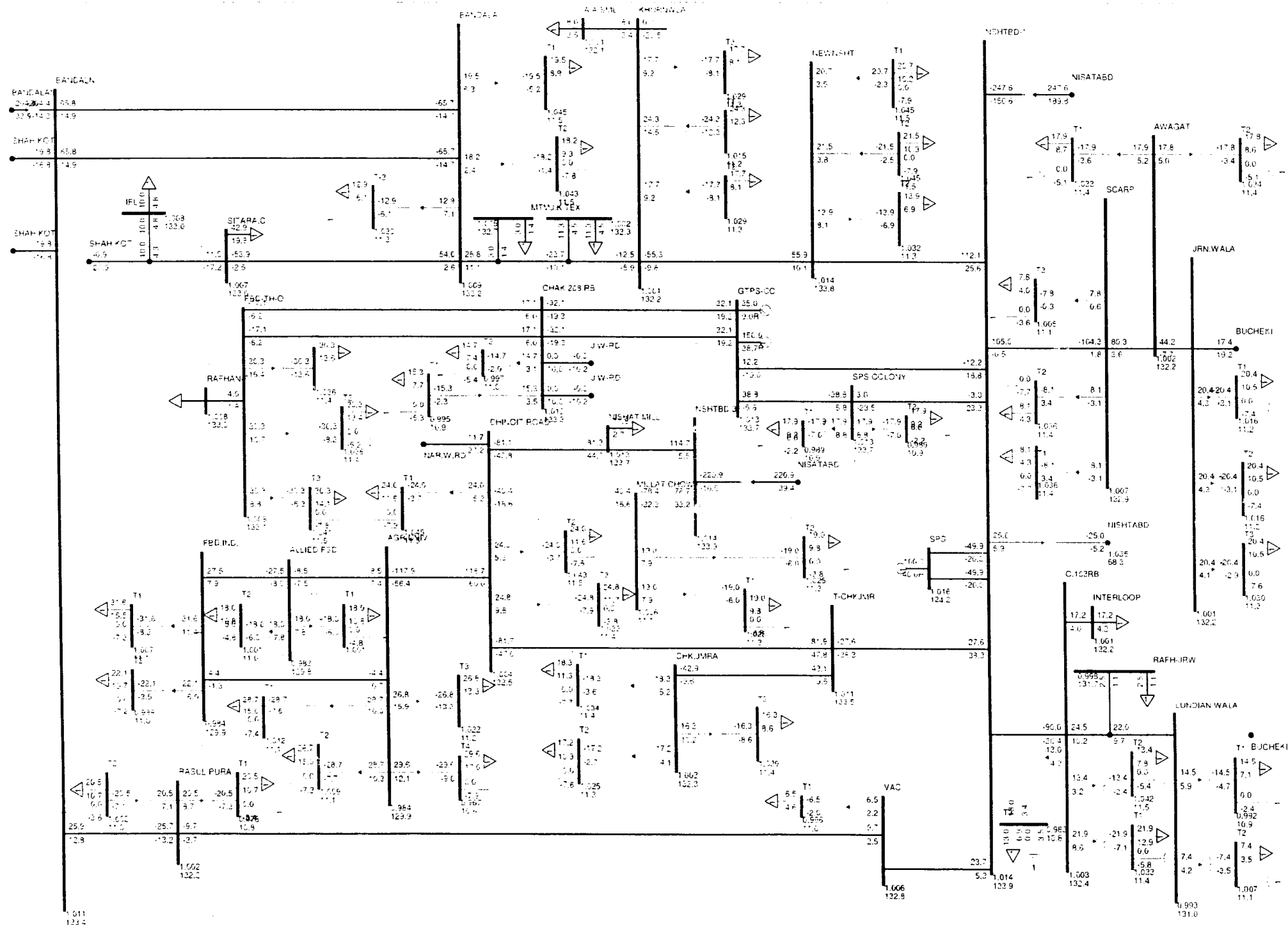


LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2019: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2019- 1.3.1





PEAK LOAD-YEAR 2019: WITHOUT ADDITIONAL REINFORCEMENT

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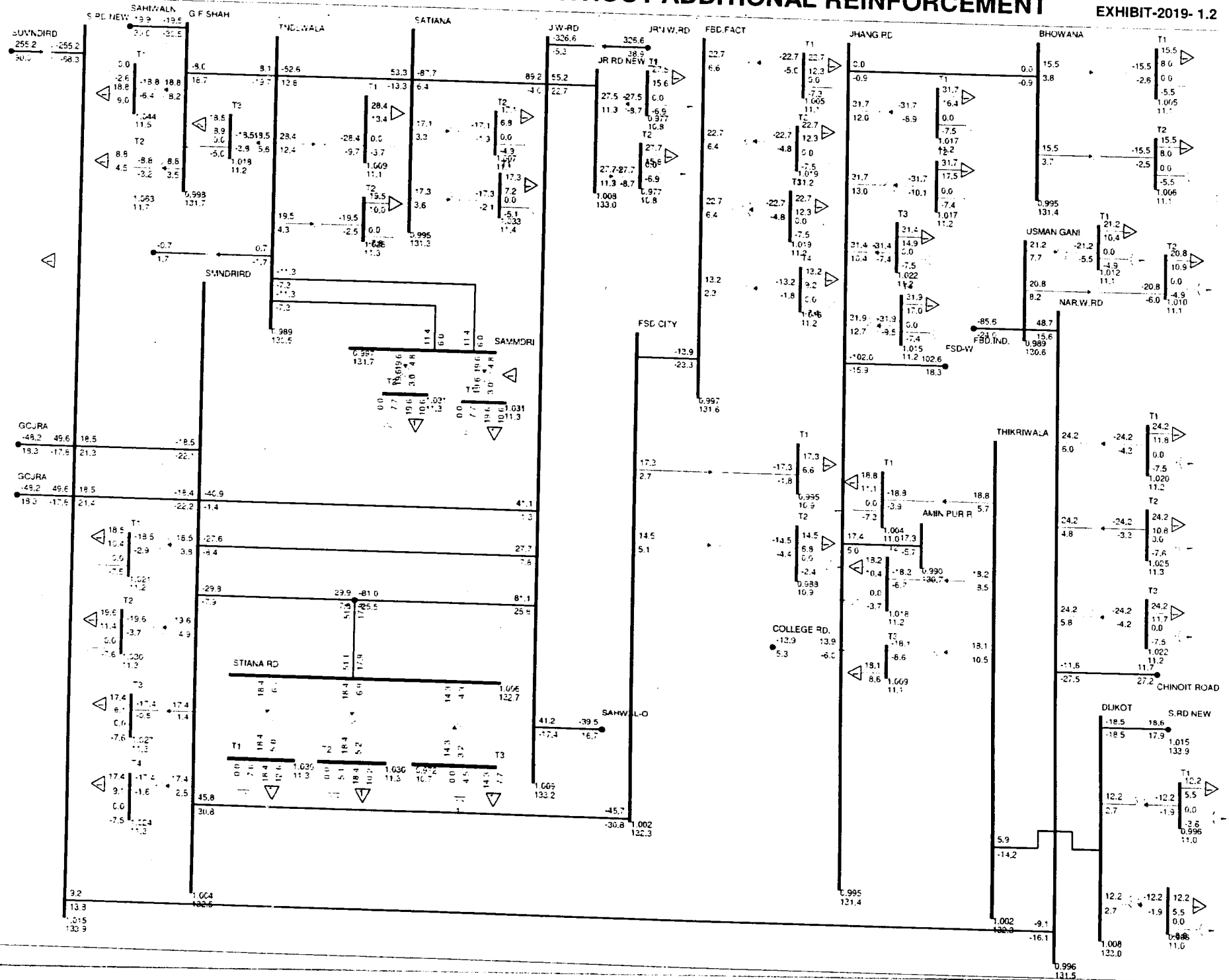
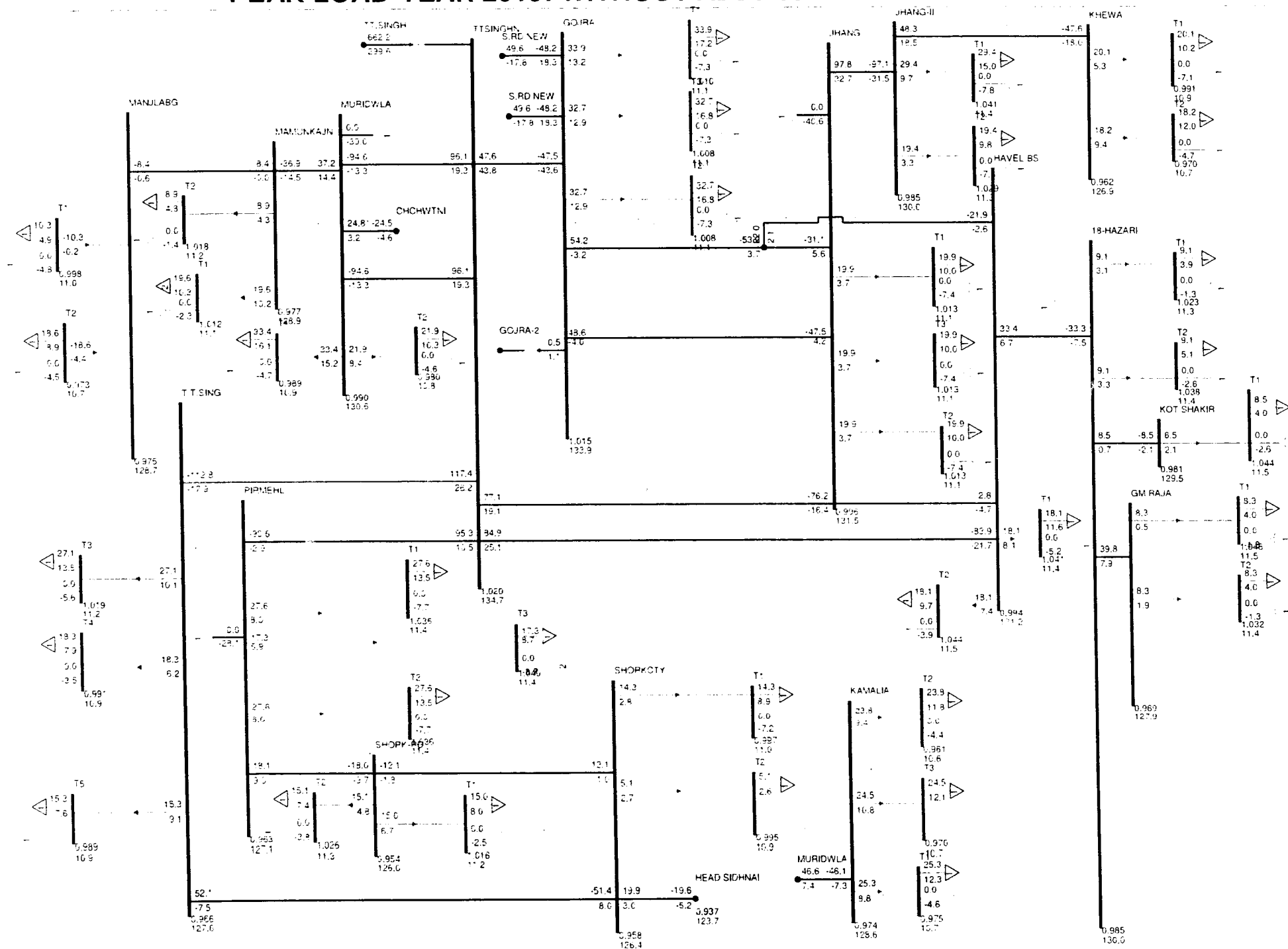
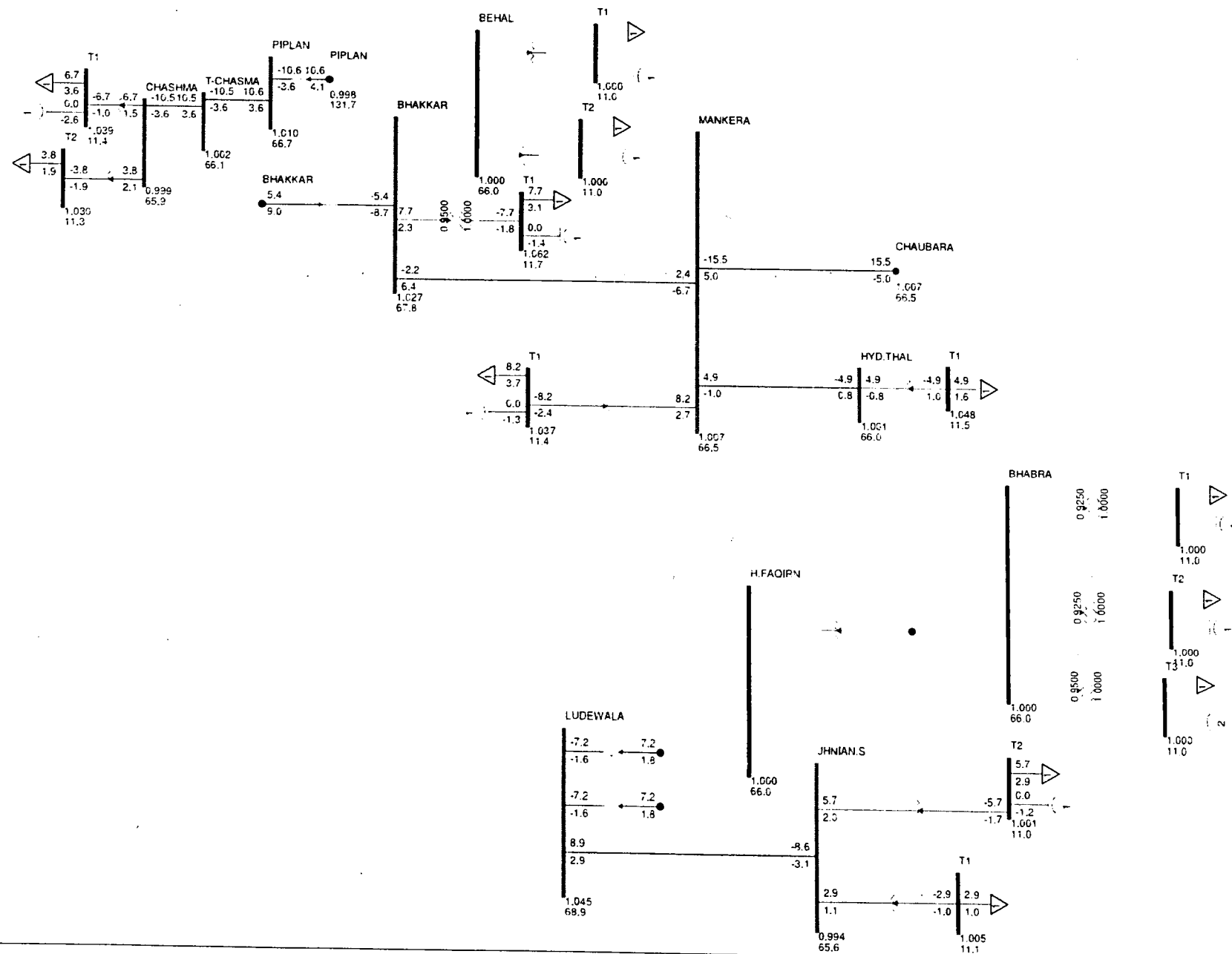


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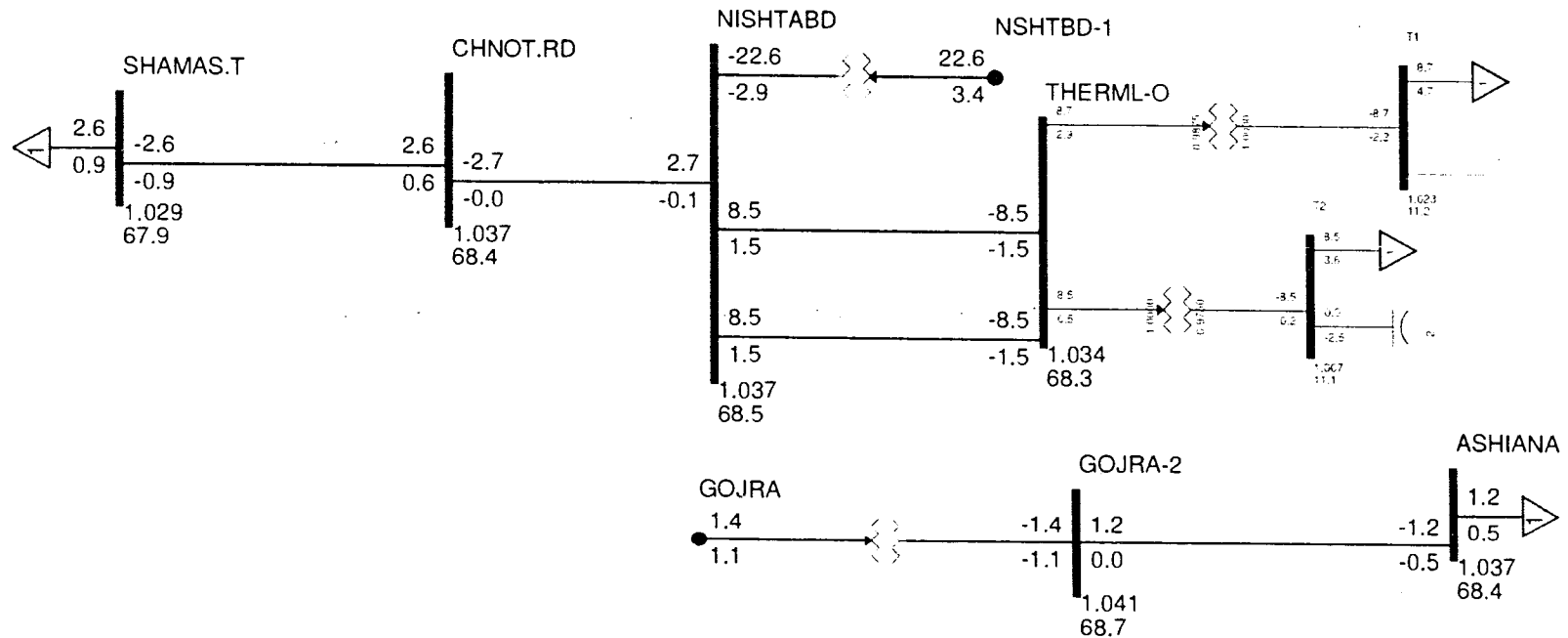
LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST) PEAK LOAD-YEAR 2018: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 2.9



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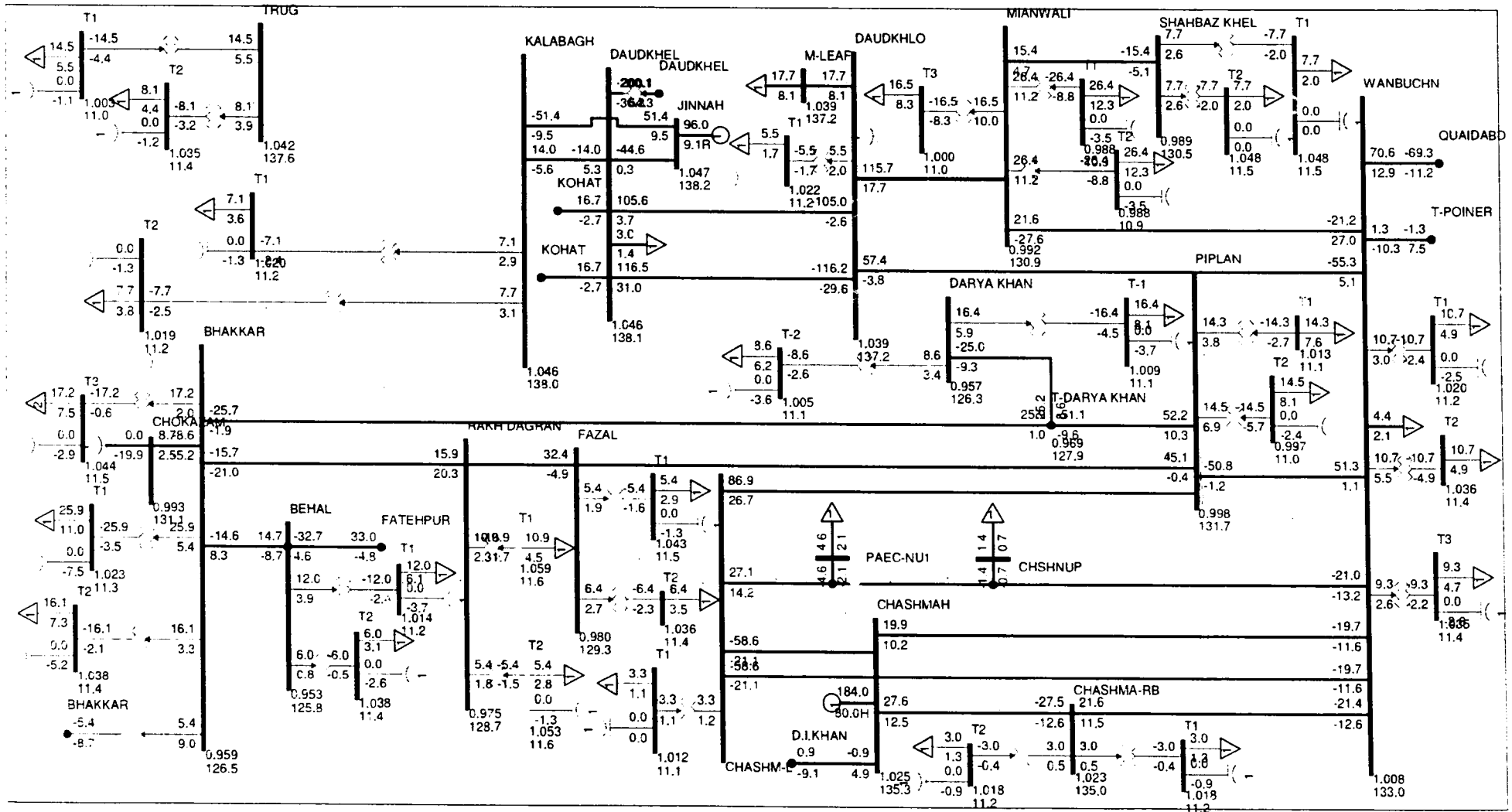
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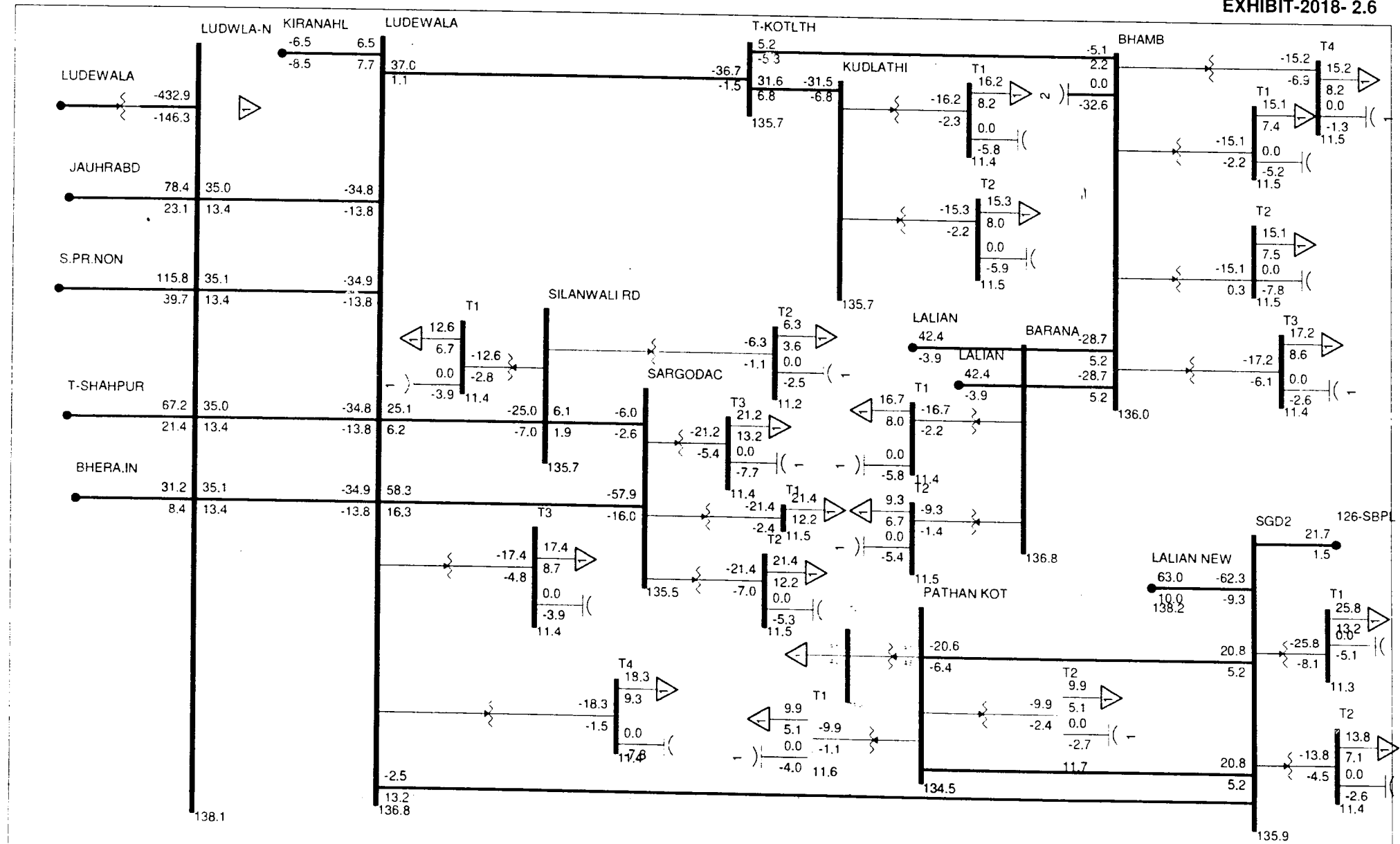
PEAK LOAD-YEAR 2018: WITH ADDITIONAL REINFORCEMENT

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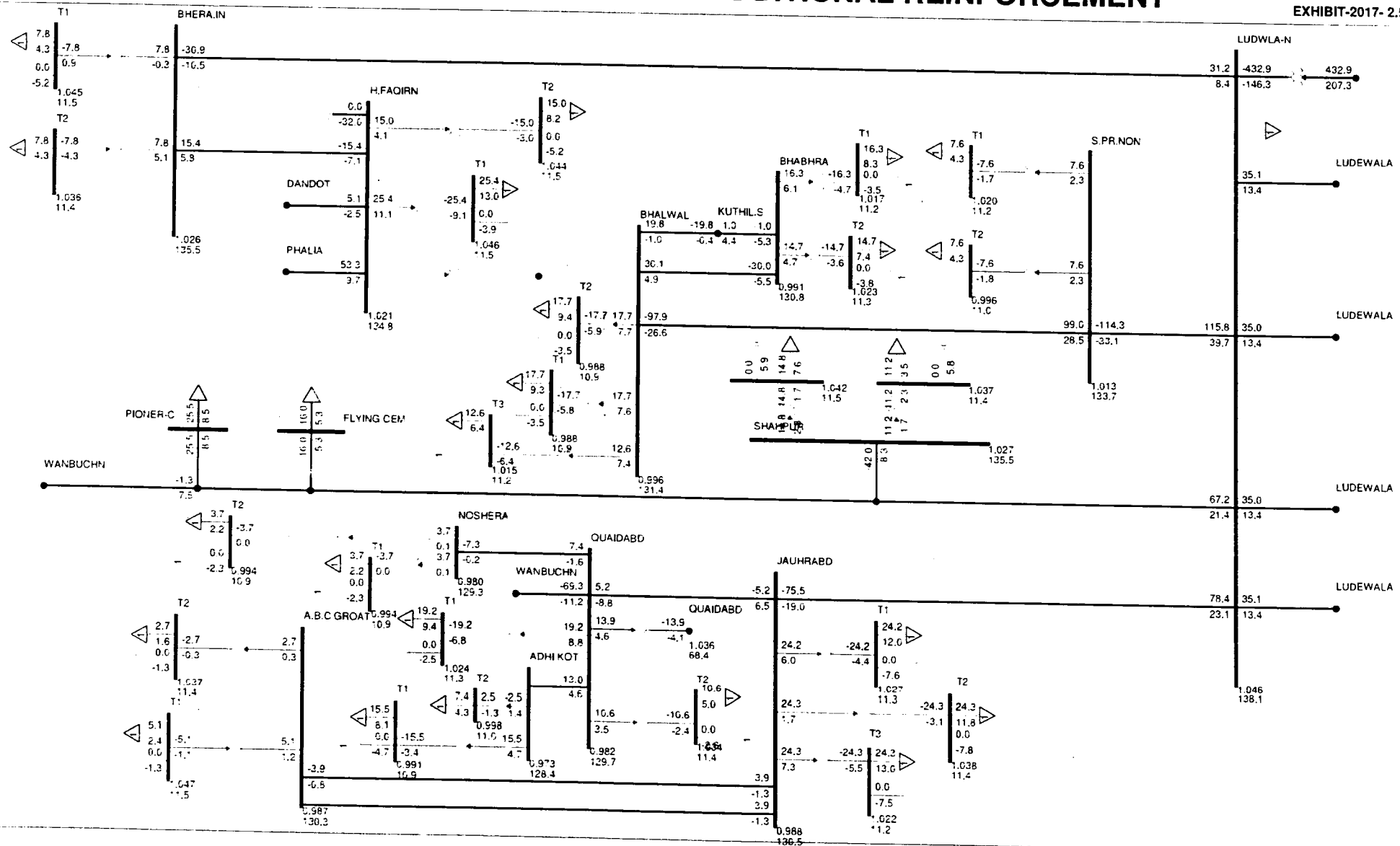
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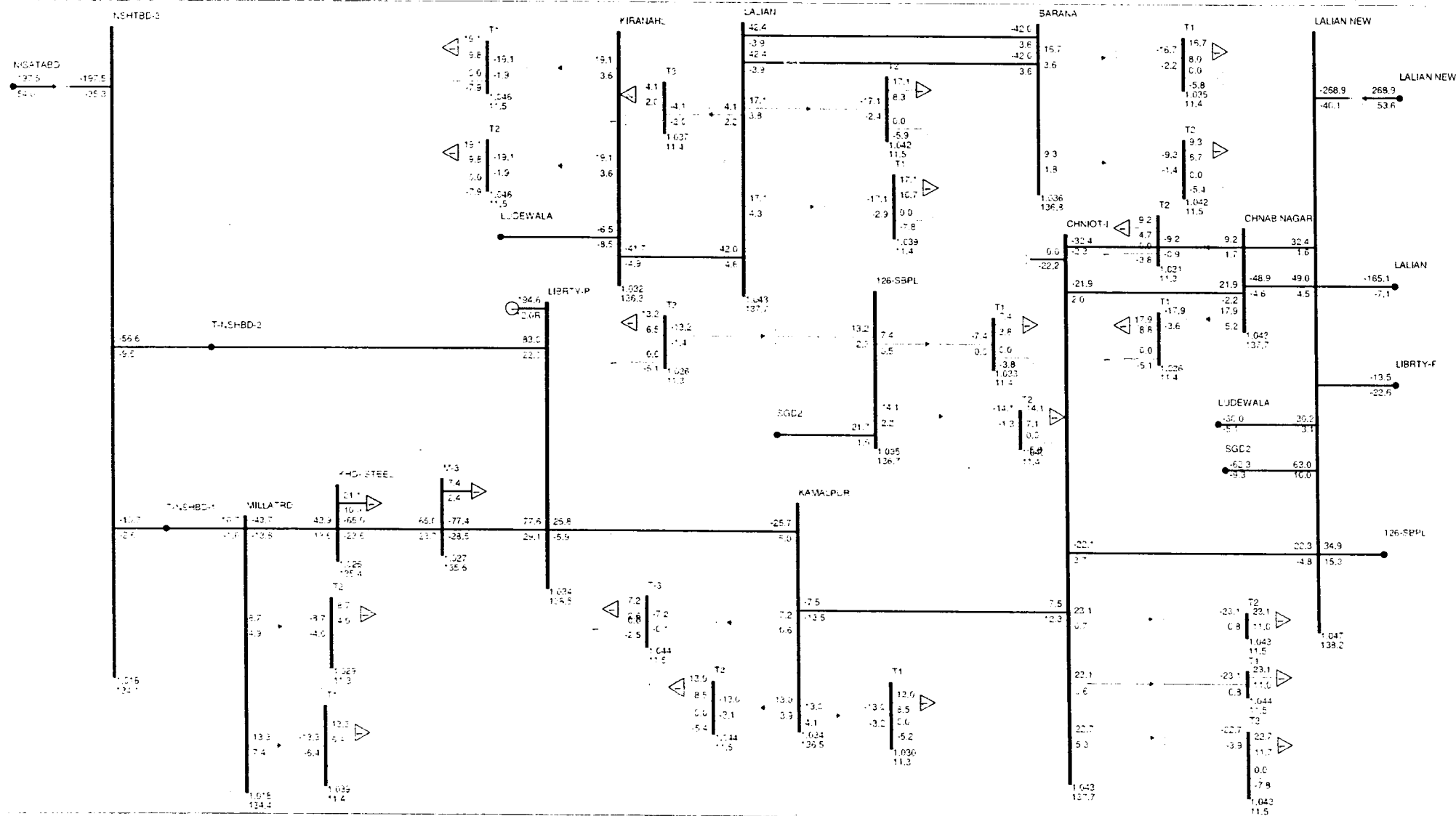
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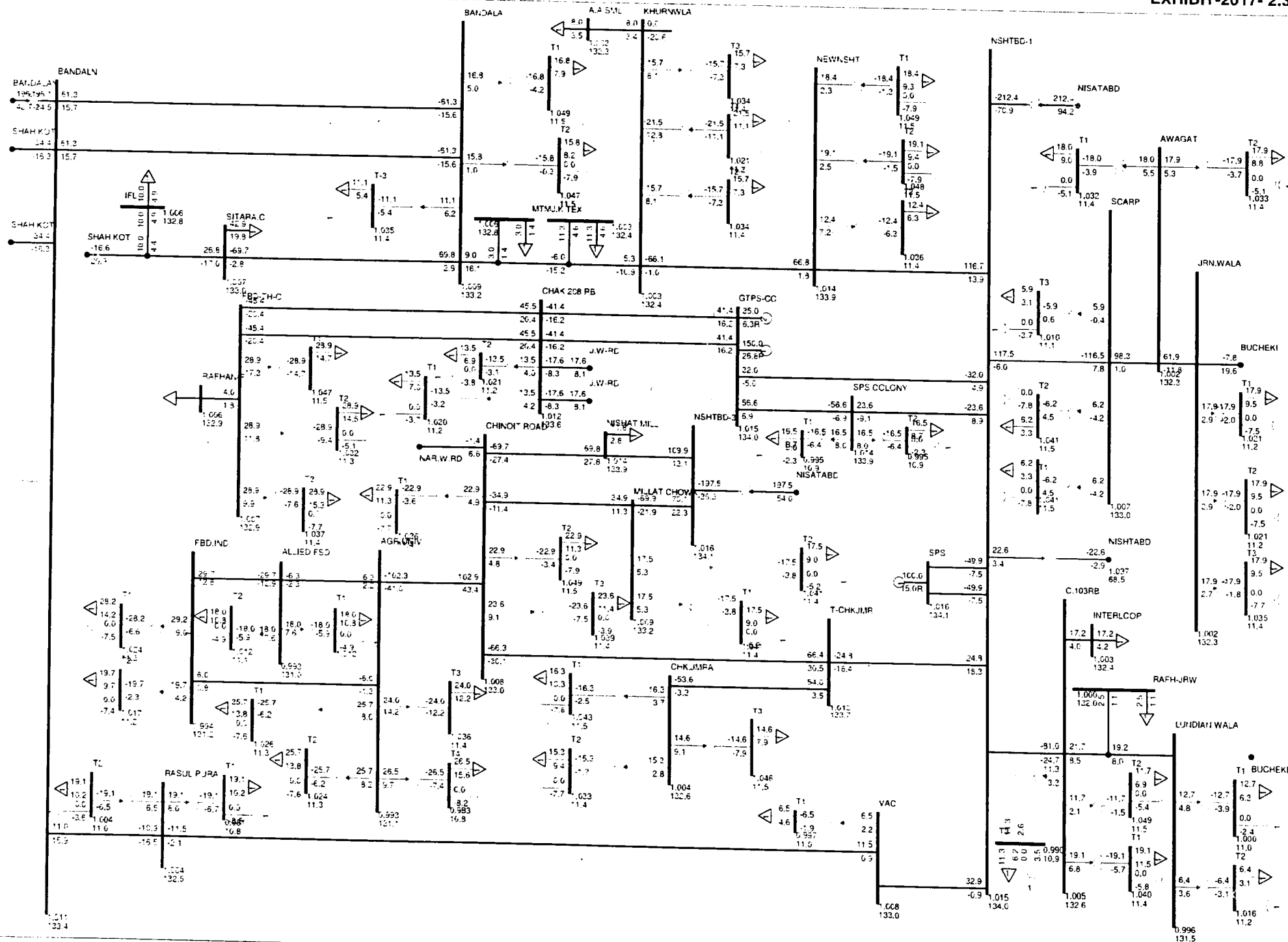
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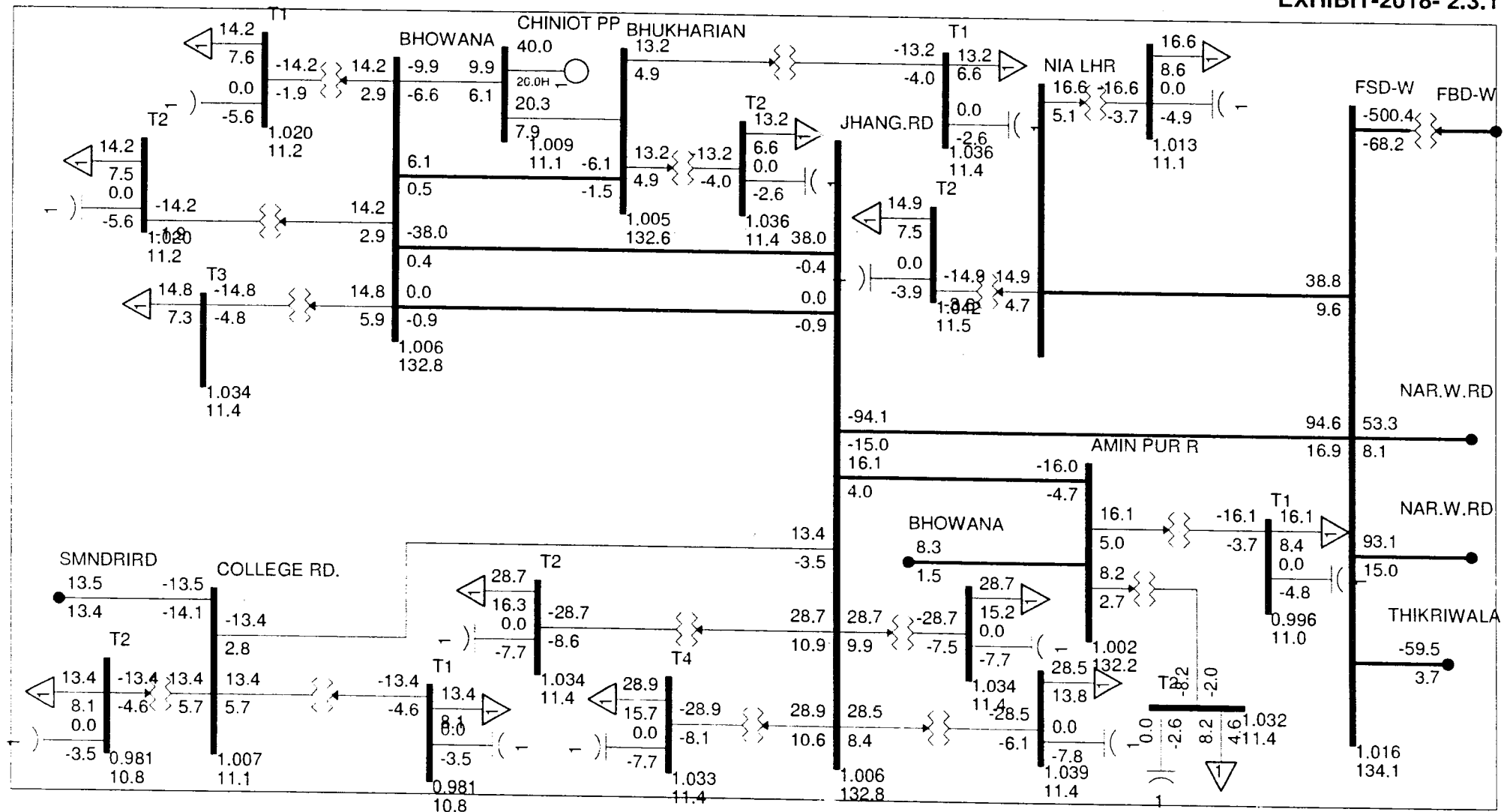
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EXHIBIT-2017-2.3



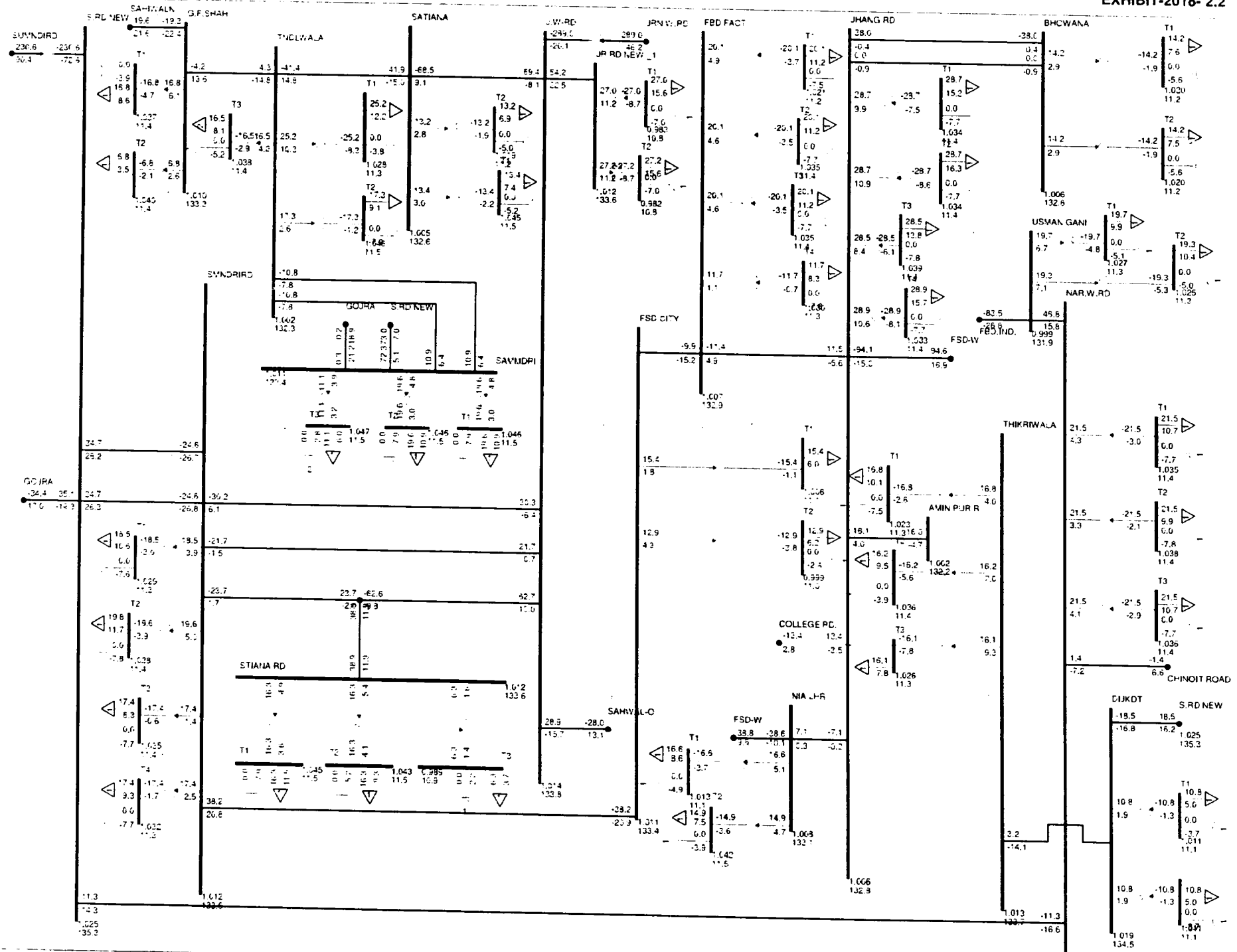
PEAK LOAD-YEAR 2018: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 2.3.1



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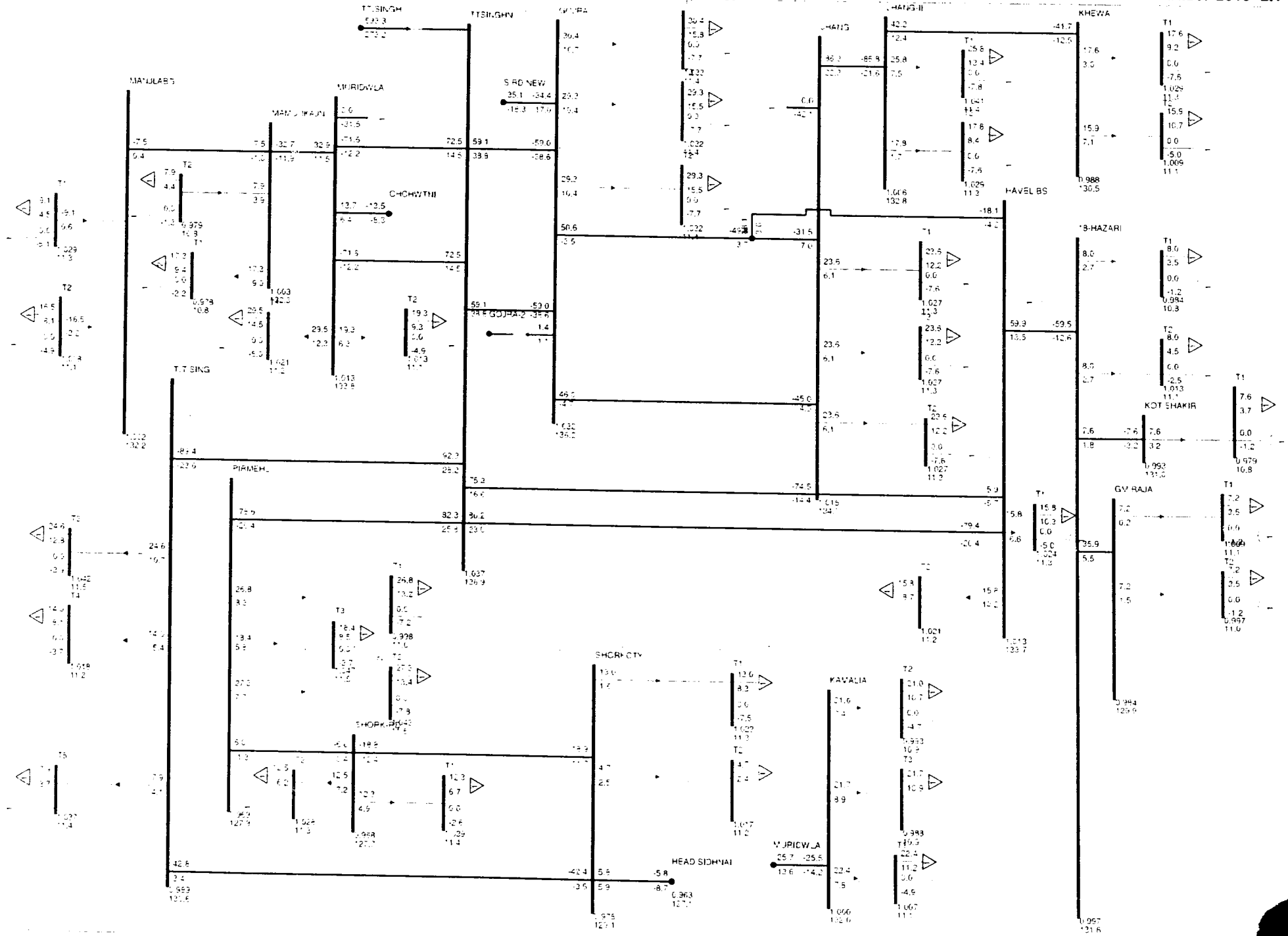
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PEAK LOAD-YEAR 2018: WITH ADDITIONAL REINFORCEMENT

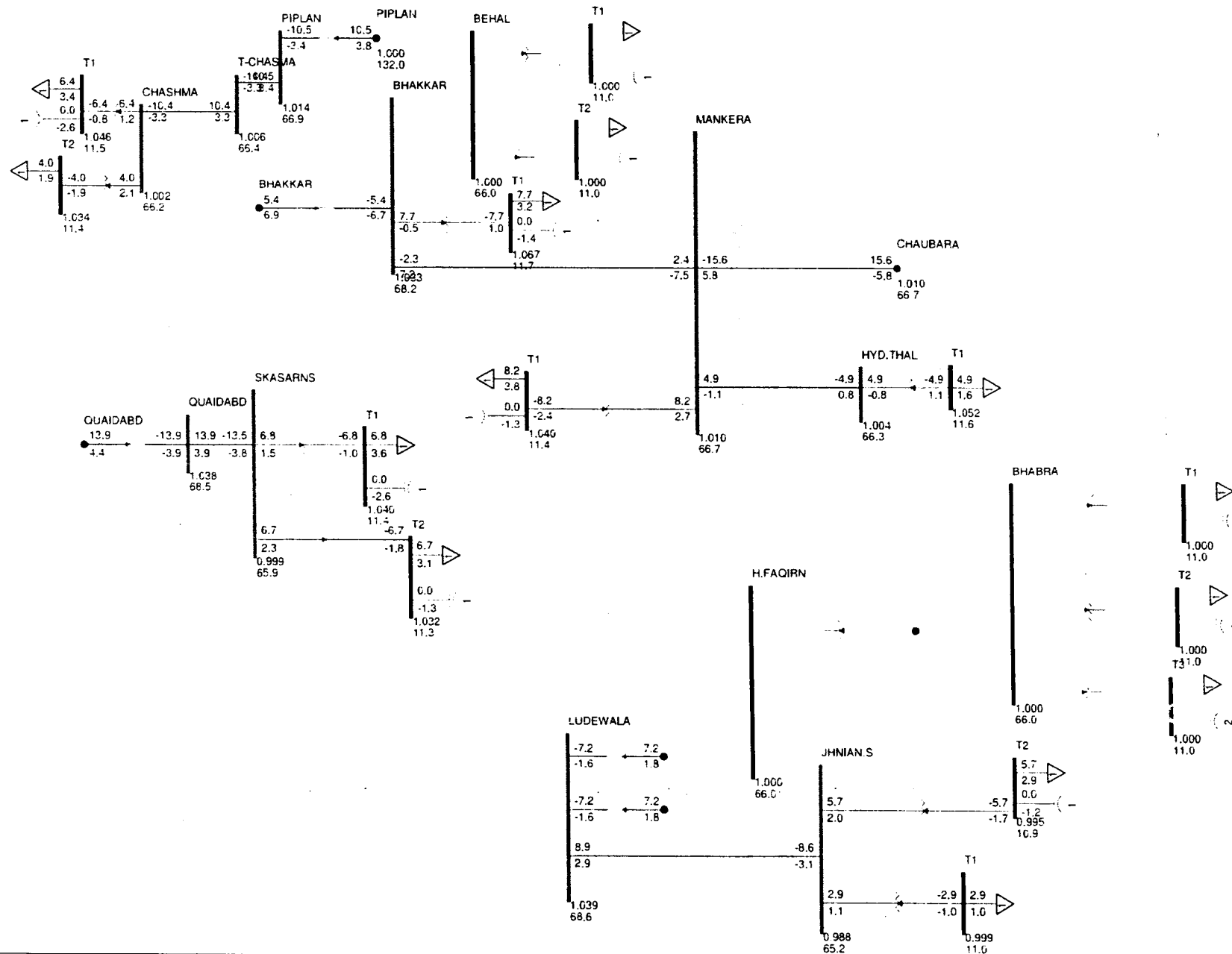
EXHIBIT-2018- 2.1



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2018: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 1.9



PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

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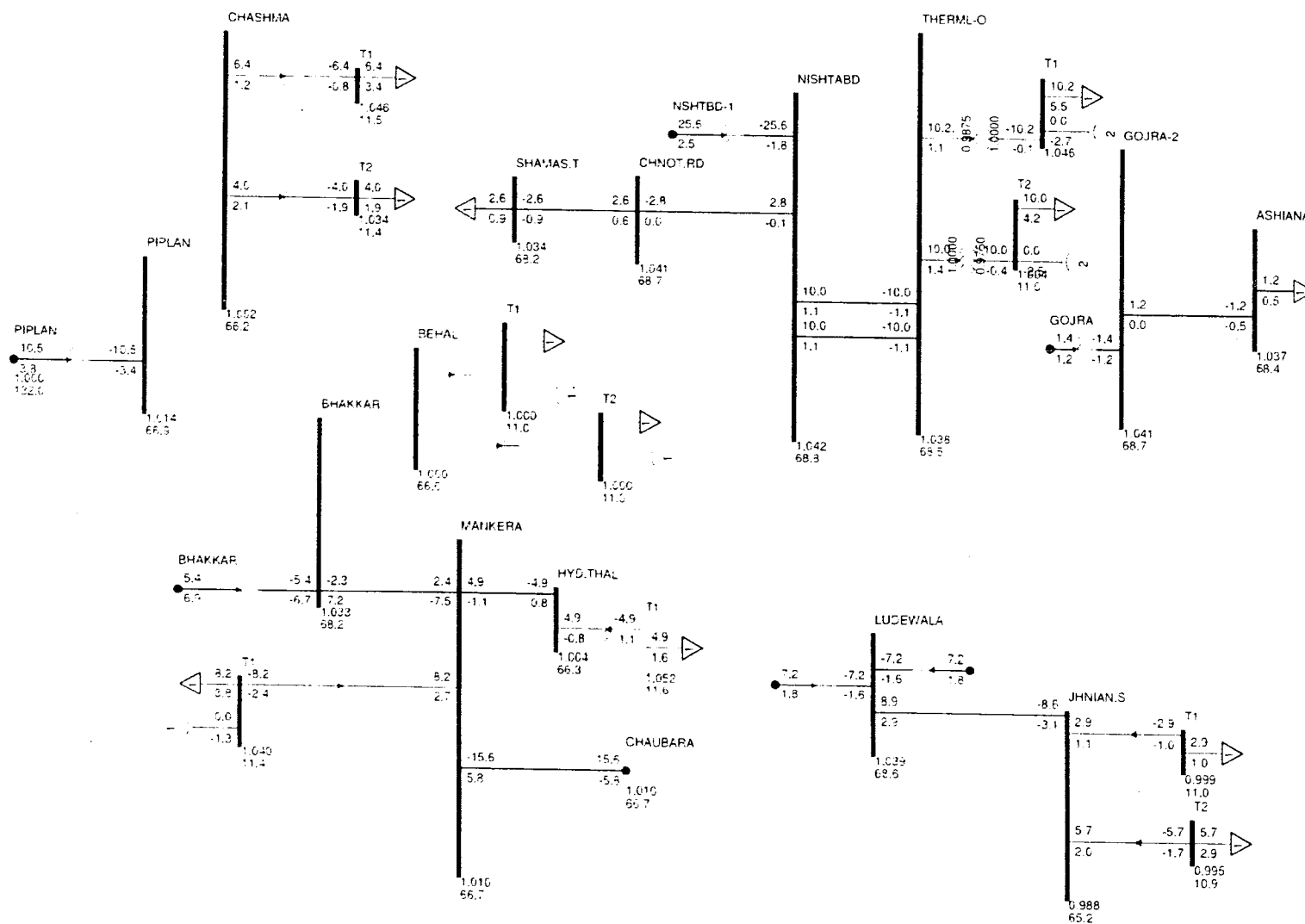


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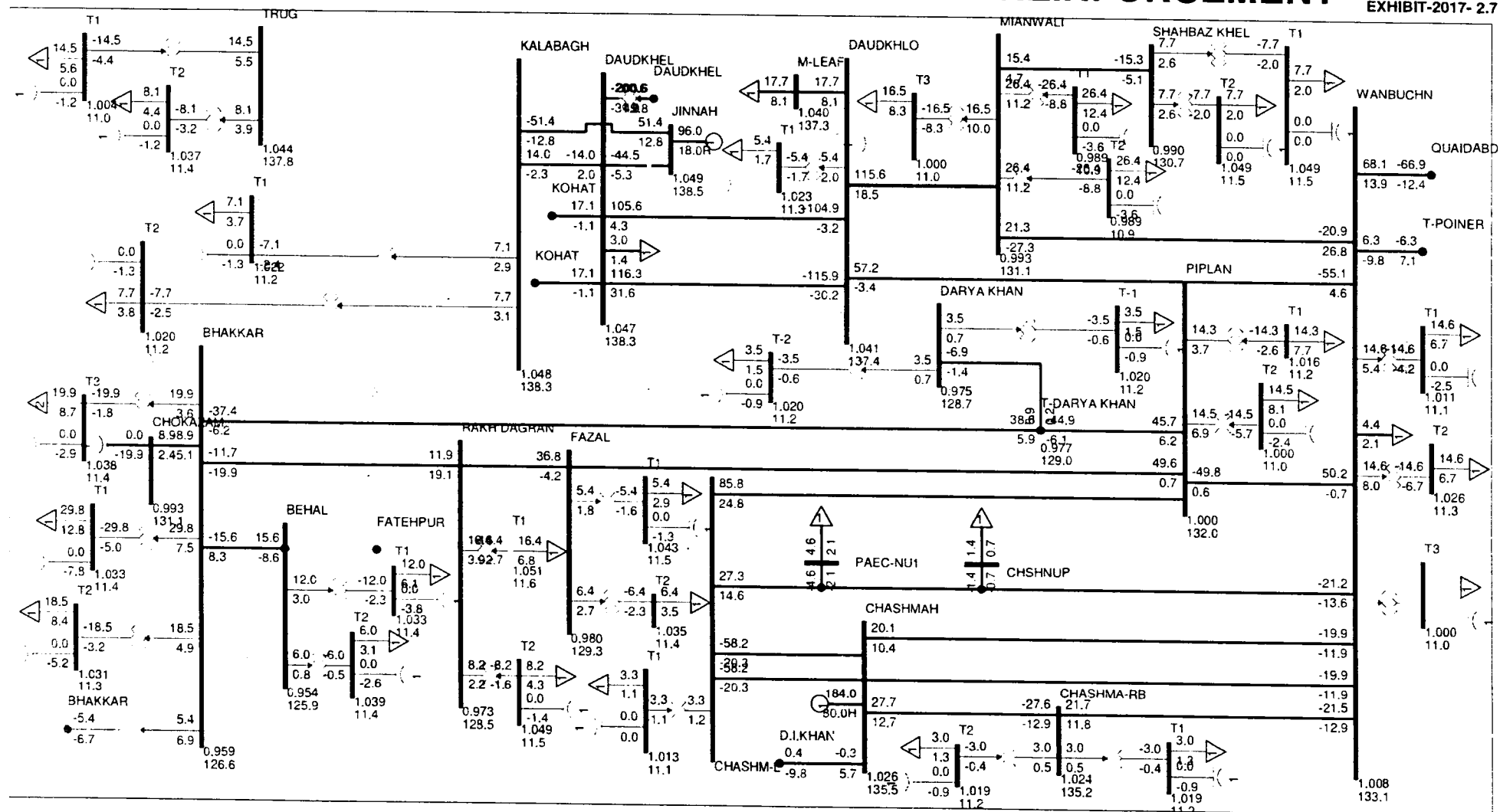
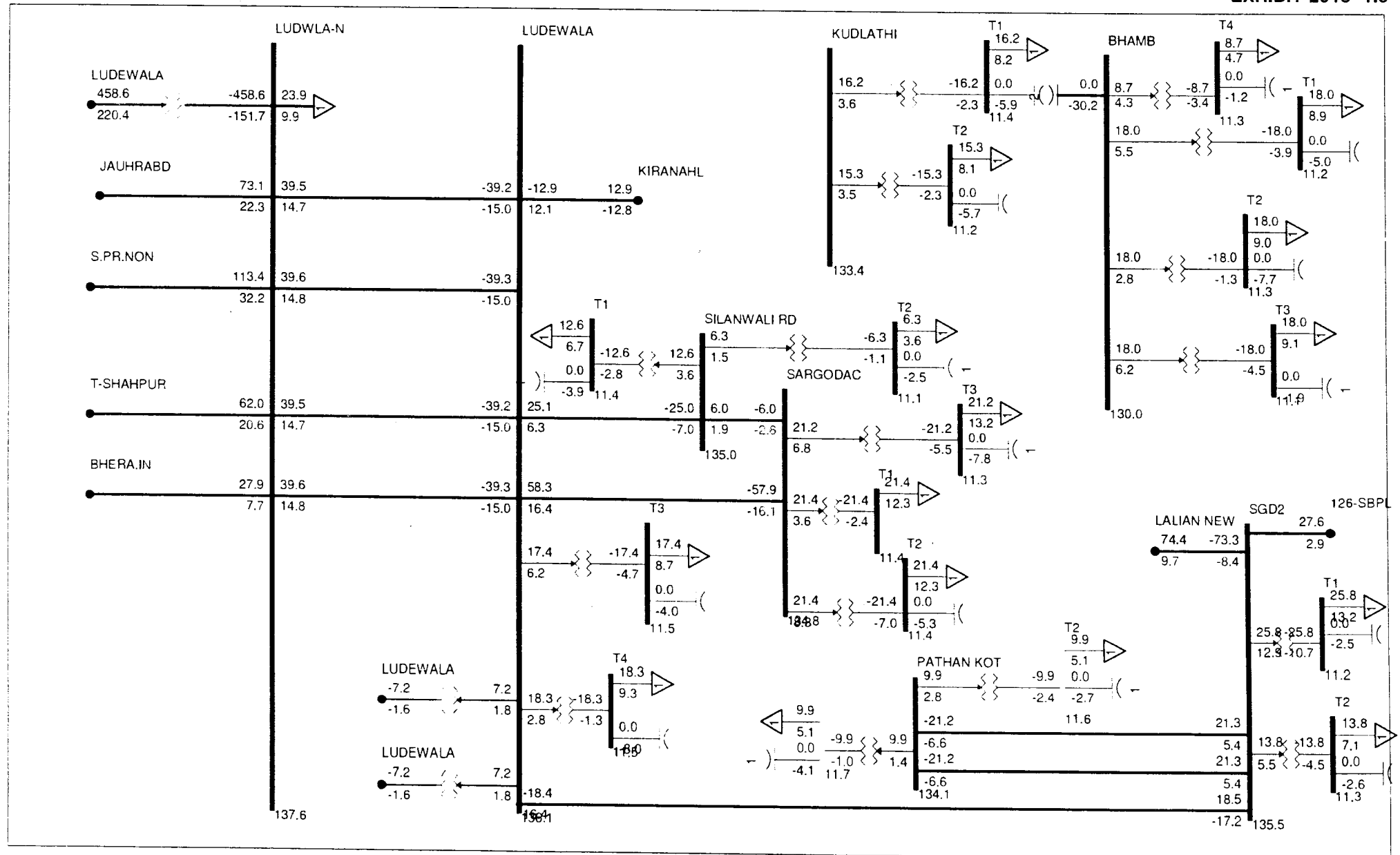


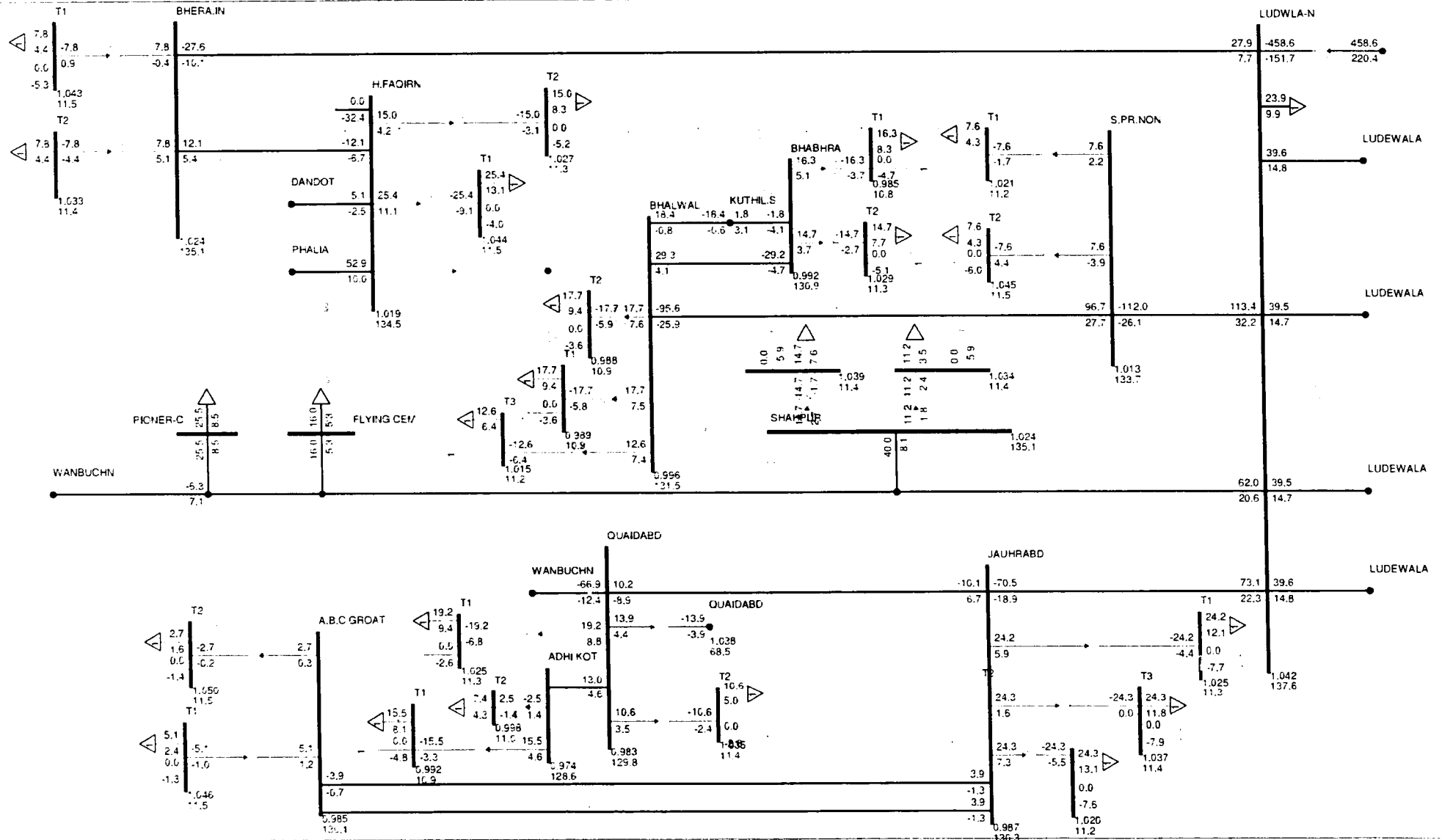
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PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

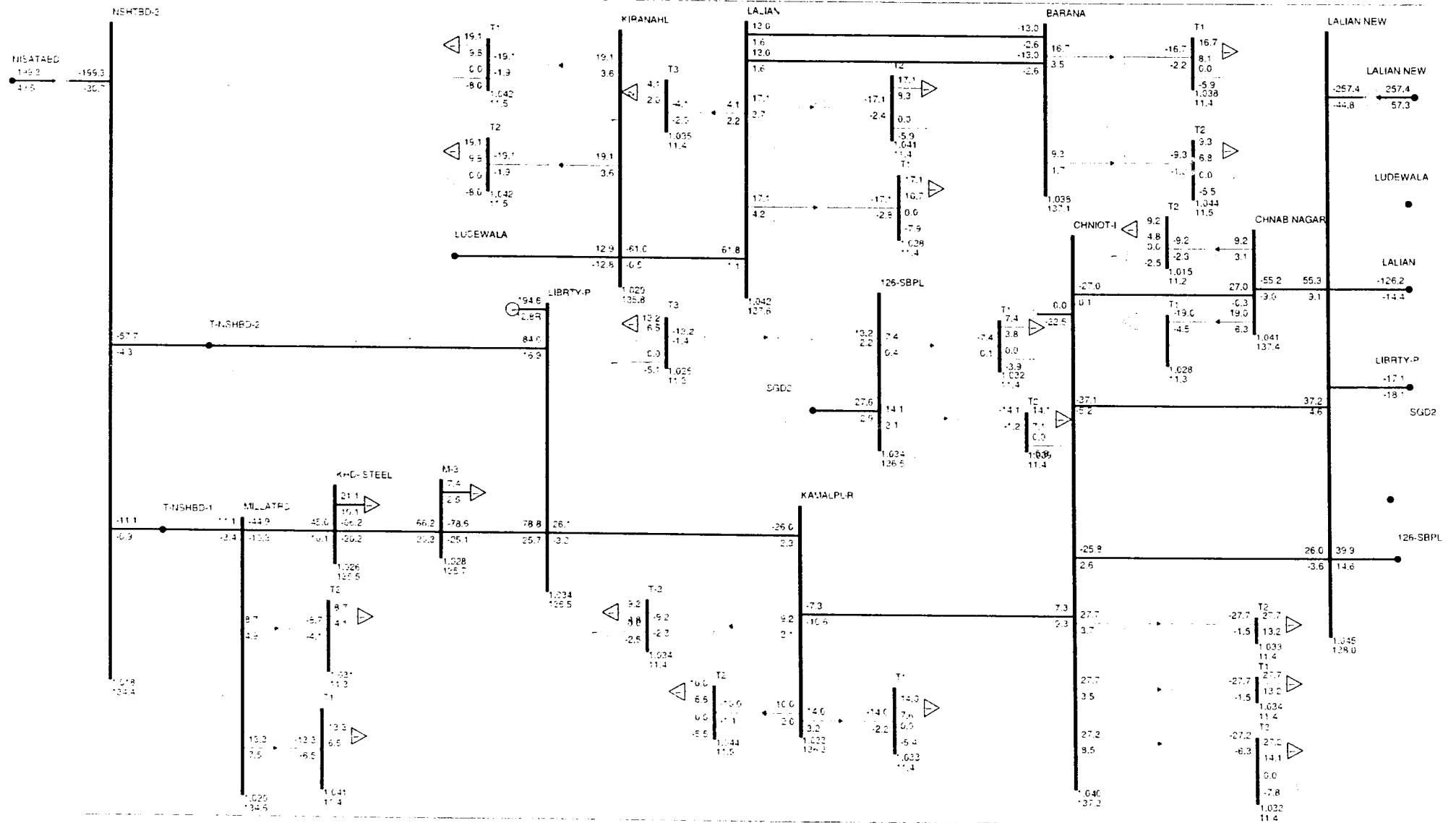
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PEAK LOAD-YEAR 2018: WITOUT ADDITIONAL REINFORCEMENT

EXHIBIT-20189- 1.4



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2018: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2018- 1.3,1

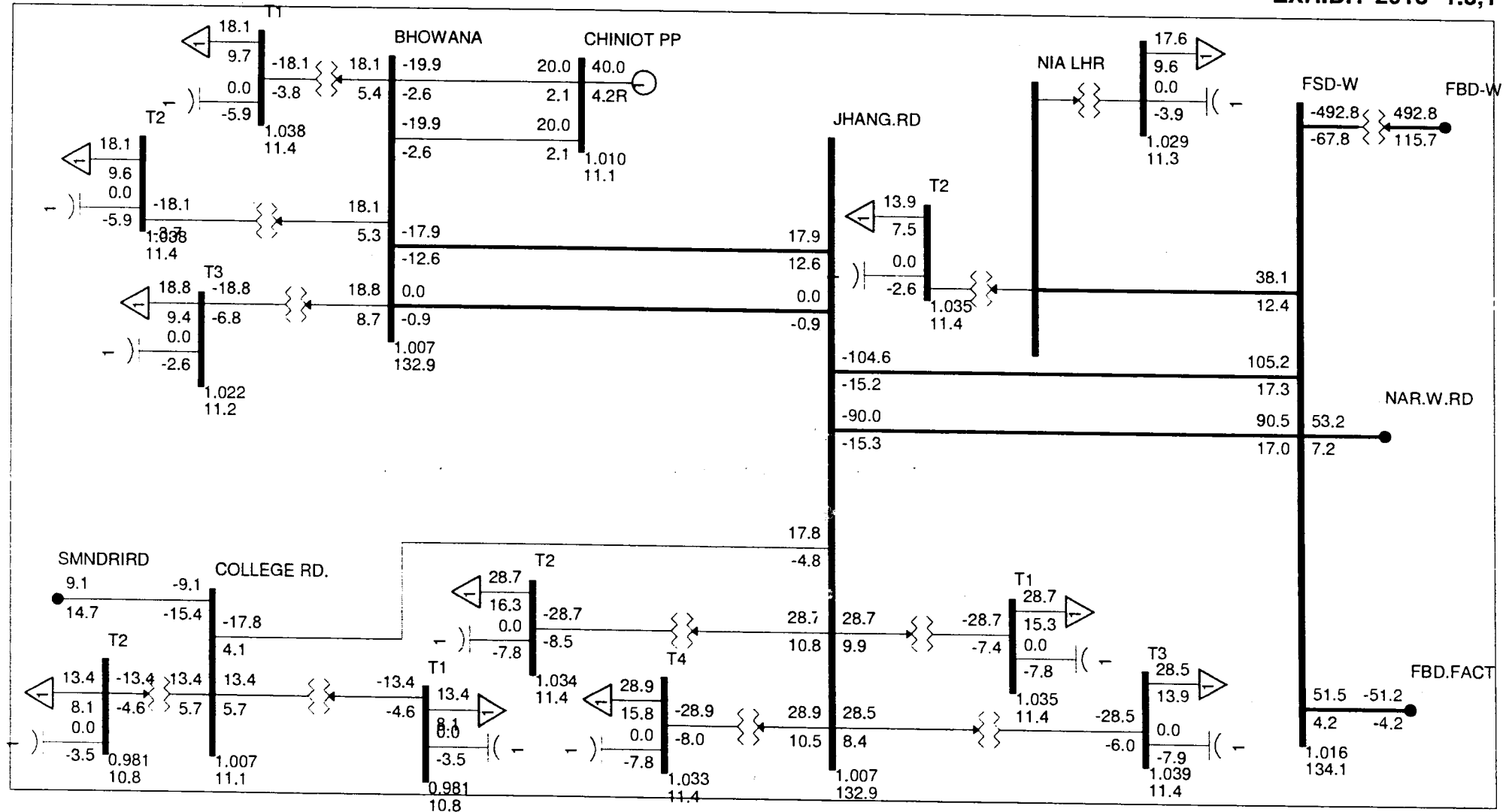
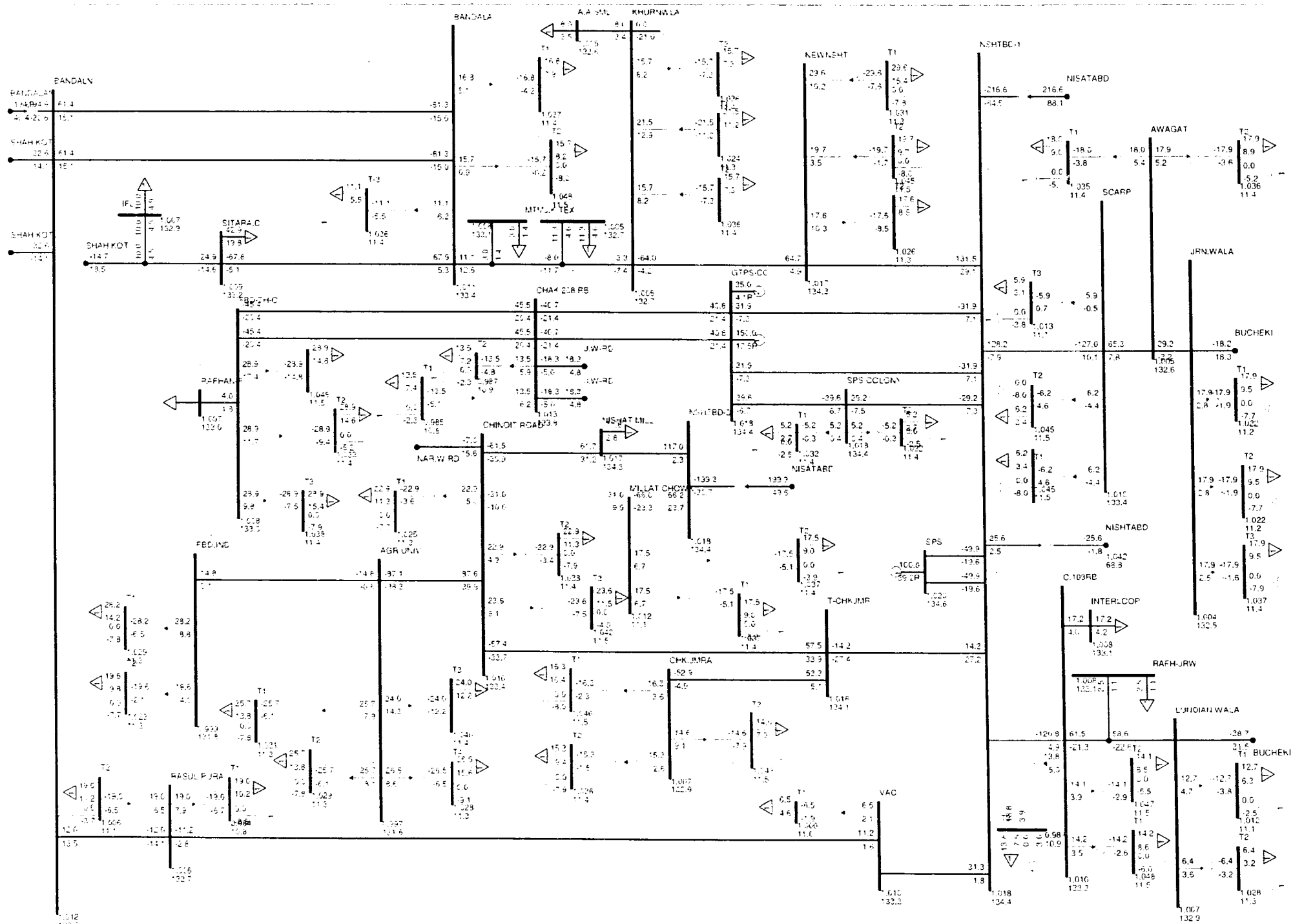


EXHIBIT-2017- 2.3



**LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)
PEAK LOAD-YEAR 2018: WITHOUT ADDITIONAL REINFORCEMENT**

EXHIBIT-2018- 1.2

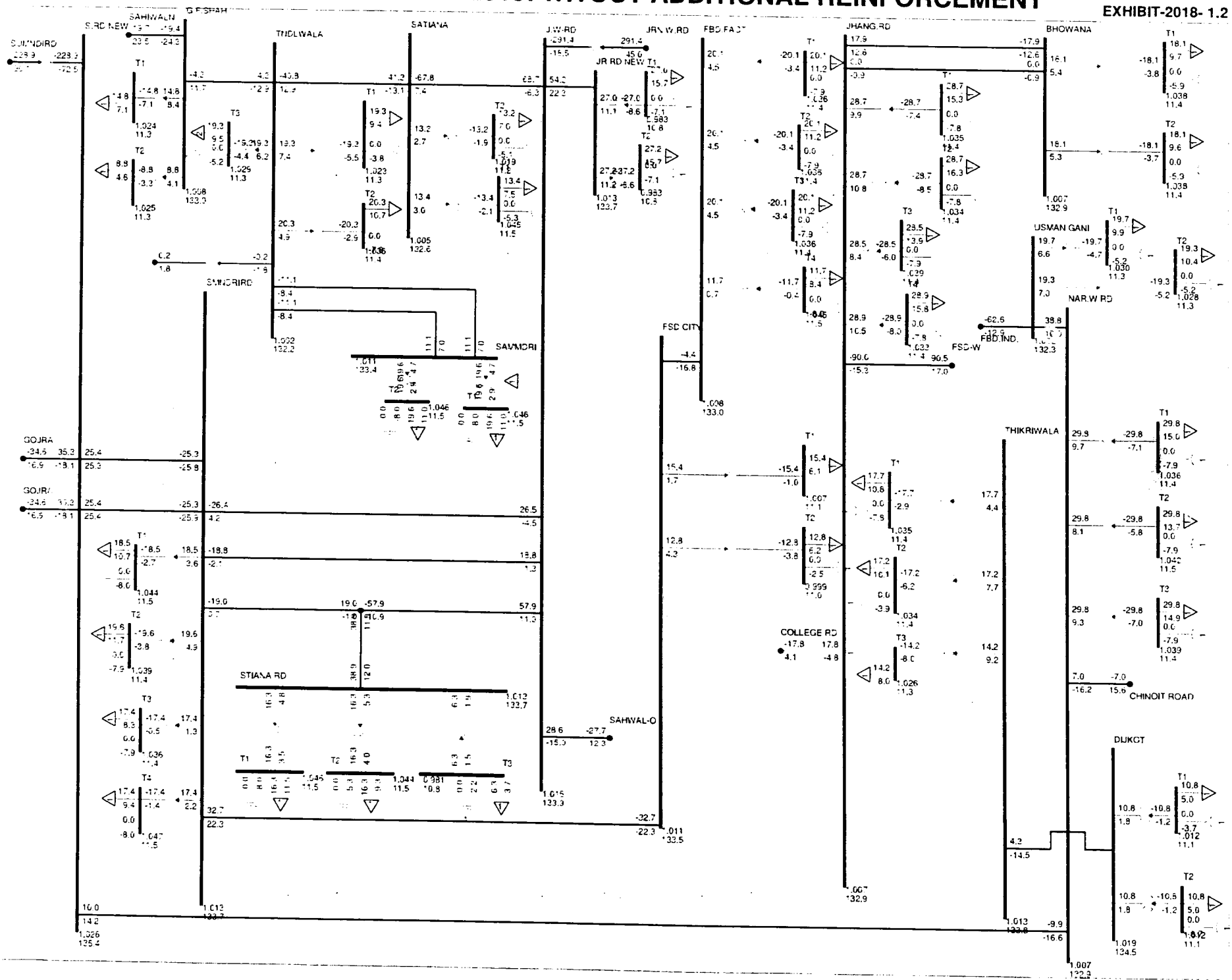
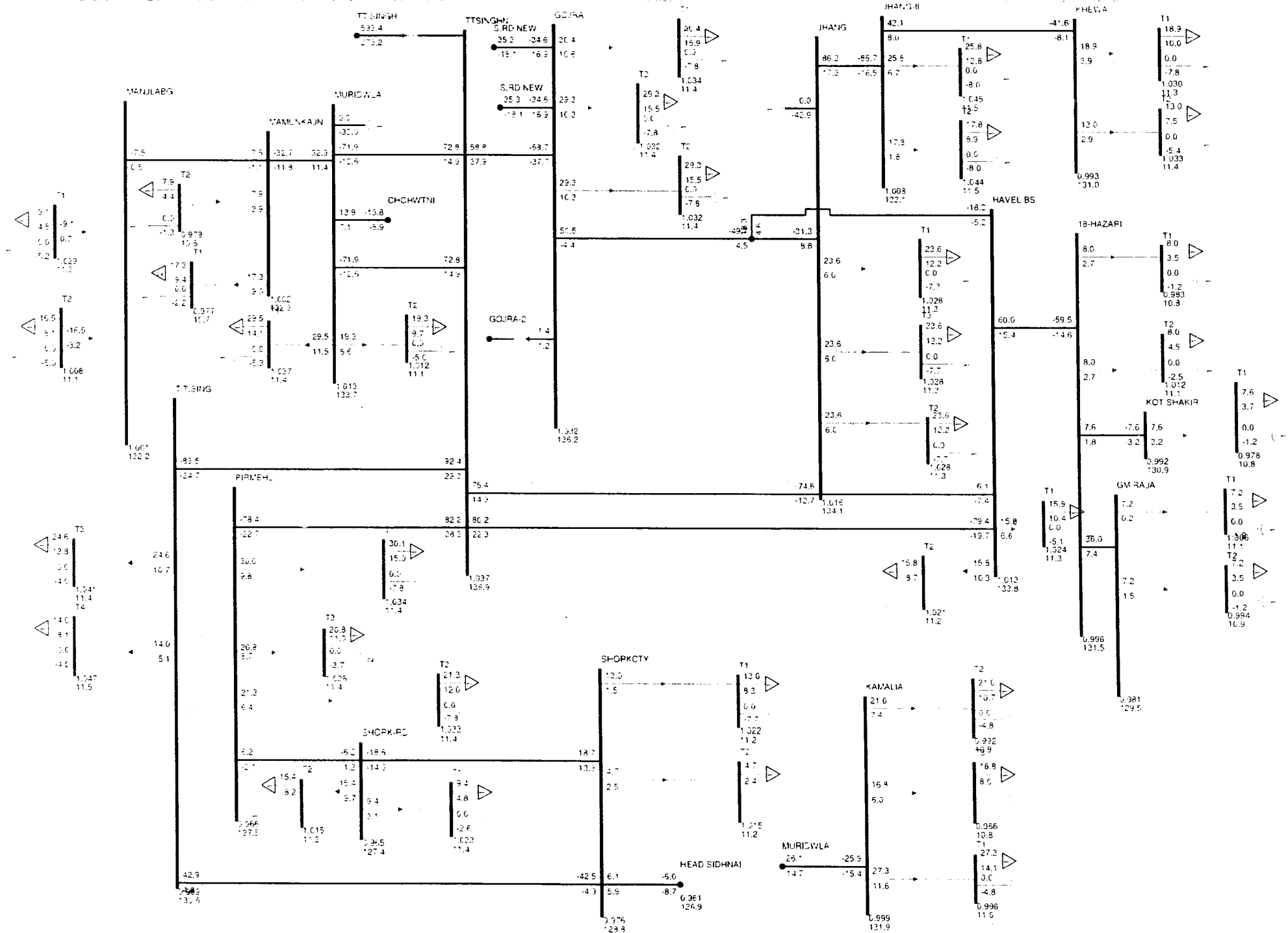
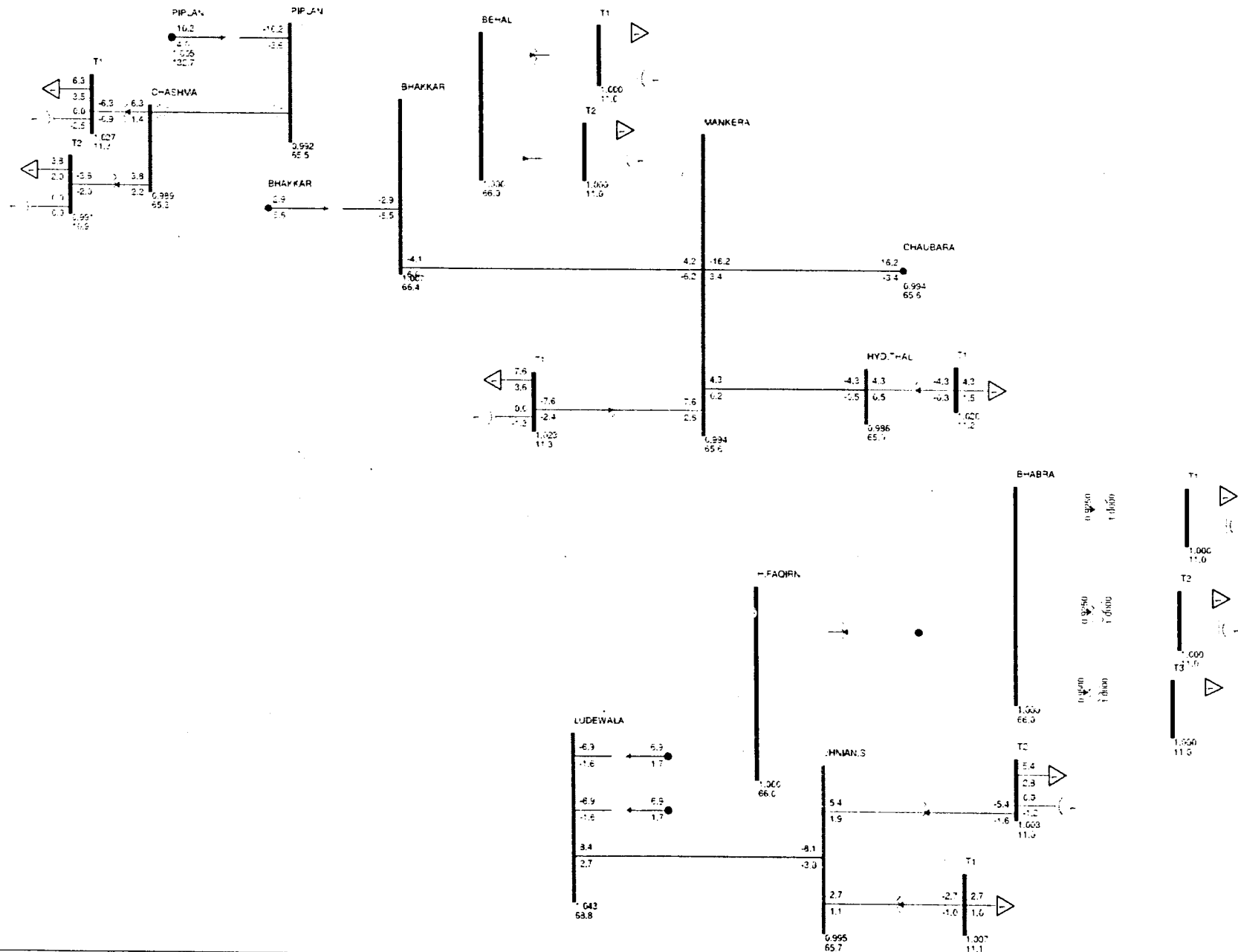


EXHIBIT-2018- 1.1



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST) PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.9



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EXHIBIT-2017- 2.8

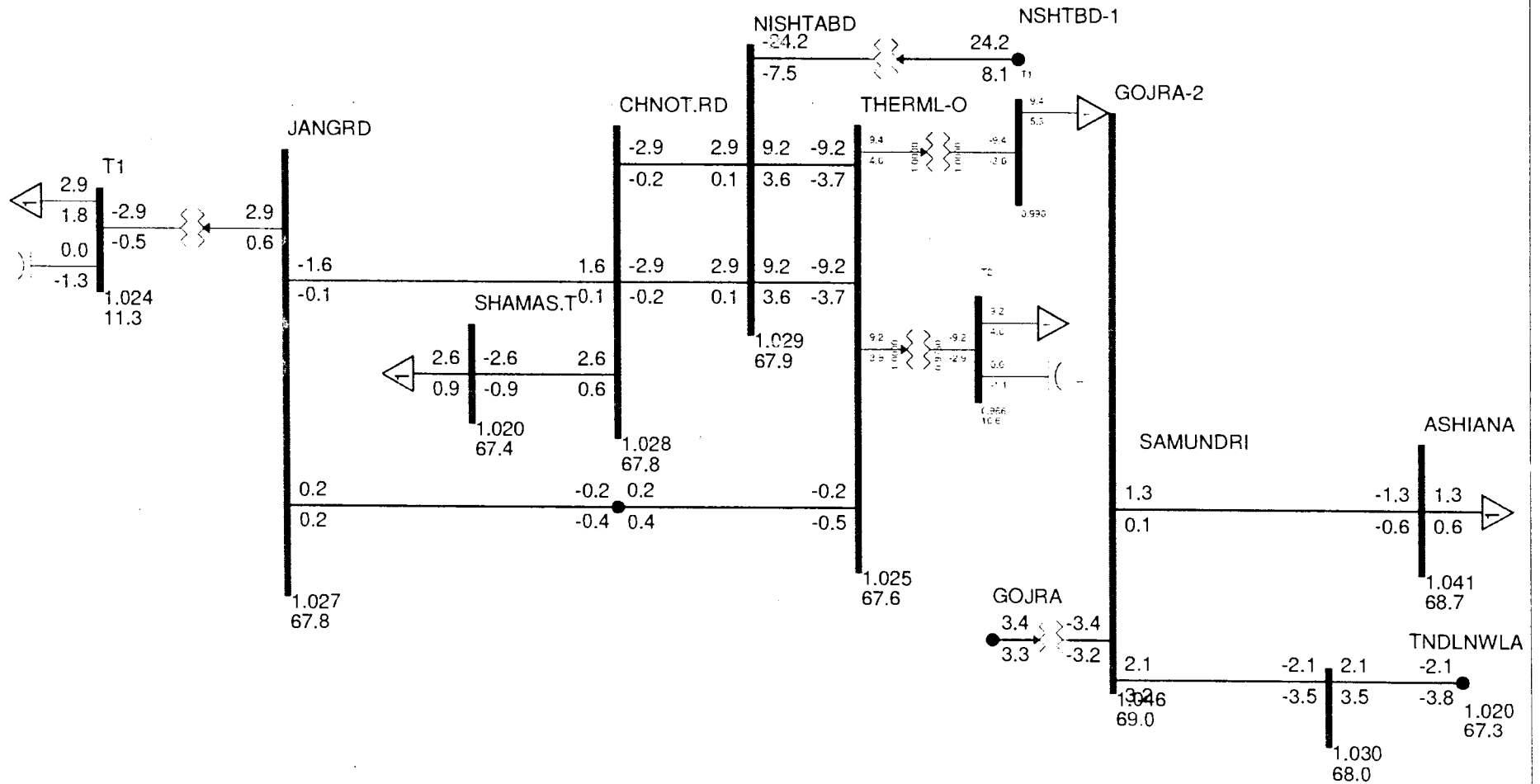
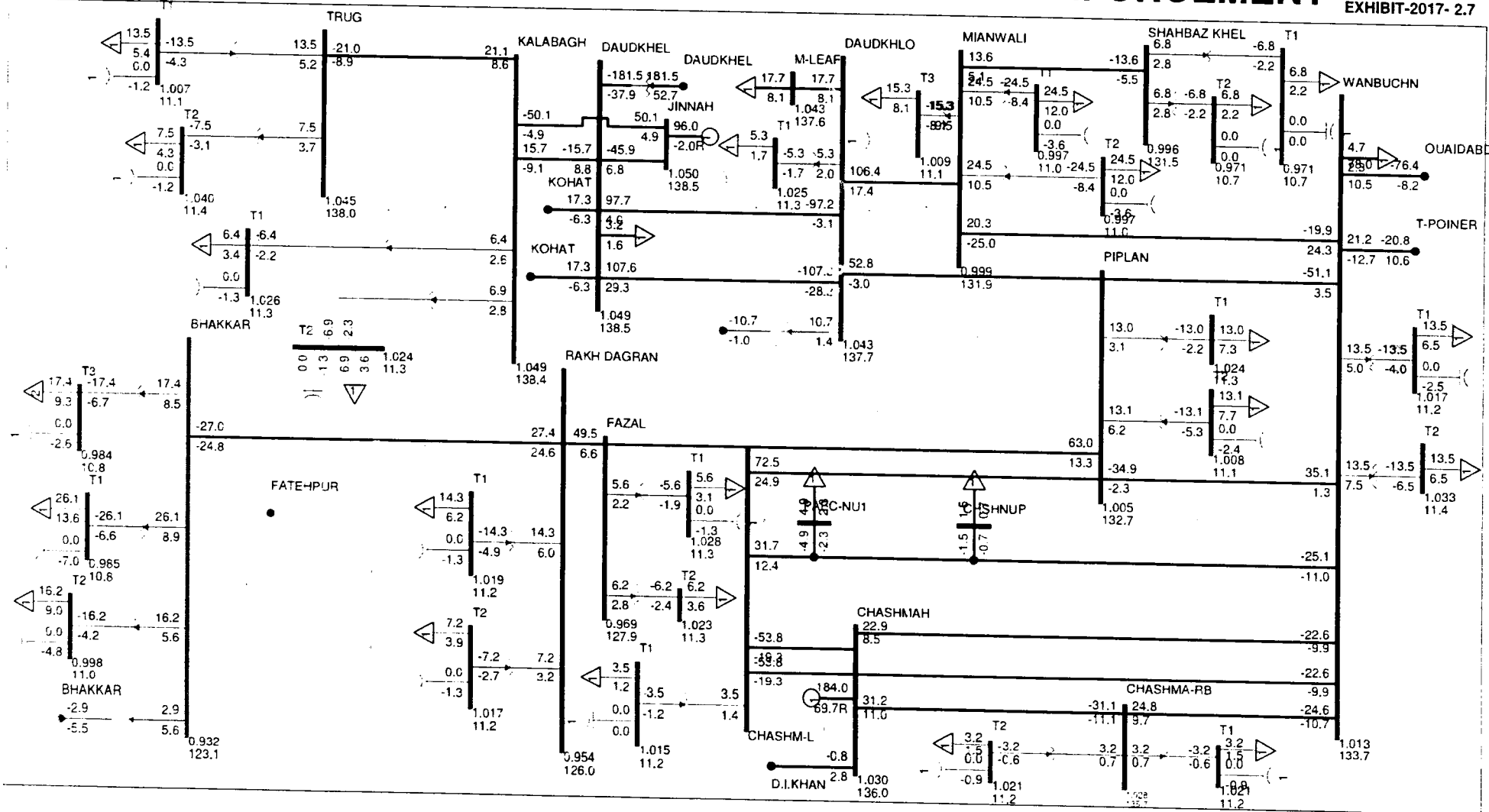
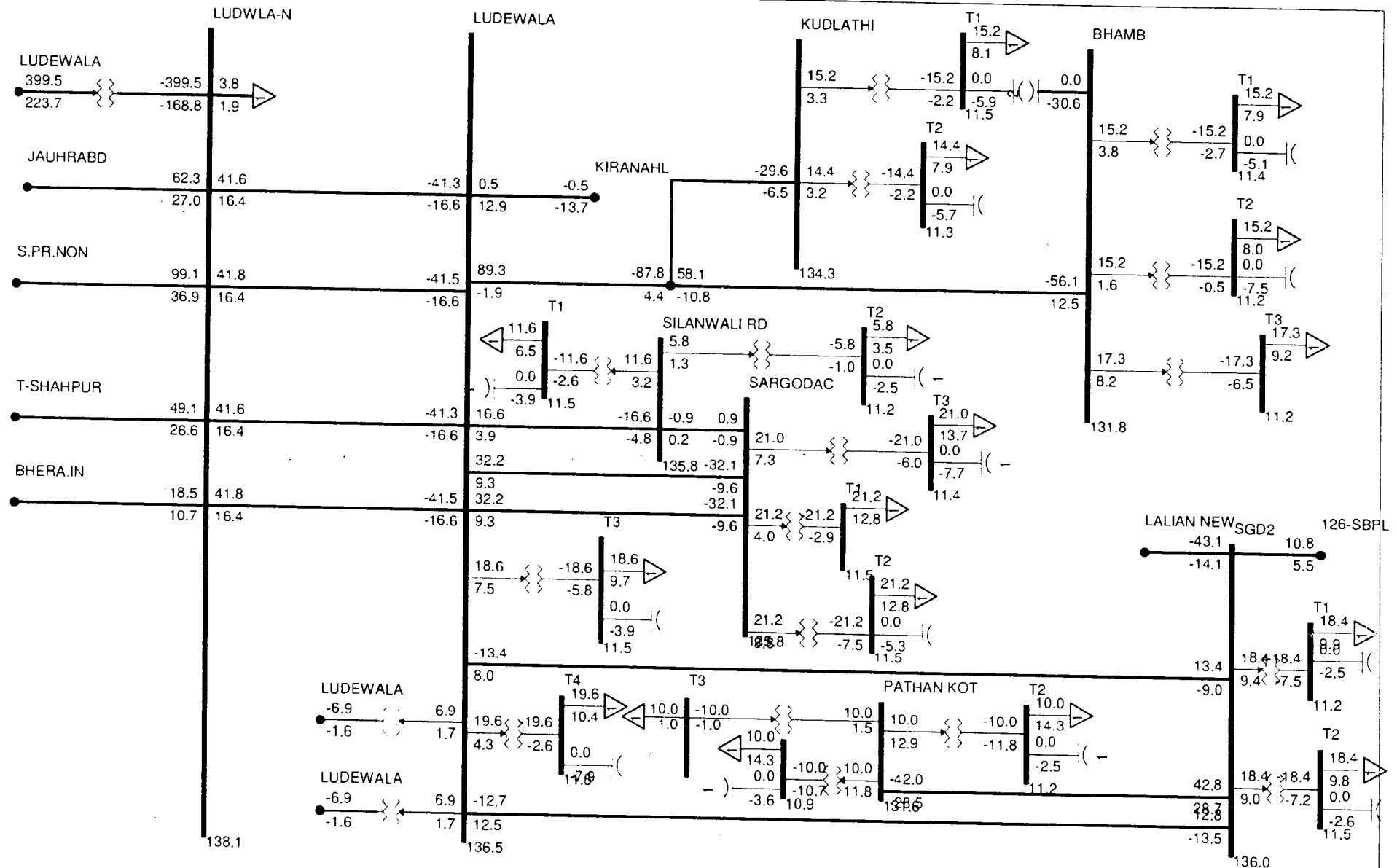


EXHIBIT-2017- 2.7



**LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)
PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT**

EXHIBIT-2017- 2.6



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

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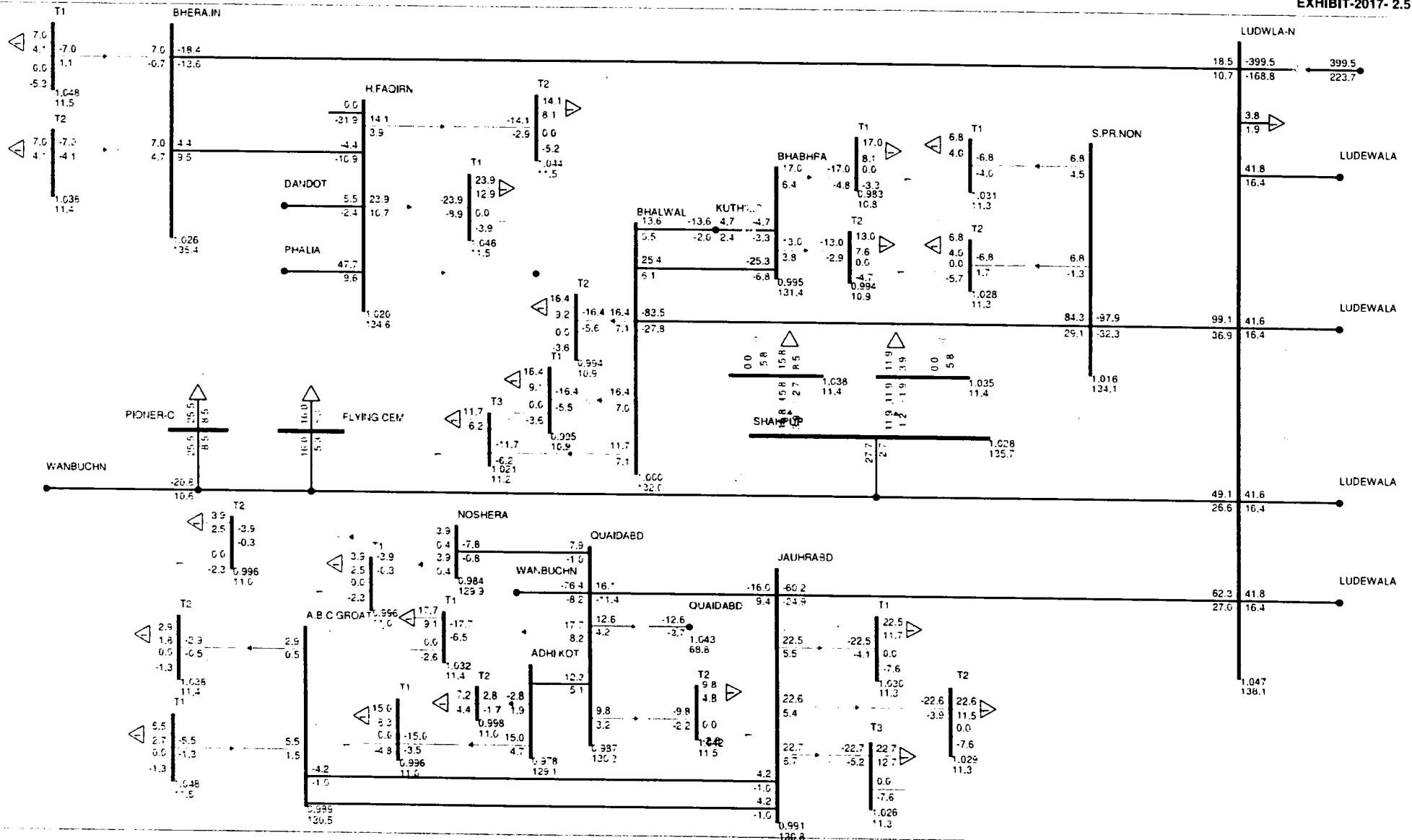


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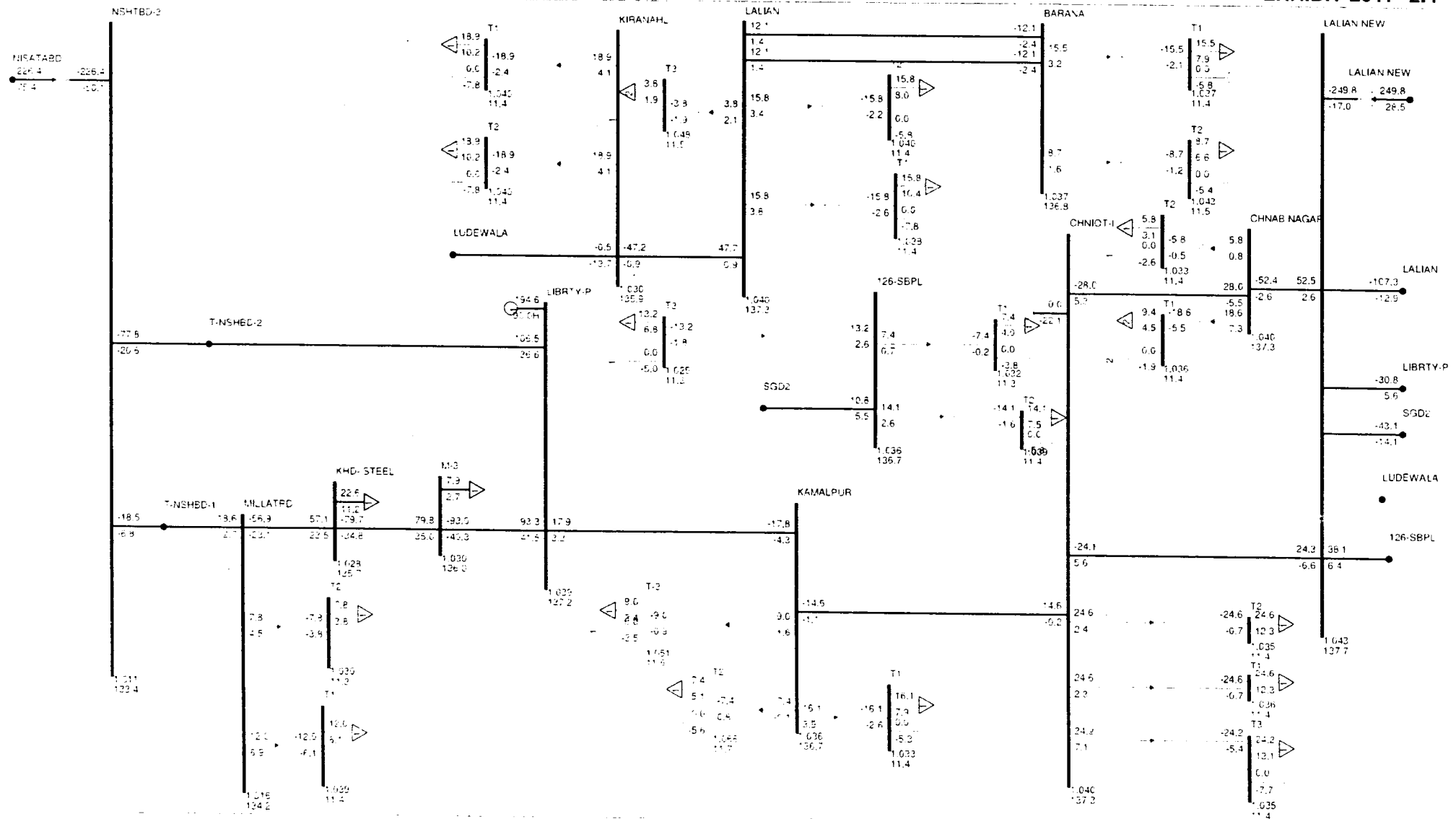
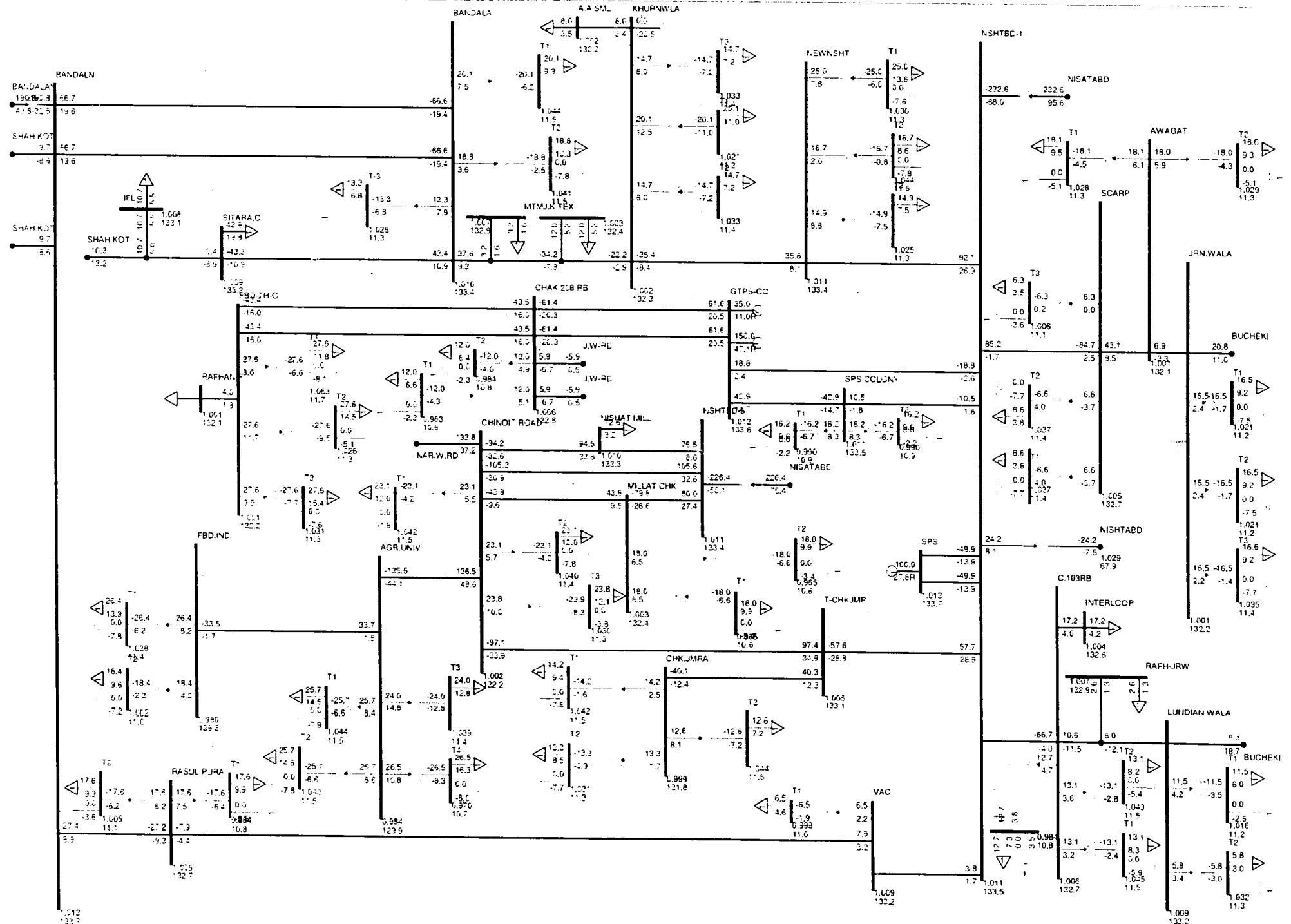


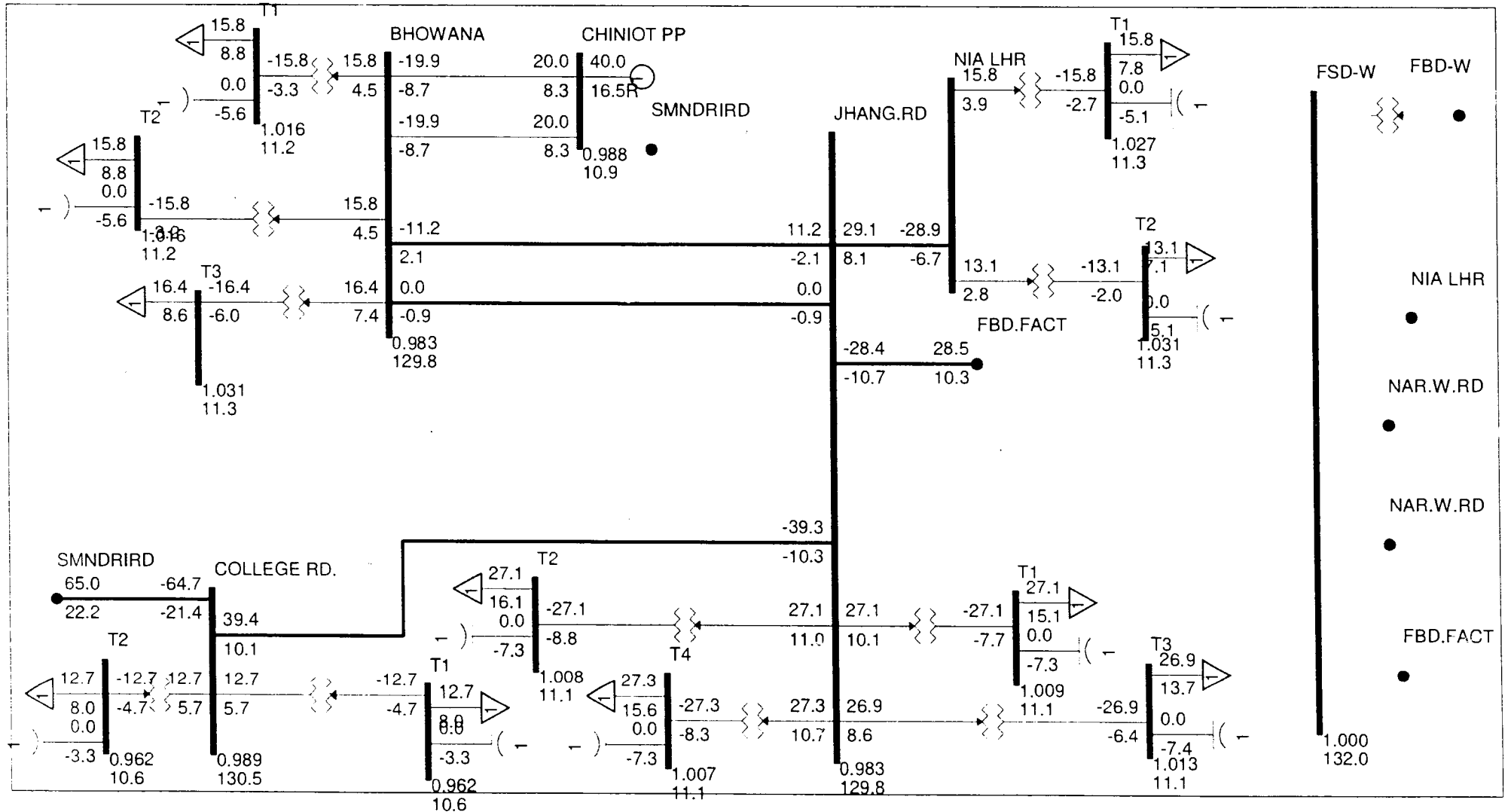
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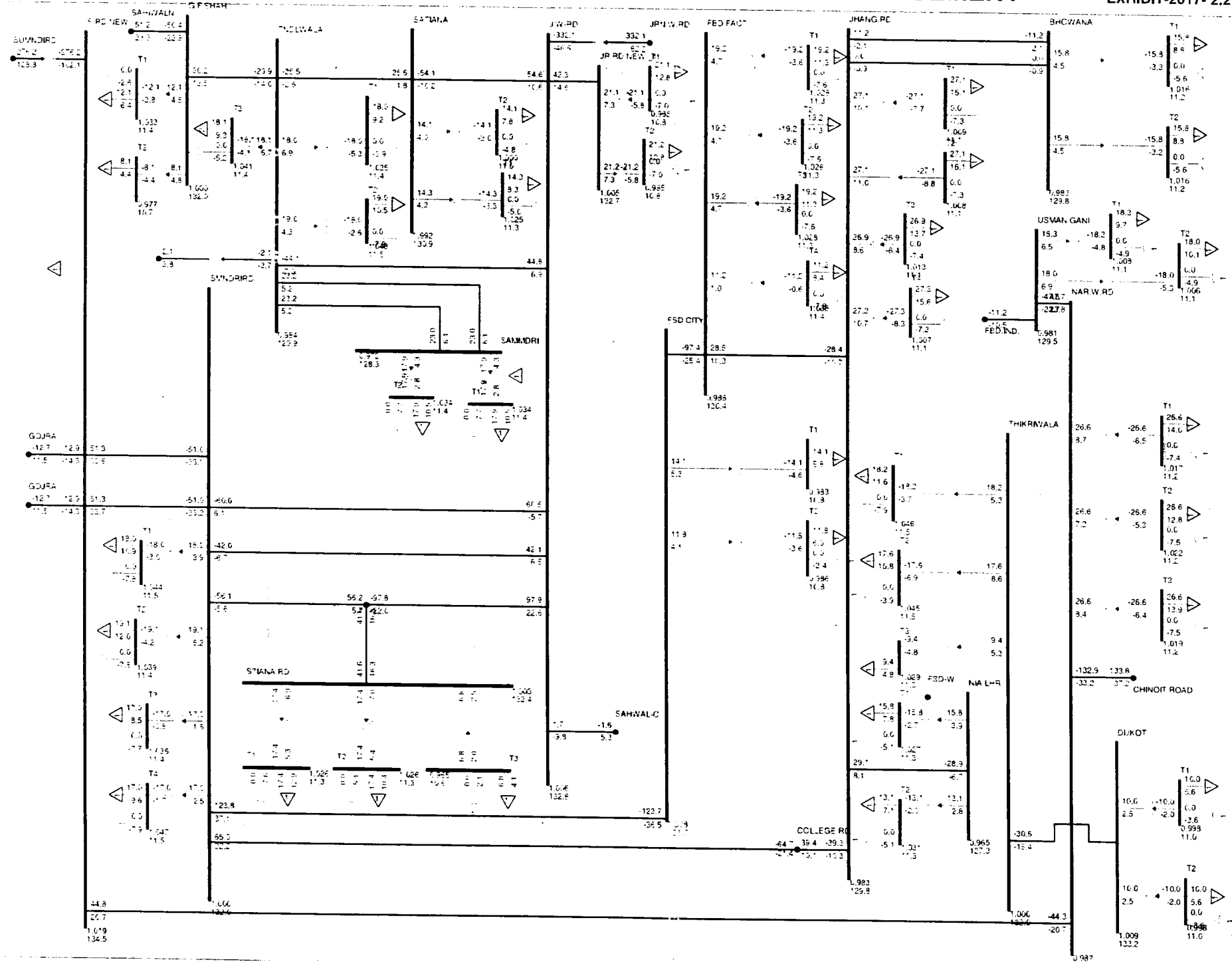
PEAK LOAD-YEAR 2017: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.3.1



**LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BFST)-
PEAK LOAD-YEAR 2017: WIT ADDITIONAL REINFORCEMENT**

EXHIBIT-2017- 2.2



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2017: WIT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 2.1

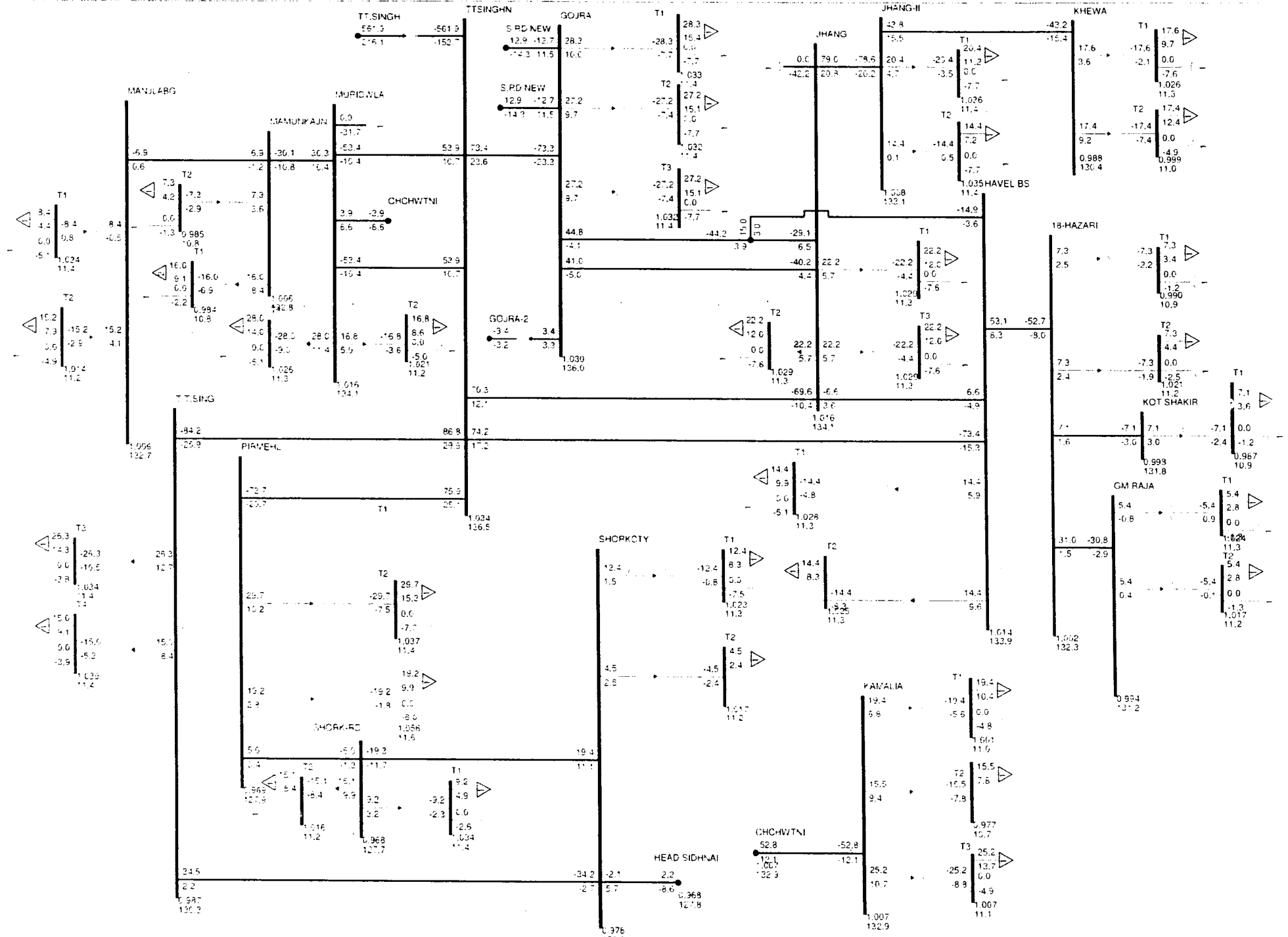
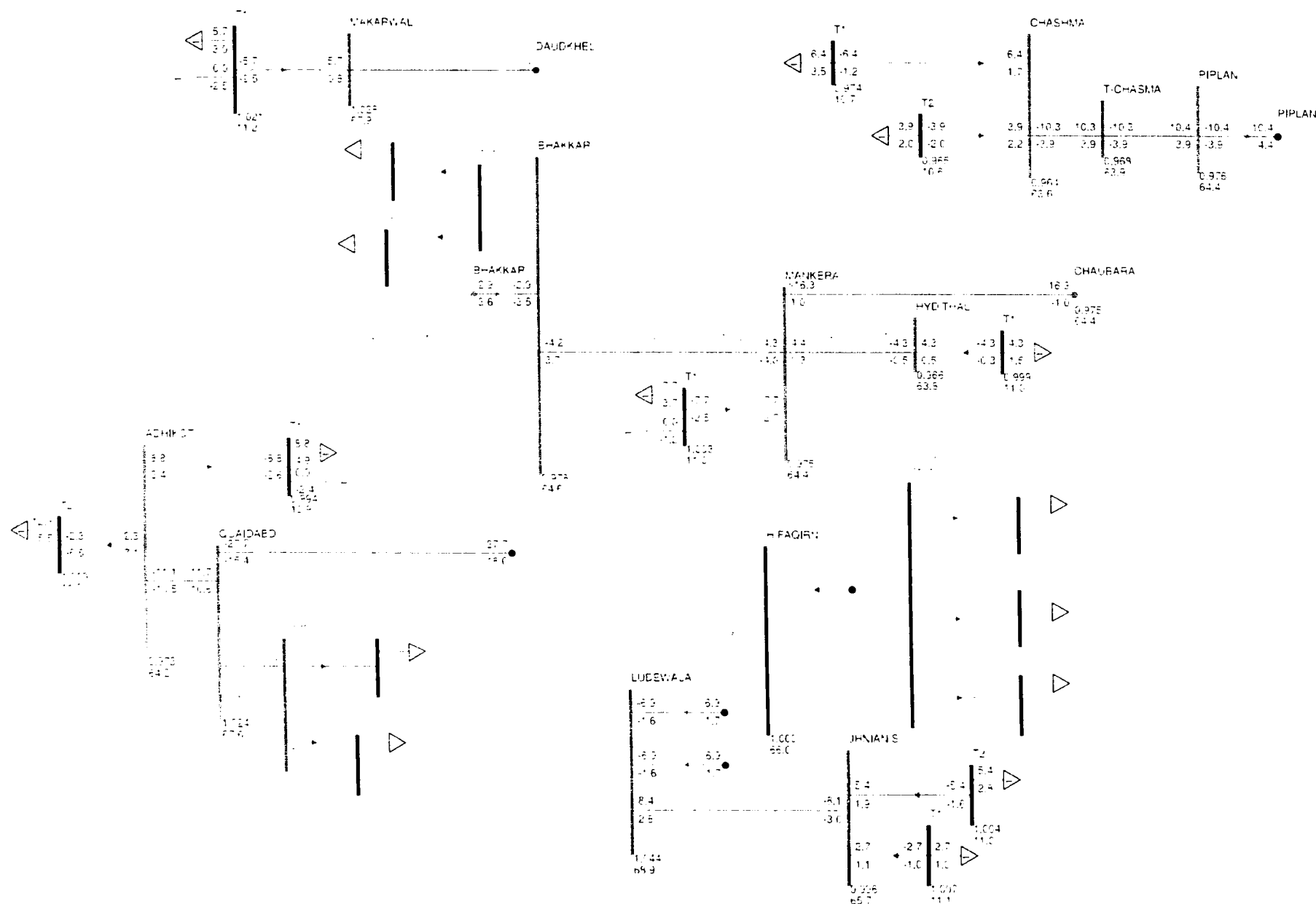


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PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.8

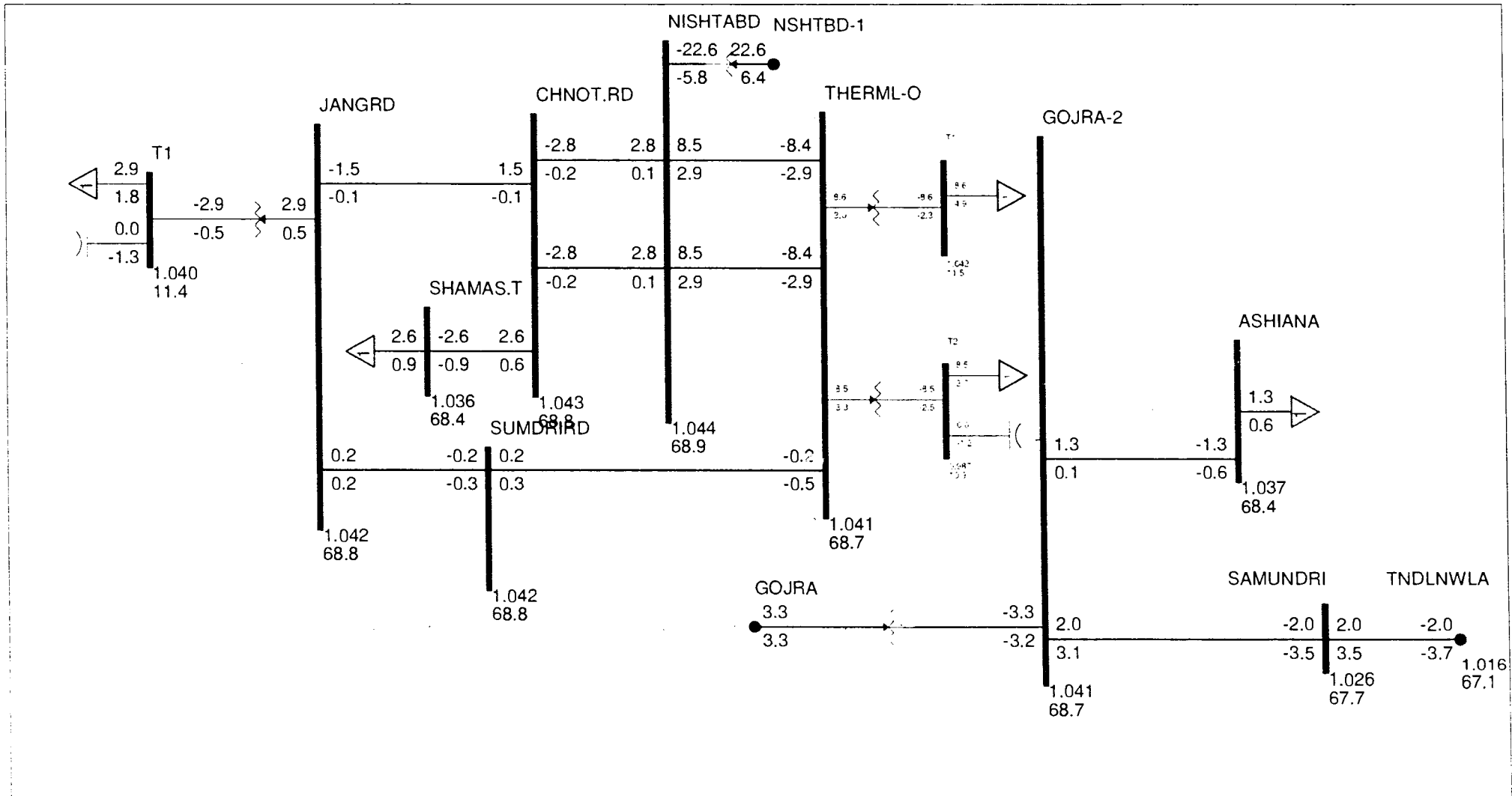
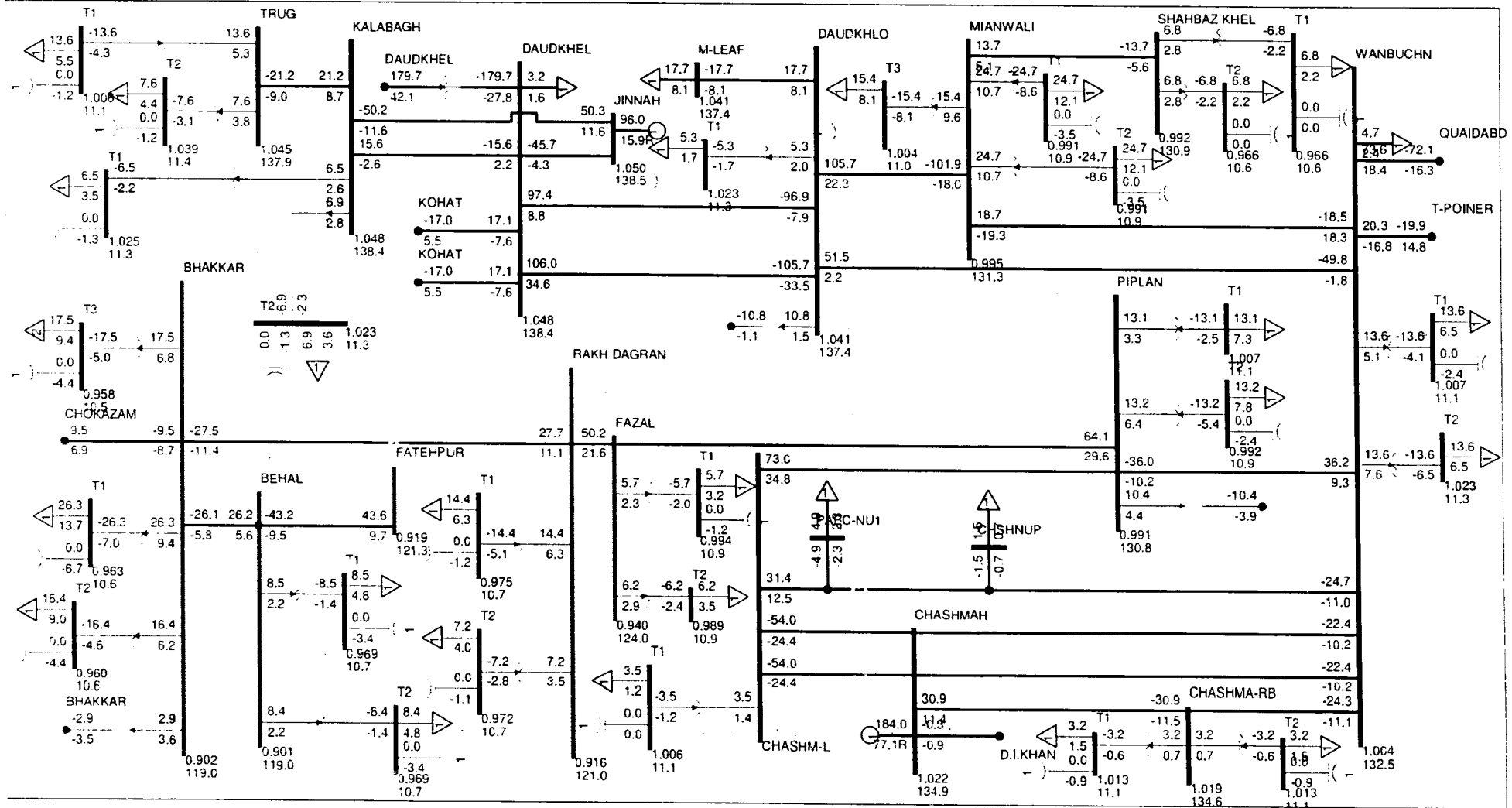


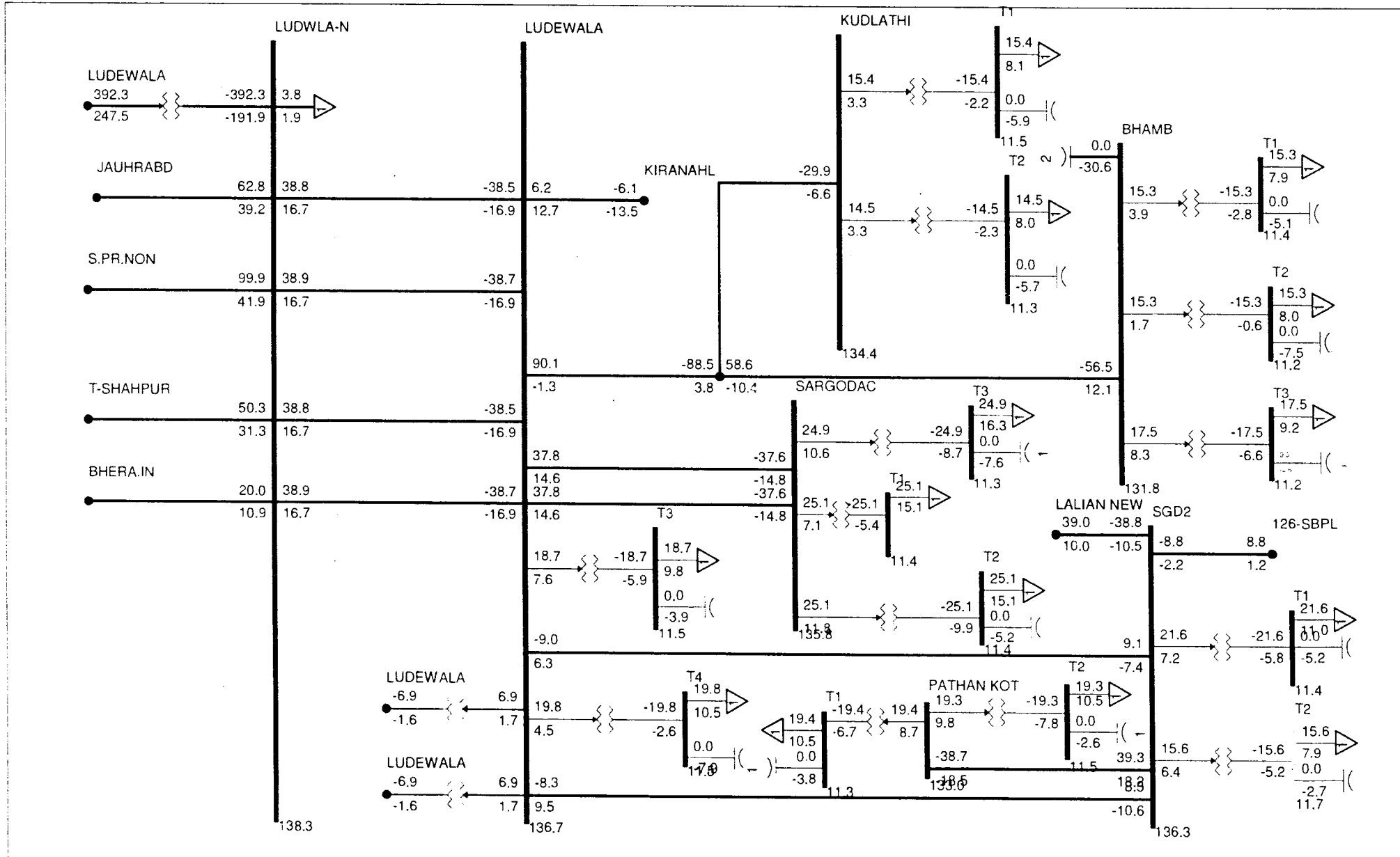
EXHIBIT-2017- 1.7



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017- 1.6



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.5

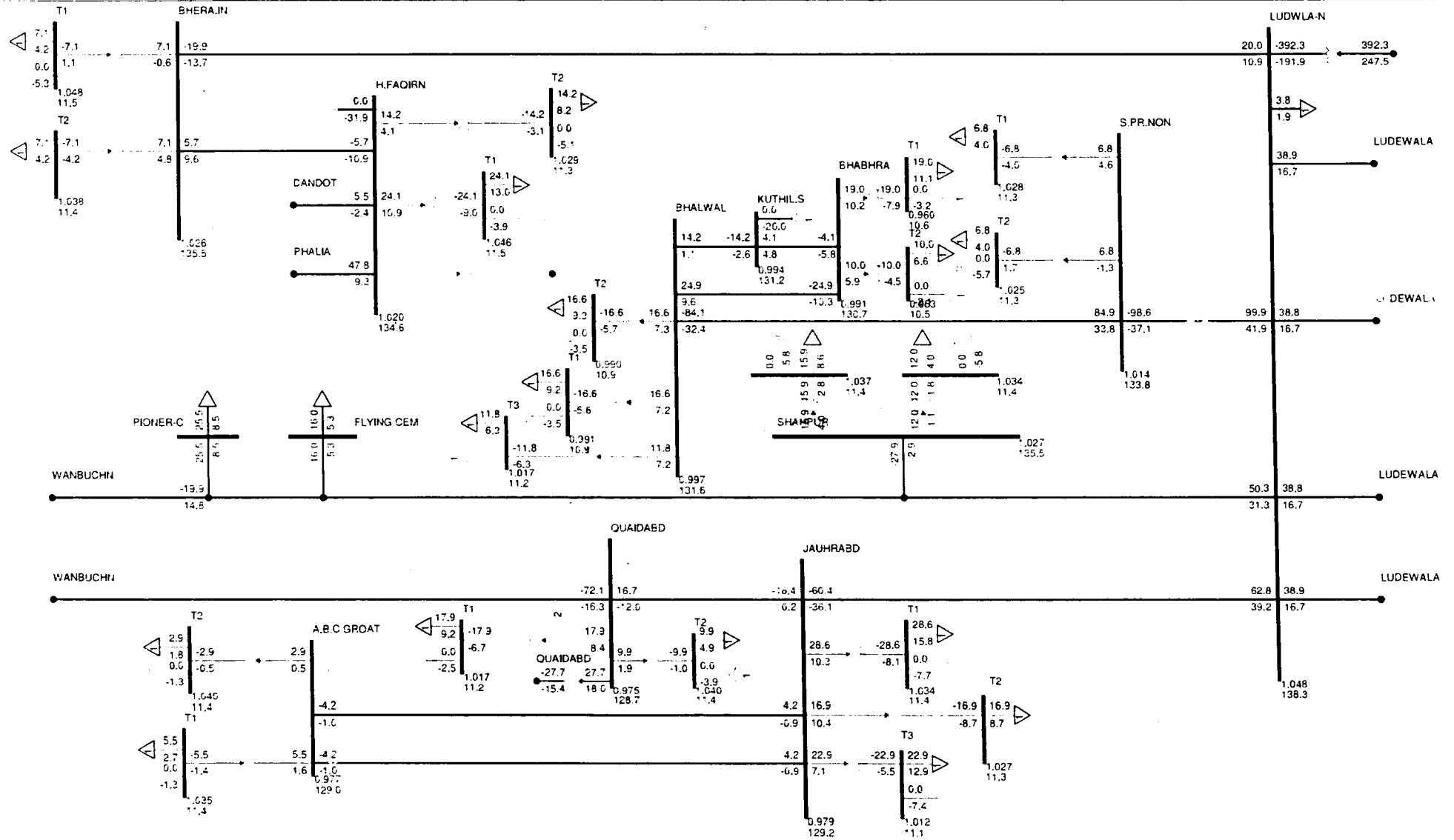
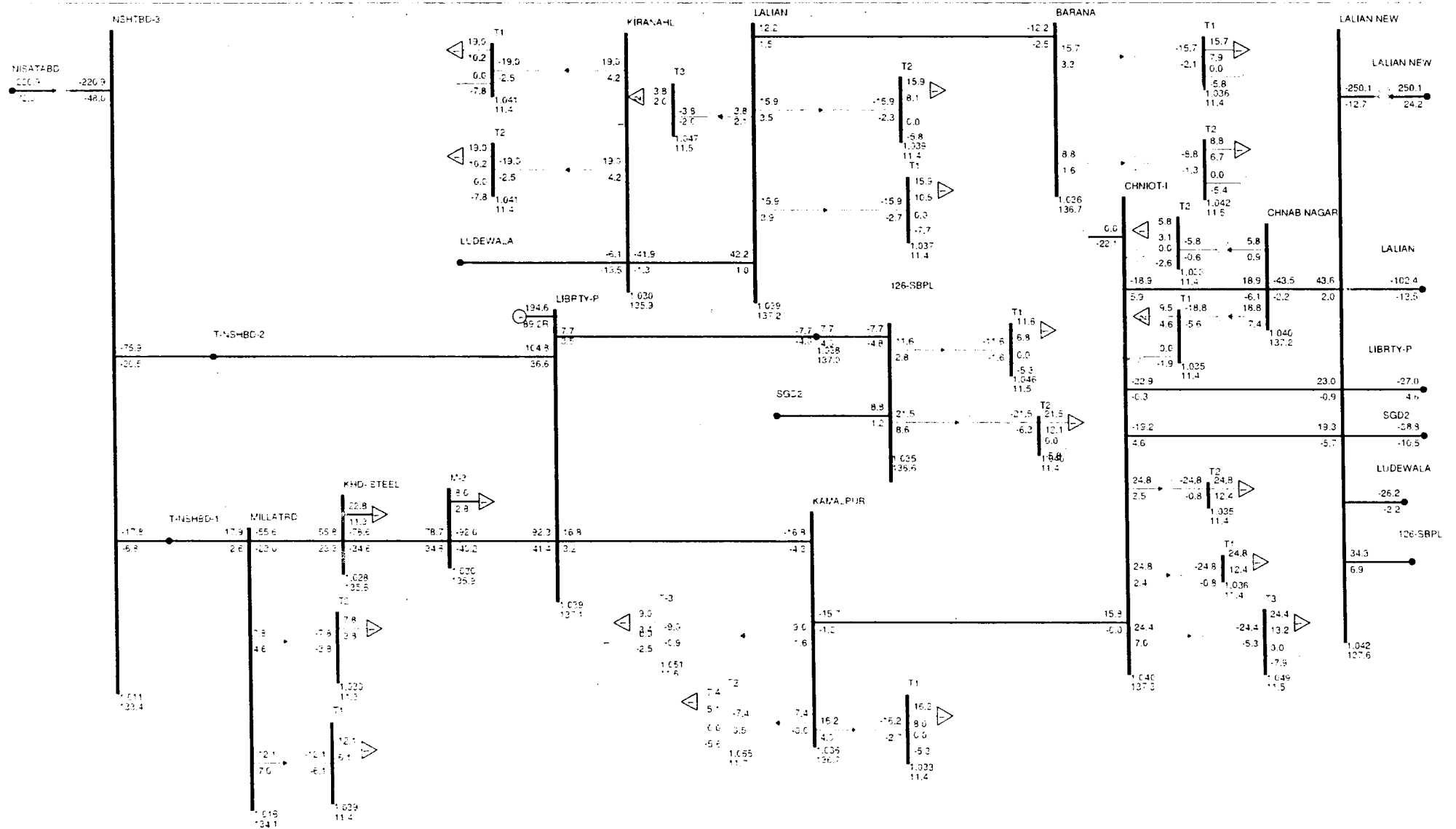
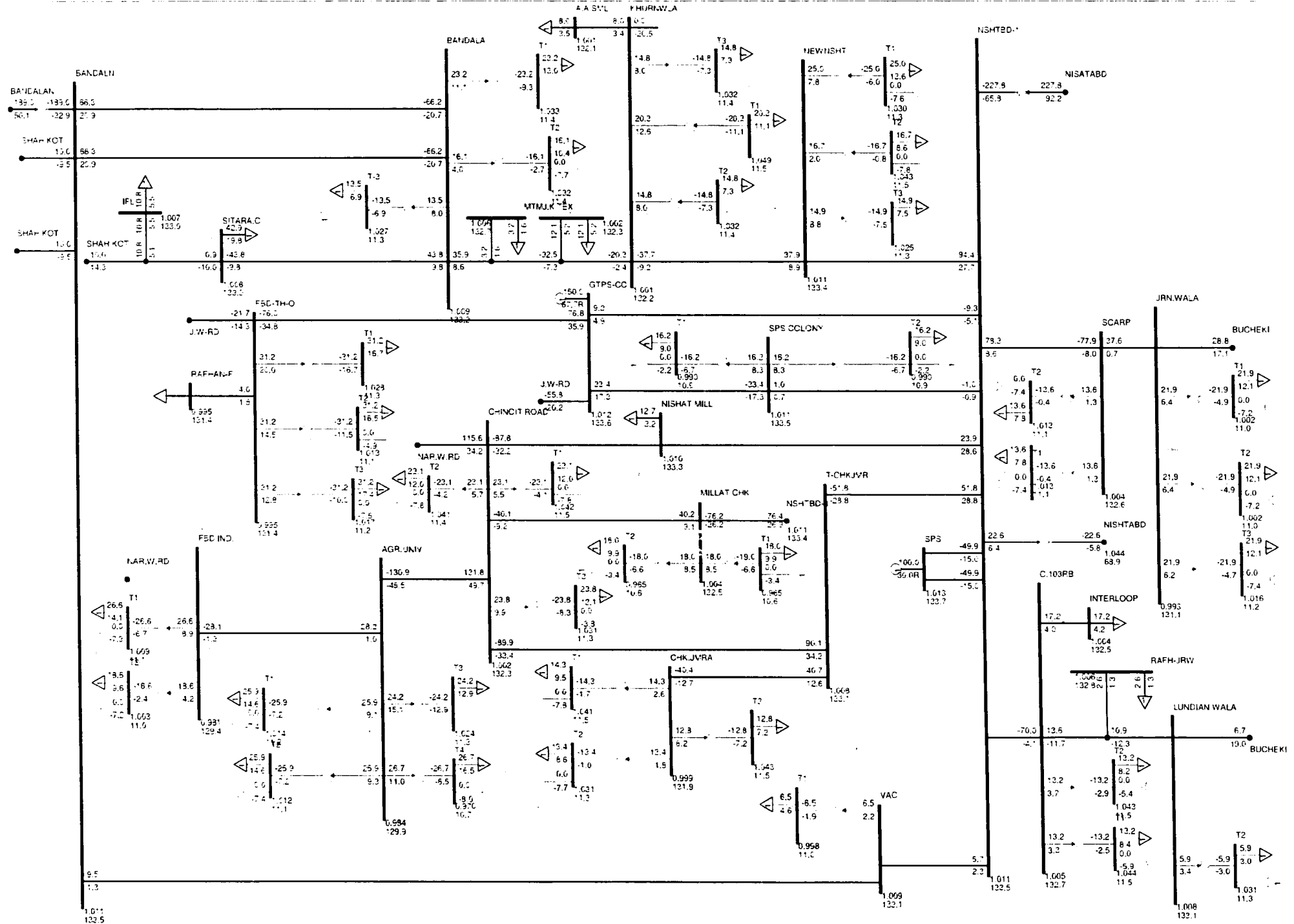


EXHIBIT-2017- 1.4



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST) PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.3



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BECT)

PEAK LOAD-YEAR 2017: WITHOUT ADDITIONAL REINFORCEMENT

EXHIBIT-2017-1.2

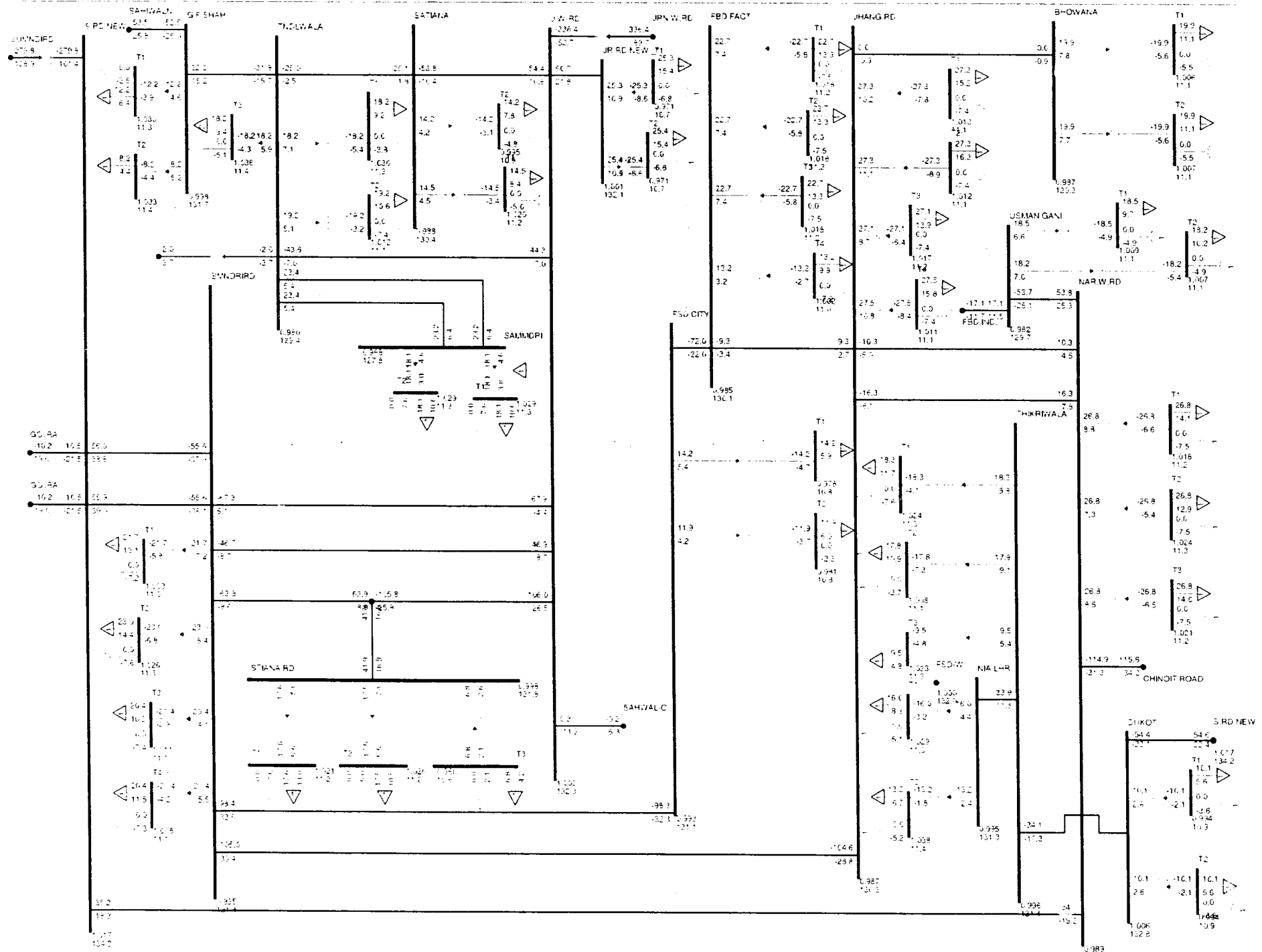


EXHIBIT-2017- 1.1

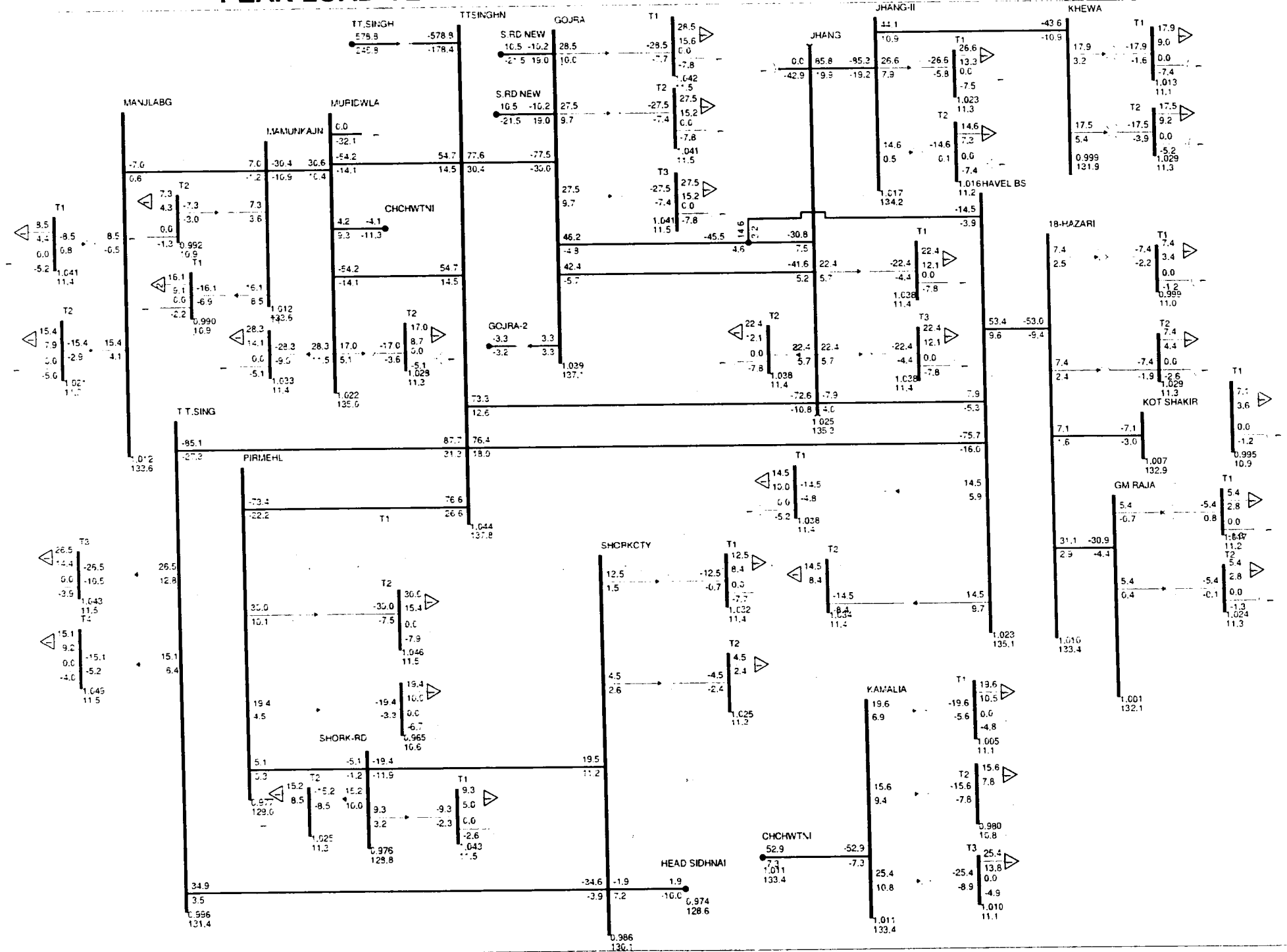
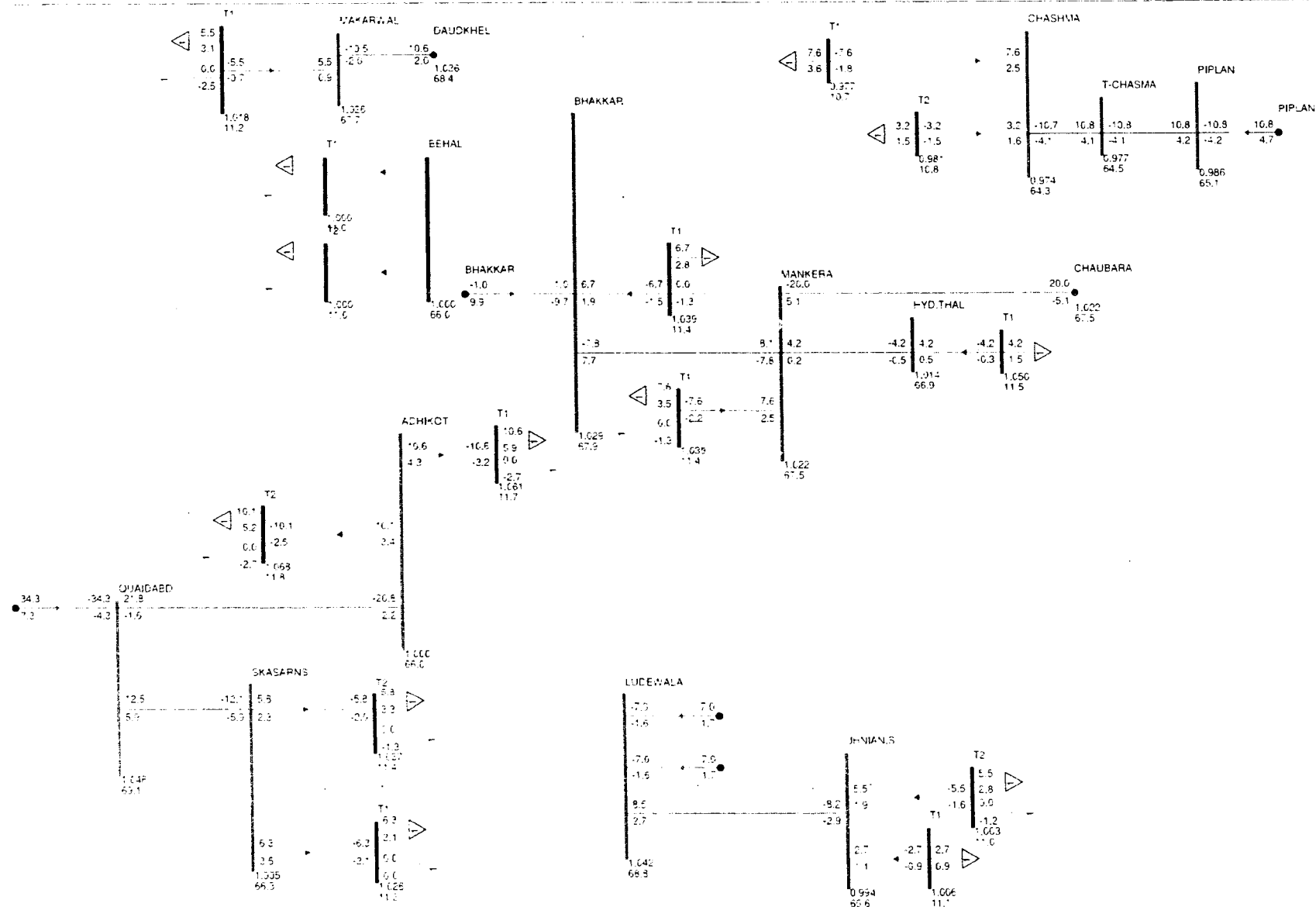


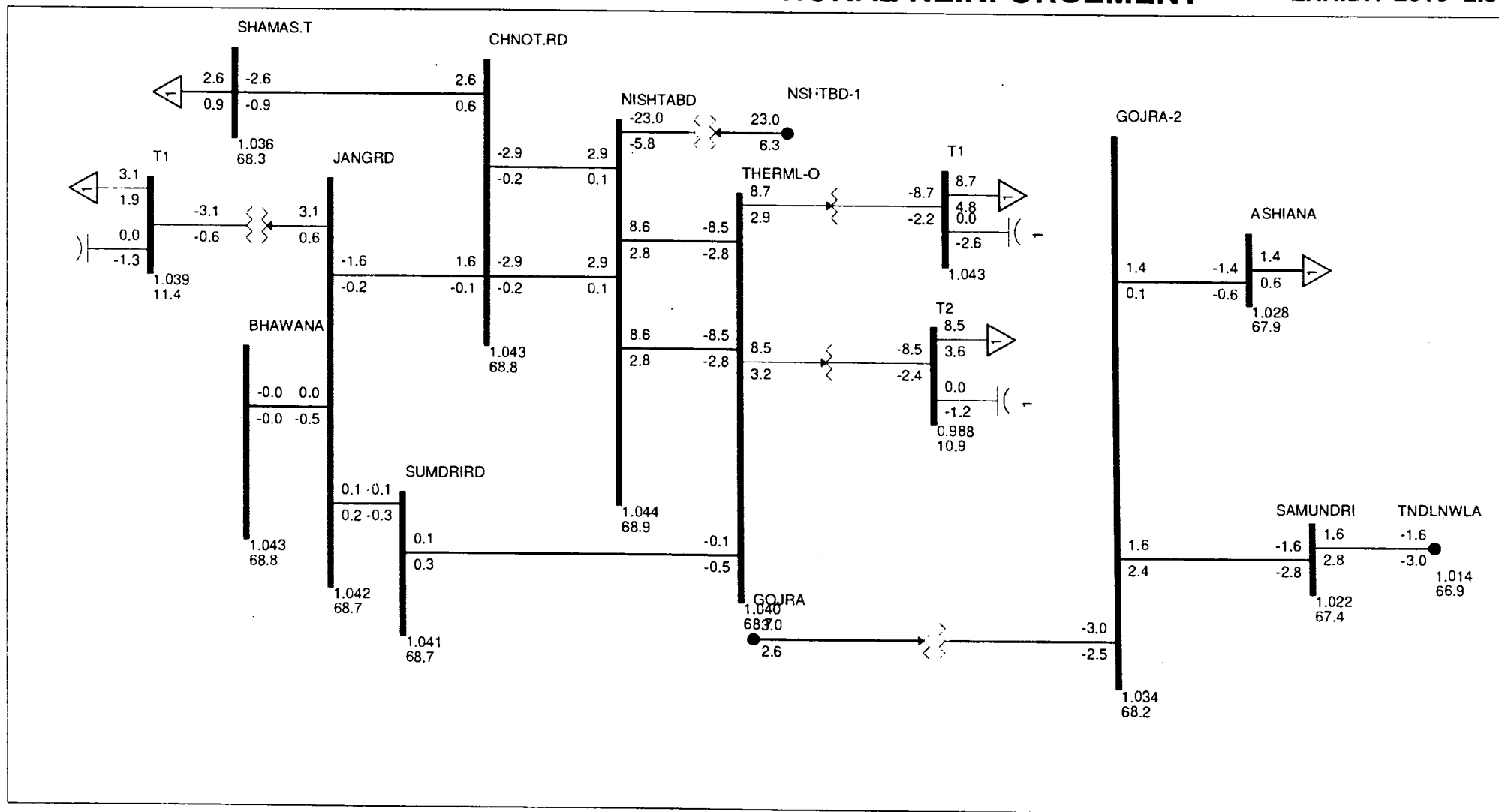
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

FESCO-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

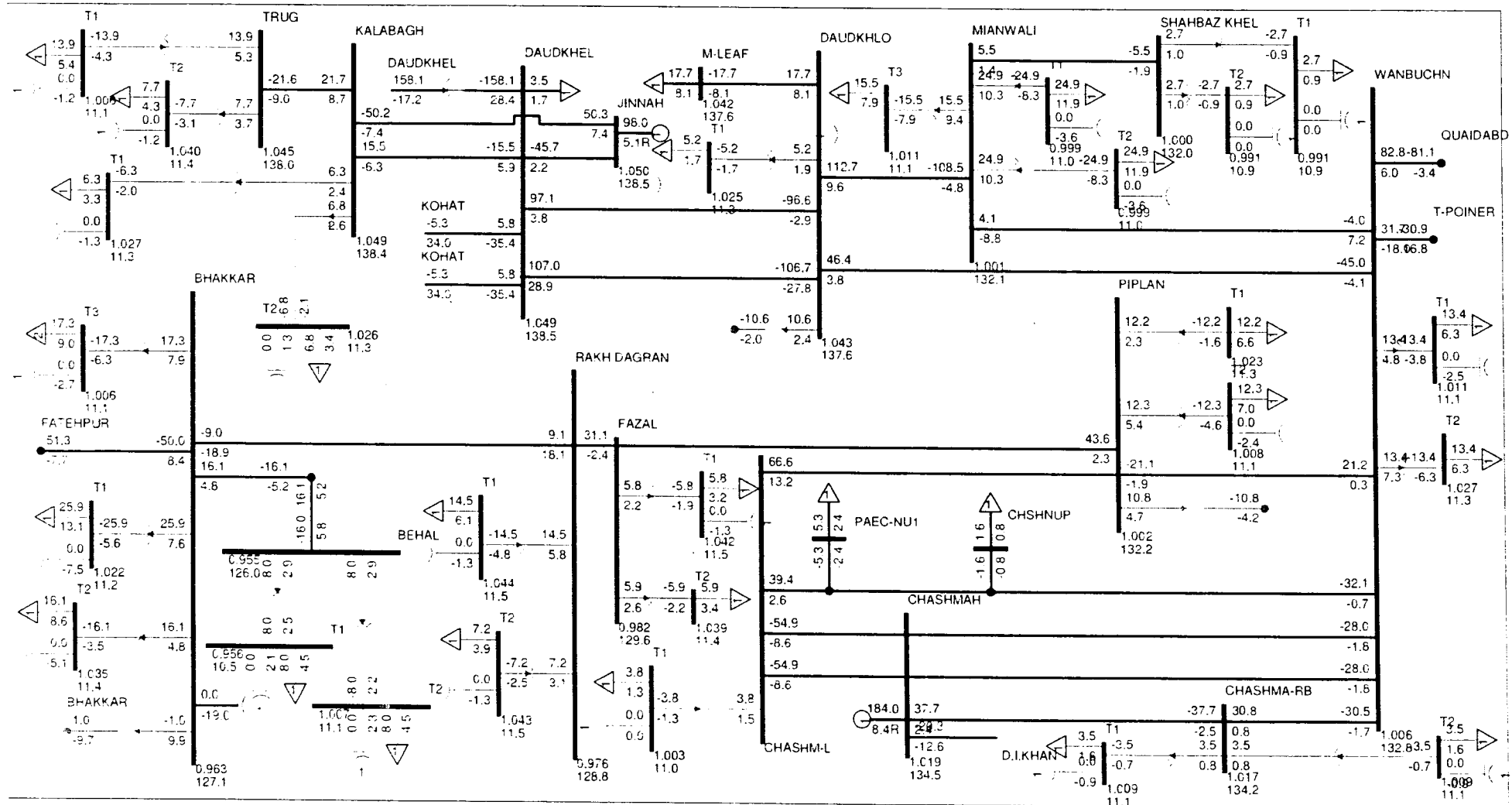
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

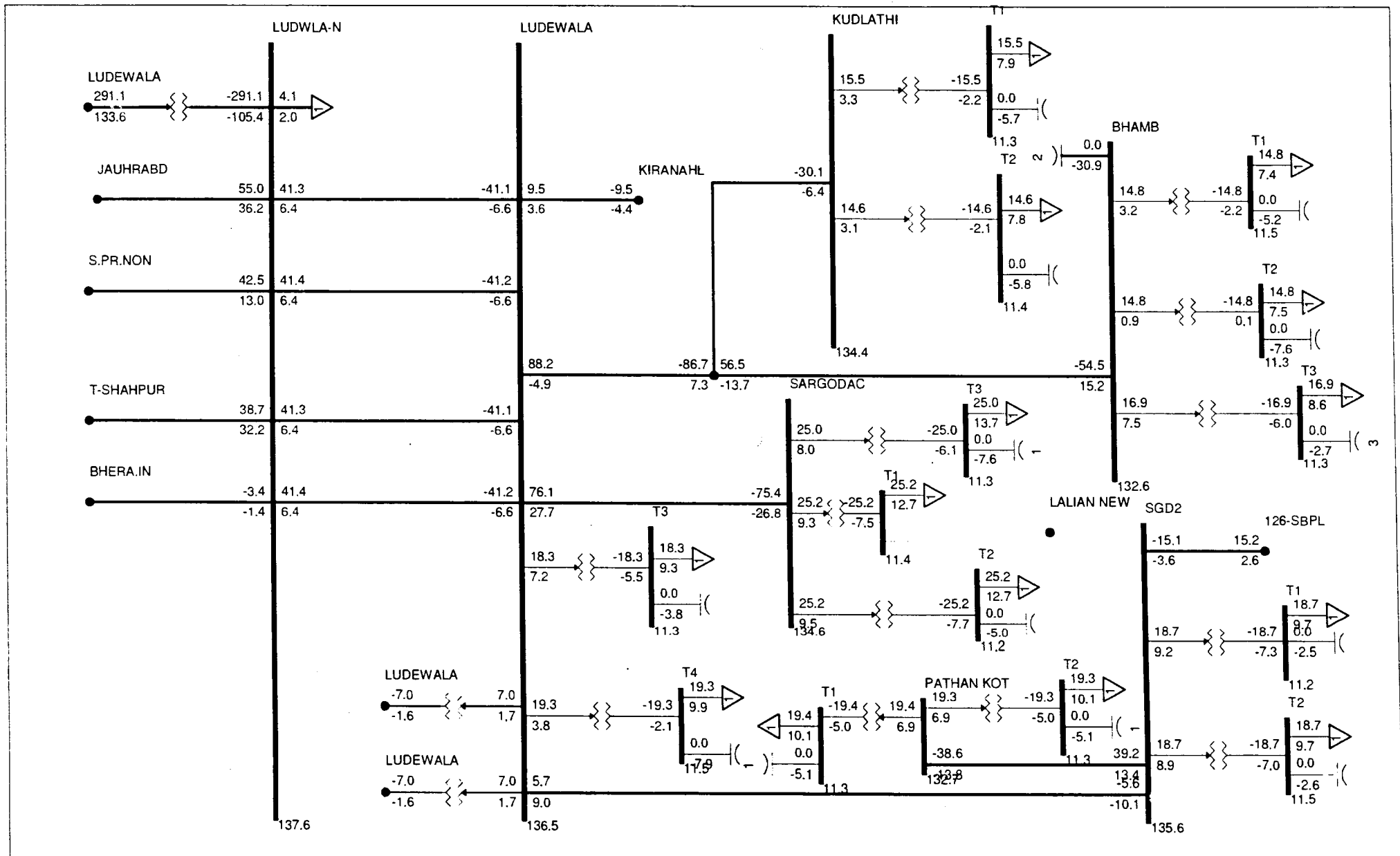
PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.7



PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.6



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST) PEAK LOAD-YEAR 2016: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 2.5

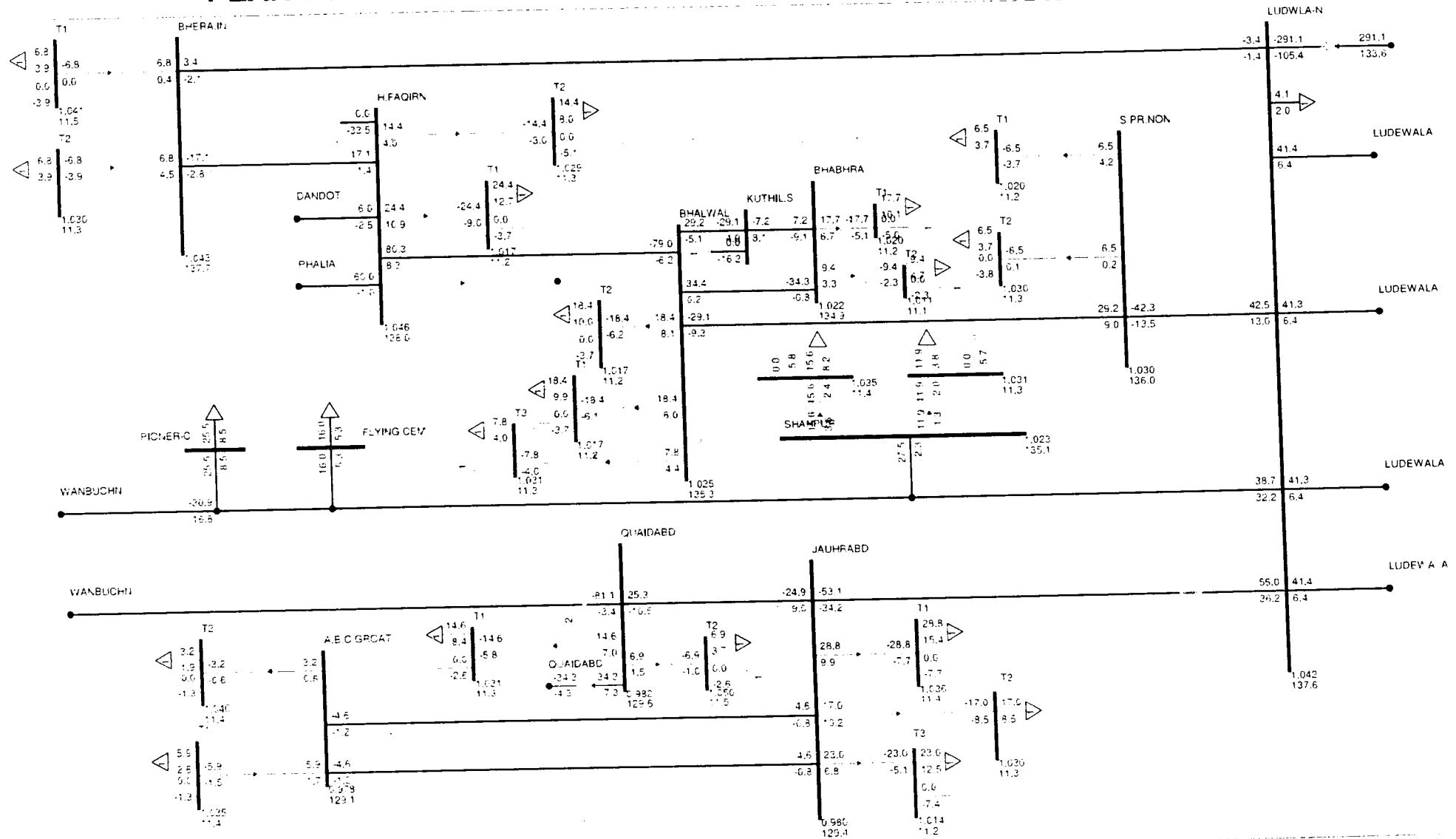


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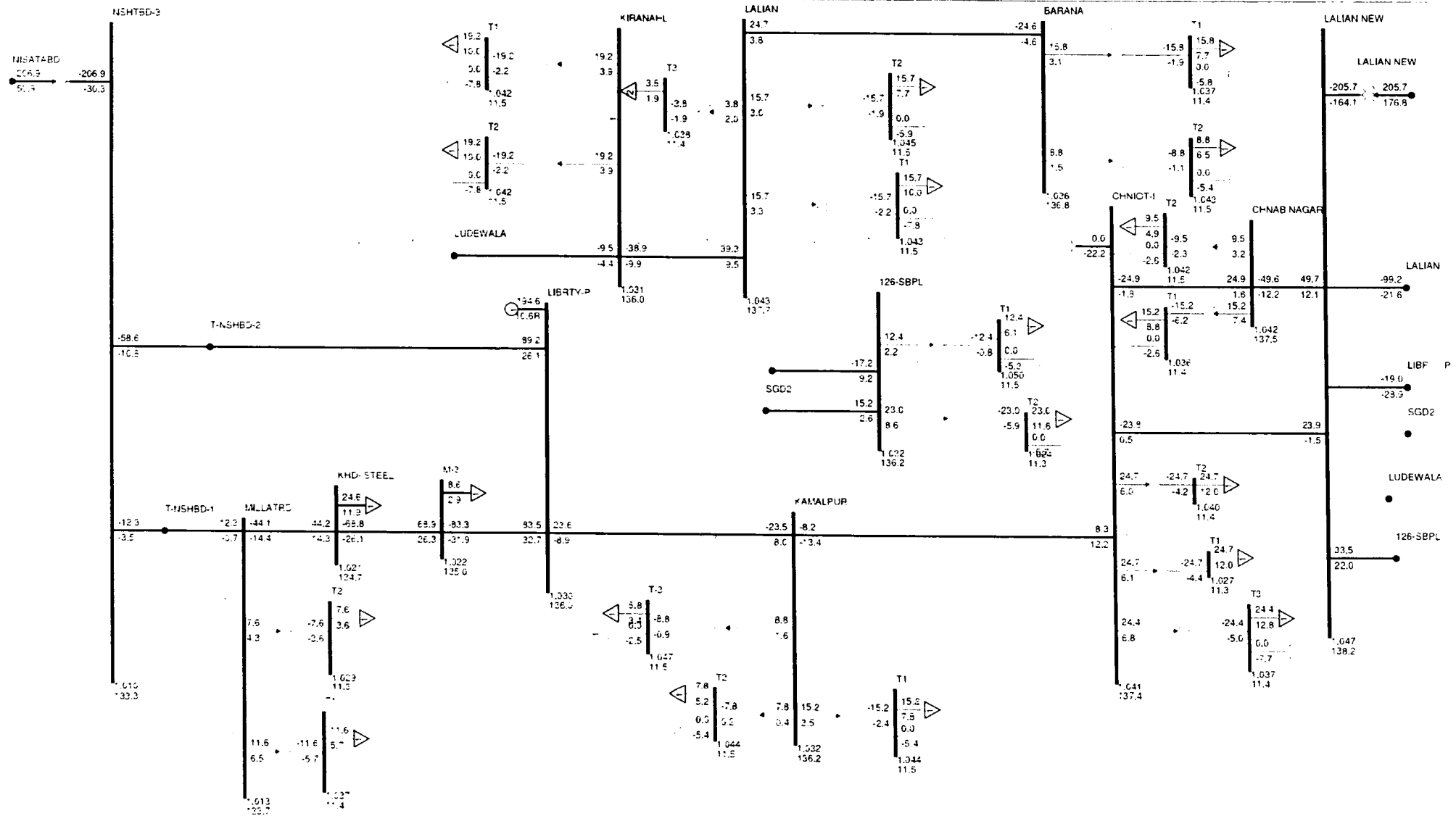


EXHIBIT-2015- 2.3

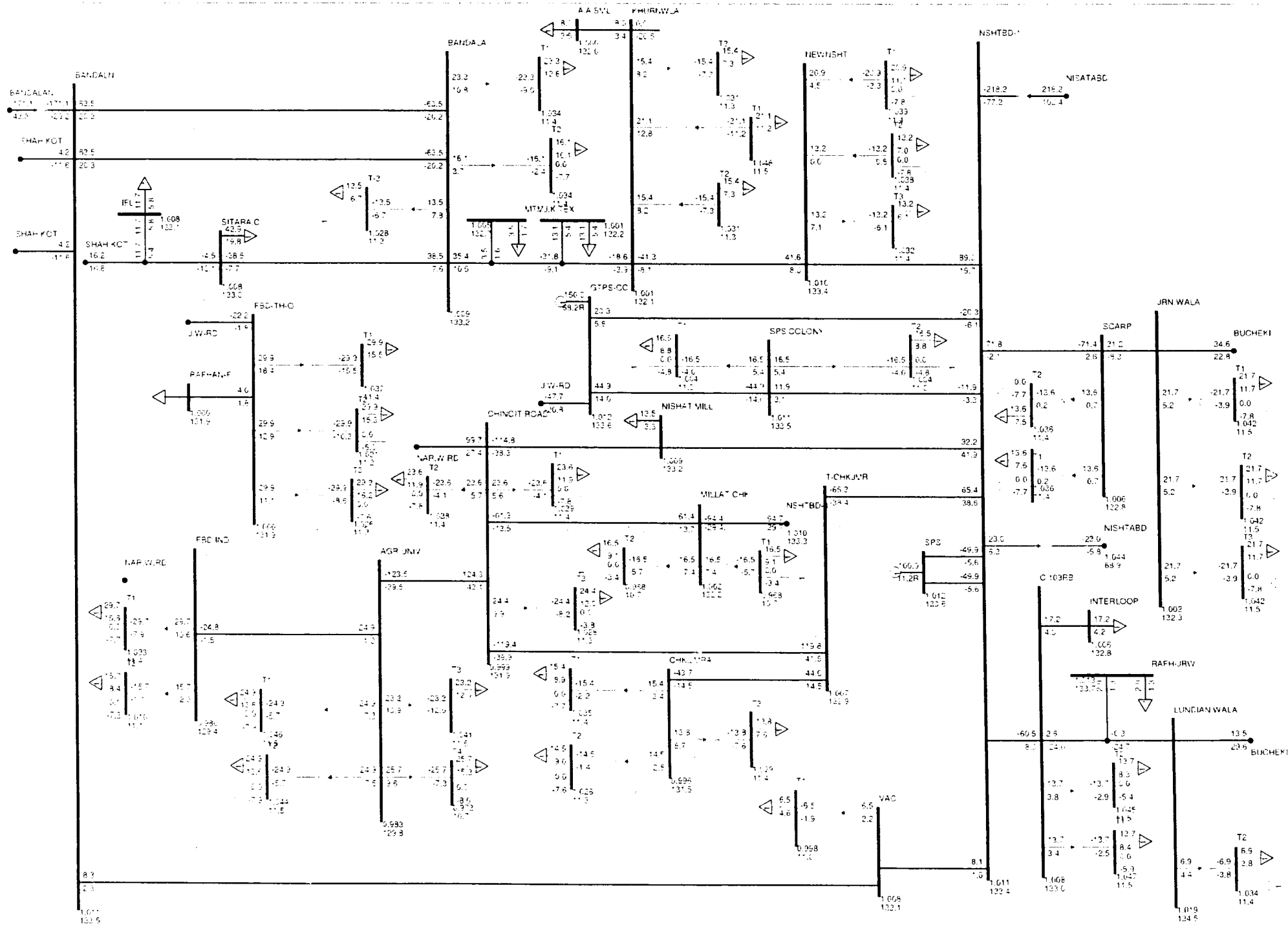


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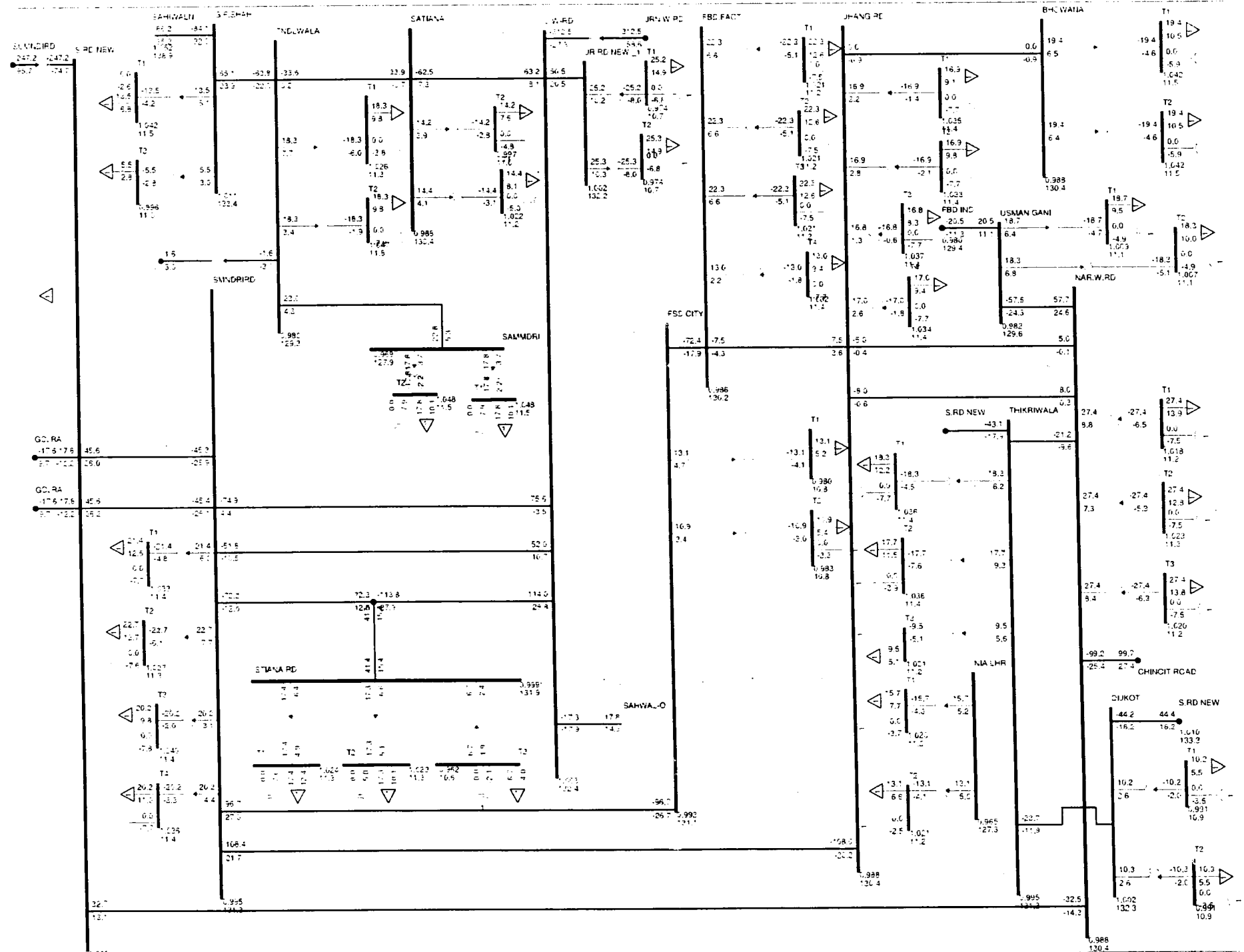
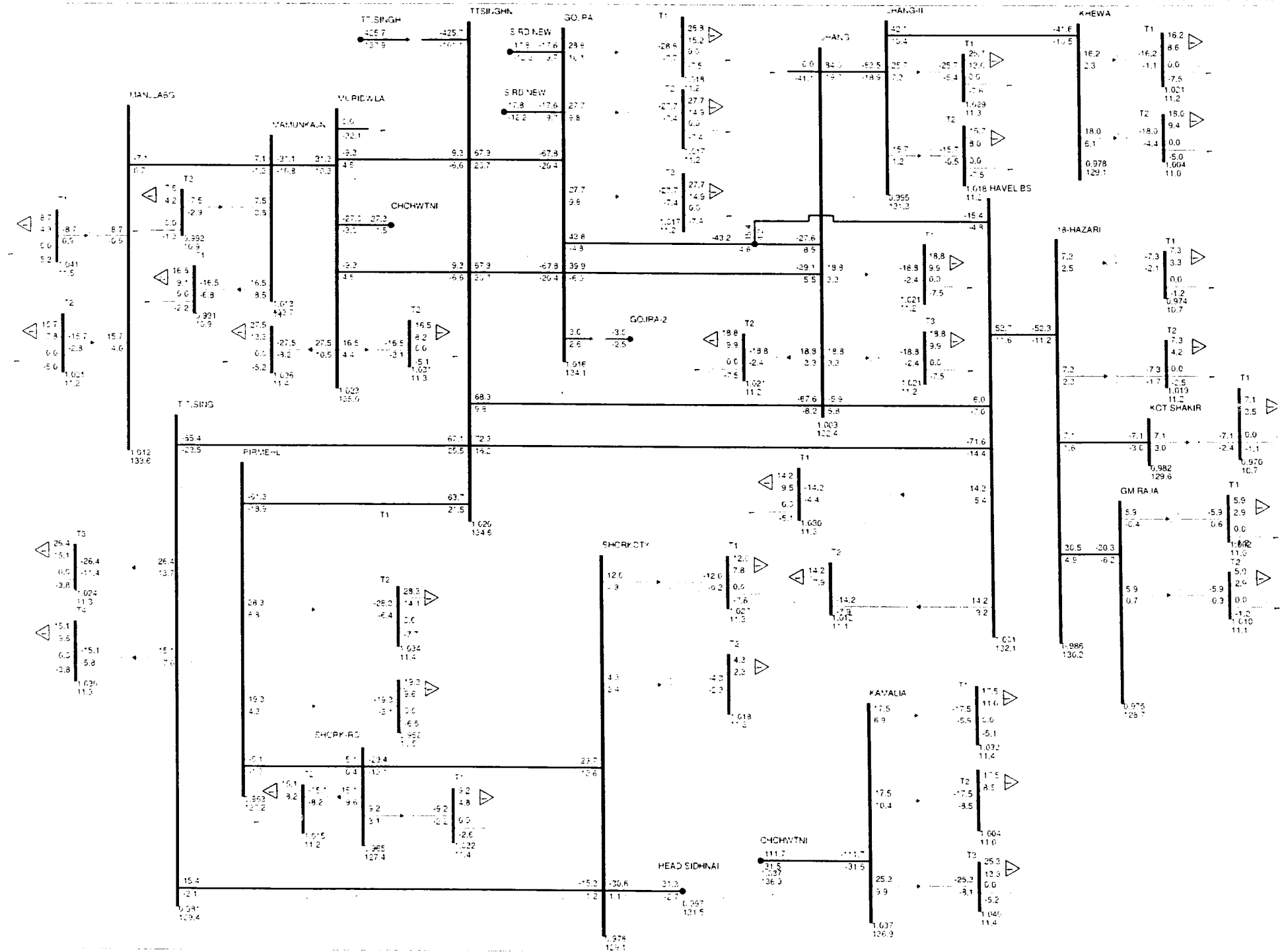


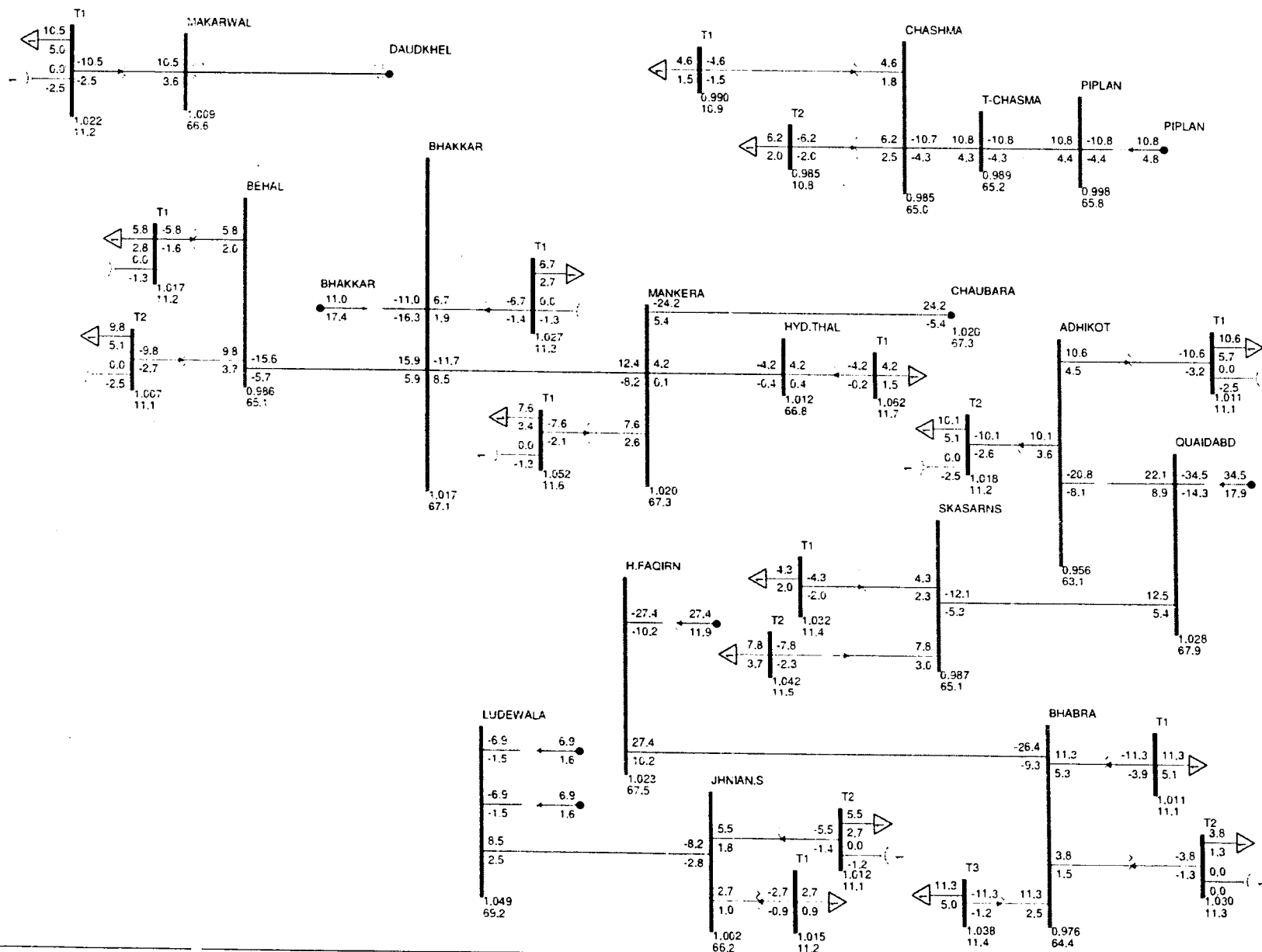
EXHIBIT-2016- 2.1



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PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

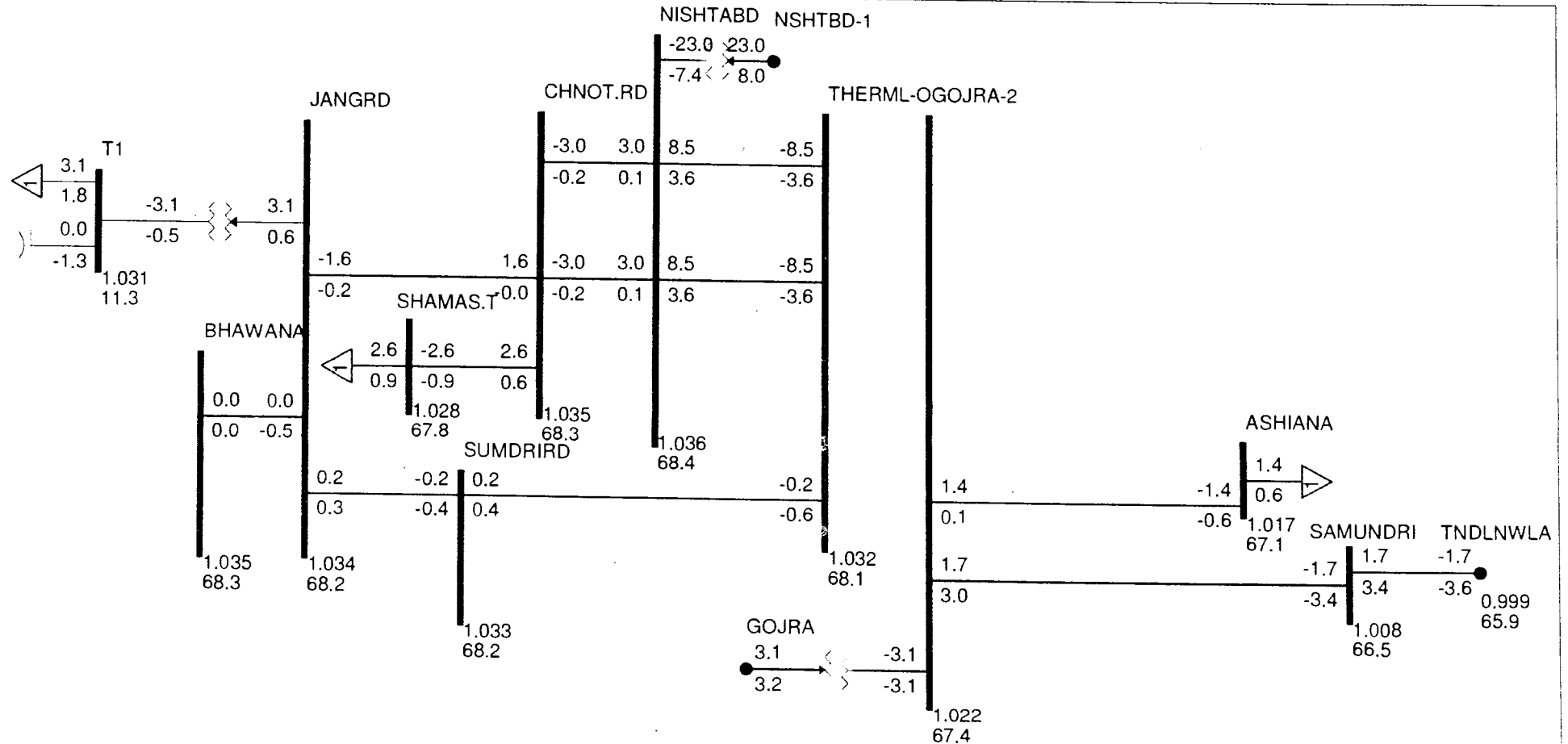
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

FESCO-YEAR 2016: WITHOUT ADDITIONAL REINFORCEMENT

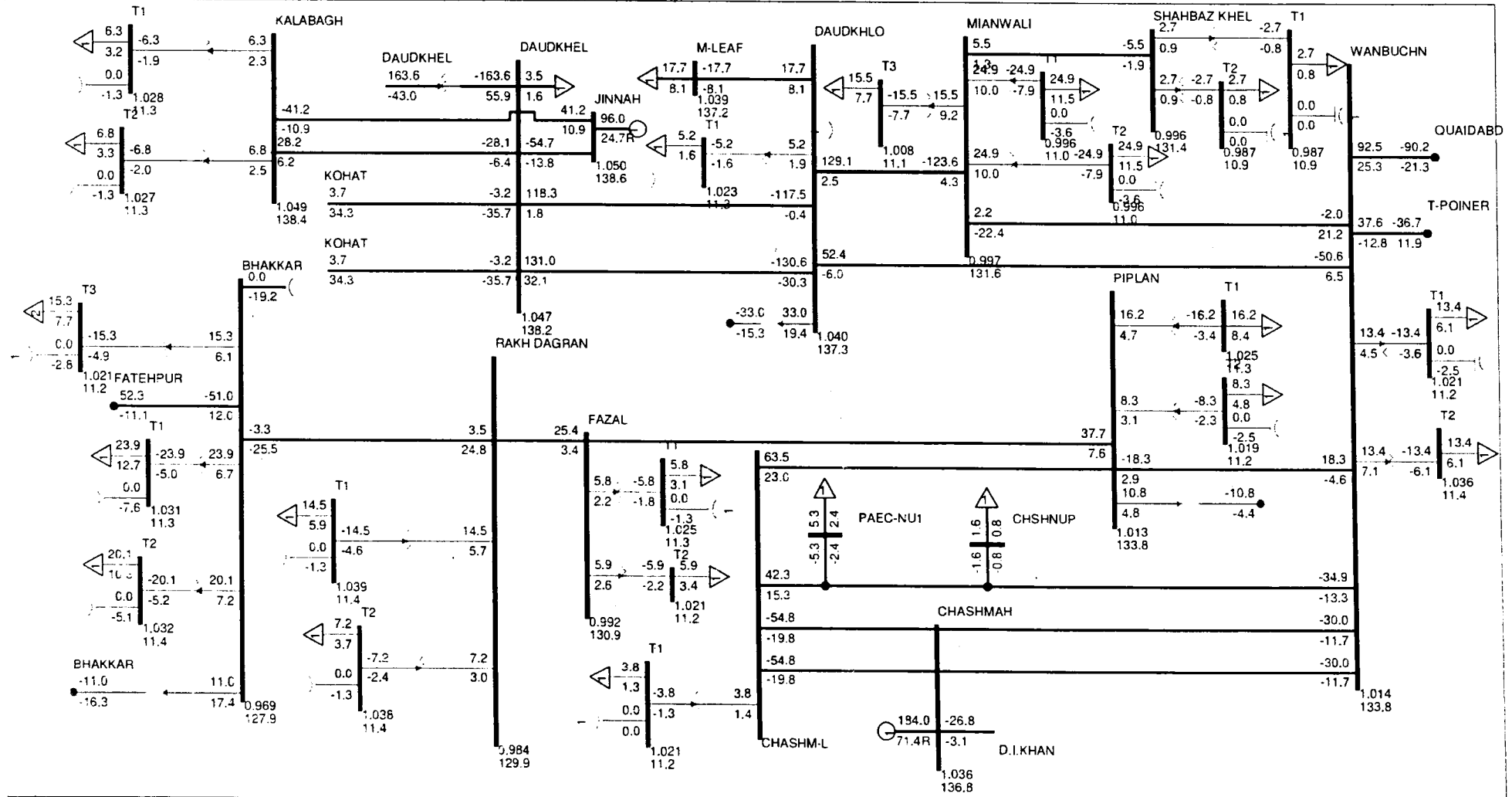
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PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

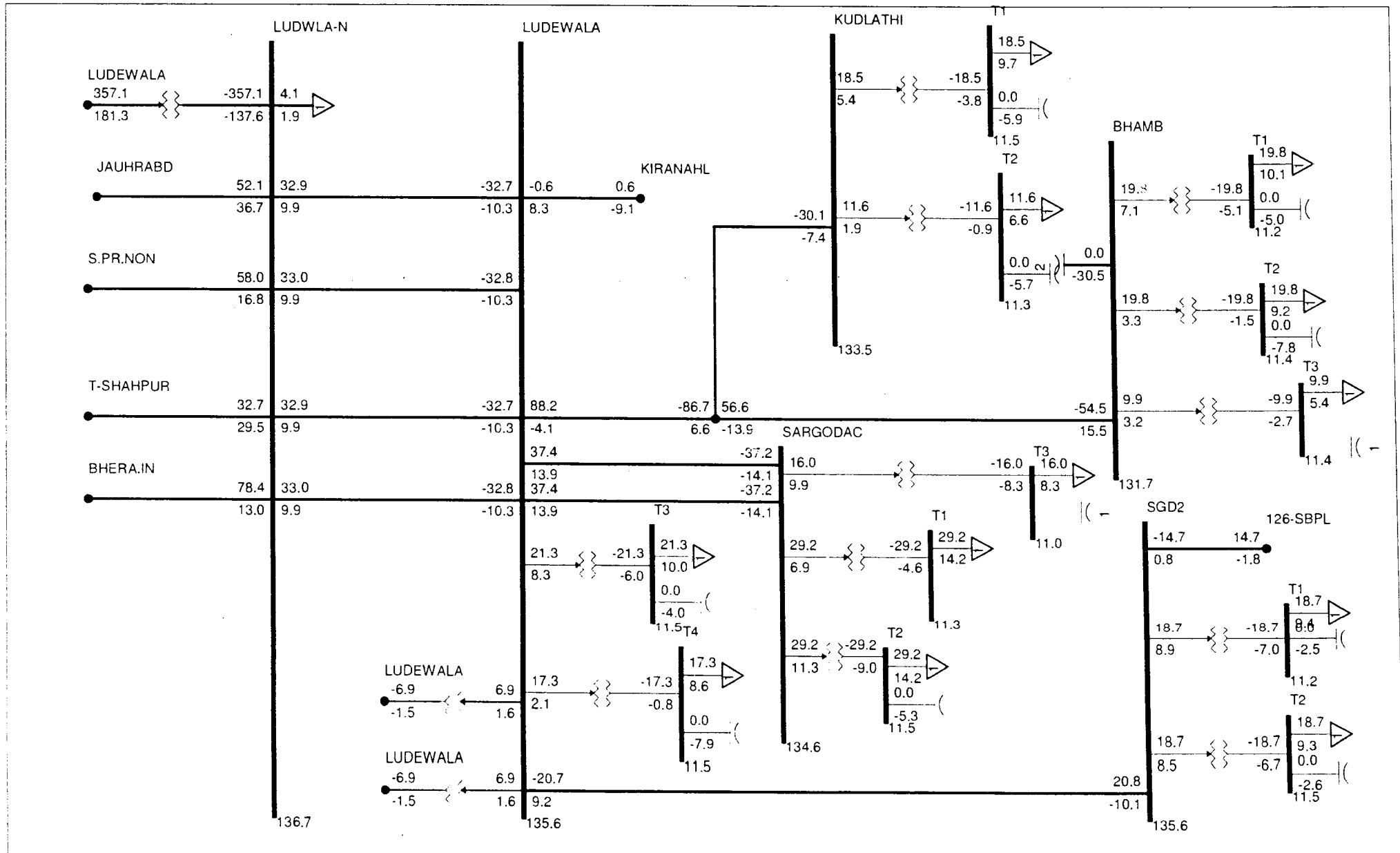
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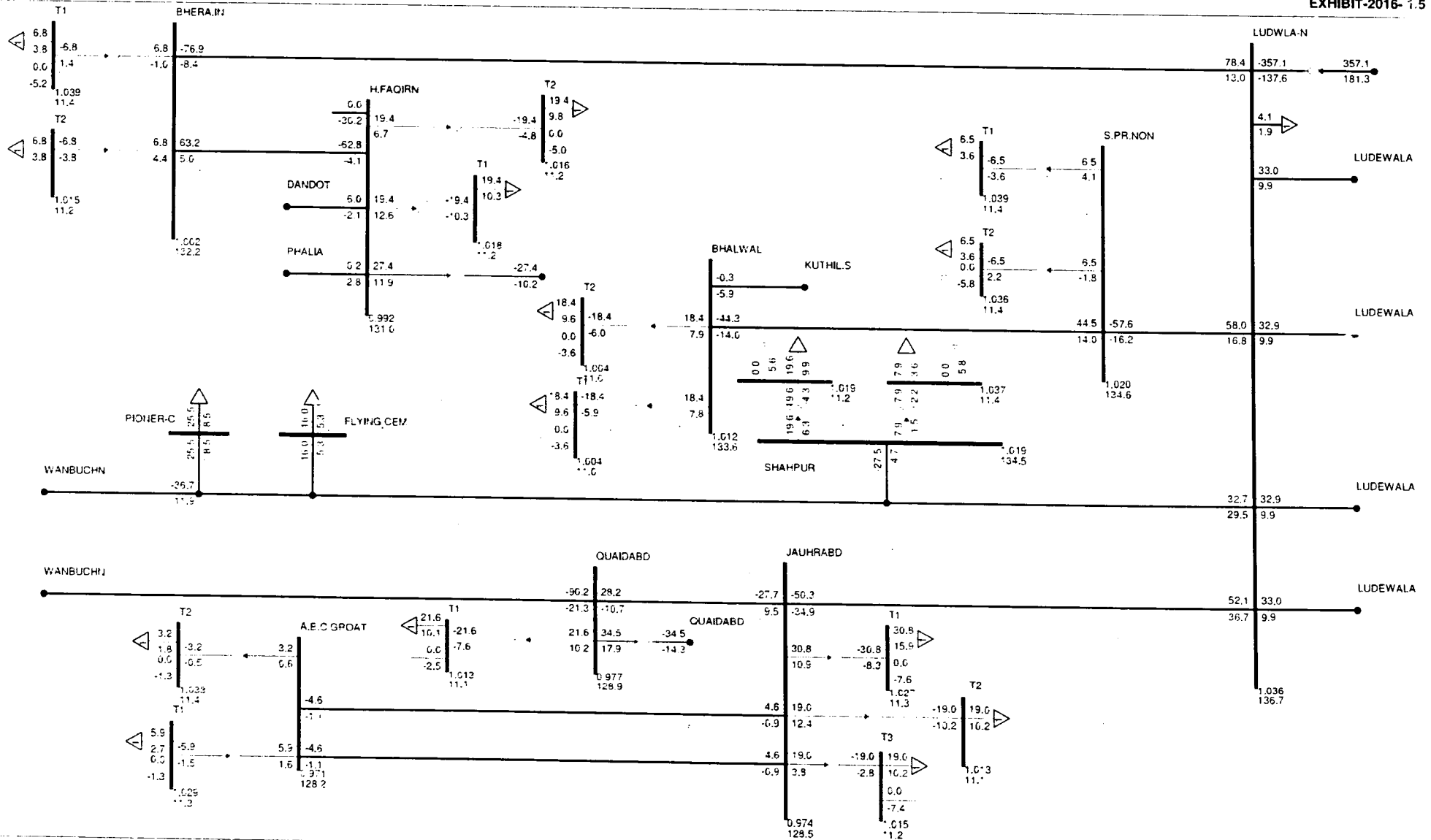
PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 1.6



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EXHIBIT-2016- 1.5



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PEAK LOAD-YEAR 2016: WITH OUT ADDITIONAL REINFORCEMENT

EXHIBIT-2016- 1.4

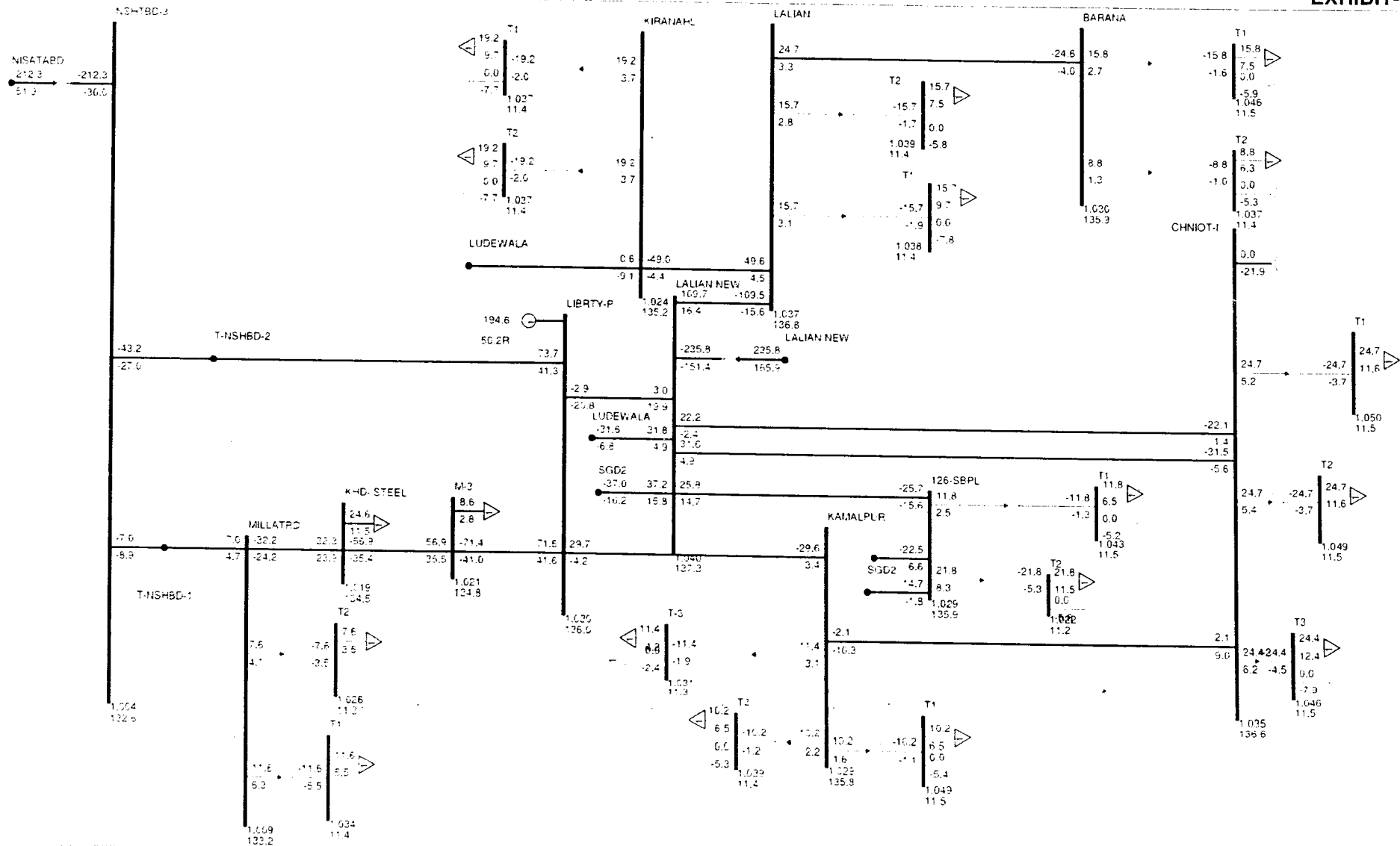


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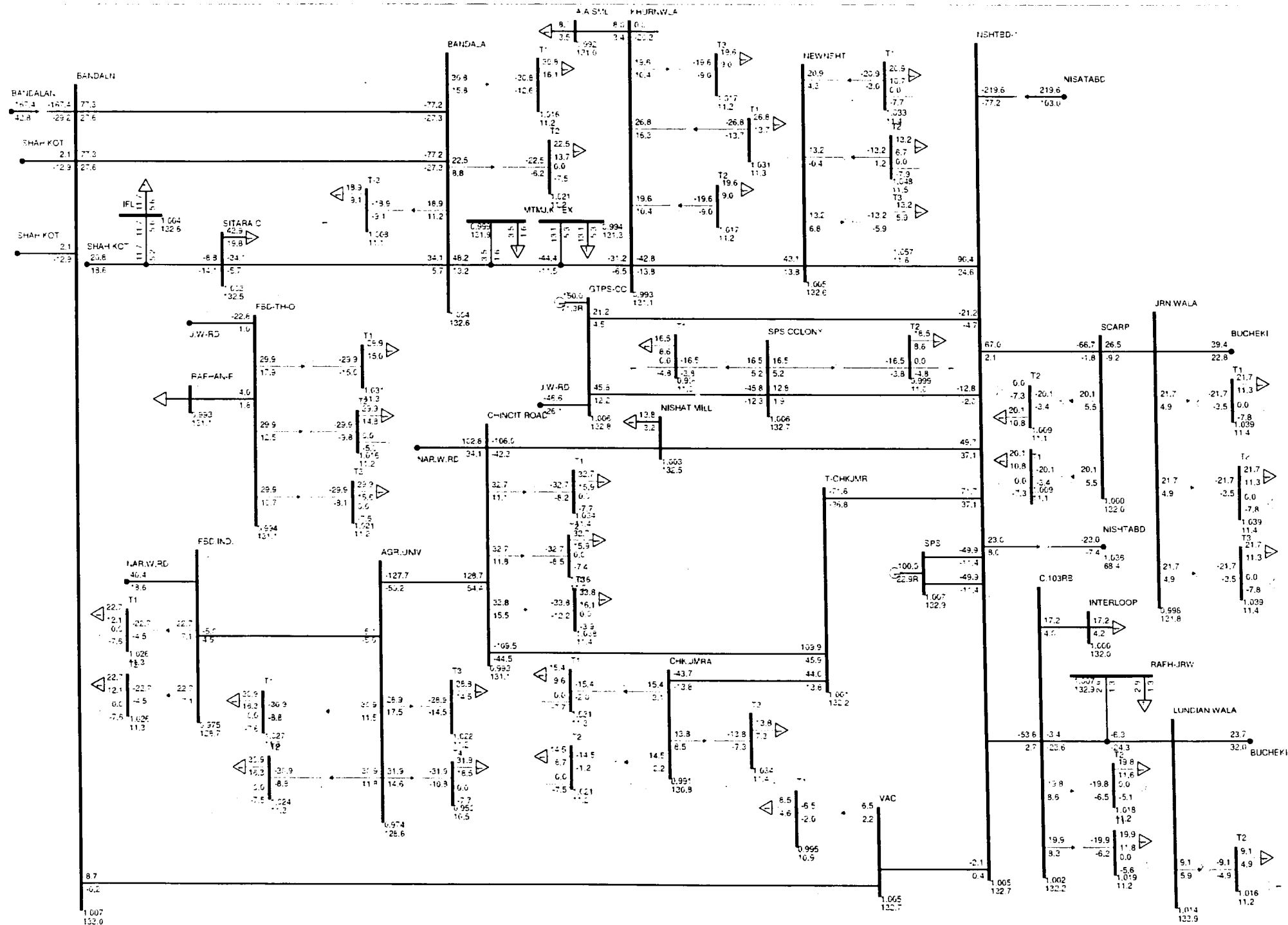
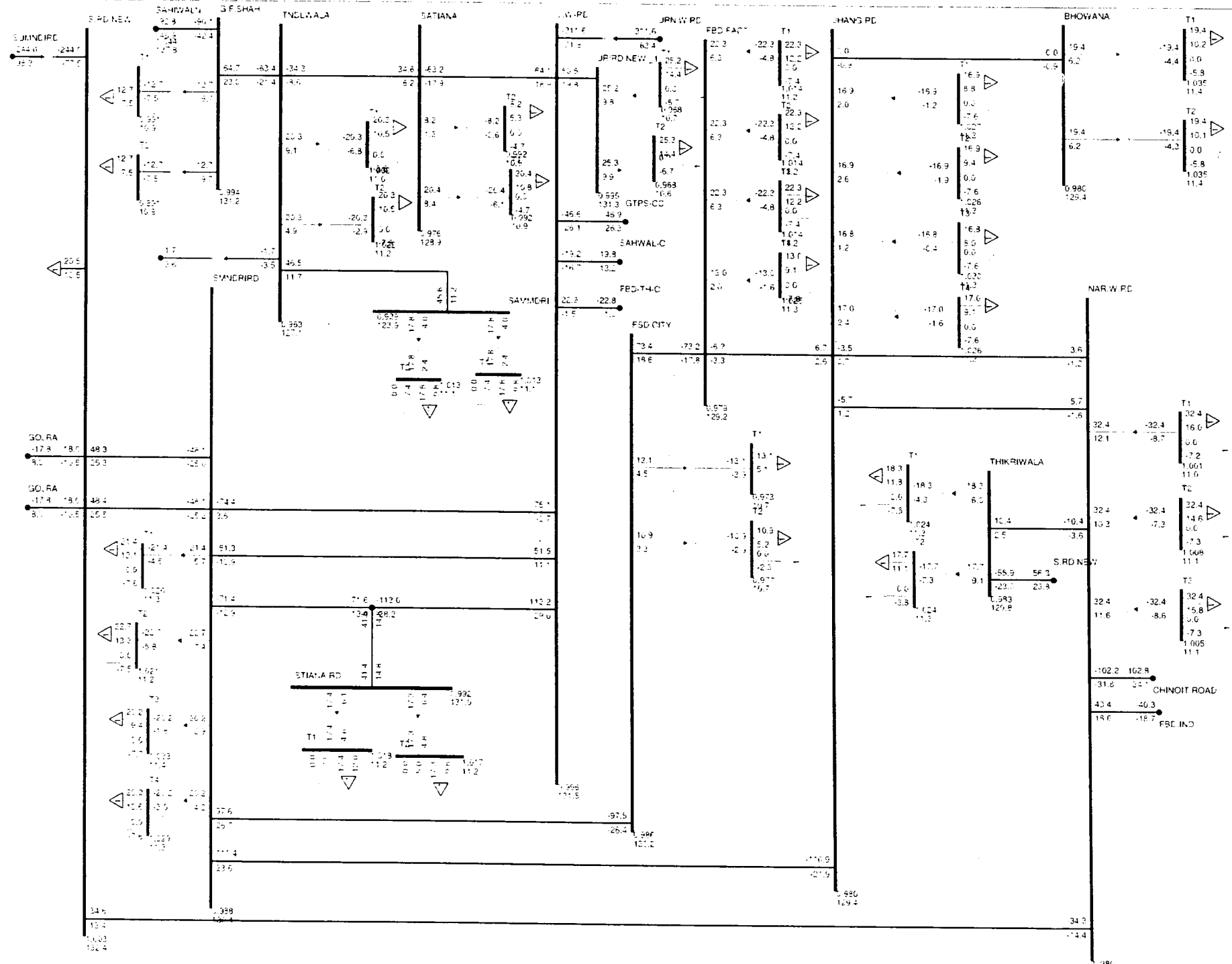
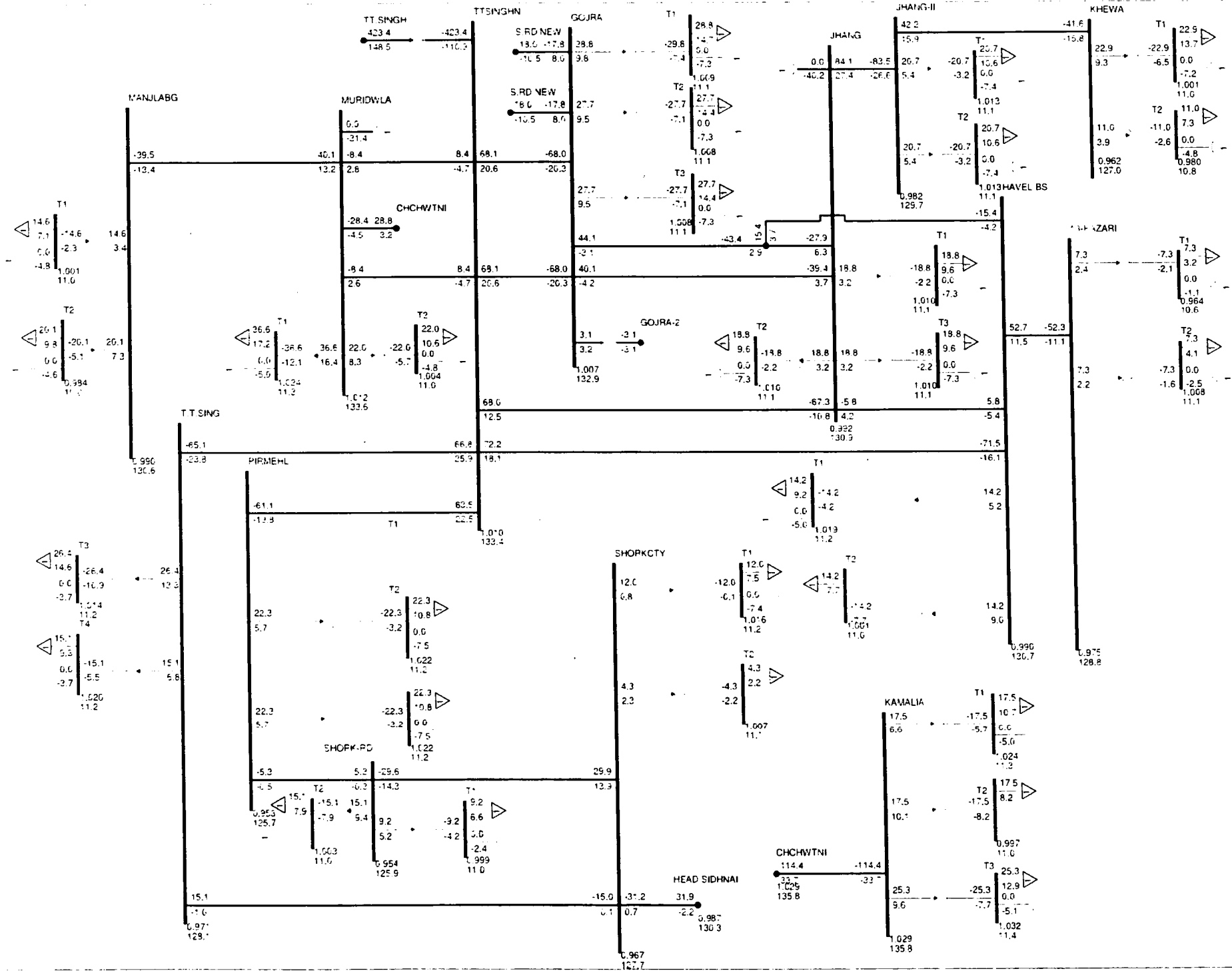


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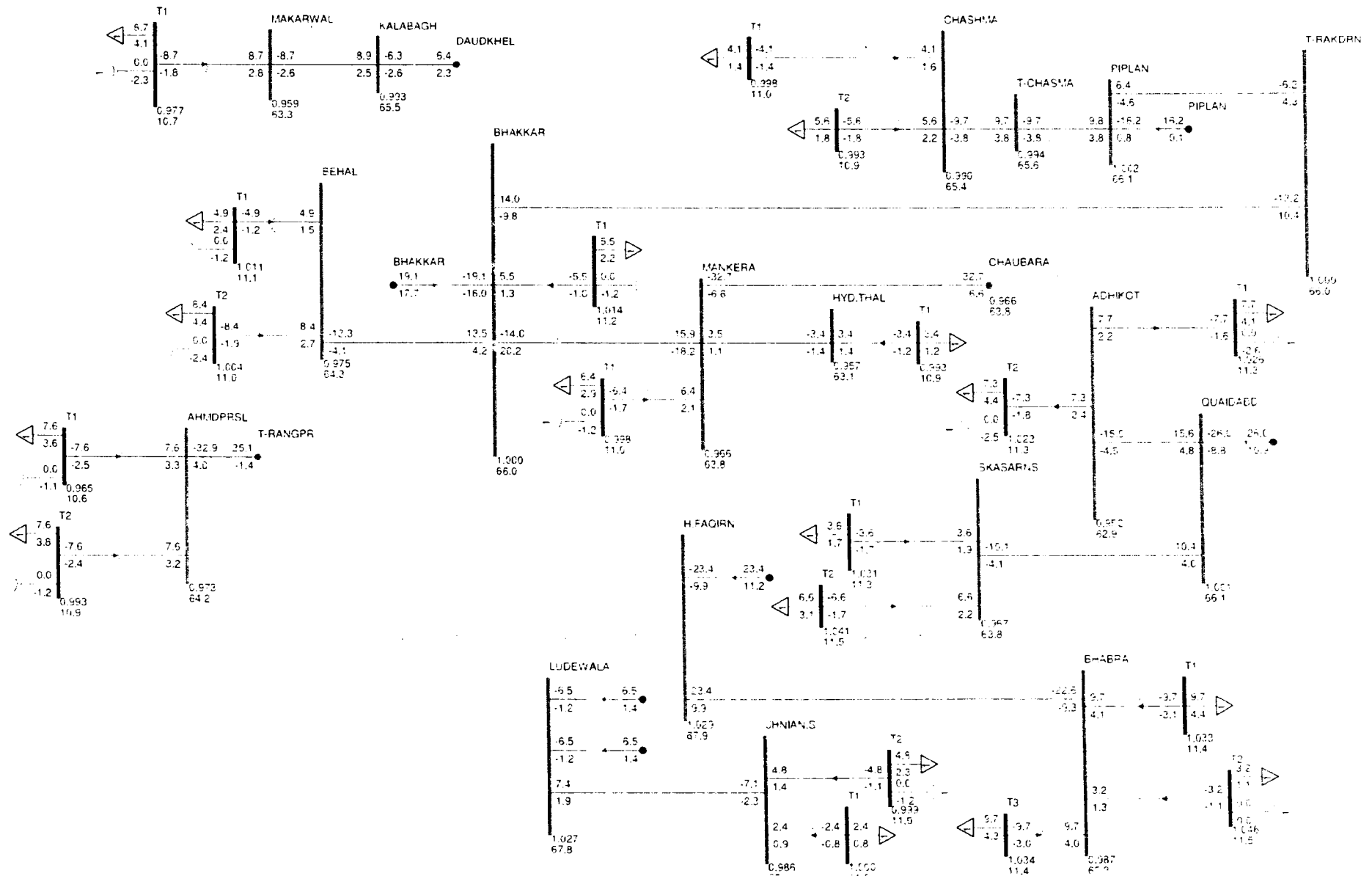
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LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

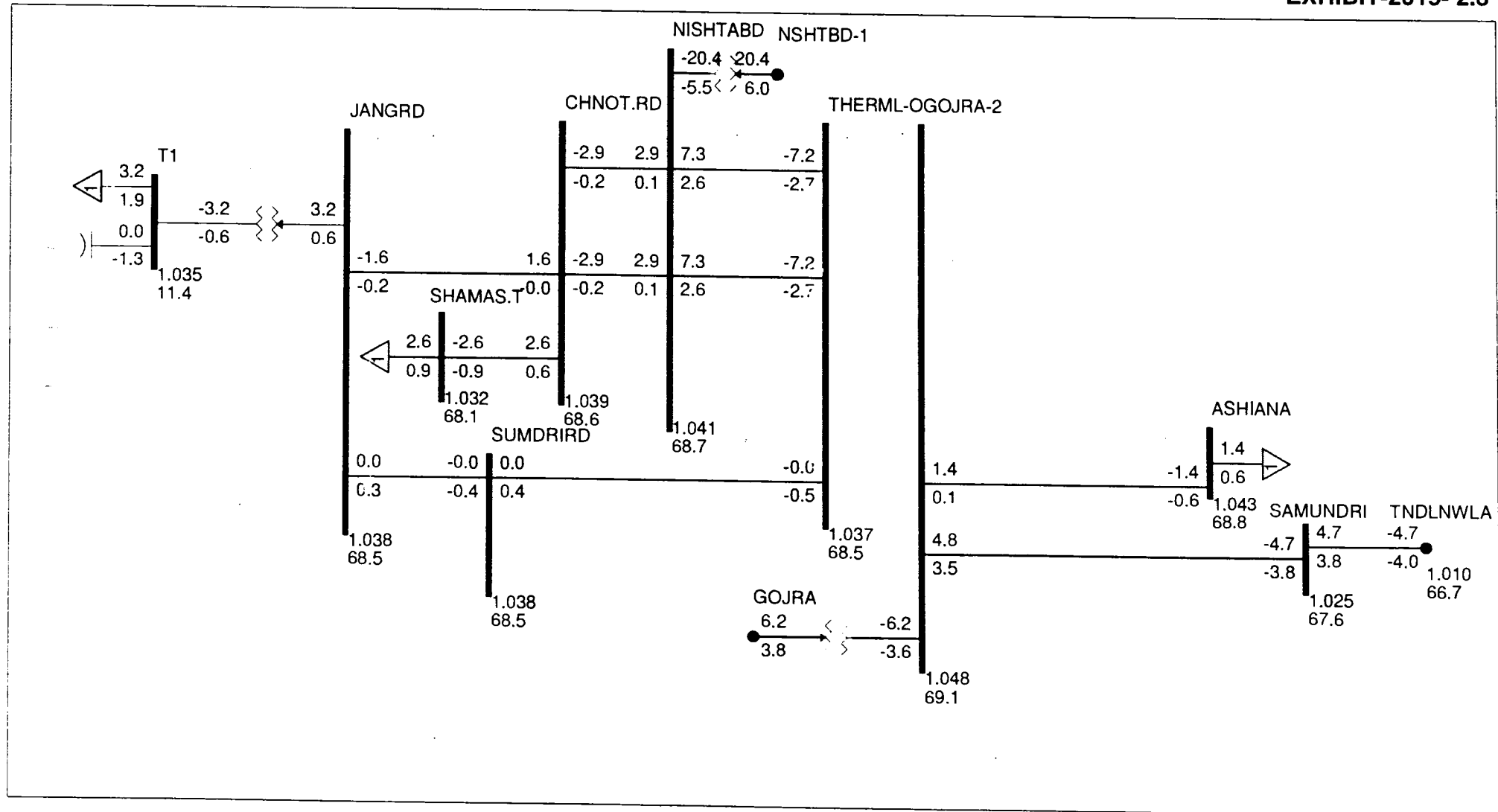
PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.9



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST) PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

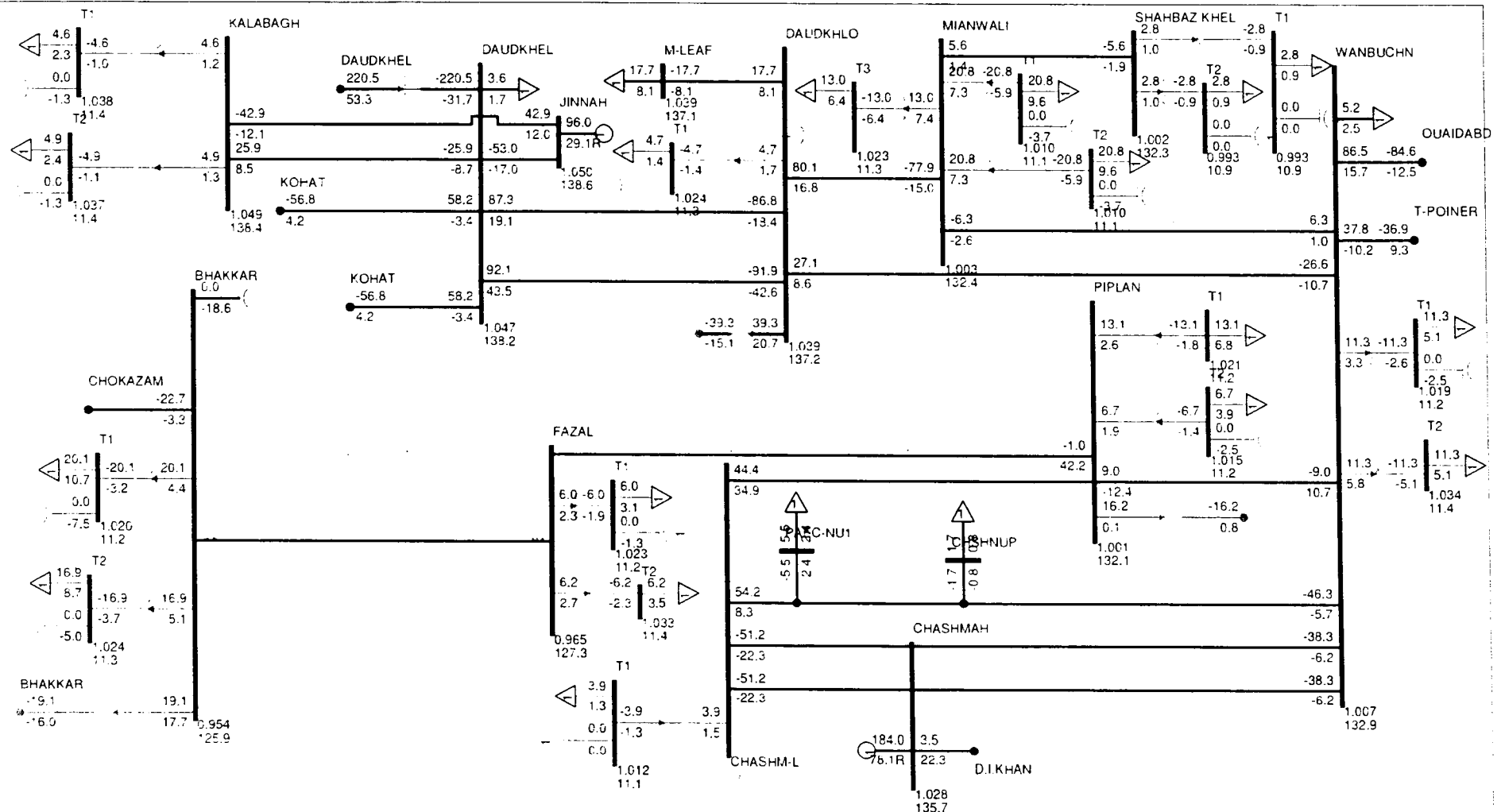
EXHIBIT-2015- 2.8



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PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.7



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PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.6

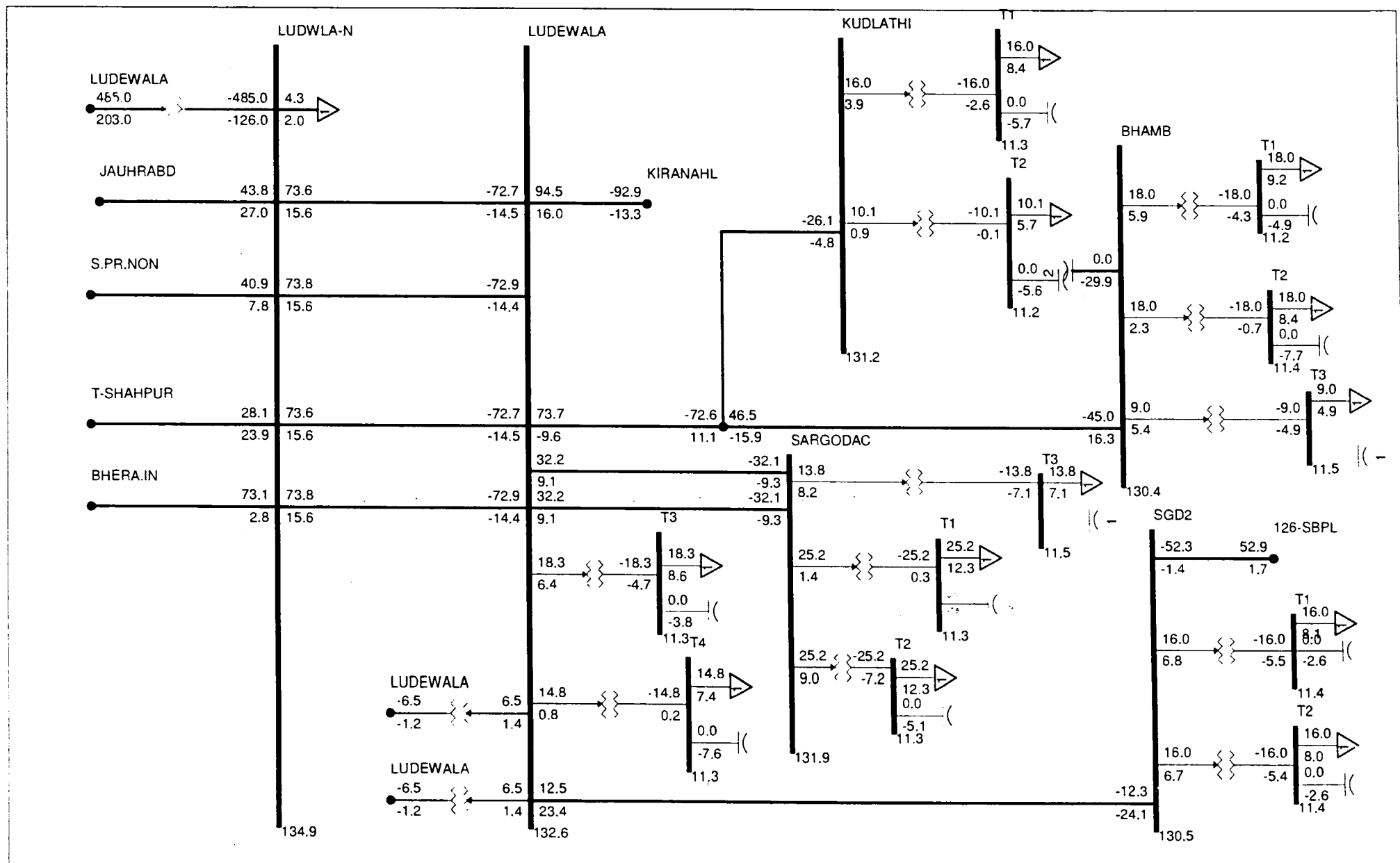
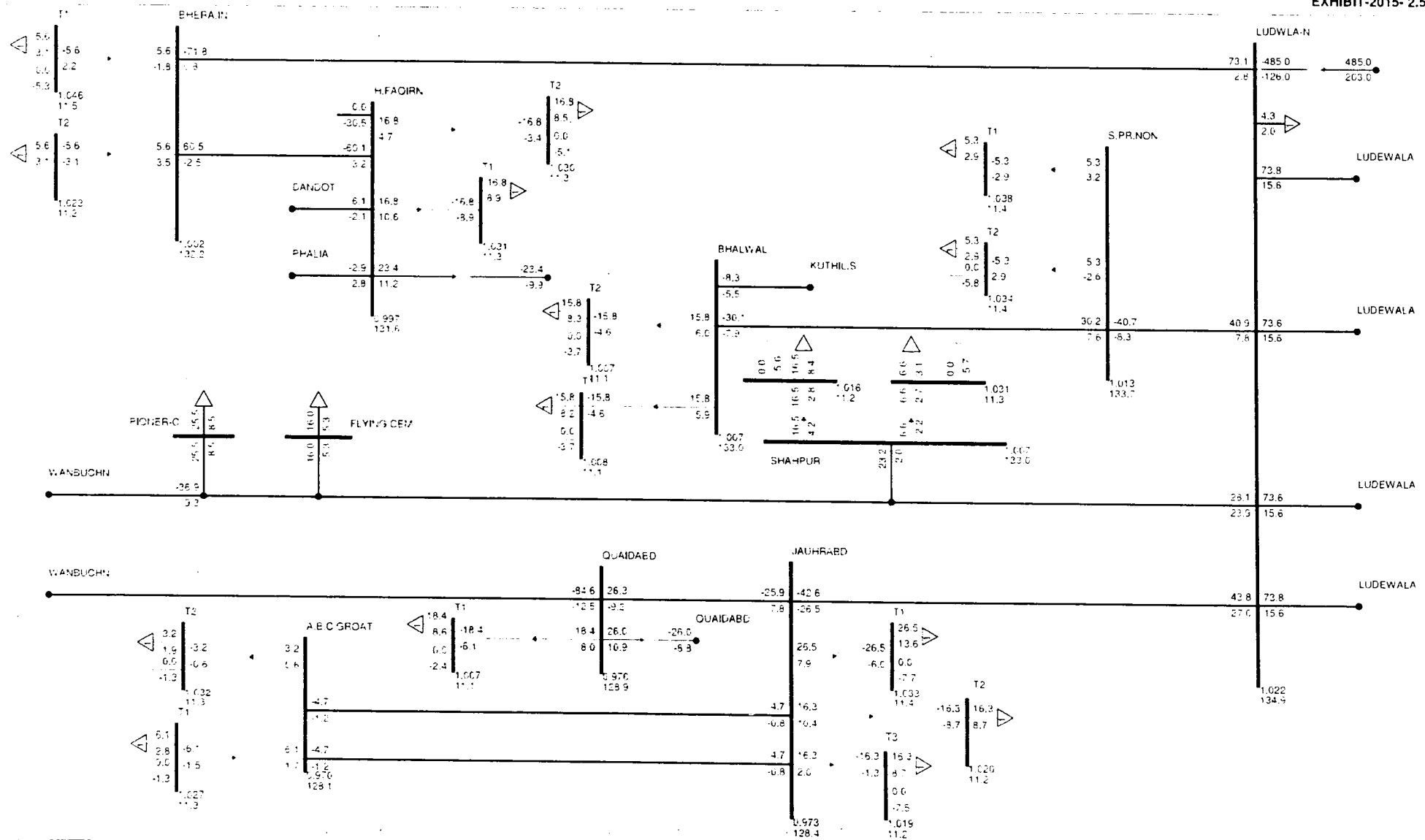


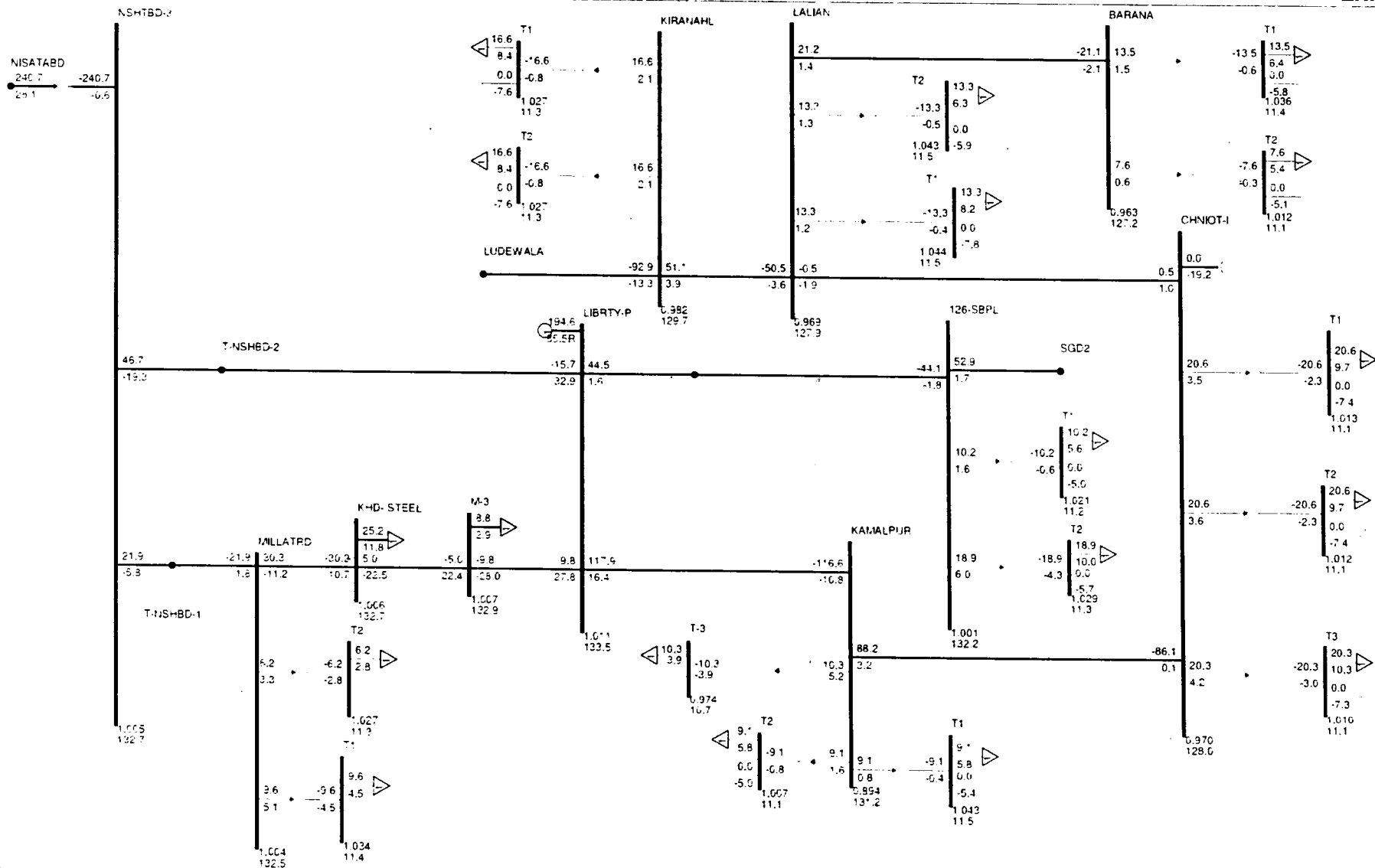
EXHIBIT-2015- 2.5



LOAD FLOW STUDY OF FESCO 7th STG PROJECT (BEST)

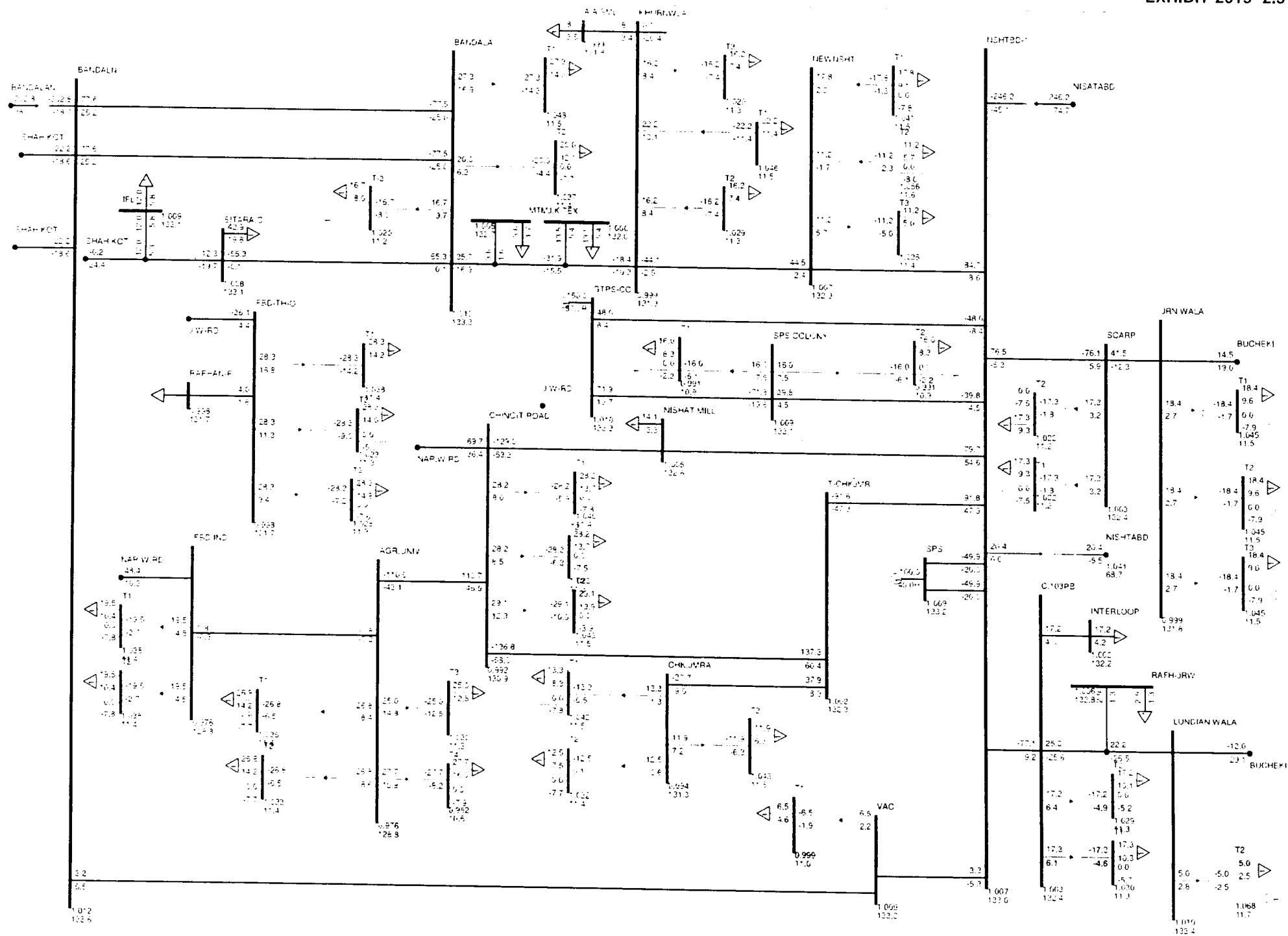
PEAK LOAD-YEAR 2015: WITH ADDITIONAL REINFORCEMENT

EXHIBIT-2015- 2.4



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EXHIBIT-2015- 2.3



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EXHIBIT-2015- 2.2

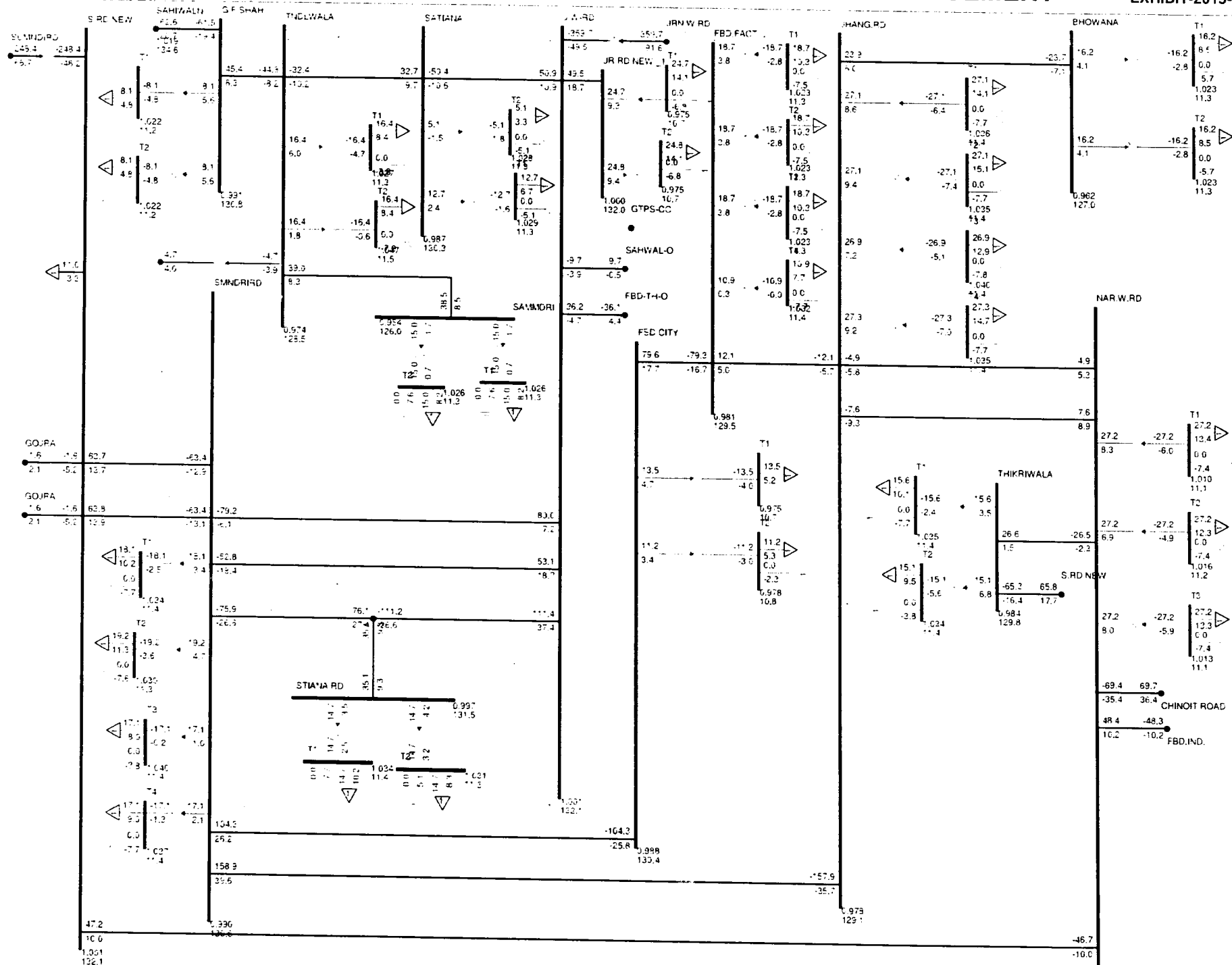
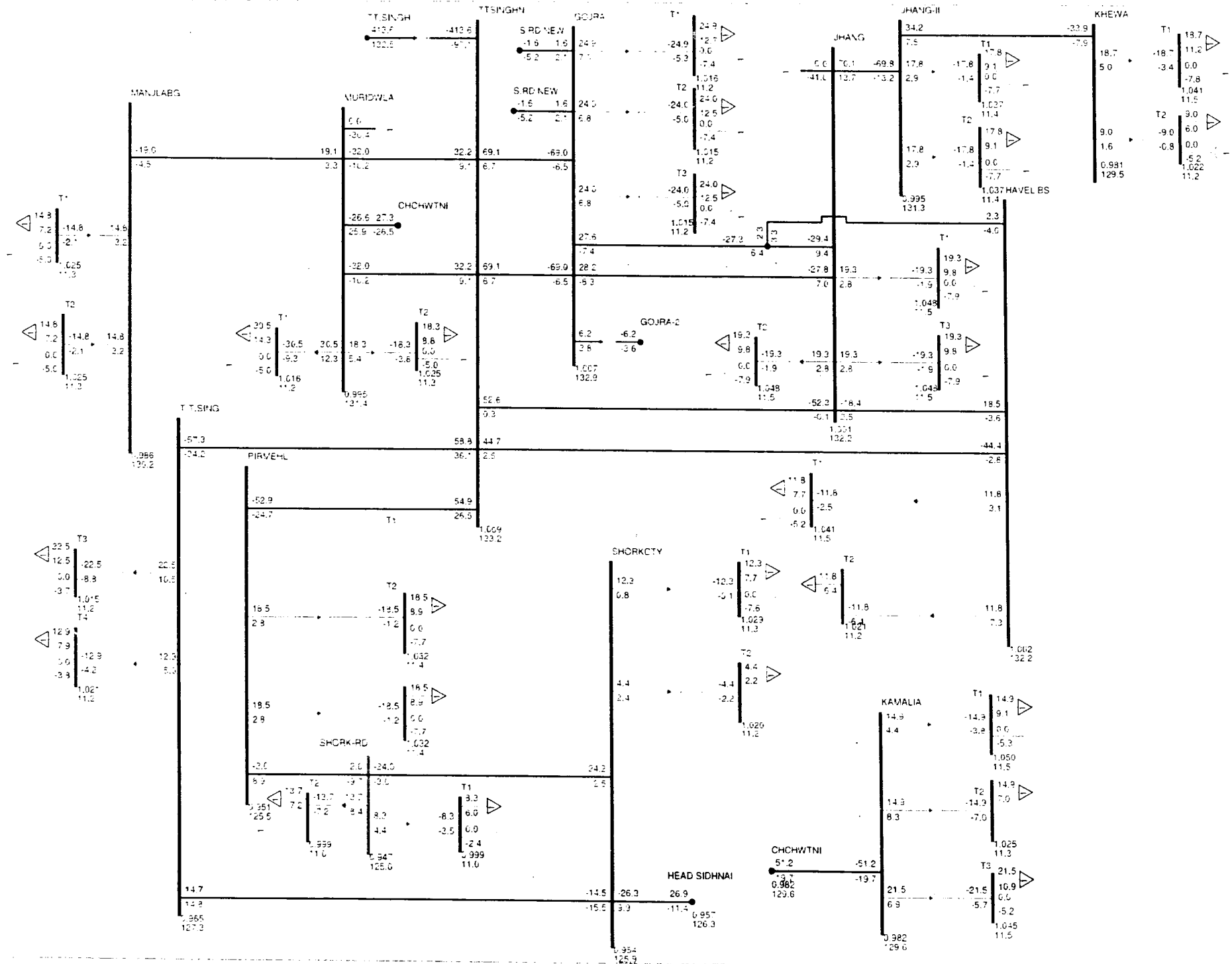


EXHIBIT-2015- 2.1



Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
21	Makarwal	T1	13 MVA	11	8.2	12.1	
		T2	13 MVA	11	8.2	12.1	
22	Bhowana	T1	26 MVA	11	10.8	12.4	Switchgear ratings of 25 kA are recommended to be used
		T2	26 MVA	11	10.8	12.4	
		T3	13 MVA	11	7.3	8.7	
23	Scarp	T1	26 MVA	11	13	14.3	
		T2	26 MVA	11	13	14.3	
24	Jaranwala	T1	40 MVA	11	19.3	21.1	
		T2	40 MVA	11	18.1	19.8	
		T3	40 MVA	11	18.1	19.8	
25	Chiniot-I	T1	40 MVA	11	19.3	20.8	
		T2	40 MVA	11	19.3	20.8	
		T3	40 MVA	11	19.3	20.8	
26	Chak 130 RB	T1	26 MVA	11	13	14.3	
		T2	26 MVA	11	13	14.3	
27	Lundianwala	T1	26 MVA	11	13	14.3	
		T2	13 MVA	11	8.3	9.5	
28	Chiot-2	T1	13 MVA	11	8.3	9.5	
		T2	13 MVA	11	8.3	9.5	
		T2	13 MVA	11	8.4	9.6	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
30	New Nishatabad	T1	40 MVA	11	20.4	21.6	Switchgear ratings of 25 kA are recommended to be used
		T2	26 MVA	11	13.7	14.9	
		T3	26 MVA	11	13.7	14.9	
31	SPS Colony	T1	26 MVA	11	13.7	14.9	
		T2	26 MVA	11	13.7	14.9	
32	Khurianwala	T1	26 MVA	11	13.2	14.5	
		T2	40 MVA	11	19.3	20.7	
		T3	26 MVA	11	13.2	14.5	
33	Millat Road	T1	26 MVA	11	12.9	14.2	
		T2	13 MVA	11	8.2	9.5	
34	Satiana	T1	26 MVA	11	12.9	14.2	
		T2	13 MVA	11	8.2	9.5	
35	Bandala	T1	40 MVA	11	19.9	21.2	
		T2	26 MVA	11	13.5	14.7	
		T3	26 MVA	11	13.5	14.7	
36	FSD Old Thermal	T1	40 MVA	11	21.2	22.6	
		T2	40 MVA	11	21.2	22.6	
		T3	40 MVA	11	21.2	22.6	
37	Chak-Jhumra	T1	26 MVA	11	12.5	13.9	
		T2	26 MVA	11	12.5	13.9	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
		T3	26 MVA	11	12.5	13.9	
		T1	40 MVA	11	19.8	21.2	
		T2	40 MVA	11	19.8	21.2	
38	Chiniot Road	T3	40 MVA	11	19.8	21.2	
		T1	26 MVA	11	13.6	14.8	Switchgear ratings of 25 kA are recommended to be used
		T2	26 MVA	11	8.5	9.7	
		T3	13 MVA	11	8.5	3.5	
		T1	40 MVA	11	20.3	21.9	
		T2	40 MVA	11	19.1	20.6	
		T3	40 MVA	11	19.1	20.6	
		T4	40 MVA	11	20.3	21.9	
		T1	40 MVA	11	20.1	20.6	
		T2	40 MVA	11	21.6	22.1	
		T3	40 MVA	11	21.6	22.1	
		T1	26 MVA	11	13.2	30.6	
		T2	26 MVA	11	13.2	30.6	
		T1	40 MVA	11	20.3	20.7	
		T2	40 MVA	11	21.8	22.3	
		T3	40 MVA	11	20.3	20.7	
		T4	40 MVA	11	20.3	20.7	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
44	Thikriwala	T1	26 MVA	11	13.2	13.5	
		T2	26 MVA	11	13.2	13.5	
		T3	26 MVA	11	13.2	13.5	
45	Factory area	T1	40 MVA	11	19.6	20.3	
		T2	40 MVA	11	19.6	20.3	
		T3	40 MVA	11	19.6	20.3	
		T4	40 MVA	11	19.6	20.3	
46	Sammundri Road	T1	40 MVA	11	22	22.5	
		T2	40 MVA	11	20.5	20.9	
		T3	40 MVA	11	20.5	20.9	
		T4	40 MVA	11	20.5	20.9	
47	FSD City	T1	40 MVA	11	20.2	20.7	
		T2	40 MVA	11	20.2	20.7	
48	Gojra	T1	40 MVA	11	21.1	21.8	Switchgear ratings of 25 kA are recommended to be used
		T2	40 MVA	11	19.8	20.4	
		T3	40 MVA	11	19.8	20.4	
49	Sammundri	T1	26 MVA	11	10.9	11.8	
		T2	26 MVA	11	10.9	11.8	
		T3	26 MVA	11	10.9	11.8	
50	T.T Singh	T3	40 MVA	11	17.2	18.5	
		T4	40 MVA	11	17.2	18.5	
		T5	26 MVA	11	12.2	12.9	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
51	H.B Shah	T1	26 MVA	11	12.7	13.2	
		T2	26 MVA	11	12.7	13.2	
52	PirMahal	T1	26 MVA	11	11.8	12.5	
		T2	26 MVA	11	11.8	12.5	
		T3	26 MVA	11	7.8	8.1	
53	18-Hazari	T1	26 MVA	11	11.1	12.0	
		T2	26 MVA	11	7.5	7.9	
54	G.M Raja	T1	26 MVA	11	9.3	10.6	Switchgear ratings of 25 kA are recommended to be used
		T2	13 MVA	11	6.6	7.2	
55	A.P Sial	T1	13 MVA	11	6.1	6.8	
		T2	13 MVA	11	6.1	6.8	
56	Hyd. Thal	T1	13 MVA	11	6.7	10.1	
57	Mankera	T1	13 MVA	11	6.2	9.3	
		T2	13 MVA	11	6.2	9.3	
58	Jhang City	T1	40 MVA	11	19.6	20.7	
		T2	40 MVA	11	19.5	20.7	
		T3	40 MVA	11	19.6	20.7	
59	Jhang 2	T1	26 MVA	11	12.4	13	
		T2	26 MVA	11	12.4	13	
60	Shorkot road	T1	26 MVA	11	7.7	8.1	
61	Khewa	T1	26MV A	11	11	12	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
		T2	26 MVA	11	11	12	
		T3	13 MVA	11	7.5	7.9	
62	Tandlianwala	T1	26 MVA	11	12.8	13.3	
		T2	26 MVA	11	12.8	13.3	
		T3	26 MVA	11	12.8	13.3	
63	GF shah	T1	26 MVA	11	12.6	13.1	
		T2	13 MVA	11	8.1	8.4	
64	Manjla Bagh	T1	26 MVA	11	11.0	12	
		T2	26 MVA	11	11.0	12	
		T3	13 MVA	11	7.5	7.9	
65	Muridwala	T1	40 MVA	11	18.7	19.4	
		T2	26 MVA	11	12.8	13.3	
66	Kamalia	T1	40 MVA	11	16.8	18.6	
		T2	40 MVA	11	15.9	17.5	
		T3	26 MVA	11	11.6	12.4	
67	Kamal pur	T1	26 MVA	11	13	13.4	
		T2	13 MVA	11	8.3	8.5	
68	Daud khail old	T1	13 MVA	11	8.4	9	
		T2	26 MVA	11	13.3	13.8	
69	Kala Bagh	T1	13 MVA	11	8.4	8.5	

Switchgear ratings of 25 kA are recommended to be used

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
		T2	13 MVA	11	8.4	8.5	
70	Mianwali	T1	40 MVA	11	17.9	19	
		T2	40 MVA	11	17.9	19	
		T3	26 MVA	11	12.6	13.1	
71	Shahbazkhail	T1	13 MVA	11	7.8	8.2	
		T2	13 MVA	11	7.8	8.2	
72	Wan Buchran	T1	26 MVA	11	13.1	135	
		T2	26 MVA	11	13.1	135	
73	Chashma L	T1	13 MVA	11	8.3	8.4	
74	Piplan	T1	26 MVA	11	12.5	13	
		T2	13 MVA	11	8.0	8.3	
		T3	13 MVA	11	8	8.3	
75	Fazal	T1	13 MVA	11	7.6	8	Switchgear ratings of 25 kA are recommended to be used
		T2	13 MVA	11	7.6	8	
76	Rakh Dargan	T1	26 MVA	11	11.3	12.1	
		T2	13 MVA	11	7.6	8	
77	Jauharabad	T1	40 MVA	11	20.6	21.4	
		T2	40 MVA	11	19.3	20	
		T3	26 MVA	11	13.3	13.6	
78	Shahpur	T1	26 MVA	11	12.4	10	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
		T2	26 MVA	11	12.4	13	
79	Quaidabad	T1	26 MVA	11	12.4	12.4	Switchgear ratings of 25 kA are recommended to be used
		T2	13 MVA	11	8	8.3	
		T1	26 MVA	11	13.5	13.8	
80	Ludewala	T2	26 MVA	11	13.5	13.8	
		T1	26 MVA	11	12.8	13.3	
81	Kirana hill	T2	26 MVA	11	12.8	13.3	
		T3	26 MVA	11	12.8	13.3	
		T1	26 MVA	11	12.1	12.8	
82	Kud Lathi	T2	16 MVA	11	9.0	9.8	
		T1	26 MVA	11	9.3	10.6	
83	Bhamb	T2	26 MVA	11	9.3	10.6	
		T3	26 MVA	11	6.6	7.3	
		T1	40 MVA	11	19.5	20.7	
84	SRG City	T2	40 MVA	11	19.5	20.7	
		T3	26 MVA	11	12.8	13.3	
85	SRG II	T1	26 MVA	11	13.2	13.6	
		T2	26 MVA	11	13.2	13.6	
86	126SB	T1	13 MVA	11	8.2	8.4	
		T2	26 MVA	11	12.7	13.3	
87	S.P. Noon	T1	16 MVA	11	8.3	8.5	
		T2	16 MVA	11	9.5	9.1	
88	Bhalwal	T1	40 MVA	11	16.6	18.0	

Sr. No.	Name of Substation	Power Transformer		Bus Voltage (kV)	Short Circuit Level (kA)		Proposed Rating of Switchgear
		Code	Rating		3-phase	1-phase	
		T2	26 MVA		11	11.9	
		T3	26 MVA	11	11.9	12.6	
89	Bhera Ind.	T1	13 MVA	11	7.6	8	
		T2	13 MVA	11	7.6	8	
90	Head Faqirian	T1	26 MVA	11	11.2	12.1	
		T2	26 MVA	11	11.2	12.1	
		T3	13 MVA	11	7.5	8	
91	Lalian	T1	26 MVA	11	13.5	13.8	
		T2	26 MVA	11	13.5	13.8	
		T3	13 MVA	11	8.5	8.6	
92	Barana	T1	26 MVA	11	12.2	12.9	
		T2	26 MVA	11	12.2	12.9	
93	Shorkot city	T1	26 MVA	11	12.2	12.9	
		T2	26 MVA	11	12.2	12.9	
94	Bhakkar	T1	40 MVA	11	16.1	17.6	Switchgear ratings of 25 kA are recommended tobe used
		T2	26 MVA	11	11.6	12.5	
		T3	26 MVA	11	11.7	12.5	

Annex-F

LIST OF STG SUBPROJECTS

(BEST CASE)

PROPOSED SUB PROJECTS UNDER TRANSMISSION EXPANSION PLAN FOR YEAR (2016-17)

Sr.N o.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA						
1	Usman Gani	N	132		2		2	1	2		2X7.2	
2	Bandala-II (Rasool Pura)	N	132	2			2	1	2		2X9.6	
3	Mamu Kanjan	N	132		1	1	2	1	2		1x7.2 1x3.6	
4	Dijkot	N	132		2		2	1	2		2X7.2	
5	Millat Chowk	N	132		2		2	1	2		2X7.2	
6	Trug	C	132		1	1	2	1	2		1x7.2 1x3.6	
7	Bhabhra	C	132		1	1	2	1	2		1x7.2 1x3.6	
8	Behal	C	132		1	1	2	1	2		1x7.2 1x3.6	
9	Chak-103/RB	E	132		1		1				7.2	
10	Khanuana	E	132			1	1				3.6	
11	Quaidabad	E	132			1	1				3.6	
12	Scarp Colony	E	132		1		1				7.2	
13	Makarwal	E	66			1	F/Bay				3.6	
14	Chiniot Ind.	E	132						2			For 220 KV Lalian
15	Barana	E	132						1			2nd cct Lalian
16	Lalian	E	132						1			2nd cct Barana
17	Sammundri	E	132						1			2nd cct Tandlianwala

Sr.N o.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA						
18	Tandlianwala	E	132						1			2nd cct Sammundri
19	Bhakkar	E	132						1			2nd cct Piplan
20	Piplan	E	132						1			2nd cct Bhakkar
21	Ludewala	E	132						2			For 220 KV Lalian
22	Head Faqirian	A	132	1							2.4	
23	Sargodha City	A	132	1							2.4	
24	Sargodha-II	A	32	1							2.4	
25	Small Industrial Estate	A	32	1							2.4	
26	Pir Mahal	A	132	1							2.4	
27	Jhang-II	A	132	1							2.4	
28	Piplan	A	132		1						2.4	
29	Shahpur	A	132		1						2.4	
30	Satiana	A	132		1						2.4	
31	Kud Lathi	A	132		1						2.4	
32	Garh Fatah Shah	A	132		1						2.4	
33	Chashma	A	66			1					2.4	
34	Noshera	A	66			1					2.4	
35	Mankera	A	66		18.8							
36	Hyderabad Thal	A	66		13							

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2017-18)

Sr.No.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	132 KV Caps (MVAR)	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA							
1	Awagat	N	132		2		2	1	2			2X7.2	
2	College Rd. FSD	N	132		2		2	1	2			2X7.2	
3	Silanwali Rd. Sargodha-IV	N	132		1	1	2	1	2			1x7.2 1x3.6	
4	Chak-208/RB	N	132		2		2	1	6			2X7.2	
5	Adhi Kot	C	132		1	1	2	1	2			1x7.2 1x3.6	
6	Chak-126/SB	E	132		1		1					7.2	
7	Pathan Kot	E	132		1		1					7.2	
8	Shor Kot Rd.	E	132						2				Conv. Of T-off to In & out
9	Kala Bagh	E	132						1				2nd cct F/F Trug
10	Jhang-11	E	132						2				Conv. Of T-off to In & out
11	Quaidabad	E	132						2				For F/F Adhi Kot & Q/Abad
12	Jauharabad	A	132	1								2.4	
13	Bandala	A	132	1								2.4	
14	Bhowana	A	132		1							2.4	
15	Bhabhra	A	132		1							2.4	
16	Rakh Dagan	R	132								36		

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2018-19)

[illegible]

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2019-20)

[illegible]

Sr.N o.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	132 KV Caps (MVAR)	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA							
21	Indust. Estate	A	132	1								2.4	
22	Muridwala	A	132	1								2.4	
23	Bhalwal	A	132	1								2.4	
24	Mamu Kanjan	A	132		1							2.4	
25	Quaidabad	A	132		1							2.4	
26	Trug	A	132		1							2.4	

PROPOSED TRANSMISSION LINES UNDER 7TH STG PROJECT

Sr. No.	Name of Transmission Lines	Type	Voltage (kV)	Length (Km)	Circuit	Conductor	Remarks
YEAR 2015-16							
1	Chiniot Ind.-220 KV Lalian (In & out F/F Chenab Nagar)	New	132	5	D C	Rail	
2	18-Hazari-Kot Shakir (F/F Kot Shakir)	New	132	31	SDT	Lynx	6th STG Spill Over
3	220 KV Jaranwala Rd-Sammundri Rd. (In & out F/F Jaranwala Rd. New)	New	132	2	D C	Rail	
4	Nishatabad-GTPS (In & out F/F SPS colony)	New	132	1	D/C	Greely	
5	Piplan Bhakkar (In & out F/F Fazil)	New	132	3	D C	Lynx	6th STG Spill Over
6	Sargodha-II-Pathan Kot (F/F Pathan Kot)	New	132	25	D C	Lynx	6th STG Spill Over
7	Thekriwal-Narwala Rd. (In & out F/F Nia Lahore)	New	132	22	D C	Rail	
8	Sammundri Rd-Factory Area (In & Out F/F FSD City)	New	132	03	D C	Rail	
9	Mianwali-Daud Khel (In & out F/F Shahbaz Khel)	New	132	08	D C	Lynx	
10	Chichawatni-Muridwala (In & Out at Kamalia)	New	132	0.5	D C	Lynx	
11	Jhang Rd-Bhowana	2nd cct	132	40	D C	Lynx	2nd Circuit Stringing
12	Sargodha city-Ludewala old	2nd cct	132	9.3	D C	Lynx	2nd Circuit Stringing
13	Nishatabad-Scarp Colony (Tower Nos. 01 to 24 & 01 to 04))	Rec	132	07	D.C	Zig - Lynx to Rail	Re-Conductoring
14	Samundri Rd-Gojra (Tower No. 106-174)	Rec	132	38	D C	Lynx to Rail	Re-Conductoring
15	220 KV T.T Singh-Gojra	Rec	132	5	D.C	Lynx to Rail	Re-Conductoring

PROPOSED TRANSMISSION LINES UNDER 7TH STG PROJECT

Sr. No.	Name of Transmission Lines	Type	Voltage (kV)	Length (Km)	Circuit	Conductor	Remarks
YEAR 2016-17							
1	Narwala Rd.-Small Industrial Estate (In & out F/F Usman Gani)	New	132	5	D/C	Rail	
2	Muridwala-Manjla Bagh (In & out F/F Mamu Kanjan)	New	132	5	D/C	Lynx	
3	220 KV Samundri Rd-Gojra (F/F Dijkot)	New	132	5	D/C	Rail	0
4	Nishatabad-Chiniot Rd.(In & Out F/F Millat Chowk (Gokhwal))	New	132	2	D/C	Rail	
5	Kalabagh-Trug (F/F Trug)	New	132	15	D/C	Lynx	
6	Bhalwal-Khuttiala Sheikhhan (In & out F/F Bhabhra)	New	132	20	D/C	Lynx	
7	Bhakkar-Fatah pur (In & Out F/F Behal)	New	132	16	D/C	Lynx	
11	220 KV Lalian-Chiniot Ind. (One cct In & out at Chenab Nagar)	New	132	20	D/C	Rail	
8	Chak-126/SB-Liberty Power (In & Out at 220 KV Lalian)	New	132	3	D/C	Rail	
9	Chiniot Ind.-Lalian (In & out at 220 kV Lalian)	New	132	3	D/C	Rail	
10	220 KV Lalian-Ludewala (One cct In & out at Sargodha-II & other cct In & out at proposed Sargodha-III)	New	132	55	D/C	Rail	
11	Lalian-Barana	2nd cct	132	21	D/C	Lynx	2nd CCT Stringing
12	Tandlianwala-Samundri	2nd cct	132	23	D/C	Lynx	2nd CCT stringing
13	Piplan-Bhakkar	2nd cct	132	91	D/C	Lynx	2nd CCT stringing
14	Chiniot Rd.-Narwala Rd. (Tower Nos. 01 to 33)	Rec	132	11	D/C	Lynx to Rail	Re-Conductoring
15	220 KV Lalian-Lalian (Tower No. 1-15)	Rec	132	05	D/C	Lynx to Rail	Re-Conductoring
YEAR 2017-18							
1	Scarp Colony-Jaranwala (In & out F/F Awagat)	New	132	3	D/C	Rail	
2	Samundri Rd.-Jhang Rd. (In & Out F/F College Rd.)	New	132	5	D/C	Rail	
3	Sargodha city-Ludewala (In & out F/F Silanwali Rd. Sargodha)	New	132	12	D/C	Lynx	
4	GTPS-220 KV Jaranwala Road (In & out F/F Chak-208/RB)	New	132	0.5	D/C	Lynx	
5	GTPS-OTP (In & out at Chak-208/RB)	New	132	2	D/C	Lynx	
6	OTP-Jaranwala Rd. (In & out at Chak-208/RB)	New	132	0.5	D/C	Lynx	
7	Quaidabad- Adhi Kot (F/F Adhi Kot)	New	132	34	SDT	Lynx	
8	Narwala Rd-Jhang Rd. (In & Out at 500 KV FSD West)	New	132	10	D/C	Rail	

PROPOSED TRANSMISSION LINES UNDER 7TH STG PROJECT

[illegible]

Annex-G

LIST OF STG SUBPROJECTS (OPTIMALLY ACHIEVABLE CASE)

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2015-16)

Sr.No.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	132 KV Caps (MVAR)	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA							
1	Chenab Nagar	N	132		1	1	2	1	2			1x7.2 1x3.6	6th STG Spill Over
2	Kot Shakir	N	132			1	1	1	1			1X3.6	
3	Jaranwala Road New	N	132	2			2	1	2			2X9.6	
4	Fazil	C	132			2	2	1	2			2x3.6	
5	Pathan Kot	C	132		2		2	1	2			2x7.2	
6	Nia Lahore	C	132		2		2	1	2			2x7.2	
7	Sargodha City	E	132		1		1	1				7.2	P.T/Bay for Ludewala 2nd Cct
8	Shorkot Road (Chuttiana)	E	132		1		1					7.2	
9	Sargodha-II	E	132						4				02- No. for Pathan Kot
10	H.B Shah	E	132					1	4				02-No. for In & out Lalian-Ludewala
11	Jhang Rd.	E	132						1				02-No. for 220 KV T.T Singh 02-No. for 18-Hazari
12	Kamalia	E	132					1	3				01-No. for Bhowana 02-No. for In & out Muridwala-Chichawatni Line
13	Ludewala	E	132						1				01-No. for existing Iso/Bay 2nd cct to Sargodha
14	Khurrianwala	A	132	1								2.4	
15	Thikriwala	A	132		1							2.4	
16	Bhamb	R	132								36		

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2016-17)

Sr.N o.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA						
1	Usman Gani	N	132		2		2	1	2		2X7.2	
2	Bandala-II (Rasool Pura)	N	132	2			2	1	2		2X9.6	
3	Mamu Kanjan	N	132		1	1	2	1	2		1x7.2 1x3.6	
4	Dijkot	N	132		2		2	1	2		2X7.2	
5	Trug	C	132		1	1	2	1	2		1x7.2 1x3.6	
6	Bhabhra	C	132		1	1	2	1	2		1x7.2 1x3.6	
7	Chak-103/RB	E	132		1		1				7.2	
8	Khanuana	E	132			1	1				3.6	
9	Quaidabad	E	132			1	1				3.6	
10	Scarp Colony	E	132		1		1				7.2	
11	Chiniot Ind.	E	132						2			For 220 KV Lalian
12	Barana	E	132						1			2nd cct Lalian
13	Lalian	E	132						1			2nd cct Barana
14	Sammundri	E	132						1			2nd cct Tandlianwala
15	Tandlianwala	E	132						1			2nd cct Sammundri
16	Bhakkar	E	132						1			2nd cct Piplan

Sr.N o.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA						
17	Piplan	E	132						1			2nd cct Bhakkar
18	Ludewala	E	132						2			For 220 KV Lalian
19	Head Faqirian	A	132	1							2.4	
20	Sargodha City	A	132	1							2.4	
21	Sargodha-II	A	32	1							2.4	
22	Small Industrial Estate	A	32	1							2.4	
23	Piplan	A	132		1						2.4	
24	Shahpur	A	132		1						2.4	
25	Satiana	A	132		1						2.4	
26	Kud Lathi	A	132		1						2.4	
27	Mankera	A	66		18.8							
28	Hyderabad Thal	A	66		13							

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2017-18)

Sr.No.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	132 KV Caps (MVAR)	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA							
1	Awagat	N	132		2		2	1	2			2X7.2	
2	College Rd. FSD	N	132		2		2	1	2			2X7.2	
3	Silanwali Rd. Sargodha-IV	N	132		1	1	2	1	2			1x7.2 1x3.6	
4	Adhi Kot	C	132		1	1	2	1	2			1x7.2 1x3.6	
5	Chak-126/SB	E	132		14.4		1					7.2	
6	Shor Kot Rd.	E	132						2				Conv. Of T-off to In & out
7	Kala Bagh	E	132						1				2nd cct F/F Trug
8	Jhang-II	E	132						2				Conv. Of T-off to In & out
9	Quaidabad	E	132						1				For F/F Adhi Kot
10	Jauharabad	A	132	1								2.4	
11	Bandala	A	132	1								2.4	
12	Bhowana	A	132		1							2.4	
13	Bhabhra	A	132		1							2.4	
14	Rakh Dagan	R	132								36		

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2018-19)

Sr.N o.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	132 KV Caps (MVAR)	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA							
1	Bukharian	N	132		2		2	1	2			2X7.2	
2	Sargodha-III (Sabzi Mandi)	N	132		2		2	1	2			2X7.2	
3	Aminpur Rd.FSD	N	132		1	1	2	1	2			1x7.2 1x3.6	
4	Darya Khan Rd. Bhakkar	N	132		1	1	2	1	2			1x7.2 1x3.6	
5	Wan Buchran	E	132		1		1					3.6	
6	Barana	E	132						2				D/C Line Barana-Bhamb
7	Bhamb	E	132						2				D/C Line Barana-Bhamb
8	Sammundri	E	132						2				For In & Out Gojra-220 KV Sammundri Line
	Kamalia	A	132	1								2.4	
9	New Nishatabad	A	132	1								2.4	
10	Tandlianwala	A	132	1								2.4	
11	Chak-103/RB	A	132	1								2.4	
12	Bhamb	A	132		1							2.4	
13	Khewa	A	132		1							2.4	
14	Shorkot Rd. Chuttiana	A	132		1							2.4	
15	Khanuana	A	32		1							2.4	
16	Kamal pur	A	132		1							2.4	

PROPOSED SUB PROJECTS UNDER 7TH STG PROJECT FOR YEAR (2019-20)

Sr.No.	Name of Grid Station	Proposal	Voltage (KV)	Transformer			T/Bay	P.T/ Bay	Line Bay	Iso Bay	132 KV Caps (MVAR)	11 KV Caps (MVAR)	Remarks
				31.5/40 MVA	20/26 MVA	10/13 MVA							
1	Bagh T.T Singh	N	132		1	1	2	1	2			1x7.2 1x3.6	
2	Gojra	E	132		1		1					7.2	
3	Jauharabad	E	132		1		1					7.2	
4	Satiana	E	132		1		1					7.2	
5	Shorkot City	E	132			1	1					3.6	
6	H.B Shah	E	132			1	1					3.6	
7	Muridwala	E	132						1				F/F Rajana
8	Bhowana	E	132						1				Bhowana-Khewa T/Line
9	Khewa	E	132						1				Bhowana-Khewa T/Line
10	Kirana	A	132	1								2.4	
11	Lalian	A	132	1								2.4	
12	Sammundri	A	132	1								2.4	
13	Tandlianwala	A	132	1								2.4	
14	Chak-103/RB	A	132	1								2.4	
15	Sargodha-II	A	132	1								2.4	
16	Chak-126/SB	A	132	1								2.4	
17	Quaidabad	A	132		1							2.4	
18	Trug	A	132		1							2.4	

PROPOSED TRANSMISSION LINES UNDER 7TH STG PROJECT

Sr. No.	Name of Transmission Lines	Type	Voltage (kV)	Length (Km)	Circuit	Conductor	Remarks
YEAR 2015-16							
1	Chiniot Ind.-220 KV Lalian (In & out F/F Chenab Nagar)	New	132	5	D/C	Rail	
2	18-Hazari-Kot Shakir (F/F Kot Shakir)	New	132	31	SDT	Lynx	6th STG Spill Over
3	220 KV Jaranwala Rd-Sammundri Rd. (In & out F/F Jaranwala Rd. New)	New	132	2	D/C	Rail	
4	Piplan Bhakkar (In & out F/F Fazil)	New	132	3	D/C	Lynx	6th STG Spill Over
5	Sargodha-II-Pathan Kot (F/F Pathan Kot)	New	132	25	D/C	Lynx	6th STG Spill Over
6	Thekriwal-Narwala Rd. (In & out F/F Nia Lahore)	New	132	22	D/C	Rail	
7	Sammundri Rd-Factory Area (In & Out F/F FSD City)	New	132	03	D/C	Rail	
8	Mianwali-Daud Khel (In & out F/F Shahbaz Khel)	New	132	08	D/C	Lynx	
9	Chichawatni-Muridwala (In & Out at Kamalia)	New	132	0.5	D/C	Lynx	
10	Jhang Rd-Bhowana	2nd cct	132	40	D/C	Lynx	2nd Circuit Stringing
11	Sargodha city-Ludewala old	2nd cct	132	9.3	D/C	Lynx	2nd Circuit Stringing
12	Nishatabad-Scarp Colony (Tower Nos. 01 to 24 & 01 to 04))	Rec	132	07	D/C	Zig / Lynx to Rail	Re-Conductoring
13	Sammundri Rd-Gojra (Tower No. 106-174)	Rec	132	38	D/C	Lynx to Rail	Re-Conductoring
14	220 KV T.T Singh-Gojra	Rec	132	5	D/C	Lynx to Rail	Re-Conductoring

PROPOSED TRANSMISSION LINES UNDER 7TH STG PROJECT

Sr. No.	Name of Transmission Lines	Type	Voltage (kV)	Length (Km)	Circuit	Conductor	Remarks
YEAR 2016-17							
1	Narwala Rd.-Small Industrial Estate (In & out F/F Usman Gani)	New	132	5	D/C	Rail	
2	Muridwala-Manjla Bagh (In & out F/F Mamu Kanjan)	New	132	5	D/C	Lynx	
3	220 KV Sammundri Rd-Gojra (F/F Dijkot)	New	132	5	D/C	Rail	
4	Kalabagh-Trug (F/F Trug)	New	132	15	D/C	Lynx	
5	Chak-126/SB-Liberty Power (In & Out at 220 KV Lalian)	New	132	3	D/C	Rail	
6	Chiniot Ind.-Lalian (In & out at 220 kV Lalian)	New	132	3	D/C	Rail	
7	220 KV Lalian-Ludewala (One cct In & out at Sargodha-II & other cct In & out at proposed Sargodha-III)	New	132	55	D/C	Rail	
8	Lalian-Barana	2nd cct	132	21	D/C	Lynx	2nd CCT Stringing
9	Tandlianwala-Sammundri	2nd cct	132	23	D/C	Lynx	2nd CCT stringing
10	Piplan-Bhakkar	2nd cct	132	91	D/C	Lynx	2nd CCT stringing
11	Chiniot Rd.-Narwala Rd. (Tower Nos. 01 to 33)	Rec	132	11	D/C	Lynx to Rail	Re-Conductoring
12	220 KV Lalian-Lalian (Tower No. 1-15)	Rec	132	05	D/C	Lynx to Rail	Re-Conductoring
YEAR 2017-18							
1	Scarp Colony-Jaranwala (In & out F/F Awagat)	New	132	3	D/C	Rail	
2	Sammundri Rd.-Jhang Rd. (In & Out F/F College Rd.)	New	132	5	D/C	Rail	
3	Sargodha city-Ludewala (In & out F/F Silanwali Rd. Sargodha)	New	132	12	D/C	Lynx	
4	Quaidabad- Adhi Kot (In & out F/F Adhi Kot)	New	132	34	SDT	Lynx	
5	Narwala Rd-Jhang Rd. (In & Out at 500 KV FSD West)	New	132	40	D/C	Rail	

PROPOSED TRANSMISSION LINES UNDER 7TH STG PROJECT

[illegible]

Annex-H

DETAIL SCOPE OF DOP & ELR

(BEST CASE)

BOQ Distribution Expansion Plan
DISTRIBUTION EXPANSION (FESCO) BILL OF QUANTITIES

Page 1 of 2

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
A	<u>New H.T Line</u>							
1)	Urban Areas (45%)							
a.	Osprey (30%)	KM	37.53	41.04	44.55	48.87	51.3	224.64
b.	Dog (40%)	KM	50.04	54.72	59.4	65.16	68.4	299.52
c.	Rabbit (30%)	KM	37.53	41.04	44.55	48.87	51.3	224.64
	Sub-Total		125.1	136.8	148.5	162.9	171	748.8
2)	Rural Areas (55%)							
a.	Dog (40%)	KM	61.16	66.88	72.6	79.64	83.6	366.08
b.	Rabbit (60%)	KM	91.74	100.32	108.9	119.46	125.4	549.12
	Sub-Total		152.9	167.2	181.5	199.1	209	915.2
	Total of H.T Line (1+2)		278	304	330	362	380	1664
B	<u>New L.T Line</u>							
1)	3-Phase (80%)							
a.	AAC Wasp (40%)	KM	51	54	57	60	64	286
b.	AAC Ant (60%)	KM	76	81	85	90	96	428
	Sub-Total		127	135	142	150	160	714
2)	1-Phase (20%)							
	AAC Ant (100%)	KM	32	34	36	38	40	178
	Total of L.T Line (1+2))		158	168	178	188	200	892

DISTRIBUTION EXPANSION (FESCO) BILL OF QUANTITIES

Page 2 of 2

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
C	<u>Sub-Stations</u>							
a.	10 KVA	No.	451	451	501	551	551	2505
b.	15 KVA	NO.	350	351	401	451	451	2004
c.	25 KVA	NO.	2004	2005	2505	2505	3005	12024
d.	50 KVA	NO.	910	950	1000	1050	1100	5010
e.	100 KVA	NO.	350	351	401	451	451	2004
f.	200 KVA	NO.	140	145	150	155	161	751
G	400 KVA	NO.	12	14	15	16	17	75
H	630 KVA	NO.	4	5	5	5	6	24
	Sub-Total		4221	4272	4978	5184	5742	24397
D	<u>Service Connections</u>							
a.	Single Phase	NO.	127410	132310	137210	142410	145416	684756
b.	Three Phase	NO.	22454	29554	39654	52454	70448	214564
c.	TOU Meter (MDI)	NO.	136	136	136	136	136	680
	Sub-Total		150000	162000	177000	195000	216000	900000
E	<u>Reliability Equipments</u>							
a.	Sectionalizer	Nos.	40	45	40	50	60	235
b.	Auto Recloser	Nos.	10	10	10	11	12	53
c.	Voltage Regulators (Single Phase Unit)	Nos.	15	15	15	15	15	75
d.	Fault Locator	Nos.	320	400	400	500	550	2170

BOQ Distribution Re-habilitation
DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 1 of 4

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
A	<u>200 11 KV FEEDERS</u>							
1	New (3-Phase) 11 KV Line							
a.	Osprey	KM	37.5	45	52.5	60	67.5	262.5
b.	Dog	KM	200	240	280	320	360	1400
c.	Rabbit	KM	12.5	15	17.5	20	22.5	87.5
	Sub-Total	KM	250	300	350	400	450	1750
2	11 KV Line Reconductoring							
a.	Osprey	KM	45	55	65	75	85	325
b.	Dog	KM	112.5	137.5	162.5	187.5	212.5	812.5
c.	Rabbit	KM	67.5	82.5	97.5	112.5	127.5	487.5
	Sub-Total	KM	225	275	325	375	425	1625
3	11KV Capacitors							
a.	Fixed 11 KV 450 KVAR	NO.	0	0	0	0	0	0
	Sub-Total	No.	0	0	0	0	0	0
4	11 KV Panels	NO.	11	14	17	20	23	85
5	Replacement of Earthing	NO.	350	370	400	430	450	2000
6	Sectionalizers (Manual Type)	NO.	0	0	0	0	0	0
7	11KV 500 MCM XLPE Cable	KM	3.36	3.99	4.62	5.25	5.88	23.1

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 2 of 4

No.	Description	Unit	QUANTITIES					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
B	<u>4000 LT PROPOSALS</u>							
8	Replacement of Over Loaded T/F							
a.	50 KVA	NO.	150	175	200	225	250	1000
b.	100 KVA	NO.	150	175	200	225	250	1000
c.	200 KVA	NO.	100	100	100	100	100	500
	Sub-Total		400	450	500	550	600	2500
9	New 11 KV Lines							
a.	Dog (Conversion LT Feeders)	KM	40	45	50	55	60	250
b.	Rabbit (Conversion LT Feeders)	KM	0	0	0	0	0	0
	Sub-Total		40	45	50	55	60	250
10	New T/F S/Stn: (Rehabilitation)							
a.	50 KVA	NO.	150	175	200	225	250	1000
b.	100 KVA	NO.	300	300	350	400	450	1800
c.	200 KVA	NO.	35	40	40	40	45	200
	Sub-Total		485	515	590	665	745	3000
11	New LT Lines							
a.	3-Phase Wasp line	K.M	50	55	60	65	70	300
b.	3-Phase Ant line	K.M	380	430	480	530	580	2400
c.	1-Phase Ant line	K.M	30	30	40	40	60	200
	Sub-Total		460	515	580	635	710	2900.0
12	LT LINE RECONDUCTORING							
a.	3-Phase Wasp line	K.M	10.5	10.5	10.5	10.5	10.5	52.5
b.	3-Phase Ant line	K.M	4.5	4.5	4.5	4.5	4.5	22.5
	Sub-Total		15	15	15	15	15	75

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 3 of 4

No.	Description	Unit	QUANTITIES					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
13	Energy Meters (Static)							
a.	Single Phase	No.	70000	80000	90000	100000	110000	450000
b.	Three Phase	No.	8000	10000	12000	11000	9000	50000
	Sub-Total		78000	90000	102000	111000	119000	500000
14	PVC Cables							
	<u>A. For Customers</u>							
a.	Twin Core 7/052	K.M	220	245	270	295	320	1350
b.	Four Core 19/0/052	K.M	25	25	30	35	35	150
	<u>B. For Sub-Mains</u>							
a.	Four Core 19/0.083	K.M	2	2	2	3	3	12
b.	Four Core 19/0.052	K.M	4	5	6	6	7	28
	Sub-Total		251	277	308	339	363	1540
15	Connectors							
a.	1-Phase (T-110)	NO.	60000	65000	70000	80000	850000	360000
a.	3-Phase (T-150)	NO.	6000	7000	8000	9000	10000	40000
	Sub-Total		66000	72000	78000	89000	95000	400000

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 4 of 4

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
C	<u>LESS VALUE OF DISMANTLED MATERIAL</u>							
1	<u>11KV Lines</u>							
a.	Dog (New Osprey)	K.M	34	41	49	56	64	244
b.	Rabbit (New Dog)	K.M	84	103	122	141	159	609
c.	Gopher (New Rabbit)	K.M	51	62	73	84	96	366
	Sub-Total		169	206	244	281	319	1219
2	<u>LT Lines</u>							
a.	Ant (New Wasp)	K.M	7.875	7.875	7.875	7.875	7.875	39.375
B	Gnat (New Ant)	K.M	3.375	3.375	3.375	3.375	3.375	16.875
	Sub-Total		11.25	11.25	11.25	11.25	11.25	56.25
3	<u>Transformer</u>							
a.	25 KVA (New 50 KVA) Replacement	NO.	150	175	200	225	250	1000
b.	50 KVA (New 100 KVA) Replacement	NO.	150	175	200	225	250	1000
c.	100 KVA (New 200 KVA) Replacement	NO.	100	100	100	100	100	500
	Sub-Total		400	450	500	550	600	2500

Annex-I

DETAIL SCOPE OF DOP & ELR (OPTIMALLY ACHIEVABLE CASE)

BOQ Distribution Expansion Plan

DISTRIBUTION EXPANSION (FESCO) BILL OF QUANTITIES

Page 1 of 2

No.	Description	Unit	QUANTITIES					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
A	<u>New H.T Line</u>							
1)	Urban Areas (45%)							
a.	Osprey (30%)	KM	36	39	43	47	50	214
b.	Dog (40%)	KM	47	52	57	62	67	285
c.	Rabbit (30%)	KM	36	119.12	80.29	85.3	91.63	447.23
	Sub-Total		119	131	142	155	167	713
2)	Rural Areas (55%)							
a.	Dog (40%)	KM	58	64	69	76	81	349
b.	Rabbit (60%)	KM	87	96	104	114	122	523
	Sub-Total		145	160	173	190	203	872
	Total of H.T Line (1+2)		265	290	315	345	370	1585
B	<u>New L.T Line,</u>							
1)	3-Phase (80%)							
a.	AAC Wasp (40%)	KM	51	54	57	60	64	286
b.	AAC Ant (60%)	KM	76	81	85	90	96	428
	Sub-Total		127	135	142	150	160	714
2)	1-Phase (20%)							
	AAC Ant (100%)	KM	32	34	36	38	40	178
	Total of L.T Line (1+2))		158	168	178	188	200	892

DISTRIBUTION EXPANSION (FESCO) BILL OF QUANTITIES

Page 2 of 2

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
C	<u>Sub-Stations</u>							
a.	10 KVA	No.	451	451	501	551	551	2505
b.	15 KVA	NO.	350	351	401	451	451	2004
c.	25 KVA	NO.	2004	2005	2505	2505	3005	12024
d.	50 KVA	NO.	910	950	1000	1050	1100	5010
e.	100 KVA	NO.	350	351	401	451	451	2004
f.	200 KVA	NO.	140	145	150	155	161	751
G	400 KVA	NO.	12	14	15	16	17	75
H	630 KVA	NO.	4	5	5	5	6	24
	Sub-Total		4221	4272	4978	5184	5742	24397
D	<u>Service Connections</u>							
a.	Single Phase	NO.	127410	132310	137210	142410	145416	684756
b.	Three Phase	NO.	22454	29554	39654	52454	70448	214564
c.	TOU Meter (MDI)	NO.	136	136	136	136	136	680
	Sub-Total		150000	162000	177000	195000	216000	900000

BOQ Distribution Re-habilitation

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 1 of 4

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
A	<u>200 11 KV FEEDERS</u>							
1	New (3-Phase) 11 KV Line							
a.	Osprey	KM	37.5	45	52.5	60	67.5	262.5
b.	Dog	KM	200	240	280	320	360	1400
c.	Rabbit	KM	12.5	15	17.5	20	22.5	87.5
	Sub-Total	KM	250	300	350	400	450	1750
2	11 KV Line Reconductoring							
a.	Osprey	KM	45	55	65	75	85	325
b.	Dog	KM	112.5	137.5	162.5	187.5	212.5	812.5
c.	Rabbit	KM	67.5	82.5	97.5	112.5	127.5	487.5
	Sub-Total	KM	225	275	325	375	425	1625
3	11KV Capacitors							
a.	Fixed 11 KV 450 KVAR	NO.	0	0	0	0	0	0
	Sub-Total	No.	0	0	0	0	0	0
4	11 KV Panels	NO.	11	14	17	20	23	85
5	Replacement of Earthing	NO.	350	370	400	430	450	2000
6	Sectionalizers (Manual Type)	NO.	0	0	0	0	0	0
7	11KV 500 MCM XLPE Cable	KM	3.36	3.99	4.62	5.25	5.88	23.1

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 2 of 4

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
B	<u>4000 LT PROPOSALS</u>							
8	Replacement of Over Loaded T/F							
a.	50 KVA	NO.	150	175	200	225	250	1000
b.	100 KVA	NO.	150	175	200	225	250	1000
c.	200 KVA	NO.	100	100	100	100	100	500
	Sub-Total		400	450	500	550	600	2500
9	New 11 KV Lines							
a.	Dog (Conversion LT Feeders)	KM	40	45	50	55	60	250
b.	Rabbit (Conversion LT Feeders)	KM	0	0	0	0	0	0
	Sub-Total		40	45	50	55	60	250
10	New T/F S/Stn: (Rehabilitation)							
a.	50 KVA	NO.	150	175	200	225	250	1000
b.	100 KVA	NO.	300	300	350	400	450	1800
c.	200 KVA	NO.	35	40	40	40	45	200
	Sub-Total		485	515	590	665	745	3000
11	New LT Lines							
a.	3-Phase Wasp line	K.M	50	55	60	65	70	300
b.	3-Phase Ant line	K.M	380	430	480	530	580	2400
c.	1-Phase Ant line	K.M	30	30	40	40	60	200
	Sub-Total		460	515	580	635	710	2900.0
12	LT LINE RECONDUCTORING							
a.	3-Phase Wasp line	K.M	10.5	10.5	10.5	10.5	10.5	52.5
b.	3-Phase Ant line	K.M	4.5	4.5	4.5	4.5	4.5	22.5
	Sub-Total		15	15	15	15	15	75

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 3 of 4

No.	Description	Unit	QUANTITIES					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
13	Energy Meters (Static)							
a.	Single Phase	No.	70000	80000	90000	100000	110000	450000
b.	Three Phase	No.	8000	10000	12000	11000	9000	50000
	Sub-Total		78000	90000	102000	111000	119000	500000
14	PVC Cables							
	<u>A. For Customers</u>							
a.	Twin Core 7/052	K.M	220	245	270	295	320	1350
b.	Four Core 19/0/052	K.M	25	25	30	35	35	150
	<u>B. For Sub-Mains</u>							
a.	Four Core 19/0.083	K.M	2	2	2	3	3	12
b.	Four Core 19/0.052	K.M	4	5	6	6	7	28
	Sub-Total		251	277	308	339	363	1540
15	Connectors							
a.	1-Phase (T-110)	NO.	60000	65000	70000	80000	850000	360000
a.	3-Phase (T-150)	NO.	6000	7000	8000	9000	10000	40000
	Sub-Total		66000	72000	78000	89000	95000	400000

DISTRIBUTION REHABILITATION (FESCO) BILL OF QUANTITIES

Page 4 of 4

No.	Description	Unit	QUANTITIES					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
C	<u>LESS VALUE OF DISMANTLED MATERIAL</u>							
1	<u>11KV Lines</u>							
a.	Dog (New Osprey)	K.M	34	41	49	56	64	244
b.	Rabbit (New Dog)	K.M	84	103	122	141	159	609
c.	Gopher (New Rabbit)	K.M	51	62	73	84	96	366
	Sub-Total		169	206	244	281	319	1219
2	<u>LT Lines</u>							
a.	Ant (New Wasp)	K.M	7.875	7.875	7.875	7.875	7.875	39.375
B	Gnat (New Ant)	K.M	3.375	3.375	3.375	3.375	3.375	16.875
	Sub-Total		11.25	11.25	11.25	11.25	11.25	56.25
3	<u>Transformer</u>							
a.	25 KVA (New 50 KVA) Replacement	NO.	150	175	200	225	250	1000
b.	50 KVA (New 100 KVA) Replacement	NO.	150	175	200	225	250	1000
c.	100 KVA (New 200 KVA) Replacement	NO.	100	100	100	100	100	500
	Sub-Total		400	450	500	550	600	2500

Annex-J

**DETAIL OF COST OF STG SUB
PROJECTS
(BEST CASE)**

TENTATIVE COST OF SUB PROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN FOR YEAR 2015-16 (MILLION RS.)

S#	Name of Sub Project	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Chenab Nagar	12.000	27.000	87.560	1.75	0.88	20.000	4.38	0.88	0.88	0.88	156.19	7.81	164.00	164.00
2	Kot Shakir	8.000	20.000	46.540	0.93	0.47	15.000	2.33	0.47	0.47	0.47	94.659	4.733	99.39	99.39
3	Jaranwala Rd.	20.000	27.000	182.630	3.65	1.83	20.000	9.13	1.83	1.83	1.83	269.719	13.486	283.21	283.21
4	SPS Colony	12.000	27.000	91.061	3.221	1.611	20.000	8.053	1.611	1.611	1.611	167.779	8.389	176.168	176.168
CONVERSION															
1	Fazal		25.000	80.190	1.60	0.80	10.000	4.01	0.80	0.80	0.80	124.011	6.201	130.21	130.21
2	Pathan Kot		25.000	92.910	1.86	0.93	10.000	4.65	0.93	0.93	0.93	138.130	6.907	145.04	145.04
3	Nia Lahore		25.000	92.910	1.86	0.93	10.000	4.65	0.93	0.93	0.93	138.130	6.907	145.04	145.04
EXTENSION															
1	Sargodha City		5.000	42.190	0.84	0.42		2.11	0.42	0.42	0.42	51.831	2.592	54.42	54.42
2	Shorkot Rd.		5.000	34.530	0.69	0.35		1.73	0.35	0.35	0.35	43.328	2.166	45.49	45.49
3	Sargodha-II		6.000	38.340	0.77	0.38		1.92	0.38	0.38	0.38	48.557	2.428	50.99	50.99
4	ILB Shah		6.000	41.340	0.83	0.41		2.07	0.41	0.41	0.41	51.887	2.594	54.48	54.48
5	Jhang Rd.		3.000	10.630	0.21	0.11		0.53	0.11	0.11	0.11	14.799	0.740	15.54	15.54
6	Kamalia		4.500	31.620	0.63	0.32		1.58	0.32	0.32	0.32	39.598	1.980	41.58	41.58
7	Ludewala		1.500	9.610	0.19	0.10		0.48	0.10	0.10	0.10	12.167	0.608	12.78	12.78
AUGMENTATION															
1	Khurrianwal			53.820	1.08	0.54		2.69	0.54	0.54	0.54	59.740	2.987	62.73	62.73
2	Thikriwala			11.750	0.24	0.12		0.59	0.12	0.12	0.12	13.043	0.652	13.69	13.69
R/ COMPENSATION															
1	Bhamb			27.040	0.54	0.27		1.35	0.03	0.27	0.27	29.771	1.489	31.26	31.26
Total		52.000	207.000	947.631	50.68	25.34	105.000	126.699	25.34	25.34	25.34	1423.572	71.179	1494.75	1526.01

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2015-16 (MILLION RS.)

COST OF SUB PROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2015-16															(MILLION RS.)		
S#	Name of Sub Project	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environement Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accountis Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost		
NEW TRANSMISSION LINES (132 KV)																Un-Escalated	Escalated
1	F/F Lundianwala	0.74	Lynx	5.88	5.51	0.11	0.3	0.06	0.28	0.06	0.06	0.06	5.33		5.33	5.33	
2	F/F Chenab Nagar	2	Rail	3.7	12.71	0.25	1.5	0.13	0.64	0.13	0.13	0.13	19.31	0.97	20.27	20.27	
3	F/F Kot Shakir	31	Lynx	23.3	102.38	2.05	9	1.02	5.12	1.02	1.02	1.02	145.94	7.30	153.24	153.24	
4	F/F Jaranwala Rd.	1	Rail	1.2	10.98	0.22	0.5	0.11	0.55	0.11	0.11	0.11	13.89	0.69	14.58	14.58	
5	F/F SPS	1	Lynx	1.150	5.100	0.102	0.500	0.051	0.255	0.051	0.051	0.051	7.311	0.366	7.677	7.677	
6	F/F Fazal	3	Lynx	5.64	12.58	0.25	0.5	0.13	0.63	0.13	0.13	0.13	20.10	1.01	21.11	21.11	
7	F/F Pathan Kot	25	Lynx	39.28	103.31	2.07	7.5	1.03	5.17	1.03	1.03	1.03	161.45	8.07	169.53	169.53	
8	F/F Nia Lahore	22	Rail	32.88	129.28	2.59	7	1.29	6.46	1.29	1.29	1.29	183.38	9.17	192.55	192.55	
9	F/F FSD City	3	Rail	8.92	28.74	0.57	0	0.29	1.44	0.29	0.29	0.29	40.82	2.04	42.86	42.86	
10	F/F Shahbaz Khel	8	Lynx	12.68	33.09	0.66	1.5	0.33	1.65	0.33	0.33	0.33	50.91	2.55	53.46	53.46	
11	Chiniot Power -Bhowana	12.15	Lynx	17.32	55.41	1.11	4	0.55	2.77	0.55	0.55	0.55	82.83	4.14	86.97	86.97	
12	220 KV T.T Singh-Muridwala	25	Rail	25.6	129.4	2.59	7.5	1.29	6.47	1.29	1.29	1.29	176.73	8.84	185.57	185.57	
13	Gojra-T.T Singh (In & out at 220 KV T.T Singh)	1.04	Lynx	5.08	5.88	0.12	0.3	0.06	0.29	0.06	0.06	0.06	11.91	0.60	12.50	12.50	
14	Gojra-Pir Mahal (In & out at 220 KV T.T Singh)	0.91	Lynx	3.68	4.55	0.09	0.3	0.05	0.23	0.05	0.05	0.05	9.03	0.45	9.48	9.48	
15	Chichawatni-Muridwala (In & Out at Kamalia)	0.5	Lynx	3.68	4.09	0.08	0.2	0.04	0.20	0.04	0.04	0.04	8.42	0.42	8.84	8.84	
2ND CIRCUIT STRINGING																	

Sl. No.	Name of Sub-Project	Length	Mode	Civil Works	Material	Engineering	Crops	Environment Mitigation/	Estt.	Audit &	Authority	T&P	Physical/ Cost	Tentative Total Sub project Cost		
1	Jhang Rd-Bhowana	40	Lynx		33.62	0.67		0.34	1.68	0.34	0.34	0.34	37.32	1.87	39.18	39.18
2	Sargodha-Ludewala	9.3	Lynx		11.58	0.23		0.12	0.58	0.12	0.12	0.12	12.85	0.64	13.50	13.50
RECONDUCTORING																
1	132 KV D/C Nishatabad--Scarp colony (Tower No. 1-24)	7	Rail	10.56	31.99	0.64	2.1	0.32	1.60	0.32	0.32	0.32	48.17	2.41	50.58	50.58
2	Sammundri Rd-Gojra (Tower No. 106-174)	38	Rail	26.45	138.2	2.76	10	1.38	6.91	1.38	1.38	1.38	189.85	9.49	199.34	199.34
3	220 KV T.T Singh-Gojra	5	Rail	9.21	26.54	0.53	1.5	0.27	1.33	0.27	0.27	0.27	40.20	2.01	42.21	42.21
Total				236.24	884.94	17.70	54.20	8.85	44.25	8.85	8.85	8.85	1265.75	63.02	1328.77	1328.77

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2016-17 (MILLION RS.)

COST OF SUB-PROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2016-17 (MILLION RS.)															
S#	Name of Grid Station	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Usman Gani	20	27	87.78	1.76	0.88	20.000	4.39	0.88	0.88	0.88	164.44	8.22	172.66	183.02
2	Bandala-II (Rasool Pura)	20	27	183.55	3.67	1.84	20.000	9.18	1.84	1.84	1.84	270.74	13.54	284.28	301.33
3	Mamu Kanjan	12	27	89.32	1.79	0.89	20.000	4.47	0.89	0.89	0.89	158.15	7.91	166.05	176.02
4	Dijkot	15	27	94.53	1.89	0.95	20.000	4.73	0.95	0.95	0.95	166.93	8.35	175.27	185.79
5	Millat Chowk (Gokhwal)	20	27	91.061	3.221	1.611	20.000	8.053	1.611	1.611	1.611	175.779	8.789	184.568	195.642
CONVERSION															
1	Trug		25	81.73	1.63	0.82	10	4.09	0.82	0.82	0.82	125.72	6.29	132.01	139.93
2	Bhabhra		25	81.73	1.63	0.82	10	4.09	0.82	0.82	0.82	125.72	6.29	132.01	139.93
3	Behal		25	81.73	1.63	0.82	10	4.09	0.82	0.82	0.82	125.72	6.29	132.01	139.93
EXTENSION															
1	132 KV Chak-103/RB		5	32.64	0.65	0.33		1.63	0.33	0.33	0.33	41.23	2.06	43.29	45.89
2	132 KV Khanuana		5	25.76	0.52	0.26		1.29	0.26	0.26	0.26	33.59	1.68	35.27	37.39
3	132 KV Quaidabad		5	25.76	0.52	0.26		1.29	0.26	0.26	0.26	33.59	1.68	35.27	37.39
4	132 KV Scarp Colony		5	32.64	0.65	0.33		1.63	0.33	0.33	0.33	41.23	2.06	43.29	45.89
5	66 KV Makarawal		3	18.978	0.38	0.19		0.949	0.19	0.19	0.19	24.067	1.203	25.270	25.270
6	132 KV Quaidabad		3	20.04	0.40	0.20		1.00	0.20	0.20	0.20	25.24	1.26	26.51	28.10
7	132 KV Chmhot Ind.		3	20.04	0.40	0.20		1.00	0.20	0.20	0.20	25.24	1.26	26.51	28.10
8	132 KV Barana		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
9	132 KV Lalian		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
10	132 KV Samundri		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
11	132 KV Tandlianwala		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
12	132 KV Chak Jhumra		3	19.94	0.40	0.20		1.00	0.20	0.20	0.20	25.13	1.26	26.39	27.97
13	132 KV Bhakkar		1.5	10.43	0.21	0.10		0.52	0.10	0.10	0.10	13.08	0.65	13.73	14.56
14	132 KV Piplan		1.5	16.03	0.32	0.16		0.80	0.16	0.16	0.16	19.29	0.96	20.26	21.47

S#	Name of Grid Station	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB,	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings &	Estt. Charges	Audit & Accounts Cost	Authnrity Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
AUGMENTATION															
1	132 KV Head Faqirian			53.83	1.08	0.54		2.69	0.54	0.54	0.54	59.75	2.99	62.74	66.50
2	132 KV Sargodha City			54.01	1.08	0.54		2.79	0.54	0.54	0.54	59.95	3.00	62.95	66.73
3	132 KV Sargodha-II			51.76	1.04	0.52		2.59	0.52	0.52	0.52	57.45	2.87	60.33	63.95
4	132 KV Small Ind. Estate			54.00	1.08	0.54		2.70	0.54	0.54	0.54	59.94	3.00	62.94	66.71
5	132 KV Pir Mahal			52.929	1.059	0.529		2.646	0.529	0.529	0.529	58.750	2.938	61.688	65.389
6	132 KV Jhang-Ii			52.939	1.059	0.529		2.646	0.529	0.529	0.529	58.750	2.938	61.688	65.389
7	132 KV Piplan			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
8	132 KV Shahpur			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
9	132 KV Satiana			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
10	132 KV Kud Lathi			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
11	132 KV G F Shah			11.011	0.92	0.46		2.391	0.46	0.46	0.46	16.072	0.804	16.876	17.888
12	66 KV Chashma			9.781	0.196	0.098		0.489	0.098	0.098	0.098	10.858	0.543	11.401	12.085
13	66 KV Noshera			9.781	0.196	0.098		0.489	0.098	0.098	0.098	10.858	0.543	11.401	12.085
14	66 KV Mankera			4.63	0.09	0.05		0.23	0.05	0.05	0.05	5.14	0.26	5.40	5.72
15	66 KV Hyderabad Thal			10.64	0.21	0.11		0.53	0.11	0.11	0.11	11.81	0.59	12.40	13.14
Total		87.000	251.000	1467.630	48.338	24.169	130.900	120.844	24.169	24.169	24.169	2108.62	105.43	2214.05	2345.38

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2016-17 (MILLION RS.)

COST OF SUB PROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2016-17 (MILLION RS.)																	
S#	Name of Grid Station	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environment Mitigation/ Resettlement Cost	Estr. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost		
NEW TRANSMISSION LINES (132 KV)																Un-Escalated	Escalated
1	F/F Usinan Gani	2	Rail	1.450	29.61	0.592	1.500	0.296	1.481	0.296	0.296	0.296	35.817	1.791	37.608	39.864	
2	F/F Rasool Pura	5	Lynx	1.890	28.63	0.573	1.500	0.286	1.432	0.286	0.286	0.286	35.169	1.758	36.928	39.143	
3	F/F Mamu Kanjan)	5	Lynx	1.880	21.83	0.437	1.500	0.218	1.092	0.218	0.218	0.218	27.611	1.381	28.992	30.731	
4	F/F Dijkot	5	Rail	2.140	29.61	0.592	1.500	0.296	1.481	0.296	0.296	0.296	36.507	1.825	38.332	40.632	
5	F/F Millat Chowk (Gokhwal)	2	Rail	1.450	10.260	0.205	1.500	0.103	0.513	0.103	0.103	0.103	14.339	0.717	15.056	15.959	
6	F/F Trug	15	Lynx	23.320	61.63	1.233	4.500	0.616	3.082	0.616	0.616	0.616	96.229	4.811	101.041	107.103	
7	F/F Bhabhura	20	Lynx	32.560	83.014	1.660	6.000	0.830	4.151	0.830	0.830	0.830	130.705	6.535	137.240	137.240	
8	In & Out F/F Behal	16	Lynx	23.450	52.091	1.042	5.000	0.521	2.605	0.521	0.521	0.521	86.271	4.314	90.585	96.020	
9	132 KV D/C 220 KV Lalian-Chiniot Ind (One cct In & out at Chenab Nagar)	20	Rail	24.960	101.440	2.029	6.000	1.014	5.072	1.014	1.014	1.014	143.558	7.178	150.736	159.780	
10	132 KV Chak-126/SB-Liberty Power (In & Out at 220 KV Lalian)	3	Rail	7.230	19.36	0.387	1.000	0.194	0.968	0.194	0.194	0.194	29.720	1.486	31.206	33.078	
11	132 KV Chiniot Ind.-Lalian (In & out at 220 KV Lalian)	3	Rail	7.230	19.36	0.387	1.000	0.194	0.968	0.194	0.194	0.194	29.720	1.486	31.206	33.078	
12	132 KV D/C 220 KV Lalian-Ludewala (One cct In & out at Sargodha-II & other at Sargodha-III)	55	Rail	56.150	328.2	6.564	10.000	3.282	16.410	3.282	3.282	3.282	430.752	21.538	452.290	479.427	

S#	Name of Grid Station	Length	Cond	Civil Works (Foundations)	Material Cost	Engineering	Crops Connecction	Environement Mitigation/	Fett. Chaynee	Audit & Accounts	Authority	T&P	Sub Total	Physical/ Cost	Tentative Total Sub project Cost	
Conversion of T/Off to In & Out arrangement/ 2nd CCt Stringing																
1	132 KV Lalian-Barana	21	Lynx		20.41	0.408		0.204	1.021	0.204	0.204	0.204	22.655	1.133	23.788	25.215
2	132 KV Tandlianwala-Sammundri	23	Lynx		21.81	0.436		0.218	1.091	0.218	0.218	0.218	24.209	1.210	25.420	26.945
3	132 KV Piplan-Bhakkar	91	Lynx		86.12	1.722		0.861	4.306	0.861	0.861	0.861	95.593	4.780	100.373	106.395
RECONDUCTORING																
1	132 KV Chiniot Rd.-Narwala Rd. Tower Nos. 01 to 33	11	Rail	13.840	43.76	0.875	3.000	0.438	2.188	0.438	0.438	0.438	65.414	3.271	68.684	72.805
2	220 KV Lalian-Lalian (Tower No. 1-15)	5	Rail	9.080	21.78	0.436	1.500	0.218	1.089	0.218	0.218	0.218	34.756	1.738	36.494	38.683
Total				197.850	957.135	19.143	45.500	9.571	47.857	9.571	9.571	9.571	1304.269	65.213	1405.976	1482.101

COST OF SUBPROJECTS UNDER TRANSMISSION BEST ACHIEVED PLAN YEAR 2017-18

(MILLION RS.)

UNDER TRANSMISSION BEST ACHIEVED PLAN YEAR 2017-18															
(MILLION RS.)															
S#	Name of Sub Project	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, C.H.R. Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Awagat	15.000	27.000	93.9	1.88	0.94	20.00	4.70	0.94	0.94	0.94	166.23	8.31	174.54	196.11
2	College Rd. FSD	20.000	27.000	93.95	1.88	0.94	20.00	4.70	0.94	0.94	0.94	171.28	8.56	179.85	202.08
3	Silanwali Rd. Sargodha-IV	20.000	27.000	89.32	1.79	0.89	20.00	4.47	0.89	0.89	0.89	166.15	8.31	174.45	196.01
4	Chak-208/RB	15	33	127.853	3.957	1.979	20.000	9.893	1.979	1.979	1.979	217.619	10.881	228.500	242.210
CONVERSION															
1	Adhi Kot		25.000	108.23	2.16	1.08	10.00	5.41	1.08	1.08	1.08	155.14	7.76	162.89	183.03
EXTENSION															
1	132 KV Chak-126 SB		50.000	32.49	0.65	0.32		1.62	0.32	0.32	0.32	86.06	4.30	90.37	101.54
2	132 KV Pathan Kot		50.000	30.985	1.32	0.66		3.299	0.66	0.66	0.66	88.244	4.412	92.656	104.109
3	132 KV Shor Kot Rd		30.000	23.38	0.47	0.23		1.17	0.23	0.23	0.23	55.95	2.80	58.75	66.01
4	132 KV Jhang-II		30.000	22.21	0.44	0.22		1.11	0.22	0.22	0.22	54.65	2.73	57.39	64.48
5	Kala Bagh		30.000	9.94	0.20	0.10		0.50	0.10	0.10	0.10	41.03	2.05	43.09	48.41
AUGMENTATION															
1	132 KV Jauharabad			61.88	1.24	0.62		3.09	0.62	0.62	0.62	68.69	3.43	72.12	81.04
2	132 KV Bandala			61.88	1.24	0.62		3.09	0.62	0.62	0.62	68.69	3.43	72.12	81.04
3	132 KV Bhowana			19.85	0.40	0.20		0.99	0.20	0.20	0.20	22.03	1.10	23.14	25.99
4	132 KV Bhabhura			19.8	0.40	0.20		0.99	0.20	0.20	0.20	21.98	1.10	23.08	25.93
R/COMPENSATION															
1	132 KV Rakh Dagrian			27.04	0.54	0.27		1.35	0.27	0.27	0.27	30.01	1.50	31.52	35.41
Total		70.00	329.00	822.71	18.55	9.28	90.00	46.39	9.28	9.28	9.28	1413.76	70.69	1484.45	1653.39

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2017-18

(MILLION RS.)

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2017-18															(MILLION RS.)	
S#	Name of Sub Project	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environement Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated
NEW TRANSMISSION LINES (132 KV)																
1	F/F Awagat	5	Rail	8.470	29.61	0.592	1.500	0.296	1.481	0.296	0.296	0.296	42.837	2.142	44.979	50.538
2	F/F College Rd.	1	Rail	1.100	49.38	0.988	0.250	0.494	2.469	0.494	0.494	0.494	56.162	2.808	58.970	66.259
3	F/F Silanwali Rd. Sargodha	12	Lynx	14.670	48.68	0.974	2.200	0.487	2.434	0.487	0.487	0.487	70.905	3.545	74.450	83.652
4	Road (In & out F/F Chak-208/RB)	0.5	Lynx	0.700	0.900	0.018	1.000	0.009	0.045	0.009	0.009	0.009	2.699	0.135	2.834	3.004
5	132 KV GTPS-OTP (In & out at Chak-208/RB)	2	Lynx	3.400	4.900	0.098	2.000	0.049	0.245	0.049	0.049	0.049	10.839	0.542	11.381	12.064
6	132 KV OTP-Jaranwala Rd (In & out at Chak-208/RB)	0.5	Lynx	0.700	0.900	0.018	1.000	0.009	0.045	0.009	0.009	0.009	2.699	0.135	2.834	3.004
7	F/F Adhi Kot	34	Lynx	38.160	108.52	2.170	10.000	1.085	5.426	1.085	1.085	1.085	168.617	8.431	177.048	198.931
8	132 KV Narwala Rd-Jhang Rd. (In & Out at 500 KV FSD West)	40	Rail	42.570	240.77	4.815	12.000	2.408	12.039	2.408	2.408	2.408	321.825	16.091	337.916	379.682
9	132 KV Jhang Rd-Factory Area (In & out at 500 KV FSD West)	40	Greely	39.670	118.1	2.362	12.000	1.181	5.905	1.181	1.181	1.181	182.761	9.138	191.899	215.618
Conversion of T/Off to In & Out arrangement/ 2nd CCT Stringing																
1	132 KV ShorKot City-Pir Mahal (T-Off F/F Shorkot Rd.)	1	Lynx		0.85	0.017		0.009	0.043	0.009	0.009	0.009	0.944	0.047	0.991	1.113
2	132 KV Jhang-Khewa (T-off F/F Jhang-II)	3	Lynx		1.55	0.031		0.016	0.078	0.016	0.016	0.016	1.721	0.086	1.807	2.030
RECONDUCTORING																
1	Narwala Rd-Industrial Estate Tower No. 07 to 33	11	Rail	1.990	70.980	1.420	3.000	0.710	3.549	0.710	0.710	0.710	83.778	4.189	87.967	87.967
2	132 KV D.C Narwala Rd-Jhang Rd. (Tower No. 1 to 21)	7	Rail	8.920	35.25	0.705	2.500	0.353	1.763	0.353	0.353	0.353	50.548	2.527	53.075	59.635
Total				160.350	710.390	14.208	47.450	7.104	35.520	7.104	7.104	7.104	996.333	49.817	1046.150	1163.497

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2018-19 (MILLION RS.)

S#	Name of Sub Projects	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	I&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Bukharan	15.000	27.000	93.9	1.878	0.94	20.00	4.70	0.94	0.94	0.94	166.23	8.31	174.54	207.88
2	Sargodha-III (Sabzi Mandi)	15.000	27.000	93.90	1.88	0.94	20.00	4.70	0.94	0.94	0.94	166.23	8.31	174.54	207.88
3	Aminpur Rd FSD	15.000	27.000	88.98	1.78	0.89	20.00	4.45	0.89	0.89	0.89	160.77	8.04	168.81	201.05
4	Darya Khan Rd. Bhakkar	15.000	27.000	88.98	1.78	0.89	20.00	4.45	0.89	0.89	0.89	160.77	8.04	168.81	201.05
5	Allied FSD	20.000	27.000	91.061	3.221	1.611	0.000	8.053	1.611	1.611	1.611	155.779	7.789	163.568	163.568
CONVERSION															
1	Nowshera		23	72.6655	1.453	0.727	10	3.633	0.727	0.727	0.727	113.660	5.683	119.342	126.503
EXTENSION															
1	132 KV Wan Buchtan		5.000	32.50	0.65	0.33		1.63	0.33	0.33	0.33	41.08	2.05	43.13	51.37
2	132 KV Barana		3.000	65.46	1.31	0.65		3.27	0.65	0.65	0.65	75.66	3.78	79.44	94.62
3	132 KV Bhumb		3.000	65.46	1.31	0.65		3.27	0.65	0.65	0.65	75.66	3.78	79.44	94.62
4	132 KV Samundri		3.000	65.46	1.31	0.65		3.27	0.65	0.65	0.65	75.66	3.78	79.44	94.62
AUGMENTATION															
1	132 KV Kamalia			53.92	1.08	0.54		2.70	0.54	0.54	0.54	59.85	2.99	62.84	74.85
2	132 KV New Nishatabad			53.99	1.08	0.54		2.70	0.54	0.54	0.54	59.93	3.00	62.93	74.94
3	132 KV Tandlianwala			53.99	1.08	0.54		2.70	0.54	0.54	0.54	59.93	3.00	62.93	74.94
4	132 KV Chak-103 RB			53.99	1.08	0.54		2.70	0.54	0.54	0.54	59.93	3.00	62.93	74.94
5	132 KV Bhaub			12.17	0.24	0.12		0.61	0.12	0.12	0.12	13.51	0.68	14.18	16.89
6	132 KV Khewa			12.13	0.24	0.12		0.61	0.12	0.12	0.12	13.46	0.67	14.14	16.84
7	132 KV Shorkot Rd.			12.27	0.25	0.12		0.61	0.12	0.12	0.12	13.62	0.68	14.30	17.03
8	132 KV Khauana			12.27	0.25	0.12		0.61	0.12	0.12	0.12	13.62	0.68	14.30	17.03
9	132 KV Kamal pur			12.27	0.25	0.12		0.61	0.12	0.12	0.12	13.62	0.68	14.30	17.03
R/COMPENSATION															
1	132 KV Pir Mahal		3.000	27.04	0.5408	0.2704		1.352	0.2704	0.2704	0.2704	33.044	1.651	34.665	41.286
Total		80.000	172.000	1035.37	45.09	22.55	90.00	112.73	22.55	22.55	22.55	1498.96	74.95	1573.91	1827.65

COST OF SUB PROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2018-19 (MILLION RS.)

NEW TRANSMISSION LINES (132 KV)																
S#	Name of Sub Projects	Length (KM)	Cond.	Civil Worrrks (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environement Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated
1	F/F Bukharian	2	Lynx	1.80	37.63	0.75	0.50	0.38	1.88	0.38	0.38	0.38	44.07	2.20	46.27	55.11
2	F/F Sargodha-III	2	Rail	1.95	35.47	0.71	1.60	0.35	1.77	0.35	0.35	0.35	42.92	2.15	45.07	53.68
3	F/F Aminpur	3	Lynx	2.40	25.34	0.51	1.60	0.25	1.27	0.25	0.25	0.25	32.13	1.61	33.73	40.18
4	F/F Darya Khan Rd. Bhakkar	15	Lynx	19.26	62.03	1.24	3.20	0.62	3.10	0.62	0.62	0.62	91.31	4.57	95.88	114.19
5	F/F Allied FSD	2	Rail	7.120	14.854	0.297	0.500	0.149	0.743	0.149	0.149	0.149	24.108	1.205	25.314	25.314
6	F/F Nowshera	45	Lynx	46.270	164.540	3.291	13.500	1.645	8.227	1.645	1.645	1.645	242.409	12.120	254.530	269.802
7	132 KV D/C Barana-Bhumb	40	Lynx	38.97	164.26	3.29	7.00	1.64	8.21	1.64	1.64	1.64	228.30	11.41	239.71	285.50
8	220 KV Samundri-Gojra (In & out at Samundri)	25	Rail	23.67	129.40	2.59	7.50	1.29	6.47	1.29	1.29	1.29	174.80	8.74	183.54	218.60
2ND CIRCUIT STRINGING																
1	132 KV 220 KV Jarawala Rd-Samundri Rd. (T-off F/F Khanuana)	2	Rail		1.82	0.04		0.02	0.09	0.02	0.02	0.02	2.02	0.10	2.12	2.53
RECONDUCTORING																
1	132 KV 220 KV Jaranwala Rd.-Chak 208/RB	4	Rail	4.500	18.970	0.379	1.200	0.190	0.949	0.190	0.190	0.190	26.757	1.338	28.095	33.461
2	220 KV GTPS-Chak 208/RB (Tower No 1-26)	8	Rail	10.640	43.251	0.865	1.500	0.433	2.163	0.433	0.433	0.433	60.149	3.007	63.156	70.962
Total				141.44	635.34	12.71	35.40	6.35	31.77	6.35	6.35	6.35	882.07	44.10	926.18	1064.90

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2019-20 (MILLION RS.)

COST OF SUB-PROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2019-20 (MILLION RS.)															
S#	Name of Grid Station	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Bagh T T Singh	15.00	27.00	93.71	1.87	0.94	20.00	4.69	0.94	0.94	0.94	166.02	8.30	174.32	220.08
2	Tariqabad	20	27	91.061	3.221	1.611	0.000	8.053	1.611	1.611	1.611	155.779	7.789	163.568	173.382
3	Adha (Gojra-Jhang Rd.)	15	27	91.061	3.221	1.611	20.000	8.053	1.611	1.611	1.611	170.779	8.539	179.318	190.077
4	Sidhar By-Pass FSD	15.000	27.000	91.562	3.221	1.611	20.000	8.053	1.611	1.611	1.611	171.280	8.564	179.844	214.194
CONVERSION															
1	Makarwal		25.000	81.8015	1.636	0.818	10.000	4.09	0.818	0.818	0.818	125.800	6.290	132.089	148.416
EXTENSION															
1	132 KV Usman Gani		5.00	33.43	0.67	0.33		1.67	0.33	0.33	0.33	42.11	2.11	44.21	55.82
2	132 KV Jauharabad		5.00	31.18	0.62	0.31		1.56	0.31	0.31	0.31	39.61	1.98	41.59	52.51
3	132 KV Satiana		5.00	31.18	0.62	0.31		1.56	0.31	0.31	0.31	39.61	1.98	41.59	52.51
4	132 KV Shorkot City		5.00	28.78	0.58	0.29		1.44	0.29	0.29	0.29	36.95	1.85	38.79	48.98
5	132 KV H B Shah		5.00	28.78	0.58	0.29		1.44	0.29	0.29	0.29	36.95	1.85	38.79	48.98
6	132 KV Bhowana		1.50	10.66	0.21	0.11		0.53	0.11	0.11	0.11	13.33	0.67	14.00	17.67
7	132 KV Khewa		1.50	10.72	0.21	0.11		0.54	0.11	0.11	0.11	13.40	0.67	14.07	17.76
AUGMENTATION															
1	132 KV Kirana			55.16	1.10	0.55		2.76	0.55	0.55	0.55	61.23	3.06	64.29	81.16
2	132 KV Lalian			55.22	1.10	0.55		2.76	0.55	0.55	0.55	61.29	3.06	64.36	81.25
3	132 KV Samundri			55.18	1.10	0.55		2.76	0.55	0.55	0.55	61.25	3.06	64.31	81.19
4	132 KV Tandlianwala			55.20	1.10	0.55		2.76	0.55	0.55	0.55	61.27	3.06	64.34	81.22
5	132 KV Chak-103/RB			55.19	1.10	0.55		2.76	0.55	0.55	0.55	61.26	3.06	64.32	81.21
6	132 KV Sargodha-II			55.14	1.10	0.55		2.76	0.55	0.55	0.55	61.21	3.06	64.27	81.14
7	132 KV Chak-126/SB			54.09	1.08	0.54		2.70	0.54	0.54	0.54	60.04	3.00	63.04	79.59
8	132 KV Muridwala			52.739	1.055	0.527		2.637	0.527	0.527	0.527	58.539	2.927	61.466	77.601
9	132 KV Bhalwal			52.739	1.055	0.527		2.637	0.527	0.527	0.527	58.539	2.927	61.466	77.601
10	132 KV Mamukanjan			10.708	0.914	0.457		2.285	0.457	0.457	0.457	15.735	0.787	16.522	20.859
11	132 KV Quaidabad			12.06	0.24	0.12		0.60	0.12	0.12	0.12	13.39	0.67	14.06	17.75
12	132 KV Trug			13.05	0.26	0.13		0.65	0.13	0.13	0.13	14.49	0.72	15.21	19.20
Total		65.00	161.00	1150.40	43.98	21.99	70.00	109.94	21.99	21.99	21.99	1599.84	79.99	1679.83	2020.15

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION BEST PLAN YEAR 2019-20 (MILLION RS.)

S#	Name of Sub Project	Length (KM)	Cond	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environment Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cnst	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated (6%)
NEW TRANSMISSION LINES (132 KV)																
1	F/F Bagh I.T Singh	15	Rail	24.67	71.13	1.42	4.50	0.71	3.56	0.71	0.71	0.71	108.12	5.41	113.53	P.
2	132 KV SDT Bhowana-Khewa	15	Lynx	18.56	48.63	0.97	4.50	0.49	2.43	0.49	0.49	0.49	77.04	3.85	80.89	102.13
3	F/F Tariqabad	5	Lynx	9.240	32.750	0.655	1.500	0.328	1.638	0.328	0.328	0.328	47.093	2.355	49.447	52.414
4	In & out F/F Adha Gojra	2	Lynx	1.480	6.150	0.123	2.500	0.062	0.308	0.062	0.062	0.062	10.787	0.539	11.326	12.005
5	F/F Sidhar By-Pass FSD	3	Rail	2.400	9.400	0.188	1.500	0.094	0.470	0.094	0.094	0.094	14.334	0.717	15.051	17.925
6	F/F Makarwal	10	Lynx	12.250	32.100	0.642	3.000	0.321	1.605	0.321	0.321	0.321	50.881	2.544	53.425	60.028
Total				43.23	119.76	2.40	9.00	1.20	5.99	1.20	1.20	1.20	185.16	9.26	194.42	102.13

Annex-K

**DETAIL OF COST OF STG SUB
PROJECTS**

(OPTIMALLY ACHIEVABLE CASE)

TENTATIVE COST OF SUB PROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN FOR YEAR 2015-16 (MILLION RS.)

S#	Name of Sub Project	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHR, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Chenab Nagar	12.000	27.000	87.560	1.75	0.88	20.000	4.38	0.88	0.88	0.88	156.19	7.81	164.00	164.00
2	Kot Shakir	8.000	20.000	46.540	0.93	0.47	15.000	2.33	0.47	0.47	0.47	94.659	4.733	99.39	99.39
3	Jaranwala Rd.	20.000	27.000	182.630	3.65	1.83	20.000	9.13	1.83	1.83	1.83	269.719	13.486	283.21	283.21
CONVERSION															
1	Fazal		25.000	80.190	1.60	0.80	10.000	4.01	0.80	0.80	0.80	124.011	6.201	130.21	130.21
2	Pathan Kot		25.000	92.910	1.86	0.93	10.000	4.65	0.93	0.93	0.93	138.130	6.907	145.04	145.04
3	Nia Lahore		25.000	92.910	1.86	0.93	10.000	4.65	0.93	0.93	0.93	138.130	6.907	145.04	145.04
EXTENSION															
1	Sargodha City		5.000	42.190	0.84	0.42		2.11	0.42	0.42	0.42	51.831	2.592	54.42	54.42
2	Shorkot Rd.		5.000	34.530	0.69	0.35		1.73	0.35	0.35	0.35	43.328	2.166	45.49	45.49
3	Sargodha-II		6.000	38.340	0.77	0.38		1.92	0.38	0.38	0.38	48.557	2.428	50.99	50.99
4	H.B Shah		6.000	41.340	0.83	0.41		2.07	0.41	0.41	0.41	51.887	2.594	54.48	54.48
5	Jhang Rd.		3.000	10.630	0.21	0.11		0.53	0.11	0.11	0.11	14.799	0.740	15.54	15.54
6	Kamalia		4.500	31.620	0.63	0.32		1.58	0.32	0.32	0.32	39.598	1.980	41.58	41.58
7	Ludewala		1.500	9.610	0.19	0.10		0.48	0.10	0.10	0.10	12.167	0.608	12.78	12.78
AUGMENTATION															
1	Khurrianwal			53.820	1.08	0.54		2.69	0.54	0.54	0.54	59.740	2.987	62.73	62.73
2	Thikriwala			11.750	0.24	0.12		0.59	0.12	0.12	0.12	13.043	0.652	13.69	13.69
R/ COMPENSATION															
1	Bhamb			27.040	0.54	0.27		1.35	0.03	0.27	0.27	29.771	1.489	31.26	31.26
Total		40.000	180.000	856.570	50.68	25.34	85.000	126.699	25.34	25.34	25.34	1255.793	62.790	1318.58	1349.84

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2015-16 (MILLION RS.)

NEW TRANSMISSION LINES (132 KV)																
S#	Name of Sub Project	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cnst	Engineering Cost	Crops Compensation Cost	Environement Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cnst Cntingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated
1	F/F Lundianwala	0.74	Lynx	5.88	5.51	0.11	0.3	0.06	0.28	0.06	0.06	0.06	5.33		5.33	5.33
2	F/F Chenab Nagar	2	Rail	3.7	12.71	0.25	1.5	0.13	0.64	0.13	0.13	0.13	19.31	0.97	20.27	20.27
3	F/F Kot Shakir	31	Lynx	23.3	102.38	2.05	9	1.02	5.12	1.02	1.02	1.02	145.94	7.30	153.24	153.24
4	F/F Jaranwala Rd.	1	Rail	1.2	10.98	0.22	0.5	0.11	0.55	0.11	0.11	0.11	13.89	0.69	14.58	14.58
5	F/F Fazal	3	Lynx	5.64	12.58	0.25	0.5	0.13	0.63	0.13	0.13	0.13	20.10	1.01	21.11	21.11
6	F/F Pathan Kot	25	Lynx	39.28	103.31	2.07	7.5	1.03	5.17	1.03	1.03	1.03	161.45	8.07	169.53	169.53
7	F/F Nia Lahore	22	Rail	32.88	129.28	2.59	7	1.29	6.46	1.29	1.29	1.29	183.38	9.17	192.55	192.55
8	F/F FSD City	3	Rail	8.92	28.74	0.57	0	0.29	1.44	0.29	0.29	0.29	40.82	2.04	42.86	42.86
9	F/F Shahbaz Khel	8	Lynx	12.68	33.09	0.66	1.5	0.33	1.65	0.33	0.33	0.33	50.91	2.55	53.46	53.46
10	Chiniot Power -Bhowana	12.15	Lynx	17.32	55.41	1.11	4	0.55	2.77	0.55	0.55	0.55	82.83	4.14	86.97	86.97
11	220 KV T.T Singh-Muridwala	25	Rail	25.6	129.4	2.59	7.5	1.29	6.47	1.29	1.29	1.29	176.73	8.84	185.57	185.57
12	Gojra-T.T Singh (In & out at 220 KV T.T Singh)	1.04	Lynx	5.08	5.88	0.12	0.3	0.06	0.29	0.06	0.06	0.06	11.91	0.60	12.50	12.50
13	Gojra-Pir Mahal (In & out at 220 KV T.T Singh)	0.91	Lynx	3.68	4.55	0.09	0.3	0.05	0.23	0.05	0.05	0.05	9.03	0.45	9.48	9.48
14	Chichawatni-Muridwala (In & Out at Kamalia)	0.5	Lynx	3.68	4.09	0.08	0.2	0.04	0.20	0.04	0.04	0.04	8.42	0.42	8.84	8.84

2ND CIRCUIT STRINGING

Sl. No.	Name of Sub-Project	Length	Mode	Civil Works	Material	Engineering	Crops	Environment Mitigation/	Estt.	Audit &	Authority	T&P	Physical/ Cost	Tentative Total Sub project Cost		
1	Jhang Rd-Bhowana	40	Lynx		33.62	0.67		0.34	1.68	0.34	0.34	0.34	37.32	1.87	39.18	39.18
2	Sargodha-Ludewala	9.3	Lynx		11.58	0.23		0.12	0.58	0.12	0.12	0.12	12.85	0.64	13.50	13.50
RECONDUCTORING																
1	132 KV D/C Nishatabad--Scarp colony (Tower No. 1-24)	7	Rail	10.56	31.99	0.64	2.1	0.32	1.60	0.32	0.32	0.32	48.17	2.41	50.58	50.58
2	Sammundri Rd-Gojra (Tower No. 106-174)	38	Rail	26.45	138.2	2.76	10	1.38	6.91	1.38	1.38	1.38	189.85	9.49	199.34	199.34
3	220 KV T.T Singh-Gojra	5	Rail	9.24	26.54	0.53	1.5	0.27	1.33	0.27	0.27	0.27	40.20	2.01	42.21	42.21
Total				235.09	879.84	17.60	53.70	8.80	43.99	8.80	8.80	8.80	1258.44	62.66	1321.10	1321.10

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2016-17 (MILLION RS.)

NEW TRANSMISSION LINES (132 KV)																	
S#	Name of Grid Station	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environement Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost		
															Un-Escalated	Escalated	
1	F/F Usman Gani	2	Rail	1.450	29.61	0.592	1.500	0.296	1.481	0.296	0.296	0.296	35.817	1.791	37.608	39.864	
2	F/F Rasool Pura	5	Lynx	1.890	28.63	0.573	1.500	0.286	1.432	0.286	0.286	0.286	35.169	1.758	36.928	39.143	
3	F/F Mamu Kanjan)	5	Lynx	1.880	21.83	0.437	1.500	0.218	1.092	0.218	0.218	0.218	27.611	1.381	28.992	30.731	
4	F/F Dijkot	5	Rail	2.140	29.61	0.592	1.500	0.296	1.481	0.296	0.296	0.296	36.507	1.825	38.332	40.632	
5	F/F Trug	15	Lynx	23.320	61.63	1.233	4.500	0.616	3.082	0.616	0.616	0.616	96.229	4.811	101.041	107.103	
6	132 KV Chak-126/SB-Liberty Power (In & Out at 220 KV Lalian)	3	Rail	7.230	19.36	0.387	1.000	0.194	0.968	0.194	0.194	0.194	29.720	1.486	31.206	33.078	
7	132 KV Chiniot Ind.-Lalian (In & out at 220 KV Lalian)	3	Rail	7.230	19.36	0.387	1.000	0.194	0.968	0.194	0.194	0.194	29.720	1.486	31.206	33.078	
8	132 KV D/C 220 KV Lalian-Ludewala (One cct In & out at Sargodha-II & other at Sargodha-III)	55	Rail	56.450	328.2	6.564	10.000	3.282	16.410	3.282	3.282	3.282	430.752	21.538	452.290	479.427	
Conversion of T/Off to In & Out arrangement/ 2nd CCt Stringing																	
1	132 KV Lalian-Barana	21	Lynx		20.41	0.408		0.204	1.021	0.204	0.204	0.204	22.655	1.133	23.788	25.215	
2	132 KV Tandlianwala-Sammundri	23	Lynx		21.81	0.436		0.218	1.091	0.218	0.218	0.218	24.209	1.210	25.420	26.945	
3	132 KV Piplan-Bhakkar	91	Lynx		86.12	1.722		0.861	4.306	0.861	0.861	0.861	95.593	4.780	100.373	106.395	
RECONDUCTORING																	
1	132 KV Chiniot Rd.-Narwala Rd. Tower Nos. 01 to 33	11	Rail	13.810	43.76	0.875	3.000	0.138	2.188	0.438	0.438	0.438	65.414	3.271	68.684	72.805	
2	220 KV Lalian-Lalian (Tower No. 1-15)	5	Rail	9.080	21.78	0.436	1.500	0.218	1.089	0.218	0.218	0.218	34.756	1.738	36.494	38.683	
Total																	
					115.430	710.330	14.207	27.000	7.103	35.517	7.103	7.103	7.103	929.396	46.470	1012.360	1073.101

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2016-17 (MILLION RS.)

PROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2016-17 (MILLION RS.)															
S#	Name of Grid Station	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Usman Gani	20	27	87.78	1.76	0.88	20.000	4.39	0.88	0.88	0.88	164.44	8.22	172.66	183.02
2	Bandala-II (Rasool Pura)	20	27	183.55	3.67	1.84	20.000	9.18	1.84	1.84	1.84	270.74	13.54	284.28	301.33
3	Mamu Kanjan	12	27	89.32	1.79	0.89	20.000	4.47	0.89	0.89	0.89	158.15	7.91	166.05	176.02
4	Dijkot	15	27	94.53	1.89	0.95	20.000	4.73	0.95	0.95	0.95	166.93	8.35	175.27	185.79
CONVERSION															
1	Trug		25	81.73	1.63	0.82	10	4.09	0.82	0.82	0.82	125.72	6.29	132.01	139.93
2	Bhabhra		25	81.73	1.63	0.82	10	4.09	0.82	0.82	0.82	125.72	6.29	132.01	139.93
EXTENSION															
1	132 KV Chak-103/RB		5	32.64	0.65	0.33		1.63	0.33	0.33	0.33	41.23	2.06	43.29	45.89
2	132 KV Khanuana		5	25.76	0.52	0.26		1.29	0.26	0.26	0.26	33.59	1.68	35.27	37.39
3	132 KV Quaidabad		5	25.76	0.52	0.26		1.29	0.26	0.26	0.26	33.59	1.68	35.27	37.39
4	132 KV Scarp Colony		5	32.64	0.65	0.33		1.63	0.33	0.33	0.33	41.23	2.06	43.29	45.89
5	132 KV Quaidabad		3	20.04	0.40	0.20		1.00	0.20	0.20	0.20	25.24	1.26	26.51	28.10
6	132 KV Chinot Ind.		3	20.04	0.40	0.20		1.00	0.20	0.20	0.20	25.24	1.26	26.51	28.10
7	132 KV Barana		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
8	132 KV Lahan		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
9	132 KV Samundri		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
10	132 KV Tandlianwala		1.5	10.06	0.20	0.10		0.50	0.10	0.10	0.10	12.67	0.63	13.30	14.10
11	132 KV Chak Jhumra		3	19.94	0.40	0.20		1.00	0.20	0.20	0.20	25.13	1.26	26.39	27.97
12	132 KV Bhakkar		1.5	10.43	0.21	0.10		0.52	0.10	0.10	0.10	13.08	0.65	13.73	14.56
13	132 KV Piplan		1.5	16.03	0.32	0.16		0.80	0.16	0.16	0.16	19.29	0.96	20.26	21.47

S#	Name of Grid Station	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB,	Material Cost	Engineering	Environment Mitigation & Reclamation	Residential/ Non Residential buildings &	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
AUGMENTATION															
1	132 KV Head Faqirani			53.83	1.08	0.54		2.69	0.54	0.54	0.54	59.75	2.99	62.74	66.50
2	132 KV Sargodha City			54.01	1.08	0.54		2.70	0.54	0.54	0.54	59.95	3.00	62.95	66.73
3	132 KV Sargodha-II			51.76	1.04	0.52		2.59	0.52	0.52	0.52	57.45	2.87	60.33	63.95
4	132 KV Small Ind. Estate			54.00	1.08	0.54		2.70	0.54	0.54	0.54	59.94	3.00	62.94	66.71
5	132 KV Piplan			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
6	132 KV Shahpur			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
7	132 KV Satiana			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
8	132 KV Kud Lathi			12.1	0.24	0.12		0.61	0.12	0.12	0.12	13.43	0.67	14.10	14.95
9	66 KV Mankera			4.63	0.09	0.05		0.23	0.05	0.05	0.05	5.14	0.26	5.40	5.72
10	66 KV Hyderabad Thal			10.64	0.21	0.11		0.53	0.11	0.11	0.11	11.81	0.59	12.40	13.14
Total		67.000	196.000	1139.430	48.338	24.169	100.000	120.844	24.169	24.169	24.169	1627.77	81.39	1709.16	1811.71

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVED PLAN YEAR 2017-18

(MILLION RS.)

NEW GRID STATIONS (132 KV)															
1	Awagat	15.000	27.000	93.9	1.88	0.94	20.00	4.70	0.94	0.94	0.94	166.23	8.31	174.54	196.11
2	College Rd. FSD	20.000	27.000	93.95	1.88	0.94	20.00	4.70	0.94	0.94	0.94	171.28	8.56	179.85	202.08
3	Silanwali Rd. Sargodha-IV	20.000	27.000	89.32	1.79	0.89	20.00	4.47	0.89	0.89	0.89	166.15	8.31	174.45	196.01
CONVERSION															
1	Adli Kot		25.000	108.23	2.16	1.08	10.00	5.41	1.08	1.08	1.08	155.14	7.76	162.89	183.03
EXTENSION															
1	132 KV Chak-126/SB		50.000	32.49	0.65	0.32		1.62	0.32	0.32	0.32	86.06	4.30	90.37	101.54
2	132 KV Shor Kot Rd.		30.000	23.38	0.47	0.23		1.17	0.23	0.23	0.23	55.95	2.80	58.75	66.01
3	132 KV Jhang-II		30.000	22.21	0.44	0.22		1.11	0.22	0.22	0.22	54.65	2.73	57.39	64.48
4	Kala Bagh		30.000	9.94	0.20	0.10		0.50	0.10	0.10	0.10	41.03	2.05	43.09	48.41
AUGMENTATION															
1	132 KV Jauharabad			61.88	1.24	0.62		3.09	0.62	0.62	0.62	68.69	3.43	72.12	81.04
2	132 KV Bandala			61.88	1.24	0.62		3.09	0.62	0.62	0.62	68.69	3.43	72.12	81.04
3	132 KV Bhowana			19.85	0.40	0.20		0.99	0.20	0.20	0.20	22.03	1.10	23.14	25.99
4	132 KV Bhabhra			19.8	0.40	0.20		0.99	0.20	0.20	0.20	21.98	1.10	23.08	25.93
R/COMPENSATION															
1	132 KV Rakh Dargan			27.04	0.54	0.27		1.35	0.27	0.27	0.27	30.01	1.50	31.52	35.41
Total		55.00	246.00	663.87	13.28	6.64	70.00	33.19	6.64	6.64	6.64	1167.90	55.39	1163.29	1307.07

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVED PLAN YEAR 2017-18

(MILLION RS.)

S#	Name of Sub Project	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environement Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated
NEW TRANSMISSION LINES (132 KV)																
1	F/F Awagat	5	Rail	8.470	29.61	0.592	1.500	0.296	1.481	0.296	0.296	0.296	42.837	2.142	44.979	50.538
2	F/F College Rd.	1	Rail	1.100	49.38	0.988	0.250	0.494	2.469	0.494	0.494	0.494	56.162	2.808	58.970	66.259
3	F/F Silanwali Rd. Sargodha	12	Lynx	14.670	48.68	0.974	2.200	0.487	2.434	0.487	0.487	0.487	70.905	3.545	74.450	83.652
4	F/F Adhi Kot	34	Lynx	38.160	108.52	2.170	10.000	1.085	5.426	1.085	1.085	1.085	168.617	8.431	177.048	198.931
5	132 KV Narwala Rd-Jhang Rd. (In & Out at 500 KV FSD West)	40	Rail	42.570	240.77	4.815	12.000	2.408	12.039	2.408	2.408	2.408	321.825	16.091	337.916	379.682
6	132 KV Jhang Rd-Factory Area (In & out at 500 KV FSD West)	40	Greely	39.670	118.1	2.362	12.000	1.181	5.905	1.181	1.181	1.181	182.761	9.138	191.899	215.618
Conversion of T/Off to In & Out arrangement/ 2nd CCT Stringing																
1	132 KV ShorKot City-Pir Mahal (T-Off F/F Shorkot Rd.)	1	Lynx		0.85	0.017		0.009	0.043	0.009	0.009	0.009	0.944	0.047	0.991	1.113
2	132 KV Jhang-Khewa (T-off F/F Jhang-II)	3	Lynx		1.55	0.031		0.016	0.078	0.016	0.016	0.016	1.721	0.086	1.807	2.030
RECONDUCTORING																
1	132 KV D.C. Narwala Rd-Jhang Rd.(Tower No. 1 to 21)	7	Rail	8.920	35.25	0.705	2.500	0.353	1.763	0.353	0.353	0.353	50.548	2.527	53.075	59.635
Total				153.560	632.710	12.654	40.450	6.327	31.636	6.327	6.327	6.327	896.318	44.816	941.134	1057.458

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHEVABLE PLAN YEAR 2018-19 (MILLION RS.)

NEW GRID STATIONS (132 KV)															
1	Bukharian	15.000	27.000	93.9	1.878	0.94	20.00	4.70	0.94	0.94	0.94	166.23	8.31	174.54	207.88
2	Sargodha-III (Sabzi Mandi)	15.000	27.000	93.90	1.88	0.94	20.00	4.70	0.94	0.94	0.94	166.23	8.31	174.54	207.88
3	Aminpur Rd.FSD	15.000	27.000	88.98	1.78	0.89	20.00	4.45	0.89	0.89	0.89	160.77	8.04	168.81	201.05
4	Darya Khan Rd. Bhakkar	15.000	27.000	88.98	1.78	0.89	20.00	4.45	0.89	0.89	0.89	160.77	8.04	168.81	201.05
EXTENSION															
1	132 KV Wan Buchran		5.000	32.50	0.65	0.33		1.63	0.33	0.33	0.33	41.08	2.05	43.13	51.37
2	132 KV Barana		3.000	65.46	1.31	0.65		3.27	0.65	0.65	0.65	75.66	3.78	79.44	94.62
3	132 KV Bhumb		3.000	65.46	1.31	0.65		3.27	0.65	0.65	0.65	75.66	3.78	79.44	94.62
4	132 KV Samundri		3.000	65.46	1.31	0.65		3.27	0.65	0.65	0.65	75.66	3.78	79.44	94.62
AUGMENTATION															
1	132 KV Kamalia			53.92	1.08	0.54		2.70	0.54	0.54	0.54	59.85	2.99	62.84	74.85
2	132 KV New Nishatabad			53.99	1.08	0.54		2.70	0.54	0.54	0.54	59.93	3.00	62.93	74.94
3	132 KV Tandlianwala			53.99	1.08	0.54		2.70	0.54	0.54	0.54	59.93	3.00	62.93	74.94
4	132 KV Chak-103/RB			53.99	1.08	0.54		2.70	0.54	0.54	0.54	59.93	3.00	62.93	74.94
5	132 KV Bhamb			12.17	0.24	0.12		0.61	0.12	0.12	0.12	13.51	0.68	14.18	16.89
6	132 KV Khewa			12.13	0.24	0.12		0.61	0.12	0.12	0.12	13.46	0.67	14.14	16.84
7	132 KV Shorkot Rd.			12.27	0.25	0.12		0.61	0.12	0.12	0.12	13.62	0.68	14.30	17.03
8	132 KV Khanuana			12.27	0.25	0.12		0.61	0.12	0.12	0.12	13.62	0.68	14.30	17.03
9	132 KV Kamal pur			12.27	0.25	0.12		0.61	0.12	0.12	0.12	13.62	0.68	14.30	17.03
Total		60.000	122.000	871.64	45.09	22.55	80.00	112.73	22.55	22.55	22.55	1229.52	61.48	1291.00	1537.58

COST OF SUB PROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2018-19 (MILLION RS.)

NEW TRANSMISSION LINES (132 KV)																
S#	Name of Sub Projects	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environment Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated
1	F/F Bukharian	2	Lynx	1.80	37.63	0.75	0.50	0.38	1.88	0.38	0.38	0.38	44.07	2.20	46.27	55.11
2	F/F Sargodha-III	2	Rail	1.95	35.47	0.71	1.60	0.35	1.77	0.35	0.35	0.35	42.92	2.15	45.07	53.68
3	F/F Aminpur	3	Lynx	2.40	25.34	0.51	1.60	0.25	1.27	0.25	0.25	0.25	32.13	1.61	33.73	40.18
4	F/F Darya Khan Rd. Bhakkar	15	Lynx	19.26	62.03	1.24	3.20	0.62	3.10	0.62	0.62	0.62	91.31	4.57	95.88	114.19
5	132 KV D/C Barana-Bhumb	40	Lynx	38.97	164.26	3.29	7.00	1.64	8.21	1.64	1.64	1.64	228.30	11.41	239.71	285.50
6	220 KV Sammundry-Gojra (In & out at Sammundry)	25	Rail	23.67	129.40	2.59	7.50	1.29	6.47	1.29	1.29	1.29	174.80	8.74	183.54	218.60
2ND CIRCUIT STRINGING																
1	132 KV 220 KV Jarawala Rd- Sammundry Rd. (T-off F/F Khanuana)	2	Rail		1.82	0.04		0.02	0.09	0.02	0.02	0.02	2.02	0.10	2.12	2.53
Total				88.05	455.95	9.12	21.40	4.56	22.80	4.56	4.56	4.56	615.55	30.78	646.33	769.78

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2019-20 (MILLION RS.)

PROJECTS UNDER TRANSMISSION EXPANSION OF OPTIMALLY ACHIEVABLE PLAN YEAR 2019-20 (MILLION RS.)															
S#	Name of Grid Station	Cost of Land	Cost of Civil works (Eq. Foundations, Trenches, CHB, Switch yard etc.)	Material Cost	Engineering	Environment Mitigation & Resettlement	Residential/ Non Residential buildings & Boundary wall	Estt. Charges	Audit & Accounts Cost	Authority Over Head	T&P Cost	Sub Total	Physical/ cost Contingency	Tentative Total Sub Project Cost	
														Un Escalated	Escalated
NEW GRID STATIONS (132 KV)															
1	Bagh T.T Singh	15.00	27.00	93.71	1.87	0.94	20.00	4.69	0.94	0.94	0.94	166.02	8.30	174.32	220.08
EXTENSION															
1	132 KV Gojra		5.00	33.43	0.67	0.33		1.67	0.33	0.33	0.33	42.11	2.11	44.21	55.82
2	132 KV Jauharabad		5.00	31.18	0.62	0.31		1.56	0.31	0.31	0.31	39.61	1.98	41.59	52.51
3	132 KV Satiana		5.00	31.18	0.62	0.31		1.56	0.31	0.31	0.31	39.61	1.98	41.59	52.51
4	132 KV Shorkot City		5.00	28.78	0.58	0.29		1.44	0.29	0.29	0.29	36.95	1.85	38.79	48.98
5	132 KV H.B Shah		5.00	28.78	0.58	0.29		1.44	0.29	0.29	0.29	36.95	1.85	38.79	48.98
6	132 KV Muridwala		1.50	10.59	0.21	0.11		0.53	0.11	0.11	0.11	13.25	0.66	13.92	17.57
7	132 KV Bhowana		1.50	10.66	0.21	0.11		0.53	0.11	0.11	0.11	13.33	0.67	14.00	17.67
8	132 KV Khewa		1.50	10.72	0.21	0.11		0.54	0.11	0.11	0.11	13.40	0.67	14.07	17.76
AUGMENTATION															
1	132 KV Kirana			55.16	1.10	0.55		2.76	0.55	0.55	0.55	61.23	3.06	64.29	81.16
2	132 KV Lalian			55.22	1.10	0.55		2.76	0.55	0.55	0.55	61.29	3.06	64.36	81.25
3	132 KV Samundri			55.18	1.10	0.55		2.76	0.55	0.55	0.55	61.25	3.06	64.31	81.19
4	132 KV Tandlianwala			55.20	1.10	0.55		2.76	0.55	0.55	0.55	61.27	3.06	64.34	81.22
5	132 KV Chak-103/RB			55.19	1.10	0.55		2.76	0.55	0.55	0.55	61.26	3.06	64.32	81.21
6	132 KV Sargodha-II			55.14	1.10	0.55		2.76	0.55	0.55	0.55	61.21	3.06	64.27	81.14
7	132 KV Chak-126/SB			54.09	1.08	0.54		2.70	0.54	0.54	0.54	60.04	3.00	63.04	79.59
8	132 KV Quaidabad			12.06	0.24	0.12		0.60	0.12	0.12	0.12	13.39	0.67	14.06	17.75
9	132 KV Trug			13.05	0.26	0.13		0.65	0.13	0.13	0.13	14.49	0.72	15.21	19.20
Total		15.00	56.50	689.32	43.98	21.99	20.00	109.94	21.99	21.99	21.99	856.65	42.83	899.48	1135.59

COST OF SUBPROJECTS UNDER TRANSMISSION EXPANSION OPTIMALLY ACHIEVABLE PLAN YEAR 2019-20 (MILLION RS.)

S#	Name of Sub Project	Length (KM)	Cond.	Civil Works (Foundations) Cost	Material Cost	Engineering Cost	Crops Compensation Cost	Environment Mitigation/ Resettlement Cost	Estt. Charges	Audit & Accounts Expenses	Authority Over Head	T&P Cost	Sub Total	Physical/ Cost Contingency	Tentative Total Sub project Cost	
															Un-Escalated	Escalated (6%)
NEW TRANSMISSION LINES (132 KV)																
1	F/F Bagh T.T Singh	15	Rail	24.67	71.13	1.42	4.50	0.71	3.56	0.71	0.71	0.71	108.12	5.41	113.53	143.33
2	132 KV SDT Bhowana-Khewa	15	L.VLN	18.56	48.63	0.97	4.50	0.49	2.43	0.49	0.49	0.49	77.04	3.85	80.89	102.13
Total				43.23	119.76	2.40	9.00	1.20	5.99	1.20	1.20	1.20	185.16	9.26	194.42	245.46

Cost Estimates Transmission Re-habilitation
TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

A. GRID STATIONS

Year	11 KV BUS COUPLER			Control Panel			Relay Panel			AC/DC Panel			Iso 132 KV		
	QT Y:	Rate	TOTA L	QT Y:	Rate	TOTA L	QT Y:	Rate	TOTA L	QTY :	Rate	TOTA L	QTY :	Rate	TOTAL
2015-16	2	1.459	2.918	8	0.382	3.056	8	0.905	7.24	2	0.772	1.544	4	1.065	4.26
2016-17	1	1.554	1.554	4	0.407	1.628	4	0.964	3.856	1	0.822	0.822	3	1.134	3.402
2017-18	-	1.655	0	5	0.434	2.17	5	1.027	5.135	1	0.876	0.876	2	1.208	2.416
2018-19	1	1.762	1.762	2	0.462	0.924	2	1.093	2.186	-	0.933	-	1	1.286	1.286
2019-20	1	1.877	1.877	2	0.492	0.984	2	1.165	2.33	-	0.993	-	1	1.370	1.370
TOTAL	5		8.111	21		8.762	21		20.747	4		3.242	11		12.734

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

A. GRID STATIONS

Year	Circuit Breaker			Current Trans:			Potential Trans:			Lightening Arrestor					
	132 KV			132 KV			132 KV 110 V			132 KV			11 KV		
	QTY :	COS T	TOTAL	QTY :	COS T	TOTAL	QTY :	COS T	TOTAL	QTY :	COS T	TOTAL	QTY :	COS T	TOTAL
2015-16	12	3.195	38.34	12	0.374	4.488	6	0.384	2.304	3	0.184	0.552	3	0.023	0.069
2016-17	6	3.403	20.418	6	0.398	2.388	3	0.409	1.227	3	0.196	0.588	3	0.025	0.075
2017-18	6	3.624	21.744	1	0.424	0.424	0	0.436	0	-	0.209	0	-	0.027	0
2018-19	2	3.859	7.718	2	0.452	0.904	0	0.464	0	3	0.223	0.669	3	0.028	0.084
2019-20	2	4.110	8.22	-	0.481	0	0	0.495	0	-	0.237	0	-	0.030	0
TOTAL	28		96.44	21		8.204	9		3.531	9		1.809	9		0.228

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

A. GRID STATIONS

Year	Battery Charger			Battery Bank			11 KV Panels IN COMING			11 KV Panels OUT GOING		
	110 VD.C			110 VD.C								
	QTY:	COST	TOTAL	QTY:	COST	TOTAL	QTY:	COST	TOTAL	QTY:	COST	TOTAL
2015-16	3	0.186	0.558	2	0.285	0.57	12	1.331	15.972	60	1.065	63.9
2016-17	1	0.198	0.198	0	0.304	0	8	1.418	11.344	45	1.134	51.03
2017-18	0	0.211	0	1	0.324	0.324	2	1.510	3.02	13	1.208	15.704
2018-19	1	0.225	0.225	0	0.345	0	1	1.608	1.608	2	1.286	2.572
2019-20	0	0.240	0	0	0.367	0	1	1.713	1.713	2	1.370	2.74
TOTAL	5		0.981	3		0.894	24		33.657	122		135.946

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

A. GRID STATIONS

YEAR	11 KV C.TS			DISTANCE RELAYS			DIFFERENTIAL RELAYS			OVERC CURRENT RELAYS		
	QTY.	COST	TOTAL	QTY.	COST	TOTAL	QTY.	COST	TOTAL	QTY.	COST	TOTAL
2015-16	12	0.050	0.6	6	0.600	3.6	2	0.300	0.6	3	0.100	0.3
2016-17	6	0.053	0.318	2	0.639	1.278	1	0.320	0.32	1	0.107	0.107
2017-18	6	0.057	0.342	1	0.681	0.681	0	0.340	0	0	0.113	0
2018-19	6	0.060	0.36	1	0.725	0.725	1	0.362	0.362	2	0.121	0.242
2019-20	6	0.064	0.384	2	0.772	1.544	1	0.386	0.386	2	0.129	0.258
TOTAL	36		2.004	12		7.828	5		1.668	8		0.907

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

A. GRID STATIONS

YEAR	TENTATIVE COST (MILLION RS.)		
	Local	FEC	Total
2015-16	101.20	49.39	150.59
2016-17	73.12	27.435	100.55
2017-18	28.256	24.584	52.84
2018-19	10.153	10.577	20.73
2019-20	11.136	10.674	21.81
TOTAL	223.865	122.66	346.52

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

COST OF DISMANTLED MATERIAL PAGE 06 OF 13

A. GRID EQUIPMENT (Rehabilitation)				
Year	DESCRIPTION OF EQUIPMENT	QTY	RATE (Rs)	AMOUNT (M.Rs)
2015-16	CIRCUIT BREAKER	12	5000	0.06
2015-16	CURRENT TRANSFORMER	12	10000	0.12
2015-16	POTENTIAL TRANSFORMER	06	10000	0.06
2015-16	LIGHTING ARRESTOR 132 KV	03	0	0
2015-16	LIGHTING ARRESTOR 11 KV	03	0	0
2015-16	BATTERY CHARGER	03	3000	0.009
2015-16	BATTERY BANK	02	10000	0.02
2015-16	11 KV INCOMING PANEL	12	12500	0.15
2015-16	11 KV OUT GOING PANEL	60	12500	0.75
2015-16	11 KV BUS COUPLER	02	17500	0.035
2015-16	CONTROL PANEL	08	5000	0.04
2015-16	RELAY PANEL	08	5000	0.04
2015-16	AC / DC PANEL	02	10000	0.02
2015-16	ISOLATOR	04	5000	0.02
2015-16	11 KV C.Ts	12	4000	0.048
2015-16	Distance Relays	06	5000	0.03
2015-16	Differential Relays	02	4000	0.008
2015-16	Over Current relays	03	2000	0.006
SUB TOTAL				1.416
2016-17	CIRCUIT BREAKER	06	5000	0.03
2016-17	CURRENT TRANSFORMER	06	10000	0.06
2016-17	POTENTIAL TRANSFORMER	03	10000	0.03
2016-17	LIGHTING ARRESTOR 132 KV	03	0	0
2016-17	LIGHTING ARRESTOR 11 KV	03	0	0
2016-17	BATTERY CHARGER	1	3000	0.003

year	DESCRIPTION OF EQUIPMENT	QTY	RATE (Rs)	
2016-17	BATTERY BANK	0	10000	0
2016-17	11 KV INCOMING PANEL	8	12500	0.1
2016-17	11 KV OUT GOING PANEL	45	12500	0.5625
2016-17	11 KV BUS COUPLER	1	17500	0.0175
2016-17	CONTROL PANEL	04	5000	0.02
2016-17	RELAY PANEL	04	5000	0.02
2016-17	AC / DC PANEL	01	10000	0.01
2016-17	ISOLATOR	03	5000	0.015
2016-17	11 KV C.TS	06	4000	0.024
2016-17	Distance Relays	02	5000	0.01
2016-17	Differential Relays	01	4000	0.004
2016-17	Over Current relays	01	2000	0.006
SUB TOTAL				0.912
2017-18	CIRCUIT BREAKER	06	5000	0.03
2017-18	CURRENT TRANSFORMER	01	10000	0.01
2017-18	POTENTIAL TRANSFORMER	0	10000	0
2017-18	LIGHTING ARRESTOR 132 KV	0	0	0
2017-18	LIGHTING ARRESTOR 11 KV	0	0	0
2017-18	BATTERY CHARGER	0	3000	0
2017-18	BATTERY BANK	01	10000	0.01
2017-18	11 KV INCOMING PANEL	02	12500	0.025
2017-18	11 KV OUT GOING PANEL	13	12500	0.1625
2017-18	11 KV BUS COUPLER	0	17500	0
2017-18	CONTROL PANEL	05	5000	0.025
2017-18	RELAY PANEL	05	5000	0.025
2017-18	AC / DC PANEL	01	10000	0.01

year	DESCRIPTION OF EQUIPMENT	QTY	RATE (Rs)	AMOUNT (M.Rs)
2017-18	ISOLATOR	02	5000	0.01
2017-18	11 KV C.Ts	06	4000	0.024
2017-18	Distance Relays	01	5000	0.005
SUB TOTAL				0.336
2018-19	CIRCUIT BREAKER	02	5000	0.01
2018-19	CURRENT TRANSFORMER	02	10000	0.02
2018-19	POTENTIAL TRANSFORMER	0	10000	0
2018-19	LIGHTING ARRESTOR 132 KV	03	0	0
2018-19	LIGHTING ARRESTOR 11 KV	03	0	0
2018-19	BATTERY CHARGER	01	3000	0.003
2018-19	BATTERY BANK	0	10000	0
2018-19	11 KV INCOMING PANEL	01	12500	0.0125
2018-19	11 KV OUT GOING PANEL	02	12500	0.025
2018-19	11 KV BUS COUPLER	01	17500	0.0175
2018-19	CONTROL PANEL	02	5000	0.01
2018-19	RELAY PANEL	02	5000	0.01
2018-19	AC / DC PANEL	01	10000	0.01
2018-19	ISOLATOR	01	5000	0.005
2018-19	11 KV C.Ts	06	4000	0.024
2018-19	Distance Relays	01	5000	0.005
2018-19	Differential Relays	01	4000	0.004
2018-19	Over Current relays	02	2000	0.004
SUB TOTAL				0.16

year	DESCRIPTION OF EQUIPMENT	QTY	RATE (Rs)	AMOUNT (M.Rs)
2019-20	CIRCUIT BREAKER	02	5000	0.01
2019-20	CURRENT TRANSFORMER	0	10000	0
2019-20	POTENTIAL TRANSFORMER	0	10000	0
2019-20	LIGHTING ARRESTOR 132 KV	0	0	0
2019-20	BATTERY CHARGER	0	3000	0
2019-20	11 KV INCOMING PANEL	01	12500	0.0125
2019-20	11 KV OUT GOING PANEL	02	12500	0.025
2019-20	11 KV BUS COUPLER	01	17500	0.0175
2019-20	CONTROL PANEL	02	5000	0.01
2019-20	RELAY PANEL	02	5000	0.01
2019-20	AC / DC PANEL	0	10000	0
2019-20	ISOLATOR	01	5000	0.005
2019-20	11 KV C.Ts	06	4000	0.024
2019-20	Distance Relays	02	5000	0.01
2019-20	Differential Relays	01	4000	0.004
2019-20	Over Current relays	02	2000	0.004
SUB TOTAL				0.132
G.TOTAL				1.54

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

B. TRANSMISSIONN LINES:

Sr. No.	Transmission Line	Type	Conductor Name		Length (km)	Estimated Cost (Million Rs.)	YEAR
			Existing	Proposed			
1	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 168 to 240	D/C	Zigolo	Rail	32	256	2015-16
2	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 46-168	D/C	Zigolo	Rail	34	272	2016-17
3	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 259-299	D/C	Zigolo	Rail	10	80	2017-18
4	132 kV Nishatabad- Chak-103/RB	D/C	Zigolo	Rail	20	160	
5	132 kV Nishatabad-T-Scarp Colony	D/C	Zigolo	Rail	8	64	2018-19
6	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 1 to 45)	D/C	Zigolo	Rail	15	120	
TOTAL						952	

TRANSMISSIONREHABILITATION (FESCO) COST ESTIMATES

A. TRANSMISSION LINES: (DISMANTLED MATERIAL)

SR. NO.	NAME OF SECTION	TYPE	SIZE OF COND	LENGTH (KM)	COST OF CONDUCTOR WITH HARDWARE	YEAR
1	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 168 to 240	D/C	Zigolo	32	3.2	2016
2	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 46-168	D/C	Zigolo	34	3.4	2017
3	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 259-299	D/C	Zigolo	10	1.0	2017
4	132 kV Nishatabad- Chak-103/RB	D/C	Zigolo	20	2.0	
5	132 kV Nishatabad-T-Scarp Colony	D/C	Zigolo	8	0.8	2018
6	132 kV Nishatabad-Ludewala (In & out at Liberty and different G/Stations in between) From Tower No. 1 to 45)	D/C	Zigolo	15	1.5	
TOTAL					11.9	

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES
COST OF DISMANTLED MATERIAL

S.NO	Description	2015-16	2016-17	2017-18	2018-19	2019-20	Total
1	Grid Stations- Equipments	1.416	0.912	0.336	0.16	0.132	2.96
2	Transmission Lines	-	3.2	3.4	3	2.3	11.9
Total Cost Dismantled Material		1.416	4.112	3.736	3.16	2.432	14.86

TRANSMISSION REHABILITATION (FESCO) COST ESTIMATES

DESCRIPTION	ESTIMATED COST (MILLION RS.)					
	2015-16	2016-17	2017-18	2018-19	2019-20	Total
T/L REHABILITATION (Un Escalated)	0	256	272	240	184	952
GRID REHABILITATION (Un Escalated)	150.87	94.42	46.57	17.90	16.95	326.72
TRANSMISSION REHABILITATION UN ESCALATED	150.87	350.42	318.57	257.90	200.95	1,278.72
ESCALATION FACTOR	1.000	1.065	1.134	1.208	1.286	
REHABILITATION ESCALATED	150.87	373.20	361.33	311.54	258.51	1,455.45
LESS COST OF DISMANTELED MATERIAL	1.42	4.11	3.74	3.16	2.43	14.86
NET REHABILITATION ESCALATED	149.45	369.09	357.59	308.38	256.08	1,440.59

Annex-L

DETAIL OF COST OF DOP & ELR (BEST CASE)

Cost Estimates Distribution Expansion
DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
A	<u>New H.T Line</u>							
1	Urban Areas (45%)							
a.	Osprey (30%)	KM	41341.71	44786.85	49380.38	53973.9	57419.04	246901.9
b.	Dog (40%)	KM	33172.58	36701.57	40230.57	43759.57	47288.57	201152.9
c.	Rabbit (30%)	KM	20288.77	67133.29	45249.59	48073.12	51640.56	232385.3
	Sub-Total		94803.06	148621.7	134860.5	145806.6	156348.2	680440.1
2	Rural Areas (55%)							
a.	Dog (40%)	KM	27916.62	30804.54	33211.15	36580.4	38987	167499.7
b.	Rabbit (60%)	KM	29501.58	32553.47	35266.25	38657.23	41370.02	177348.5
	Sub-Total		57418.2	63358.01	68477.4	75237.63	8057.03	344848.3
	Total of H.T Line (1+2)		152221.3	211979.7	203337.9	221044.2	236705.2	1025288
B	<u>New L.T Line,</u>							
1	3-Phase (80%)							
a.	AAC Wasp (40%)	KM	26,228.28	27,771.12	29,313.96	30,856.80	32,913.92	147,084.08
b.	AAC Ant (60%)	KM	25,998.08	27,708.48	29,076.80	30,787.20	32,839.68	146,410.24
	Sub-Total		52,226.36	55,479.60	58,390.76	61,644.00	65,753.60	293,494.32
2	1-Phase (20%)							
	AAC Ant (100%)	KM	8,248.67	8,764.21	9,279.76	9,795.30	10,310.84	46,398.78
	Total of L.T Line (1+2))		60,475.03	64,243.81	67,670.52	71,439.30	76,064.44	339,893.10
	Sub-Total of H.T/L.T Line (A+B)		212696.33	276223.51	271008.42	292483.5	312769.64	1365181.1

DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
C	<u>Sub-Stations</u>							
a.	10 KVA	NO.	67118.72	67118.72	74559.82	82000.92	82000.92	372799.11
b.	15 KVA	NO.	60677.75	60851.12	69519.37	78187.62	78187.62	347423.46
c.	25 KVA	NO.	422823.96	423034.95	528529.95	528529.95	634024.95	2536943.76
d.	50 KVA	NO.	270532.99	282424.55	297289.00	312153.45	327017.90	1489417.89
e.	100 KVA	NO.	154990.15	155432.98	177574.43	199715.88	199715.88	887429.32
f.	200 KVA	NO.	92863.40	96179.95	99496.50	102813.05	106792.91	498145.81
g.	400 KVA	NO.	13705.80	15990.10	17132.25	18274.40	19416.55	84519.10
h.	630 KVA	NO.	5774.36	7217.95	7217.95	7217.95	8661.53	36089.73
	Sub-Total		1088487.13	1108250.31	1271319.26	1328893.21	1455818.26	6252768.17
D	<u>Service Connections</u>							
a.	Single Phase	NO.	509640.00	529240.00	548840.00	569640.00	581664.00	2739024.00
b.	Three Phase	NO.	336810.00	443310.00	594810.00	786810.00	1056720.00	3218460.00
c.	TOU Meter (MDI)	NO.	4485.01	4485.01	4485.01	4485.01	4485.01	22425.04
	Sub-Total		850935.01	977035.01	1148135.01	1360935.01	1642869.01	5979909.04
E	<u>Reliability Equipment</u>							
a.	Sectionlizers	NO.	56000	63000	56000	70000	84000	329000
b.	Auto Reclouser	NO.	20000	20000	20000	22000	24000	106000
c.	Voltage Regulator (Single Phase Unit)	NO.	15000	15000	15000	15000	15000	75000
d.	Fault Locator	NO.	3200	4000	4000	5000	5500	21700
	Sub Total		94200	102000	95000	112000	128500	531700
F	Total of Sub-Stations & Connections (C+D+E)		2033622	2187285	2514454	2801828	3227187	12764377
G	Total of H.T/L.T Line (A+B, Page -1)		212696.33	276223.51	271008.42	292483.5	312769.64	1365181.1
H	Total Cost of Material (F + G)		2246318	2463509	2785462	3094312	3539957	14129558
I	Installation Charges (@ 8%)		179705	197081	222837	247545	283197	1130365
J	Total Cost of Construction (G+H)		2426024	2660589	3008299	3341856	3823153	15259923
K	Cost To Be Recovered From Consumers (Page-4)		2076007.796	2255518.997	2588793.765	2871789.628	3293104.308	13085214.5
L	Net Cost of Construction (I - J)		350016.204	405070.003	419505.235	470066.372	530048.692	2174708.5
M	Escalation Factor ((@ 6.5% per Annum)		1.00	1.07	1.13	1.21	1.29	
N	Escalated Cost of Construction (K + L)		350016.204	433424.9032	474040.9156	568780.3101	683762.8127	2510025.15

DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
H	COST RECOVERABLE FROM CONSUMERS:							
1)	New H.T Line							
a)	Urban Areas (45%)							
i)	Osprey (30%)	KM	20670.8565	22393.4235	24690.19	26986.95	28709.52	123450.9
ii)	Dog (40%)	KM	16586.2935	18350.787	20115.29	21879.78	23644.29	100576.4
iii)	Rabbit (30%)	KM	10144.386	33566.652	22624.8	24036.56	25820.29	116192.7
	Sub-Total		47401.536	74310.8625	67430.28	72903.3	78174.09	340220
b)	Rural Areas (55%)							
i)	Dog (40%)	KM	13958.3115	15402.2715	16605.58	18290.2	19493.5	83749.86
ii)	Rabbit (60%)	KM	14750.7885	16276.7325	17633.12	19328.62	20685.01	88674.27
	Sub-Total		28709.1	31679.004	34238.7	37618.82	40178.51	172424.1
	Total of H.T Line (a+b)		76110.6255	105989.8665	101669	110522.1	118352.6	512644.2
2)	New L.T Line,							
a)	3-Phase (80%)							
i)	AAC Wasp (40%)	KM	26,228.28	27,771.12	29,313.96	30,856.80	32,913.92	147,084.08
ii)	AAC Ant (60%)	KM	25,998.08	27,708.48	29,076.80	30,787.20	32,839.68	146,410.24
	Sub-Total		52,226.36	55,479.60	58,390.76	61,644.00	65,753.60	293,494.32
b)	1-Phase (20%)							
1)	AAC Ant (100%)	KM	8,248.67	8,764.21	9,279.76	9,795.30	10,310.84	46,398.78
	Total of L.T Line (a+b))		60,475.03	64,243.81	67,670.52	71,439.30	76,064.44	339,893.10
	Sub-Total of H.T/L.T Line (1+2)		136585.6555	170233.6765	169339.495	181961.408	194417.038	852537.267

DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
3	<u>Sub-Stations</u>							
a.	10 KVA	NO.	67118.72	67118.72	74559.82	82000.92	82000.92	372799.11
b.	15 KVA	NO.	60677.75	60851.12	69519.37	78187.62	78187.62	347423.46
c.	25 KVA	NO.	422823.96	423034.95	528529.95	528529.95	634024.95	2536943.76
d.	50 KVA	NO.	270532.99	282424.55	297289.00	312153.45	327017.90	1489417.89
e.	100 KVA	NO.	154990.15	155432.98	177574.43	199715.88	199715.88	887429.32
f.	200 KVA	NO.	92863.40	96179.95	99496.50	102813.05	106792.91	498145.81
G	400 KVA	NO.	13705.80	15990.10	17132.25	18274.40	19416.55	84519.10
h	630 KVA	NO.	5774.36	7217.95	7217.95	7217.95	8661.53	36089.73
	Sub-Total		1088487.13	1108250.31	1271319.26	1328893.21	1455818.26	6252768.17
4	<u>Service Connections</u>							
a.	Single Phase	NO.	509640.00	529240.00	548840.00	569640.00	581664.00	2739024.00
b.	Three Phase	NO.	336810.00	443310.00	594810.00	786810.00	1056720.00	3218460.00
c.	L.T TOU Meter	NO.	4485.01	4485.01	4485.01	4485.01	4485.01	22425.04
	Sub-Total		850935.01	977035.01	1148135.01	1360935.01	1642869.01	5979909.04
Sub-Total of H.T/L.T Line (1+2)			136585.6555	170233.6765	169339.495	181961.408	194417.038	852537.267
Sub-Total of Sub-Stations & Service Connections (3+4)			1939422.14	2085285.32	2419454.27	2689828.22	3098687.27	12232677.21
Total Cost To Be Recovered From Consumers			2076007.796	2255518.997	2588793.765	2871789.628	3293104.308	13085214.5

Cost Estimates Distribution Re-habilitation
DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
A	<u>137 11 KV FEEDERS</u>							
1	New 11 KV Line							
a.	Osprey	KM	9188	11025	12863	14700	16538	64314
b.	Dog	KM	21600	25920	30240	34560	38880	151200
c.	Rabbit	KM	625	750	875	1000	1125	4375
	Sub-Total		31413	37695	43978	50260	56543	219889
2	11 KV Line Reconductoring							
a.	Osprey	KM	11025	13475	15925	18375	20825	79625
b.	Dog	KM	12150	14850	17550	20250	22950	87750
c.	Rabbit	KM	3375	4125	4875	5625	6375	24375
	Sub-Total		26550	32450	38350	44250	50150	191750
3	11KV Capacitors							
a.	Fixed 11 KV 450 KVAR	NO.	0	0	0	0	0	0
	Sub-Total		0	0	0	0	0	0
4	11 KV Panels	NO.	11396	14504	17612	20720	23828	88060
5	Replacement of Earthing	NO.	0	0	0	0	0	0
6	Sectionalizers (Manual Type)	NO.	0	0	0	0	0	0
7	11KV 500 MCM XLPE Cable	KM	2816	3344	3872	4400	4927	19359
	Total Cost of HT Feeders (Item 1 To 7)		72175	87993	103812	119630	135448	519058

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
B	4000 LT PROPOSALS							
8	Replacement of Over Loaded T/F							
a.	50 KVA	NO.	34294	40010	45725	51441	57157	22862
b.	100 KVA	NO.	49900	58216	66533	74850	83166	33266
c.	200 KVA	NO.	62746	62746	62746	62746	62746	31373
	Sub-Total		146940	160972	175004	189037	203069	87502
9	New 11 KV Lines							
a.	Dog (Conversion LT Feeders)	KM	2000	2250	2500	2750	3000	12500
b.	Rabbit (Conversion LT Feeders)	KM	0	0	0	0	0	0
	Sub-Total		2000.0	2250.0	2500.0	2750.0	3000.0	12500.0
10	Replacement of Damaged/Burnt Transformers							
a.	50 KVA	NO.	34294	40010	45725	51441	57157	22862
b.	100 KVA	NO.	99800	99800	116433	133066	149699	59879
c.	200 KVA	NO.	21961	25098	25098	25098	28235	12549
	Sub-Total		156055	164908	187256	209605	235091	95291
11	New LT Lines							
a.	3-Phase Wasp line	K.M	17600	19360	21120	22880	24640	10560
b.	3-Phase Ant line	K.M	60800	68800	76800	84800	92800	38400
c.	1-Phase Ant line	K.M	2400	2400	3200	3200	4800	1600
	Sub-Total		80800	90560	101120	110880	122240	50560
12	LT LINE RECONDUCTORING							
a.	3-Phase Wasp line	K.M	3696	3696	3696	3696	3696	1848
b.	3-Phase Ant line	K.M	720	720	720	720	720	360
	Sub-Total		4416	4416	4416	4416	4416	2208

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
13	Energy Meters (Static)							
a.	Single Phase	No.	147000	168000	189000	210000	231000	945000
b.	Three Phase	No.	84800	106000	127200	116600	95400	530000
	Sub-Total		231800	274000	316200	326600	326400	1475000
14	PVC Cables							
	<u>A. For Customers</u>							
a.	Twin Core 7/052	K.M	8580	9555	10530	11505	12480	52650
b.	Four Core 19/0/052	K.M	4150	4150	4980	5810	5810	24900
	<u>B. For Sub-Mains</u>							
a.	Four Core 19/0.083	K.M	90	90	90	135	135	540
b.	Four Core 19/0.052	K.M	664	830	996	996	1162	4648
	Sub-Total		13484	14625	16596	18446	19587	82738
15	Connectors							
a.	1-Phase (T-110)	NO.	3900	4225	4550	5200	55250	73125
a.	1-Phase T-150)	NO.	408	476	544	612	680	2720
	Sub-Total		4308	4701	5094	5812	55930	75845
16	Replacement of D-Fitting	NO.	0	0	0	0	0	0
C	Total (Item 8 to 16) Cost of LT Proposals (P/2&3)		639803	716432	808186	867546	969733	4001700
D	Total (Item 1 to 7) Cost of HT Proposals (P/1)		72175	87993	103812	119630	135448	519058

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
17	Tools & Plants	Lot	950	1000	1100	1150	1179	5379
18.	Recording Meters/ Personnel Computers	No.	330	319	319	274	274	1516
E	Total (Item 17 to 18)		1280	1319	1419	1424	1453	6895
F	Total Cost of Material (C+D+E)		713258	805744	913417	988600	1106634	4527653
G	Installation Charges (8%)		57060.6	64459.5	73073.4	79088	88530.7	362212
H	Store Charges (12%) (on F) already included		0	0	0	0	0	0
I	Total Cost of Construction		770319	870204	986490	1067688	1195165	4889865

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No	Description	Unit	COST (RS. IN THOUSANDS)					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
J	<u>LESS VALUE OF DISMANTLED MATERIAL</u>							
1	<u>11KV Lines</u>							
a.	Dog (New Osprey)	K.M	937	1130	1350	1543	1764	6724
b.	Rabbit (New Dog)	K.M	1260	1545	1830	2115	2385	9135
c.	Gopher (New Rabbit)	K.M	378	460	542	623	712	2715
	Sub-Total		2575	3135	3722	4281	4861	18574
2	<u>LT Lines</u>							
a.	Ant (New Wasp)	K.M	39	39	39	39	39	195
b	Gnat (New Ant)	K.M	10	10	10	10	10	50
	Sub-Total		49	49	49	49	49	245
3	<u>Transformers</u>							
a.	25 KVA (New 50 KVA) Replacement	NO.	4785	5583	6380	7178	7975	31901
b.	50 KVA (New 100 KVA) Replacement	NO.	6698	7814	8930	10046	11163	44651
c.	100 KVA (New 200 KVA) Replacement	NO.	6720	6720	6720	6720	6720	33600
	Sub-Total		18203	20117	22030	23944	25858	110152
	Total Value of Dismantled Material		20827	23301	25801	28274	30768	128971
K	NetCost of Distribution Rehabilitation (I - J)		749492	846903	960689	1039414	1164397	4760894
L	Escalation Factor (@ 6.5% Per Annum)		1.00	1.07	1.13	1.21	1.29	
M	EscalatedCost of Distribution Rehabilitation		749,492	901,952	1,089,637	1,255,560	1,497,958	5,494,598

Annex-M

DETAIL OF COST OF DOP & ELR (OPTIMALLY ACHIEVABLE CASE)

Cost Estimates Distribution Expansio
DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					
			2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
A	<u>New H.T Line</u>							
1	Urban Areas (45%)							
a.	Osprey (30%)	KM	39,373.06	42,654.14	47,028.93	51,403.71	54,684.80	235,144.64
b.	Dog (40%)	KM	31,592.93	34,953.88	38,314.83	41,675.78	45,036.73	191,574.15
c.	Rabbit (30%)	KM	19,322.64	63,936.47	43,094.85	45,783.92	49,181.49	221,319.37
	Sub-Total		90,288.63	141,544.49	128,438.61	138,863.41	148,903.02	648,038.16
2	Rural Areas (55%)							
a.	Dog (40%)	KM	26,587.26	29,337.66	31,629.67	34,838.48	37,130.48	159,523.55
b.	Rabbit (60%)	KM	28,096.74	31,003.30	33,586.90	36,816.41	39,400.02	168,903.37
	Sub-Total		54,684.00	60,340.96	65,216.57	71,654.89	76,530.50	328,426.92
	Total of H.T Line (1+2)		144,972.62	201,885.45	193,655.19	210,518.30	225,433.52	976,465.08
B	<u>New L.T Line,</u>							
1	3-Phase (80%)							
a.	AAC Wasp (40%)	KM	26,228.28	27,771.12	29,313.96	30,856.80	32,913.92	147,084.08
b.	AAC Ant (60%)	KM	25,998.08	27,708.48	29,076.80	30,787.20	32,839.68	146,410.24
	Sub-Total		52,226.36	55,479.60	58,390.76	61,644.00	65,753.60	293,494.32
2	1-Phase (20%)							
	AAC Ant (100%)	KM	8,248.67	8,764.21	9,279.76	9,795.30	10,310.84	46,398.78
	Total of L.T Line (1+2))		60,475.03	64,243.81	67,670.52	71,439.30	76,064.44	339,893.10
	Sub-Total of H.T/L.T Line (A+B)		205,447.65	266,129.26	261,325.71	281,957.60	301,497.96	1,316,358.18

DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
C	<u>Sub-Stations</u>							
a.	10 KVA	NO.	67118.72	67118.72	74559.82	82000.92	82000.92	372799.11
b.	15 KVA	NO.	60677.75	60851.12	69519.37	78187.62	78187.62	347423.46
c.	25 KVA	NO.	422823.96	423034.95	528529.95	528529.95	634024.95	2536943.76
d.	50 KVA	NO.	270532.99	282424.55	297289.00	312153.45	327017.90	1489417.89
e.	100 KVA	NO.	154990.15	155432.98	177574.43	199715.88	199715.88	887429.32
f.	200 KVA	NO.	92863.40	96179.95	99496.50	102813.05	106792.91	498145.81
g.	400 KVA	NO.	13705.80	15990.10	17132.25	18274.40	19416.55	84519.10
h.	630 KVA	NO.	5774.36	7217.95	7217.95	7217.95	8661.53	36089.73
	Sub-Total		1088487.13	1108250.31	1271319.26	1328893.21	1455818.26	6252768.17
D	<u>Service Connections</u>							
a.	Single Phase	NO.	509640.00	529240.00	548840.00	569640.00	581664.00	2739024.00
b.	Three Phase	NO.	336810.00	443310.00	594810.00	786810.00	1056720.00	3218460.00
c.	TOU Meter (MDI)	NO.	4485.01	4485.01	4485.01	4485.01	4485.01	22425.04
	Sub-Total		850935.01	977035.01	1148135.01	1360935.01	1642869.01	5979909.04
E	Total of Sub-Stations & Connections (C+D)		1939422.14	2085285.32	2419454.27	2689828.22	3098687.27	12232677.21
F	Total of H.T/L.T Line (A+B, Page -1)		205447.65	266129.26	261325.71	281957.60	301497.96	1316358.18
G	Total Cost of Material (E + F)		2144869.79	2351414.58	2680779.98	2971785.82	3400185.23	13549035.39
H	Installation Charges (@ 8%)		171589.58	188113.17	214462.40	237742.87	272014.82	1083922.83
I	Total Cost of Construction (G+H)		2316459.37	2539527.75	2895242.38	3209528.69	3672200.05	14632958.22
J	Cost To Be Recovered From Consumers (Page-4)		2,072,383.48	2,250,471.86	2,583,952.39	2,866,526.67	3,287,468.47	13,060,802.85
K	Net Cost of Construction (I - J)		244,075.89	289,055.89	311,289.99	343,002.02	384,731.58	1,572,155.37
L	Escalation Factor ((@ 6.5% per Annum)		1.00	1.07	1.13	1.21	1.29	
M	Escalated Cost of Construction (K + L)		244,076	307,845	353,073	414,329	494,944	1,814,267

DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
H	COST RECOVERABLE FROM CONSUMERS:							
1)	New H.T Line							
a)	Urban Areas (45%)							
i)	Osprey (30%)	KM	19686.53	21327.07	23514.47	25701.86	27342.40	117572.32
ii)	Dog (40%)	KM	15796.47	17476.94	19157.42	20837.89	22518.37	95787.08
iii)	Rabbit (30%)	KM	9661.32	31968.24	21547.43	22891.96	24590.75	110659.69
	Sub-Total		45144.32	70772.25	64219.31	69431.71	74451.51	324019.08
b)	Rural Areas (55%)							
i)	Dog (40%)	KM	13293.63	14668.83	15814.835	17419.24	18565.24	79761.775
ii)	Rabbit (60%)	KM	14048.37	15501.65	16793.45	18408.205	19700.01	84451.685
	Sub-Total		27342	30170.48	32608.285	35827.445	38265.25	164213.46
	Total of H.T Line (a+b)		72486.31	100942.73	96827.595	105259.15	112716.76	488232.54
2)	New L.T Line,							
a)	3-Phase (80%)							
i)	AAC Wasp (40%)	KM	26,228.28	27,771.12	29,313.96	30,856.80	32,913.92	147,084.08
ii)	AAC Ant (60%)	KM	25,998.08	27,708.48	29,076.80	30,787.20	32,839.68	146,410.24
	Sub-Total		52,226.36	55,479.60	58,390.76	61,644.00	65,753.60	293,494.32
b)	1-Phase (20%)							
1)	AAC Ant (100%)	KM	8,248.67	8,764.21	9,279.76	9,795.30	10,310.84	46,398.78
	Total of L.T Line (a+b))		60,475.03	64,243.81	67,670.52	71,439.30	76,064.44	339,893.10
	Sub-Total of H.T/L.T Line (1+2)		132,961.34	165,186.54	164,498.12	176,698.45	188,781.20	828,125.64

DISTRIBUTION EXPANSION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
3	<u>Sub-Stations</u>							
a.	10 KVA	NO.	67118.72	67118.72	74559.82	82000.92	82000.92	372799.11
b.	15 KVA	NO.	60677.75	60851.12	69519.37	78187.62	78187.62	347423.46
c.	25 KVA	NO.	422823.96	423034.95	528529.95	528529.95	634024.95	2536943.76
d.	50 KVA	NO.	270532.99	282424.55	297289.00	312153.45	327017.90	1489417.89
e.	100 KVA	NO.	154990.15	155432.98	177574.43	199715.88	199715.88	887429.32
f.	200 KVA	NO.	92863.40	96179.95	99496.50	102813.05	106792.91	498145.81
G	400 KVA	NO.	13705.80	15990.10	17132.25	18274.40	19416.55	84519.10
h	630 KVA	NO.	5774.36	7217.95	7217.95	7217.95	8661.53	36089.73
	Sub-Total		1088487.13	1108250.31	1271319.26	1328893.21	1455818.26	6252768.17
4	<u>Service Connections</u>							
a.	Single Phase	NO.	509640.00	529240.00	548840.00	569640.00	581664.00	2739024.00
b.	Three Phase	NO.	336810.00	443310.00	594810.00	786810.00	1056720.00	3218460.00
c.	L.T TOU Meter	NO.	4485.01	4485.01	4485.01	4485.01	4485.01	22425.04
	Sub-Total		850935.01	977035.01	1148135.01	1360935.01	1642869.01	5979909.04
Sub-Total of H.T/L.T Line (1+2)			402920	402920	1939422.14	2085285.32	2419454.27	2689828.22
Sub-Total of Sub-Stations & Service Connections (3+4)			1939422.14	2085285.32	2419454.27	2689828.22	3098687.27	12232677.21
Total Cost To Be Recovered From Consumers			2,072,383.48	2,250,471.86	2,583,952.39	2,866,526.67	3,287,468.47	13,060,802.85

Cost Estimates Distribution Re-habilitation
DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
A	<u>137 11 KV FEEDERS</u>							
1	New 11 KV Line							
a.	Osprey	KM	9188	11025	12863	14700	16538	64314
b.	Dog	KM	21600	25920	30240	34560	38880	151200
c.	Rabbit	KM	625	750	875	1000	1125	4375
	Sub-Total		31413	37695	43978	50260	56543	219889
2	11 KV Line Reconductoring							
a.	Osprey	KM	11025	13475	15925	18375	20825	79625
b.	Dog	KM	12150	14850	17550	20250	22950	87750
c.	Rabbit	KM	3375	4125	4875	5625	6375	24375
	Sub-Total		26550	32450	38350	44250	50150	191750
3	11KV Capacitors							
a.	Fixed 11 KV 450 KVAR	NO.	0	0	0	0	0	0
	Sub-Total		0	0	0	0	0	0
4	11 KV Panels	NO.	11396	14504	17612	20720	23828	88060
5	Replacement of Earthing	NO.	0	0	0	0	0	0
6	Sectionalizers (Manual Type)	NO.	0	0	0	0	0	0
7	11KV 500 MCM XLPE Cable	KM	2816	3344	3872	4400	4927	19359
	Total Cost of HT Feeders (Item 1 To 7)		72175	87993	103812	119630	135448	519058

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
B	4000 LT PROPOSALS							
8	Replacement of Over Loaded T/F							
a.	50 KVA	NO.	34294	40010	45725	51441	57157	228627
b.	100 KVA	NO.	49900	58216	66533	74850	83166	332665
c.	200 KVA	NO.	62746	62746	62746	62746	62746	313730
	Sub-Total		146940	160972	175004	189037	203069	875022
9	New 11 KV Lines							
a.	Dog (Conversion LT Feeders)	KM	2000	2250	2500	2750	3000	12500
b.	Rabbit (Conversion LT Feeders)	KM	0	0	0	0	0	0
	Sub-Total		2000.0	2250.0	2500.0	2750.0	3000.0	12500.0
10	Replacement of Damaged/Burnt Transformers							
a.	50 KVA	NO.	34294	40010	45725	51441	57157	228627
b.	100 KVA	NO.	99800	99800	116433	133066	149699	598798
c.	200 KVA	NO.	21961	25098	25098	25098	28235	125490
	Sub-Total		156055	164908	187256	209605	235091	952915
11	New LT Lines							
a.	3-Phase Wasp line	K.M	17600	19360	21120	22880	24640	105600
b.	3-Phase Ant line	K.M	60800	68800	76800	84800	92800	384000
c.	1-Phase Ant line	K.M	2400	2400	3200	3200	4800	16000
	Sub-Total		80800	90560	101120	110880	122240	505600
12	LT LINE RECONDUCTORING							
a.	3-Phase Wasp line	K.M	3696	3696	3696	3696	3696	18480
b.	3-Phase Ant line	K.M	720	720	720	720	720	3600
	Sub-Total		4416	4416	4416	4416	4416	22080

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
13	Energy Meters (Static)							
a.	Single Phase	No.	147000	168000	189000	210000	231000	945000
b.	Three Phase	No.	84800	106000	127200	116600	95400	530000
	Sub-Total		231800	274000	316200	326600	326400	1475000
14	PVC Cables							
	<u>A. For Customers</u>							
a.	Twin Core 7/052	K.M	8580	9555	10530	11505	12480	52650
b.	Four Core 19/0/052	K.M	4150	4150	4980	5810	5810	24900
	<u>B. For Sub-Mains</u>							
a.	Four Core 19/0.083	K.M	90	90	90	135	135	540
b.	Four Core 19/0.052	K.M	664	830	996	996	1162	4648
	Sub-Total		13484	14625	16596	18446	19587	82738
15	Connectors							
a.	1-Phase (T-110)	NO.	3900	4225	4550	5200	55250	73125
a.	1-Phase T-150)	NO.	408	476	544	612	680	2720
	Sub-Total		4308	4701	5094	5812	55930	75845
16	Replacement of D-Fitting	NO.	0	0	0	0	0	0
C	Total (Item 8 to 16) Cost of LT Proposals (P/2&3)		639803	716432	808186	867546	969733	4001700
D	Total (Item 1 to 7) Cost of HT Proposals (P/1)		72175	87993	103812	119630	135448	519058

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No.	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
17	Tools & Plants	Lot	950	1000	1100	1150	1179	5379
18.	Recording Meters/ Personnel Computers	No.	330	319	319	274	274	1516
E	Total (Item 17 to 18)		1280	1319	1419	1424	1453	6895
F	Total Cost of Material (C+D+E)		713258	805744	913417	988600	1106634	4527653
G	Installation Charges (8%)		57060.6	64459.5	73073.4	79088	88530.7	362212
H	Store Charges (12%) (on F) already included		0	0	0	0	0	0
I	Total Cost of Construction		770319	870204	986490	1067688	1195165	4889865

DISTRIBUTION REHABILITATION (FESCO) COST ESTIMATES

No	Description	Unit	COST (RS. IN THOUSANDS)					TOTAL
			2015-16	2016-17	2017-18	2018-19	2019-20	
J	<u>LESS VALUE OF DISMANTLED MATERIAL</u>							
1	<u>11KV Lines</u>							
a.	Dog (New Osprey)	K.M	937	1130	1350	1543	1764	6724
b.	Rabbit (New Dog)	K.M	1260	1545	1830	2115	2385	9135
c.	Gopher (New Rabbit)	K.M	378	460	542	623	712	2715
	Sub-Total		2575	3135	3722	4281	4861	18574
2	<u>LT Lines</u>							
a.	Ant (New Wasp)	K.M	39	39	39	39	39	195
b	Gnat (New Ant)	K.M	10	10	10	10	10	50
	Sub-Total		49	49	49	49	49	245
3	<u>Transformers</u>							
a.	25 KVA (New 50 KVA) Replacement	NO.	4785	5583	6380	7178	7975	31901
b.	50 KVA (New 100 KVA) Replacement	NO.	6698	7814	8930	10046	11163	44651
c.	100 KVA (New 200 KVA) Replacement	NO.	6720	6720	6720	6720	6720	33600
	Sub-Total		18203	20117	22030	23944	25858	110152
	Total Value of Dismantled Material		20827	23301	25801	28274	30768	128971
K	NetCost of Distribution Rehabilitation (I - J)		749492	846903	960689	1039414	1164397	4760894
L	Escalation Factor (@ 6.5% Per Annum)		1.00	1.07	1.13	1.21	1.29	
M	EscalatedCost of Distribution Rehabilitation		749,492	901,952	1,089,637	1,255,560	1,497,958	5,494,598

Annex-N
FINANCIAL ANALYSIS

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
FINANCIAL ANALYSIS (DOP)

Rs. in Millions

Rs.in Millions																									
Sr. No.	Years	Project Cost			Revenue					Line Losses	Total Purchase Price (Mkwh)	Purchase Price (Rs)	Total Purchase Price (M.Rs)	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit			
		Capital Cost	O&M Cost	Total	No. of Consumers added	Total Sales (Mkwh)	Sale Price (Rs)	Total Sales (M.Rs)	Salvage Value							Total Revenue	12%	14%	16%	12%	14%	16%	12%	14%	16%
0																									
1	2016	878		878.03	150,000		12.209	-	-	0.1090		9.496	-	-	(878)	784	770	757	-	-	-	(784)	(770)	(757)	
2	2017	1471.854	94.00	1565.85	312,000	263	12.787	3,369	-	3,369	0.1056	295	9.606	2,830	539	(1,027)	1,248	1,205	1,164	430	415	401	(818)	(790)	(763)
3	2018	1123.538	138.94	1262.47	489,000	744	12.942	9,626	-	9,626	0.1040	830	9.715	8,064	1,562	299	899	852	809	1,112	1,054	1,001	213	202	192
4	2019	882.2864	174.23	1056.51	684,000	1,469	13.061	19,184	-	19,184	0.1015	1,635	9.833	16,073	3,111	2,054	671	626	584	1,977	1,842	1,718	1,306	1,216	1,134
5	2020	754.0367	204.39	958.43	900,000	2,403	13.171	31,643	-	31,643	0.0998	2,669	9.951	26,561	5,082	4,124	544	498	456	2,884	2,639	2,420	2,340	2,141	1,964
6	2021		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	104	93	84	3,815	3,431	3,091	3,711	3,338	3,007
7	2022		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	92	82	72	3,406	3,009	2,664	3,314	2,927	2,592
8	2023		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	83	72	62	3,041	2,640	2,297	2,958	2,568	2,235
9	2024		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	74	63	54	2,715	2,316	1,980	2,641	2,253	1,926
10	2025		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	66	55	46	2,424	2,031	1,707	2,358	1,976	1,661
11	2026		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	59	48	40	2,165	1,782	1,471	2,106	1,734	1,431
12	2027		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	52	42	34	1,933	1,563	1,269	1,881	1,521	1,235
13	2028		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	47	37	30	1,726	1,371	1,094	1,679	1,334	1,064
14	2029		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	42	33	26	1,541	1,203	943	1,499	1,170	917
15	2030		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	37	29	22	1,376	1,055	813	1,339	1,026	791
16	2031		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	33	25	19	1,228	925	701	1,195	900	682
17	2032		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	30	22	16	1,097	812	604	1,067	790	568
18	2033		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	27	19	14	979	712	521	952	693	507
19	2034		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	24	17	12	874	625	449	850	608	437
20	2035		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	21	15	11	781	548	387	760	533	376
21	2036		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	19	13	9	697	481	334	678	468	325
22	2037		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	17	11	8	622	422	288	605	411	280
23	2038		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	15	10	7	556	370	248	541	360	241
24	2039		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	13	9	6	496	324	214	483	315	208
25	2040		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	12	8	5	443	285	184	431	277	179
26	2041		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	11	7	4	395	250	159	384	243	155
27	2042		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	10	6	4	353	219	137	343	213	133
28	2043		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	9	5	3	316	192	118	306	187	115
29	2044		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	8	5	3	281	168	102	273	163	99
30	2045		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	7	4	2	251	148	88	244	144	86
31	2046		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	6	4	2	224	130	76	218	126	74
32	2047		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	5	3	2	200	114	65	195	111	63
33	2048		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	5	3	2	179	100	56	174	97	54
34	2049		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	4	2	1	160	88	48	156	86	47
35	2050		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,326	4	2	1	143	77	42	139	75	41
Total		5,109.75	3,677.40	8,787.15											123,243	114,456	4,937	4,603	4,312	35,504	29,973	25,531			

Net Present Value

31,351 26,140 21,976

Benefit Cost Ratio

7.19 6.51 5.92

Internal Financial Rate of Return (IFRR): 87%

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	878	-	878	-
2	1,565	539	2,444	539
3	1,262	1,562	3,706	2,101
4	1,057	3,111	4,763	5,212
5	958	5,082	5,721	10,294
		7,530		17,824

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FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
FINANCIAL ANALYSIS OF THE PROJECT(DISTRIBUTION REHABILITATION)

Sr.No	Years	Rs.in Millions																		
		Project Costs			Project Benefits					Discount Cost			Discount Benefit			Net Benefit				
		Capital Cost	O&M Cost	Total	Power Savings	Unit Purchase Price	Gross Benefits	Salvage Value	Total	Total Benefit	Net	12%	14%	16%	12%	14%	16%	12%	14%	16%
1	2016	749.49164		749.49	0.00	9.496	0.00	0.00	0.00	-749.49		669	657	646	0	0	0	-669	-657	-646
2	2017	901.951695	66.06	968.01	53.77	9.606	516.53	0.00	516.53	-451.48		772	745	719	412	397	384	-360	-348	-335
3	2018	1089.637481	109.64	1199.28	103.13	9.715	1001.93	0.00	1001.93	-197.35		854	809	768	713	676	642	-141	-133	-126
4	2019	1255.559752	159.87	1415.43	147.18	9.833	1447.17	0.00	1447.17	31.74		900	838	782	920	857	799	20	19	17
5	2020	1497.957559	219.78	1717.74	188.15	9.951	1872.37	0.00	1872.37	154.63		975	892	818	1062	972	891	87	80	73
6	2021		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		111	100	90	1110	998	899	999	898	809
7	2022		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		99	88	78	991	876	775	892	788	697
8	2023		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		89	77	67	885	768	668	796	691	601
9	2024		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		79	68	58	790	674	576	711	606	518
10	2025		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		71	59	50	706	591	497	635	532	447
11	2026		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		63	52	43	630	519	428	567	467	385
12	2027		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		56	46	37	562	455	369	506	409	332
13	2028		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		50	40	32	502	399	318	452	359	286
14	2029		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		45	35	28	448	350	274	403	315	246
15	2030		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		40	31	24	400	307	237	360	276	213
16	2031		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		36	27	20	357	269	204	321	242	184
17	2032		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		32	24	18	319	236	176	287	212	158
18	2033		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		29	21	15	285	207	152	256	186	137
19	2034		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		26	18	13	254	182	131	228	164	118
20	2035		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		23	16	11	227	159	113	204	143	102
21	2036		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		20	14	10	203	140	97	183	126	87
22	2037		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		18	12	8	181	123	84	163	111	76
23	2038		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		16	11	7	162	108	72	146	97	65
24	2039		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		14	9	6	144	94	62	130	85	56
25	2040		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		13	8	5	129	83	54	116	75	49
26	2041		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		12	7	5	115	73	46	103	66	41
27	2042		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		10	6	4	103	64	40	93	58	36
28	2043		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		9	6	3	92	56	34	83	50	31
29	2044		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		8	5	3	82	49	30	74	44	27
30	2045		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		7	4	3	73	43	26	66	39	23
31	2046		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		7	4	2	65	38	22	58	34	20
32	2047		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		6	3	2	58	33	19	52	30	17
33	2048		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		5	3	2	52	29	16	47	26	14
34	2049		219.78	219.78	220.20	9.95	2191.32	0.00	2191.32	1971.54		5	3	1	46	25	14	41	22	13
35	2050		219.78	219.78	220.20	9.95	2191.32	549.46	2740.78	2521.00		4	2	1	52	28	15	48	26	14
Total		5,495	7,149	12,643						58,484		5,173	4,740	4,379	13,130	10,878	9,164			

Year	Cash Out Flows		Inflows	Cumulative Out flows	Cumulative Inflows	Benefit Cost Ratio	Net Present Value		
0									
1	749			749					
2	968		517	1,718	517				
3	1,199		1,002	2,917	1,518				
4	1,415		1,447	4,332	2,965	5.65			
5	1,718		1,872	6,050	4,838				
			2,191		7,029				
							43%		
							8,626	6,795	5,431
							2.54	2.29	2.09

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

FINANCIAL ANALYSIS 2015-2049

PDEIP (IGTDP)

Sr. No		Project Cost				Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit					
		Capital Cost	O&M Cost	Fin Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%			
0														0	0	0	0	0	0	0	0				
1	2016	4,214		791	5,005	-	12.21	-	-	9.50	-	-	(5,005)	4,469	4,391	4,315	-	-	-	(4,469)	(4,391)	(4,315)			
2	2017	914	169	663	1,746	-	12.79	-	-	9.61	-	-	(1,746)	1,392	1,343	1,297	-	-	-	(1,392)	(1,343)	(1,297)			
3	2018		205	520	725	-	12.94	-	-	9.72	-	-	(725)	516	489	464	-	-	-	(516)	(489)	(464)			
4	2019		205	357	563	2,497	13.06	32,606	2,811	9.83	27,643	4,963	4,400	358	333	311	3,154	2,938	2,741	2,796	2,605	2,430			
5	2020		205	175	380	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,523	216	197	181	2,782	2,547	2,334	2,566	2,350	2,153			
6	2021		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	104	93	84	2,484	2,234	2,012	2,380	2,141	1,928			
7	2022		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	93	82	73	2,218	1,960	1,735	2,125	1,878	1,662			
8	2023		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	83	72	63	1,980	1,719	1,496	1,897	1,647	1,433			
9	2024		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	74	63	54	1,768	1,508	1,289	1,694	1,445	1,235			
10	2025		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	66	55	46	1,579	1,323	1,111	1,513	1,268	1,065			
11	2026		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	59	49	40	1,410	1,160	958	1,351	1,111	918			
12	2027		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	53	43	35	1,259	1,018	826	1,206	975	791			
13	2028		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	47	37	30	1,124	893	712	1,077	856	682			
14	2029		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	42	33	26	1,003	783	614	961	750	588			
15	2030		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	37	29	22	896	687	529	859	658	507			
16	2031		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	33	25	19	800	603	456	767	578	437			
17	2032		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	30	22	16	714	529	393	684	507	377			
18	2033		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	27	19	14	638	464	339	611	445	325			
19	2034		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	24	17	12	569	407	292	545	390	280			
20	2035		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	21	15	11	508	357	252	487	342	241			
21	2036		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	19	13	9	454	313	217	435	300	209			
22	2037		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	17	11	8	405	275	187	388	264	179			
23	2038		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	15	10	7	362	241	161	347	231	154			
24	2039		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	14	9	6	323	211	139	309	202	133			
25	2040		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	12	8	5	288	185	120	276	177	115			
26	2041		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	11	7	4	258	163	103	247	156	99			
27	2042		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	10	6	4	230	143	89	220	137	85			
28	2043		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	9	5	3	205	125	77	196	120	74			
29	2044		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	8	5	3	183	110	66	175	105	63			
30	2045		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	7	4	2	164	96	57	157	92	55			
31	2046		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	6	4	2	146	84	49	140	80	47			
32	2047		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	5	3	2	130	74	42	125	71	40			
33	2048		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	5	3	2	116	65	37	111	62	35			
34	2049		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	4	2	1	104	57	32	100	55	31			
35	2050		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,698	4	2	1	93	50	27	89	48	26			
Total		5,128	5,912	2,506	13,546								118,901	7,866	7,485	7,164	27,758	22,992	19,305	19,892	15,507	12,141			
8.7774106																NET PRESENT VALUE			19,892	15,507	12,141				
																BENEFIT TO COST			3.53	3.07	2.69				
Year		Cash Out Flows		Inflows		Cumulative Out flows		Cumulative Inflows																	
0																									
1		5,005				5,005																			
2		1,746				6,751																			
3		725				7,476																			
4		563		4,963		8,038		4,963		4.70															
5		380		4,903		8,418		9,866																	
		205		4,903		8,623																			

7th STG

Sr. No		Project Cost			Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit			
		Capital Cost	O&M Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%	
0				-	-			-				(2,828)	0	0	0	0	0	0	0	0	0	
1	2016	2,828		2,828		12.21			9.50				2,525	2,481	2,438				(2,525)	(2,481)	(2,438)	
2	2017	3,252	130	3,382	710	12.79	9,075	794	9.61		7,623	1,452	2,696	2,603	2,514	1,158	1,117	1,079	(1,538)	(1,486)	(1,435)	
3	2018	2,722	239	2,961	1,917	12.94	24,808	2,139	9.72		20,783	4,025	2,108	1,999	1,897	2,865	2,717	2,579	757	718	682	
4	2019	2,616	344	2,959	2,640	13.06	34,477	2,938	9.83		28,887	5,591	1,881	1,752	1,634	3,553	3,310	3,088	1,672	1,558	1,454	
5	2020	1,637	409	2,046	3,548	13.17	46,725	3,941	9.95		39,220	7,504	1,161	1,063	974	4,258	3,898	3,573	3,097	2,835	2,599	
6	2021		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	207	186	168	8,718	7,840	7,063	8,511	7,654	
7	2022		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	185	163	145	7,784	6,877	6,089	7,599	6,714	
8	2023		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	165	143	125	6,950	6,032	5,249	6,785	5,889	
9	2024		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	148	126	108	6,205	5,292	4,525	6,057	5,166	
10	2025		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	132	110	93	5,541	4,642	3,901	5,409	4,532	
11	2026		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	118	97	80	4,947	4,072	3,363	4,829	3,975	
12	2027		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	105	85	69	4,417	3,572	2,899	4,312	3,487	
13	2028		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	94	74	59	3,944	3,133	2,499	3,850	3,059	
14	2029		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	84	65	51	3,521	2,748	2,154	3,437	2,683	
15	2030		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	75	57	44	3,144	2,411	1,857	3,069	2,354	
16	2031		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	67	50	38	2,807	2,115	1,601	2,740	2,065	
17	2032		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	60	44	33	2,506	1,855	1,380	2,446	1,811	
18	2033		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	53	39	28	2,238	1,627	1,190	2,185	1,588	
19	2034		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	47	34	24	1,998	1,427	1,026	1,951	1,393	
20	2035		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	42	30	21	1,784	1,252	884	1,742	1,222	
21	2036		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	38	26	18	1,593	1,098	762	1,555	1,072	
22	2037		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	34	23	16	1,422	963	657	1,388	940	
23	2038		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	30	20	13	1,270	845	566	1,240	825	
24	2039		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	27	18	12	1,134	741	488	1,107	723	
25	2040		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	24	15	10	1,012	650	421	988	635	
26	2041		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	21	14	9	904	570	363	883	556	
27	2042		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	19	12	7	807	500	313	788	488	
28	2043		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	17	10	6	720	439	270	703	429	
29	2044		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	15	9	6	643	385	233	628	376	
30	2045		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	14	8	5	574	338	200	560	330	
31	2046		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	12	7	4	513	296	173	501	289	
32	2047		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	11	6	4	458	260	149	447	254	
33	2048		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	10	5	3	409	228	128	399	223	
34	2049		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	9	5	3	365	200	111	356	195	
35	2050		409	409	4,284	13.17	56,428	3,941	9.95		39,220	17,208	16,799	8	4	2	326	175	95	318	171	
Total		13,056	11,349	24,405								424,369	12,192	11,356	10,645	88,417	72,466	60,272	76,225	61,110	49,627	
17.3889073																NET PRESENT VALUE			76,225	61,110	49,627	
																BENEFIT TO COST			7.25	6.38	5.66	
		Year		Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows															
24954				0																		
1368				1	2,828	-	2,828	-														
26322				2	3,382	1,452	6,211	1,452														
								Internal Financial Rate of Return(IFRR):				73.87%										
								Pay Back Period				4.41 Years										
								4.41														
								17,208				35,780										

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
FINANCIAL ANALYSIS 2016-20 (IGTDP)

Sr. No		Project Cost				Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Fin Cost	Total			12%	14%	16%	12%	14%	16%	12%	14%	16%
0								0	0	0	0	0	0	0	0	0
1	2016	8,670		791	9,461	1,002	(8,459)	8,447	8,299	8,156	895	879	864	(7,552)	(7,420)	(7,292)
2	2017	6,540	347	663	7,550	3,438	(4,112)	6,019	5,810	5,611	2,741	2,646	2,555	(3,278)	(3,164)	(3,056)
3	2018	4,935	608	520	6,063	7,459	1,396	4,316	4,093	3,884	5,309	5,035	4,779	993	942	895
4	2019	4,754	806	357	5,917	15,856	9,939	3,760	3,503	3,268	10,077	9,388	8,757	6,317	5,885	5,489
5	2020	3,889	996	175	5,060	19,681	14,621	2,871	2,628	2,409	11,168	10,222	9,370	8,297	7,594	6,961
6	2021		1,152		1,152	31,833	30,681	583	525	473	16,127	14,502	13,065	15,544	13,977	12,592
7	2022		1,152		1,152	31,833	30,681	521	460	407	14,399	12,721	11,263	13,878	12,261	10,866
8	2023		1,152		1,152	31,833	30,681	465	404	351	12,857	11,159	9,719	12,392	10,755	9,359
9	2024		1,152		1,152	31,833	30,681	415	354	303	11,479	9,789	8,370	11,064	9,435	8,067
10	2025		1,152		1,152	31,833	30,681	371	311	261	10,249	8,587	7,216	9,878	8,275	6,955
11	2026		1,152		1,152	31,833	30,681	331	272	225	9,151	7,532	6,221	8,820	7,260	5,996
12	2027		1,152		1,152	31,833	30,681	296	239	194	8,171	6,607	5,363	7,875	6,368	5,169
13	2028		1,152		1,152	31,833	30,681	264	210	167	7,295	5,796	4,623	7,031	5,586	4,456
14	2029		1,152		1,152	31,833	30,681	236	184	144	6,514	5,084	3,985	6,278	4,900	3,841
15	2030		1,152		1,152	31,833	30,681	210	161	124	5,816	4,460	3,436	5,606	4,299	3,312
16	2031		1,152		1,152	31,833	30,681	188	142	107	5,193	3,912	2,962	5,005	3,770	2,855
17	2032		1,152		1,152	31,833	30,681	168	124	92	4,636	3,432	2,553	4,468	3,308	2,461
18	2033		1,152		1,152	31,833	30,681	150	109	80	4,139	3,010	2,201	3,989	2,901	2,121
19	2034		1,152		1,152	31,833	30,681	134	96	69	3,696	2,640	1,897	3,562	2,544	1,828
20	2035		1,152		1,152	31,833	30,681	119	84	59	3,300	2,316	1,636	3,181	2,232	1,577
21	2036		1,152		1,152	31,833	30,681	107	73	51	2,946	2,032	1,410	2,839	1,959	1,359
22	2037		1,152		1,152	31,833	30,681	95	64	44	2,631	1,782	1,216	2,536	1,718	1,172
23	2038		1,152		1,152	31,833	30,681	85	57	38	2,349	1,563	1,048	2,264	1,506	1,010
24	2039		1,152		1,152	31,833	30,681	76	50	33	2,097	1,371	903	2,021	1,321	870
25	2040		1,152		1,152	31,833	30,681	68	44	28	1,872	1,203	779	1,804	1,159	751
26	2041		1,152		1,152	31,833	30,681	60	38	24	1,672	1,055	671	1,612	1,017	647
27	2042		1,152		1,152	31,833	30,681	54	33	21	1,493	926	579	1,439	893	558
28	2043		1,152		1,152	31,833	30,681	48	29	18	1,333	812	499	1,285	783	481
29	2044		1,152		1,152	31,833	30,681	43	26	16	1,190	712	430	1,147	686	414
30	2045		1,152		1,152	31,833	30,681	38	23	13	1,063	625	371	1,025	602	358
31	2046		1,152		1,152	31,833	30,681	34	20	12	949	548	320	915	528	308
32	2047		1,152		1,152	31,833	30,681	31	17	10	847	481	276	816	464	266
33	2048		1,152		1,152	32,382	31,231	27	15	9	769	429	242	742	414	233
34	2049		1,152		1,152	29,641	28,490	24	13	7	629	344	191	605	331	184
35	2050		1,152		1,152	29,641	28,490	22	12	6	561	302	164	539	290	158
Total		28,788	31,545	2,506	62,839			30,538	28,445	26,670	171,858	141,798	118,732	141,320	113,353	92,062
												NET PRESENT VALUE		141,320	113,353	92,062
												BENEFIT TO COST		5.63	4.98	4.45
												Internal Financial Rate of Return(IFRR):				
												65.35%				

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	9,461	1,002	9,461	1,002
2	7,550	3,438	17,011	4,440
3	6,063	7,459	23,074	11,899
4	5,917	15,856	28,991	27,755
5	5,060	19,681	34,051	47,436

4.32

Annex-0

SENSIVITY ANALYSIS

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % higher cost (DOP)

		Rs.in Millions																							
Sl. No.	Year	Project Cost			Revenue																				
		Capital Cost	Op.M Cost	Total	Power Generation (MWh)	Total Sales (MWh)	Sale Price (Rs/KWh)	Total Sales M.Rs.	Salvage Value	Total Revenue	Line Losses	Total Purchase (MWh)	Purchase Price (Rs/KWh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
																	12%	14%	16%	12%	14%	16%	12%	14%	16%
0																									
1	2016	878		965.84	150,000		12.209	-	-	-	0.1090	-	9.496	-	-	(966)	862	847	833	-	-	-	(862)	(847)	(833)
2	2017	1471.854	94.00	1722.43	312,000	263	12.787	3,369	-	3,369	0.1056	295	9.606	2,830	539	(1,183)	1,373	1,325	1,280	430	415	401	(943)	(910)	(879)
3	2018	1123.538	138.94	1388.72	489,000	744	12.942	9,626	-	9,626	0.1040	830	9.715	8,064	1,562	173	988	937	890	1,112	1,054	1,001	124	117	111
4	2019	882.2864	174.23	1162.17	684,000	1,469	13.061	19,184	-	19,184	0.1015	1,635	9.833	16,073	3,111	1,949	739	688	642	1,977	1,842	1,718	1,238	1,154	1,076
5	2020	754.0367	204.39	1054.27	900,000	2,403	13.171	31,643	-	31,643	0.0998	2,669	9.951	26,561	5,082	4,028	598	548	502	2,884	2,639	2,420	2,286	2,091	1,918
6	2021		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	114	102	92	3,815	3,431	3,091	3,701	3,329	2,999
7	2022		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	102	90	80	3,406	3,009	2,664	3,304	2,919	2,584
8	2023		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	91	79	69	3,041	2,640	2,297	2,950	2,561	2,228
9	2024		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	81	69	59	2,715	2,316	1,980	2,634	2,247	1,921
10	2025		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	72	61	51	2,424	2,031	1,707	2,352	1,970	1,656
11	2026		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	65	53	44	2,165	1,782	1,471	2,100	1,729	1,427
12	2027		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	58	47	38	1,933	1,563	1,269	1,875	1,516	1,231
13	2028		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	52	41	33	1,726	1,371	1,094	1,674	1,330	1,061
14	2029		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	46	36	28	1,541	1,203	943	1,495	1,167	915
15	2030		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	41	31	24	1,376	1,055	813	1,335	1,024	789
16	2031		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	37	28	21	1,228	925	701	1,191	897	680
17	2032		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	33	24	18	1,097	812	604	1,064	788	586
18	2033		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	29	21	16	979	712	521	950	691	505
19	2034		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	26	19	13	874	625	449	848	606	436
20	2035		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	23	16	12	781	548	387	758	532	375
21	2036		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	21	14	10	697	481	334	676	467	324
22	2037		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	19	13	9	622	422	288	603	409	279
23	2038		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	17	11	7	556	370	248	539	359	241
24	2039		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	15	10	6	496	324	214	481	314	208
25	2040		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	13	8	6	443	285	184	430	277	178
26	2041		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	12	7	5	395	250	159	363	243	154
27	2042		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	11	7	4	353	219	137	342	212	133
28	2043		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	9	6	4	315	192	118	306	186	114
29	2044		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	8	5	3	281	168	102	273	163	99
30	2045		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	8	4	3	251	148	88	243	144	85
31	2046		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	7	4	2	224	130	76	217	126	74
32	2047		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	6	3	2	200	114	65	194	111	63
33	2048		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	5	3	2	179	100	56	174	97	54
34	2049		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	5	3	1	160	88	48	155	85	47
35	2050		204.39	224.83	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	7,530	7,305	4	2	1	143	77	42	139	75	41
Total		5,109.75	3,677.40	9,665.86													4	2	1	143	77	42	139	75	41

Net Present Value

30,936 25,758 21,619

Benefit Cost Ratio

6.54 5.92 5.38

Internal Financial Rate of Return (IFRR):

80%

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	966	-	966	-
2	1,722	539	2,688	539
3	1,389	1,562	4,077	2,101
4	1,162	3,111	5,239	5,212
5	1,054	5,082	6,293	10,294
		7,530		17,824

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % higher cost (DISTRIBUTION REHABILITATION)

Sr.No	Years	Project Costs			Project Benefits					Rs.in Millions										
		Capital Cost	O&M Cost	Total	Power Savings	Unit Purchase Price	Gross Benefits	Salvage Value	Total	Total Benefit	Net	Discount Cost			Discount Benefit			Net Benefit		
												12%	14%	16%	12%	14%	16%	12%	14%	16%
1	2016	749.49164		824.44	0.00	9.496	0.00	0.00	0.00	-824.44	736	723	711	0	0	0	-736	-723	-711	
2	2017	901.951695	66.06	1064.81	53.77	9.606	516.53	0.00	516.53	-548.28	849	819	791	412	397	384	-437	-422	-407	
3	2018	1089.637481	109.64	1319.21	103.13	9.715	1001.93	0.00	1001.93	-317.27	939	890	845	713	676	642	-226	-214	-203	
4	2019	1255.559752	159.87	1556.97	147.18	9.833	1447.17	0.00	1447.17	-109.80	989	922	860	920	857	799	-69	-65	-61	
5	2020	1497.957559	219.78	1889.52	188.15	9.951	1872.37	0.00	1872.37	-17.14	1072	981	900	1062	972	891	-10	-9	-9	
6	2021		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	122	110	99	1110	998	899	988	888	800	
7	2022		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	109	97	86	991	876	775	882	779	689	
8	2023		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	98	85	74	885	768	668	787	683	594	
9	2024		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	87	74	64	790	674	576	703	600	512	
10	2025		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	78	65	55	706	591	497	628	526	442	
11	2026		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	70	57	47	630	519	428	560	462	381	
12	2027		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	62	50	41	562	455	369	500	405	328	
13	2028		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	55	44	35	502	399	318	447	355	283	
14	2029		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	49	39	30	448	350	274	399	311	244	
15	2030		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	44	34	26	400	307	237	356	273	211	
16	2031		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	39	30	22	357	269	204	318	239	182	
17	2032		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	35	26	19	319	236	176	284	210	157	
18	2033		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	31	23	17	285	207	152	254	184	135	
19	2034		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	28	20	14	254	182	131	226	162	117	
20	2035		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	25	18	12	227	159	113	202	141	101	
21	2036		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	22	15	11	203	140	97	181	125	86	
22	2037		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	20	14	9	181	123	84	161	109	75	
23	2038		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	18	12	8	162	108	72	144	96	64	
24	2039		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	16	10	7	144	94	62	128	84	55	
25	2040		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	14	9	6	129	83	54	115	74	48	
26	2041		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	13	8	5	115	73	46	102	65	41	
27	2042		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	11	7	4	103	64	40	92	57	36	
28	2043		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	10	6	4	92	56	34	82	50	30	
29	2044		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	9	5	3	82	49	30	73	44	27	
30	2045		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	8	5	3	73	43	26	65	38	23	
31	2046		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	7	4	2	65	38	22	58	34	20	
32	2047		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	6	4	2	58	33	19	52	29	17	
33	2048		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	6	3	2	52	29	16	46	26	14	
34	2049		219.78	241.76	220.20	9.95	2191.32	0.00	2191.32	1949.56	5	3	2	46	25	14	41	22	12	
35	2050		219.78	241.76	220.20	9.95	2191.32	549.46	2740.78	2499.02	5	2	1	52	28	15	47	26	14	
Total		5,495	7,149	13,908						57,219	5,687	5,214	4,817	13,130	10,878	9,164				

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows	Benefit Cost Ratio	Net Present Value		
						8,179	6,387	5,058
0								
1	824	-	824	-				
2	1,065	517	1,889	517				
3	1,319	1,002	3,208	1,518				
4	1,557	1,447	4,765	2,966	5.97			
5	1,890	1,872	6,655	4,838				
		2,191		7,029				
						38%		

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % higher cost (IGTDP)

Sr. No		Project Cost				Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Fin Cost	Total											
								12%	14%	16%	12%	14%	16%	12%	14%	16%
0								0	0	0	0	0	0	0	0	0
1	2016	8,670		791	10,407	1,002	(9,405)	9,292	3,129	8,972	895	879	864	(8,397)	(8,250)	(8,108)
2	2017	6,540	347	663	8,305	3,438	(4,867)	6,621	6,391	6,172	2,741	2,646	2,555	(3,880)	(3,745)	(3,617)
3	2018	4,935	608	520	6,670	7,459	790	4,747	4,502	4,273	5,309	5,035	4,779	562	533	506
4	2019	4,754	806	357	6,509	15,856	9,347	4,136	3,854	3,595	10,077	9,388	8,757	5,941	5,534	5,162
5	2020	3,889	996	175	5,566	19,681	14,115	3,158	2,891	2,650	11,168	10,222	9,370	8,010	7,331	6,720
6	2021		1,152		1,267	31,833	30,566	642	577	520	16,127	14,502	13,065	15,485	13,925	12,545
7	2022		1,152		1,267	31,833	30,566	573	506	448	14,399	12,721	11,263	13,826	12,215	10,815
8	2023		1,152		1,267	31,833	30,566	512	444	386	12,857	11,159	9,710	12,345	10,715	9,324
9	2024		1,152		1,267	31,833	30,566	457	390	333	11,479	9,789	8,370	11,022	9,399	8,037
10	2025		1,152		1,267	31,833	30,566	408	342	287	10,249	8,587	7,216	9,841	8,245	6,929
11	2026		1,152		1,267	31,833	30,566	364	300	248	9,151	7,532	6,221	8,787	7,232	5,973
12	2027		1,152		1,267	31,833	30,566	325	263	213	8,171	6,607	5,363	7,846	6,344	5,150
13	2028		1,152		1,267	31,833	30,566	290	231	184	7,295	5,796	4,623	7,005	5,565	4,439
14	2029		1,152		1,267	31,833	30,566	259	202	159	6,514	5,084	3,985	6,255	4,882	3,826
15	2030		1,152		1,267	31,833	30,566	231	177	137	5,816	4,460	3,436	5,585	4,283	3,299
16	2031		1,152		1,267	31,833	30,566	207	156	118	5,193	3,912	2,962	4,986	3,756	2,844
17	2032		1,152		1,267	31,833	30,566	184	137	102	4,636	3,432	2,553	4,452	3,295	2,451
18	2033		1,152		1,267	31,833	30,566	165	120	88	4,139	3,010	2,201	3,974	2,890	2,113
19	2034		1,152		1,267	31,833	30,566	147	105	76	3,696	2,640	1,897	3,549	2,535	1,821
20	2035		1,152		1,267	31,833	30,566	131	92	65	3,300	2,316	1,636	3,169	2,224	1,571
21	2036		1,152		1,267	31,833	30,566	117	81	56	2,946	2,032	1,410	2,829	1,951	1,354
22	2037		1,152		1,267	31,833	30,566	105	71	48	2,631	1,782	1,216	2,526	1,711	1,168
23	2038		1,152		1,267	31,833	30,566	93	62	42	2,349	1,563	1,048	2,256	1,501	1,006
24	2039		1,152		1,267	31,833	30,566	83	55	36	2,097	1,371	903	2,014	1,316	867
25	2040		1,152		1,267	31,833	30,566	75	48	31	1,872	1,203	779	1,797	1,155	748
26	2041		1,152		1,267	31,833	30,566	67	42	27	1,672	1,055	671	1,605	1,013	644
27	2042		1,152		1,267	31,833	30,566	59	37	23	1,493	926	579	1,434	889	556
28	2043		1,152		1,267	31,833	30,566	53	32	20	1,333	812	499	1,280	780	479
29	2044		1,152		1,267	31,833	30,566	47	28	17	1,190	712	430	1,143	684	413
30	2045		1,152		1,267	31,833	30,566	42	25	15	1,063	625	371	1,021	600	356
31	2046		1,152		1,267	31,833	30,566	38	22	13	949	548	320	911	526	307
32	2047		1,152		1,267	31,833	30,566	34	19	11	847	481	276	813	462	265
33	2048		1,152		1,267	32,382	31,115	30	17	9	769	429	242	739	412	233
34	2049		1,152		1,267	29,641	28,375	27	15	8	629	344	191	602	329	183
35	2050		1,152		1,267	29,641	28,375	24	13	7	561	302	164	537	289	157
Total		28,788	31,545	2,506	69,123			33,590	31,290	29,341	171,858	141,798	118,732	138,268	110,508	89,391
NET PRESENT VALUE														138,268	110,508	89,391
BENEFIT TO COST														5.12	4.53	4.05
Internal Financial Rate of Return(IFRR):																
														60.17%		

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	10,407	1,002	10,407	1,002
2	8,305	3,438	18,712	4,440
3	6,670	7,459	25,382	11,899
4	6,509	15,856	31,890	27,755
5	5,565	19,681	37,455	47,436

4.49

PDEIP (IGTDP)

9,866

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED

Sensitivity Analysis with 10 % higher cost

7th STG

Sr. No		Project Cost			Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit									
		Capital Cost	O&M Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%							
0													0	0	0	0	0	0	0	0	0							
1	2016	2,828		3,111	-	12.21	-	-	9.50	-	-	(3,111)	2,778	2,729	2,682	-	-	-	(2,778)	(2,729)	(2,682)							
2	2017	3,252	130	3,721	710	12.79	9,075	794	9.61	7,623	1,452	(2,268)	2,966	2,863	2,765	1,158	1,117	1,079	(1,808)	(1,746)	(1,686)							
3	2018	2,722	239	3,257	1,917	12.94	24,808	2,139	9.72	20,783	4,025	768	2,318	2,199	2,087	2,865	2,717	2,579	547	518	492							
4	2019	2,616	344	3,255	2,640	13.06	34,477	2,938	9.83	28,887	5,591	2,335	2,069	1,927	1,798	3,553	3,310	3,088	1,484	1,383	1,290							
5	2020	1,637	409	2,251	3,548	13.17	46,725	3,941	9.95	39,220	7,504	5,254	1,277	1,169	1,072	4,258	3,898	3,573	2,981	2,729	2,501							
6	2021		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	228	205	185	8,718	7,840	7,063	8,490	7,635	6,878							
7	2022		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	204	180	159	7,784	6,877	6,089	7,580	6,697	5,930							
8	2023		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	182	158	137	6,950	6,032	5,249	6,768	5,874	5,112							
9	2024		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	162	138	118	6,205	5,292	4,525	6,043	5,154	4,407							
10	2025		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	145	121	102	5,541	4,642	3,901	5,396	4,521	3,799							
11	2026		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	129	106	88	4,947	4,072	3,363	4,818	3,966	3,275							
12	2027		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	116	93	76	4,417	3,572	2,899	4,301	3,479	2,823							
13	2028		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	103	82	65	3,944	3,133	2,499	3,841	3,051	2,434							
14	2029		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	92	72	56	3,521	2,748	2,154	3,429	2,676	2,098							
15	2030		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	82	63	49	3,144	2,411	1,857	3,062	2,348	1,808							
16	2031		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	73	55	42	2,807	2,115	1,601	2,734	2,060	1,559							
17	2032		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	66	49	36	2,506	1,855	1,380	2,440	1,806	1,344							
18	2033		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	59	43	31	2,238	1,627	1,190	2,179	1,584	1,159							
19	2034		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	52	37	27	1,998	1,427	1,026	1,946	1,390	999							
20	2035		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	47	33	23	1,784	1,252	884	1,737	1,219	861							
21	2036		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	42	29	20	1,593	1,098	762	1,551	1,069	742							
22	2037		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	37	25	17	1,422	963	657	1,385	938	640							
23	2038		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	33	22	15	1,270	845	566	1,237	623	551							
24	2039		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	30	19	13	1,134	741	488	1,104	722	475							
25	2040		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	26	17	11	1,012	650	421	986	633	410							
26	2041		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	24	15	9	904	570	363	880	555	354							
27	2042		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	21	13	8	807	500	313	786	487	305							
28	2043		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	19	11	7	720	439	270	701	428	263							
29	2044		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	17	10	6	643	385	233	626	375	227							
30	2045		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	15	9	5	574	338	200	559	329	195							
31	2046		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	13	8	5	513	296	173	500	288	168							
32	2047		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	12	7	4	458	260	149	446	253	145							
33	2048		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	11	6	3	409	228	128	398	222	125							
34	2049		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	10	5	3	365	200	111	355	195	108							
35	2050		409	450	4,284	13.17	56,428	3,941	9.95	39,220	17,208	16,758	9	5	2	326	175	95	317	170	93							
Total		13,056	11,349	26,845								421,928	13,412	12,492	11,709	88,417	72,466	60,272	75,005	59,974	48,563							
																15.7171885			NET PRESENT VALUE			75,005	59,974	48,563				
																			BENEFIT TO COST			6.59	5.80	5.15				
24954					Cash Out								Internal Financial Rate of Return(IFRR):			68.41%												
1368					Flows	Inflows	Cumulative	Cumulative																				
26322					0		2,828						Pay Back Period										4.41			Years		
					1	2,828		2,828																				
					2	3,382	1,452	6,211	1,452																			
					3	2,961	4,025	9,172	5,477																			
					4	2,959	5,591	12,131	11,068			4.41																
					5	2,046	7,504	14,177	18,572																			
							17,208		35,780																			

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % less Benefit (DOP)

Sr. No	Years	Project Cost			Revenue							Rs.in Millions														
		Capital Cost	O&M Cost	Total	No. of Consumers added	Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Salvage Value	Total Revenue	Line Losses	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit			
																	12%	14%	16%	12%	14%	16%	12%	14%	16%	
0																										
1	2016	878		878.03	150,000		12.209	-	-	-	0.1090	-	9.496	-	-	(878)	784	770	757	-	-	-	-	(784)	(770)	(757)
2	2017	1471.854	94.00	1565.85	312,000	263	12.787	3,369	-	3,369	0.1056	295	9.606	2,830	485	(1,081)	1,248	1,205	1,164	387	373	361	(861)	(832)	(803)	
3	2018	1123.538	138.94	1262.47	489,000	744	12.942	9,626	-	9,626	0.1040	830	9.715	8,064	1,406	143	899	852	809	1,000	949	900	101	97	91	
4	2019	882.2864	174.23	1056.51	684,000	1,469	13.061	19,184	-	19,184	0.1015	1,635	9.833	16,073	2,800	1,743	671	626	584	1,779	1,658	1,546	1,108	1,032	962	
5	2020	754.0367	204.39	958.43	900,000	2,403	13.171	31,643	-	31,643	0.0998	2,669	9.951	26,561	4,574	3,615	544	498	456	2,595	2,376	2,178	2,051	1,878	1,722	
6	2021		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	104	93	84	3,433	3,088	2,782	3,329	2,995	2,698	
7	2022		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	92	82	72	3,066	2,708	2,398	2,974	2,626	2,326	
8	2023		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	83	72	62	2,737	2,376	2,067	2,654	2,304	2,005	
9	2024		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	74	63	54	2,444	2,084	1,782	2,370	2,021	1,728	
10	2025		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	66	55	46	2,182	1,828	1,536	2,116	1,773	1,490	
11	2026		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	59	48	40	1,948	1,604	1,324	1,889	1,556	1,284	
12	2027		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	52	42	34	1,739	1,407	1,142	1,687	1,365	1,108	
13	2028		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	47	37	30	1,553	1,234	984	1,506	1,197	954	
14	2029		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	42	33	26	1,387	1,082	848	1,345	1,049	822	
15	2030		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	37	29	22	1,238	949	731	1,201	920	709	
16	2031		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	33	25	19	1,105	833	631	1,072	808	612	
17	2032		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	30	22	16	987	731	544	957	709	528	
18	2033		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	27	19	14	881	641	469	854	622	455	
19	2034		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	24	17	12	787	562	404	763	545	392	
20	2035		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	21	15	11	703	493	348	682	478	337	
21	2036		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	19	13	9	627	433	300	608	420	291	
22	2037		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	17	11	8	560	379	259	543	368	251	
23	2038		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	15	10	7	500	333	223	485	323	216	
24	2039		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	13	9	6	446	292	192	433	283	186	
25	2040		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	12	8	5	399	256	166	387	248	161	
26	2041		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	11	7	4	356	225	143	345	218	139	
27	2042		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	10	6	4	318	197	123	308	191	119	
28	2043		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	9	5	3	284	173	106	275	168	103	
29	2044		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	8	5	3	253	152	92	245	147	89	
30	2045		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	7	4	2	226	133	79	219	129	77	
31	2046		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	6	4	2	202	117	68	196	113	66	
32	2047		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	5	3	2	180	102	59	175	99	57	
33	2048		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	5	3	2	161	90	51	156	87	49	
34	2049		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	4	2	1	144	79	44	140	77	43	
35	2050		204.39	204.39	900,000	3,560	13.171	46,884	-	46,884	0.0998	3,955	9.951	39,354	6,777	6,573	4	2	1	128	69	38	124	67	37	
Total		5,109.75	3,677.40	8,787.15												110,919	102,132	4,937	4,603	4,312	31,951	26,976	22,975			

Net Present Value

Benefit Cost Ratio
Internal Financial Rate of Return (IFRR):

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	878		878	
2	1,566	485	2,444	485
3	1,262	1,406	3,706	1,891
4	1,057	2,800	4,763	4,690
5	958	4,574	5,721	9,264
		6,777		16,041

6.47

5.86

5.33

80%

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % less Benefit (DISTRIBUTION REHABILITATION)

Rs.in Millions

Sr.No	Years	Project Costs			Project Benefits					Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Total	Power Savings	Unit Purchase Price	Gross Benefits	Salvage Value	Total		12%	14%	16%	12%	14%	16%	12%	14%	16%
1	2016	749.49164		749.49	0.00	9.496	0.00	0.00	0.00	-749.49	669	657	646	0	0	0	-669	-657	-646
2	2017	901.951695	66.06	968.01	53.77	9.606	516.53	0.00	464.88	-503.13	772	745	719	371	358	345	-401	-387	-374
3	2018	1089.637481	109.64	1199.28	103.13	9.715	1001.93	0.00	901.74	-297.54	854	809	768	642	609	578	-212	-200	-190
4	2019	1255.559752	159.87	1415.43	147.18	9.833	1447.17	0.00	1302.45	-112.98	900	838	782	828	771	719	-72	-67	-63
5	2020	1497.957559	219.78	1717.74	189.15	9.951	1872.37	0.00	1685.14	-32.60	975	892	818	956	875	802	-19	-17	-16
6	2021		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	111	100	90	999	899	809	888	799	719
7	2022		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	99	88	78	892	788	698	793	700	620
8	2023		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	89	77	67	797	691	602	708	614	535
9	2024		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	79	68	58	711	606	519	632	538	461
10	2025		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	71	59	50	635	532	447	564	473	397
11	2026		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	63	52	43	567	467	385	504	415	342
12	2027		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	56	46	37	506	409	332	450	363	295
13	2028		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	50	40	32	452	359	286	402	319	254
14	2029		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	45	35	28	404	315	247	359	280	219
15	2030		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	40	31	24	360	276	213	320	245	189
16	2031		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	36	27	20	322	242	183	286	215	163
17	2032		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	32	24	18	287	213	158	255	189	140
18	2033		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	29	21	15	256	186	136	227	165	121
19	2034		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	26	18	13	229	164	118	203	146	105
20	2035		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	23	16	11	204	143	101	181	127	90
21	2036		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	20	14	10	183	126	87	163	112	77
22	2037		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	18	12	8	163	110	75	145	98	67
23	2038		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	16	11	7	146	97	65	130	86	58
24	2039		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	14	9	6	130	85	56	116	76	50
25	2040		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	13	8	5	116	75	48	103	67	43
26	2041		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	12	7	5	104	65	42	92	58	37
27	2042		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	10	6	4	92	57	36	82	51	32
28	2043		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	9	6	3	83	50	31	74	44	28
29	2044		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	8	5	3	74	44	27	66	39	24
30	2045		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	7	4	3	66	39	23	59	35	20
31	2046		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	7	4	2	59	34	20	52	30	18
32	2047		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	6	3	2	52	30	17	46	27	15
33	2048		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	5	3	2	47	26	15	42	23	13
34	2049		219.78	219.78	220.20	9.95	2191.32	0.00	1972.19	1752.40	5	3	1	42	23	13	37	20	12
35	2050		219.78	219.78	220.20	9.95	2191.32	549.46	2466.70	2246.92	4	2	1	47	25	14	43	23	13
Total		5,495	7,149	12,643						51,371	5,173	4,740	4,379	11,822	9,789	8,247			

Net Present Value

7,318 5,706 4,514

Benefit Cost Ratio

2.29 2.07 1.88

37%

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	749		749	
2	968	465	1,718	465
3	1,199	902	2,917	1,367
4	1,415	1,302	4,332	2,669
5	1,718	1,685	6,050	4,354
		1,972		6,326

6.01

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensivity Analysis with 10 % less Benefit (IGTDP)

Sr. No		Project Cost				Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Fin Cost	Total											
								12%	14%	16%	12%	14%	16%	12%	14%	16%
0								0	0	0	0	0	0	0	0	0
1	2016	8,670		791	9,461	812	(8,649)	8,447	8,299	8,156	725	712	700	(7,722)	(7,587)	(7,456)
2	2017	6,540	347	663	7,550	2,916	(4,634)	6,019	5,810	5,611	2,324	2,243	2,167	(3,695)	(3,567)	(3,444)
3	2018	4,935	608	520	6,063	6,404	341	4,316	4,093	3,884	4,558	4,323	4,103	242	230	219
4	2019	4,754	806	357	5,917	13,793	7,876	3,760	3,503	3,268	8,766	8,167	7,618	5,006	4,664	4,350
5	2020	3,889	996	175	5,060	17,058	11,998	2,871	2,628	2,409	9,679	8,860	8,122	6,808	6,232	5,713
6	2021		1,152		1,152	27,774	26,623	583	525	473	14,071	12,654	11,400	13,488	12,129	10,927
7	2022		1,152		1,152	27,774	26,623	521	460	407	12,564	11,100	9,827	12,043	10,640	9,420
8	2023		1,152		1,152	27,774	26,623	465	404	351	11,218	9,737	8,472	10,753	9,333	8,121
9	2024		1,152		1,152	27,774	26,623	415	354	303	10,016	8,541	7,303	9,601	8,187	7,000
10	2025		1,152		1,152	27,774	26,623	371	311	261	8,943	7,492	6,296	8,572	7,181	6,035
11	2026		1,152		1,152	27,774	26,623	331	272	225	7,984	6,572	5,428	7,653	6,300	5,203
12	2027		1,152		1,152	27,774	26,623	296	239	194	7,129	5,765	4,679	6,833	5,526	4,485
13	2028		1,152		1,152	27,774	26,623	264	210	167	6,365	5,057	4,034	6,101	4,847	3,867
14	2029		1,152		1,152	27,774	26,623	236	184	144	5,683	4,436	3,477	5,447	4,252	3,333
15	2030		1,152		1,152	27,774	26,623	210	161	124	5,074	3,891	2,998	4,864	3,730	2,874
16	2031		1,152		1,152	27,774	26,623	188	142	107	4,531	3,413	2,584	4,343	3,271	2,477
17	2032		1,152		1,152	27,774	26,623	168	124	92	4,045	2,994	2,228	3,877	2,870	2,136
18	2033		1,152		1,152	27,774	26,623	150	109	80	3,612	2,626	1,920	3,462	2,517	1,840
19	2034		1,152		1,152	27,774	26,623	134	96	69	3,225	2,304	1,656	3,091	2,208	1,587
20	2035		1,152		1,152	27,774	26,623	119	84	59	2,879	2,021	1,427	2,760	1,937	1,368
21	2036		1,152		1,152	27,774	26,623	107	73	51	2,571	1,773	1,230	2,464	1,700	1,179
22	2037		1,152		1,152	27,774	26,623	95	64	44	2,295	1,555	1,061	2,200	1,491	1,017
23	2038		1,152		1,152	27,774	26,623	85	57	38	2,049	1,364	914	1,964	1,307	876
24	2039		1,152		1,152	27,774	26,623	76	50	33	1,830	1,197	788	1,754	1,147	755
25	2040		1,152		1,152	27,774	26,623	68	44	28	1,634	1,050	680	1,566	1,006	652
26	2041		1,152		1,152	27,774	26,623	60	38	24	1,459	921	586	1,399	883	562
27	2042		1,152		1,152	27,774	26,623	54	33	21	1,302	808	505	1,248	775	484
28	2043		1,152		1,152	27,774	26,623	48	29	18	1,163	708	435	1,115	679	417
29	2044		1,152		1,152	27,774	26,623	43	26	16	1,038	621	375	995	595	369
30	2045		1,152		1,152	27,774	26,623	38	23	13	927	545	324	889	522	311
31	2046		1,152		1,152	27,774	26,623	34	20	12	828	478	279	794	458	267
32	2047		1,152		1,152	27,774	26,623	31	17	10	739	419	240	708	402	230
33	2048		1,152		1,152	28,219	27,068	27	15	9	670	374	211	643	359	202
34	2049		1,152		1,152	25,999	24,848	24	13	7	552	302	167	528	289	160
35	2050		1,152		1,152	25,999	24,848	22	12	6	492	265	144	470	253	138
Total		28,788	31,545	2,506	62,839			30,538	28,445	26,670	149,659	123,450	103,337	119,121	95,005	76,667
NET PRESENT VALUE														119,121	95,005	76,667
BENEFIT TO COST														4.90	4.34	3.87
Internal Financial Rate of Return(IFRR):																
														57.59%		

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	9,461	812	9,461	812
2	7,550	2,916	17,011	3,727
3	6,063	6,404	23,074	10,131
4	5,917	13,793	28,991	23,924
5	5,060	17,058	34,051	40,983

4.59

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % less Benefit
PDEIP (IGTDP)

Sr. No		Project Cost				FUEIP (IGTDP)							Discount Cost			Discount Benefit			Net Benefit			
		Capital Cost	O&M Cost	Fin Cost	Total	Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	12%	14%	16%	12%	14%	16%	12%	14%	16%
0													0	0	0	0	0	0	0	0	0	0
1	2016	4,214		791	5,005	-	12.21	-	-	9.50	-	-	(5,005)	4,469	4,391	4,315	-	-	-	(4,469)	(4,391)	(4,315)
2	2017	914	169	663	1,746	-	12.79	-	-	9.61	-	-	(1,746)	1,392	1,343	1,297	-	-	-	(1,392)	(1,343)	(1,297)
3	2018		205	520	725	-	12.94	-	-	9.72	-	-	(725)	516	489	464	-	-	-	(516)	(489)	(464)
4	2019		205	357	563	2,497	13.06	32,606	2,811	9.83	27,643	4,467	3,904	358	333	311	2,839	2,645	2,467	2,481	2,312	2,156
5	2020		205	175	380	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,033	216	197	181	2,504	2,292	2,101	2,288	2,095	1,920
6	2021		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	104	93	84	2,236	2,010	1,811	2,132	1,917	1,727
7	2022		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	93	82	73	1,996	1,764	1,561	1,903	1,682	1,488
8	2023		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	83	72	63	1,782	1,547	1,346	1,699	1,475	1,283
9	2024		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	74	63	54	1,591	1,357	1,160	1,517	1,294	1,106
10	2025		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	66	55	46	1,421	1,190	1,000	1,355	1,135	954
11	2026		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	59	49	40	1,269	1,044	862	1,210	995	822
12	2027		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	53	43	35	1,133	916	743	1,080	873	708
13	2028		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	47	37	30	1,011	803	641	964	766	611
14	2029		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	42	33	26	903	705	552	861	672	526
15	2030		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	37	29	22	806	618	476	769	589	454
16	2031		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	33	25	19	720	542	411	687	517	392
17	2032		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	30	22	16	643	476	354	613	454	338
18	2033		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	27	19	14	574	417	305	547	398	291
19	2034		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	24	17	12	512	366	263	488	349	251
20	2035		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	21	15	11	457	321	227	436	306	216
21	2036		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	19	13	9	408	282	195	389	269	186
22	2037		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	17	11	8	365	247	169	348	235	161
23	2038		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	15	10	7	326	217	145	311	207	138
24	2039		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	14	9	6	291	190	125	277	181	119
25	2040		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	12	8	5	260	167	108	248	159	103
26	2041		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	11	7	4	232	146	93	221	139	89
27	2042		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	10	6	4	207	128	80	197	122	76
28	2043		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	9	5	3	185	113	69	176	108	66
29	2044		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	8	5	3	165	99	60	157	94	57
30	2045		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	7	4	2	147	87	51	140	83	49
31	2046		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	6	4	2	132	76	44	126	72	42
32	2047		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	5	3	2	117	67	38	112	64	36
33	2048		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	5	3	2	105	58	33	100	55	31
34	2049		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	4	2	1	94	51	28	90	49	27
35	2050		205		205	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,208	4	2	1	84	45	24	80	43	23
Total		5,128	5,912	2,506	13,546								105,656	7,866	7,485	7,164	24,983	20,689	17,375	17,117	13,204	10,211
7.7996695																NET PRESENT VALUE			17,117	13,204	10,211	
																BENEFIT TO COST			3.18	2.76	2.43	
		Cash Out		Inflows	Cumulative Out flows	Cumulative Inflows							Internal Financial Rate of Return(IFRR):		33.99%							
Year		Flows													Pay Back Period		4.90		Years			
0		5,005		-	5,005	-																
1		1,746		-	6,751	-																
2		725		-																		

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensivity Analysis with 10 % less Benefit
7th STG

Sr. No		Project Cost			Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit			
		Capital Cost	O&M Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%	
0													0	0	0	0	0	0	0	0	0	
1	2016	2,828		2,828	-	12.21	-	-	9.50	-	-	(2,828)	2,525	2,481	2,438	-	-	-	(2,525)	(2,481)	(2,438)	
2	2017	3,252	130	3,382	710	12.79	9,075	794	9.61	7,623	1,307	(2,075)	2,696	2,603	2,514	1,042	1,006	971	(1,654)	(1,597)	(1,543)	
3	2018	2,722	239	2,961	1,917	12.94	24,808	2,139	9.72	20,783	3,623	661	2,108	1,999	1,897	2,578	2,445	2,321	470	446	424	
4	2019	2,616	344	2,959	2,640	13.06	34,477	2,938	9.83	28,887	5,032	2,072	1,881	1,752	1,634	3,198	2,979	2,779	1,317	1,227	1,145	
5	2020	1,637	409	2,046	3,548	13.17	46,725	3,941	9.95	39,220	6,754	4,708	1,161	1,063	974	3,832	3,508	3,216	2,671	2,445	2,242	
6	2021		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	207	186	168	7,846	7,056	6,357	7,639	6,870	6,189	
7	2022		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	185	163	145	7,006	6,189	5,480	6,821	6,026	5,335	
8	2023		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	165	143	125	6,255	5,429	4,724	6,090	5,286	4,599	
9	2024		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	148	126	108	5,585	4,762	4,072	5,437	4,636	3,964	
10	2025		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	132	110	93	4,986	4,178	3,511	4,854	4,068	3,418	
11	2026		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	118	97	80	4,452	3,665	3,026	4,334	3,568	2,946	
12	2027		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	105	85	69	3,975	3,215	2,609	3,870	3,130	2,540	
13	2028		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	94	74	59	3,549	2,820	2,249	3,455	2,746	2,190	
14	2029		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	84	65	51	3,169	2,473	1,939	3,085	2,408	1,888	
15	2030		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	75	57	44	2,829	2,170	1,671	2,754	2,113	1,627	
16	2031		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	67	50	38	2,526	1,903	1,441	2,459	1,853	1,403	
17	2032		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	60	44	33	2,256	1,670	1,242	2,196	1,626	1,209	
18	2033		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	53	39	28	2,014	1,464	1,071	1,961	1,425	1,043	
19	2034		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	47	34	24	1,798	1,285	923	1,751	1,251	899	
20	2035		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	42	30	21	1,606	1,127	796	1,564	1,097	775	
21	2036		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	38	26	18	1,433	988	686	1,395	962	668	
22	2037		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	34	23	16	1,280	867	591	1,246	844	575	
23	2038		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	30	20	13	1,143	761	510	1,113	741	497	
24	2039		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	27	18	12	1,020	667	440	993	649	428	
25	2040		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	24	15	10	911	585	379	887	570	369	
26	2041		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	21	14	9	813	513	327	792	499	318	
27	2042		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	19	12	7	726	450	282	707	438	275	
28	2043		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	17	10	6	648	395	243	631	385	237	
29	2044		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	15	9	6	579	347	209	564	338	203	
30	2045		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	14	8	5	517	304	180	503	296	175	
31	2046		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	12	7	4	462	267	156	450	260	152	
32	2047		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	11	6	4	412	234	134	401	228	130	
33	2048		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	10	5	3	368	205	116	358	200	113	
34	2049		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	9	5	3	329	180	100	320	175	97	
35	2050		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	8	4	2	293	158	86	285	154	84	
Total		13,056	11,349	24,405								379,491	12,192	11,356	10,645	79,572	65,221	54,245	67,380	53,865	43,600	
15.5500166																	NET PRESENT VALUE			67,380	53,865	43,600
																	BENEFIT TO COST			6.53	5.74	5.10
24954	Year	Cash Out Flows		Inflows		Cumulative Out flows		Cumulative Inflows														
1368	0																					
26322	1	2,828				2,828																
	2	3,382		1,307		6,211		1,307														
	3	2,961		3,623		9,172		4,929														
	4	2,959		5,032		12,131		9,961														
	5	2,046				14,177		16,715														
						15,487		32,202														
Internal Financial Rate of Return(IFRR):																	67.86%					
Pay Back Period																	4.62 Years					

Internal Financial Rate of Return(IFRR):

67.86%

Pay Back Period

4.62 Years

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % higher cost and 10 % lower benefit (DOP)

		Rs.in Millions																								
Sr No	Years	Project Cost			Revenue												Discount Cost			Discount Benefit			Net Benefit			
		Capital Cost	Cost Cost	Total	No. of Consumers added	Total Sales (Mkwh)	Sale Price (Rs/kwh)	Total Sales M.R.	Salvage Value	Total Revenue	Line Losses	Total Purchase Price (Rs/kwh)	Purchase Price (Rs/kwh)	Total Purchase Price M.R.	Benefit from Sales of Energy	Total Net Benefit	12%	14%	16%	12%	14%	16%	12%	14%	16%	
0																										
1	2016	878		965.84	150,000		12.209	-	-	0.1090	-	9.496	-	(966)	862	847	833	-	-	-	(862)	(847)	(833)			
2	2017	1471.854	94.00	1722.43	312,000	263	12.787	3,369	-	0.1056	295	9.606	2,830	485	(1,237)	1,373	1,325	1,280	387	373	361	(986)	(952)	(919)		
3	2018	1123.538	138.94	1388.72	489,000	744	12.942	9,626	-	0.1040	830	9.715	8,064	1,406	17	988	937	890	1,000	949	900	12	12	10		
4	2019	882.2864	174.23	1162.17	684,000	1,469	13.061	19,184	-	0.1015	1,635	9.833	16,073	2,800	1,638	739	688	642	1,779	1,658	1,546	1,040	970	904		
5	2020	754.0367	204.39	1054.27	900,000	2,403	13.171	31,643	-	0.0998	2,669	9.951	26,561	4,574	3,520	598	548	502	2,595	2,376	2,178	1,997	1,828	1,676		
6	2021		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	114	102	92	3,433	3,088	2,782	3,319	2,986	2,690		
7	2022		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	102	90	80	3,066	2,708	2,398	2,964	2,618	2,318		
8	2023		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	91	79	69	2,737	2,376	2,067	2,646	2,297	1,998		
9	2024		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	81	69	59	2,444	2,084	1,782	2,363	2,015	1,723		
10	2025		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	72	61	51	2,182	1,828	1,536	2,110	1,767	1,485		
11	2026		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	65	53	44	1,948	1,604	1,324	1,883	1,551	1,280		
12	2027		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	58	47	38	1,739	1,407	1,142	1,681	1,360	1,104		
13	2028		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	52	41	33	1,553	1,234	984	1,501	1,193	951		
14	2029		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	46	36	28	1,387	1,082	848	1,341	1,046	820		
15	2030		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	41	31	24	1,238	949	731	1,197	918	707		
16	2031		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	37	28	21	1,105	833	631	1,068	805	610		
17	2032		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	33	24	18	987	731	544	954	707	526		
18	2033		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	29	21	16	881	641	469	852	620	453		
19	2034		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	26	19	13	787	562	404	761	543	391		
20	2035		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	23	16	12	703	493	348	680	477	336		
21	2036		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	21	14	10	627	433	300	606	419	290		
22	2037		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	19	13	9	560	379	259	541	366	250		
23	2038		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	17	11	7	500	333	223	483	322	216		
24	2039		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	15	10	6	445	292	192	431	282	186		
25	2040		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	13	8	6	399	256	166	386	248	160		
26	2041		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	12	7	5	356	225	143	344	218	138		
27	2042		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	11	7	4	318	197	123	307	190	119		
28	2043		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	9	6	4	284	173	106	275	167	102		
29	2044		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	8	5	3	253	152	92	245	147	89		
30	2045		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	8	4	3	226	133	79	218	129	76		
31	2046		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	7	4	2	202	117	68	195	113	66		
32	2047		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	6	3	2	180	102	59	174	99	57		
33	2048		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	5	3	2	161	90	51	156	87	49		
34	2049		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	5	3	1	144	79	44	139	76	43		
35	2050		204.39	224.83	900,000	3,560	13.171	46,884	-	0.0998	3,955	9.951	39,354	6,777	6,552	4	2	1	128	69	36	124	67	37		
Total		5,109.75	3,677.40	9,665.86																						

Net Present Value

27,383 22,761 19,063

Benefit Cost Ratio

5.88 5.33 4.84

Internal Financial Rate of Return(IFRR):

74%

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	966	-	966	-
2	1,722	485	2,688	485
3	1,389	1,406	4,077	1,891
4	1,162	2,890	5,239	4,690
5	1,954	4,574	6,293	9,264
		6,777		16,041

4.35

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED																							
Sensivity Analysis with 10 % higher Cost and 10 % Less Benefit (DISTRIBUTION REHABILITATION)																							
Sr.No	Years	Project Costs			Project Benefits							Discount Cost			Discount Benefit			Net Benefit			Rs.in Millions		
		Capital Cost	O&M Cost	Total	Power Savings	Unit Purchase Price	Gross Benefits	Salvage Value	Total	Total	Net	12%	14%	16%	12%	14%	16%	12%	14%	16%			
1	2016	749.49164		824.44	0.00	9.496	0.00	0.00	0.00	-824.44		736	723	711	0	0	0	-736	-723	-711			
2	2017	901.951695	66.06	1064.81	53.77	9.606	516.53	0.00	464.88	-599.93		849	819	791	371	358	345	-478	-461	-446			
3	2018	1089.637481	109.64	1319.21	103.13	9.715	1001.93	0.00	901.74	-417.47		939	890	845	642	609	578	-297	-281	-267			
4	2019	1255.559752	159.87	1556.97	147.18	9.833	1447.17	0.00	1302.45	-254.52		989	922	860	828	771	719	-161	-151	-141			
5	2020	1497.957559	219.78	1889.52	188.15	9.951	1872.37	0.00	1685.14	-204.38		1072	981	900	956	875	802	-116	-106	-98			
6	2021		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		122	110	99	999	899	809	877	789	710			
7	2022		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		109	97	86	892	788	698	877	789	710			
8	2023		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		98	85	74	797	691	602	877	789	710			
9	2024		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		87	74	64	711	606	519	877	789	710			
10	2025		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		78	65	55	635	532	447	877	789	710			
11	2026		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		70	57	47	567	467	385	877	789	710			
12	2027		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		62	50	41	506	409	332	877	789	710			
13	2028		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		55	44	35	452	359	286	877	789	710			
14	2029		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		49	39	30	404	315	247	877	789	710			
15	2030		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		44	34	26	360	276	213	877	789	710			
16	2031		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		39	30	22	322	242	183	877	789	710			
17	2032		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		35	26	19	287	213	158	877	789	710			
18	2033		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		31	23	17	256	186	136	877	789	710			
19	2034		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		28	20	14	229	164	118	877	789	710			
20	2035		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		25	18	12	204	143	101	877	789	710			
21	2036		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		22	15	11	183	126	87	877	789	710			
22	2037		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		20	14	9	163	110	75	877	789	710			
23	2038		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		18	12	8	146	97	65	877	789	710			
24	2039		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		16	10	7	130	85	56	877	789	710			
25	2040		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		14	9	6	116	75	48	877	789	710			
26	2041		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		13	8	5	104	65	42	877	789	710			
27	2042		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		11	7	4	92	57	36	877	789	710			
28	2043		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		10	6	4	83	50	31	877	789	710			
29	2044		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		9	5	3	74	44	27	877	789	710			
30	2045		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		8	5	3	66	39	23	877	789	710			
31	2046		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		7	4	2	59	34	20	877	789	710			
32	2047		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		6	4	2	52	30	17	877	789	710			
33	2048		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		6	3	2	47	26	15	877	789	710			
34	2049		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		5	3	2	42	23	13	877	789	710			
35	2050		219.78	241.76	220.20	9.95	2191.32	0.00	1972.19	1730.43		5	2	1	47	25	14	877	789	710			
Total		5,495	7,149	13,908				549.46	2466.70	2224.94	50,107	5,687	5,214	4,817	11,822	9,789	8,247						
																		Net Present Value					
																		6,871	5,298	4,141			
																		Benefit Cost Ratio					
																		2.08	1.88	1.71			
																		33%					

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	824		824	
2	1,065	465	1,889	465
3	1,319	902	3,208	1,367
4	1,557	1,302	4,765	2,669
5	1,890	1,685	6,655	4,354
		1,972		6,326

6.37

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity analysis with 10 % higher cost and 10 % less Benefit (IGTDP)

Sr. No		Project Cost				Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit				
		Capital Cost	O&M Cost	Fin Cost	Total													
0								12%	14%	16%	12%	14%	16%	12%	14%	16%		
1	2016	8,670		791	10,407	812	(9,595)	9,292	9,120	8,972	725	712	700	(8,567)	(8,417)	(8,272)		
2	2017	6,540	347	663	8,305	2,916	(5,389)	6,621	6,391	6,172	2,324	2,243	2,167	(4,297)	(4,148)	(4,005)		
3	2018	4,935	608	520	6,670	6,404	(265)	4,747	4,502	4,273	4,558	4,323	4,103	(189)	(179)	(170)		
4	2019	4,754	806	357	6,509	13,793	7,284	4,136	3,854	3,595	8,766	8,167	7,618	4,630	4,313	4,023		
5	2020	3,889	996	175	5,566	17,058	11,492	3,158	2,891	2,650	9,679	8,860	8,122	6,521	5,969	5,472		
6	2021		1,152		1,267	27,774	26,508	642	577	520	14,071	12,654	11,400	13,429	12,077	10,880		
7	2022		1,152		1,267	27,774	26,508	573	506	448	12,564	11,100	9,827	11,991	10,594	9,379		
8	2023		1,152		1,267	27,774	26,508	512	444	386	11,218	9,737	8,472	10,706	9,293	8,086		
9	2024		1,152		1,267	27,774	26,508	457	390	333	10,016	8,541	7,303	9,559	8,151	6,970		
10	2025		1,152		1,267	27,774	26,508	408	342	287	8,943	7,492	6,298	8,535	7,150	6,009		
11	2026		1,152		1,267	27,774	26,508	364	300	248	7,984	6,572	5,428	7,620	6,272	5,180		
12	2027		1,152		1,267	27,774	26,508	325	263	213	7,129	5,765	4,679	6,804	5,502	4,466		
13	2028		1,152		1,267	27,774	26,508	290	231	184	6,365	5,057	4,034	6,075	4,826	3,850		
14	2029		1,152		1,267	27,774	26,508	259	202	159	5,683	4,436	3,477	5,424	4,234	3,318		
15	2030		1,152		1,267	27,774	26,508	231	177	137	5,074	3,891	2,998	4,843	3,714	2,861		
16	2031		1,152		1,267	27,774	26,508	207	156	118	4,531	3,413	2,584	4,324	3,257	2,466		
17	2032		1,152		1,267	27,774	26,508	184	137	102	4,045	2,994	2,228	3,861	2,857	2,126		
18	2033		1,152		1,267	27,774	26,508	165	120	88	3,612	2,626	1,920	3,447	2,506	1,832		
19	2034		1,152		1,267	27,774	26,508	147	105	76	3,225	2,304	1,656	3,078	2,199	1,580		
20	2035		1,152		1,267	27,774	26,508	131	92	65	2,879	2,021	1,427	2,748	1,929	1,362		
21	2036		1,152		1,267	27,774	26,508	117	81	56	2,571	1,773	1,230	2,454	1,692	1,174		
22	2037		1,152		1,267	27,774	26,508	105	71	48	2,295	1,555	1,061	2,190	1,484	1,013		
23	2038		1,152		1,267	27,774	26,508	93	62	42	2,049	1,364	914	1,956	1,302	872		
24	2039		1,152		1,267	27,774	26,508	83	55	36	1,830	1,197	788	1,747	1,142	752		
25	2040		1,152		1,267	27,774	26,508	75	48	31	1,634	1,050	680	1,559	1,002	649		
26	2041		1,152		1,267	27,774	26,508	67	42	27	1,459	921	586	1,392	879	559		
27	2042		1,152		1,267	27,774	26,508	59	37	23	1,302	808	505	1,243	771	482		
28	2043		1,152		1,267	27,774	26,508	53	32	20	1,163	708	435	1,110	676	415		
29	2044		1,152		1,267	27,774	26,508	47	28	17	1,038	621	375	991	593	358		
30	2045		1,152		1,267	27,774	26,508	42	25	15	927	545	324	885	520	309		
31	2046		1,152		1,267	27,774	26,508	38	22	13	828	478	279	790	456	266		
32	2047		1,152		1,267	27,774	26,508	34	19	11	739	419	240	705	400	229		
33	2048		1,152		1,267	28,219	26,953	30	17	9	670	374	211	640	357	202		
34	2049		1,152		1,267	25,999	24,733	27	15	8	552	302	167	525	287	159		
35	2050		1,152		1,267	25,999	24,733	24	13	7	492	265	144	468	252	137		
Total		28,788	31,545	2,506	69,123			33,590	31,290	29,341	149,559	123,450	103,337	116,069	92,160	73,996		
												NET PRESENT VALUE			116,069	92,160	73,996	
												BENEFIT TO COST			4.46	3.95	3.52	
												Internal Financial Rate of Return(IFRR):						53.05%

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	10,407	812	10,407	812
2	8,305	2,916	18,712	3,727
3	6,670	6,404	25,382	10,131
4	6,509	13,793	31,890	23,924
5	5,566	17,058	37,456	40,983

4.79

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % higher cost and 10 % less benefit
PDEIP (IGTDP)

PDEIP (IGTDP)																												
Sr. No		Project Cost				Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit								
		Capital Cost	O&M Cost	Fin Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%						
0														12%	14%	16%	12%	14%	16%	12%	14%	16%						
1	2016	4,214		791	5,506	-	12.21	-	-	9.50	-	-	(5,506)	4,916	4,830	4,746	-	-	-	(4,916)	(4,830)	(4,746)						
2	2017	914	169	663	1,920	-	12.79	-	-	9.61	-	-	(1,920)	1,531	1,478	1,427	-	-	-	(1,531)	(1,478)	(1,427)						
3	2018		205	520	797	-	12.94	-	-	9.72	-	-	(797)	567	538	511	-	-	-	(567)	(538)	(511)						
4	2019		205	357	619	2,497	13.06	32,606	2,811	9.83	27,643	4,467	3,848	393	366	342	2,839	2,645	2,467	2,446	2,279	2,125						
5	2020		205	175	418	2,497	13.17	32,881	2,811	9.95	27,978	4,413	3,995	237	217	199	2,504	2,292	2,101	2,267	2,075	1,902						
6	2021		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	114	103	93	2,236	2,010	1,811	2,122	1,907	1,718						
7	2022		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	102	90	80	1,996	1,764	1,561	1,894	1,674	1,481						
8	2023		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	91	79	69	1,782	1,547	1,346	1,691	1,468	1,277						
9	2024		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	81	69	59	1,591	1,357	1,160	1,510	1,288	1,101						
10	2025		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	73	61	51	1,421	1,190	1,000	1,348	1,129	949						
11	2026		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	65	53	44	1,269	1,044	862	1,204	991	818						
12	2027		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	58	47	38	1,133	916	743	1,075	869	705						
13	2028		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	52	41	33	1,011	803	641	959	762	608						
14	2029		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	46	36	28	903	705	552	857	669	524						
15	2030		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	41	32	24	806	618	476	765	586	452						
16	2031		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	37	28	21	720	542	411	683	514	390						
17	2032		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	33	24	18	643	476	354	610	452	336						
18	2033		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	29	21	16	574	417	305	545	396	289						
19	2034		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	26	19	13	512	366	263	486	347	250						
20	2035		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	23	16	12	457	321	227	434	305	215						
21	2036		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	21	14	10	408	282	195	387	268	185						
22	2037		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	19	13	9	365	247	169	346	234	160						
23	2038		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	17	11	7	326	217	145	309	206	138						
24	2039		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	15	10	6	291	190	125	276	180	119						
25	2040		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	13	9	6	260	167	108	247	158	102						
26	2041		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	12	7	5	232	146	93	220	139	88						
27	2042		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	11	7	4	207	128	80	196	121	76						
28	2043		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	9	6	4	185	113	69	176	107	65						
29	2044		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	8	5	3	165	99	60	157	94	57						
30	2045		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	8	4	3	147	87	51	139	83	48						
31	2046		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	7	4	2	132	76	44	125	72	42						
32	2047		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	6	3	2	117	67	38	111	64	36						
33	2048		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	5	3	2	105	58	33	100	55	31						
34	2049		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	5	3	1	94	51	28	89	48	27						
35	2050		205		226	2,497	13.17	32,881	2,811	9.95	27,978	4,413	4,187	4	2	1	84	45	24	80	43	23						
Total		5,128	5,912	2,506	14,901								104,301	8,648	8,234	7,881	24,983	20,689	17,375	16,335	12,455	9,494						
														6.9996996														
																	NET PRESENT VALUE			16,335			12,455			9,494		
																	BENEFIT TO COST			2.89			2.51			2.20		
Year		Cash Out Flows		Inflows		Cumulative Out flows		Cumulative Inflows																				
0		5,506				5,506																						
1		1,920				7,426																						
2		797				8,223																						
3		619		4,467		8,842		4,467		5.09																		
4		418		4,413		9,260		8,879																				
5		226		4,413		9,486																						
														Internal Financial Rate of Return(IFRR):			31.62%											
														Pay Back Period			5.09			Years								

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 10 % higher cost and 10 % less benefits
7th STG

Sr. No		Project Cost			Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit			
		Capital Cost	O&M Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%	
0													0	0	0	0	0	0	0	0	0	
1	2016	2,828		2,828	-	12.21	-	-	9.50	-	-	(2,828)	2,525	2,481	2,438	-	-	-	(2,525)	(2,481)	(2,438)	
2	2017	3,252	130	3,382	710	12.79	9,075	794	9.61	7,623	1,307	(2,075)	2,696	2,603	2,514	1,042	1,006	971	(1,654)	(1,597)	(1,543)	
3	2018	2,722	239	2,961	1,917	12.94	24,808	2,139	9.72	20,783	3,623	661	2,108	1,999	1,897	2,578	2,445	2,321	470	446	424	
4	2019	2,616	344	2,959	2,640	13.06	34,477	2,938	9.83	28,887	5,032	2,072	1,881	1,752	1,634	3,198	2,979	2,779	1,317	1,227	1,145	
5	2020	1,637	409	2,046	3,548	13.17	46,725	3,941	9.95	39,220	6,754	4,708	1,161	1,063	974	3,832	3,508	3,216	2,671	2,445	2,242	
6	2021		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	207	186	168	7,846	7,056	6,357	7,639	6,870	6,189	
7	2022		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	185	163	145	7,006	6,189	5,480	6,821	6,026	5,335	
8	2023		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	165	143	125	6,255	5,429	4,724	6,090	5,286	4,599	
9	2024		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	148	126	108	5,585	4,762	4,072	5,437	4,636	3,964	
10	2025		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	132	110	93	4,986	4,178	3,511	4,854	4,068	3,418	
11	2026		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	118	97	80	4,452	3,665	3,026	4,334	3,568	2,946	
12	2027		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	105	85	69	3,975	3,215	2,609	3,870	3,130	2,540	
13	2028		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	94	74	59	3,549	2,820	2,249	3,455	2,746	2,190	
14	2029		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	84	65	51	3,169	2,473	1,939	3,085	2,408	1,888	
15	2030		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	75	57	44	2,829	2,170	1,671	2,754	2,113	1,627	
16	2031		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	67	50	38	2,526	1,903	1,441	2,459	1,853	1,403	
17	2032		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	60	44	33	2,256	1,670	1,242	2,196	1,626	1,209	
18	2033		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	53	39	28	2,014	1,464	1,071	1,961	1,425	1,043	
19	2034		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	47	34	24	1,798	1,285	923	1,751	1,251	899	
20	2035		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	42	30	21	1,606	1,127	796	1,564	1,097	775	
21	2036		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	38	26	18	1,433	988	686	1,395	962	668	
22	2037		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	34	23	16	1,280	867	591	1,246	844	575	
23	2038		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	30	20	13	1,143	761	510	1,113	741	497	
24	2039		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	27	18	12	1,020	667	440	993	649	428	
25	2040		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	24	15	10	911	585	379	887	570	369	
26	2041		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	21	14	9	813	513	327	792	499	318	
27	2042		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	19	12	7	726	450	282	707	438	275	
28	2043		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	17	10	6	648	395	243	631	385	237	
29	2044		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	15	9	6	579	347	209	564	338	203	
30	2045		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	14	8	5	517	304	180	503	296	175	
31	2046		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	12	7	4	462	267	156	450	260	152	
32	2047		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	11	6	4	412	234	134	401	228	130	
33	2048		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	10	5	3	368	205	116	358	200	113	
34	2049		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	9	5	3	329	180	100	320	175	97	
35	2050		409	409	4,284	13.17	56,428	3,941	9.95	39,220	15,487	15,078	8	4	2	293	158	86	285	154	84	
Total		13,056	11,349	24,405								379,491	12,192	11,356	10,645	79,572	65,221	54,245	67,380	53,865	43,600	
													15.5500166									
													NET PRESENT VALUE			67,380			53,865			43,600
													BENEFIT TO COST			6.53			5.74			5.10
		Year		Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows															
24954		0																				
1368		1		2,828	-	2,828	-															
26322		2		3,382	1,307	6,211	1,307															
		3		2,961	3,623	9,172	4,929															
		4		2,959	5,032	12,131	9,961	4 62														
		5		2,046	6,754	14,177	16,715															
					15,487		32,202															
													Internal Financial Rate of Return(IFRR):			67.86%						
													Pay Back Period			4.62 Years						

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity analysis with 25 % higher cost (DOP)

Sr. No.	Years	Project Cost				Revenue						Rs.in Millions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Capital Cost	O&M Cost	Total	No. of Consumers added	Total Sales (Mkwh)	Sales Price (kwh)	Total Sales M.Re.	Salvage Value	Total Revenue	Line Losses	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Re.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Cash Out Flows				Cumulative Inflows				Cumulative Outflows				Net Present Value				Benefit Cost Ratio				Internal Financial Rate of Return (IFRR):			
Year	Cash Out	Flows	Inflows	Cumulative	Outflows	Inflows		Cumulative	Outflows	Inflows													
0																							
1	878	-		878	-																		
2	1,566	539		2,444	539																		
3	1,262	1,562		3,706	2,101																		
4	1,057	3,111		4,763	5,212																		
5	958	5,082		5,721	10,294																		
		7,530			17,824																		

Internal Financial Rate of Return (IFRR): 87%

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity analysis with 25 % higher cost (DISTRIBUTION REHABILITATION)

		Rs.in Millions																		
Sr.No	Years	Project Costs			Project Benefits							Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Total	Power Savings	Unit Purchase Price	Gross Benefits	Salvage Value	Total	Total Benefit	Net	12%	14%	16%	12%	14%	16%	12%	14%	16%
1	2016	749.49164		936.86	0.00	9.496	0.00	0.00		-936.86		836	822	808	0	0	0	-836	-822	-808
2	2017	901.951695	66.06	1210.01	53.77	9.606	516.53	0.00	516.53	-693.48		965	931	899	412	397	384	-553	-534	-515
3	2018	1089.637481	109.64	1499.10	103.13	9.715	1001.93	0.00	1001.93	-497.17		1067	1012	960	713	676	642	-354	-336	-318
4	2019	1255.559752	159.87	1769.28	147.18	9.833	1447.17	0.00	1447.17	-322.12		1124	1048	977	920	857	799	-204	-191	-178
5	2020	1497.957559	219.78	2147.18	188.15	9.951	1872.37	0.00	1872.37	-274.80		1218	1115	1022	1062	972	891	-156	-143	-131
6	2021		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		139	125	113	1110	998	899	971	873	786
7	2022		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		124	110	97	991	876	775	867	766	678
8	2023		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		111	96	84	885	768	668	774	672	584
9	2024		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		99	84	72	790	674	576	691	590	504
10	2025		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		88	74	62	706	591	497	618	517	435
11	2026		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		79	65	54	630	519	428	551	454	374
12	2027		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		71	57	46	562	455	369	491	398	323
13	2028		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		63	50	40	502	399	318	439	349	278
14	2029		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		56	44	34	448	350	274	392	306	240
15	2030		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		50	38	30	400	307	237	350	269	207
16	2031		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		45	34	26	357	269	204	312	235	178
17	2032		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		40	30	22	319	236	176	279	206	154
18	2033		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		36	26	19	285	207	152	249	181	133
19	2034		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		32	23	16	254	182	131	222	159	115
20	2035		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		28	20	14	227	159	113	199	139	99
21	2036		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		25	18	12	203	140	97	178	122	85
22	2037		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		23	15	10	181	123	84	158	108	74
23	2038		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		20	13	9	162	108	72	142	95	63
24	2039		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		18	12	8	144	94	62	126	82	54
25	2040		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		16	10	7	129	83	54	113	73	47
26	2041		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		14	9	6	115	73	46	101	64	40
27	2042		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		13	8	5	103	64	40	90	56	35
28	2043		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		12	7	4	92	56	34	80	49	30
29	2044		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		10	6	4	82	49	30	72	43	26
30	2045		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		9	5	3	73	43	26	64	38	23
31	2046		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		8	5	3	65	38	22	57	33	19
32	2047		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		7	4	2	58	33	19	51	29	17
33	2048		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		7	4	2	52	29	16	45	25	14
34	2049		219.78	274.73	220.20	9.95	2191.32	0.00	2191.32	1916.59		6	3	2	46	25	14	40	22	12
35	2050		219.78	274.73	220.20	9.95	2191.32	549.46	2740.78	2466.05		5	3	2	52	28	15	47	25	13
Total		5,495	7,149	15,804						55,323		6,464	5,926	5,474	13,130	10,878	9,164			
Net Present Value																		7,502	5,774	4,498
Benefit Cost Ratio																		2.03	1.84	1.67

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	937		937	
2	1,210	517	2,147	517
3	1,499	1,002	3,646	1,518
4	1,769	1,447	5,415	2,966
5	2,147	1,872	7,562	4,838
		2,191		7,029

6.46

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 25 % higher cost (IGTDP)

Sr. No		Project Cost				Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Fin Cost	Total			12%	14%	16%	12%	14%	16%	12%	14%	16%
0								0	0	0	0	0	0	0	0	0
1	2016	8,670		791	9,461	1,002	(8,459)	8,447	8,299	8,156	895	879	864	(7,552)	(7,420)	(7,292)
2	2017	6,540	347	663	7,550	3,438	(4,112)	6,019	5,810	5,611	2,741	2,646	2,555	(3,278)	(3,164)	(3,056)
3	2018	4,935	608	520	6,063	7,459	1,396	4,316	4,093	3,884	5,309	5,035	4,779	993	942	895
4	2019	4,754	806	357	5,917	15,856	9,939	3,760	3,503	3,268	10,077	9,388	8,757	6,317	5,885	5,489
5	2020	3,889	996	175	5,060	19,681	14,621	2,871	2,628	2,409	11,168	10,222	9,370	8,297	7,594	6,961
6	2021		1,152		1,152	31,833	30,681	583	525	473	16,127	14,502	13,065	15,544	13,977	12,592
7	2022		1,152		1,152	31,833	30,681	521	460	407	14,399	12,721	11,263	13,878	12,261	10,856
8	2023		1,152		1,152	31,833	30,681	465	404	351	12,857	11,159	9,710	12,392	10,755	9,359
9	2024		1,152		1,152	31,833	30,681	415	354	303	11,479	9,789	8,370	11,064	9,435	8,067
10	2025		1,152		1,152	31,833	30,681	371	311	261	10,249	8,587	7,216	9,878	8,276	6,955
11	2026		1,152		1,152	31,833	30,681	331	272	225	9,151	7,532	6,221	8,820	7,260	5,996
12	2027		1,152		1,152	31,833	30,681	296	239	194	8,171	6,607	5,363	7,875	6,368	5,169
13	2028		1,152		1,152	31,833	30,681	264	210	167	7,295	5,796	4,623	7,031	5,586	4,456
14	2029		1,152		1,152	31,833	30,681	236	184	144	6,514	5,084	3,985	6,278	4,900	3,841
15	2030		1,152		1,152	31,833	30,681	210	161	124	5,816	4,460	3,436	5,606	4,299	3,312
16	2031		1,152		1,152	31,833	30,681	188	142	107	5,193	3,912	2,962	5,005	3,770	2,855
17	2032		1,152		1,152	31,833	30,681	168	124	92	4,636	3,432	2,553	4,468	3,308	2,461
18	2033		1,152		1,152	31,833	30,681	150	109	80	4,139	3,010	2,201	3,989	2,901	2,121
19	2034		1,152		1,152	31,833	30,681	134	96	69	3,696	2,640	1,897	3,562	2,544	1,828
20	2035		1,152		1,152	31,833	30,681	119	84	59	3,300	2,316	1,636	3,181	2,232	1,577
21	2036		1,152		1,152	31,833	30,681	107	73	51	2,946	2,032	1,410	2,839	1,959	1,359
22	2037		1,152		1,152	31,833	30,681	95	64	44	2,631	1,782	1,216	2,536	1,718	1,172
23	2038		1,152		1,152	31,833	30,681	85	57	38	2,349	1,563	1,048	2,264	1,506	1,010
24	2039		1,152		1,152	31,833	30,681	76	50	33	2,097	1,371	903	2,021	1,321	870
25	2040		1,152		1,152	31,833	30,681	68	44	28	1,872	1,203	779	1,804	1,159	751
26	2041		1,152		1,152	31,833	30,681	60	38	24	1,672	1,055	671	1,612	1,017	647
27	2042		1,152		1,152	31,833	30,681	54	33	21	1,493	926	579	1,439	893	558
28	2043		1,152		1,152	31,833	30,681	48	29	18	1,333	812	499	1,285	783	481
29	2044		1,152		1,152	31,833	30,681	43	26	16	1,190	712	430	1,147	686	414
30	2045		1,152		1,152	31,833	30,681	38	23	13	1,063	625	371	1,025	602	358
31	2046		1,152		1,152	31,833	30,681	34	20	12	949	548	320	915	528	308
32	2047		1,152		1,152	31,833	30,681	31	17	10	847	481	276	816	464	266
33	2048		1,152		1,152	32,382	31,231	27	15	9	769	429	242	742	414	233
34	2049		1,152		1,152	29,641	28,490	24	13	7	629	344	191	605	331	184
35	2050		1,152		1,152	29,641	28,490	22	12	6	561	302	164	539	290	158
Total		28,788	31,545	2,506	62,839			30,538	28,445	26,670	171,858	141,798	118,732	141,320	113,353	92,062
												NET PRESENT VALUE			141,320	92,062
												BENEFIT TO COST			5.63	4.45
												Internal Financial Rate of Return (IFRR):				
												65.35%				

Year	Cash Out Flows	Inflows	Cumulative Out flows	Cumulative Inflows
0				
1	9,461	1,002	9,461	1,002
2	7,550	3,438	17,011	4,440
3	6,063	7,459	23,074	11,899
4	5,917	15,856	28,991	27,755
5	5,060	19,681	34,051	47,436

4.32

FAISALABAD ELECTRIC SUPPLY COMPANY LIMITED
Sensitivity Analysis with 25% higher cost
PDEIP (IGTDP)

PDEIP (IGTDP)																						
Sr. No		Project Cost				Total Sales (Mkwh)	Sale Price (kwh)	Total Sales M.Rs.	Total Purchase (Mkwh)	Purchase Price (kwh)	Total Purchase Price M.Rs.	Benefit from Sales of Energy	Total Net Benefit	Discount Cost			Discount Benefit			Net Benefit		
		Capital Cost	O&M Cost	Fin Cost	Total									12%	14%	16%	12%	14%	16%	12%	14%	16%
0					-									0	0	0	0	0	0	0	0	
1	2016	4,214		791	6,256	-	12.21	-	-	9.50	-	-	(6,256)	5,586	5,488	5,394	-	-	-	(5,586)	(5,488)	(5,394)
2	2017	914	169	663	2,182	-	12.79	-	-	9.61	-	-	(2,182)	1,740	1,679	1,622	-	-	-	(1,740)	(1,679)	(1,622)
3	2018		205	520	906	-	12.94	-	-	9.72	-	-	(906)	645	611	580	-	-	-	(645)	(611)	(580)
4	2019		205	357	703	2,497	13.06	32,606	2,811	9.83	27,643	4,963	4,260	447	416	388	3,154	2,938	2,741	2,707	2,522	2,353
5	2020		205	175	475	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,428	269	247	226	2,782	2,547	2,334	2,513	2,300	2,108
6	2021		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	130	117	105	2,484	2,234	2,012	2,354	2,117	1,907
7	2022		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	116	102	91	2,218	1,960	1,735	2,102	1,858	1,644
8	2023		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	104	90	78	1,980	1,719	1,496	1,876	1,629	1,418
9	2024		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	92	79	67	1,768	1,508	1,289	1,676	1,429	1,222
10	2025		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	83	69	58	1,579	1,323	1,111	1,496	1,254	1,053
11	2026		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	74	61	50	1,410	1,160	958	1,336	1,099	908
12	2027		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	66	53	43	1,259	1,018	826	1,193	965	783
13	2028		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	59	47	37	1,124	893	712	1,065	846	675
14	2029		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	52	41	32	1,003	783	614	951	742	582
15	2030		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	47	36	28	896	687	529	849	651	501
16	2031		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	42	32	24	800	603	456	758	571	432
17	2032		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	37	28	21	714	529	393	677	501	372
18	2033		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	33	24	18	638	464	339	605	440	321
19	2034		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	30	21	15	569	407	292	539	386	277
20	2035		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	27	19	13	508	357	252	481	338	239
21	2036		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	24	16	11	454	313	217	430	297	206
22	2037		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	21	14	10	405	275	187	384	261	177
23	2038		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	19	13	8	362	241	161	343	228	153
24	2039		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	17	11	7	323	211	139	306	200	132
25	2040		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	15	10	6	288	195	120	273	175	114
26	2041		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	13	8	5	258	163	103	245	155	98
27	2042		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	12	7	5	230	143	89	218	136	84
28	2043		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	11	7	4	205	125	77	194	118	73
29	2044		205		256	2,497	13.17	32,881	2,811	9.96	27,978	4,903	4,647	10	6	3	183	110	66	173	104	63
30	2045		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	9	5	3	164	96	57	155	91	54
31	2046		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	8	4	3	146	84	49	138	80	46
32	2047		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	7	4	2	130	74	42	123	70	40
33	2048		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	6	3	2	116	65	37	110	62	35
34	2049		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	5	3	2	104	57	32	99	54	30
35	2050		205		256	2,497	13.17	32,881	2,811	9.95	27,978	4,903	4,647	5	3	1	93	50	27	88	47	26
Total		5,128	5,912	2,506	16,933								115,514	9,830	9,357	8,952	27,756	22,992	19,305	17,928	13,635	10,353
6.8219285																	NET PRESENT VALUE			17,928	13,635	10,353
																	BENEFIT TO COST			2.82	2.46	2.16
Year		Cash Out Flows		Inflows	Cumulative Out flows	Cumulative Inflows																
0		6,256		-	6,256	-																
1		2,182		-	8,439	-																
2		906		-	9,345	-																
3		703		4,963	10,048	4,963																
4		475		4,903	10,523	9,866																
5		256		4,903	10,779	-																
																	Internal Financial Rate of Return(IFRR):			31.08%		
																	Pay Back Period			5.13 Years		