National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/R/ADG(Trf)/TRF-564/PESCO-2021/8685-8687
June 2, 2022

Subject: **DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY PESHAWAR ELECTRIC SUPPLY COMPANY LTD. (PESCO) FOR DETERMINATION OF DISTRIBUTION TARIFF UNDER MYT REGIME FOR THE FY 2020-21 TO FY 2024-25 [CASE # NEPRA/TRF-564/PESCO-2021]**

Dear Sir,

Please find enclosed herewith subject Determination of the Authority along with additional note of Engr. Rafique Ahmed Shaikh, Member NEPRA (93 Pages) in Case No. NEPRA/TRF-564/PESCO-2021.

2. The Determination is being intimated to the Federal Government for the purpose of notification in the official Gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 within 30 days from the intimation of this Decision. In the event the Federal Government fails to notify the subject tariff Decision or refer the matter to the Authority for reconsideration, within the time period specified in Section 31(7), then the Authority shall notify the same in the official Gazette pursuant to Section 31(7) of NEPRA Act.

Enclosure: As above

02-06-22

(Syed Safeer Hussain)

Secretary
Ministry of Energy (Power Division)
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

National Electric Power Regulatory Authority
(NEPRA)

PETITION NO: NEPRA/TRF-564/PESCO-2021

DETERMINATION OF DISTRIBUTION TARIFF PETITION

FOR

PESHAWAR ELECTRIC SUPPLY COMPANY LIMITED (PESCO)

FOR THE FY 2020-21 – FY 2024-25

UNDER

NEPRA TARIFF (STANDARDS AND PROCEDURE) RULES - 1998

Islamabad

2 - 6 -, 2022

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Abbreviations

CpGenCap	The summation of the capacity cost in respect of all CpGencos for a billing period minus the amount of liquidated damages received during the months
ADB	Asian Development Bank
AMI	Advance Metering Infrastructure
AMR	Automatic Meter Reading
BoD	Board of Director
BTS	Base Transceiver Station
CAPM	Capital Asset Pricing Model
CDP	Common Delivery Point
COSS	Cost of Service Study
CPPA (G)	Central Power Purchasing Agency Guarantee Limited
CTBCM	Competitive Trading Bilateral Contract Market
CWIP	Closing Work in Progress
DIIP	Distribution Company Integrated Investment Plan
DISCO	Distribution Company
DM	Distribution Margin
DOP	Distribution of Power
ELR	Energy Loss Reduction
ERC	Energy Regulatory Commission
ERP	Enterprise resource planning
FCA	Fuel Charges Adjustment
FY	Financial Year
GIS	Geographical Information System
GOP	Government of Pakistan
GWh	Giga Watt Hours
HHU	Hand Held Unit
HT/LT	High Tension/Low Tension
HSD	High Speed Diesel
IGTDP	Integrated Generation Transmission and Distribution Plan
IESCO	Islamabad Electric Supply Company Limited
KIBOR	Karachi Inter Bank Offer Rates
KSE	Karachi Stock Exchange
KV	Kilo Volt
kW	Kilo Watt
kWh	Kilo Watt Hour
LPC	Late Payment Charges
MDI	Maximum Demand Indicator
MMBTU	One million British Thermal Units
MoWP	Ministry of Water and Power
MVA	Mega Volt Amp

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MW	Mega Watt
NEPRA	National Electric Power Regulatory Authority
NOC	Network Operation Centre
NTDC	National Transmission & Despatch Company
O&M	Operation and Maintenance
OGRA	Oil and Gas Regulatory Authority
PEPCO	Pakistan Electric Power Company
PESCO	Peshawar Electric Supply Company Limited
PDEIP	Power Distribution Enhancement Investment Program
PDP	Power Distribution Program
PPA	Power Purchase Agreement
PPAA	Power Procurement Agency Agreement
PPP	Power Purchase Price
PYA	Prior Year Adjustment
R&M	Repair and Maintenance
RAB	Regulatory Asset Base
RE	Rural Electrification
RFO	Residual Fuel Oil
RLNG	Re-gasified Liquefied Natural Gas
RoE	Return on Equity
RORB	Return on Rate Base
ROR	Rate of Return
SBP	State Bank of Pakistan
SOT	Schedule of Tariff
STG	Secondary Transmission Grid
SYT	Single Year Tariff
T&D	Transmission and Distribution
TFC	Term Finance Certificate
TOU	Time of Use
TOR	Term of Reference
TPM	Transfer Price Mechanism
USCF	The fixed charge part of the Use of System Charges in Rs./kW/Month
UOSC	Use of System Charges
WACC	Weighted average cost of capital
WAPDA	Water and Power Development Authority
XWDISCO	Ex-WAPDA Distribution Company

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DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY PESHAWAR ELECTRIC SUPPLY COMPANY LIMITED (PESCO) FOR DETERMINATION OF DISTRIBUTION TARIFF UNDER MYT REGIME FOR THE FY 2020-21 TO FY 2024-25

CASE NO. NEPRA/TRF-564/PESCO-2021

PETITIONER

Peshawar Electric Supply Company Limited (PESCO), WAPDA House Shami Road, Peshawar.

INTERVENER
M/s PTCL
M/S Telenor
M/S Pak Telecom Mobile Ltd.
M/s Nayatel
M/s CM Pak (Zong)

COMMENTATOR
M/s Deodar PMCL (Jazz)

REPRESENTATION

i. Chief Executive Officer
ii. Chief Commercial Officer
iii. Director Finance
iv. Technical Team

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1. <u>Background</u>

1.1. The amendments in the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 was passed by the National Assembly on 15th March, 2018, which was published in the official Gazette on 30th April 2018 (the "**Amendment Act**"), resulting in restructuring of the energy sector. One of the fundamental changes as per the amendment Act is the introduction of a competitive retail energy sector, wherein, supply function has been segregated from the distribution license.

1.2. As per the amended Act, function of sale of electric power traditionally being performed by the Distribution Licensees has been amended under Section 21(2)(a), whereby 'sale' of electric power has been removed from the scope of 'Distribution Licensee' and transferred to 'Supply Licensee'.

1.3. The newly introduced section 23(E) of the Act, provides NEPRA with the powers to grant Electric Power Supply License for the supply of electric power. As per Section 23E(1), the holder of a distribution license on the date of coming into effect of the Amendment Act, shall be deemed to hold a license for supply of electric power under this section for a period of five years from such date. Thus, all the existing Distribution Licensees have been deemed to have electric Power Supplier Licenses, to ensure distribution licensees earlier performing both the sale and wire functions, can continue to do so. Section 23E, further states that the eligibility criteria for grant of license to supply electric power to be prescribed by the Federal Government, and shall include, provision with respect to a supplier of the last resort, as the case may be.

1.4. As per Section 23F (2)(b), the Supplier possess the right to make sales of electric power to consumers within their specified territories on a non-discriminatory basis to all the consumers who meet the eligibility criteria laid down by the Authority.

1.5. In view thereof, Peshawar Electric Supply Company Limited (PESCO), hereinafter called "the Petitioner", being a Distribution company as well as deemed Supplier filed separate tariff petitions for the determination of its Distribution and Supply of Electric Power Tariff under the MYT Regime for a period of five years i.e. from FY 2020-21 to FY 2024-25, in terms of Rule 3 (1) of Tariff Standards & Procedure Rules-1998 (hereinafter referred as "Rules").

1.6. The Petitioner, inter alia, has requested for a distribution cost for the five years period as detailed below;

Requetsed Revenue Requirement - Distribution Business

Description	Unit	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Investment	Mln Rs.	10,213	14,041	13,354	11,550	7,411
Units Received	GWh	15,206	15,632	16,070	16,519	16,982
Units Lost	GWh	5,756	5,757	5,750	5,735	5,713
% of T&D Losses	%	37.85%	36.83%	35.78%	34.72%	33.64%
Units Delivered	GWh	9,450	9,875	10,320	10,784	11,269
O&M	Mln Rs.	16,667	18,301	20,246	22,857	25,597
Depreciation	Mln Rs.	3,000	3,416	3,812	4,154	4,373
Return on Regulatory Asset Base (RoRB)	Mln Rs.	4,957	5,725	6,725	7,521	7,929
Other Income	Mln Rs.	(2,611)	(2,872)	(3,159)	(3,475)	(3,823)
Distribution Margin	Mln Rs.	22,013	24,571	27,623	31,057	34,076
Net Average Sale Rate	Rs./kWh	2.33	2.49	2.68	2.88	3.02

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2. <u>Proceedings</u>

2.1. In terms of Rule 4 of the Tariff standard and Procedure Rules, 1998 (hereinafter referred to as "Rules"), the petition was admitted by the Authority. However, considering the fact that the distribution license of the Petitioner is valid only till April 2022, the Authority decided to deliberate the term of the MYT period as a separate issue during the hearing. Since the impact of any such adjustments has to be made part of the consumer end tariff, therefore, the Authority, in order to provide an opportunity of hearing to all the concerned parties and to meet the ends of natural justice, decided to conduct a hearing in the matter.

2.2. Hearing in the matter was initially scheduled on August 03, 2021, for which notice of admission / hearing along-with the title and brief description of the petition was published in the newspapers on July 14, 2021 and also uploaded on NEPRA website; Individual notices were also issued to stakeholders/ interested parties. However, upon the request of the Petitioner, the hearing was rescheduled on August 10, 2021.

3. <u>Issues of Hearing</u>

3.1. For the purpose of hearing, and based on the pleadings, following issues were framed to be considered during the hearing and for presenting written as well as oral evidence and arguments;

i. Whether the request of Petitioner to allow MYT for a period of five years is justified, considering the fact that distribution license is valid till April 2022?

ii. Whether the Petitioner has complied with the direction of the Authority given in the tariff determination of FY 2019-20?

iii. Whether the projected energy purchases are justified?

iv. Whether the projected O&M is justified?

v. Whether the projected Return on Regulatory Asset base (RORB), Depreciation & Other Income is justified?

vi. What are the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments?

vii. What should be the adjustment mechanisms during the MYT? Whether there should any efficiency factor (X Factor)? Or any adjustment for new hiring and cost related to extra ordinary events as requested by the Petitioner?

viii. Whether there should be any bifurcation of O&M on the basis of controllable and uncontrollable?

ix. Whether the requests of the petitioner in its review motion against the tariff determination for the FY 2018-19 & FY 2019-20 are justified?

x. Whether the concerns raised by the intervener/ commentator if any are justified?

xi. Whether the requested T&D loss targets stated in the instant MYT petition are justified?

xii. Whether PESCO fully utilized the investments allowed previously in FY 2018-19 and FY 2019-20? PESCO is required to submit detailed report showing status of each project.

xiii. Whether the indicated Capital Cost of Rs.56,568 Million (including deposit works and others) for proposed projects for next five years under optimally achievable case is justified? PESCO is required to submit year wise rationale in respect of improvement in HT/LT ratios and average length per 11 kV feeders.

xiv. Whether the indicated Capital Cost of Rs.128,881 Million (including deposit works and others) for proposed projects for next five years under best case scenario is justified?

xv. Whether the claimed savings of 2203 GWh and 1270 GWh through loss reduction plans as highlighted in Best Case and Optimally Achievable Case respectively are justifiable?

xvi. What are the basis being adopted by PESCO for assessment of Demand and Energy Forecasts in next five (05) years?

xvii. As per the available record, PESCO is unable to draw its allocated power quota. PESCO is required to submit the reasons for less drawl by identifying the grey areas in its transmission and distribution system.

xviii. Whether PESCO has provided at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005? Provide detail of pending connections till 30 June 2021.

xix. Whether project-wise detailed report for the investment carried out along with their cost-benefit analysis and technical/financial savings achieved by June 30, 2021

xx. What corrective measures have been taken to tackle the future demand and removal of constraints?

xxi. Provide reasoning regarding less drawl of Power against allocated quota?

xxii. Provide progress about the actions taken to reduce losses down to the minimum level?

xxiii. Whether any analysis about the soft and hard areas relative to the claim was done?

xxiv. What are the remedial measures taken for the achievement of performance standards (targets of SAIFI & SAIDI given by the Authority during FY 2019-20) as laid down in Performance Standards (Distribution) Rules 2005?

xxv. Provide loading position of distribution network and submit a report regarding the plans/investments executed to improve the system constraints.

xxvi. Provide details of preventive measures taken during FY 2020-21 to cater to the safety incidents?

xxvii. Whether TOU meters installed to all the eligible connections? Submit details in this regard and also share progress regarding the installation of AMI meters at the consumer end.

xxviii. Progress of installation of ABC cable to control theft of electricity, which is the major source of the increase in transmission and distribution losses.

xxix. Any other issue that may come up during or after the hearing?

4. <u>Filing Of Objections/ Comments</u>

4.1. Comments/replies and filing of Intervention Request (IR), if any, were desired from the interested person/ party within 7 days of the publication of notice of admission in terms of

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Rule 6, 7 & 8 of the Rules. In response thereof, IR has been filed by M/s PTCL, M/s Pak Telecom Mobile, M/s Telenor, M/s Nayatel and M/s CM Pak (Zong). Written comments also received from M/s Deodar PMCL (Jazz). A brief of the concerns raised in the IR/ comments is as under;

Telecom Sector including Cellular Operators (CMOs) has been declared as an Industry vide Ministry of Industries notification dated 20.04.2004, therefore, for the purpose of charging of electricity, industrial tariff may be applied to CMOs instead of currently applicable Commercial tariffs.

4.2. The Authority during the tariff determinations of GEPCO for the FY 2019-20, on the request of Telenor regarding charging of Industrial tariff from Telecom Operators decided as under;

"The Authority observed that the issue highlighted by the commentator M/s Telenor Pakistan regarding applicability of Industrial tariff to Cellular Mobile Operator (CMOs) pertains to all the DISCOs including K-Electric as CMOs are operating all over Pakistan, therefore, the issue requires deliberations involving all stakeholders i.e. DISCOs, CMOs, Ministry of Energy, MoIT etc. The Authority noted that proceedings regarding Tariff Petitions filed by all XWDISCOs for the FY 2018-19 and FY 2019-20, except GEPCO, have already been completed, therefore, the Authority has decided to consider the request of M/s Telenor as a separate issue during the proceedings for the upcoming tariff Petitions of DISCOs for the FY 2020-21 & onward".

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4.3. In view thereof, in the instant tariff Petition, the subject matter has been discussed as a separate issue in the Supply of Power Tariff determination of the Petitioner for the FY 2020-21 to FY 2024-25.

5. During the hearing, the Petitioner was represented by its Chief Executive Officer along-with its technical and financial teams; On the basis of pleadings, evidence/record produced and arguments raised during the hearing, issue-wise findings are given as under;

6. <u>Whether the request of Petitioner to allow MYT for a period of five years is justified, considering the fact that distribution license is valid till April 2022?</u>

6.1. The Authority noted that the Petitioner has filed its MYT Petition for a period of five years i.e. FY 2020-21 to FY 2024-25, however, the Distribution license of the Petitioner is valid only till April 2022. In view thereof, the Authority decided to deliberate the matter during the hearing.

6.2. The Petitioner during the hearing submitted that they are in the process of filing request for renewal of its distribution license and expects the same to be renewed by the Authority, considering the fact that PESCO is operating in 25 districts of KPK, covering over 74,000 KMs of land, and serving around 3.9 million consumers. The Petitioner further added that to ensure continuous, safe and reliable supply of electric power to the consumers, extension in the term of Distribution license is mandatory and would be in the interest of consumers and the Industry as a whole.

6.3. The Authority, considering the fact that the Petitioner has already filed request for renewal of its distribution license, which is under process with the Authority, therefore, has decided to consider the distribution tariff request of the Petition under the MYT tariff regime.

However, the Authority is also aware of the fact that under Section 21 (2) (a) of the NEPRA Act, the word "exclusive" has been omitted, meaning thereby that the Petitioner does not possess the exclusive right for provision of distribution services in its specified territory. Thus, the grant of distribution tariff under the MYT regime shall in no way be construed as a basis for claiming any exclusivity in the licensed territory of the Petitioner. The terms & conditions, given by the Authority, in the new Distribution license of the Petitioner would be applicable during the MYT control period and the MYT would be governed by the terms & conditions of the new license.

7. <u>Directions given to the Petitioner in its previous Tariff determination</u>

7.1. The Authority gave certain directions to the Petitioner in its tariff determination for the FY 2019-20. The Authority understands that periodic monitoring of the directions given by the Authority is absolutely necessary in order to analyze the Petitioner's performance, therefore, the Authority has decided to have a half yearly review of the given directions, instead of discussing the same only during the tariff proceedings. However, the directions which are directly relevant to the tariff determination of the Petitioner are discussed hereunder;

8. <u>To spend at least 20% of the village electrification funds for improvement / up-gradation of the grid without which it should not undertake any village electrification resulting in overloading of its system. The village electrification would only be undertaken without augmentation of the grid, if it already has spare MVAs.</u>

8.1. The Authority in the MYT determination of PESCO for the FY 2015-16 observed that the impact of all the investments may get diluted, if the Petitioner carry out village electrification imprudently as imprudent village electrification may result in overloading and increasing the T&D losses.

8.2. In the past, the village electrification was restricted to poles, lines and distribution transformers only. Its impact on the existing grid or strengthening of the grid due to the additional load in the form of village electrification was totally ignored. In view thereof, the Authority directed the Petitioner to spend at least 20% of the village electrification funds for improvement / up-gradation of the grid. The Petitioner was further directed not to undertake any village electrification which would result in overloading of its system and the village electrification would only be undertaken without augmentation of the grid, if it already has spare MVAs.

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8.3. PEPCO vide letter dated July 01, 2020, directed all the DISCOs to deduct 20% from the SAP funds. This action caused hue and cry amongst the different stakeholders and a meeting of Cabinet was convened on July 07, 2020, wherein it was decided that the practice of deducting 20% from SAP funds should be discontinued.

8.4. The same decision was communicated to NEPRA, which was subsequently discussed with the honorable Federal Minister of Energy with respect to its implications to the Sector. The Federal Minister assured that wherever grid augmentation is involved, the Ministry of Energy (Power Division) will ensure these funds to DISCOs to beef up the grid facilities.

8.5. The Authority keeping in view the decision of Cabinet dated July 07, 2020 and subsequent assurance by the Honorable Federal Minister of Energy, directed the Petitioner to stop the existing practice of deducting 20% of SAP funds for grid augmentation and carry out the augmentation of the grid after coordinating with the Ministry of Energy.

8.6. The Petitioner during the hearing submitted that directions in this regard has been issued to all relevant offices under PESCO and the direction of the Authority is being implemented.

9. <u>To ensure that consumers deposits are not utilized for any other purpose and the same is reflected in the Audited accounts for the FY 2020-21 and onwards</u>

10. <u>To restrain from unlawful utilization of receipts against deposit works and security deposits immediately, and the same is reflected in the Audited accounts for the FY 2020-21 & onward.</u>

11. <u>To give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance for the FY 2020- 21 & onward</u>.

11.1. The Authority during the tariff determination of the Petitioner for the FY 2015-16 and onward, noted that the Petitioner had insufficient cash balance as on 30th June 2015 against its pending liability of receipt against deposit works and consumer security deposits, which indicated that the amount received against the aforementioned heads has been utilized somewhere else and the Petitioner failed to provide details in this regard. The Authority observed that the amount collected as security deposit cannot be utilized for any other reason and any profit earned thereon has to be distributed to the consumers. Also, the amount collected under the head of receipt against deposit works has to be spent for the purpose for which it has been collected. The utilization of the money collected against deposit works and security deposits other than the works for which it has been received is illegal and unlawful. In view thereof, the Petitioner was directed to provide rational / justification for improper utilization of the money because the consumers have to face unnecessary delay for their applied connections.

11.2. Similarly for the FY 2018-19, the Authority again observed that the Petitioner as per its provisional accounts had insufficient cash balance, against its pending liability of receipt against deposit works and consumer security deposits, thus, indicating that the amount received against the aforementioned heads has been utilized somewhere else for which no details have been provided.

11.3. Accordingly, the Authority decided, to include the amount of receipts against deposit works as a part of Deferred Credits for RAB for FY 2018-19, after excluding therefrom cash/ bank balances and amount of stores & Spares available with the Petitioner as on 30-06-2019 and also directed the Petitioner to restrain from unlawful utilization of receipts against deposit works & security deposits, and to give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance.

11.4. The Petitioner during the hearing submitted that Security deposits and receipt against deposit works is being utilized for the purpose, for which these funds are received. It also added that PESCO inherited security deposit shortfall from WAPDA on its inception in 1998 together with the amount being recovered by FBR from these heads from time to time. However, it is making all out efforts to recoup the shortfall to the extent possible. The Petitioner further submitted that to check the shortfall, the balance under the head of Deposit Work in Progress, Bank Balance and the stock in operation needs to be considered also.

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11.5. The Petitioner also stated that requisite details in this regard have been provided in the MYT Petition, and requests to release the deducted Revenue of Rs.2,604 Million for FY 2015-16 to 2017-18 & Rs.3,456 Million for FY 2018-19 & 2019-20 as PESCO was penalized to this account repeatedly with heavy financial penalties on the same amount every year.

11.6. Regarding disclosure in the financial statements, the Petitioner mentioned that specific disclosures have been given in the audited accounts of FY 2019-20 w.r.t bank balance as well as work in progress under Deposit head.

11.7. The Authority noted that the Petitioner has also filed Motion for Leave for Review against the Authority's determinations dated in its MLR against the Authority determination for the FY 2018-19 and FY 2019-20 dated 11.12.2020 & 14.12.2020 respectively. The matter has therefore been deliberated in detail as a separate issue while discussing the MLR of the Petitioner in the instant determination.

12. <u>To ensure proper tagging of assets, so that the cost incurred are classified as per their nature and report be submitted to the Authority</u>

12.1. The Authority in the previous tariff determinations of the Petitioner, directed the Petitioner to maintain a proper record of its assets by way of tagging each asset for its proper tracking, as it is of utmost importance in order to properly classify the cost in terms of capital expenditure or O&M expense. In addition, the Petitioner was also directed to provide an explanation on the concerns raised by the Authority in terms of capitalization of costs which were being expensed out as R&M by the Petitioner.

12.2. The Petitioner during the hearing submitted that 100% offices & Grid Stations, 98% HT and 34% LT Network including 101,301 transformers have been Geo tagged through in-house team through GIS and provided the following details;

Sr.#	Geotagging of Distribution Network/Grid Station/Offices	Nos. / KMs	Remarks
1	98 % HT Line Geotagged (Digitized)	33,620 Km	All types of HT Poles,Conductors geotagged/digitized.
2	Distribution Transformers Geotagged (Digitized)	101,301 Nos.	
3	All PESCO offices Geotagged	481 Nos	PESCO H/Q, Circles, Divisions, Sub Divisions, Stores, Training Centers etc.
4	All PESCO Grid station Geotagged	PESCO 98 Nos. NTDC 08 Nos. Total = 106 Nos.	
5	34 % LT Line Digitized/Mapped		70% will be completed up to December, 2021. 100% target will be achieved up to June, 2022.

12.3. It further stated that implementation of centralized GIS mapping & analysis of PESCO Distribution System is under process. Tender opened on 29-07-2021.

12.4. The Authority considers that utilization of the asset and the other essential requirements w.r.t renewal or maintenance can be monitored if the location of the asset is known and is available with its primary information, and is updated from time to time. Thus, the efforts of the Petitioner for geo-tagging is appreciated. However, the Authority also understands that main purpose for direction of asset-tagging was to ensure proper classification of costs in terms of CAPEX or O&M expense. Therefore, the Petitioner is again directed to ensure tagging of each of its assets to ensure proper classification of costs and for their proper tracking. The Petitioner is further directed to provide explanation on the concerns raised by the Authority in terms of costs which were being expensed out instead of capitalization.

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13. To transfer already collected provision on account of Post-Retirement benefits into the Fund

13.1. The matter has been discussed in the ensuing paragraphs while deliberating the issue of Distribution Margin requested by the Petitioner.

14. To share detail of late payment charges recovered from consumers and any invoice raised by CPPA under head of mark-up on delayed payments for the FY 2014-15 to FY 2019-20.

14.1. The Authority during the tariff determination of the Petitioner for the FY 2017-18 noted that CPPA-G did not raise any invoice to the Petitioner on account of late payment charges, therefore, the amount of LPS allowed in the FY 2015-16, FY 2016- 17 and FY 2017-18 shall be adjusted once the CPPA-G raises the late payment invoice. The Petitioner did not share any details in this regard. Accordingly, the Petitioner was again directed to provide the required details of late payment charges recovered from the consumers and invoices raised by CPPA (G) under the head of mark-up on delayed payments for the period from FY 2015-16 to FY 2019-20, in its next tariff petition.

14.2. The Petitioner during the hearing submitted the following detail in this regard;

Financial Year	PESCO	CPPA-G
	Late Payment Charges recovered from Consumers	Markup on delayed payments
2014-15	1.118	4.941
2015-16	1.189	2.042
2016-17	1.233	2.621
2017-18	1.325	2.846
2018-19	1.29	7.973
2019-20	1.354	13.011
2020-21	1.786	17.006
Total	**9.295**	**50.44**

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14.3. The matter has been deliberated further under the issue of PYA.

15. Segment reporting with clear break-up of costs in financial statements for the Distribution and Supply Functions in light of the amended NEPRA Act for the FY 2020-21 & onward?

15.1. As explained in earlier paragraphs, the function of sale of electric power traditionally being performed by the Distribution Licensees has been amended through NEPRA Act, 2018, whereby 'sale' of electric power has been removed from the scope of Distribution Licenses and transferred to 'Supply Licensee'.

15.2. In light of the aforementioned provisions of the Act, the Petitioner was directed for segment reporting with clear break-up of costs in financial statements for the Distribution and Supply Functions in light of the amended NEPRA Act for the FY 2020-21 & onward bifurcate its costs in terms of Distribution and Supply Function and provide basis thereof.

15.3. The Petitioner during the hearing submitted that financial statements of PESCO for the FY 2019-20 were finalized before the receipt of this direction. However, the segment reporting will be made in the next year Financial Statements.

15.4. The Petitioner is directed to ensure segment reporting with clear break-up of costs in financial statements for the Distribution and Supply Functions in light of the amended NEPRA Act for the FY 2020-21 & onward.

16. <u>Provide details of PEPCO Management Fees, if any, claimed previously so that same could be adjusted in the subsequent tariff determinations?</u>

16.1. The Authority, in the tariff determination of the Petitioner for the FY 2018-19 & FY 2019-20 observed that each DISCO is an independent entity having its own board of Directors, thus, allowing any cost on the pretext of PEPCO Management fee is not logical. It was also noted that the Ministry of Energy (MoE), itself in the Peshawar High Court submitted that PEPCO shall be dissolved after June 2011.

16.2. In view thereof, the cost of PEPCO fee was not allowed to the Petitioner and it was directed to provide details of PEPCO Management Fees, if any, claimed previously so that same could be adjusted in the subsequent tariff determinations.

16.3. The Petitioner during the hearing requested the Authority to reconsider its decision and PEPCO Management Fee, if to be disallowed, should be disallowed prospectively rather than retrospectively as the Accounts has already been audited and closed.

16.4. The Authority noted with concern that instead of complying with the direction of the Authority, the Petitioner is suggesting for non-adjustment of the cost on the pretext that Accounts for the relevant period have been audited and closed. The Authority, however, fails to understand that at the same time, the Petitioner has claimed different costs pertaining to the previous periods for which accounts have also been audited and closed.

16.5. In view thereof the Petitioner is again directed to provide details of PEPCO Management Fees, if any, claimed previously.

17. <u>Whether the projected energy purchases are justified?</u>

18. <u>What are the basis being adopted by PESCO for assessment of Demand and Energy Forecasts in next five (05) years?</u>

18.1. The Petitioner, for the FY 2020-21 till FY 2024-25 has proposed the following purchases during the MYT period;

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Mkwh	**15,206**	**15,632**	**16,070**	**16,519**	**16,982**
Cost (Mln Rs.)	199,200	207,121	215,492	223,839	232,653

18.2. The Petitioner submitted that growth of 2.8% has been projected in the FY 2020-21 over the actual purchases of 14,792 GWh in the FY 2019-20.

18.3. The Petitioner further submitted that sales growth of 4.5% has been projected during the MYT period as detailed below;

Projected Sales

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Mkwh	9,450	9,875	10,320	10,784	11,269

18.4. The Petitioner provided the following basis of its projections;

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Description	Average Growth	
	Energy Sale	Energy Purchase
Average Growth Rate for Last 10 Years	3.44%	3.80%
Target Reduction in T&D Losses for MYT	1.04%	1.04%
Growth Rate used in MYT	**4.50%**	**2.80%**

18.5. The Authority observed that the issue of Power Purchase Price being relevant with the Supply Business has been deliberated in detail under Supply Tariff Petition of PESCO for the MYT control period.

19. <u>What are the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments?</u>

19.1. The Petitioner on the issue submitted that the Distribution Margin of Distribution (Non-Sale Elements) comprises of Actual salaries and wages of GSO Circle, PD GSC and PD C&O, XEN Operations etc, since these circles / directorates are responsible for construction, rehabilitation, augmentation and similar activities involved in Distribution (Non-Sale Elements) for providing electricity to the end consumers.

19.2. The XEN offices comprises of technical as well as administrative staff, the salaries of technical officer and officials such as XEN, SDO, line man, assistant line man, line supervisor etc. have been allocated to Distribution (Non-Sale Elements) on actual basis except for meter reader, bill distributer and meter reader supervisor, as the same has been allocated to Power Supply (Sale of Electric Power) as their job description relates to billing and recovery. Moreover, the expenditure of HQ, and other offices has been allocated on the most suitable basis to Distribution (Non-Sale Elements) or Power Supply (Sale of Electric Power).

19.3. The Petitioner during the hearing submitted the following regarding bifurcation into supply and distribution segments;

Description	Distribution	Supply	Overall
	% Share	% Share	Total %
O&M Costs:			
Pay & Allowances	66%	34%	100%
Travelling Expenses	71%	29%	100%
Vehicle Running Expenses	76%	24%	100%
Other Expenses	14%	86%	100%
Repair & Maintenance	96%	4%	100%
Total O&M Cost	**65%**	**35%**	**100%**
Provision for bad debts	0%	100%	100%
Depreciation	90%	10%	100%
Return on Rate Base	80%	20%	100%
Less: Other Revenues	69%	31%	100%
Distribution Margin (D.M)	**57%**	**43%**	**100%**

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19.4. The Authority understands that as per the Amended Act, the Distribution Licensee is responsible to provide distribution service within its territory on a non-discriminatory basis and develop, maintain and publicly make available, with the prior approval of the Authority, an investment program, meaning thereby, that installation/investment, operation, maintenance and controlling of distribution networks, form part of the Distribution License and activities like billing and collection form part of the Supply License.

19.5. The Authority in the determination of PESCO for the FY 2019-20 decided the following;

"The Authority believes that after amendments in NEPRA Act, all the Public Sector Distribution companies are required to make organizational restructuring in terms of segregation of responsibilities of the Distribution and Sale functions and in order to ensure appropriate coordination between both functions. Hence, keeping in view the fact that it is operational issue and DISCOs are owned by the Federal Government, it would be more appropriate that a centralized restructuring plan at the level of Federal Government is prepared to be implemented by all the public sector DISCOs in order to have a uniformity and consistency in the structure."

19.6. It is again desired that a centralized restructuring plan at the level of Federal Government is prepared, so that a uniform & consistent basis/ approach is adopted by all the DISCOs. Till such time, the submissions of the Petitioner are considered.

20. <u>Whether the projected O&M is justified?</u>

21. <u>Whether the projected Return on Regulatory Asset base (RORB), Depreciation & Other Income is justified?</u>

22. <u>What should be the adjustment mechanisms during the MYT? Whether there should any efficiency factor (X Factor)? Or any adjustment for new hiring and cost related to extra ordinary events as requested by the Petitioner?</u>

23. <u>Whether there should be any bifurcation of O&M on the basis of controllable and un-controllable?</u>

23.1. The Petitioner's requested O&M expenses includes salaries and other benefits of employees, repair and maintenance expenses, traveling allowance, vehicle maintenance allowance and other operating costs related to its distribution and supply business. A summary of the O&M requested by the Petitioner under the MYT control period for its distribution function is as under:

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Description	Unit	Test Year FY 2020-21	Y 1 FY 2021-22	Y 2 FY 2022-23	Y 3 FY 2023-24	Y 4 FY 2024-25
Investment	Mln Rs.	10,213	14,041	13,354	11,550	7,411
Units Received	GWh	15,206	15,632	16,070	16,519	16,982
Units Lost	GWh	5,756	5,757	5,750	5,735	5,713
% of T&D Losses	%	37.85%	36.83%	35.78%	34.72%	33.64%
Units Delivered	GWh	9,450	9,875	10,320	10,784	11,269
O&M	Mln Rs.	16,667	18,301	20,246	22,857	25,597
Depreciation	Mln Rs.	3,000	3,416	3,812	4,154	4,373
Return on Regulatory Asset Base (RoRB)	Mln Rs.	4,957	5,725	6,725	7,521	7,929
Other Income	Mln Rs.	(2,611)	(2,872)	(3,159)	(3,475)	(3,823)
Distribution Margin	Mln Rs.	22,013	24,571	27,623	31,057	34,076

<u>Salaries and wages:</u>

23.2. The Petitioner submitted that Salaries & Wages including employee's retirement benefits is the major component of O&M expense. Since PESCO was incorporated as company in compliance with power sector reform policy of Government of Pakistan and the WAPDA employees working in Area Electricity Board Peshawar gradually become employees of the company in terms of the Man Power Transition Plan, therefore PESCO had to Maintain the GOP pay scales and the terms of employment for the employees which were prevalent in WAPDA.

23.3. The following additional increases are also made by the GoP in its annual budget for FY 2019-20 along with various other impacts:

<u>Increase in Pay & Allowances announced for FY 2020-21:</u>

- o Expected increase in salaries.
- o Enhancement of danger allowance from Rs.5,000 to 7,000 per month for line man.
- o Impact of Additional recruitment.
- o Enhancement of conveyance allowance to disable employees.
- o Assistance package for families of employees who died due to COVID-19 while performing official duties.
- o Adoption of transfer policy.
- o 25% Disparity allowance announced by Federal Government since March-2021 onward.
- o Hiring cost against Market Implementation Regulatory Affair Division (MIRAD) is included in Pay & Allowances.
- o Cost of new hiring is claimed as an additional item as PESCO is operating with only 47% of existing staff and facing severe shortage of resources and if PESCO could not hire required staff the operations of the company would be unsustainable.
- o Employees Retirement Benefits have been based on the average of annual increase in the last three years audited figures as per the assumption used by the Valuer, Anwar Associates. Accordingly, pension increase of 8% and discount rate of 10% has been assumed.

23.4. Keeping in view the above increases, the Petitioner stated that salaries and wages are based on the Audited Financial statement of PESCO for the FY 2019-20 and Provisional figure for FY 2020-21 and projected for FY 2021-22 to 2024-25 are as under:

<u>Existing Strength (Actual Working):</u>

Description	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	Audited	Audited	Provisional	Projected	Projected	Projected	Projected
Pay & Allowances (Regular)	9,432	9,194	11,350	12,485	13,734	15,794	18,163
Pay & Allowances (Contract)	247	263	1,188	1,330	1,503	1,698	1,866
Post-Retirement Benefits including WAPDA Pensioners	8,173	8,613	8,972	9,906	11,097	12,438	13,583
Other Benefits	695	767	1,066	1,150	1,280	1,420	1,650
Total Salaries & Wages	**18,547**	**18,837**	**22,576**	**24,871**	**27,614**	**31,350**	**35,262**

23.5. The Petitioner submitted that above includes the Budget for MIRAD under CTBCM.

23.6. The Petitioner also requested for new hiring cost as under;

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New Recruitment

Description	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25
	Provisional	Projected	Projected	Projected	Projected
New Hiring (Nos)	7,498	4,958	1,330	995	226
Cost (Mln. Rs.)*	2,466	1,574	405	225	74

23.7. The Petitioner stated that cost of new Recruitment is not included in the Salaries and Wages cost and is covered through adjustment factor as variable "N" in the O&M adjustment mechanism.

23.8. The Petitioner on the issue of MIRAD submitted the following;

23.9. Budget Approval of MIRAD:

i. Distribution companies around the world are well-augmented with the necessary infrastructure and dedicated staff to perform efficient market operations within the competitive electricity markets. Similarly, the XW-DISCOs are required to have dedicated staff with specialized knowledge and competency to inter alia administer the bilateral contracts portfolio, manage the regulatory affairs pertaining to competitive markets and efficiently perform requisite market operations required in the competitive regime. Furthermore, it is also inevitable for DISCOs to perform short and medium-term demand forecasting accurately in power market envisaged for Pakistan.

ii. To complement this important requirement, a dedicated department to act as an interface between the DISCOs and the Competitive Trading Bilateral Contracts Market (CTBCM) has been envisaged in the CTBCM Implementation Roadmap. Creation of this dedicated market department is also part of the CTBCM Detailed Implementation Plans submitted by DISCOs to NEPRA. This department will initially assist DISCOs in implementation of CTBCM planned activities of DISCOs and later perform competitive market related functions of DISCOs as envisaged in the approved plan. This department will become a dedicated central interface between DISCOs and the competitive electricity market equipped with staff having specialized knowledge and competency and supported by necessary infrastructure to first implement and then administer the market operations including bilateral contracts portfolio management, short and medium term, demand forecasting, transmission planning, and overseeing legal and regulatory affairs.

iii. To help DISCOs in this activity, CPPA-G being central facilitator, arranged consultative sessions for DISCOs in Dec 2019 and Feb 2020 wherein DISCOs had detailed joint deliberations on the suitable structure of the subject department. Consequently, DISCOs jointly prepared in consultation with CPPA and its international consultants, a proposal encapsulating structure of the department titled as "Market Implementation and Regulatory Affairs Department (MIRAD)" to be created within each DISCOs before the start of CTBCM.

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iv. The proposal has been endorsed by the Ministry of Energy (Power Division) vide letter No. PF No. PF-05(04)/2012 dated December 01, 2020 vide which MoE (PD) directed PEPCO to forward the proposed structure to DISCOs BoDs for approval of staffing and respective perks & privileges. Consequently, PEPCO has forwarded the structure endorsed by MoE (PD) vide letter dated December 09, 2020 to the BoDs of the DISCOs for approval and implementation of the same.

v. The MoE (PD) has also recommended to sanction additional financial benefits to the staff positioned within the MIRAD (up to 40% of basic pay) as this will be a highly technical work and will require some incentive to recruit and retain competent staff.

vi. The BoD PESCO in its 153rd meeting held on 10-02-2021 has principally approved the MIRAD department (17 New and 3 existing positions) with initial financial implication of Rs.47.136 Million plus 40% special allowance per annum.

23.10. Total Number of Management Positions in MIRAD

i. The structure of MIRAD has a total of 20 managerial positions of different cadres ranging from BPS-20 to BPS-17. The break-up of these positions is as following:

- Head of Department (BPS-20) : 1 Position
- Managers (BPS-19) : 3 Positions
- Deputy Managers (BPS-18) : 6 Positions
- Assistant Managers (BPS-17) : 10 Positions

ii. Out of 20 positions, 03 Positions already exist in various quarters under the current sanctioned strength while 17 Positions are new and required to be created exclusively under MIRAD. The details pertaining to the existing positions and new positions is as under:

a) Director General MIRAD (01 Position)
b) Manager Contract Management & Regulatory Affairs (01 Position–already Exists)
c) Manager Planning and Forecasting (01 Position)
d) Manager Legal / Contracts (01 Position)
e) Deputy Manager Contract Management (01 Position - Already Exists)
f) Deputy Manager Regulatory Affairs (01 Position)
g) Deputy Manager Demand Forecasting (01 Position)
h) Deputy Manager Transmission Planning (01 Position)
i) Deputy Manager Finance (01 Position)
j) Deputy Manager Legal / Contracts (01 Position)
k) Assistant Manager Contract Management (02 Positions)
l) Assistant Manager Transmission Planning (02 Positions)
m) Assistant Manager Demand Forecasting (01 Positions - Already Exists)
n) Assistant Manager Regulatory Affairs (01 Position)
o) Assistant Manager Finance (02 Positions)
p) Assistant Manager Admin (01 Positions)
q) Assistant Manager Demand Forecasting (01 Positions)

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23.11. The Petitioner also shared comparison of its sanctioned strength and actual working strength as under:

Description	Sanctioned Strength	Working Strength	Shortfall	% Shortfall
Qualified Professional	400	382	18	5%
Staff	27,868	12,839	15,029	54%
Total	**28,268**	**13,221**	**15,047**	**53%**

Number of Employees	Existing	Dec-21 (Proj.)	Dec-22 (Proj.)	Dec-23 (Proj.)	Dec-24 (Proj.)	Dec-25 (Proj.)
1. Qualified Professionals	**382**	**453**	**550**	**571**	**587**	**577**
Engineers	289	342	439	460	476	466
Others	93	111	111	111	111	111
2. Staff	**12,839**	**20,259**	**25,120**	**26,429**	**27,408**	**27,634**
Technical	7,060	11,425	15,002	15,027	15,027	15,028
Clerical	1,029	1,730	1,922	2,114	2,301	2,326
Non-Technical	4,750	7,104	8,196	9,288	10,080	10,280
3. Total (1+2)	**13,221**	**20,712**	**25,670**	**27,000**	**27,995**	**28,211**
4. Retirements	**817**	**761**	**888**	**880**	**845**	**783**
5. Net Total (3-4)	**13,221**	**19,951**	**24,782**	**26,120**	**27,152**	**27,428**

23.12. The Petitioner in view of the above submitted that it is currently working on strength of 13,221 employees approximately out of which 382 are officers of different grades. The shortage of the staff is main cause of losses and system constraints being faced by PESCO at present. Now in the future plans under the MYT, i.e. from FY 2020-21 to FY 2024-25, a progressive recruitment of around 50% per year is proposed to complete the shortfall of staff. In this regard, a year-wise proposal, initially for the year Dec 2021 is projected including around 700-Grid System Operation staff, which is required for GSO of newly commissioned grids waiting for minimum required staff. Moreover, such arrangement will continue till Dec 2025. It is further pointed out that 3rd party analysis of yard stick is being carried out by PESCO at present and regulator may allow to re-negotiate future hiring after such study, and in the meantime, the number of appointments recommended are necessary.

24. <u>Repair & maintenance expenses:</u>

24.1. Regarding Repair and Maintenance expenses, the Petitioner submitted that the same have been assumed @ around 2% of the net Fixed Assets in operation. The Petitioner further stated that it has to maintain its old and over loaded system in order to ensure un-interrupted power supply to the consumers, moreover cost of material has also increased due to inflationary pressure. Therefore, Repair & Maintenance expenditure has been projected as Rs.1,150 million for FY 2020-21, Rs.1,208 million for FY 2021-22, Rs.1,268 million for FY 2022-23, Rs.1,331 million for FY 2023-24 & Rs.1,398 million for FY 2024-25 for both the Distribution and Supply Functions and is required for the following;

- ✓ Repair of Power Trafos damaged at Grid Stations & controlling Breakers, Isolators etc.
- ✓ Repairs and Maintenance of 3,722 KM Transmission Lines.
- ✓ Repair & Maintenance of 1,116 Nos. 11KV feeders.
- ✓ Repair & Maintenance of 37,220 KMs HT Lines.
- ✓ Repair & Maintenance of 45,311 KMs LT Lines.
- ✓ Repair & Maintenance of 78,759 Nos. of Distribution Transformers

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24.2. For its Distribution of Power, the Petitioner has projected the following cost under Repair & Maintenance Cost for the Tariff Control Period;

Distribution of Power Business								
Description	Nepra Determination	Audited	Tariff Control Period					Avg. for Tariff Control Period
		Base Year	Test Year	Y2	Y3	Y4	Y5	
	2019-20	2019-20	2020-21 Act/Pro.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.	
Repair And Maintenance	760	753	1,100	1,155	1,213	1,273	1,337	1,216
%Increase/ (Decrease)			46%	5%	5%	5%	5%	

25. **Adjustment mechanism:**

25.1. The Petitioner for the adjustment of above costs has proposed that this may be linked with the percentage of Fixed Assets (i.e. 2% of the net Fixed Assets) in operation and WPI.

26. **Travelling expenses:**

26.1. The Petitioner stated that Travelling expenses have been projected Rs.351 million, Rs.386 million, Rs.432 million, Rs.484 million & Rs.542 million for FY 2020-21 to FY 2024-25 respectively for both the Distribution and Supply Functions. However, for its Distribution Function, the following amounts have been proposed;

Distribution of Power Business								
Description	Nepra Determ'ion	Audited	Tariff Control Period					Avg. for Tariff Control Period
		Base Year	Test Year	Y2	Y3	Y4	Y5	
	2019-20	2019-20	2020-21 Act/Pro.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.	
Travelling Expenses	180	167	250	275	308	345	386	313
%Increase/ (Decrease)			50%	10%	12%	12%	12%	

27. **Adjustment mechanism:**

27.1. The Petitioner has proposed to adjust the Travelling Expenses with CPI.

28. **Vehicle running expenses:**

28.1. Regarding Vehicle charges, the Petitioner stated that it has a fleet of more than 720 vehicles, most of the vehicles are old and have completed useful life of 10 years & need major overhauling. It further explained that financial position of PESCO does not allow us to replace them with new vehicles, thus, left with no option but to maintain them. Moreover, the cost of POL has increased manifolds & the cost of parts of vehicles is also increasing due to inflation. Apart from above, PESCO's distribution system is spread all over Khyber Pakhtunkhwa and it has to be maintained, hence PESCO requires funds for running of vehicles as well as for their maintenance.

28.2. The Petitioner has projected the following costs under vehicle running expenses for its Distribution Function under the MYT control period from the FY 2020-21 to FY 2024-25;

29. **Vehicle Running Expenses for Tariff Control Period**

Distribution of Power Business								
Description	Nepra Determination	Audited	Tariff Control Period					Avg. for Tariff Control Period
		Base Year	Test Year	Y2	Y3	Y4	Y5	
	2019-20	2019-20	2020-21 Act/Pro.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.	
Vehicle Expenses	140	128	195	215	236	260	285	238
%Increase/ (Decrease)			52%	10%	10%	10%	10%	

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30. Adjustment mechanism:

30.1. The Petitioner has proposed that adjustment in Vehicle Expenses may be linked with CPI.

31. Other Operating expenses:

31.1. The Other expenses include Rent, Rates and Taxes, Utility expenses, communications, office supplies, professional fees, auditor's remuneration, outsourced services, management fees, electricity bill collection expenses etc. The Petitioner has projected the following costs in this regard for its Distribution Function under the MYT control period from the FY 2020-21 to the FY 2024-25

Distribution of Power Business								
Description	Nepra Determination	Audited	Tariff Control Period					Avg. for Tariff Control Period
		Base Year	Test Year	Y2	Y3	Y4	Y5	
	2019-20	2019-20	2020-21 Act/Pro.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.	
Other Expenses	124	163	200	218	237	257	280	238
% Increase/ (Decrease)			23%	9%	9%	8%	9%	

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32. Adjustment mechanism:

32.1. The Petitioner has proposed that adjustment in Other Expenses may be linked with the CPI.

33. Controllable & Uncontrollable Costs

33.1. Regarding O&M expenses, the Petitioner submitted that these are one of the major unknowns for XWDISCOs in Pakistan due to many uncontrollable factors such as statutory implications arising out of increase in salaries (as announced by the Federal Government), increase in certain expenses due to growth in consumer base, this includes increase in maintenance expenses, meter reading expenses, whereas other expenses are directly linked to the rate of petroleum. The employees' cost includes costs related to salaries and benefits of all staff (administrative, operational and security).

33.2. The Petitioner further apprised that to ensure an efficient, coordinated, economical distribution system and to build, maintain and operate the system more systematically, it will be employing a highly skilled and technically proficient team to manage all aspects of the distribution of power to ensure that all key commercial interests of all stakeholders are maintained, protected and prioritized.

33.3. Accordingly, it has been requested that the O&M cost needs to be bifurcated into controllable and uncontrollable cost components. The Petitioner therefore submitted that 'Uncontrollable costs' be trued-up at the end of every year and the 'Controllable costs' should be indexed every year with CPI change less agreed efficiency factor, adjustable in last two years, to pass on the benefit of system efficiency to the consumers.

33.4. The Petitioner shared the following basis for the controllable and un-controllable costs;

34. Controllable Cost:

34.1. The controllable O&M costs are projected by assuming an inflation rate of 10% to 11% for each year of the tariff control period excluding the base year. The controllable cost during control period will also increase annually due to new projects (as envisaged in DM) and accordingly this new addition in per unit base cost of controllable component may be allowed in the related year in which project is planned to be completed and indexed subsequently as part of controllable cost component.

35. <u>Uncontrollable Cost:</u>

35.1. With regards to uncontrollable cost different growth rates are projected for different cost streams based on management experience. Uncontrollable cost factors could be affected by growth in employee benefits, consumer growth rates and growth in regulatory fee etc. The uncontrollable cost will also increase annually due to new projects (as envisaged in DIIP) and accordingly projected cost includes impact of new projects.

35.2. The Petitioner has bifurcated its costs in terms of controllable and uncontrollable as under;

Controllable Costs	Uncontrollable Costs
Travelling Expenses	Pay and Allowances – Existing
Office Supplies & Store handling	Rent, Rate & Taxes
Vehicle Expenses	Injuries & Damages
Power, Light & Water	Collection Expenses
Communication & Postage	Legal Charges
Advertising & Publicity	Management Fee
Subscription & Periodicals	Audit Charges
Misc. Expenses	
Bank Charges	
Insurance Premium	

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Description (Un-Controllable Costs)	Test Year	Base Year	Control Period				
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Pay and Allowances – Existing	18,547	18,837	22,576	24,871	27,614	31,350	35,262
Rent, Rate & Taxes	199	54	170	187	215	247	284
Injuries & Damages	37	82	130	137	143	150	158
Collection Expenses	126	146	200	210	221	232	243
Legal Charges	19	30	31	32	34	36	37
Management Fee	127	177	320	352	387	426	469
Audit Charges	3	1	5	5	5	5	5
Sub Total	**19,059**	**19,327**	**23,432**	**25,794**	**28,620**	**32,446**	**36,459**

36. <u>Adjustment Mechanism:</u>

36.1. The Petitioner for the adjustment of above costs has proposed for the following mechanism:

a. The base year FY 2019-20 does not reflect the true cost rather showing with employees of 13,221 Nos. with sanctioned posts of 28,268 Nos. and accordingly factor "N" is included to account for the new recruitments.

b. Adjustment in Salary & Pension (including pension part of post-retirement benefit) may be linked with the Increase announced by GoP in Annual Budget on actual basis.

c. 5% increase on account of Annual Increment may be allowed.

d. The remaining allowances / benefits may be adjusted on the basis of CPI for controllable costs and on the basis of actual in case of uncontrollable costs.

e. An additional variable "N" may be included to account for the New Recruitments against vacant positions and the same may be indexed as proposed above.

f. Another variable "Z" may also be included to account for the cost relating to extra ordinary events with financial implication of Rs.25 Million or more and the same may be indexed as well.

g. The O&M part of Distribution Margin shall be indexed with CPI subject to adjustment for efficiency gains (X factor). Accordingly, the O&M be indexed every year according to the following formula:

$O\&M_{Rev} = [O\&M_{Ref}\ (\text{Controllable Cost}) * \{1+(\Delta CPI-X)\}] + \text{Uncontrollable Cost (Actual)}+N+Z$

Where:

O&M (Rev) = Revised O&M Expense for the Current Year.

O&M (Ref) = Reference O&M Expense for the Reference Year

ΔCPI = Change in Consumer Price Index published by Pakistan Bureau of Statistics latest available on 1st July against the CPI as on 1st July of the Reference Year in terms of percentage.

X = Efficiency factor

N = New Hiring including indexation of controllable and uncontrollable costs.

Z = Cost relating to extraordinary events including indexation with financial impact of Rs.25 Million or more.

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36.2. The Authority observed that as per section 31(3) of the amended Act the following general guidelines shall be applicable to the Authority in the determination, modification or revision of rates, charges and terms and conditions for provision of electric power services;

- ✓ *"(a) tariffs should allow licensees the recovery of any and all cost prudently incurred to meet the demonstrated needs of their customers Tariff."*
- ✓ *(b) tariffs should generally be calculated by including a depreciation charge and a rate of return on the capital investment of each licensee commensurate to that earned by other investments of comparable risk;*
- ✓ *(c) tariffs should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service;*
- ✓ *(d) tariffs should include a mechanism to allow licensees a benefit from and penalties for failure to achieve the efficiencies in the cost of providing the service and the quality of service;"*

36.3. Further, as per NEPRA determination of Consumer-end-Tariff (Methodology & Process) Guidelines, 2015, the Authority shall choose a base year for the purpose of determining the affected company's revenue requirement under multi-year tariff regime or annual tariff regime. "Base Year" has been defined as the year on which the annual or multiyear tariff projection is being made, which may be a historical financial year, for which the actual results/audited accounts are available. It may be a combination of actual results and projected results for the same financial year or it may be a pure projection of a future financial year.

36.4. Here it is also pertinent to mention that as per the approved tariff methodology the Power Purchase Price is the only uncontrollable cost which is allowed a pass through item. The other remaining costs are to be treated as controllable costs.

36.5. Considering the fact that the MYT has been filed for the period pertaining to the FY 2020-21 to FY 2024-25, and the cost for the FY 2020-21 i.e. test year, is being assessed as reference cost during the MYT control period, the Authority has decided to consider the costs as per the Audited accounts of the Petitioner for the FY 2019-20 as base year.

36.6. The Authority considers that for projections or assessment of OPEX costs, the two commonly used approaches are the Ex-Ante approach and the Ex-Post approach. In a regime where the allowed OPEX is determined Ex-Ante, there will inevitably be deviations between the allowed and actual OPEX in the form of efficiency savings or losses. Thus resulting in two broad options, one that the utility bears all savings or losses, i.e. no action is taken by the Regulator. The 2nd that the utility shares the savings or losses with consumers. The former provides the utility with a profit incentive to cut costs, but at the same time places the utility at greater financial risk in the face of losses. The latter somewhat dilutes efficiency incentives, but also limits the losses/gains for the utility and its customers. However, the widely used approach is that no adjustments to allowed Revenues or OPEX allowances are made in the next period to compensate for a deviation from allowed OPEX in the current period except for certain allowed adjustments in terms of CPI etc.

36.7. In view thereof, the head wise assessment of the Petitioner under each of the requested costs is as discussed hereunder.

37. <u>Salaries, Wages and Other benefits (excluding post-retirement benefits)</u>

37.1. The Authority noted that head of Salaries, Wages and Other Benefits include employees Pay & Allowances and Post-retirement benefits and accounts for around 90% of the Petitioner's total O&M costs, excluding therefrom depreciation and provision for doubtful debts. The Authority understands that employees of XWDISCOs are hired on Government pay scales, thus, any salary increase announced by the Federal Government in Fiscal Budget is also applicable on the employees of XWDISCOs. Therefore, salaries & wages cost of employees can be considered as un-controllable cost for XWDISCOs as long as they remain in public sector.

37.2. Considering the fact that the cost for the FY 2020-21 is being assessed, which would be used as reference during the MYT control period, the Authority has decided to consider the costs as per the Audited accounts of the Petitioner for the FY 2019-20 as base year as explained in the preceding paras. It is also pertinent to mention that being a public sector company, the Petitioner is required to pay, its employees, increases in salaries & wages announced by the Federal Government through Budget. This also addresses the concern of the Petitioner in terms of salaries & wages cost being uncontrollable.

37.3. The actual total cost reflected in the Audited accounts of the Petitioner for the FY 2019-20, under Salaries & Wages *(excluding postretirement benefits, discussed separately)* is

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Rs.10,223 million. Accordingly, the said amount has been considered as base cost and by applying thereon the increases as approved by the Federal Government on Salaries and Wages in the Federal Budget for the FY 2020-21, and the impact of inflation on certain heads, the cost of Salaries & Wages *(excluding postretirement benefits, discussed separately)*, for both the Distribution and Supply Functions works out as Rs.11,148 million. The same is hereby allowed to the Petitioner for the FY 2020-21 for both its distribution and Supply Functions as reference cost, to be adjusted in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

37.4. Since the Audited accounts of the Petitioner, do not provide bifurcation of the Salaries, Wages and other benefits costs in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of total cost of Salaries, Wages and other benefits in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of Salaries, Wages and other benefits *(excluding postretirement benefits)* for the FY 2020-21 pertaining to the distribution function works out as Rs.7,358 million.

37.5. The assessed Salaries & Wages costs for the FY 2020-21 i.e. Rs.7,358 million, shall be considered as the reference cost for working out future Salaries & Wages expenses, in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

38. <u>Additional Recruitment</u>

38.1. Regarding cost of new recruitment, the Authority observed that Salaries & Wages cost for the FY 2019-20, as per the Audited accounts of the Petitioner, have been considered as base cost, therefore, impact of any new recruitment already made till FY 2019-20 has been accounted for. For the proposed recruitment to be carried out in FY 2020-21 and onward, the Authority understands that allowing cost of additional hiring, upfront would be unfair with the consumers, without considering/ analyzing the benefits of such recruitment. The Authority understands that it will be in a better position to adjudicate on the issue once the Petitioner provides details of the actual cost incurred in this regard and substantiates the same with the quantified benefits accrued. In view thereof, the Authority has decided to consider the financial impact of any additional hiring during the midterm review, which will be carried out after expiry of 3rd year of the MYT control period, whereby the Petitioner would provide complete detail/ justification of the recruitment made along-with benefits achieved. The mid-term review would be carried out, in case the Petitioner remains in the Public sector. This also addresses the concern of the Petitioner regarding inclusion of "N" factor.

39. <u>Hiring for MIRAD</u>

39.1. The Authority observed that detailed design and implementation plan of the Competitive Trading Bilateral Contract Market (CTBCM) has been approved on November 12, 2020 to make a competitive wholesale electricity market functional from May 2022. Pursuant thereto, DISCOs have created a Market Implementation & Regulatory Affairs Department (MIRAD). The department would be a dedicated central interface between DISCOs and the competitive electricity market equipped with staff having specialized knowledge and competency and supported by necessary infrastructure, inter-alia, to administer the market operations including bilateral contracts portfolio management, short and medium-

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term demand forecasting, transmission planning, and overseeing legal and regulatory affairs.

39.2. Regarding recruitment for MIRAD, the Petitioner has submitted that its BoD has principally approved the MIRAD department (17 New and 3 existing positions) with initial financial implication of Rs.47.136 million plus 40% special allowance per annum.

39.3. Accordingly, for inclusion of cost impact of hiring made for MIRAD by the Petitioner, details were requested from the Petitioner. The Petitioner shared its latest status of hiring made on account of MIRAD, whereby only one position i.e. DG MIRAD has been hired externally and the remaining positions have been filled through internal transfers. As per the submitted information, the recruitment process of MIRAD has still not been completed, however, the Petitioner has requested for the financial impact for all the positions.

39.4. In view thereof, the Authority has decided to allow hiring for MIRAD in principal and allow the incremental financial impact of the same as part of PYA in the subsequent adjustment requests and would also be made part of reference cost for future indexations, once the Petitioner completes its recruitment process and submits complete details in this regard. Here it is pertinent to mention that impact of employees internally transferred to MIRAD has already been largely accounted for while assessing the salaries & wages cost.

39.5. Regarding request of the Petitioner for PM assistance package, the Authority in principle agrees to allow the Prime Minister Assistance Package as announced by the Federal Government for the families of employees who died during service. However, for the requested amount, the Authority considers that allowing any such costs, upfront would be unfair with the consumers, therefore, the Authority may consider such costs once the actual expenditure is incurred by the Petitioner. To justify the claim the Petitioner is required to provide employees name, CNIC number, designation, date of death, along with the financial impact, etc. in its next tariff petition/adjustment request for the Authority to consider.

40. **Post-Retirement Benefits**

40.1. The Petitioner submitted that Salaries & Wages also include employee's retirement benefits. Since PESCO was incorporated as company in compliance with power sector reform policy of Government of Pakistan and the WAPDA employees working in Area Electricity Board Peshawar gradually become employees of the company in terms of the Man Power Transition Plan, therefore PESCO had to maintain the GOP pay scales and the terms of employment for the employees which were prevalent in WAPDA. The Petitioner has stated that Employees Retirement Benefits have been based on the average of annual increase in the last three years audited figures as per the assumption used by the Valuer, Anwar Associates. Accordingly, pension increase of 8% and discount rate of 10% has been assumed.

40.2. The Petitioner accordingly requested the following amounts under the head of post-retirement benefits;

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Description	Audited	Prov.	Proj.	Proj.	Proj.	Proj.
Post-Retirement Benefits including WAPDA Pensioners	8,613	8,972	9,906	11,097	12,438	13,583

40.3. The Authority noted that the head of Post-retirement benefit includes employees' pension, free electricity and medical facility. The Authority also understands that employees of

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XWDSICSOs are hired on Government pay scales, thus, any pension increase announced by the Federal Government in the Budget is also applicable on the retired employees of XWDISCOs. The last four years pension payment as provided by the Petitioner is as under;

Sr.	Paid Rs in mln	FY 2020	FY 2019	FY 2018	FY 2017
1	Post retirement benefits	5,461	4,863	4,034	2,852
2	Medical Facilities	9	7	13	14
3	Free Electricity	82	66	62	62
	Total	5,552	4,935	4,109	2,928

40.4. Based on the above breakup of pension expense for the FY 2020 the requested amount has broken down as under;

Rs mln	FY 21	FY 22	FY 23	FY 24	FY 25
Post retirement benefits	8,825	9,744	10,916	12,235	13,361
Medical Facilities	14	16	18	20	21
Free Electricity	132	146	164	184	200
	8,972	9,906	11,097	12,438	13,583

40.5. It is also pertinent to mention that the Authority in its previous determinations, considering the overall liquidity position in the power sector and in order to ensure that XWDISCOs fulfil their legal obligations with respect to the post-retirement benefits, directed the XWDISCOs to create a separate fund in this regard. The rationale behind creation of separate fund was to ensure that DISCOs record their liability prudently as the funds would be transferred into a separate legal entity, which would also generate its own profits, as it would be kept separate from the Company's routine operations, thus reducing the Distribution Margin and eventually consumer-end tariff in longer run.

40.6. In compliance with the Authority's direction, the Petitioner has created a separate Fund for its post-retirement benefits. Although, the Petitioner has created the Fund, however, the Authority is also cognizant of the operational performance of the Petitioner in terms of achieving the Regulatory Targets of T&D losses and Recoveries etc. The actual losses of the Petitioner for the FY 2019-20 remained at around 39% as compared to the allowed target of 21%. Similarly, the recovery ratio of the Petitioner during FY 2019-20 remained well below the allowed level of 100% recovery target.

40.7. The Authority keeping in view the operational performance of the Petitioner considers that at this point in time allowing provision for post-retirement benefits instead of actual payments made by the Petitioner, would not be in the interest of the consumers as any additional amount over & above the actual payments, would be eaten-up by the inefficiencies of the Petitioner and the Petitioner would not be able to deposit the excess amount in the Fund. However, if the Petitioner still manages to deposit any additional amount in the Fund, the Authority may consider to allow the same as PYA in the subsequent adjustment request.

40.8. In view thereof, the Authority has decided to consider the amount of actual payments as per the Audited accounts of the Petitioner for the FY 2019-20 as base cost and by applying thereon the increases as approved by the Federal Government on Pension Benefits in the Federal Budget for the FY 2020-21, the cost of post-retirement benefits for the FY 2020-21 for both the Distribution and Supply Functions works out as Rs.5,560 million. The same is hereby allowed to the Petitioner for the FY 2020-21 for both its distribution and Supply Functions as reference cost, to be adjusted in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

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40.9. Since the Audited accounts of the Petitioner, do not provide bifurcation of post-retirement benefits in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of total cost of post-retirement benefits in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of post-retirement benefits for the FY 2020-21 pertaining to the Distribution function works out as Rs.3,670 million.

41. **Repair & Maintenance Costs**

41.1. Regarding Repair and maintenance expenses, the Petitioner has assumed the same @ around 2% of the net Fixed Assets in operation. The Petitioner while justifying its submissions stated that it has to maintain its old and over loaded system in order to ensure un-interrupted power supply to the consumers, moreover cost of material has also increased due to inflationary pressure. Accordingly, the Petitioner projected repair & maintenance costs as Rs.1,150 million for FY 2020-21, Rs.1,208 million for FY 2021-22, Rs.1,268 million for FY 2022-23, Rs.1,331 million for FY 2023-24 & Rs.1,398 million for FY 2024-25 for both the Distribution and Supply Functions, with the following amounts pertaining to the Distribution Function;

Distribution of Power Business								
Description	Nepra Determination	Audited	Tariff Control Period					Avg. for Tariff Control Period
		Base Year	Test Year	Y2	Y3	Y4	Y5	
	2019-20	2019-20	2020-21 Act/Pro.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.	
Repair And Maintenance	760	753	1,100	1,155	1,213	1,273	1,337	1,216
%Increase/ (Decrease)			46%	5%	5%	5%	5%	

41.2. The Petitioner for the adjustment of above costs proposed that this may be linked with the percentage of Fixed Assets (i.e. 2% of the net Fixed Assets) in operation and WPI.

41.3. The Authority has carefully examined the Petitioner's request of linking the R&M cost as a percentage of Net Fixed Assets (NFAs). The Authority, while going through the actual expenditure incurred by the Petitioner on account of R&M during the last three years as per its audited accounts, observed that the same works out as 1.28%, 1.35% and 1.43% of the NFAs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively. Moreover, the Petitioner has not provided any rationale or working to substantiate its request of setting R&M as 2% of NFAs except that it has to maintain old and over loaded system in order to ensure un-interrupted power supply to the consumers, and that cost of material has also increased due to inflationary pressure.

41.4. No doubt that the adherence to service standards and improvement of customer services is only possible through continuous repair and maintenance of distribution network, however, at the same time the Petitioner has also requested for huge CAPEX of Rs.76,746 million for making additional investment in Fixed Assets, resulting in new, expensive and efficient equipment, leading to overall reduction in R&M cost and increasing the total Assets base. Thus, the Petitioner idea if adopted would result in undue benefit to the Petitioner in the long run. In addition to aforementioned discussion, the Petitioner's request of annual adjustment in this regard is against the very sprit of multiyear tariff regime. It has also been noted that the Petitioner has not been able to spend more than Rs.788 million under the R&M head during the last three years.

41.5. In view of the foregoing and keeping in view the current approved tariff methodology, the Authority has decided to allow an amount of Rs.863 million under R&M head, for the FY

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2020-21, after incorporating the inflationary impact on the R&M cost as per the audited accounts of the Petitioner for the FY 2019-20 for both the Distribution and Supply Functions. The same is hereby allowed to the Petitioner for the FY 2020-21 for both its distribution and Supply Functions.

41.6. Since the Audited accounts of the Petitioner, do not provide bifurcation of the R&M costs in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of total cost of R&M costs in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of R&M for the FY 2020-21 pertaining to the distribution function works out as Rs.828 million.

41.7. The assessed repair and maintenance cost for the FY 2020-21 i.e. Rs.828 million, shall be considered as the reference cost for working out future repair and maintenance expenses, in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

42. Other O&M Expenses

42.1. Other O&M expenses includes Travelling costs, Vehicle Maintenance and other O&M expenses i.e. Rent, Rates & Taxes, Power, Light and Water, Communication, Bill Collection Charges, Office supplies, Director Fees, Auditor Remuneration, Professional Fees, Outside Service Employed, Management Fees, NEPRA License Fees, Advertisement & Publicity, Subscriptions & Periodicals, Representation & Entertainment, Insurance, Bank Charges, and other miscellaneous expense. The Petitioner projected its Other O&M costs including Travelling and Vehicle Maintenance costs as Rs.2,013 million for the FY 2020-21, Rs.2,204 million for the FY 2021-22, Rs.2,410 million for the FY 2022-23, Rs.2,637 million for the FY 2023-24 & Rs.2,892 million for the FY 2024-25 for both the Distribution and Supply Functions, with the following amounts pertaining to the Distribution Function;

	2020-21	2021-22	2022-23	2023-24	2024-25
Description	Act/Pro.	Proj.	Proj.	Proj.	Proj.
Traveling Costs	250	275	308	345	386
Vehicle Fuel & Maintenance	195	215	236	260	285
Other O&M expenses	200	218	237	257	280
Total	**645**	**708**	**781**	**862**	**951**

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42.2. The Petitioner has requested around 50% increase in its O&M expenses for the FY 2020-21 as compared to the FY 2019-20 and thereafter around 10-12% increase every year during the remaining MYT control period, on the proposed cost of the FY 2020-21. The Petitioner proposed that O&M part of Distribution Margin shall be indexed with CPI subject to adjustment for efficiency gains (X factor).

42.3. The Authority noted that as per the approved tariff methodology, all other operating expenses are part of O&M costs which are to be assessed through CPI-X formulae for the whole tariff control period. Accordingly, for the assessment pertaining to the FY 2020-21 (reference cost), the Authority has decided to accept the actual figures of the FY 2019-20 as such and allowed an inflationary increase of 9.49 % over the same and accordingly has assessed the other O&M expenses as Rs.1,252 million.

42.4. By considering the figures as per financial statement, the Authority has incorporated all the costs including bill collection, building rent, NEPRA fee, insurance cost, rent, rates & taxes, and travelling, transportation etc. However, Management Fees of PEPCO, has not been considered as each DISCO is an independent entity having its own board of Directors, thus, allowing any cost on the pretext of PEPCO Management fee is not logical. Further, the Ministry of Energy (MoE), itself in the Peshawar High Court submitted that PEPCO shall be dissolved after June 2011. Accordingly, the cost of PEPCO fee, if any, has not been allowed to the Petitioner.

42.5. Since the Audited accounts of the Petitioner, do not provide bifurcation of the Other O&M costs in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of total cost of other O&M costs in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of other O&M for the FY 2020-21 pertaining to the distribution function works out as Rs.436 million.

42.6. The aforementioned assessment for the FY 2020-21 shall be considered as reference for working out future Other Operating Expenses for remaining tariff control period to be adjusted as per the adjustment mechanism provided in the instant determination.

43. <u>Depreciation</u>

43.1. The Petitioner has submitted that Depreciation is calculated on the basis of the value of existing Assets plus the additions in assets during the year. It further stated that assets are depreciated on straight line method as per utility practice i.e. land @ 0 %, buildings and civil works @ 2%, Plant and machinery @ 3.5%, office equipment and mobile plant @ 10% and other assets @ 10%. Accordingly, based upon these assumptions the Petitioner has requested Rs.3,334 million for the FY 2020-21, Rs.3,796 million for the FY 2021-22, Rs.4,235 million for the FY 2022-23, Rs.4,615 million for the FY 2023-24 & Rs.4,895 million for the FY 2024-25 for both the Distribution and Supply Functions, with the following amounts pertaining to the Distribution Function;

Distribution of Power Business								
Description	Nepra Determination	Audited	Tariff Control Period					Avg. for Tariff Control Period
		Base Year	Test Year	Y2	Y3	Y4	Y5	
	2019-20	2019-20	2020-21 Act/Pro.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.	
Depreciation	2,799	2,723	3,000	3,416	3,812	4,154	4,373	3,751
% Increase/ (Decrease)			**10%**	**14%**	**12%**	**9%**	**5%**	

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43.2. The Petitioner has proposed that adjustment in Depreciation Expenses may be linked with the Gross Fixed Assets in operation.

43.3. The Authority noted that as per the Methodology, depreciation expense for the test year, which in the instant case is FY 2020-21, will be determined by applying depreciation charge on the Gross Fixed Assets in Operation, including new investment and will be considered reference for the tariff control period.

43.4. In order to make fair assessment of the depreciation expense, the Authority accounts for the investments approved for the year. After taking into account the new investments, the

Gross Fixed Assets in Operation for the FY 2020-21 have been worked out as Rs.92,662 million. Accordingly, the depreciation charge for the FY 2020-21 has been assessed as Rs.3,206 million calculated on actual depreciation rates for each category of Assets as per the Company policy, which will be considered as reference cost for working out future depreciation Expenses for the remaining tariff control period, to be adjusted as per the mechanism provided in the instant determination.

43.5. After carefully examining the relevant details and information pertaining to the deferred credit and amortization as per the accounts for the FY 2019-20, the Authority has projected amortization of deferred credit to the tune of Rs.1,934 million for the FY 2020-21. Accordingly, the consumers would bear net depreciation of Rs.1,272 million.

43.6. The actual depreciation reflected in the Audited accounts of the Petitioner for the FY 2019-20, do not provide bifurcation of depreciation cost in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of depreciation cost in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the depreciation cost for the FY 2020-21 pertaining to the distribution function works out as Rs.2,886 million.

44. RoRB

44.1. The Petitioner has submitted that NEPRA allowed WACC to PESCO 10.95% for FY 2018-19 and 15.02% for FY 2019-20 in its tariff determination for FY 2018-19 & FY 2019-20, PESCO has reservation on the calculation of allowed WACC of 10.95%. PESCO is of the opinion that return should be adequate enough to not only cover the cost of debt but also to cater for the exchange rate parity as well as reasonable return to the equity holders. The Petitioner further stated that as per amortization schedule provided by Economic Affairs Division (EAD) for ADB Trench-I, II, III & IV PESCO has to pay the interest charges as well the exchange risk and Principal repayments.

44.2. It also submitted that PESCO has no other source of revenue except Tariff to pay off the principal, interest and exchange risk payable to EAD except for consumer end Tariff and if not allowed, it will in any way effect the consumers as the same will be passed in the form of deficit financing resulting in financial hardship to the consumers.

44.3. The Petitioner accordingly requested the Authority to allow RORB @14.06% WACC, including debt as per following calculations and further projection is also being made for the tariff control period for both the Distribution and Supply Functions:

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Description	FY 2019-20 Audited	FY 2020-21 Act/Prov.	FY 2021-22 Projected	FY 2022-23 Projected	FY 2023-24 Projected	FY 2024-25 Projected
Gross Fixed Assets In Operation–Opening Balance	83.299	87.395	96.996	110.194	122.747	133.604
Addition in Fixed Assets	4.096	9.600	13.199	12.553	10.857	6.966
Gross Fixed Assets In Operation–Closing Balance	87.395	96.996	110.194	122.747	133.604	140.570
Less Accumulated Depreciation	32.191	35.525	39.321	43.556	48.171	53.030
Net Fixed Assets in Operation	55.204	61.471	70.874	79.191	85.433	87.540
Add: Capital Work in Progress-Closing Balance	19.756	20.369	21.211	22.013	22.706	23.150
Investment in Fixed Assets	74.960	81.840	92.085	101.204	108.138	110.690
Less Deferred Credits	32.776	35.894	36.244	37.479	38.145	39.708
Regulatory Assets Base	42.184	45.946	55.841	63.724	69.994	70.983
Average Regulatory Assets Base	41.400	44.066	50.893	59.782	66.859	70.488
Rate of Return	15.02%*	14.06%	14.06%	14.06%	14.06%	14.06%
Return on Rate Base	**6,218**	**6,196**	**7,156**	**8,405**	**9,400**	**9,911**

44.4. The Petitioner submitted the following amounts pertaining to its Distribution Function;

Description	Distribution of Power Business						
	NEPRA Determination FY-2019-20	2019-20 Actual	2020-21 Prov.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2024-25 Proj.
RORB	3,514	4,974	4,957	5,725	6,725	7,521	7,929

44.5. The Authority observed that as per Section 31(3) of the amended NEPRA Act, the following general guidelines shall be applicable to the Authority in the determination, modification or revision of rates, charges and terms and conditions for provision of electric power services;

(b) tariffs should generally be calculated by including a depreciation charge and a rate of return on the capital investment of each licensee commensurate to that earned by other investments of comparable risk;

(c) tariffs should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service;

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44.6. The Authority uses the Capital Asset Pricing Model (CAPM) for calculation of Return of Equity (RoE) component of the WACC, being the most widely accepted model, which is applied by regulatory agencies all over the world to estimate the cost of capital for regulated utilities. Further, as per the Tariff methodology, in case of negative equity the Authority would consider a minimum of 20% equity and any equity in excess of 30% would be considered as debt.

44.7. Keeping in view the above, the Authority for the assessment of RoE component for the FY 2020-21, has considered weighted average yield on 05 Years Pakistan Investment Bond (PIB) as of July 22, 2020 as risk free rate, which is 8.2139%.

44.8. The expected return on any investment is the sum of the risk-free rate and an extra return to compensate for the risk. This extra return or 'risk premium' is the difference between market rate of return and risk free rate. Generally, the return on stock market index is taken as a measure of market rate of return. To have an appropriate measure of the market rate of return, analyzed KSE-100 Index return, over a period of 10 years i.e. FY 2011 to FY 2020, which remained at around 13.9%. The Authority also analyzed returns offered by stock exchanges of the neighboring countries, and noted that return of KSE-100 index remained higher than those of neighboring countries.

44.9. Based on the above analysis, the Authority has considered the rate of return on KSE-100 index as expected market return in WACC formula for calculation of Return of equity. The rate of return on KSE-100 index of around 13.9%, translates into risk premium of around 5.68% *(with risk free rate of 8.2139%, Weighted Average Yield of 5-Year PIB as of July 22, 2020).* Therefore, keeping in view the aforementioned, Market Risk Premium of 5.68% is considered as reasonable for calculation of cost of equity component.

44.10. Regarding assessment of beta, the Authority has considered the earlier studies in the matter, range of betas used by international Regulators, and accordingly decided to use the beta of 1.10, while assessing the RoE component.

44.11. As regard the cost of debt, it is the interest rate on which a company would get borrowing from the debt market / commercial banks i.e. a rate at which banks lend to their customers. In order to have a fair evaluation of the cost of debt, the Authority has taken cost of debt as 3 month's KIBOR + 2.00% spread. Consequently, the cost of debt has been worked out as 9.03% i.e. 3 Months KIBOR of 7.03% as of 3rd July 2020 plus a spread of 2.00% *(200 basis points).*

44.12. In view thereof, the WACC for the FY 2020-21 has been worked out as under;

Cost of Equity;

$Ke = R_F + (R_M - R_F) \times \beta$

$= 8.2139\% + (13.9\% - 8.2139\% = 5.686\% \times 1.1) = 14.47\%$

The cost of debt is;

$Kd = 9.03\%$

WACC= ((Ke x (E / V) + (Kd x (D / V))

Where E/V and D/V are equity and debt ratios respectively taken as 30% and 70%;

WACC = ((14.47% x 30%) + (9.03% x 70%)) = 10.66%

45. <u>Treatment of Capital Work in Progress (CWIP) while calculating the RoRB</u>

45.1. The Authority noted that as per the existing practice of XWDISCOs, CWIP in made part of RAB, while calculating RoRB. Considering the fact that CWIP also includes Interest during Construction (IDC), which once capitalized becomes part of total fixed assets, the Authority, regarding treatment of CWIP as part of RAB, has considered the best practices adopted by different Regulators across the world and observed the following;

46. <u>Energy Regulators Regional Association (ERRA) Practices for RAB</u>

46.1. As per the Energy Regulators Regional Association (ERRA) tariff data base, regarding CWIP, most of the regulators think that new CAPEX should be introduced in the RAB on the basis of actual costs incurred up to the point at which the assets become operational. Some regulators include construction work in progress in the RAB when construction is to be completed within a relatively short period of time, e.g. in one year. Accordingly RAB is calculated as per the following formula;

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RAB calculation: net approach

The regulatory asset base for the year t is calculated according to the following formula:

$$CB = OB + Inv - D - AD - DC + DWC$$

where:

OB - opening value of regulatory assets for year t of the regulatory period;
Inv - investment (capital expenditures) for year t of the regulatory period;
D - depreciation for year t of regulatory period;
AD - assets disposal for year t of regulatory period;
DC - annual change over year t in the value of assets funded by capital contributions;
D*WC* - annual change over year t in working capital;
CB - closing value of regulatory assets for year t of the regulatory period

46.2. Similarly, in India, the Maharashtra Electricity Regulatory Commission, while calculating return only considers assets that have been capitalized and any amount beyond 30% of equity portion is treated as part of debt.

46.3. In view of the above international practices and the fact that CWIP includes IDC, which once capitalized becomes part of total fixed assets, the Authority has decided to allow Return on Equity only up-to 30% of the CWIP separately and make the same as part of total RoRB.

46.4. Based on above and using WACC of 10.66% on RAB by including allowed investment for the FY 2020-21 and excluding therefrom the amount of CWIP, and allowing RoE at 30% of the closing value of CWIP, the RoRB of the Petitioner for the FY 2020-21 has been worked out as under;

Description	FY 2019-20	FY 2020-21
Fixed Assets O/B	83,299	87,551
Addition	4,252	5,266
Fixed Assets C/B	87,551	92,817
Depreciation	32,191	35,397
Net Fixed Assets	55,360	57,420
Capital WIP C/B	-	-
Fixed Assets Inc. WIP	55,360	57,420
Less: Deferred Credits	41,134	41,420
Total RAB	14,226	16,000
Average RAB		15,113
WACC - %		10.66%
RORB		1,611
Capital WIP C/B		24,472
Equity Portion of CWIP 30%		7,342
ROE on CWIP		1,062
Total RORB		2,673

46.5. The total amount of RoRB as worked out above has been allocated in terms of Distribution and Supply Functions, as per the criteria adopted by the Petitioner itself. Accordingly, the RORB for the FY 2020-21 pertaining to the distribution function works out as Rs.2,139 million.

46.6. The reference RoRB determined for the FY 2020-21 would be adjusted annually as per the adjustment mechanism prescribed in the instant determination

46.7. The Authority during the tariff determination of the Petitioner for the FY 2015-16 and onward, noted that the Petitioner had insufficient cash balance as on 30th June 2015 against its pending liability of receipt against deposit works and consumer security deposits, which indicated that the amount received against the aforementioned heads has been utilized somewhere else and the Petitioner failed to provide details in this regard. The Authority observed that the amount collected as security deposit cannot be utilized for any other reason and any profit earned thereon has to be distributed to the consumers. Also, the amount collected under the head of receipt against deposit works has to be spent for the purpose for which it has been collected. The utilization of the money collected against deposit works and security deposits other than the works for which it has been received is illegal and unlawful. In view thereof, the Petitioner was directed to provide rational / justification for improper utilization of the money because the consumers have to face unnecessary delay for their applied connections.

46.8. Similarly for the FY 2018-19, the Authority again observed that the Petitioner as per its provisional accounts had insufficient cash balance, against its pending liability of receipt against deposit works and consumer security deposits, thus, indicating that the amount received against the aforementioned heads has been utilized somewhere else for which no details have been provided.

46.9. Accordingly, the Authority decided, to include the amount of receipts against deposit works as a part of Deferred Credits for RAB for FY 2018-19, after excluding therefrom cash/ bank balances and amount of stores & Spares available with the Petitioner as on 30-06-2019 and also directed the Petitioner to restrain from unlawful utilization of receipts against deposit works & security deposits, and to give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance.

46.10. The Petitioner during the hearing submitted that Security deposits and receipt against deposit works is being utilized for the purpose, for which these funds are received. It also added that PESCO inherited security deposit shortfall from WAPDA on its inception in 1998 together with the amount being recovered by FBR from these heads from time to time. However, it is making all out efforts to recoup the shortfall to the extent possible. The Petitioner further submitted that to check the shortfall, the balance under the head of Deposit Work in Progress, Bank Balance and the stock in operation needs to be considered also.

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46.11. Regarding disclosure in the financial statements, the Petitioner mentioned that specific disclosures have been given in the audited accounts of FY 2019-20 w.r.t bank balance as well as work in progress under Deposit head.

46.12. The Authority for the FY 2019-20, has again observed that the Petitioner has insufficient cash balance as on 30th June 2020, against their pending liability of receipt against deposit works and consumer security deposits, thus, indicating that the amount received against the aforementioned heads has been utilized somewhere else. Thus, it would be unfair and unjust with the consumers to suffer due to the unlawful act of the Petitioner. Accordingly, the amount of receipts against deposit works has been considered as a part of Deferred Credits for the assessment of RAB for FY 2020-21, after excluding therefrom the cash/ bank balances and the amount of stores & Spares available with DISCOs.

47. Other Income

47.1. The Petitioner has submitted that main sources of other income include Interest Income, Sale of Scrape, Amortization of Deferred Credit, Rental & Service Income etc., whereas the Wheeling Charges and Late Payment Surcharge have been excluded as per decision of NEPRA. Accordingly the Petitioner has projected the following amounts as Other Income during the MYT control period for both its distribution and supply functions;

Distribution & Supply of Power Business					
Description	Tariff Control Period				
	Test Year 2020-21 Act/Pro.	Y2 2021-22 Proj.	Y3 2022-23 Proj.	Y4 2023-24 Proj.	Y5 2024-25 Proj.
Other Income	3,800	4,180	4,598	5,058	5,564
% Inc./ (Dec.)	10%	10%	10%	10%	10%

47.2. The Petitioner has provided the following detail of other income pertaining to the Distribution Function;

Distribution of Power Business					
Description	Tariff Control Period				
	Test Year 2020-21 Act/Pro.	Y2 2021-22 Proj.	Y3 2022-23 Proj.	Y4 2023-24 Proj.	Y5 2024-25 Proj.
Other Income	2,611	2,872	3,159	3,475	3,823
% Inc./ (Dec.)	10%	10%	10%	10%	10%

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47.3. Other income is considered to be a negative cost which may include, but not be limited to, amortization of deferred credit, meter and rental income, late-payment charges, profit on bank deposits, sale of scrap, income from non-utility operations, commission on PTV fees and miscellaneous income.

47.4. Since the other income would be trued up every year as per the mechanism provided in the instant determination, therefore, for the FY 2020-21, the Authority has decided to allow an amount of Rs.3,467 million based on audited accounts of the Petitioner for FY 2019-20, including the amount of amortization of deferred credit but exclusive of the amount of late payment charges and wheeling charges from TESCO for both of its Distribution and Supply functions.

47.5. The Authority in consistency with its earlier decision, on the issue, has not included the amount of LPS while assessing the other income for the FY 2020-21. Here it is pertinent to mention that the LPS recovered from the consumers on utility bills shall be offset against the late payment invoices raised by CPPA (G) against respective XWDISCO only and in the event of non-submission of evidence of payment to CPPA (G), the entire amount of Late Payment charge recovered from consumers shall be made part of other income and deducted from revenue requirement in the subsequent year.

47.6. The Petitioner is further directed to provide year wise detail of wheeling charges charged to TESCO and the amount actually received from TESCO in this regard.

47.7. The total amount of Other Income as worked out above has been allocated in terms of Distribution and Supply Functions, as per the criteria adopted by the Petitioner itself. Accordingly, Other Income for the FY 2020-21 pertaining to the distribution function works out as Rs.2,392 million.

47.8. The reference Other Income determined for the FY 2020-21 would be adjusted annually as per the adjustment mechanism prescribed in the instant determination

48. <u>Adjustment Mechanism</u>

48.1. The Petitioner has submitted that O&M component of the Distribution Margin shall be indexed with CPI subject to adjustment for efficiency gains (X factor).

49. <u>Controllable & Uncontrollable Costs</u>

49.1. The Petitioner has submitted that O&M cost needs to be bifurcated into controllable and uncontrollable cost components and the 'Uncontrollable costs' be trued-up at the end of every year and the 'Controllable costs' be indexed every year with CPI change less agreed efficiency factor, adjustable in last two years, to pass on the benefit of system efficiency to the consumers. The Petitioner has provided the following break-up in terms of Controllable and Uncontrollable costs;

Controllable Costs	Uncontrollable Costs
Travelling Expenses	Pay and Allowances – Existing
Office Supplies & Store handling	Rent, Rate & Taxes
Vehicle Expenses	Injuries & Damages
Power, Light & Water	Collection Expenses
Communication & Postage	Legal Charges
Advertising & Publicity	Management Fee
Subscription & Periodicals	Audit Charges
Misc. Expenses	
Bank Charges	
Insurance Premium	

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49.2. The Petitioner proposed the following adjustment mechanism for the above costs;

- ✓ The base year FY 2019-20 does not reflect the true cost rather showing with employees of 13,221 Nos. with sanctioned posts of 28,268 Nos. and accordingly factor "N" is included to account for the new recruitments.
- ✓ Adjustment in Salary & Pension (including pension part of post-retirement benefit) may be linked with the Increase announced by GoP in Annual Budget on actual basis.
- ✓ 5% increase on account of Annual Increment may be allowed.
- ✓ The remaining allowances / benefits may be adjusted on the basis of CPI for controllable costs and on the basis of actual in case of uncontrollable costs.

- ✓ An additional variable "N" may be included to account for the New Recruitments against vacant positions and the same may be indexed as proposed above.
- ✓ Another variable "Z" may also be included to account for the cost relating to extra ordinary events with financial implication of Rs.25 Million or more and the same may be indexed as well.
- ✓ The O&M part of Distribution Margin shall be indexed with CPI subject to adjustment for efficiency gains (X factor) as per the following mechanism;

$O\&M_{Rev.} = [O\&M_{Ref.} \text{ (Controllable Cost) x } \{1+(\Delta CPI-X)\}]+\text{Uncontrollable Cost (Actual)}+N+Z$

Where;

O&M (Rev) = Revised O&M Expense for the Current Year.

O&M (Ref) = Reference O&M Expense for the Reference Year

ΔCPI = Change in Consumer Price Index published by Pakistan Bureau of Statistics latest available on 1st July against the CPI as on 1st July of the Reference Year in terms of percentage.

X = Efficiency factor

N = New Hiring including indexation of controllable & uncontrollable costs.

Z = Cost relating to extraordinary events including indexation with financial impact of Rs.25 Million or more.

49.3. The Authority noted that as per the approved tariff methodology the Power Purchase Price is the only uncontrollable cost which is allowed a pass through item. The other remaining costs are to be treated as controllable costs.

49.4. The Authority, while assessing the O&M costs of the Petitioner i.e. rent, rates & taxes, Injuries & damages, collection expenses, legal charges, management fee, and Audit Charges etc., has incorporated these costs in the reference cost, keeping in view the audited accounts of the Petitioner for the FY 2019-20, to be adjusted in the remaining MYT control period as per the adjustment mechanism given below. The risk / benefits of any future cost fluctuations thereof lies with the Petitioner along with an opportunity for optimizing overall costs under these head. The treatment is in line with the very sprit of multi- year tariff regime and in accordance with Authority's approved tariff methodology.

49.5. Regarding adjustment of O&M costs with the efficiency factor X, the Authority noted that the Petitioner although has proposed to index its O&M costs with CPI subject to adjustment of X-factor, however, nothing has been proposed in terms of value of X-factor. Therefore, in the absence of any recommendation from the Petitioner, the Authority in line with its earlier MYT decisions in the matter of XWDISCOs, has decided to keep the efficiency factor "X", as 30% of increase in CPI for the relevant year of the MYT control period. The Authority has further decided to implement the efficiency factor from the 3rd year of the control period, in order to provide the Petitioner with an opportunity to improve its operational performance, before sharing such gains with the consumers.

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49.6. Regarding request of the Petitioner to allow "Z" factor, the Authority observed that it has allowed insurance cost to the Petitioner in the reference O&M cost for the FY 2020-21 subject to future increases, and the same covers for any such extra ordinary events. Therefore, the request of the Petitioner, to allow any such factor as a separate cost is not justified.

49.7. The mechanism for adjustment of costs allowed as part of Distribution Margin, during the MYT control period is as under;

50. <u>Salaries & Wages and Post-retirement Benefits;</u>

50.1. The reference costs shall be adjusted every year with the increase announced by the GoP, being beyond the Petitioner's control, for the respective year till the time the Petitioner remains in the public sector. In addition a 5% increase as requested by the Petitioner would be allowed on the amount of Basic pay to account for the impact of annual increment. In case, the Petitioner is privatized during the MYT period, the allowed cost of Salaries & Wages would be adjusted with CPI-X factor.

51. <u>Post-retirement benefits</u>

51.1. Similarly, the allowed amount of post-retirement benefits would also be adjusted every year with the Pension increase announced by the GoP for the respective year, till the time the Petitioner remains in the public sector. In case, the Petitioner is privatized during the MYT period, the allowed cost of Salaries & Wages would be adjusted with CPI-X factor.

52. <u>O&M Costs</u>

52.1. Regarding other O&M cost, the reference cost would be adjusted every Year with CPI-X factor. However, the X factor would be applicable from the 3rd year of the MYT control period. The Adjustment mechanism would be as under;

Adjustment Mechanism -Operation & Maintenance Exp.	
Operation & Maintenance Exp.	= Ref. O&M cost x [1+(CPI -X factor)]

53. <u>RORB</u>

53.1. The reference RoRB would be adjusted every Year based on the amount of RAB worked out for the respective year after taking into account the amount of investment allowed for that year as per the following mechanism;

Adjustment Mechanism - RoRB	
RORB(Rev)	=RORB(Ref) x RAB(Rev) / RAB(Ref)

53.2. In addition the allowed RAB for previous year will be trued up downward only, keeping in view the amount of investment allowed for the respective year. In case, the Petitioner ends up making higher investments than the allowed, the same would be the Petitioner's own commercial decision and would not be considered while truing up the RAB, unless due to any regulatory decisions/interventions/approved plans for which the Petitioner obtains prior approval of the Authority. In such case the Authority may also revise the efficiency targets in terms of T&D losses etc.

53.3. The Authority also understands that interest payment is an obligatory cash flow liability unlike discretionary dividend payment and considering the fact that any default may hamper the financial position of the Petitioner, hence the Authority has decided to cover the risk of floating KIBOR. Accordingly, fluctuation in the reference KIBOR would be adjusted biannually. In addition, the Authority has also decided to allow sharing of benefit by introducing a claw back mechanism for any savings resulting from cheaper financing by the Petitioner to the extent of 2.00% spread. If the Petitioner manages to negotiate a

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loan below 2.00% spread, the savings would be shared equally between the consumers and the Petitioner through PYA mechanism annually. In case of more than one loan, the saving with respect to the spread would be worked out by a weighted average cost of debt. The sharing would be only to the extent of savings only i.e. if the spread is greater than 2.00%, the additional cost would be borne by the Petitioner.

54. **Depreciation Expenses**

54.1. The reference Depreciation charges would be adjusted every Year as per the following formula;

$$DEP\ (Rev) = DEP\ (Ref) \times \frac{GFAIO\ (Rev)}{GFAIO\ (Ref)}$$

Where: DEP (Rev) = Revised Depreciation Expense for the Current Year

DEP (Ref) = Reference Depreciation Expense for the Reference Year

GFAIO (Rev) = Revised Gross Fixed Assets in Operation for the Current Year

GFAIO (Ref) = Reference Gross Fixed Assets in Operation for the Reference Year

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54.2. In addition the allowed Depreciation for previous year will be trued up downward only, keeping in view the amount of investment allowed for the respective year. In case, the Petitioner ends up making higher investments than the allowed, the same would be the Petitioner's own commercial decision and would not be considered while truing up the depreciation expenses, unless due to any regulatory decisions/interventions/approved plans for which the Petitioner obtains prior approval of the Authority. In such case the Authority may also revise the efficiency targets in terms of T&D losses etc.

55. **Other Income**

55.1. Other Income shall be adjusted annually as per the following mechanism during the MYT control period to calculate future Other Income.

$OI_{(Rev)} = OI_{(1)} + (OI_{(1)} - OI_{(0)})$

$OI_{(Rev)}$ = Revised Other Income for the Current Year

$OI_{(1)}$ = Actual Other Income as per latest Financial Statement.

$OI_{(0)}$ = Actual/Assessed Other Income used in the previous year.

56. **Whether the request of the Petitioner in its Review Motion against the tariff determination for the FY 2018-19 & FY 2019-20 are justified?**

56.1. The Authority issued determinations of PESCO for Distribution of Power on December 11, 2020, and Supply of Power tariff on December 14, 2020, for the FY 2018-19 & FY 2019-20 and intimated the same to the Federal Government for notification. PESCO being aggrieved with the decisions of the Authority filed Motion for leave for Review vide letter dated December 24, 2020, against both the decisions of the Authority for its Distribution of Power and Supply of Power.

56.2. The Authority in the matter of MLR vide decision dated 19.04.2021 decided as under;

"The Authority, however, considering the fact that the determination against which the MLR has been filed by the Petitioner has already been notified by the Federal Government

vide SRO dated February 12, 2021, which was made applicable with immediate effect, has decided to return back the subject Motion to the Petitioner, with the directions to submit the concerns raised in the MLR in its next tariff petition for consideration of the Authority. The Petitioner is directed to file its Multi Year Tariff Petition, as already directed, without further delay."

56.3. In view thereof, the Petitioner's concern raised in the MLR as mentioned hereunder have been discussed in the following paragraphs;

- ✓ Transmission & Distribution Losses.
- ✓ RORB & Calculation of Deferred Credits.
- ✓ Weighted Average Cost of Capital (WACC)
- ✓ Post-Retirement Benefits
- ✓ CPPA Overhead charges.
- ✓ Supplemental Charges.
- ✓ Provision for bad debts
- ✓ Turnover Tax.
- ✓ Recovery of Revenue on Rs. /Kw Basis and Increase in Fixed Charges

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57. <u>RORB & calculation of Deferred Credits</u>

57.1. The Petitioner in its review submitted that the Authority in its decision at para 35.34 of the Distribution Tariff Determination of FY 2018-19 & FY 2019-20 stated that PESCO Financial statement for FY 2018-19 shows insufficient balances as on 30th June, 2019 against pending liability of Receipt against Deposit Work and consumer security deposits and that amount has been utilized somewhere else and petitioner failed to provide any details in this regard. In this context it is once again apprised that it had already provided the details during Review Motion for FY 2015-16 and it was categorically mentioned that the apprehension of utilization of receipt against deposit work is not based on ground realities and needs to be reconsidered. The deduction of legitimate RORB, which is already on a very lower side, is unjustified as it has no correlation with Revenue Requirement and the Distribution Margin.

57.2. It was also contested that the maintenance of such huge balance of cash is not possible considering the weak cash flow position and the fact that PESCO inherited the same on its inception in 1998 together with the amount being recovered by FBR from these heads from time to time. However, PESCO is making all out efforts to recoup the shortfall gradually and it is now only Rs.774 Million (collectively) as on 30-06-2020 compared to Rs.3,722 Million in 2015-16. In any case the treatment of the shortfall and its deduction from DM is objectionable and needs rectification.

57.3. The Petitioner also submitted that it is utilizing the said Receipts for the purpose for which it was received; however, there is a misconception that needs to be addressed by NEPRA instead of deducting the amount from RoRB. The Petitioner raised severe reservations on the treatment of Deferred Credit in RORB calculations, is not considering the balance under the head of Deposit Work In Progress, Bank Balance and the stock in operation rather only comparing the Receipts against Deposit works with the bank balance and penalizing PESCO to this account repeatedly with heavy financial penalties on the same amount every year is unjustified.

57.4. The Petitioner further submitted that it like all the DISCOs maintains inventory records as per Inventory Recording Procedure approved by the competent authority and the records are maintained based on the single entry card i.e. any inventory received by the store keeper is recorded irrespective of the source of financing. Since the works conducted under various scheme such as DOP, ELR, STG, augmentation etc. are carried out throughout the year. The stock is released against each work order and the Authority's apprehension that the funds have been utilize somewhere else are unfair and incorrect as no clarification was sought from PESCO before incorporating the same in the PESCO Tariff Determination for FY 2018-19 & FY 2019-20 despite of the fact the soft copy of the audited accounts for FY 2018-19 and draft accounts for FY 2019-20 along with detailed trial balance containing all the required figures was provided. Based on the same questionable principle, NEPRA has again deducted additional amount of Rs.13,952 Million for FY 2018-19 & Rs.12,838 Million for FY 2019-20 from the asset base of PESCO without considering the available balances under the head of Deposit Work In Progress, Bank Balance and the stock in operation. Similarly, NEPRA has deducted additional amount of Rs.22,009 Million for the period FY 2015-16, FY 2016-17 and FY 2018-19 from the asset base of PESCO compared to the actual audited amount of Rs.11,779 Million as calculated by PESCO. The said figure of Rs.11,779 million is calculated by PESCO for the sake of comparison only and it has no relation with the PESCO's stance that the said treatment is not legally acceptable.

57.5. The Petitioner presented the following detailed analysis;

Deferred Credit Rs. In Mln

Description	2015-16	2016-17	2017-18	Sub-Total	2018-19	2019-20	Sub-Total
Nepra Figure used for RORB Calculation	32,742	31,835	35,057		45,443	45,613	
Actual Audited Figure	21,567	26,190	29,868		31,491	32,775	
a. Difference as per Nepra	**11,175**	**5,645**	**5,189**	**22,009**	**13,952**	**12,838**	**26,790**
Pesco Working							
Closing Balances as per Audited Accounts							
Receipt against deposit work	11,175	12,854	13,766		13,456	17,341	
Consumer Security Deposit	2,996	3,345	3,916		4,388	4,903	
Capital contribution awaiting connections	510	175	480		728	786	
Sub-Total	**14,680**	**16,373**	**18,162**		**18,571**	**23,031**	
Detail Of Funds Utilized & Available							
Deposit WIP	4,256	5,904	6,426		7,130	7,586	
Stock Account	6,239	3,519	3,186		4,497	5,355	
Bank Balance	464	3,077	4,366		3,459	9,316	
Sub-Total	**10,959**	**12,500**	**13,978**		**15,086**	**22,257**	
b. Difference as per Pesco	**3,722**	**3,873**	**4,184**	**11,779**	**3,485**	**774**	**4,259**
Net Difference (a-b)	**7,453**	**1,772**	**1,005**	**10,231**	**10,467**	**12,064**	**22,531**

57.6. As per the Petitioner, the Authority deducted the amount of deferred credits Rs.45,433 million for FY 2018-19 & Rs.45,613 million for FY 2019-20 while calculating the regulatory assets base of PESCO, whereas the actual amount of deferred credits that is required to be considered is Rs.31,491 Million for FY 2018-19 & Rs.32,775 Million for FY

2019-20. The financial impact of the excess deduction made by the Authority considering the WACC used in determination i.e. 10.95% for FY 2018-19 & 15.02% for FY 2019-20 is Rs.1,528 Million for FY 2018-19 and Rs.1,928 Million for FY 2019-20.

57.7. The Petitioner stated that the above said financial impact of the excess deduction is calculated on the basis of WACC as determined by NEPRA and is for the sake of comparison only and it has no relation with the PESCO's stance that the WACC should be determined on consistent assumptions and should consider the cost of Debt on the basis of available loans on PESCO's balance sheet.

57.8. The Petitioner presented the following detailed analysis;

Financial Impact on RORB Rs. In Mln

Description	2015-16	2016-17	2017-18	Sub-Total	2018-19	2019-20	Sub-Total
Finacial Impact of Deferred Credit deduction as per Nepra Calculations:							
Cash Shortfall as per Nepra Calculations	11,175	5,645	5,189		13,952	12,838	
WACC as per Nepra Determinations	**11.83%**	**11.83%**	**11.83%**		**10.95%**	**15.02%**	
Financial Impact of RORB deduction	1,322	668	614	**2,604**	1,528	1,928	**3,456**

Finacial Impact of Deferred Credit deduction as per Pesco Calculations:

Description	2015-16	2016-17	2017-18	Sub-Total	2018-19	2019-20	Sub-Total
Cash Shortfall as per Pesco Calculations	3,722	3,873	4,184		3,485	774	
Movement in Cash Shortfall	3,722	151	310		(699)	(2,711)	
WACC as per Nepra Determinations	**11.83%**	**11.83%**	**11.83%**		**10.95%**	**15.02%**	
Financial Impact of RORB deduction	440	18	37	**495**	(77)	(407)	**0**

Excess Deductions

Description	2015-16	2016-17	2017-18	Sub-Total	2018-19	2019-20	Sub-Total
Nepra -Financial Impact of RORB deduction	1,322	668	614	2,604	1,528	1,928	3,456
Pesco -Financial Impact of RORB deduction	440	18	37	495	(77)	(407)	(484)
Excess Deductions to be Allowed (RORB)	**882**	**650**	**577**	**3,099**	**1,528**	**1,928**	**3,456**

57.9. The Petitioner stated that the Authority has deducted the RORB amount of Rs.1,528 Million for FY 2018-19 & Rs.1,928 million for FY 2019-20 (total Rs.3,456 Million for two years), whereas the actual amount to be deducted is Zero. The Petitioner mentioned that it is a fact as depicted in the above table that the Authority is repeatedly including the cash shortfall of FY 2015-16 in all the subsequent years and similarly for next years and so on, which means that PESCO has been penalized for the same amount in every year from FY 2015-16 to FY 2019-20, which is unfair and unjustified. Instead of considering the movement in the said head, the Authority has repeatedly used the closing balances, which need to be reconsidered.

57.10. PESCO submitted that it is not utilizing the consumer receipts for any other purpose. Further, since FY 2015-16, PESCO has managed to reduce the shortfall (whether inherited or recovered by FBR) to Rs.774 Million (collectively), hence the deduction of RORB has no legal grounds and needs to be allowed to PESCO.

57.11. The Petitioner submitted that considering the principle of deduction of PEPCO fee of previous years in the instant Tariff determinations, PESCO hereby claims the excess deducted RORB of Rs.3,099 million for the years 2015-16, 2016-17 and 2017-18 during 2019-20 be allowed to PESCO as the said deduction is unjustified.

57.12. The Petitioner accordingly submitted its revised calculation of RORB, as under:

RORB Calculation

	Description		Audited 2018-19	Audited 2019-20
				Mln Rs.
A	Gross Fixed Assets in Operation - Opening Bal	[Mln Rs]	76,825	83,299
B	Addition in Fixed Assets	[Mln Rs]	6,474	4,096
C	Gross Fixed Assets in Operation - Closing Bal	[Mln Rs]	**83,299**	**87,395**
D	*Less*: Accumulated Depreciation	[Mln Rs]	29,320	32,191
E	Net Fixed Assets in Operation	[Mln Rs]	**53,979**	**55,204**
F	*Add*: Capital Work In Progress - Closing Bal	[Mln Rs]	18,127	19,756
G	Investment in Fixed Assets	[Mln Rs]	**72,106**	**74,960**
H	*Less*: Deferred Credits	[Mln Rs]	31,491	32,776
I	Regulatory Assets Base	[Mln Rs]	**40,615**	**42,184**
J	Average Regulatory Assets Base	[Mln Rs]	**39,347**	**41,400**
	Rate of Return (Reference WACC)	[%age]	10.95%	15.02%
	Return on Rate Base	[Mln Rs]	**4,418**	**6,320**

57.13. In light of above submissions, the Petitioner has requested to review the calculation of deferred credits and allow the deducted amount of RORB of Rs.1,528 million (total RORB; Rs.4,418 million) for FY 2018-19 & Rs.1,928 million (total RORB; Rs.6,320 million) for the FY 2019-20 and Rs.3,099 million for the previous years' RoRB from FY 2015-16 to FY 2017-18.

58. <u>Weighted Average Cost of Capital (WACC)</u>

58.1. The Petitioner while citing reservation on allowed 10.95% WACC for FY 2018-19 & 15.02% for FY 2019-20 in Tariff Determination for FY 2018-19 & FY 2019-20, has requested the Authority to review the same in the light of clear evidence and submitted that it will not be sufficient to meet the revenue requirement and the assumptions on which the calculation is based. The Petitioner submitted that the authority has taken the assumptions without even considering the economic conditions of KPK and the effect of war on terror on the business environment in which PESCO is providing services and hence it needs to be reconsidered. NEPRA used different assumptions for the calculation of WACC in every two to three years from FY 2014-15 to FY 2019-20 instead of applying the assumptions consistently, thereby reducing the amount of WACC on one pretext or the other, which needs to be reconsidered. The Authority is requested to apply the assumption consistently for a reasonable control period instead of changing it every third to fourth year.

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58.2. The Petitioner stated that firstly for the assessment of ROE component, weighted average yield on 05 years Pakistan investment bond (PIB) as of June 13, 2018 has been considered as risk free rate which is 8.4795% for FY 2018-19 & 13.7687% for FY 2019-20. Moreover the rate of return on KSE-100 index over a period of 8 years was around 15% (same figure as was used in previous determination and no detail provided neither in respect of base years nor any other detail to comment). The same translated in to risk premium of around 6.521% for FY 2018-19 and 1.23% (very low) for FY 2019-20 and on the other hand, the risk premium used by different brokerage houses of the country ranges from 6% to 7%.

58.3. It was further submitted that the Authority assumed market risk premium of 6.521% & 1.23% (very low) which may be reconsidered as only Karachi generates almost 60% of the business activity as compared to Peshawar which is 200% folds higher. These assumptions were considered without even considering the economic conditions of KPK and the effect of war on terror on the business environment in which PESCO is operating. Accordingly the area of operation and the economic conditions of the area needs to be considered and necessary adjustments may be made to the risk premium because of the fact that the market in Khyber Pakhtunkhwa is riskier than that of other parts of the country and a margin of 2% to 3% may be added to the new base line. The linking of return with Transmission & Distribution losses margin allowed by Authority does not hold ground as the same has been substantially reduced by the Authority together with heavy deduction of the allowed provision for bad debts of FY 2015-16. Moreover, the Power Purchase Price is a pass through item and relates to the cost and has no co-relation with return which is for the equity holders.

58.4. It was further stated that for measurement of Beta, in order to arrive at a suitable measure, the Authority conducted an in house analysis and arrived at appropriate measure of 1.10 and it is the same as was used during 2015-16, which means the economic conditions are stable even in the wake of pandemic COVID 19, hence needs to be reconsidered.

58.5. Moreover, to ascertain the cost of debt, the Authority has decided to take cost of debt as 3 months KIBOR + 2.00% spread (200 basis points). Since 2015-16 authority used 3 months KIBOR + 2.75% spread, however, the authority used 2.00% spread for FY 2017-18 & FY 2018-19 without any reason and it only seems to reduce the return of PESCO. The Authority is requested to apply the assumptions consistently and firstly the cost of debt may be allowed on the basis of the outstanding loans of PESCO otherwise may allow a spread of 2.75% as was previously allowed during FY 2016-17 and FY 2017-18. By considering the spread of 2.75% the cost of Debt would be revised to 9.68% for FY 2018-19 i.e. 3 months KIBOR of 6.93% as of July 3rd July, 2018 plus 2.75% spread, similarly for FY 2019-20 it should be 16.63% i.e. 3 months KIBOR of 13.88% as of 25thJuly, 2019 plus 2.75% spread (actual 3 months KIBOR of 25thJuly, 2019 is 13.88% instead of 12.97% as used by NEPRA).

58.6. The Petitioner, based on the above assumptions, requested the Authority to allow WACC of 11.47% for FY 2018-19 and 16.18% for FY 2019-20 based on the above adjustment in cost of debt. Moreover, in addition to above, the average risk premium of 6.5%, as used by different brokerage houses, may also be allowed and the calculation may be adjusted accordingly.

58.7. The Authority in determination of PESCO for Distribution & Supply of power tariff for the FY 2018-19 & FY 2019-20 (para 35.13 and para 23.13) has comprehensively addressed the issue raised by the Petitioner as under;

" On the issue regarding deducting amount of receipt against the deposit work from regulatory asset base, the Authority observed that the amount deducted was worked out from the audited financial statements provided by the Petitioner, which showed insufficient cash balance as on 30th June 2015 against the Petitioner's pending liability of receipt against deposit works and consumer security deposits. The Authority at the same time also directed the Petitioner to provide rational / justification for improper utilization of the money, however, no response has been provided in this regard. The Authority has seriously noted Petitioner's illogical and irrational justification of using consumer deposit

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money owing to cash shortfall, since the amount collected in this regard cannot be utilized for any other purpose. The Authority understands that main reasons of cash shortfall may be because of bad governance and inefficiencies on part of the Petitioner. The Petitioner, however, despite the Authority's direction has failed to provide any proper justification / rational for improper utilization of the consumers' money.

Similarly for the FY 2018-19, the Authority has again observed that the Petitioner had insufficient cash balance as on 30th June 2019, against its pending liability of receipt against deposit works and consumer security deposits, thus, indicating that the amount received against the aforementioned heads has been utilized somewhere else for which no details have been provided. Thus, it would be unfair and unjust with the consumers to suffer due to the unlawful act of the Petitioner.

Accordingly, the Authority has decided, to include the amount of receipts against deposit works as a part of Deferred Credits for the assessment of RAB for FY 2018-19 and FY 2019-20, after excluding therefrom the cash/ bank balances and the amount of stores & Spares available with the Petitioner as on June 30, 2019."

58.8. Now the Petitioner regarding insufficient cash balances against the receipt against deposit works security deposits has explained, that the Authority while working cash shortfall against the pending liabilities has not accounted for Short Term investment of Rs.2,521 million, which was made through security deposits receipt from the consumers for the FY 2018-19. The Petitioner also explained that while working out insufficient cash balance against the Petitioner's pending liability of receipt against deposit works and consumer security deposits Cash & Bank Balance only to the extent of deposit accounts has been accounted for, however the current account balance also includes Rs.205 million on account of Meter Security account and Rs.611 million on account of Capital Contribution. The Authority observed that while calculating RoRB, average RAB is considered i.e. RAB of the Year for which RORB is being determined plus RAB of the last year and dividing it by two. Therefore, for calculation of RoRB for the FY 2018-19, the RAB of FY 2017-18 has also been adjusted based on the submissions of the Petitioner. Similarly for the FY 2019-20, the amount on account of Meter Security account and Capital Contribution is Rs.2,969 million and Rs.2,554 million respectively has been considered.

58.9. Keeping in view the explanation of the Petitioner and provision of Audited accounts for the FY 2019-20, the Authority has decided to include this amount as part of cash and bank balance of the Petitioner, while working out the cash balance against the Petitioner's pending liability of receipt against deposit works and consumer security deposits. By taking into account the above amounts, the revised RoRB of the Petitioner for the FY 2018-19 and FY 2019-20 works out as Rs.3,146 million and Rs.4,792 million respectively. Thus, a difference of Rs.256 million and Rs.400 million for the FY 2018-19 and FY 2019-20 respectively, for the RoRB is allowed to the Petitioner as part of PYA in the instant decision.

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58.10. Here it is pertinent to mention that since the Petitioner has provided Audited accounts for the FY 2019-20, therefore, the actual RAB has been worked out while accounting for the above adjustments, wherein, depreciation for the FY 2019-20, as per the Audited accounts has also been considered. Consequently, the difference of depreciation allowed in the determination of FY 2019-20 vis a vis the amount as per the audited accounts has been adjusted in the instant decision, resulting in reduction by Rs.83 million in the revenue requirement of PESCO.

58.11. On the point of Revision in WACC by changing different components of WACC, following has been stated in the determination;

On the point regarding assessment of risk premium and risk free rate, without considering the economic conditions of KPK and the effect of war on terror on the business environment in which PESCO operates, the Authority reiterates that the operational difficulties and inherent risk faced by the Petitioner due to law and order situation has already been accounted for in the shape of margin for law & order allowed in the T&D losses target.

58.12. On the issue of Spread over KIBOR 2%, it is highlighted that the Authority Benchmarks for Tariff Determination Guidelines, 2018, "a *spread not exceeding 2.25% over KIBOR shall be approved, with savings in the spread to be shared between the power producer and power purchaser in the ratio of 50:50.* Keeping in view the approved benchmarks, the Authority decided to allow the Spread of 2.00% over KIBOR for XWDISCOs.

58.13. Regarding KIBOR as of 25th July, 2019 being 13.88% instead of 12.97% used by NEPRA in the determination, it is submitted that for the FY 2019-20, KIBOR at the start of the year i.e. 3rd July 2019 was considered, however, the date was inadvertently mentioned as 25th July 2019, thus this is only a typo error, therefore, no change is required in the already allowed WACC.

59. Post-Retirement Benefits

59.1. The Petitioner on the issue submitted that the Authority in its tariff determinations for the FY 2018-19 & FY 2019-20 disallowed provision for post-retirement benefits expenses and allowed only actual cash payment made to the pensioners during the said period. The Petitioner further mentioned that as per the Authority directions, it has created a separate Pension fund account, hence it should be allowed to PESCO to enable it to transfer the allowed fund to the said account. The Petitioner accordingly requested to allow the provision of post-retirement benefits of Rs.3,238 Million for FY 2018-19 & Rs.3,061 Million for FY 2019-20 as per audited accounts.

59.2. The Authority in the determination of PESCO for Distribution & Supply of power tariff for the FY 2018-19 & FY 2019-20 decided as under;

"*The Authority considering the overall liquidity position in the power sector and in order to ensure that the Petitioner fulfils its legal liability with respect to the post-retirement benefits, directed the Petitioner to create a separate fund in this regard before 30th June 2012. Subsequently, this deadline was extended by the Authority. The rationale was that the creation of funds would ensure that the Petitioner records it liability more prudently since the funds would be transferred into a separate legal entity. In addition to that these independent funds would generate their own profits, if kept separate from the company's routine operations and in the longer run reducing the Distribution Margin and eventually consumer-end tariff.*

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The Petitioner in the tariff Petition submitted that it has created Pension Fund in compliance to Authority's Direction, on the direction of NEPRA, however, the Authority has yet to allow the actuarial cost to PESCO for maintaining the said fund. The Petitioner accordingly requested to allow such expenses in O&M, so that after collecting the same through tariff, it would be able to deposit into the fund created for the purpose. The Petitioner further submitted that employees Retirement Benefits have been based on the average of annual increase in the last three years audited figures as per the assumption used by the valuer M/s SIR Consultants and accordingly, pension increase of 7.50% has been assumed, equivalent to discount rate of 13%.

The Authority noted that the Petitioner in its tariff determination process for the FY 2015-16 informed the creation of separate Pension Fund in compliance to Authority's direction, however, no details regarding transfer of amount, if any, into the fund was shared with the Authority. Here it is pertinent to mention here that the Authority had been allowing the provision for post-retirement benefits to the Petitioner as a part of its O&M cost till FY 2011-12 and it was only from FY 2012-13 that the Authority decided to allow the actual amount on account of pension benefits, due to non-compliance of the Authority's directions regarding creation of post-retirement Fund. Thus, any post retirement liability pre FY 2012-13, is with the Petitioner. Accordingly, the Petitioner was directed in the tariff determinations for the FY 2015-16, FY 2016-17 & FY 2017-18 to transfer the already collected provision into the Fund. The Petitioner in its instant Petition has not provided any update in the matter, however, has requested an amount of Rs.6,650 million and Rs.7,300 million, under the head of post-retirement benefits for the FY 2018-19 and FY 2019-20 respectively in the tariff petition for both the distribution and supply of power functions.

The Authority, understands that payment of postretirement benefits to the retired employees is a compulsory obligation of the Petitioner and by not depositing the previously allowed amounts into the Fund would not absolve the Petitioner from its responsibility in this regard.

The Petitioner is again directed to transfer the already collected provision on account of Post-Retirement benefits into the Fund and also provide break-up of the said postretirement benefits indicating the provision amount pertaining to the prior period and the current portion."

59.3. The Authority has further observed that during hearing of the MLR, the Petitioner agreed to route its payments of postretirement benefits through the Fund, therefore once the Petitioner starts routing its payments through the Fund and transfers the already collected provision on account of Post-Retirement benefits into the Fund and provides break-up of the said postretirement benefits indicating the amount of provision pertaining to the prior period and the current portion, the Authority may consider to allow provision for post-retirement benefits keeping in view the operational performance of the Petitioner. Moreover, as mentioned in earlier paragraphs, the Authority keeping in view the operational performance of the Petitioner considers that at this point in time allowing provision for post-retirement benefits instead of actual payments, would not be in the interest of the consumers as any additional amount over & above the actual payments, would be eaten-up by the inefficiencies of the Petitioner and the Petitioner would not be

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able to deposit the excess amount in the Fund. However, if the Petitioner still manages to deposit any additional amount in the Fund, the Authority may consider to allow the same as PYA in the subsequent adjustment request.

60. <u>CPPA Overhead</u>

60.1. The Petitioner on the issue submitted that the Authority has deducted Rs.99 Million on account of PEPCO management fee for the FY 2016-17 and the FY 2017-18 and requested the Authority to reconsider the decision as it has already been incurred. The Petitioner further stated that if it is to be disallowed then the same should be disallowed prospectively rather than with retrospective implications. It has also been submitted that the deduction of Rs.96.27 million made from Other Expenses of FY 2018-19 may be reconsidered as it is the management fee paid by PESCO on account of other services as well e.g. to PITC etc. and includes only Rs.46.75 million on account of PEPCO management fee. The Petitioner accordingly requested to allow Rs.49.52 Million other than PEPCO management fee and also allow PEPCO management fee of Rs.99 Million for FY 2015-16 and FY 2016-17 and Rs.46.75 Million for the FY 2018-19.

60.2. The Authority noted that in the tariff determination of PESCO for the FY 2018-19 & FY 2019-20 it was decided as under;

The Authority, during analysis, noted that the Petitioner included an amount of Rs.96.27 million on account of Management Fees of PEPCO. The Authority observed that each DISCO is an independent entity having its own board of Directors, thus, allowing any cost on the pretext of PEPCO Management fee is not logical. Further, the Ministry of Energy (MoE), itself in the Peshawar High Court submitted that PEPCO shall be dissolved after June 2011. In view thereof, the cost of PEPCO fee has not been allowed to the Petitioner.

60.3. However, based on the explanation of the Petitioner that out of Rs.96.27 million, the amount of Rs.49.52 million does not pertains to PEPCO, and verification of the same from the financial data submitted by the Petitioner for the FY 2018-19, the Authority has decided to allow the same as part of PYA in the instant decision.

61. <u>Supplemental Charges</u>

61.1. The Petitioner submitted that NEPRA has allowed offsetting the Late Payment Charges (LPC) recovered from the consumers against the Late Payment Invoices of markup on delayed payments i.e supplemental charges raised by CPPA since FY 2014-15, yet the same is not enough to pay off the supplemental charges completely. The Petitioner stated that CPPA is charging supplemental charges to PESCO on account of delayed payments to IPPs and the shortfall is as under:

<u>Rs. In Billion</u>

Year	Suppl Chrgs.	LP charges	shortfall
2014-15	Rs. 4.941	Rs. 1.637	Rs.3.304
2015-16	Rs. 2.042	Rs. 1.451	Rs.0.591
2016-17	Rs. 2.621	Rs. 1.595	Rs. 1.026
2017-18	Rs. 2.846	Rs. 1.839	Rs. 1.007
2018-19	Rs. 7.973	Rs. 2.044	Rs. 5.929
2019-20	Rs. 13.011	Rs. 3.084	Rs. 9.927
Total	Rs. 33.434	Rs. 11.650	Rs. 21.784

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61.2. The Petitioner accordingly has requested to allow the same to PESCO.

61.3. The Authority noted that in the tariff determination of PESCO for distribution of power for the FY 2018-19 & FY 2019-20, it has been decided as under;

"Regarding other issues raised by the Petitioner in its instant Petition i.e. Tariff for AJK, Supplemental charges and Industrial Support package, the Authority observed that the Petitioner failed to present any new information, evidence / rationale to substantiate its aforementioned requests, which could form any basis for the Authority to reconsider its earlier decision in this regard; therefore, the request of the Petitioner to reconsider Supplemental charges, Tariff for AJK, and Industrial Support package is declined. The Authority has already discussed these issues in detail and with reasonable clarity in the Petitioner's determination dated July 12, 2018 i.e. Tariff for AJK under para 14.1 & 14.2, Supplemental charges under para 16.5 and Industrial Support Package under 22.1 to 24.1."

61.4. In view thereof, the Authority does not see any rationale to change its earlier decision.

62. <u>Turnover Tax</u>

62.1. The Petitioner submitted that the Authority in its determination dated 11.12.2020, under the para 37.4, allowed turn over tax paid by PESCO for FY 2016-17 and FY 2017-18, however turn over tax paid by PESCO during FY 2018-19 and FY 2019-20 was not allowed by the Authority. Accordingly, it is requested that turn over tax already paid by PESCO amounting to Rs.1,432 million and Rs.1,576 million during the FY 2018-19 and FY 2019-20 may be allowed, as evidence of payment of Income Tax return for FY 2018-19 along with cash payment receipts (CPRs) of FY 2018-19 and FY 2019-20 have been provided. The Petitioner further submitted that figure of Turnover tax for FY 2019-20 is not finalized yet and may increase on the basis of return to be filed shortly, however, after filing of return for FY 2019-20 the remaining amount will be claimed in subsequent tariff petition.

62.2. The Petitioner provided the following detail of turnover tax payment;

Mln. Rs.

S.No.	Month of Payment	FY 2018-19	FY 2019-20
1	September	180	427
2	October	175	77
3	December	305	423
4	January	65	48
5	March	361	
6	April		368
7	May		233
8	June	263	
9	At source deduction/adjustment	83	
	Total	1,432	1,576

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62.3. The Authority noted that the Petitioner also requested turn over tax for the FY 2018-19 & FY 2019-20 on provisional basis, however, same was not supported with any evidence of payments, thus were not allowed. As now the Petitioner has provided the relevant documentary evidence i.e. tax Payment receipts whereby it has deposited an amount of Rs.1,432 million and Rs.1,576 million as tax pertaining to the FY 2018-19 and FY 2019-20 respectively, therefore the Authority has decided to allow the same as part of PYA in the instant decision.

63. Whether the requested Prior Years Adjustment is justified?

64. Whether the requested turnover tax is justified

64.1. The Petitioner has requested to allow negative PYA of Rs.3,151 million as detailed hereunder, for both its Distribution and Supply of Power Functions;

Sr.	Prior Year Adjustments	Rs. In Million
1	DM (FY 2019-20)	
	DM Allowed	23,376
	DM Recovered	20,032
	Under Recovered	3,344
2	Other Income (FY 2019-20)	
	Allowed	-2,940
	Actual	-3,467
	Under/(Over) Recovery	-527
3	Sales Mix Variances FY 2019-20	(5,228)
4	PYA over recovered (FY 2018-19)	(4,455)
5	Turn over tax	3,008
	Total Prior Period Adjustment	-3,858
6	Uniform Seasonal Pricing Structure Subsidy (USPS)	707
	Net Prior Year Adjustment	(3,151)

64.2. PESCO has also requested Turn over tax as per section 113 of the income tax ordinance by submitting that it is required to pay turnover tax, which is a pass through item, hence, requested the Authority to allow Rs.2,379 million, Rs.2,684 million, Rs.2,922 million, Rs.3,150 million & Rs.3,410 Million as turnover tax for FY 2020-21 to FY 2024-25 respectively.

64.3. Regarding Turnover Tax, the Authority while going through the financial statements of the DISCOs including the Petitioner, has observed that significant amount of tax refund is appearing from FBR. In view thereof, the Authority has decided to allow actual tax paid by the Petitioner net off of the amount of Tax Refund outstanding from FBR, if any, once the Petitioner provides detail of actual tax assessments vis a vis tax paid for the last five years. Accordingly, the Petitioner is directed to provide details of actual tax assessments, tax allowed and the amount of tax paid for the last five years.

64.4. The Authority based on the discussion made in the preceding paras and keeping in view the scope of PYA, has worked out the following PYA of the Petitioner till the FY 2019-20.

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Rs. Mln

Description	PESCO
1st & 2nd Qtr. FY 2018-19	
Allowed Amount	25,120
Qtr. Rs./kWh	2.1699
Recovered	29,055
Under/(Over) Recovery	(3,935)
3rd & 4th Qtr. FY 2018-19	
Allowed Amount	5,443
Qtr. Rs./kWh	0.5877
Recovered	5,963
Under/(Over) Recovery	(520)
Interim D.M FY 2018-19	
Allowed Amount	3,817
Qtr. Rs./kWh	0.4121
Recovered	4,181
Under/(Over) Recovery	(364)
1st Qtr. FY 2019-20	
Allowed Amount	2,865
Qtr. Rs./kWh	0.3093
Recovered	3,157
Under/(Over) Recovery	(292)
Distribution Margin FY 2019-20	
Allowed	23,376
Recovered	19,839
Under/(Over) Recovery	3,537
Other Income FY 2019-20	
Allowed	(2,940)
Actual	(3,467)
Under/(Over) Recovery	(527)
Sales Mix Variances	
FY 2019-20	(5,345)
	(5,345)
MLR FY 2018-19 & FY 2019-20	
RORB	656
Other Exp without PEPCO Fee	50
Tax Payments	3,008
PYA of FY 2018-19	1,737
	5,451
Distribution Margin FY 2020-21	
Allowed	23,376
Recovered	22,188
Under/(Over) Recovery	1,188
Total Prior Period Adjustment	(6,259)

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64.5. The Authority in line with its earlier decision in the matter of negative FCA, has calculated the impact of negative FCA pertaining to the FY 2019-20 in the matter of lifeline consumers, domestic consumers (consuming up-to 300 units) and Agriculture Consumers which has been retained by the Petitioner. The Authority has also worked out the impact of positive FCAs not recovered by the Petitioner from life line consumers. The Authority also considered the relevant clauses of the S.R.O. 189 (1)/2015 dated March 05, 2015 issued by GoP and the amount of subsidy claims filed by the Petitioner for the FY 2019-20.

64.6. After considering all the aforementioned factors, the Authority observed that the Petitioner has retained a net amount of Rs.796 million on account of negative FCA for the FY 2019-20, pertaining to the lifeline consumers, domestic consumers (consuming up-to 300 units) and Agriculture Consumers, which is still lying with the Petitioner. The Authority also considered the amount of subsidy claims filed by the Petitioner for the FY 2019-20, which shows a net subsidy claim filed by the Petitioner.

64.7. The Authority in view of the above and in line with its earlier decisions, has decided not to adjust the impact of negative FCA across different consumer categories. Thus, the net negative FCA amount pertaining to the lifeline consumers, domestic consumers (consuming up-to 300 units) and Agriculture Consumers for the FY 2019-20 i.e. Rs.796 million, which is still lying with the Petitioner, must be adjusted by the Federal Government, against the overall Tariff Differential Subsidy claim in the matter of the Petitioner eventually reducing GOP's overall Tariff Differential Subsidy burden. The above working has been carried out based on the data/ information provided by PITC, as DISCOs have not submitted the required information. In case DISCOs own calculations are different from the aforementioned numbers, keeping in view the last slab benefits etc., the same may be shared with the Authority in its subsequent adjustment request. This decision of the Authority is only applicable under a subsidy regime, whereby aforementioned classes of consumers are receiving subsidy directly in their base tariff.

64.8. Here it is pertinent to mention that the Petitioner vide letter dated 14.05.2022, has provided its workings regarding impact of life line consumers on quarterly adjustments, by claiming an amount of Rs.1,023 million for the period from 4th quarter of FY 2017-18 till the FY 2020-21. The Authority considers that the claim of the Petitioner requires further deliberation, however, considering the fact that the instant tariff determinations are at final stage, the Authority has decided to consider this claim in the next tariff adjustment/ indexation of the Petitioner.

65. <u>Other issues raised in the Review Motion</u>

65.1. Regarding other issues raised by the Petitioner in its instant Petition i.e. Tariff for AJK, Supplemental charges and Industrial Support package, the Authority observed that all these issues have already been deliberated in detail in the earlier tariff determinations of the Petitioner. The Petitioner has failed to present any new information, evidence / rationale to substantiate its aforementioned requests, which could form any basis for the Authority to reconsider its earlier decision in this regard; therefore, the request of the Petitioner to reconsider Supplemental charges, Tariff for AJK, and Industrial Support package is declined. The Authority has already discussed these issues in detail and with reasonable clarity in the Petitioner's earlier tariff determinations.

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66. <u>Whether the requested T&D loss targets stated in the instant MYT petition are justified?</u>

66.1. The Petitioner in its MYT tariff petition, requested for T&D losses for 5-years MYT control period from FY 2020-21 to FY 2024-25 with the following break-up:

Year	Technical Losses (%)	Administrative Losses (%)	Total Losses (%)
FY 2020-21	26.35	11.5	**37.85**
FY 2021-22	26.13	10.7	**36.83**
FY 2022-23	25.98	9.8	**35.78**
FY 2023-24	25.82	8.9	**34.72**
FY 2024-25	25.54	8.1	**33.64**

66.2. The petitioner also provided the following segregation of its T&D losses in respect of its technical and administrative losses;

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Transmission Losses at 132kV (%)	4.2	4.1	4	3.9	3.8
11kV Network Losses (%)	8.6	8.5	8.4	8.3	8.2
LT Losses	13.55	13.53	13.58	13.62	13.54
Total Technical Losses (%)	**26.35**	**26.13**	**25.98**	**25.82**	**25.54**
Energy Balances					
Units Received (GWh)	15206	15632	16070	16519	16982
Units Sold (GWh)	9450	9875	10320	10784	11269
Units Lost (GWh)	5756	5757	5750	5735	5713
Technical Losses (%)	26.35	26.13	25.98	25.82	25.54
Administrative Losses (%)	11.5	10.7	9.8	8.9	8.1
TOTAL	**37.85**	**36.83**	**35.78**	**34.72**	**33.64**

66.3. Further, PESCO in its instant MYT petition has stated that as per directions given by the Authority, it has carried out the losses study from the third party and the same has been completed. The technical loss of PESCO as per independent assessment is 20.95% (17.31% below 11 KV network and 3.64% for 132 KV network). The summary of losses as per independent assessment is given below:

Description	Transmission Losses 132 kV	11 kV Network Losses	LT Line Losses	Total Technical Losses
Third Party Assessment	3.64%	13.00%	4.31%	20.95%

66.4. Moreover, PESCO submitted that it could not manage to reduce the distribution losses to the desired level, even with the involvement of police, because of the adverse law and order situation, War on Terror, Kunda Culture and non-cooperation by the local MPAs and MNAs. The actual T&D losses during FY 2019-20 remained 38.87% against NEPRA allowed target of 21.33% and the T&D losses for FY 2018-19 were recorded to be 37.11% against allowed loss level of 22.43%.

66.5. The Petitioner while justifying its failure to achieve the NEPRA target has taken stance that NEPRA's determined target losses for FY 2018-19 and FY 2019-20 based on third party study are not achievable due to following technical and administrative issues.

67. <u>Technical Issues:</u>

- Lengthy Transmission Lines

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- Over Loaded Grid System
- High Ratio of 11 kV Distribution line to 400 volts line (1:12)
- Partially damaged distribution transformers

68. **Administrative Issues:**

- Fata Boundaries
- Overall Law & Order position
- Consumer mix
- Shortage of trained Manpower and lack of adequate financing
- Socio Economic and Culture Issues

69. PESCO, during the hearing, also submitted the following Historic trend of its T&D losses as follows:

Financial Year	Units Purchased	Units Sold	Units Lost	T&D Actual	NEPRA Target
	GWh	GWh	GWh	%	%
2014-15	11657	7597	4061	34.80	20.00
2015-16	11803	7783	4020	34.10	31.95
2016-17	12511	8432	4079	32.60	31.95
2017-18	14220	8796	5424	38.14	31.95
2018-19	14427	9074	5353	37.10	22.43
2019-20	14792	9043	5749	38.87	21.33

70. The Petitioner, afterwards vide letter dated 15.10.2021, submitted an addendum to the MYT petition whereby PESCO informed that the requested T&D losses in MYT petition have been revised because of typographical errors. PESCO provided the following revised segregation of its T&D losses in respect of its technical and administrative losses for MYT control period of 5-years:

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Transmission Losses at 132kV (%)	4.2	4.1	4	3.9	3.8
11kV Network Losses (%)	13.6	13.5	13.4	13.3	13.2
LT Losses	4.4	4.4	4.4	4.4	4.4
Total Technical Losses (%)	**22.2**	**22**	**21.8**	**21.6**	**21.4**
Energy Balances					
Units Received (GWh)	15206	15632	16070	16519	16982
Units Sold (GWh)	9450	9875	10320	10784	11269
Units Lost (GWh)	5756	5757	5750	5735	5713
Technical Losses (%)	22.2	22	21.8	21.6	21.4
Administrative Losses (%)	15.7	14.8	14	13.1	12.2
TOTAL	**37.9**	**36.8**	**35.8**	**34.7**	**33.6**

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71. **T&D Losses pertaining to Earlier Period FY 2018-19 & FY 2019-20**

71.1. The Authority has noted that the Petitioner has requested to allow its actual T&D losses of 37.11% for FY 2018-19 and 38.87% for FY 2019-20 against the Authority's determined target of 22.43% for FY 2018-19 and 21.33% for FY 2019-20, which has already lapsed. In this regard, it is observed that PESCO did not provide any justification and/or rationale which enables revision in determined target T&D losses of 22.43% and 21.33% for previous determination period i.e. FY 2018-19 and FY 2019-20. It is further noted that the Authority, in its earlier determination for FY 2018-19 and FY 2019-20, set targets of 22.43% and 21.33% T&D losses for PESCO by considering all facts and submissions by the petitioner. In light of above, the Authority has decided to maintain the already determined targets of T&D losses of 22.43% for FY 2018-19 and 21.33% for FY 2019-20 for PESCO.

72. **Transmission Losses pertaining to Instant MYT Control Period:**

72.1. It is noted that PESCO requested following transmission losses for MYT control period:

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Transmission Losses at 132kV (%)	4.2	4.1	4	3.9	3.8

72.2. The Authority noted that as per the DISCO annual performance report of NEPRA the impact of losses for the past five years is as under;

Period	Actual Losses %	Notified Losses %	Breach %	Impact of Breach Rs. mln	Impact of Notified Rs. mln	Impact of Actual Rs. mln
FY 2016	33.8	26.0	7.8	10,769	35,896	46,665
FY 2017	32.6	26.0	6.6	10,123	39,880	50,003
FY 2018	38.1	27.6	10.5	19,634	51,745	71,379
FY 2019	36.6	32.0	4.7	11,994	82,410	94,404
FY 2020	38.9	32.0	7.0	22,521	103,533	126,054

72.3. It is noted that PESCO's requested transmission losses as mentioned above are higher than its transmission losses of 3.64% as assessed by the third party consultant. In this regard, it is noted that PESCO submitted its third party transmission loss study conducted by M/s Power Planner International (PPI) during the proceedings of the Tariff Re-Determination for the FY 2015-16. Based on the results of the said study, the Petitioner requested 3.64% transmission losses, which was allowed to PESCO in Authority's earlier determinations pertaining to FY 2015-16, FY 2016-17 and FY 2017-18. It is also noted that the Third Party Loss study was conducted in the FY 2015-16 on the basis of PESCO's transmission assets (132kV, 66kV and 33kV) statistics pertaining to FY 2014-15 which are tabulated as under:

Sr. #	Description	As on 30.06.15
1	Grid Stations	97 Nos.
2	Transmission line length	3317 kms.

72.4. It is also observed that in the said study, the third party consultant, keeping in view the higher transmission losses of 3.64% for PESCO, recommended the following:

"For PESCO, the installation of switched shunt capacitor banks at 11kV levels to bring the power factor of distribution network as high as possible is very important as during peak conditions the low voltage on the network causes heavier loading on the lines in order to meet the load demand, thus causing high losses. In addition, to relieve the heavily loaded transmission lines and power transformers by installing more lines and transformers or re-conducting heavily loaded lines using Rail Conductor to bring the loading reasonably below the limit to operate the system comfortably and with lower losses."

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72.5. It is evident from the available record that PESCO requested transmission losses of 3.0% for FY 2018-19 and FY 2019-20 on actual basis which were allowed by the Authority being lower than the results of third party study and achieved by PESCO as a result of implementation of the following additions in PESCO's transmission networks (132kV and 66kV) as recommended earlier by the third party consultant in last few years:

Sr. #	Description	2016	2017	2018	2019
1	No. of Grid Stations	98	101	104	108
2	MVA Capacity	5265	5773	6086	6327
3	Transmission line length	3362	3362	3432	3687

72.6. For the purpose of instant MYT petition and in order to set a starting point with respect to PESCO's transmission network losses, the Authority has decided to allow the same as 3.00%, as already determined by the Authority for the FY 2019-20, for the first year of MYT control period i.e. FY 2020-21. For rest of the four years of MYT control period, the Authority has decided to link the reduction in transmission network losses with the investments allowed to PESCO against MVA capacity additions at PESCO's grid stations which will be undertaken for removal of constraints / overloading at transmission networks of PESCO. Since PESCO has requested to allow an investment of Rs.5,635 million in next 5-years for addition of 1044 MVA capacity at its grid stations to overcome the congestions and overloading issues at transmission networks, therefore, an overall reduction of 0.56% in transmission network losses of PESCO is considered for the MYT control period of 5-years i.e. from FY 2020-21 to FY 2024-25. Accordingly following transmission network losses are allowed to PESCO:

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Requested Investment (Million Rs.)	2,345	2,012	767	510	0
Allowed Loss Reduction (%)	0	0.23	0.2	0.07	0.06
Allowed Transmission Losses (%)	**3**	**2.77**	**2.57**	**2.5**	**2.44**

73. **Distribution Losses at 11kV Level pertaining to Instant MYT Control Period:**

73.1. It is noted that for the purpose of instant MYT petition, PESCO requested following distribution losses at 11kV level:

2020-21	2021-22	2022-23	2023-24	2024-25
13.60%	13.50%	13.40%	13.30%	13.20%

73.2. While considering the above distribution losses at 11kV level, it is noted that the above requested losses are higher than the targeted losses of 12.93% allowed to PESCO in the Authority's earlier determination for the FY 2018-19 and the FY 2019-20 on the basis of distribution loss study conducted by third party consultant i.e. M/s PPI. Therefore, the Authority has decided to consider the already determined target of distribution losses at 11kV i.e. **12.93%** distribution losses at 11kV, as starting point for PESCO for FY 2020-21.

73.3. For setting the distribution loss targets at 11kV level for the remaining control period of 4-years of the MYT term, the Authority considers that by allowing an investment of Rs.11,199 million in ELR component; PESCO is encouraged to achieve better results in the MYT control period than the requested T&D loss targets. Further, a reduction of only 0.40% in distribution losses at 11kV level as proposed by PESCO over the MYT control period is not acceptable and an overall reduction of **1.11%** in distribution losses at 11kV

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level is required to be achieved by PESCO. Accordingly the following distribution loss targets at 11kV level are allowed to PESCO:

Description	2021-22	2022-23	2023-24	2024-25
Requested Dist. Losses at 11kV Level (%)	13.50%	13.40%	13.30%	13.20%
Investment Allowed for ELR Projects (Million Rs.)	2,674	2,757	2,851	2,917
Allowed Dist. Losses at 11kV Level (%)	**12.66**	**12.39**	**12.11**	**11.82**

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74. <u>Distribution Losses at LT Level;</u>

74.1. It is noted that for the purpose of instant MYT petition, PESCO has requested consistent margin of 4.40% LT losses for the MYT control period of 5-years, which are slightly higher than the results (4.31%) of distribution loss study conducted by third party consultant M/s PPI. It is important to mention here that the Authority allowed 4.0% (requested by PESCO on actual basis) LT losses in its earlier determination pertaining to FY 2018-19 and FY 2019-20. Accordingly, the Authority has decided to maintain the earlier allowed target of 4.0%, already achieved by PESCO during preceding years, for the MYT control period of 5-years i.e. from FY 2020-21 to FY 2024-25.

75. <u>Margin for Law and Order;</u>

75.1. It is noted that PESCO has also requested the following administrative losses for next 5-years:

2020-21	2021-22	2022-23	2023-24	2024-25
15.7	14.8	14	13.1	12.2

75.2. In this regard, it is observed that the Authority in its earlier determinations pertaining to FY 2013-14, allowed a margin of 0.50% administrative losses to all DISCOs except IESCO and TESCO. After that period, the Authority never considered the request for allowing administrative losses to any distribution licensee. However, the Authority allowed a margin of law & order to PESCO, HESCO, QESCO and SEPCO in its earlier determinations pertaining to FY 2015-16, FY 2016-17 and FY 2017-18. Accordingly, the Authority allowed 11.0% as margin for law and order to PESCO in its earlier determinations for the three years noted above.

75.3. It is also noted that for FY 2018-19 and FY 2019-20, PESCO requested to allow 15.0% administrative losses. In this regard, the Authority considered that 11.0% law and order margin for previous years was allowed to PESCO due to worsened situation in the aforementioned period of 3-years as noted above and due to improved law and order situation in the country including the areas under PESCO's service territory, such a high margin for losses on account of law and order was not justified. In view thereof, the Authority, for the purpose of consistency, decided to revise the law and order margin for PESCO and other DISCOs *(whom the Authority allowed margin for law and order in its earlier determinations for last 3 years)* and accordingly allowed 2.50% for the FY 2018-19 and 1.40% for the FY 2019-20.

75.4. For the purpose of instant MYT petition, the Authority has decided to maintain the already allowed target of 1.40% as margin for Law & Order, for the first year of MYT control period and to gradually reduce the same to 1.0% in the remaining period of 4-years of MYT control period for PESCO as follows:

2020-21	2021-22	2022-23	2023-24	2024-25
1.40%	1.30%	1.20%	1.10%	1.00%

75.5. Based on the discussion in the preceding paras, the Petitioner is hereby allowed the following level of T&D losses for the MYT period;

Year	Transmission Losses (%)	11kV Distribution Losses (%)	LT Losses (%)	Margin for Law & Order (%)	Total T&D Losses (%)
2020-21	3	12.93	4	1.4	**21.33**
2021-22	2.77	12.66	4	1.3	**20.73**
2022-23	2.57	12.39	4	1.2	**20.16**
2023-24	2.5	12.11	4	1.1	**19.71**
2024-25	2.44	11.82	4	1	**19.26**

75.6. Considering T&D losses being of critical importance, the Petitioner is directed to target high loss feeders to bring the overall losses down. A detailed plan be prepared and submitted to the Authority for monitoring the progress of the Petitioner in this respect. The Petitioner is also directed to take remedial measures for achievement of performance standards as laid down in NEPRA Performance Standards (Distribution) Rules, 2005, for which a detailed plan showing steps to be taken be prepared and submitted to the Authority. Further, PESCO is directed to prepare a plan regarding installation of Aerial Bundle Cable (ABC) in its all circles to bring LT line losses down, and submit the same to the Authority for monitoring the progress of the Petitioner.

76. **Whether PESCO fully utilized the investments allowed previously in FY 2018-19 and FY 2019-20? PESCO is required to submit detailed report showing status of each project.**

76.1. The Petitioner has submitted following details regarding investment utilization in the FY 2018-19 and the FY 2019-20.

Mln. Rs.

Description / Head	FY 2018-19		FY 2019-20	
	Determined	Actual	Determined	Actual
Own Resources				
DOP	-	2,099	-	673
ELR	-	768	-	1,033
STG (energy efficiency, capacitors)	-	1,286	-	1,219
Deposit Works	-	2,875	-	2,956
Total	**7,028**	**7,028**	**8,450**	**5,881**

76.2. Further, PESCO has submitted following details/benefits achieved through above investments:

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Year	2018-19	2019-20	2020-21 (Prov.)
Allowed Investment (Million Rs.)	7,028	8,450	-
Actual Investment (Million Rs.)	7,028	5,881	9,331
Savings in MW	28.29		20.68
Savings in GWh	136.37		99.64
MVA added	414		423.5
Energy savings (GWh) due to MVA added	770		788
Saving Rs. Million	1,636		1,196
Addl: Sale Savings (Rs. Million)	9,240		9,456
Total Savings	10,876		10,652
New Grids, Up-gradation, extension/augmentation Nos.	18		18
T/Lines added (KMs)	202		60.5
HT Feeders added (Nos.)	86		55
LT Works done (Nos.)	2,350		776

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76.3. The Authority has reviewed the submissions of the Petitioner and observed that the Petitioner has made investments amounting to Rs.7,028 million (against allowed investment of same amount) for the FY 2018-19 and Rs.5,881 million *(against allowed investment of Rs. 8,450 million)* for FY 2019-20. The above actual investments have also been verified from the audited accounts pertaining to FY 2018-19 and FY 2019-20 as provided by PESCO. Keeping in view the fact that the information submitted by the Petitioner is supported/verified by its audited accounts, the Authority has decided accept the same.

77. **Whether the claimed savings of 2203 GWh and 1270 GWh through loss reduction plans as highlighted in Best Case and Optimally Achievable Case respectively are justifiable?**

77.1. The petitioner has submitted that the savings claimed in the Distribution Integrated Investment Plan are based on the Study of Network. Further, after implementation of investment plans PESCO will be able to achieve not only energy savings at transmission and distribution voltage levels but also improvement in voltage profile and overloading situation. The details of energy savings as provided by petitioner is given below;

Year	Optimally Achievable Scenario (MkWh)					Total GWh
	Transmission	Distribution				
		H.T Rehab.	Chitral	L.T Rehab.	ABC Cables	
2020-21	53.96	60		14		128.0
2021-22	69.38	62.4		62.9		194.7
2022-23	57.33	64.8		119.1		241.2
2023-24	48.66	67.2		202.4		318.3
2024-25	24.09	69.6		294.24		387.9
	253.42	**324**		**692.64**		**1270.1**

Year	Best Scenario (MkWh)					Total GWh
	Transmission	Distribution				
		H.T Rehab.	Chitral	L.T Rehab.	ABC Cables	
2020-21	53.96	78		119.8		251.8
2021-22	69.38	85.2		187		341.6
2022-23	75.64	90		259.4		425.0
2023-24	87.78	88.8		365.2		541.8
2024-25	57.82	98.4		486.56		642.8
	344.58	**440.4**		**1417.96**		**2202.9**

77.2. The Authority has noted that PESCO claimed cumulative energy savings of 1270.10 GWh achieved through implementation of its ELR projects during next five years under Optimally Achievable Case whereas, these savings will reach out at 2202.90 GWh through implementation of its ELR projects during next five years under Best Case. In this regard, it is clarified that PESCO during the hearing, while presenting its justification on preparation of DIIP under Best Case, admitted that due to certain technical and financial issues, the Best Case Investment Plan will not be implemented. Therefore it can be concluded that the energy savings claimed against Best Case Investment Plan will not be achieved by PESCO.

77.3. As far as the claimed energy savings of 1270.10 GWh against Optimally Achievable Case are concerned, it is clarified that an investment of Rs. 12,138 million has been to PESCO against its ELR projects for the MYT control period of next 5-years, thus cumulative energy savings of 1270.10 GWH as claimed by PESCO are justified.

78. <u>Whether the indicated Capital Cost of Rs.128,881 million (including deposit works and others) for proposed projects for next five years under best case scenario is justified?</u>

78.1. The Petitioner has stated that the DIIP for 5 years starting from FY 2020-21 to FY 2024-25 has been prepared keeping in view certain targets. The petitioner further stated that the total cost worked out is Rs.128,881 million for the sBest Case to achieve such targets. The scope of STG, DOP (Expansion & Rehabilitation) and other measures to improve its commercial and operational efficiency as highlighted in Best Case of DIIP are as under:

A. <u>STG SCOPE & Cost (Grid Stations)</u>

S. #	Description	Total No.	Total Capacity (MVA)	2020-21	2021-22	2022-23	2023-24	2024-25
1	New							
a	132 KV	42	2416	5	8	16	7	6
	Million Rs.	13390		1167	2731	3956	3915	1621
2	**Conversion**							
a	66 to 132 KV	5	260	1	-	2	1	1
	Million Rs.	1217		260	-	422	270	265
b	33 to 132 KV	1	26	1	-	-	-	-
	Million Rs	132		132	-	-	-	-
3	Augmentation				-	-	-	-
a	132 KV	37	517	11	11	1	8	6
	Million Rs.	3732		1070	1132	90	840	600
b	66 KV	1	13	1	1	-	-	-
	Million Rs.	82		50	32	-	-	-
4	**Extension (Transformer)**							
a	132 KV	22	648	9	6	3	-	4
	Million Rs.	2217		876	606	255	-	480
5	**Rehabilitation**							
a	132 KV	2	-	-	2	-	-	-
	Million Rs	710	-	-	710	-	-	-
	Total No.	111	3880	28	28	22	16	17
	Million Rs.	21,480	-	3555	5211	4723	5025	2966

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B. STG SCOPE & Cost (Transmission Lines)

S. #	Description	Total Length (km)	2020-21	2021-22	2022-23	2023-24	2024-25
1	132 KV D/C	435	49	94	169	27	96
	Million Rs.	**7101.45**	**1876**	**2490.6**	**1498.8**	**389**	**847**
2	132 KV SDT	458	51	113	135	98	61
	Million Rs.	**4338**	**417**	**1078**	**1581**	**761**	**501**
	Re-conductoring						
3	132 kV additional circuit	89	-	-	59	30	-
	Million Rs.	**949**	**-**	**-**	**821**	**128**	**-**
4	132 KV D/C	52	-	16	36	-	-
	Million Rs.	**293**	**-**	**173**	**120**	**-**	**293**
5	132 KV SDT	225	-	24	152	-	49
	Million Rs.	**2961**	**-**	**295**	**2066**	**-**	**600**
	Total Cost	15642.45	2293	4036.6	6086.8	1278	2241

C. Distribution Expansion Scope & Cost (HT/LT proposals)

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S. #	Description	Unit	Quantities 2020-21	2021-22	2022-23	2023-24	2024-25	Total
Scope of Work for 11 kV and Below Expansion								
1	**Expansion of HT Lines**							
	Number of proposals	Nos.	30	33	35	32	37	167
	Length of new HT line	Km	450	495	525	480	555	2505
		Mln Rs	675	742	787	720	832	3755
	Reconductoring	Km	300	330	350	320	370	1670
		Mln Rs	291	320	339	310	359	1618
2	**Transformers**							
	a. 25 KVA	Nos	1772	2000	2200	2300	2500	10772
	b. 50 KVA	Nos	1043	1400	1600	2000	2440	8483
	c. 100 KVA	Nos	150	200	250	300	390	1290
	d. 200 KVA	Nos	30	50	60	80	109	329
	e. others KVA	Nos	-	-	-	-	-	-
	Sub Total	Nos	2995	3650	4110	4680	5439	20874
		Mln Rs	685.2	850	963.3	1114	1313.2	4925.7
3	**11 KV Capacitors**							
	a. Fixed 450 KVAR	Nos	30	33	35	32	37	167
	b. Fixed 900 KVAR	Nos	-	-	-	-	-	-
	c. Others	Nos	-	-	-	-	-	-
	Sub Total	Nos	30	33	35	32	37	167
		Mln Rs	5	5	5	5	6	26
4	**11 KV Panel**	Nos	30	33	35	32	37	167
		Mln Rs	39	43	46	42	48	218
5	**11kV 500 MCM Cable**	km	9	10	11	10	11	50
		Mln Rs	24	27	29	26	30	136
Scope of Work for LT Expansion								
1	**New LT Lines**							
	Number of proposals	Nos	2995	3650	4110	4680	5439	20874
	Length of new LT line (Total Wasp+ANT)	Km	1797	2190	2466	2808	3263	12524
		Mln Rs	1487.73	1813.09	2041.59	2324.73	2701.76	10368.91
2	**LT Capacitors**							
	a. Different KVARs	Nos					-	-
3	**Other Equipment's and MateriaL**							
	a. Single Phase Meters	Nos	300000	200000	120000	130000	132000	882000
	b. Three Phase Meters	Nos	121000	86000	54000	53000	52000	366000
	c. MDI	Nos	2337	1100	1200	1300	1500	7437
	Sub Total	Nos	423337	287100	175200	184300	185500	1255437
		Mln Rs	730.52	496.52	313.38	322.61	324.7	2187.735
Scope of Cost Deposit Work								
1	**Village Electrification**							
	New HT Lines							
	Length of new HT line	Km	366	439	488	536	609	2438
		Mln Rs	263.1	315.6	350.8	385.4	437.8	1752.8
2	**New LT Lines**							
	Length of new LT line	Km	1247	1496	1663	1829	2078	8314
		Mln Rs	1017.5	1220.6	1356.9	1492.3	1695.5	6782.8
3	**Transformers**							
	a. 25 KVA	Nos	406	487	542	596	677	2708
	b. 50 KVA	Nos	1240	1488	1653	1818	2067	8266
	c. 100 KVA	Nos	449	539	599	658	748	2993
	d. 200 KVA	Nos	43	51	57	63	71	285
	e. others KVA	Nos						
	Sub Total	Nos	2138	2565	2850	3135	3563	14251
		Mln Rs	575.5	690.4	767.1	843.9	959.1	3836
1	**Independent Feeder**							
	New HT Lines							
	Length of new HT line	Km	30	39	60	75	85	289
		Mln Rs	38.7	50.3	77.4	96.8	109.7	372.9
2	**New LT Lines**							
	Length of new LT line	Km						
3	**Transformers**							
	a. 25 KVA	Nos						
	b. 50 KVA	Nos						
	c. 100 KVA	Nos	32	40	32	265	257	626
	d. 200 KVA	Nos	11	13	11	88	86	209
	e. others KVA	Nos						
	Sub Total	Nos	43	53	43	353	343	835
		Mln Rs	16.8	20.6	16.8	137.7	133.5	325.5
4	**11 KV Panel**	Nos	10	12	23	26	27	98
		Mln Rs	13.1	15.7	30.1	34	35.3	128.2

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D. Distribution Rehabilitation Scope & Cost (HT/LT proposals)

	Scope of Work for 11 kV and Below Rehabilitation	unit	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**Rehabilitation of HT Lines**							
	Number of proposals	Nos.	35	38	40	42	45	200
	New Line	Km	525	570	600	630	675	3000
		Mln Rs	787	854	899	944	1012	4497
	Reconductoring	Km	350	380	400	420	450	2000
		Mln Rs	339	368	388	407	436	1938
	Re-routing	Km	-	-	-	-	-	-
2	**New Transformers**							
	a. 25 KVA	Nos	1772	2000	2200	2300	2500	10772
	b. 50 KVA	Nos	1043	1400	1600	2000	2440	8483
	c. 100 KVA	Nos	150	200	250	300	390	1290
	d. 200 KVA	Nos	30	50	60	80	109	329
	e. others KVA	Nos	-	-	-	-	-	-
	Sub Total	Nos	2995	3650	4110	4680	5439	20874
		Mln Rs	685.2	850	963.3	1114	1313.2	4925.7
3	**Installation of 11 kV Panels**	Nos	35	38	40	42	45	200
		Mln Rs	46	50	52	55	59	262
4	**11kV 500 MCM Cable**	km	11	11	12	13	14	60
		Mln Rs	29	31	33	34	37	163
Scope of Work for LT Rehabilitation								
1	**LT Lines Rehabilitation**							
	New LT Line	Km	599	730	822	936	1088	4175
		Mln Rs	532	648	730	831	966	3706
	Reconductoring of LT Line	Km	419	511	575	655	761	2922
		Mln Rs	136	166	187	213	248	951

2	**Other Equipment and Material**							
	a. Single Phase Meters	Nos	15000	46000	46211	47000	48000	202211
	b. Three Phase Meters	Nos	3000	5000	6000	6500	7000	27500
	Sub Total	Nos	18000	51000	52211	53500	55000	229711
		Mln Rs	25	65	68	71	73	303

78.2. The Authority has reviewed the above submitted DIIP under Best Case Scenario in detail. While analyzing the submissions including the justifications which were considered by PESCO for preparation of Investment Plan under Best Case, the Authority has noted that the investment plan under Best Case amounting to Rs.128,881 million has been prepared by PESCO keeping in view certain targets however, the Petitioner has admitted that it can arrange funding up to Rs. 56,568 million required to undertake the investment plan under Optimally Achievable Case and would not be able to arrange financing of Rs.128,881 million required for the implementation of investments requested under Best Case. It has further been stated that considering limited capabilities and procurement constraints, the implementation of Best Case is not possible.

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78.3. In view of the above statements by PESCO, whereby it has shown its inability to undertake proposed investments under Best Case Scenario due to certain Technical and Financial limitations and constraints, the Authority has decided not to accept the requested investments of Rs.128,881 million claimed under Best Case Scenario.

79. **Whether the indicated Capital Cost of Rs.56,568 Million (including deposit works and others) for proposed projects for next five years under optimally achievable case is justified? PESCO is required to submit year wise rationale in respect of improvement in HT/LT ratios and average length per 11 kV feeders.**

79.1. The Petitioner vide its letter dated: 03.06.2021 submitted a detailed Investment Plan (DIIP) which contained the scope of STG, DOP, ELR and other measures to improve commercial and operational efficiency of PESCO as highlighted in Optimally Achievable Case of DIIP as under:

A. STG SCOPE (Grid Stations):

S. #	Description	Total No.	Total Capacity (MVA)	2020-21	2021-22	2022-23	2023-24	2024-25
1	New							
a	132 KV	35	2022	5	6	10	9	5
2	Conversion							
a	66 to 132 KV	4	208	1		2	1	4
b	33 to 132 KV	-	-	-	-	-	-	-
3	Augmentation							
a	132 KV	24	335	11	10	1	2	-
b	66 KV	2	13	1	1	-	-	-
4	Extension (Transformer)							
a	132 KV	18	488	9	6	3	18	-
b	66 KV	0	-	-	-	-	-	-
5	Rehabilitation							
a	132 KV	1	-	-	1	-	-	-
b	66 KV	-	-	-	-	-	-	-
	Total	84	3066	27	24	16	12	5

B. STG SCOPE (Transmission Lines):

S. #	Description	Total Length (km)	2020-21	2021-22	2022-23	2023-24	2024-25
1	132 KV D/C	335	49	83	142	42	19
2	132 KV SDT	291	31	83	50	57	70
3	132 KV D/C Reconductoring	132	-	19	52	61	-
4	132 KV SDT Reconductoring	95	-	-	25	70	-

C. Distribution Expansion Scope (DOP):

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S. #	Description	Unit	Quantities					
			2020-21	2021-22	2022-23	2023-24	2024-25	Total
Scope of Work for 11 kV and Below Expansion								
1	**New HT Lines**							
	Number of proposals	Nos	5	10	12	12	13	52
	Length of new HT line	Km	75	149	179	179	194	776
	Reconductoring	km	50	100	120	120	130	520
2	**Transformers**							
	a. 25 KVA	Nos	40	40	45	45	50	220
	b. 50 KVA	Nos	60	65	65	65	70	325
	c. 100 KVA	Nos	100	100	105	110	110	525
	d. 200 KVA	Nos	130	130	135	140	142	677
	e. others KVA	Nos						
	Sub Total	Nos	330	335	350	360	372	1747
3	**11 KV Capacitors**							
	a. Fixed 450 KVAR	Nos	5	10	12	12	13	52
	b. Fixed 900 KVAR	Nos	-	-	-	-	-	-
	c. Others	Nos	-	-	-	-	-	-
	Sub Total	Nos	5	10	12	12	13	52
4	**11 KV Panel**	Nos	5	10	12	12	13	52
5	**11kV 500 MCM Cable**	Km	2	3	4	4	3.9	16
Scope of Work for LT Expansion								
1	**New LT Lines**							
	Number of proposals	Nos	330	335	350	360	372	1747
	Length of new LT line (Total Wasp+ANT	Km	198	201	210	216	223	1048
	LT Line Reconductoring	km	165	168	175	180	186	874
2	**LT Capacitors**							
	a. Different KVARs	Nos.	-	-	-	-	-	-
3	**Other Equipment and Material**	-	-	-	-	-	-	-
	a. Single Phase Meters	Nos.	100000	140000	150000	155000	160000	705000
	b. Three Phase Meters	Nos.	30000	550	600	650	700	32500
	c. MDI	Nos.	500	250	250	300	350	1650
	Sub Total	Nos.	130500	140800	150850	155950	161050	739150
Scope of Cost Deposit Work								
1	**New HT Lines**							
	Length of new HT line	Km	286	255	264	269	275	1349
2	**New LT Lines**							
	Length of new LT line	Km	320	295	305	320	345	1585
3	**Transformers**							
	a. 25 KVA	Nos	50	40	41	42	48	221
	b. 50 KVA	Nos	150	35	36	37	38	296
	c. 100 KVA	Nos	40	42	42	43	44	211
	d. 200 KVA	Nos	35	36	36	38	39	184
	e. others KVA	Nos	-	-	-	-	-	-
	Sub Total	Nos	275	153	155	160	169	912
Independent Feeder								
1	**New HT Lines**							
	Length of new HT line	Km	95	41	51	57	63	307
2	**New LT Lines**							
	Length of new LT line	Km	-	-	-	-	-	-
3	**Transformers**							
	a. 25 KVA	Nos	-	-	-	-	-	-
	b. 50 KVA	Nos	-	-	-	-	-	-
	c. 100 KVA	Nos	54	12	15	18	20	119
	d. 200 KVA	Nos	30	15	18	20	22	105
	e. others KVA	Nos	-	-	-	-	-	-
	Sub Total	Nos	84	27	33	38	42	224
4	**11 KV Panel**	Nos	20	10	11	14	16	71

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D. Distribution Rehabilitation Scope (ELR):

	Scope of Work for 11 kV and Below Rehabilitation	unit	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**Rehabilitation of HT Lines**							
	Number of proposals	Nos	26	42	42	44	45	199
	Bifurcation	Nos	26	42	42	44	45	199
	New 11 kV Line	Km	390	630	630	660	675	2985
	Reconductoring	Km	260	420	420	440	450	1990
2	**New Transformers**							
	a. 25 KVA	Nos	80	120	135	140	160	635
	b. 50 KVA	Nos	150	320	355	360	350	1535
	c. 100 KVA	Nos	100	240	275	280	290	1185
	d. 200 KVA	Nos	40	80	90	80	90	380
	e. others KVA	Nos	-	-	-	-	-	-
	Sub Total		370	760	855	860	890	3735
3	**Fixed 11 KV 450 KVAR Capacitors**	Nos	26	42	42	44	37	191
4	**Installation of 11 kV Panels**	Nos	26	42	42	44	45	199
5	**11kV 500 MCM Cable**	km	8	13	13	13	14	60
	Scope of Work for LT Rehabilitation							
1	**LT Lines Rehabilitation**							
	Rabbit (Conversion LT Feeders)	km	37	76	86	86	89	374
	New LT Line	Km	74	152	171	172	178	747
	Reconductoring of LT Line	Km	56	114	128	129	134	560
2	**Other Equipment and Material**							
	a. Single Phase Meters	Nos	8000	12000	13000	13500	14000	60500
	b. Three Phase Meters	Nos	400	600	650	650	650	2950
	Sub Total	Nos	8400	12600	13650	14150	14650	63450

E. Installation of ABC Cable:

S. #	Circle	Division	No. of Feeders	Length of ABC Cable (Km)
1	Peshawar	City Rural	2	100.968
		Charsadda	8	534.01
		Shabqadar	6	97.865
		Rural	9	239.099
2	Bannu	Bannu-1	12	266.632
		Lakki	7	329.532
		Tank	2	81.882
		Bannu-2	8	379.954
3	Khyber	Khyber	16	449.892
TOTAL			70	2479.834

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F. Status of Study Based Distribution System Planning Based on GIS Mapping and the Transition Plan:

79.2. The petitioner provided following plan to map the whole HT and LT network and subsequent conversion to planning based on GIS mapping using modern state of the art tools is given as under:

S. #	Description	Unit	Quantities					
			2020-21	2021-22	2022-23	2023-24	2024-25	Total
GIS Mapping								
1	HT Mapping/updation							
	Number of 11 kV Feeders	Nos.	200	200	200	200	200	1000
	Length of HT Lines mapped	Km	9000	6000	6200	6000	6300	33500
2	LT Mapping							
	Number of LT Lines	Nos.	200	200	180	165	180	925
	Length of LT Lines mapped	Km	3000	3100	3200	3200	3300	15800
3	Tools Required							
	Development of Enterprise GIS Solution	Nos.	2					2
	Plotters	Nos.	8					8
	Capacity Building of PESCO staff on GIS/SynerGEE Electric		25	25	25	25	25	125
4	Simulation Software Licenses	Nos.	3		3	3	3	12

G. **Other Functional Improvement Plans:** The petitioner submitted that the integrated cross-functional plan will cover the core business (transmission and distribution system expansion and rehabilitation) and also the support business (improving the commercial, financial, HR and other functional improvement) initiatives to meet the stated objectives. The details of support business improvement plans are given below:

a. Commercial Improvement Plans: This plan covers the commercial improvement activities including but not limited to metering (including AMRs), Hand Held Units based meter reading, improvement in billing systems, anti-theft initiatives, consumers database update, customers services improvement initiatives etc.

b. **Financial Management Improvement Plan:** PESCO is implementing ERP and the costs for ERP implementation are already covered. Further PESCO started work to improve the internal audit function and audit and accounting manuals. Under this plan PESCO envisages to conduct specialized studies like Assets tagging and valuation.

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c. **Human Resource Improvement Plan:** This plan covers the HR improvement activities, revamping / addition of training facilities, training of employees through external facilities, conducting some studies, improving the working environment etc.

d. **Communication Improvement Plan:** This plan covers the communications improvement activities including but not limited to improving the internal communication amongst employees and external communication with customers to improve image of the company etc.

e. Lineman Training, Tools and Equipment: This plan aims to eliminate fatal accidents by ensuring required safety level in PESCO.

79.3. The detailed breakup of costing for above projects as provided by the petitioner is given below:

A. STG (Grid Stations): (Million Rs.)

Sr #	Description	Total Cost	Total Capacity (MVA)	2020-21	2021-22	2022-23	2023-24	2024-25
1	**New**							
a	132 KV	10982	2022	1167	2425	4114	1964	1312
2	**Conversion**							
a	66 to 132 KV	952	208	260	-	422	270	-
b	33 to 132 KV	0	0	-	-	-	-	-
3	**Augmentation**							
A	132 KV	2418	335	1070	1018	90	240	-
B	66 KV	82	13	50	32	-	-	-
4	**Extension (Transformer)**							
A	132 KV	1823	488	965.98	602	255	-	-
B	66 KV	0	0	-	-	-	-	-
5	**Rehabilitation**							
A	132 KV	360	-	-	360	-	-	-
B	66 KV	-	-	-	-	-	-	-
	Sub Total	**16617**	**3066**	**3513**	**4437**	**4881**	**2474**	**1312**

B. STG (Transmission Lines): (Million Rs.)

S. #	Description	Total Cost	2020-21	2021-22	2022-23	2023-24	2024-25
1	T/Line D/C	6233	1877	2272	1196	714	174
2	T/Line SDT	2783	167	910	390	751.8	564
3	132 KV D/C	1426	-	218	441.1	767	-
4	132 KV SDT	1125	-	-	380.1	745	-
Sub Total		**11,568**	**2,044**	**3,400**	**2,408**	**2,978**	**738**

Total STG Cost Breakup: (Million Rs.)

S. #	Description	Total Cost	2020-21	2021-22	2022-23	2023-24	2024-25
1	Grid Stations	**16617**	3513	4437	4881	2474	1312
2	T/Lines	**11568**	2044	3400	2408	2978	738
Total STG		28,185	5557	7837	7289	5452	2050

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C. DOP (Expansion):

S. #	Description	Rs. In Millions					
		2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**Expansion of HT Line**						
	Number of proposals	5	10	12	12	13	52
	New HT line	112	224	269	269	291	1165
	Reconductoring	48	97	116	116	126	504
2	**Transformers**						
	a. 25 KVA	7.9	7.9	8.9	8.9	9.8	43.32
	b. 50 KVA	15.5	16.8	16.8	16.8	18.1	83.86
	c. 100 KVA	34	34	35.7	37.3	37.3	178.26
	d. 200 KVA	70.2	70.2	72.9	75.6	76.7	365.54
	e. others KVA	-	-	-	-	-	-
	Sub Total Transformers	127.5	128.8	134.2	138.6	141.9	671
3	**11 KV Capacitors**						
	a. Fixed 450 KVAR	1	2	2	2	2	8
	b. Fixed 900 KVAR	-	-	-	-	-	-
	c. Others	-	-	-	-	-	-
	Sub Total Capacitors	1	2	2	2	2	8
4	**11 KV Panel**	7	13	16	16	17	68
5	**11kV 500 MCM Cable**	4	8	10	10	11	42
Cost of Work for LT Expansion							
1	**New LT Lines**						
	No. of proposals	330	335	350	360	372	1747
	New LT line (Total Wasp+ANT)	163.924	166.407	173.858	178.826	184.787	867.8
	LT Line Reconductoring	53.673	54.486	56.925	58.552	60.504	284.14
2	**Other Equipment and Material**						
	a. Single Phase Meters	108	151.2	162	167.4	172.8	761.4
	b. Three Phase Meters	92.1	1.689	1.842	1.996	2.149	99.78
	c. MDI	7.5	3.75	3.75	4.5	5.25	24.75
	Sub Total Other Equipment	207.6	156.639	167.592	173.896	180.199	885.93
Sub- Total Expansion – A		725	850	945	962	1,014	4,496
12% Store Charges – B		87	102	113	115	122	540
8% Installation Charges - C		58	68	76	77	81	360
Contingency (3%) – D		26	31	34	35	37	162
Total CAPEX of Material		**896**	**1,051**	**1,168**	**1,189**	**1,254**	**5,557**
OPEX Material & Cost							
Vehicles (Lump sum)		0	60	30	30	30	120
Civil Works (Lump sum)		86	40	40	45	34	245
Tools and Plants (Lump sum)		1	1	1	1	1	5
Recording Meters/Personal Computers		1.21	2.73	0.99	0.86	0	5.79
Sub Total OPEX Material and Cost		88.21	103.73	71.99	76.86	65	375.79
Store Charges (12%) only on		0.26	0.45	0.24	0.22	0.12	1.3
Total OPEX Cost - F		88.47	104.18	72.23	77.08	65.12	377.09
Total DOP Expansion Cost (E+F)		**984.47**	**1155.18**	**1240.23**	**1266.08**	**1319.12**	**5934.09**

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D. ELR (Rehabilitation):

S. #	Description	Million Rs.					
		2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**Rehabilitation of HT Lines**						
	Number of proposals	26	42	42	44	45	199
	New line	585	944	944	989	1012	4475
	Reconductoring	252	407	407	426	436	1928
2	**Fixed 11 KV 450 KVAR**	4	7	7	7	7	31
3	**New Transformers**						
	a. 25 KVA	15.8	23.6	26.6	27.6	31.5	125
	b. 50 KVA	38.7	82.6	91.6	92.9	90.3	396.1
	c. 100 KVA	34	81.5	93.4	95.1	98.5	402.4
	d. 200 KVA	21.6	43.2	48.6	43.2	48.6	205.2
	e. others KVA			-	-	-	-
	Sub Total New Transformers	110	230.9	260.2	258.7	268.9	1128.6
3	**Installation of 11 kV Panels**	34	55	55	58	59	260
4	**11kV 500 MCM Cable**	21	34	34	36	37	162
Cost of Work for LT Rehabilitation							
1	**LT Lines Rehabilitation**						
	New LT Line	65.693	134.9	151.805	152.692	158.019	663.147
	Reconductoring of LT Line	15.839	32.53	36.601	36.815	38.099	159.889
	Rabbit (Conversion LT Feeders)	22.18	45.55	51.25	51.55	53.35	223.87
2	**Other Equipment's and Material**						
	a. Single Phase Meters	8.64	12.96	14.04	14.58	15.12	65.34
	b. Three Phase Meters	1.228	1.842	1.996	1.996	1.996	9.057
	Sub Total Others	9.868	14.8	16.036	16.576	17.116	74.397
	Cost of Material - A	**1,120**	**1,906**	**1,963**	**2,032**	**2,081**	**9,101**
	12% Store Charges	134	229	236	244	250	1092
	8% Installation Charges	90	152	157	163	166	728
	Total Cost including store & installation charges	**1343**	**2287**	**2355**	**2439**	**2497**	**10921**
	Contingency (3%)	40	69	71	73	75	328
	Total cost **including store, installation charges & contingency charges**	1384	2355	2426	2512	2572	11249
	Escalated Cost @ 7.9%	109	186	192	198	203	889
	Total Material Cost	**1493**	**2542**	**2618**	**2710**	**2775**	**12138**
OPEX Material & Cost							
	Vehicles (Lump sum)	120	120	123	126	129	618
	Tools and Plants (Lump sum)	10	1	4	3	1	18
	Recording Meters/Personal Computers	0.954	1.757	1.518	1.259	1.259	5.487
	Total OPEX Material and Cost	130.95	122.76	128.52	130.26	131.26	641.49
	Store Charges (12%) Excluding Vehicles	1.314	0.271	0.662	0.451	0.271	2.698
	Total OPEX Cost	132	123	129	130	132	646
	Total OPEX Cost including escalated Cost @ 7.9%	**143**	**132**	**139**	**140**	**142**	**697**
	Total Rehabilitation Project Cost	**1,636**	**2,674**	**2,757**	**2,851**	**2,917**	**12,835**

E. Electrification in Chitral and ABC Cables: (Million Rs.)

Project	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Electrification work at different valleys of district Chitral	150	717	311	216	165	**1,559**
ABC Cable for Peshawar, Khyber & Bannu Circle	350	786	916	872	0	**2,924**

F. GIS Mapping and SynerGEE:

S. #	Description	Million Rs.					
		2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	GIS Mapping and SynerGEE	114.35	8	22	22	23	189.35

G. Commercial Improvement Plan:

Commercial Improvement Plan		2020-21	2021-22	2022-23	2023-24	2024-25	Total
A	AMR Metering	72	166	100	101	110	549
B	SMS Data collection	1.2					1.2
C	Consumer Census	0.232	0.255	0.28	0.309	0.339	1.415
D	Data Center	27	2.5	3.65	5.4	1.79	40.34
E	Email Hosting	0.84	0.924	1.016	1.118	1.229	5.127
F	Billing SMS	4	5.28	5.808	5.8	5.8	26.688
G	HHUs for meter reading	45	30	20	20	20	135
F	Licenses and support	142	95	96	100	96	529
Total		292	300	227	234	235	1288

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H. Financial Improvement Plan: (Million Rs.)

Financial Improvement Plan		2020-21	2021-22	2022-23	2023-24	2024-25	Total
A	ERP system implementation	110	54	40	42	45	**291**

I. HR Improvement Plan: (Million Rs.)

HR Improvement Plan		2020-21	2021-22	2022-23	2023-24	2024-25	Total
A	Revamping of Training Centers	0	15	14	12	12	53
B	Training of employees through external training institutions	0	20	16	14	14	64
C	Human Resource Information System Implementation	0	5	4	1	1	11
D	Conducting the yard stick study	0	1	2	1	1	5
E	IT infrastructure to support new initiatives	0	4	3	1	1	9
F	Improving the working environment	0	2	1	1	1	5
G	Others etc…	0					
Total		0	47	40	30	30	147

J. Communication Improvement Plan: (Million Rs.)

Communications Plan		2020-21	2021-22	2022-23	2023-24	2024-25	Total
A	Improving Internal Communications with Employees	0	3	3	3	3	12
B	Improving External Communications with Customers	0	1	1	1	1	4
C	Communication material	0	1	1	1	1	4
D	Others etc...	0					0
Total		0	5	5	5	5	20

79.4. The head wise break up of investment claimed by PESCO under optimally achievable scenario is given below:

(Million Rs.)

Head	2020-21	2021-22	2022-23	2023-24	2024-25	Total
STG	5557	7837	7289	5452	2050	**28185**
DOP	984.47	1155.18	1240.23	1266.08	1319.12	**5934**
ELR	1,636	2,674	2,757	2,851	2,917	**12,835**
Electrification work at Chitral	150	717	311	216	165	**1559**
ABC Project for Peshawar, Khyber & Bannu Circle	350	786	916	872	0	**2924**
Deposit Works	1,020	487	507	560	622	**3,196**
GIS Mapping	114.35	8	22	22	23	**189.35**
Commercial Improvement	292	300	227	234	235	**1288**
Financial Improvement	110	54	40	42	45	**291**
HR Improvement	0	47	40	30	30	**147**
Communication Improvement	0	5	5	5	5	**20**
Grand Total	**10,213**	**14,041**	**13,354**	**11,550**	**7,411**	**56,568**

79.5. PESCO's financing arrangement for above referred investment is given below:

Description	Total Cost	2020-21	2021-22	2022-23	2023-24	2024-25
Loan / PSDP	19,118	2,057	6,340	6,016	4,540	165
Own Resources	26,642	5,936	5,673	5,244	4,834	4,955
Consumer Contribution	10,809	2,220	2,028	2,094	2,176	2,291
Total	**56,568**	**10,213**	**14,041**	**13,354**	**11,550**	**7,411**

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79.6. In order to arrive an informed decision on the investments claimed by PESCO for its five years tariff control period, the Authority desired the Petitioner to present its investment plan before the Authority. Accordingly, PESCO team presented its investment plan on 21-2-2022. The Authority during the course of presentation directed PESCO to revise its investment plan (if needed) keeping in view the prudent utility practices for reduction of T&D losses, improvement in recovery ratio, performance standards, quality of service to end consumers, safety of employees and public and strategic agreement signed between the Ministry of Energy (Power Division) and PESCO.

79.7. Accordingly, PESCO submitted its revised DIIP vide letter dated 1-3-2022. In the revised DIIP, PESCO included an additional cost of 11,751 Million Rupees for World Bank Funded Projects and 9,500 Million Rupees for projects under Special PSDP. Thus, the revised total cost under optimally achievable case as claimed by PESCO is Rs.77,819 million. The head wise break up of investment claimed by PESCO under optimally achievable scenario is given below:

(Million Rs.)

Head	2020-21	2021-22	2022-23	2023-24	2024-25	Total
STG	5557	7837	7289	5452	2050	**28185**
DOP	984.47	1155.18	1240.23	1266.08	1319.12	**5934**
ELR	1,636	2,674	2,757	2,851	2,917	**12,835**
Electrification work at Chitral	150	717	311	216	165	**1559**
ABC Project for Peshawar, Khyber & Bannu Circle	350	786	916	872	0	**2924**
Deposit Works	1,020	487	507	560	622	**3,196**
GIS Mapping	114.35	8	22	22	23	**189.35**
Commercial Improvement	292	300	227	234	235	**1288**
Financial Improvement	110	54	40	42	45	**291**
HR Improvement	0	47	40	30	30	**147**
Communication Improvement	0	5	5	5	5	**20**
Sub Total	**10,213**	**14,041**	**13,354**	**11,550**	**7,411**	**56,568**
World Bank Project	0	2,425	5,979	3,347	0	**11,751**
Distribution Projects under Special PSDP	0	0	2,850	3,800	2,850	**9,500**
Grand Total	**10,213**	**16,466**	**22,183**	**18,697**	**10,261**	**77,819**

79.8. The annual break-up and amount to be spent on each project identified under World Bank and Special PSDP heads is provided as follows:

(Million Rs.)

Head/ Description	2020-21	2021-22	2022-23	2023-24	2024-25	Total
World Bank Project						

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11 kV Capacitors, 132 kV Bus Bars, Extension/Augmentation of PTF & Reconductoring of 132 kV T/Lines	-	836.81	2092.03	1255.22	-	4184.06
IT Infrastructure, GIS Mapping, AMI Meters & ABC Installation	-	991.42	2478.55	1487.13	-	4957.10
Technical Assistance (Equipment for M&T, T/Fs workshops, T&P, PPE, IT, Vehicles, consultancy)	-	596.86	1,408.05	604.83	-	2,609.72
Total World Bank Project	-	2,425.09	5,978.62	3,347.17	-	11,750.88

Distribution Projects under Special PSDP						
Combing of Feeders & Replacement of bare LT Conductor by ABC Cable	-	-	1531.618	2882.523	2071.770	6485.911
Rehabilitation of HV Distribution System	-	-	240	450	510	1200
Installation of Asset Performance Management System (APMS) on 2508 No Distribution Transformers	-	-	446.378	477.351	267.243	1190.97
Up gradation of IT Infrastructure	-	-	528	-	-	528
Procurement of Operational Vehicles	-	-	105	-	-	105

79.9. The detailed scope of World Bank Project and Distribution Projects under Special PSDP are given below:

(Million Rs.)

Name of Project	Type of Project	Detail	Cost (million Rs)
Scope of World Bank Projects			
Installation of 11 kV Capacitor Banks	Reactive Power Compensation	27x12 MVAR shunt capacitors	758.211
Up gradation of 132 kV bus bars	Bus Bar Up gradation	20 No. 132 kV Grid Stations	210.258
Extension of Power T/Fs	Installation of Additional Power T/Fs	Installation of Power T/Fs at existing 132 kV Grid Stations	564.93
Augmentation of Power T/Fs	Replacement of existing 26 MVA T/Fs	Installation of 14x40 MVA Power T/Fs for	1518.02

		replacement of 26 MVA T/Fs	
Reconductoring with Greely	Replacement of lower capacity conductor	4 No. of transmission lines (49 km)	642.241
Billing & IT infrastructure	Up gradation of existing system	Billing & IT infrastructure improvement	448
Transformer Monitoring System	Installation of TMS	60 No's of 11 kV Feeders in Peshawar & Khyber circles selected for installation of ABC	428.15
Up gradation of ESCO GIS infrastructure	GIS Mapping	Up gradation to Arc-GIS Enterprise	599
AMI Meters	Installation of AMI meters	65,000 meters (5-20 kW) consumers	1040
Technical Assistance	Improvement and facilitation of the System, Consultancy Services	Equipment for M&T, T/Fs Workshop, T&P, PPE, IT, vehicles, STG spares, Project Implementation support, Training and capacity building.	1951.54
Training & Capacity building	-	-	72
Project Implementation Support	-	-	320
IDC	-	-	534.13
Price Contingency	-	-	302.34
Physical Contingency	-	-	302.34
PESCO Support (Project Overhead)	-	-	534.13
Total		-	11,750.88

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Scope of Distribution Projects under Special PSDP			
Combing of Feeders and Replacement of bare LT conductor by ABC cable	-	104 feeders having length of 3343.314 km	6485.911
Rehabilitation of HV distribution System	-	40 feeders	1200
Installation of Asset Performance Management System (APMS) on Distribution Transformers	-	3057 No. 100 KVA Dist. TF 1715 No. of 200 kVA Dist. TF	1190.97
Up gradation of IT infrastructure	-	Data Center up gradation; LAN/WAN infrastructure up-gradation; Level 1 expansion and deployment.	528
Procurement of operational Vehicles	-	15 double cabin pickups	105

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79.10. PESCO also claimed the following energy savings as a result of implementation of its aforementioned revised investment plan:

Year	*Optimally Achievable (MkWh)*		*World Bank Project*	*Special PSDP*
	Transmission	*Distribution*		
2020-21	*53.96*	*74*	*153.94*	-
2021-22	*69.38*	*125.3*		-
2022-23	*57.33*	*183.9*		*62.73*
2023-24	*48.66*	*269.6*		*113.46*
2024-25	*24.09*	*363.84*		*79.94*
Total	***253.42***	***1,016.64***	***153.94***	***256.137***

79.11. In addition to the above energy savings, the petitioner claimed that through the investment it will be able to make additional sales as a result of MVA additions in the system as well. The quantum of additional sales in optimally achievable case is 5,707.37

GWh. Furthermore, the other benefits that will be achieved through investment are improvement in voltage profile and improvement in the loading position of the network.

79.12. The Authority observed that as per requirement under Para 23 of NEPRA's Consumer-end Tariff Methodology Guidelines, 2015, PESCO was required to provide its investment plans for next 5-years under the MTY regime, to meet the the performance targets determined by the Authority.

79.13. Pursuant to above requirements, PESCO has submitted its investment plans.

79.14. However, as discussed in the earlier paras, PESCO, in compliance with the directions of the Authority revised its DIIP on the basis of certain improvements and the strategic agreements between MOE (PD) and PESCO, submitted its revised DIIP detailed as below:

Rs. in Mln

Head	2020-21	2021-22	2022-23	2023-24	2024-25	Total
STG	5557	7837	7289	5452	2050	**28185**
DOP	984.47	1155.18	1240.23	1266.08	1319.12	**5934**
ELR	1,636	2,674	2,757	2,851	2,917	**12,835**
Electrification work at Chitral	150	717	311	216	165	**1559**
ABC Project for Peshawar, Khyber & Bannu Circle	350	786	916	872	0	**2924**
Deposit Works	1,020	487	507	560	622	**3,196**
GIS Mapping	114.35	8	22	22	23	**189.35**
Commercial Improvement	292	300	227	234	235	**1288**
Financial Improvement	110	54	40	42	45	**291**
HR Improvement	0	47	40	30	30	**147**
Communication Improvement	0	5	5	5	5	**20**
Sub Total	**10,213**	**14,041**	**13,354**	**11,550**	**7,411**	**56,568**
World Bank Project	0	2,425	5,979	3,347	0	**11,751**
Distribution Projects under Special PSDP	0	0	2,850	3,800	2,850	**9,500**
Grand Total	**10,213**	**16,466**	**22,183**	**18,697**	**10,261**	**77,819**

79.15. As discussed in the preceding paragraph, the investment plans prepared by PESCO would be reflective of its current base line conditions with respect to its existing network conditions and constraints in the existing T&D networks. For the purpose, following base line conditions and network constraints have been considered as starting point for future proposed investments which will be improved accordingly after implementation of such planned investments:

Existing System of PESCO (As on 30-June-2021):

Description	Unit	Quantity
a. Grid Stations		
132 kV Grid Stations	No.	83
66 kV Grid Stations	No.	11
33 kV Grid Stations	No.	2
132 kV Consumer Owned Grid Stations	No.	12
Power Transformers	No.	252
Capacity of Power Transformers	MVA	6925
b. Transmission Lines (132 kV & 66 kV)		
Total Length of 132kV Transmission Lines	KM	2967
Total Length of 66kV Transmission Lines	KM	494
Total Length of 33kV Transmission Lines	KM	75
c. Distribution System		
11 kV Feeders	No.	1138
Total Length of 11 kV Lines	KM	37177
Total Length of LT Lines	KM	45371
Distribution Transformers	No.	79437
Capacity of Distribution Transformers	KVA	6264345
Existing HT / LT Ratio	Ratio	01:01.2
Average Length of 11kV Feeder	KM	32.67

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Constraints in Existing System of PESCO:

Description	Unit	Quantity
Overloaded Power Transformers	No.	95
Overloaded 11 kV Feeders	No.	435
Overloaded Distribution Transformers	No.	2441

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79.16. In order to assess the above investment requirements of the Petitioner, a review of the historical pattern of the actual expenditure made by the Petitioner has been conducted to ensure investment utilization capability of PESCO. The following table shows actual expenditure made from FY 2015-16 to FY 2019-20 by the petitioner:

Mln. Rs.

Description	2015-16	2016-17	2017-18	2018-19	2019-20	Total
DOP	2,500	3,397	2,931	2,099	673	**11,600**
ELR	1,200	2,264	964	768	1,033	**6,229**
STG	1,700	1,435	1,459	1,286	1,219	**7,099**
Others	2,222	1,270	5,992	2,875	2,800	**15,159**
Total	**7,622**	**8,366**	**11,347**	**7,028**	**5,725**	**40,088**

79.17. Further review of the investments requested by the Petitioner, allowed by NEPRA Vis a Vis actual utilization by the petitioner revealed the following:

Mln. Rs

Description	2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
Requested	8,969	8,359	10,050	11,007	8,450	**54,797**
Allowed	7,622	8,366	9,610	7,029	8,450	**49,039**
Actual	7,622	8,366	11,347	7,029	5,725	**45,138**
Excess/(Less)	-	-	1,737	-	-2,725	**-3,901**
%age	100	100	118.07	100	67.75	**92.05**

79.18. From above, it is observed that during last 5-years, PESCO has utilized major portion (more than 92%) of the allowed investment and has spent the maximum of Rs. 11,347 million in FY 2017-18 over the last five years period.

79.19. Further analysis of the requested investment plan proposed under Optimally Achievable Case revealed that the Petitioner has claimed an amount of Rs.1,074 million on account of operational expenditure (OPEX) and included this amount in its DIIP Investment Plan despite the fact that the DIIP investment plan is always reflective of the capital expenditure (CAPEX) and such OPEX should NOT be part of DIIP investment plans. Therefore, the amount of Rs.1,074 million on account of OPEX has been excluded from DIIP of PESCO.

79.20. Based on the aforementioned observations, analysis, assessment, discussion and keeping in view the historical capability of PESCO to utilize the allocated budget against investment requirements, the Authority expects PESCO to make all necessary efforts to carry out its proposed investment plans under Optimally Achievable Case, so that MYT regime proves to be a success. Accordingly following investment is allowed to PESCO for MYT control period of 5-years from FY 2020-21 to FY 2024-25:

Rs. in Mln

Description	Requested under Optimal Case	Allowed Investments
STG CAPEX	28,185	28,185
DOP CAPEX	5,557	5,557
DOP OPEX	377	-
ELR CAPEX	12,138	12,138
ELR OPEX	697	-
Village Electrification	1,559	1,559
ABC Installation	2,924	2,924
Deposit Works	3,196	3,196
GIS Mapping	189	189
Commercial Improvements CAPEX	1,288	1,288
Financial Improvement CAPEX	291	291
HR Improvements CAPEX	147	147
Communication Improvements CAPEX	20	20
World Bank Project	11,751	11,751
Distribution Projects under Special PSDP	9,500	9,500
TOTAL	**77,819**	**76,746**

<u>Target Additions and Improvements Expected after Implementation of Investments:</u>

79.21. Following additions in T&D networks of PESCO are expected to be included through planned investment plans under Optimally Achievable Case:

Total MVA Addition at 132 kV Grids:	2022 MVA
MVA Addition through Conversion from 66kV to 132kV:	208 MVA
MVA Addition through Augmentation:	348 MVA
MVA Addition through Extension of Transformer Bays:	488 MVA
New Transmission Lines at 132kV:	626 kMs
New HT (11 kV) Lines:	3761 kMs
New LT (415/230 V) Overhead Lines:	1795 kMs
New LT (415/230 V) Aerial Bundle Cables:	2480 kMs
New Distribution Transformers Addition:	5482 Nos.

79.22. Based on the above discussion, a year-wise detail of the allowed investments under Optimally Achievable Case is tabulated hereunder:

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Rs. in Mln

	Description	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	STG CAPEX	5,557	7,837	7,289	5,452	2,050	**28,185**
2	DOP CAPEX	896	1,051	1,168	1,189	1,254	**5,558**
3	ELR CAPEX	1,493	2,542	2,618	2,710	2,775	**12,138**
4	Village Electrification	150	717	311	216	165	**1,559**
5	ABC Installation	350	786	916	872	-	**2,924**
6	Deposit Works	1,020	487	507	560	622	**3,196**
7	GIS Mapping	114	8	22	22	23	**189**
8	Commercial Improvements CAPEX	292	300	227	234	235	**1,288**
9	Financial Improvement CAPEX	110	54	40	42	45	**291**
10	HR Improvements CAPEX	-	47	40	30	30	**147**
11	Communication Improvements CAPEX	-	5	5	5	5	**20**
12	World Bank Project	-	2,425	5,979	3,347	-	**11,751**
13	Distribution Projects under Special PSDP	-	-	2,850	3,800	2,850	**9,500**
	TOTAL	**9,982**	**16,230**	**21,972**	**18,479**	**10,054**	**76,746**

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79.23. PESCO is required to submit its report containing achievements made viz-a-viz yearly targets along with the Annual Performance Report as per PSDR 2005. PESCO is further directed to prioritize its investment claimed under STG, DOP and ELR etc. i.e. removal of system constraints for transferring power from NTDC system must be the first priority, followed by reduction in T&D losses and improvement in metering systems through ELR and overloaded grids and 11kV feeders.

79.24. STG and HT connectivity proposals should be reflective of the new grid stations as planned and approved under TSEP be given in the tariff determination.

79.25. DISCO shall take all the possible preventive measures to ensure no fatal accidents occur in future and improve its HSEQ performance.

79.26. DISCO shall take all possible measures to facilitate consumers in terms of complaint handling, connection provision as per CSM and establish one window solutions.

79.27. DISCO shall also adopt CSR practices to have a positive influence in the community and improve its image.

79.28. DISCO shall ensure that amount allowed under each head of investment shall not be used under any other head. The re-appropriation of Authority's allowed investment under different heads by DISCO shall not be acknowledged by the Authority and shall be adjusted accordingly.

79.29. In case of any deviation under each head of the investment for more than 5% in the instant approved investment plans of DISCOs due to any regulatory decisions/interventions/approved plans, DISCOs shall be required to submit additional investment requirements for prior approval of the Authority

79.30. MIRAD shall ensure effective reporting and monitoring of the allowed investment on monthly, quarterly and annual basis. The main components would include STG, DOP, ELR and Commercial Improvement.

80. <u>Whether PESCO has provided at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005? Provide detail of pending connections till 30 June 2021.</u>

80.1. The Authority in the previous tariff determination directed the Petitioner to provide at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005. The petitioner was further directed to provide detail of pending connections till 30 June 2021.

80.2. The Petitioner during the hearing submitted that PESCO has given about 97.5% connections during FY 2020-21. The Authority has considered the submissions of PESCO and is of the opinion that the submission of PESCO needs to be verified. PESCO is further directed to clear all pending connections and submit a detailed report to NEPRA on monthly basis.

81. **Whether project-wise detailed report for the investment carried out along with their cost-benefit analysis and technical/financial savings achieved by June 30, 2021.**

81.1. The Authority in the previous tariff determination directed the Petitioner to submit the project-wise detailed report for the investment carried out along with their cost-benefit analysis and technical/financial savings achieved by June 30, 2021. The Petitioner during the hearing submitted the following information:

Year	2018-19	2019-20	2020-21
Allowed Investment (Rs. Mln)	7028	8450	-
Actual Investment (Rs. Mln)	7028	5881	9331
Saving MW	28.29		20.68
Saving MKWh	136.37		99.64
MVA Added	414		423.5
MKWh due to MVA added	770		788
Saving (Rs. Mln)	1636		1196

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81.2. The Authority has considered the submissions of PESCO and observed that the same are not in line with the issue framed. PESCO was directed to provide project-wise detailed report for the investment carried out along with their cost-benefit analysis and technical/financial savings achieved, which has not been submitted. PESCO should also have provided the impacts on system improvements in terms of reliability & quality of power supply, customer satisfaction, and safety of public and its properties. In view thereof, the Petitioner is again directed to submit the detailed report in this regard for consideration of the Authority for the FY 2018-19, FY 2019-20 and FY 2020-21.

82. **What corrective measures have been taken to tackle the future demand and removal of constraints?**

82.1. The Authority in the previous tariff determination directed the Petitioner to provide the details of the corrective measures to tackle the future demand and removal of constraints. The Petitioner during the hearing submitted the following information:

- NTDC / PESCO 132 kV System Constraints as on 30.06.2021:
  Completed - 34 Nos.
  Remaining - 07 Nos.

- NPCC 132 kV System Constraints as on 30.06.2021:

Completed - 10 Nos.
Remaining - 06 Nos.

82.2. The Authority has considered the submissions of PESCO and noted that the response of the Petitioner is not in accordance with the issue framed. PESCO has only submitted the number of system constraints which have been completed and which are remaining, however, no detail regarding measures taken and/or to be taken by the Petitioner to remove the remaining system constraints. In view thereof, the Petitioner is again directed to submit the detailed report in this regard for consideration of the Authority.

83. **As per the available record, PESCO is unable to draw its allocated power quota. PESCO is required to submit the reasons for less drawl by identifying the grey areas in its transmission and distribution system.**

83.1. The Authority in the previous tariff determination directed the Petitioner to provide detailed reasoning for less drawl of power against its allocated quota. The Petitioner during the hearing provided data pertaining to demand, supply, quota allocated and drawl of power etc. for the month of July 2021 only. As per the figures provided by the Petitioner, it shows that averagely 700-1000MW power was less drawn by PESCO in the month of July 2021. The Authority noted that the Petitioner was required to submit the reasons for less drawl by identifying the grey areas in its transmission and distribution system, however, no such details/ reasoning have been submitted. In view thereof, the Petitioner is directed to submit the detailed report in this regard for consideration of the Authority.

Progress about the actions taken to reduce the losses down to the minimum level.

83.2. The Authority in the previous tariff determination directed the Petitioner to provide the progress about the actions taken to reduce the losses down to the minimum level. The Petitioner during the hearing submitted the following details:

Administrative Measures

a) Reinstallation of meters at readable height and on proper frame.

b) Surveillance and checking of metering equipment on emergent & periodical basis.

c) Awareness of public through media campaign, Jirga system and religious scholars.

d) FIR against the energy stealers under criminal law amended in January 2016.

e) Chief Minister's Task Force has been constituted/re-activated for control of Electricity theft and eradication of Kunda culture through meterization.

Technical Measures

a) Replacement of Bare LT lines with AB (Aerial Bundled) Cable in massive theft areas.

b) Switching over of manual meter reading to more develop meter reading i.e., Mobile Meter Reading (MMR), Automated Meter Reading (AMR) in respect of consumers having load 10 Kw and above.

c) Replacement of sluggish, defective and out of design meters.

d) Construction of additional Grid Stations.

e) Rehabilitation of Grid Station and enhancement of Capacity of transmission lines.

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f) Bifurcation & Rehabilitation of 11 KV Distribution System and Capacitor installation.

g) Construction of 11 KV lines to minimize LT (400 Volts) System.

h) Area planning with addition of new feeder.

i) Installation of HT shunt capacitors.

j) Load balancing of distribution transformers.

k) Re-location of distribution transformers.

l) Shifting of transformers to load centers.

m) Re-conducting of LT line.

n) Augmentation of existing transformers and addition of new transformers.

83.3. The Authority has considered the submissions of PESCO and noted that although PESCO has submitted a number of administrative and technical measures to bring the losses down to minimum level, however, PESCO has failed to reduce its losses, rather the same have increased over the year as given hereunder:

2017-18	38.1%
2018-19	37.1%
2019-20	38.9%
2020-21	38.8%

83.4. This raises serious question mark on utilization of investment and O&M funds by PESCO, thus, requiring that a comprehensive technical audit of PESCO for failure to reduce the losses to minimum level needs to be carried out.

84. <u>Whether any analysis about the soft and hard areas relative to the claim was done?</u>

84.1. The Authority in the previous tariff determination directed the Petitioner to submit the details of whether any analysis about the soft and hard areas relative to the claim was done?

84.2. The Petitioner during the hearing submitted the following details:

Area	AT&C Losses	Recovery
Soft Area	17.10%	100%
Semi Hard Area	38.50%	98.30%
Hard Area	71.90%	70.00%

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84.3. The Authority has considered the submissions of PESCO and observed that PESCO has categorized its areas in three forms on the basis of AT&C losses & recovery. However, PESCO has not given rationale that on what basis, these areas are segmented as soft, semi hard and hard. PESCO is therefore again directed to explain whether it is based on law & order situation or geography or theft or any other factor and submit the detailed justification in this regard. PESCO is also directed to submit the measures that can be taken to convert hard areas into soft.

85. **<u>What are the remedial measures taken for the achievement of performance standards (targets of SAIFI & SAIDI given by the Authority during FY 2019-20) as laid down in Performance Standards (Distribution) Rules 2005?</u>**

85.1. The Authority in the previous tariff determination directed the Petitioner to provide the remedial measures taken for the achievement of performance standards (targets of SAIFI & SAIDI given by the Authority during FY 2019-20) as laid down in Performance Standards (Distribution) Rules 2005.

85.2. The Petitioner during the hearing submitted the following details:

NEPRA Target for SAIFI & SAIDI	
SAIFI	SAIDI
178.53	13,590.83
PESCO's Achieved Target of SAIFI & SAIDI	
SAIFI	SAIDI
175.1	13,129.2

85.3. The Authority observed that although as per the Petitioner's submission it has achieved NEPRA's targets in terms of SAIFI and SAIDI. However, it has not submitted the detail of measures taken to achieve the targets. Moreover, PESCO is still far away from the limits of SAIFI and SAIDI as prescribed in Performance Standards (Distribution) Rules 2005, therefore, PESCO is directed to submit the detailed remedial measures in this regard for consideration of the Authority.

86. **<u>Provide loading position of distribution network and submit a report regarding the plans/investments executed to improve the system constraints.</u>**

86.1. The Authority in the previous tariff determination directed the Petitioner to provide loading position of its distribution network and submit a report regarding the plans/investments executed to improve the system constraints. The Petitioner however did not submit any information in this regard. The Authority has taken a serious notice of non-submission of the details by the Petitioner's and directs the Petitioner to submit a detailed report in this regard for consideration of the Authority.

87. <u>Provide details of preventive measures taken during FY 2020-21 to cater to the safety incidents?</u>

87.1. The Authority in the previous tariff determination directed the Petitioner to provide the details of preventive measures taken during FY 2020-21 to cater to the safety incidents. The Petitioner during the hearing submitted the following details:

- **Surprise visits:**

  Total 50 Nos. Surprise visits throughout PESCO have been exercised during 2020-21;

  Rain Emergency SOP:

  The Rain Emergency SOP has been developed and circulated among all concerned for implementation to control Fatal and Non-Fatal accidents of PESCO employees and Public vide this office letter No. 9288-99 dated 02.07.2021.

- Print media and Electronic media advertisement.

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Advertisements have been published in print as well as in electronic media for public awareness regarding safety in Rainy Seasons / Monsoon.

- Bucket Cranes.

10 Nos. Bucket Cranes for operation circles are purchased during 2020-21which are in delivery stage.

- PESCO Safety Policy.

To improve the safety culture and to minimize the fatal and non-fatal accidents ratio up to zero, PESCO developing safety policy which will be complete shortly.

- Safety Hazards

Total 830 Nos. Public Safety hazardous locations have been removed during 2020-21 at PESCO level.

- Mobile Messages

Mobile messages to all line staff and officers (7061 Nos.) on their mobile phone regarding safety awareness.

- Quality T&P/PPE.

Quality T&P/ PPE purchased during 2020-21 and provided to field staff.

87.2. The Authority has considered the submissions of PESCO and noted that PESCO has tried to portray that it has taken a lot of measures to avoid/reduce the fatal accidents and create safety culture, however, the number of fatal accidents for both employees and public occurred in PESCO during last four years shows PESCO's complete failure in this regard.

2017-18	10
2018-19	16
2019-20	31
2020-21	23

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87.3. The Authority therefore directs the Petitioner to take all the possible preventive measures to ensure no fatal accidents occur in future.

88. <u>Whether TOU meters installed to all the eligible connections? Submit details in this regard?</u>

88.1. The Authority in the previous tariff determination directed the Petitioner to provide the details that whether TOU meters installed to all the eligible connections.

88.2. The Petitioner hasn't submitted any information in this regard. The Authority took displeasure on the non-submission of the details and strictly directed PESCO to submit the required details in this regard for consideration of the Authority.

89. <u>Progress regarding the installation of AMI meters at the consumer end.</u>

89.1. The Authority in the previous tariff determination directed the Petitioner to provide the progress regarding the installation of AMI meters at the consumer end.

89.2. The Petitioner hasn't submitted any information in this regard. The Authority took displeasure on the non-submission of the details and strictly directed PESCO to submit the details regarding the installation of AMI meters at the consumer end for consideration of the Authority.

90. Progress of installation of ABC cable to control theft of electricity, which is the major source of the increase in transmission and distribution losses?

90.1. The Authority in the previous tariff determination directed the Petitioner to provide progress of installation of ABC cable to control theft of electricity and which is the major source of the increase in transmission and distribution losses?

90.2. The Petitioner hasn't submitted any information in this regard. The Authority took displeasure on the non-submission of the details and strictly directs PESCO to submit the required details in this regard consideration of the Authority.

91. Upfront Indexation/adjustment for the FY 2021-22 and FY 2022-23

91.1. The Authority understands that by the time the instant decision is notified, the FY 2021-22 would have elapsed and the FY 2022-23 would have also started. Meaning thereby that tariff indexation/adjustment for the FY 2021-22, which ideally should have been allowed in July 2021 would have become overdue, and the indexation/adjustment for the FY 2022-23 would also have become due. In view thereof, and in order to ensure timely recovery of the allowed cost to the Petitioner, the Authority has decided to allow the indexation/adjustment for the FY 2021-22 and the FY 2022-23, upfront in the instant decision as per the adjustment /indexation mechanism provided in this determination. However, the impact of under/ over recovery due to indexation/ adjustment for the FY 2021-22 would be allowed / adjusted subsequently as part of future PYA.

91.2. Here it is pertinent to mention that indexation/adjustment for the FY 2021-22 and FY 2022-23 has been worked out based on the NCPI for the month of December 2020 and December 2021 respectively, for which the reference NCPI for the month of December 2019 has been used. Thus, for the purpose of filing future indexation/ adjustment requests, the Petitioner shall use the NCPI for the month of December for the respective year. The Petitioner is directed to submit its annual adjustment / indexation requests by February every year, so that adjustment / indexation for the next year is determined in timely manner.

92. Order

92.1. In view of the discussion made in preceding paragraphs and accounting for the adjustments discussed above, the allowed revenue requirement of the Petitioner, for the FY 2020-21 along-with upfront indexation/adjustment for the FY 2021-22 and FY 2022-23, to the extent of its distribution function is summarized as under;

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Distribution of Power (DOP) Description	Unit	FY 2020-21 DOP	FY 2021-22 DOP	FY 2022-23 DOP
Units Received	[MkWh]	14,909	14,909	16,532
Units Sold	[MkWh]	11,729	11,819	13,199
Units Lost	[MkWh]	3,180	3,091	3,333
Units Lost	[%]	21.33%	20.73%	20.16%
Investment	[Mln. Rs.]	9,982	16,230	21,972
Pay & Allowances		7,358	8,916	9,803
Post Retirement Benefits		3,670	4,037	4,384
Repair & Maintainance		828	933	1,013
Traveling allowance		182	205	223
Vehicle maintenance		141	158	172
Other expenses		113	128	139
O&M Cost	[Mln. Rs.]	12,292	14,377	15,733
Depriciation		2,886	3,107	3,410
RORB		2,139	2,725	3,596
O.Income		(2,392)	(2,884)	(2,884)
Margin	[Mln. Rs.]	14,924	17,325	19,854
Revenue Requirement	[Mln. Rs.]	14,924	17,325	19,854
Average Tariff	[Rs./kWh]	1.27	1.47	1.50

92.2. The Petitioner is directed to follow the following time lines for submission of its future indexation/adjustment during the MYT control period;

Description	ADJUSTMENTS/ INDEXATION	TIME LINES
Distribution Margin		
Salaries, Wages & Benefits	Annually as per the approved mechanism given in the decision	Request to be submitted by Petitioner in February of every year, so that adjustment / indexation for the next year is determined in timely manner.
Post-retirement Benefit		
Other operating expenses		
Depreciation		
Return on Regulatory Asset Base		
Other Income		
Prior Year Adjustment	Annually as per the approved mechanism as per existing practice	
KIBOR	Bi-Annually, as per the decision	
Return on Equity (ROE)	No adjustment allowed over Refernce ROE	
Spread	No adjustment allowed over Refernce Spread	

Ref. NCPI-General of December 2019 i.e. 9.49%

92.3. Peshawar Electric Supply Company Limited (PESCO), being a distribution licensee, is allowed to charge its consumers, the following "Use of system charge" (UOSC) for the FY 2022-23;

Description	For 132 kV only	For 11 kV only	For both 132kV & 11 kV
Asset Allocation	23.65%	43.65%	67.30%
Level of Losses	2.57%	13.92%	16.13%
UoSC Rs./kWh	0.33	0.78	1.17

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92.4. Responsible to provide distribution service within its service territory on a non-discriminatory basis to all the consumers who meet the eligibility criteria laid down by the Authority,

92.5. To make its system available for operation by any other licensee, consistent with applicable instructions established by the system operator.

92.6. To follow the performance standards laid down by the Authority for distribution and transmission of electric power, including safety, health and environmental protection instructions issued by the Authority or any Governmental agency or Provincial Government;

92.7. To develop, maintain and publicly make available, its investment program for satisfying its service obligations and acquiring and selling its assets

92.8. To disconnect the provision of electric power to a consumer for default in payment of power charges or to a consumer who is involved in theft of electric power on the request of Licensee.

92.9. The Petitioner shall comply with, all the existing or future applicable Rules, Regulations, orders of the Authority and other applicable documents as issued from time to time.

93. <u>Summary of Direction</u>

93.1. A summary of all directions passed in this determination by the Authority are reproduced hereunder. The Authority hereby directs the Petitioner to;

i. To ensure tagging of each of its assets to ensure proper classification of costs and for their proper tracking.

ii. To provide the required details of late payment charges recovered from the consumers and any invoice raised by CPPA (G) under the head of mark-up on delayed payments for the period from FY 2019-20 to FY 2020-21

iii. To provide details of actual tax assessments, tax allowed and the amount of tax paid for the last five years

iv. To target high loss feeders to bring the overall losses down. A detailed plan be prepared and submitted to the Authority for monitoring the progress of the Petitioner in this respect.

v. To take remedial measures for achievement of performance standards as laid down in NEPRA Performance Standards (Distribution) Rules, 2005, for which a detailed plan showing steps to be taken be prepared and submitted to the Authority.

vi. To prepare a plan regarding installation of Aerial Bundle Cable (ABC) in its all circles to bring LT line losses down, and submit the same to the Authority for monitoring the progress of the Petitioner

vii. To prioritize its investment claimed under STG, DOP and ELR etc. i.e. removal of system constraints for transferring power from NTDC system must be the first priority, followed by reduction in T&D losses and improvement in metering systems through ELR and overloaded grids and 11kV feeders.

viii. STG and HT connectivity proposals should be reflective of the new grid stations as

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planned and approved under TSEP be given in the tariff determination

ix. To take all the possible preventive measures to ensure no fatal accidents occur in future and improve its HSEQ performance

x. To take all possible measures to facilitate consumers in terms of complaint handling, connection provision as per CSM and establish one window solutions.

xi. To ensure that amount allowed under each head of investment shall not be used under any other head. The re-appropriation of Authority's allowed investment under different heads by DISCO shall not be acknowledged by the Authority and shall be adjusted accordingly. In case of any deviation under each head of the investment for more than 5% in the instant approved investment plans of DISCOs due to any regulatory decisions/interventions/approved plans, DISCOs shall be required to submit additional investment requirements for prior approval of the Authority.

xii. The HT and LT rehabilitation proposals shall be evaluated on the basis of GIS mapping through ArcGIS and load flow analysis through SynerGee Electric. The HT & LT Plans will be based on of PMS demand forecast and consistent with the STG Plan. The STG plans should be in line with the Transmission System Expansion Plan (TSEP) approved by the Authority from time to time.

xiii. GIS mapping has to be updated periodically after execution of respective HT and LT rehabilitation proposals and network shall be regularly updated for the optimized future investments and avoid equipment failures through prudent and proactive planning practices.

xiv. DISCOs shall ensure Open Access to all the relevant entities/licensees without discrimination and shall objectively evaluate and make available on the website of DISCO the network available capacity, current allocation of the capacity and the future investment required to be made part of distribution system planning.

xv. The DISCO through Market Implementation & Regulatory Affairs Department (MIRAD) shall prepare and develop the medium-term demand forecast, transmission plans and business plan for submission of the same to the Authority. All other departments of the DISCOs shall be obligated to provide their sub-plans to MIRAD for consolidation.

xvi. MIRAD shall ensure effective reporting and monitoring of the allowed investment on monthly, quarterly and annual basis. The main components would include STG, DOP, ELR and Commercial Improvement.

xvii. MIRAD shall develop the dashboard for effective monitoring and reporting of above plans. The CEO along with the functional in-charge of each department will be responsible for presenting the above mentioned progress to the Authority and also submit the monthly, quarterly and annual progress reports in the matter.

xviii. To clear all pending connections and submit a detailed report to NEPRA on monthly basis.

xix. To submit the project-wise detailed report for the investment carried out along with their cost-benefit analysis and technical/financial savings achieved for the FY 2018-19, FY 2019-20 and FY 2020-21, by September 30, 2022.

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xx. To provide the details of the corrective measures to tackle the future demand and removal of constraints.

xxi. To provide detailed reasoning for less drawl of power against its allocated quota.

xxii. To submit the measures that can be taken to convert hard areas into soft

xxiii. To provide the remedial measures taken for the achievement of performance standards

xxiv. To provide loading position of its distribution network and submit a report regarding the plans/investments executed to improve the system constraints

xxv. To take all the possible preventive measures to ensure no fatal accidents occur in future.

xxvi. To provide the details that whether TOU meters installed to all the eligible connections

xxvii. To provide the progress regarding the installation of AMI meters at the consumer end.

xxviii. To provide progress of installation of ABC cable to control theft of electricity.

xxix. To submit its annual adjustment / indexation requests by February every year, so that adjustment / indexation for the next year is determined in timely manner

94. The determination of the Authority is hereby intimated to the Federal Government for notification in the official gazette in terms of section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

AUTHORITY

Rafique Ahmed Shaikh
Member

Engr. Maqsood Anwar Khan
Member

Tauseef H. Farooqi
Chairman

My additional note is attached herewith.

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Additional Note:

At the outset, the multi-year tariff determination which I am signing is for the control period from financial year 2020-21 to 2024-25; the two years of its control period have already been lapsed. Timely tariff determinations depend on submission of the petition by DISCOs within the given time. However, in sheer disregard of timelines given in the NEPRA Guidelines for Consumer End Tariff-2015 as well as the Authority's direction, DISCOs have failed to submit their petitions in timely manner which reflects their indifference to the regulatory discipline which ultimately cause suffering for the power sector as well as the end-consumers.

For the period from July, 2020, beyond the tariff control period of last determined tariff, the Authority has been issuing the quarterly adjustments under the given mechanism. Such adjustments, though covers the cost increase to larger extent but not suffice to cover the entire financial impact. Therefore, I am of the opinion that quarterly adjustments beyond the tariff control period are highly undesirable and should not be allowed.

This is a fact on record that NEPRA has been allowing huge amount to DISCOs under the head of investments for up-gradation of their infrastructure, however, DISCOs could not be able to improve their T&D losses and quality of supply corresponding to the allowed investment. Therefore, comprehensive audit of DISCOs is necessary to check the utilization of funds allowed under the head of investments.

The overall recovery position of DISCOs is also below the desired level. Resultantly, the country is facing circular debt and despite certain bail out packages, the circular debt is on the rise which currently stands at more than Rs. 2.5 trillion. To get rid of the circular debt issue, immediate actions are needed which may include the structural changes in ownership and control of the DISCOs.

This has also been highlighted in the last many years that the performance of DISCOs has been marred with serious governance issues. Load shedding on account of Aggregate Technical and Commercial (AT&C) losses is one of the classic example of poor governance. Instead of improving their distribution network, checking the theft of electricity and improving the recovery, DISCOs have found an easy way of indiscriminate load shed at feeder level. This AT&C base load shedding is a stumbling block in improving the sales growth of Discos. This is a fact that sufficient generation capacity is available in the country, mostly on take or pay basis. The AT&C base load shedding is suffering the consumers in shape of not having the electricity as well as increased electricity cost due to payment of capacity payment of unutilized capacity. I am of the considered view that the burden of capacity payments due to underutilization of power plants caused by DISCO level load shedding should not be passed on to the consumers.

DISCOs are allowed sizeable amount for payments on account of pension and other post-retirement benefits which is being increased year on year basis. Although, under the agreed terms and conditions, these payments are binding but not a direct cost of product, i.e. generated electricity. Had the pension fund been established earlier in a timely manner to meet this obligation, the burden of these payments on consumers could have been avoided.

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The present centralized control of DISCOs has shown its inherent tendency for inefficiency and unless developed as independent corporate entities, autonomous in their business decisions, DISCOs will continue to burden the power sector. Therefore, immediate actions are needed to revamp DISCOs and free them of centralized control. In my view, this is time to either privatize DISCOs or transit to public private partnership to run these entities as independent business in a competitive environment. The involvement of provincial governments may help in improving the governance of DISCOs especially in controlling electricity theft and improving the recovery.

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