National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/R/ADG(Trf)/TRF-567/SEPCO-2021/ 8695-8697
June 2, 2022

Subject: **DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY SUKKUR ELECTRIC POWER COMPANY LTD. (SEPCO) FOR DETERMINATION OF SUPPLY OF POWER TARIFF UNDER MYT REGIME FOR THE FOR THE FY 2020-21 TO FY 2024-25** [CASE # NEPRA/TRF-567/SEPCO-2021]

Dear Sir,

Please find enclosed herewith subject Determination of the Authority along with Annex-I, I-A, II, III, IV, V, A, B, C & D and additional note of Engr. Rafique Ahmed Shaikh, Member NEPRA (76 Pages) in Case No. NEPRA/TRF-567/SEPCO-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-567/SEPCO-2021

DETERMINATION OF SUPPLY OF POWER TARIFF PETITION

FOR

SUKKUR ELECTRIC POWER COMPANY LIMITED (SEPCO)

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
SEPCO	Sukkur Electric Power 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 SUKKUR ELECTRIC POWER COMPANY LIMITED (SEPCO) FOR DETERMINATION OF SUPPLY OF POWER TARIFF UNDER MYT REGIME FOR THE FY 2020-21 TO FY 2024-25

CASE NO. NEPRA/TRF-567/SEPCO-2021

PETITIONER

Sukkur Electric Power Company Limited (SEPCO), Thermal Power Station, Old Sukkur, Sukkur.

INTERVENER

M/s PTCL
M/S Telenor
M/S Pak Telecom Mobile Ltd.

COMMENTATOR

M/s Deodar PMCL (Jazz)

REPRESENTATION

Chief Executive Officer and along-with its Technical and Financial team

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1. **Background**

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 existing Distribution Licensees have been deemed to have 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, Sukkur Electric Power Company Limited (SEPCO), hereinafter called "the Petitioner", being a Distribution 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, requested the following Supply of Power Margin in its Petition for the five years MYT period;

Description	Unit	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Unit Purchased	Gwh	4317	4482	4593	5505	5979
Units to be sold	Gwh	2793	2942	3060	3721	4102
Power Purchase Cost	Rs. Mln	59,126	70135	79711	99734	115598
O&M	Rs. Mln	954	1137	1356	1553	1780
Depreciation	Rs. Mln	6	6	6	6	6
Return on Asset Base (RoRB)	Rs. Mln	5	6	6	6	6
Provision for Bad Debts	Rs. Mln	1687	2332	3302	3963	4953
Other Income	Rs. Mln	-98	-99	-99	-99	-99
Total Supply Margin		2554	3382	4571	5429	6646
Finance Cost	Rs. Mln	4443	1640	1640	1640	1640
Total Revenue Requirement	Rs. Mln	66,123	75,157	85,922	106,803	123,884
Average Tariff		23.60	25.55	28.09	28.70	30.20

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2. Proceedings

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. 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 and meet the ends of natural justice, decided to conduct a hearing in the matter.

2.2. Hearing in the matter was initially scheduled on November 29, 2021, for which notice of admission / hearing along-with the title and brief description of the petition was published in newspapers on November 20, 2021 and also uploaded on NEPRA website; Individual notices were also issued to stakeholders/ interested parties. However, on the request of SEPCO, the hearing was re-scheduled for December 16, 2021, for which notice of rescheduling was uploaded on NEPRA website on 27.11.2021.

3. Issues of Hearing

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?

ii. Whether the Petitioner has complied with the direction of the Authority given in earlier determination?

iii. Whether the projected energy (GWh) and projected power purchase cost is reasonable?

iv. Whether the requested O&M costs are justified?

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

vi. Whether the requested Financial Charges are justified?

vii. Whether the requested provision for bad debt is justified?

viii. What should be the adjustment mechanisms during the MYT? Whether there should any efficiency factor (X Factor)?

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

x. Whether the existing Tariff Terms and Conditions needs to be modified, especially with reference to the request of Telecom companies to charge "B Industrial Supply" Category tariff instead of "A-2 Commercial" category tariff?

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xi. Whether the existing fixed charges applicable to different consumer categories needs to be revised and requires any changes in mechanism for charging of such charges based on Actual MDI or Sanction Load or otherwise?

xii. Whether there should be any amendment in Terms and Conditions of Tariff (For Supply of Electric Power to Consumers by Supply Licensees) keeping in view the changes in Consumer Service Manual?

xiii. Whether there should any Fixed Charges on consumer having net metering facility on which currently no fixed charges are applicable?

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

xv. 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 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 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 the Petitioner 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.

4.4. The Energy Wing of the Ministry of Planning, Development and Special Initiatives has submitted that for the distribution petition of SEPCO for the FY 2020-21 to 2024-25 the Authority should approve the investment plan before considering the MYT petition.

Similarly, it also submitted that the investment plan should be linked with the actual performance of SEPCO. These targets should be realistic and should incorporate performance incentives for the DISCOs to retain earnings, if they do better than the targeted AT&C loss levels. It also submitted that the bad debt write-off mechanism should be on the lines of already approved mechanism for KE.

4.5. PPDB in its comments submitted that projected tariff requested by SEPCO will definitely result in hike of overall uniform tariff for all the consumer categories. Further increase in in T&D losses projected for MYT period will also be payable by consumers of electricity at good performing DISCOs including Punjab Consumers. PPDB requested that while MYT tariff NEPRA to cap the T&D losses based on the last allowed number determined for the FY 2019-20), which would also enable SEPCO to project the prudent cost reflective numbers for ascertaining the efficient sale & distribution tariff numbers. PPDB also requested that while allowing MYT tariff, NEPRA should not enhance basket price tariff, so that end consumer may be protected from this change.

4.6. 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;

5. <u>Whether the request of Petitioner to allow MYT for a period of five years is justified?</u>

5.1. 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. It has also been noted that the Distribution license of the Petitioner is valid till 2031, however, its supply license is valid till April 2023. In view thereof, the Authority decided to deliberate the matter during the hearing.

5.2. The Authority also noted that Section 23E (1) of the Amended Act, provides that 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 i.e. April 2023. Thus, all existing Distribution Licensees have been deemed to have Power Supplier Licenses, to ensure distribution licensees earlier performing both the sale and wire functions, can continue to do so including the Petitioner.

5.3. 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 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 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.

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

6.1. The Authority gave certain directions to the Petitioner in its tariff determination for the FY 2019-20. The same have been discussed in detail in the MYT Distribution of Power Tariff Determination of the Petitioner, therefore, need not to be discussed here again. The Authority also 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. Further, the directions given by the Authority in the MYT Distribution tariff determination of the Petitioner, have been reproduced in the instant decision for compliance by the Petitioner.

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

7.1. The Petitioner has submitted that Power Purchase Price is a pass-through item and consists of the following four components:

- Energy Charges
- Variable Operating and Maintenance (O& M) Charges
- Capacity Charges
- NTDC Use of System Charges & CPPAG Market Operations Fee

7.2. The Petitioner during the hearing submitted the following projected Energy (GWh) for the FY 2020-21 to FY 2024-25;

Description	Unit	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Units Purchased	GWH	4,317	4,482	4,593	5,505	5,979
Power Purchase Cost	Rs. In M	54,329	70,135	79,711	99,734	115,598
Av: PPP	Rs./kWh	12.66	15.65	17.36	18.12	19.34
Increased in PPP	%	-7%	24%	11%	4%	7%

7.3. The Petitioner submitted the following justification for the projected purchases;

Description	%
[A] Actual:	
Av: Energy Purchase (GWH) Growth Rate for last 5 years	-0.27%
Average Energy Sale (GWH) Growth Rate for Last 5 Years	0.35%
Average T&D Losses reduce during last 5 years	-0.38%
[B] Projection	
Av: Energy Purchase (GWH) Growth Rate Projected	7.25%
Average Energy Sale (GWH) Growth Rate Projected	8.85%
Average T&D Losses reduce Projected	1%

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7.4. The Authority, observed that for the FY 2021-22, variations in the Power Purchase Price (PPP) for the 1st quarter of the FY 2021-22 i.e. Jul. to Sep. 2020 have already been allowed to the Petitioner vide the Authority's decision dated 09.05.2022 and for the 2nd quarter of FY 2021-22, the Petitioner has already filed its PPP adjustment requests with the Authority, which are at an advance stage of the proceedings and would be processed as per the prescribed mechanism. Therefore, for the purpose of instant Petition, the PPP of the Petitioner for the FY 2021-22 shall be the PPP that remained notified during the FY 2021-22, and on which the Petitioner has been / would be allowed quarterly adjustments, thus any reassessment of PPP for the FY 2021-22 is not required.

7.5. Although, variations in the PPP of the Petitioner are being actualized through quarterly adjustment mechanism, however, the existing PPP references, against which the variations are being allowed, were determined by the Authority keeping in view the FY 2020-21. The Authority understands that these references now require up-dation / revision as large amount of new capacities e.g. Coal, Nuclear, Hydel etc. along-with HVDC transmission line have since been added in the system, and also to cater for the impact of PKR vs US$ devaluation, hike in fuel prices and CPI indexations. This revision of PPP references would minimize the impact of future monthly fuel charges adjustments & quarterly variations and will provide a more predictable tariff to the consumers.

7.6. Here it is pertinent to mention that the NEPRA Guidelines for determination of consumer end tariff (Methodology and Process) notified vide SRO dated 16.01.2015, prescribes submission of Procurement Plan by CPPA-G and approval of Power Purchase Cost by the Authority. Accordingly, CPPA-G, submitted its Power Purchase Price forecast report for the FY 2021-30, which outlines end consumer tariff outlook up-to FY 2030, and electricity price projections based on IGCEP.

7.7. As per the Report, CPPA-G has projected total generation of 136,867 GWh for the FY 2021-22, with the certain assumptions of fuel prices and other parameters i.e. exchange rate, CPI, USCPI, LIBOR and KIBOR etc. However, considering the fact that adjustments in PPP pertaining to the FY 2021-22 are already being processed as per the notified tariff, therefore, the projections by CPPA-G for FY 2021-22 are not relevant and by the time the instant tariff determination would be notified, the PPP reference for the FY 2022-23 will be relevant.

7.8. The Authority is cognizant of the fact that major component of the consumer-end tariff is the Power Purchase Price, which accounts for around 90% of total consumer-end tariff. Therefore, projection of PPP is of utmost importance, as all future monthly fuel charges adjustments as well as quarterly adjustments are worked out based on the projected notified PPP references.

7.9. In view thereof, the Authority by adopting a forward looking approach, has projected the revised PPP references keeping in view the ground realities for the FY 2022-23. For the purpose of determining the new PPP references, the Authority has made its own projections of PPP references for the FY 2022-23 by first projecting the total amount of generation that would be required and then estimating the plant wise generation along-with fuel prices and other assumptions etc., as discussed in detail in the ensuing paras.

7.10. The Authority observed that as per the IGCEP approved vide decision dated 24.09.2021, the total generation has been projected as 142,563 GWh for the FY 2020-23, with peak demand of 25,779 MW. The Projected Generation as per the IGCEP for the FY 2022-23 is around 9% higher as compared to the actual generation of FY 2020-21 i.e. 130,652 GWh, meaning thereby that there would be around 4.5% growth in generation during each of the FY 2021-22 and FY 2022-23.

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7.11. However, it is pertinent to mention here that K-Electric during the FY 2020-21 withdrew energy of 6,118 GWhs from the National Grid, however, for the FY 2022-23, the share of energy to with obtained by K-Electric from National Grid has been assumed as 1100 MW i.e. 9,636 GWhs. The same in terms of generation, after grossing up for the allowed level of NTDC and HVDC losses works out as 9,989 GWhs. Thus, out of total projected generation of 142,563 GWhs as per the IGCEP, share of K-Electric would be 9,968 GWhs and the remaining generation of 132,385 would be for the XWDISCOs, after accounting for sale to IPPs.

7.12. The aforementioned projected generation has been allocated to each of the XWDISCO in proportion to its actual units purchased for the period from July 2020 to July 2021. However, for K-Electric as explained above, the energy to be drawn from National Grid has been assumed as 1100 MW flat for each month, keeping in view the current scenario, whereby KE is allowed to draw 1100 MW from the National Grid. For the purpose of energy delivered to DISCOs, actual NTDC losses with maximum cap of 2.5% (energy delivered through NTDC network) and HVDC losses as approved by the Authority have been considered.

7.13. Accordingly, the generation as per the approved IGCEP, for the FY 2022-23 i.e. 142,563 GWh, which after adjustment of allowed T&T losses of NTDC/ HVDC and sale to IPPs (as per previous trend), results in projected energy of 137,609 GWh, delivered to DISCOs including K-Electric and would be available with DISCOs for sale to consumers, as detailed below;

	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
Energy Gwh	16,107	16,018	14,326	11,208	8,185	8,657	8,928	7,966	9,803	11,455	14,221	15,687	142,563
NTDC Losses	490.06	505.01	461.88	383.63	316.93	334.75	352.97	293.81	354.90	372.49	425.67	459.25	4,751
Sale to IPPs	22.91	22.78	20.37	15.94	11.64	12.31	12.70	11.33	13.94	16.29	20.22	22.31	203
Energy Delivered to DISCOs	15,594	15,491	13,844	10,809	7,856	8,310	8,563	7,661	9,434	11,066	13,775	15,206	137,609

7.14. The energy delivered to DISCOs has been allocated to each XWDISCO on monthly basis in proportion to their actual units purchased for the period from July 2020 to July 2021. For K-Electric, actual units purchased have been considered at 1100 MW flat for the FY 2022-23. Thus, resulting in following DISCO wise projected allocation of energy;

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Projected Units to be Sold to DISCOs GWh

DISCOs	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
IESCO	1,536	1,482	1,267	959	711	615	644	690	779	889	1,241	1,526	12,739
LESCO	3,010	2,983	2,888	2,190	1,485	1,600	1,698	1,482	1,861	2,125	2,580	3,125	27,027
GEPCO	1,621	1,507	1,454	1,017	669	696	678	619	825	967	1,254	1,512	12,820
FESCO	1,942	1,961	1,787	1,359	908	937	970	924	1,181	1,385	1,736	1,933	17,023
MEPCO	2,644	2,835	2,335	1,687	1,034	1,015	1,084	1,052	1,486	1,857	2,428	2,440	21,897
PESCO	1,861	1,886	1,471	1,167	994	1,158	1,222	1,014	1,060	1,265	1,619	1,815	16,532
HESCO	701	619	577	505	324	306	304	290	425	564	676	666	5,957
QESCO	712	657	585	553	516	535	512	475	534	616	664	680	7,041
SEPCO	562	551	501	350	227	224	223	192	264	403	561	520	4,577
TESCO	185	191	187	205	196	206	209	183	201	204	197	197	2,361
K-Electric	818	818	792	818	792	818	818	739	818	792	818	792	9,636
Total	**15,594**	**15,491**	**13,844**	**10,809**	**7,856**	**8,310**	**8,563**	**7,661**	**9,434**	**11,066**	**13,776**	**15,206**	**137,609**

7.15. Since the power generated from different sources is procured by the Central Power Purchasing Agency (CPPA (G)) on behalf of XWDISCOs as per the rates so determined by the Authority and subsequently reflected in the respective Power Purchase Agreements (PPAs). The overall power purchase cost constitutes a pool price which is transferred to the DISCOs according to the prescribed mechanism and notified by the Federal Government in the Official Gazette. The Power Purchase Price so projected, in turn formulates the reference values for the monthly fuel adjustments & biannual PPP adjustment with respect to T&D losses, Capacity and Transmission Charges.

7.16. From all the available sources of generation of electricity, i.e. Hydel, Gas, Nuclear, Local and imported Coal, Solar, Wind, and Bagasse etc., a total of 142,563 GWh power is expected to be generated during the FY 2022-23. Here it is also important to mention that while projecting generation, the plants have been projected to be operated as per Merit order, keeping in view the projected prices of different fuels. The average prices for different fuels have been assumed as Rs.3,183/mmbtu for RLNG, Rs.2,078/mmbtu for imported coal, Rs.1,466 /mmbtu for local coal, and Rs.1,000 /mmbtu for local gas. All prices have been considered exclusive of GST. Assumptions and criteria for projection of fuel prices for each of the fuel has been discussed in detail in the ensuing paragraphs.

7.17. Accordingly, the estimated/projected source-wise generation and the estimated cost of electricity generation is given in the following table;

Source	Generation MkWh	Share	EPP Rs. Mln	CPP Rs. Mln	EPP + CPP Rs. Mln	EPP Rs./kWh	CPP Rs./kWh	EPP + CPP Rs./kWh
Hydel	44,859	31.47%	5,566	232,775	238,341	0.12	5.19	5.31
RFO	-	0.00%	-	70,300	70,300	-	-	-
Coal	39,202	27.50%	754,465	361,638	1,116,103	19.25	9.22	28.47
Gas	12,685	8.90%	107,105	57,377	164,482	8.44	4.52	12.97
RLNG	15,036	10.55%	336,262	122,730	458,991	22.36	8.16	30.53
Bagasse	1,012	0.71%	7,225	8,794	16,019	7.14	8.69	15.84
Wind	5,611	3.94%	-	116,087	116,087	-	20.69	20.69
Solar	1,163	0.82%	-	24,671	24,671	-	21.22	21.22
Nuclear	22,281	15.63%	21,065	304,219	325,284	0.95	13.65	14.60
Import	498	0.35%	9,269	3,144	12,413	18.60	6.31	24.91
SPPs	217	0.15%	1,428		1,428	6.59	-	6.59
Total	142,563	100.00%	1,242,385	1,301,735	2,544,120	8.71	9.13	17.85

7.18. Here it is pertinent to mention that the aforementioned energy charge includes variable O&M charges, however, variable O&M charges are not made part of monthly fuel charges adjustment and are adjusted as part of quarterly / biannual adjustments.

7.19. As per the above table, around 31.47% of total generation is expected from Hydel sources, 27.50% from Coal (both local & imported), and 15.63% from Nuclear. RLNG would contribute around 10.55% of the total generation, with around 8.9% by indigenous gas. Other Renewables i.e. Wind, Solar & Bagasse and Imports/SPPs share would be around 6%. Meaning thereby that variation in generation mix and prices of Coal, and RLNG/ Gas would have greater impact on the generation cost, thus, ultimately affecting the consumer-end tariff.

7.20. Regarding projection of fuel prices i.e. RLNG, Local & Imported Coal, Local Gas etc., various reports from different sources as given hereunder have been analyzed;

- ✓ US Energy Information Administration, Short-Term Energy Outlook October 2021
- ✓ World Bank Commodities Price Forecast
- ✓ IMF, World Economic Outlook Database
- ✓ Bloomberg (Various Analyst Firms forecast)
- ✓ Standard Chartered Bank Report
- ✓ Argus Media

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7.21. Based on the information available in the aforementioned reports, the Authority has projected the following fuel prices in terms of RLNG, Local & Imported Coal, and Gas, for the purpose of Power Purchase Price;

7.22. The Authority noted that as per the RLNG price notification issued by OGRA, RLNG prices in Pakistan are benchmarked with Brent Crude Oil Prices and are determined as a slope (%) of price of crude oil. In addition to this price, Port charges, PSO import related actual costs, PSO/ PLL Margin and Terminal Charges etc. are added to the price. The said prices are also adjusted with the Transmission Losses and other miscellaneous costs. Thus, the RLNG prices in Pakistan are not only affected by the international prices, being linked with crude oil, but also by the exchange rate parity.

7.23. Therefore, to have a fair projection of RLNG prices, the Authority considered the projections of Brent Crude oil prices by various reliable sources i.e. Short Term Energy Outlook published by US Energy Information Administration, World Bank Commodities Price Forecast report, IMF-World Economic Outlook Database and various analyst firm forecasts.

7.24. The 2nd factor for determination of price of RLNG is the slope that is applied on the price of Crude oil. To have a fair assessment of the applicable slope, the actual slope on which RLNG has been procured by PSO and PLL including spot purchases, during the last 12 months period has been analyzed. Accordingly, by applying the % slope on the projected prices of Crude Oil, the Delivered Ex-Ship (DES) prices of RLNG have been worked out. Here it is pertinent to mention that beside slope, certain additional charges like PSO/PLL Margin, other import related costs, terminal charges etc. are also applicable on CIF price of RLNG. Accordingly, the Authority keeping in view the projected prices of crude oil, % slope, and impact of rupee devaluation, has projected RLNG prices as Rs.3,183/mmbtu.

7.25. For indigenous gas, the Authority considering the existing price, has projected the same as Rs.1,000/mmbtu for the power purchase price projections.

7.26. Regarding price of imported coal, the Authority observed that majority of coal used by coal power plants operating in Pakistan, is imported from South Africa and to some extent from Indonesia, therefore, for the purpose of projection of coal prices, the price forecasts given by World Bank Commodities Price Forecast, Argus-McCloskey etc. have been considered. Accordingly, based on these reports and keeping in view the impact of devaluation of Pak Rupee, and by incorporating therein the Marine Insurance, Handling Loss, Other Charges (Port Handling Charges, Customs Duties & Cess, L/C Charges), Inland Freight etc., the price for imported coal works out as average Rs.2,078/mmbtu.

7.27. For projection of local coal prices for Thar coal, the Authority has considered the coal price determination made by Thar Coal Energy Board (TCEB) for Block-II. As per the TCEB determination, reference tariff determined for the 4th year includes variable cost of US$ 15.10 /Ton and fixed cost of US$ 50.58/Ton. The said total reference total cost determined by TCEB has been indexed with US CPI and US$ /PKR exchange rate to work out the projected coal price for the FY 2022-23, which works out as Rs.1,466 mmbtu. The same has been considered while projecting the PPP references.

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7.28. Based on the above discussion, the source wise estimated/projected generation and the estimated cost of electricity generation is given in the following table;

Source	Generation MkWh	Share	EPP Rs. Mln	CPP Rs. Mln	EPP + CPP Rs. Mln	EPP Rs./kWh	CPP Rs./kWh	EPP + CPP Rs./kWh
Hydel	44,859	31.47%	5,566	232,775	238,341	0.12	5.19	5.31
RFO	-	0.00%	-	70,300	70,300	-	-	-
Coal	39,202	27.50%	754,465	361,638	1,116,103	19.25	9.22	28.47
Gas	12,685	8.90%	107,105	57,377	164,482	8.44	4.52	12.97
RLNG	15,036	10.55%	336,262	122,730	458,991	22.36	8.16	30.53
Bagasse	1,012	0.71%	7,225	8,794	16,019	7.14	8.69	15.84
Wind	5,611	3.94%	-	116,087	116,087	-	20.69	20.69
Solar	1,163	0.82%	-	24,671	24,671	-	21.22	21.22
Nuclear	22,281	15.63%	21,065	304,219	325,284	0.95	13.65	14.60
Import	498	0.35%	9,269	3,144	12,413	18.60	6.31	24.91
SPPs	217	0.15%	1,428	-	1,428	6.59	-	6.59
Total	142,563	100.00%	1,242,385	1,301,735	2,544,120	8.71	9.13	17.85
Add; NTDC/ HVDC & CPPA-G Cost				119,212				
Less; NTDC/ HVDC Losses	(4,751)							
Less; Sale to IPPs	(203)		(4,055)					
PPP Adjusted	137,609		1,238,330	1,420,946	2,659,277	9.00	10.33	19.32

7.29. The generation cost is transferred to the DISCOs according to the Transfer Price Mechanism (TPM) as prescribed by the Authority.

7.30. According to the above mechanism, Rs.48,494 million and Rs.4,445 million is the share of the Petitioner on account of CpGenCap and UoSC (NTDC/ HVDC) & Market Operator Fee respectively for the FY 2022-23. The overall fixed charges comprising of CpGenCap and UoSC (NTDC/HVDC) & Market Operator Fee in the instant case works out as Rs.52,939 million, which translate into Rs.4,350/kW/month based on projected average monthly MDI of the Petitioner i.e. 1,014 MW or Rs.11.57/kWh on units purchased basis.

7.31. The total annual PPP of the Petitioner for the FY 2022-23 in the instant case works out as Rs.94,175 million. With the projected purchase of 4,577 GWh for the same period, the average PPP of the Petitioner turns out to be as Rs.20.58/kWh (Annex-IV), whereas, the national average determined PPP works out as Rs.19.32/kWh after accounting for the allowed level of NTDC/ HVDC losses and sale to IPPs. Similarly, the National Average Energy Purchase Price (PPP) works out as Rs.9.00/kWh. On the basis of allowed level of T&D losses of 17.05% for the Petitioner for the 3rd Year of the MYT, the adjusted PPP of the Petitioner is assessed as Rs.24.81/kWh.

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

8.1. The Petitioner submitted the following bifurcation of costs, into supply and distribution segments, during the hearing:

SUPPLY OF POWER	DISTRIBUTION OF POWER
•CHIEF COMMERCIAL OFFICER	•C.E TECHNICAL, C.E (DEV.) PMU, C.E OPERATIONS.
•01 MANAGER (COMMERCIAL)	•03 X OPERATION CIRCLES, 16 OPERATION DIVISIONS, 62 OPERATION SUB DIVISIONS.
•01 MANAGER (S&I) MANAGER TMCM) & MANAGER (M&T).	•PD GSC, 1 X GSO CIRCLE
•DY MANAGER (COMMERCIAL)	•PD (CONSTRUCTION)
•REVENUE OFFICERS	•SALARIES AND OTHER EXPENSES OF HEAD QUARTER, ALLOCATED ON THE BASIS OF SERVICE PROVIDE.
•100% EXPENSES ARE ALLOCATED	•15% OF EXPENSES OF COMPUTER CENTER
•SALARIES AND OTHER EXPENSES OF HEAD QUARTER, ALLOCATED ON THE BASIS OF SERVICE PROVIDE.	
•85% OF EXPENSES OF COMPUTER CENTER	

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8.2. The Petitioner also submitted the following percentage wise breakup of costs in terms of Distribution and Supply of Power Functions;

Description	Distribution Share	Supply Share	Overall
Salaries, Pension & Benefits	90%	10%	100%
Repair & Maintenance	99.99%	0.03%	100%
Travelling	89%	11%	100%
Transportation	97%	3%	100%
Miscellaneous Expenses	97%	3%	100%
Total O&M	91%	9%	100%
Provision for Bad Debts	-	100%	100%
Deprication	99.65%	0.35%	100%
RORB	99.82%	0.18%	100%
Less Onther Income	92%	8%	100%
D.M	84%	16%	100%

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8.3. 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.

8.4. The Authority in the determination of the Petitioner 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."

8.5. 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.

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

10. <u>What should be the adjustment mechanisms during the MYT? Whether there should any efficiency factor (X Factor)?</u>

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

11.1. The Petitioner submitted that the 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.

11.2. The Petitioner has requested the following O&M for Supply of Power Function in its Petition.

Rs. Mln

Description	2020-21 Proj.	2021-22 Proj.	2022-23 Proj.	2023-24 Proj.	2021-25 Proj.
Salaries, wages	892	1070	1285	1477	1699
Employee benefits	18	20	22	24	26
Repair & Maintenance	0	0	0	0	0
Travelling	30	33	34	36	39
Transportation	5.41	5.68	5.96	6.26	6.57
Miscellaneous expenses	8	9	9	10	10
Total O&M	953	1138	1356	1553	1781

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11.3. The Petitioner submitted that for projecting O&M expenses impact of inflation is incorporated on operating expenses from the latest available provisional accounts of the FY 2019-20 and 10% increase in Salaries & Allowances in the FY 2020-21 to 2024 to 2025.

Pay and Allowances:

11.4. The Petitioner has submitted that its pay and allowances includes salaries of regular and contract employees, wages of daily wages, which includes all benefits such as house rent allowances, medical allowances and facilities, free electricity and pension contribution. Considering the impact of increase in salaries annual increment by the Govt: as per the finance bill.

Disparity Reduction Allowance:

11.5. For Disparity Reduction Allowance, the Petitioner submitted that the Government of Pakistan approved Disparity Reduction Allowance @ 25% of the basic pay of basic pay scale 2017 to all Federal Government Employees BPS-01 to BPS-19 w.e.f. 1st March, 2021.

11.6. In the same manner, the petitioner also submitted that Government of Pakistan has grant of Disparity Reduction Allowance @ 25% of the Basic Pay of Basic Pay Scale 2017 to government employees in BPS 20–22, with effect from 01.07.2021 vide Finance Division (Regulations Wing) Islamabad Office Memorandum F.No.14(1)R-3/ 2021-324, dated 08.07.2021.

Grant of Ad-Hoc Allowance 2021 @ 10% of Basic Pay to SEPCO Employees

11.7. For Grant of Ad-Hoc Allowance the Petitioner submitted that the Government of Pakistan has allowed Ad-Hoc Relief Allowance-2021 @ 10% of the basic pay to all the Federal Government Employees w.e.f 1st July 2021 vide Finance Division (Regulation Wing), Islamabad office Memorandum No F.1(1)Imp/2021-216 dated 08.07.2021. in the light of clarification Finance Division's No. 4(3)R-4/2011-Revision dated July 26, 2021 circulated by Section Officer (Admin) Ministry of Energy (Power Division), Government of Pakistan, Islamabad vide his letter No. 2(8)/2021-Admn, dated 30.08.2021.

Grant of Increase in Pension to Pensioners of the Federal Government

11.8. The petitioner submitted that the Government of Pakistan has sanctioned an increase of @ 10% of net pension to the pensioners of the Federal Government w.e.f 1st July 2021 vide Finance Division (Regulation Wing), Islamabad office MemorandumF.No.4(1)-/Reg.6/2021-486 dated 08.07.2021.

Revision of Rate of Orderly Allowance

11.9. The petitioner submitted that the Government of Pakistan has revised the rate of orderly allowance from Rs.14,000/- to Rs.17,500/- per month to BPS-20 to BPS-22 officers with effect from 01.07.2021 for the civil employees of the Federal Government vide Finance Division (Regulations Wing), Islamabad, vide his Office Memorandum F.No.1(13) Imp/ 2016-217, dated 08.07.2021.

Revision of Rate of Integrated Allowance

11.10. The petitioner submitted that the Government of Pakistan, has allowed revision of rate of integrated allowance from Rs.450/- to Rs.900/- per month for Qasids, Naib Qasids, and Daftaries to all the Federal Government Employees with effect from 01.07.2021 vide Finance Division (Regulations Wing) Office Memorandum F.No.6(1)R-5/2005, dated 08.07.2021.

Repair and Maintenance:

11.11. Regarding Repair and maintenance expenditures, the Petitioner has stated that it pertain to the Computers and Equipment.

Travelling Allowance:

11.12. For travelling cost, it has been mentioned that these are for daily movement from allied formation to all bank branched and collect the scroll from banks and submit to MIS Directorate.

Transportation Charges:

11.13. The transportation charges, as per the Petitioner, include repair and maintenance of vehicles, POL and annual renewal of registration fees.

Other Miscellaneous Expenditures:

11.14. Other miscellaneous expenditures, includes repair of furniture and office equipment, stationery and Photostat charges, postage and telecommunications.

Plan for Additional hiring:

11.15. On the issue of additional Hiring, the Petitioner presented the following detail of its existing manpower and vacant posts during the hearing;

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BPS	Sanctioned Strength	Working Strength	Vacany Posts	Vacant Posts (%)
BPS-17 & Above	331	149	182	55%
BPS-01To 16	9159	6052	3107	34%
TOTAL	9490	6201	3289	35%

MIRAD

11.16. On the issue of MIRD, the Petitioner submitted that it has a functional MIRAD w.e.f. 27.09.2021 by handing over the additional charge to various posts. The Petitioner submitted the following total no. of posts required for the MIRAD.

Particular	No of Posts
D.G (BPS-20)	1
Manager (BPS-19)	3
Deputy Manager (BPS-18)	6
Assistant Manager (BPS-17)	10
Total	20

11.17. It also stated that advertisement for DG MIRAD has been published for the 3rd time, and the selection process in underway. The Petitioner also stated that internal reallocation for various posts of MIRAD has been done on permanent basis as mentioned below and for the remaining posts, advertisements was published, against which shortlisting of candidates is in progress and interview letters will be issued shortly.;

Sr. #	Description of Posts	No.
1	Deputy Manager (Demand forecasting)	1
2	Deputy Manager (Transmission planning)	1
3	Assistant Manager (Demand forecasting)	2
4	Assistant Manager (Transmission planning)	1
	Total	5

11.18. The Petitioner provided the financial impact of the MIRAD as under;

Mln. Rs.

	Monthly Impact	Annual Impact
Pay & Allowances	1.316	15.793
Employee Benefits	0.18	2.159
TOTAL	1.496	17.953

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Post Retirement Fund

11.19. The Petitioner has requested provisions for post-retirement benefits as under;

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Post-Retirement Benefits	3,868	4,008	4,469	4,808	5,175

RORB

11.20. On the issue of RoRB, the Petitioner submitted as per NEPRA mechanism, the return on Rate Base is being calculated as follows:

Weighted Average Cost of Capital (WACC) X Rate Base

11.21. It stated that NEPRA allowed WACC to SEPCO 15.02% in its tariff determination for FY 2019-20, which comprises of cost of debt and cost of equity as under;

$Ke=RF + (RM - RF) \times \beta = 13.7687\% + (15\% \times 1.1) = 15.12\%$
The cost of debt; $kd = 15.02\%$

11.22. Accordingly, the rate calculated for SEPCO is: $WACC = [Ke \times (E/V)] + [Kd \times (D/V)]$

Where E/V and D/V are equity and debt ratio respectively taken as 30% & 70%.

11.23. The Petitioner further stated that Profit Rate Base is defined for the FY 2020-21 to FY 2024-25 as the sum of (i) Gross Fixed Assets in Operation beginning of the year (ii) The capital expenditures for the year (New Investments), in accordance with the proposed investment program. (iii) Less Cumulative Depreciation (iv) Plus Closing Capital Work in Progress (v) Less: Differed Credit.

11.24. The also submitted that Annual Rate of Return is a pre-tax return on the Profit Rate Base and since the investment is typically financed with a combination of debt & equity, the appropriate rate of return should be a market-based weighed average of the cost of capital. The Petitioner accordingly proposed the following RoRB for the MYT control period for its Distribution Function;

Mln. Rs.

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
RORB	3,035	3,564	3,941	4,267	4,521

Depreciation:

11.25. Regarding depreciation charges, the Petitioner submitted that the projected depreciation of assets is provided in accordance with the accounting policy of the Company and projected the following amounts during the MYT control period;

Mln. Rs.

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Depreciation	1,573	1,769	1,976	2,189	2,407

Other Income:

11.26. On the issue of Other Income, the Petitioner submitted the following figures for other income charged to Distribution of Power.

Mln. Rs.

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Other Income	1,059	1,140	1,230	1,330	1,441

11.27. The Authority observed that the Amended NEPRA Act under Section 31(3), *inter alia*, has prescribed that 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;

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- ✓ *"(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;"*

11.28. 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.

11.29. 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.

11.30. 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 / Provisional accounts of the Petitioner for the FY 2019-20, and/or the request of the Petitioner in this regard as base year.

11.31. 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.

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

Salaries and wages:

11.33. The Petitioner submitted that Salaries & Wages including employee's retirement benefits is the major component of O&M expense. 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.

11.34. 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 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.

11.35. The actual cost reflected in the accounts of the Petitioner for the FY 2019-20, under Salaries & Wages (excluding postretirement benefits, discussed separately) is Rs.4,082 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.4,504 million.

11.36. Here it is pertinent to mention that the Petitioner, despite the Authority's clear directions, has still not provided the replacement hiring certificate. Therefore, the replacement hiring Cost, which works out as Rs.116 million for the FY 2020-21, which has been adjusted from the cost of Salaries & Wages assessed for the FY 2020-21.

11.37. In view thereof, an amount of Rs.4,388 million, net off replacement hiring cost, 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.

11.38. The Petitioner is also directed to provide certificate of replacement hiring from its Auditors as directed by the Authority in its previous tariff determinations. Once the requisite certificate is provided by the Petitioner, the Authority may consider allowing the cost of replacement hiring prospectively and no adjustment would be allowed for previous periods deducted cost.

11.39. Since the 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

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cost of Salaries, Wages and other benefits (excluding postretirement benefits) for the FY 2020-21 pertaining to the Supply of Power function works out as Rs.762million.

11.40. The assessed Salaries & Wages costs for the FY 2020-21 i.e. Rs.762 million, shall be considered as the reference cost for working out future Salaries & Wages expenses of Distribution function, in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

<u>Additional Hiring</u>

11.41. Regarding additional recruitment, the Authority observed that Salaries & Wages cost for the FY 2019-20, as per the 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.

<u>Hiring for MIRAD</u>

11.42. 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 in near future. 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-term demand forecasting, transmission planning, and overseeing legal and regulatory affairs.

11.43. 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.

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<u>Post-retirement benefits</u>

11.44. On the issue of Post-retirement benefits, 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.

11.45. However, despite these repeated directions, no updates regarding creation of the separate Fund or otherwise has been provided by the Petitioner either in its Petition or during the hearing. In view thereof, the Authority has decided to take-up this matter with the Petitioner through legal / M&E department owing to its consistent non-compliance.

11.46. The Authority is also cognizant of the fact that payment of postretirement benefits to the retired employees is a compulsory obligation of the Petitioner which can be best fulfilled through a separate postretirement Fund having sufficient funds. However, failure of the Petitioner to create a Fund or deposit the amount of already collected provision of postretirement benefits into the Fund, would not absolve the Petitioner from its responsibility in this regard.

11.47. In view thereof, the Authority has decided to considered the amount of actual payments as per the 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.1,435 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.

11.48. 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 Supply of Power function works out as Rs.7 million. At the same time the Petitioner is again directed to create a separate Fund for its post-retirement benefits and deposit the amount of already collected provision of postretirement benefits into the Fund.

11.49. **For other O&M Expenses including travelling & transportation**, 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 keeping in view the cost as per the accounts of the Petitioner for the FY 2019-20, and the request of the Petitioner has assessed the other O&M expenses as Rs.642 million for both the Distribution and Supply of Power Function for the FY 2020-21.

11.50. Since the 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

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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.37 million.

11.51. The assessed Other O&M cost for the FY 2020-21 i.e. Rs.37 million, shall be considered as the reference cost for working out future repair and maintenance expenses for its Supply function, in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

11.52. By considering the figures as per the financial statements/ request of the Petitioner, 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.

<u>RORB</u>

12. Regarding RoRB the Petitioner has submitted the following Calculation for FY 2020-21 to 2024-25;

Rs. Mln

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Opening Fixed Asset in operation	53	54	55	56	57
Transferred during the year	1	1	1	1	1
Closing Fixed Assets in operation	54	55	56	57	59
Less Cumulative Depreciation	18	24	30	35	41
Net Fixed Assets in Operation	36	31	27	22	17
Closing Capital Work in Progress	-	-	-	-	-
Total Assets	36	31	27	22	17
Regulatory Rate Base	36	31	27	22	17
Average ROR	36	36	37	38	39

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12.1. Regarding projection of WACC the Petitioner has submitted the following;

- ✓ NEPRA allowed WACC to SEPCO 15.02% in its tariff determination for FY 2019-20. It comprise cost of debt and cost of equity.

<u>Average Rate of Return (ROR):</u>

- ✓ Average ROR is kept at 15.02% as cost of capital as allowed by NEPRA for the FY 2019-20.
    - o Ke=RF + (RM – RF) x β
      = 13.7687% + (15% x 1.1) = 15.12%
    - o The cost of debts; kd = 15.02%
- ✓ WACC = [Ke x (E/V)] + [kd x (D/V)]
- ✓ Where E/V and D/V are equity and debt ratio respectively taken as 30% & 70%.

12.2. 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;*

12.3. 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.

12.4. 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%.

12.5. 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.

12.6. 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.

12.7. 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.

12.8. 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

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9.03% i.e. 3 Months KIBOR of 7.03% as of 3rd July 2020 plus a spread of 2.00% *(200 basis points).*

12.9. 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%

Treatment of Capital Work in Progress (CWIP) while calculating the RoRB

12.10. 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;

Energy Regulators Regional Association (ERRA) Practices for RAB

12.11. 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

12.12. 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.

12.13. 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.

12.14. 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	35,600	36,301
Addition	701	1,061
Fixed Assets C/B	36,301	37,362
Depreciation	17,196	18,596
Net Fixed Assets	19,105	18,766
Capital WIP C/B	-	-
Fixed Assets Inc. WIP	19,105	18,766
Less: Deferred Credits	13,171	12,979
Total	**5,933**	**5,787**
RAB		**5,860**
WACC		10.66%
RORB		**625**
Capital WIP C/B		8,614
Equity Portion of CWIP 30%		2,584
ROE on CWIP		374
Total RORB		**999**

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12.15. 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 entire amount of RORB i.e. Rs.2 million for the FY 2020-21 has been allocated to the Supply of Power Function.

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

12.17. The Authority from the annual accounts of the Petitioner for the FY 2019-20, has again observed that the Petitioner as per its accounts has insufficient cash balance as on 30th June 2020, 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.

12.18. 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 2020-21, after excluding therefrom the cash/ bank balances and the amount of stores & Spares available with the Petitioner as on June 30, 2020.

Depreciation

12.19. Regarding Depreciation projected cost the Petitioner submitted that the depreciation of assets is provided in accordance with the accounting policy of the Company. The details are provided as below;

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Depreciation (Million Rs.)	6	6	6	6	6

12.20. 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.

12.21. 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.41,324 million. Accordingly, the depreciation charge for the FY 2020-21 has been assessed as Rs.1,400 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.

12.22. 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.608 million for the FY 2020-21. Accordingly, the consumers would bear net depreciation of Rs.791 million.

12.23. The actual depreciation reflected in the 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 of Rs.5 million for the FY 2020-21 has been allocated to the Supply of Power function.

12.24. The reference expense determined for the FY 2020-21 would be adjusted annually as per the mechanism provided in the instant determination.

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Other income

12.25. With regards to other income, the Petitioner submitted the following projections as stated below;

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Other Income (Million Rs.)	98	99	99	99	100

12.26. These figures will be further explained by the petitioner during the hearing.

12.27. 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.

12.28. 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 assessed Rs.1,157 million as Other Income of the Petitioner for the FY 2020-21, which does not include late payment charge but includes amortization of deferred credit.

12.29. 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.

12.30. 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 Supply of Power Function works out as Rs.98 million, to be adjusted during the MYT control period as per the adjustment mechanism prescribed in the instant determination.

13. **Adjustment Mechanism:**

13.1. The Petitioner regarding adjustment mechanism proposed the following during hearing;

O&M Rev= [O&M Ref (Controllable Cost) * {1+(ΔCPI-X)] + Uncontrollable Cost (Actual)

Where:-

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

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

CPI = Change in Consumers Price Index published by Pakistan Bureau of Statics

latest available on 1st july against CPI of the Reference Year in term of %

X = Efficiency factor

13.2. The Petitioner although has proposed to adjust the controllable O&M costs with CPI – X factor, however, nothing has been submitted regarding value of X-Factor. Similarly, no break-up of costs in terms of controllable or uncontrollable items has been provided.

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13.3. 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 accounts of the Petitioner for the FY 2019-20 and the request of the Petitioner, 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.

13.4. 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 to be adjusted with efficiency factor "X", however, no value of X has been proposed by the Petitioner. The Authority, therefore, in line with its decisions in the matter of XWDISCOs which have been allowed MYTs, 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.

13.5. The Authority also 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. Accordingly, the Authority prescribes the following mechanism for adjustment of costs allowed as part of Supply of Power Function, during the MYT control period;

Salaries & Wages and Post-retirement Benefits;

13.6. 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.

Post-retirement benefits

13.7. Similarly, the allowed amount of post-retirement benefits would 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.

O&M Costs

13.8. Regarding O&M costs, the reference costs 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;

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

RORB

13.9. 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)

13.10. 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.

13.11. 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. This addresses the concern of the Petitioner to recalculate WACC for changes in input parameters. 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 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.

Depreciation Expenses

13.12. 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

13.13. 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

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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.

Other Income

13.14. 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.

Taxation

13.15. The Petitioner has also requested certain amounts under the head of taxation during the MYT control period as under, however, no justification/ workings of the requested amount has been provided.

Mln. Rs.

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Taxation	127	127	991	1,189	1,486

13.16. Regarding Taxation, 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

Prior Year Adjustment (PYA)

13.17. The Petitioner has not requested any amount on account of Prior Year Adjustments (PYA).

13.18. The Authority, however, understands that the Prior Year Adjustment includes the impact of variation in the following;

- ✓ Difference between the actual PPP billed and the amount recovered by the DISCO.
- ✓ Difference between the assessed DM and the amount actually recovered.
- ✓ Difference between the previously assessed PYA/ quarterly adjustment and the amount actually recovered.
- ✓ Difference between actual other income and the amount allowed
- ✓ Variation due to Sales Mix

13.19. It is important to highlight that variation between the PPP billed to DISCOs by CPPA-G and the amount recovered by the DISCOs are being accounted for separately through

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Quarterly/Bi-Annual Adjustment mechanism, therefore, the PYA only includes only the remaining components.

13.20. The Authority is also cognizant of the fact that for the FY 2020-21, for which the assessment is being made has already lapsed, therefore, while calculating the PYA of the Petitioner, the Authority has also included therein the impact of under/ over recovery of the assessed DM for the FY 2020-21.

13.21. Based on the discussion made in the preceding paras, the PYA of the Petitioner has been worked out as under;

Description	Rs. Mln SEPCO
1st & 2nd Qtr. FY 2018-19	
Allowed Amount	6,593
Qtr. Rs./kWh	1.5680
Recovered	6,876
Under/(Over) Recovery	(283)
3rd & 4th Qtr. FY 2018-19	
Allowed Amount	3,462
Qtr. Rs./kWh	1.0291
Recovered	3,425
Under/(Over) Recovery	37
Interim D.M FY 2018-19	
Allowed Amount	882
Qtr. Rs./kWh	0.2622
Recovered	873
Under/(Over) Recovery	9
1st Qtr. FY 2019-20	
Allowed Amount	2,367
Qtr. Rs./kWh	0.7038
Recovered	2,289
Under/(Over) Recovery	78
Distribution Margin FY 2019-20	
Allowed	8,817
Recovered	7,602
Under/(Over) Recovery	1,215
Other Income FY 2019-20	
Allowed	(1,084)
Actual	(1,134)
Under/(Over) Recovery	(50)
Sales Mix Variances	
FY 2019-20	1,755
	1,755
Distribution Margin FY 2020-21	
Allowed	8,817
Recovered	7,681
Under/(Over) Recovery	1,136
Total Prior Period Adjustment	3,895

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13.22. 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.

13.23. After considering all the aforementioned factors, the Authority observed that the Petitioner has retained a net amount of Rs.400 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.

13.24. 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.400 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.

13.25. Here it is pertinent to mention that the impact of under/ over recovery of quarterly adjustments for the FY 2018-19 and 1st quarter of the FY 2019-20 has been worked out based on total units i.e. without adjusting the impact of life line units as DISCOs have neither submitted their workings in this regard nor provided break-up of category wise units sold for the period. In view thereof, the Petitioner is directed to provide its working in the matter along-with break-up of units sold for each category for the period from FY 2019-20 till FY 2021-22, for consideration of the Authority. Any adjustment in this regard would be adjusted subsequently as PYA.

14. <u>Whether the requested Financial Charges are justified?</u>

14.1. Regarding requested financial charges, the Petitioner has submitted the following figures in its Petition as mentioned below;

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Finance Cost (Rs./kWh)	1.59	0.56	0.54	0.44	0.4

14.2. The Petitioner during the hearing submitted that it booked as Equity (Against Markup) for the FY 2019-20 amounting to Rs.1,564 Million and now New Debit notes on account of markup have been issued of Rs.824 Million.

14.3. It also stated that as per decision of the Ministry of Finance, since this amount has been paid on behalf of the DISCO's, therefore each DISCO is required to acknowledge the expense incurred and book the same as the equity on loan of Rs.7.4 Billion, 25 Billion and 30 Billion. As per the decision of ECC dated 07-06-2017, to SEPCO for booking of the same as liability in SEPCO books on account of long term loans. These TFC's carry interest of Kibor plus a spread of 1% to 3.5% and the Authority is requested to allow the same to SEPCO.

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14.4. The Authority observed that this issue is being pleaded by XWDISCOs since long and the Authority has already adjudicated on the issue in detail and with reasonable clarity in the tariff determination of the Petitioner for the FY 2015-16, and in the subsequent tariff determinations. The Petitioner has failed to provide any new evidence or reason to substantiate its aforementioned claim, which could formulate the basis for the Authority to reconsider its earlier decision in this regard; therefore, the request of the Petitioner is declined.

15. <u>Whether the requested provision for bad debt is justified?</u>

15.1. The Petitioner has submitted that the socio-economic condition of the consumers of SEPCO's area of service is very poor. The capability of payment utility bills is weak. The Petitioner further stated that the overall recovery position of consumer end-tariff of SEPCO is as under:-

Period	Billing [Rs. In M]	Collection [Rs. In M]	%age of Collection
FY 2019-20	47,256	27,607	58%
FY 2018-19	42,110	26,923	64%
Inc/Dec:	5,146	684	-6%

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15.2. The Petitioner during the hearing submitted that provision is made on the basis of aging formula approved by BoD SEPCO & agreed with the auditors. The main reason for provision is the worst law and order situation and Administration & Political obligations don't allow to take severe action against the defaulters. It also submitted that disconnections creates law and order situation in the shape of road blockage and attacks on SEPCO staff, Grid Stations & Offices. In view thereof, the Petitioner has requested to allow provision of bad debts of Rs.1,687 million, Rs.2,332 million, Rs.3,302 million, Rs.3,963 million and Rs.4,953 million for FY 2020-21 to FY 2024-25 respectively.

15.3. Here it is pertinent to mention that the Authority in its Redetermination decision dated September 18,2017, pertaining to tariff petitions of DISCOs for the FY 2015-16, allowed an amount of Rs.2,009 million to the Petitioner as Write-Offs on provisional basis subject to fulfilment of the given criteria. The Authority also decided that in case the Petitioner fails to actually write off the allowed amounts, as per the given criteria, and required evidence is not provided, the provisionally allowed amount shall be adjusted back subsequently. The tariff for the FY 2015-16 was notified by the Federal Government w,e.f. March 22, 2018, therefore, DISCOs were required to complete the process of Write-Offs till March21, 2019.

15.4. The Petitioner did not make any write offs as per the given criteria. The Authority accordingly adjusted back the amount of write-offs allowed to the Petitioner in its tariff determination for the FY 2019-20 as part of PYA.

15.5. The Authority has also noted that recovery position of the Petitioner has not shown any major improvement over the years. Further, the impact of any under recoveries of the Petitioner owing to its own inefficiencies cannot be passed on to the paying consumers. In view of the above discussion and the fact that the Petitioner has failed to write-offs the provisionally allowed amount as per the specified criteria, the instant request of the

Petitioner to allow provision for bad debts, without any actual write-offs as per the criteria, does not merit consideration and hence disallowed.

16. **Whether the existing fixed charges applicable to different consumer categories needs to be revised and requires any changes in mechanism for charging of such charges based on Actual MDI or Sanction Load or otherwise?**

16.1. The Petitioner during the hearing submitted that changes in mechanism for charging of MDI fixed Charges may not be imposed on Commercial connections because they are already facing financial problems due to COVID-19. Imposition of MDI Fixed Charges to Commercial connections to compel them to switch over solar or other alternate source of energy. This can cause reduction of heavy commercial connections to very small company such as SEPCO. The MDI charges may be imposed on exceeding the limit of sanctioned load. It will increase industrial connections and suppress to switching over to alternate source of energy.

16.2. The Authority noted that other DISCOs also during proceedings of their tariff petitions supported applicability of fixed charges based on sanctioned loads.

16.3. The Authority also noted that as per the decision dated 01.11.2021 in the matter of Wheeling Costs to be included in the Tariff Determination of DISCOs, it was decided as under;

"Hybrid BPC

12.1. In future tariff determinations of DISCOs, for Hybrid BPCs, fixed charges shall be levied based on their sanctioned load or actual MDI, whichever is higher and will be applicable on such BPCs who retain DISCOs as deemed supplier. In the meanwhile, based on the above formula, NEPRA will determine it on case to case basis."

16.4. The Authority observed that as per the current tariff structure, certain consumer categories like Commercial, Industrial, Bulk and Agriculture are levied fixed charges, which are based on their actual MDI for the month. The Authority considers that the capacity charges of generation companies which are fixed in nature, as it has to be paid based on plant availability, are charged to DISCOs based on the actual MDIs of DISCOs. However, the present consumer end tariff design is of volumetric nature whereby major portion of the cost is charged / recovered from the consumers on units consumed basis i.e. per kWh and only a small amount is recovered on MDIs basis from the consumers.

16.5. In view of the above discussion, decision of the Authority dated 01.11.2021 in the matter of wheeling and to ensure that Hybrid BPCs, who keep DISCOs connection as backup, also share portion of the fixed costs, the Authority has decided to change the mechanism for levying of monthly fixed charges to various categories of consumers. The Fixed charges shall now be charged, based on 50% of the sanctioned load or actual MDI for the month, whichever is higher. However, in such cases, no minimum monthly charges would be billed even if no energy is consumed. The Authority has also decided to increase the rate of fixed charges currently applicable to certain categories i.e. from Rs.400/kW/M, 420/kW/M and 440/kW/M to Rs.440/kW/M, 460/kW/M, and 500/kW/M respectively. At the same time, the Authority not to overburden such consumers who are levied fixed charges, has adjusted

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their variable rate, to minimize the impact of increase in fixed charges.

16.6. Here it is pertinent to mention that Rs.48,494 million and Rs.4,445 million is the share of the Petitioner on account of CpGenCap and UoSC (NTDC/ HVDC) & Market Operator Fee respectively for the FY 2022-23. The overall fixed charges comprising of CpGenCap and UoSC (NTDC/HVDC) & Market Operator Fee in the instant case works out as Rs.52,939 million, which translate into Rs.4,350/kW/month, based on projected average monthly MDI of the Petitioner However, Fixed charges being billed to consumers is Rs.440/kW/M, 460/kW/M, and 500/kW/M for different categories based on 50% of the sanctioned load or actual MDI for the month, whichever is higher, which is around 11% of total projected fixed charges to be charged to the Petitioner by CPPA-G.

16.7. Here it is also pertinent to mention that once the CTBCM becomes operational, the Hybrid BPCs shall be treated in accordance with the prevailing Regulations at that time.

17. <u>Whether there should be any amendment in Terms and Conditions of Tariff (For Supply of Electric Power to Consumers by Supply Licensees) keeping in view the changes in Consumer Service Manual?</u>

17.1. The Authority observed that certain amendments have been approved in the NEPRA CSM, regarding extension of load for B-3 & C-2 from 5MW upto 7.5MW, after following due process of law. The same amendments are also required to be incorporated in the Tariff determination of DISCOs. Accordingly, the following changes are being made in the Terms & Conditions of Tariff;

"Considering the fact that the Authority, through CSM, has already allowed extension in load beyond 5MW upto 7.5MW whose connection is at least three (3) years old, therefore, for such consumers the applicable tariff shall remain as B-3 or C-2 as the case may be. However, while allowing extension in load, the DISCOs shall ensure that no additional line losses are incurred and additional loss, if any, shall be borne by the respective consumers."

18. <u>Electric Vehicle Charging Stations</u>

18.1. In order to provide an enabling regulatory regime for the Electric Vehicle Charging Stations ("EVCS") that would supplement the introduction and promotion of Electric Vehicles ("EV") in Pakistan, and provide a strong base for the growth of the EV charging infrastructure to support the development of this industry. The charging services for EV is going to involve setting up a dedicated facility that would require a dedicated infrastructure including AC/DC conversion, conductive charging system, charging connectors, plugs, inlets and socket outlets, cables, protection system and dedicated electricity supply system with dedicated connection and transformer.

18.2. Here it is pertinent mention that the National Electric Vehicle Policy 2019 requires the following;

"NEPRA shall develop a policy to enact EV tariffs and to ensure compliance with EV standards and specifications. The foremost of which are safety standards for EVs."

18.3. The Authority in view thereof, in exercise of powers under section 7 read with section 31

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of NEPRA Act read with 3(1) of NEPRA Tariffs (Standards & Procedure) Rules, 1998 carried out proceedings to amend the terms and condition of XWDISCOs and KE's tariff for this purpose. During the proceedings the issues regarding tariff to be charged from electric vehicles by EVCS along-with proposed amendments in the tariff Terms & conditions for the purpose was discussed in detail.

18.4. Based on the outcome of the proceedings, the Authority has decided as under;

Amendment in Tariff Terms & Conditions

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- ✓ In A-2 Commercial "1", following is added at the end;

  "ix) Electric Vehicle Charging Stations"

- ✓ In A-2 Commercial "2", following is added;

  "Electric Vehicle Charging Stations shall be billed under A-2(d) tariff i.e. Rs./kWh for peak and off-peak hours. For the time being, the tariff design is with zero fixed charges, however, in future the Authority after considering the ground situation may design its tariff structure on two part basis i.e. fixed charges and variable charges."

- ✓ In addition in A-2 Commercial, following is added;

  "The Electric Vehicle Charging Station shall provide "charging service" to Electric Vehicle with a maximum cap as determined by the Authority from time to time. For the time being the Cap has been determined as Rs.50/kWh. The EVCS shall be billed by DISCOS under A-2(d) tariff. However, monthly FCAs either positive or negative shall not be applicable on EVCS."

Addition in Schedule of Tariff

- ✓ In Schedule of Tariffs (SoTs), under A-2 General Supply Tariff - Commercial, a new tariff i.e. A-2(d) – Electric Vehicle Charging Station is added.

19. Whether the existing Tariff Terms and Conditions needs to be modified, especially with reference to the request of Telecom companies to charge "B Industrial Supply" Category tariff instead of "A-2 Commercial" category tariff?

19.1. 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".

19.2. In view thereof, in the instant tariff adjustment requests of the Petitioner, the subject matter is being discussed as a separate issue.

19.3. The Petitioner during the hearing submitted that Telecom sector is only providing the services to consumers not value addition, therefore A-2 commercial is accurate, and there is no need of modification in tariff terms and conditions with reference to the request of telecom companies.

19.4. Telecom companies in their comments/ Intervention Requests have submitted that 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.

19.5. M/s NAYAtel and M/S PTCL both submitted that in line with the Telecom Policy of 2004, the Federal Government was pleased to declare Telecom sector including Cellular Operators as an "Industry" with immediate effect vide Gazette Notification dated 20.04.2004, issued by the Ministry of Industries and Production, Government of Pakistan.

19.6. The Ministry of Information Technology vide UO dated 16.06.2014 also endorsed the request of the Telecom Sector including CMOs to be classified as Industrial Undertaking under clause (b) of Section 2(29C) of the Income Tax Ordinance 2001.

19.7. In view of the above, it has been submitted that telecom companies along with other CMO's as an "Industrial Undertaking", so that "Industrial Tariff is applied across the board to the Telecom Sector companies in Pakistan instead of "Commercial Tariff". Accordingly, it has been requested that issue of applicability of "Industrial Tariff on Telecom Sector may be addressed and determined by the Authority, while determining the Uniform Tariff for DISCOs throughout Pakistan, including the current MYT indexation request of IESCO.

19.8. Ministry of IT &T vide its letter dated 18.06.2014 addressed to FBR, submitted the following;

> *".... MoIT endorses the request of Telecom Industry, including Mobile Cellular Operators (CMOs) to be classified as "Industrial Undertaking" under clause (b) of section 2 (29C) of the Income Tax Ordinance 2001.*
>
> *We will appreciate if the issue is examined and finalized in light of the aforementioned Cabinet decision and the subsequent notification issued in this regard by the Ministry of Industries & Production."*

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19.9. The Ministry of Information Technology and Telecommunication, vide letter dated 29.04.2020, while referring to the meeting of the Committee on issues of CMOs constituted by the Prime Minister, held on 13.04.2020 stated that like any high tech industry, Telecom Operators use electricity for their infrastructure i.e. Data Centers, exchanges, points of presence (POPs), BTSs, Mobile Switching centers, Base Station Controllers (BSCs) etc. MoIT&T accordingly requested NEPRA to implement the Government orders.

19.10. DISCOs during the hearing submitted that as per tariff terms and conditions industrial connections required motive load and Telecom companies does not fall under this category of tariff.

19.11. The Ministry of Energy (MoE) vide comments dated 02.08.2021, submitted that the government has extended various reforms, packages & incentives, inter alia; Circular Debt Management Plan (CDMP), facilitative Ease of Doing Business architecture, strategizing increase in sales to high value consumer classes, Industrial Support package (ISP), flat peak & off-peak tariff scheme for industrial units and Zero-Rated Industrial (ZRI) package. Industrial tariff is applicable to the industries production facilities and the warehouses, which are used to transmit the products to the retailer/ distribution network, are considered as commercial value addition. Telecom companies being engaged in provision of telecom services through retail/ distribution network infrastructure, may be treated as commercial value-added activity for which consumer has to pay and, therefore, the same may be continued to be served electricity under commercial tariff category. In view of above, it has been submitted that any consideration of the Authority for the relocation of telecom companies from commercial category to industrial category may not be aligned with the economic objectives underlying the various industrial packages/concessions in field. Moreover, this relocation will result in the revenue gap and put extra burden on other consumers or fiscal space.

19.12. The Ministry of Finance (MoF) vide comments dated 30.07.2021, submitted that Telecom Companies/Cellular Mobile Companies Operators are basically involved in commercial activities and electricity cost is a pass through item. Further, Telecom Companies/Cellular Mobile Companies Operators fix their consumer end tariff without consulting the Regulator. Therefore, Finance Division is further of view that electricity supply to these companies for their infrastructure units under the category "A-2 Commercial" may be continued and they may not be considered for supply of electricity under the tariff category "B-2 Industrial Supply".

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19.13. Here it is pertinent to mention that subsequent to the aforementioned Intervention Requests and Comments from the Telecom companies, separate tariff petitions have also been filed by M/s PTCL, M/s Telenor and M/s Pak Telecom Mobile Company (Ufone) Limited for change in tariff category of Telecom Operators from Commercial to Industrial.

19.14. Since the said Petitions are under consideration of the Authority, therefore, the Authority has decided to issue a separate additional decision on the issue once the proceedings on the aforementioned petitions are completed.

20. <u>Whether there should any Fixed Charges on Residential & General Services Consumers, having net metering facility?</u>

20.1. The Petitioner during the hearing submitted that sufficient Electricity is available against demand. SEPCO pay huge amount against capacity charges. Net metering has caused more electricity supply to SEPCO which is also already facing over supply issue. In order to control the net metering fixed charges may be imposed on net metering facility.

20.2. The Authority observed that the net metering regime is presently at a nascent stage as current installations are a negligible portion of total generation capacity of the power system, therefore, decided not to levy any fixed charges on Residential and General services net metering consumers.

20.3. However, considering the steep rise in the Power Purchase cost of electricity coupled with stability in the prices of installing DG facilities, the Authority has decided to initiate proceedings for amendment in NEPRA (Alternative and Renewable Energy) Distributed Generation and Net Metering Regulations, 2015, for change in tariff payable by DISCOs to net metering consumers for excess energy delivered in the system.

<u>Upfront Indexation/adjustment for the FY 2021-22 and FY 2022-23</u>

20.4. 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.

20.5. 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.

20.6. The Authority considers that, after taking into account all the adjustments and assessments, as discussed in the instant determination, if the Petitioner still earns extra profits the same will be shared with the consumers and the Petitioner equally.

21. <u>Order</u>

21.1. 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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Supply of Power (SOP)

Description	Unit	FY 2020-21 SOP	FY 2021-22 SOP	FY 2022-23 SOP
Units Received	[MkWh]	4,276	4,276	4,577
Units Sold	[MkWh]	3,547	3,532	3,796
Units Lost	[MkWh]	729	745	780
Units Lost	[%]	17.05%	17.41%	17.05%
Energy Charge		24,937	24,937	41,236
Capacity Charge		34,774	34,774	48,494
Transmission Charge/ Market Operator Fee		1,893	1,893	4,445
Power Purchase Price	[Mln. Rs.]	**61,605**	**61,605**	**94,175**
Wire Business Margin		7,796	9,214	11,075
Power Purchase Price with Wire Business		69,400	70,819	105,249
Pay & Allowances		782	956	1,060
Repalcement Hiring		(20)	(25)	(27)
Post Retirement Benefits		7	7	8
Traveling allowance		26	30	32
Vehicle maintenance		5	5	6
Other expenses		5	6	7
O&M Cost	[Mln. Rs.]	**805**	**980**	**1,086**
Depriciation		5	6	6
RORB		2	2	4
O.Income		(98)	(105)	(105)
Margin	[Mln. Rs.]	**714**	**883**	**991**
Prior Year Adjustment		3,895	3,895	3,895
Revenue Requirement	[Mln. Rs.]	74,010	75,597	110,136
PPP with Wire Business -Unadj.				
PPP with Wire Business -Adjusted		19.56	20.05	27.72
Margin		0.20	0.25	0.26
PYA Adjustments		1.10	1.10	1.03
Average Tariff	[Rs./kWh]	**20.86**	**21.40**	**29.01**

21.2. 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
Power Purchase Price	The Authority, keeping in view of any abnormal changes may review Power Purchase Price references along with any Quarterly adjustment	
Fuel Cost	Monthly, as per the approved mechanism. Impact of FCA on T&D losses would be adjusted on Quarterly basis	Data to be provided by CPPA (G) by close of the month
Variable O&M	Quarterly, as per the approved Quarterly adjustment mechanism.	Request to be furnished by the Petitioner not later than a period of 07 Days on Quarterly basis.
Capacity Charges	Quarterly, as per the approved Quarterly adjustment mechanism.	Request to be furnished by the Petitioner not later than a period of 07 Days on Quarterly basis.
Transmission (UOSC) & MOF Charges	Quarterly, as per the approved Quarterly adjustment mechanism.	Request to be furnished by the Petitioner not later than a period of 07 Days on Quarterly basis.
Margin		
Salaries, Wages & Benefits	Annually as per the 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 mechanism given in the decision	
KIBOR	Bi-Annually, as per the decision	
Return on Equity (ROE)	No adjustment allowed over Reference ROE	
Spread	As per the mechanism in the decision	

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

21.3. Sukkur Electric Power Company Limited (SEPCO), being a distribution licensee, is allowed to charge its consumers, the following "Use of system charge" (UOSC) for the FY 2022-23;

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Description	For 132 kV only	For 11 kV only	For both 132kV & 11 kV
Asset Allocation	24.49%	43.81%	68.30%
Level of Losses	1.49%	11.25%	12.57%
UoSC Rs./kWh	0.66	1.34	2.09

21.4. 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,

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

21.6. 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;

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

21.8. 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.

21.9. 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.

21.10. The Authority may review the tariff applicable to each class of consumers for rationalization or modification along-with their terms & conditions from time to time as deemed appropriate, to ensure the revenue requirement of the Petitioner.

21.11. The Authority considers that, after taking into account all the adjustments and assessments, as discussed in the instant determination, if the Petitioner still earns extra profits the same will be shared with the consumers and the Petitioner equally.

21.12. Direction given in Distribution function tariff determination along-with investment annexure are reproduced in the instant determination as well.

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

22.1. 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 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

ii. 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.

iii. To provide the detail of PEPCO fee claimed and allowed in tariff till June 30, 2021 in its subsequent tariff adjustment/indexation request.

iv. To create a separate Fund for its post-retirement benefits and deposit the amount of

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already collected provision of postretirement benefits into the Fund.

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

vi. To provide its working of under/(over) recovery of quarterly adjustments, along-with break-up of units sold for each category for the period from FY 2019-20 till FY 2021-22, for consideration of the Authority. Any adjustment in this regard would be adjusted subsequently as PYA.

vii. To prioritize its investments claimed under STG, DOP and ELR etc. In this respect, 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. The main components would include STG, DOP, ELR and Commercial Improvement.

viii. 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 SEPCO in this respect.

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

x. To share project-wise details including utilization of amounts vis-a-vis performance improvement, particularly in the aforementioned areas.

xi. To submit a concrete plan regarding the reduction of AT&C Losses & exemption of 11kV feeders from load shedding.

xii. To carry out load shedding in accordance with Rule 4 (f) of Performance Standard (Distribution) Rules, 2005. The criteria being followed by SEPCO is a clear violation of NEPRA Laws and has never been recognized by NEPRA.

xiii. To eliminate all such constraints by taking immediate measures and help from local government and submit a detailed compliance report to NEPRA in this regard

xiv. To submit the details of curative measures taken to tackle the future demand and removal of constraints and to provide detail of projects along with timelines and benefits to be accrued that will be achieved.

xv. To utilize maximum amounts under the investment head as allowed by NEPRA in its tariff determinations to achieve further improvement in KPIs.

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

xvii. To improve the loading position of Power Transformers, Distribution Transformers and 11kV Feeders and submit the detail for last three years.

xviii. To clear all pendency and install TOU meters within one month and submit a compliance report in this regard.

xix. To submit a plan for the installation of AMR meters at least on PMT level in its service territory.

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.

xxi. To take all the possible preventive measures to ensure no fatal accidents occur in future and improve its HSEQ performance. Detail objectives/targets of HSE are attached as Annex-A for compliance.

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

xxiii. 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.

xxiv. 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.

xxv. 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.

xxvi. 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.

xxvii. 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.

xxviii. MIRAD shall be adequately staffed at all times as per the approved organochart for effective and efficient performance of its functions. 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.

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xxix. DISCO shall ensure Data Standardization for load forecasting and coordinate with PITC for auto retrieval and analysis of data for demand forecasts and use a software based on a modern language instead of Fox-Pro based software for accurate and reliable demand forecasts.

xxx. MIRAD shall undertake an exercise to identify and accurately use the data of captive consumers in the demand forecasts and ensure better coordination with local agencies/housing colonies/industrial consumers for potential upcoming demand for better and reliable demand forecasts.

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

23. The determination of the Authority along-with annex-I,I-A,II,III, IV, V, A, B, C and D, 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 2/6/22

Engr. Maqsood Anwar Khan
Member

Tauseef H. Farooqi
Chairman

(x) My additional note is attached herewith..

2/6/22

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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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Annex-I

FUEL PRICE ADJUSTMENT MECHANISM

Actual variation in fuel cost component against the reference fuel cost component for the corresponding months will be determined according to the following formula

Fuel Price variation = Actual Fuel Cost Component - Reference Fuel Cost Component

Where:

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

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

Reference fuel cost component is the fuel cost component for the corresponding month projected for the purpose of tariff determination as per Annex-IV of the determination;

The fuel price adjustment determined by the Authority shall be shown separately in the bill of the consumer and the billing impact shall be worked out on the basis of consumption by the consumer in the respective month.

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QUARTERLY ADJUSTMENT MECHANISM

Quarterly adjustment shall be the Actual variation in Power Purchase Price (PPP), excluding Fuel Cost Component, against the reference Power Purchase Price component and the impact of T&D losses on FCA, for the corresponding months and shall be determined according to the following formula;

Quarterly $PPP_{(Adj)} = \underline{PPP_{(Actual)} \text{ (excluding Fuel cost)} - PPP_{(Recovered)} \text{ (excluding Fuel cost)}}$

Where;

$PPP_{(Actual)}$ is the actual cost, excluding Fuel cost, invoiced by CPPA-G to XWDISCOs, adjusted for any cost disallowed by the Authority.

$PPP_{(Recovered)}$ is the amount recovered based on reference rate in Rs./kWh, excluding fuel cost, as per the Annex-IV of the XWDISCOs determination that remained notified during the period.

Impact of T&D losses on FCA

$= \underline{\text{Monthly FCA allowed}_{(Rs./kWh)} \text{ x Actual units Purchase x \% T\&D losses}}$

Where;

Monthly FCA allowed $_{(Rs./kWh)}$ is the FCA allowed by the Authority for the respective months of the concerned period.

T&D Loss % is percentage of T&D losses that remained notified during the period.

The sum of amounts so worked for each month of the Quarter shall be divided by the Projected units to be sold as determined by the Authority to work out Rs./kWh Quarterly adjustment.

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Annex-II

Sukkur Electric Power Company Limited (SEPCO)
Estimated Sales Revenue on the Basis of New Tariff

	Description	Sales		Revenue			Base Tariff		PYA 2021		Total Tariff	
		GWh	% Mix	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Amount	Variable Charge	Fixed Charge	Variable Charge
					Mln. Rs.		Rs./kW/ M	Rs./ kWh	Mln. Rs.	Rs./ kWh	Rs./kW/ M	Rs./ kWh
	Residential											
	For peak load requirement less than 5 kW											
Protected	Up to 50 Units - Life Line	229	6.03%	-	1,145	1,145		5.00	-	-		5.00
Protected	51-100 units - Life Line	19	0.51%		392	392		20.27	20	1.05		21.32
Protected	01-100 Units	206	5.44%	-	4,803	4,803		23.27	223	1.08		24.35
Protected	101-200 Units	90	2.36%	-	2,267	2,267		25.27	97	1.08		26.35
Un-Protected	01-100 Units	240	6.32%		6,211	6,211		25.89	259	1.08		26.97
Un-Protected	101-200 Units	291	7.67%		8,470	8,470		29.08	315	1.08		30.16
Un-Protected	201-300 Units	645	16.98%	-	19,079	19,079		29.59	696	1.08		30.67
Un-Protected	301-400 Units	198	5.20%	-	6,092	6,092		30.83	215	1.09		31.92
Un-Protected	401-500 Units	137	3.60%		4,270	4,270		31.27	150	1.10		32.37
Un-Protected	501-600 Units	78	2.06%		2,524	2,524		32.27	86	1.10		33.37
Un-Protected	601-700Units	89	2.34%		2,953	2,953		33.27	98	1.10		34.37
Un-Protected	Above 700 Units	215	5.66%	-	7,367	7,367		34.27	236	1.10		35.37
	For peak load requirement exceeding 5 kW)	0										
	Time of Use (TOU) - Peak	3	0.08%	-	105	105		33.27	3	1.10		34.37
	Time of Use (TOU) - Off-Peak	16	0.43%	-	426	426		25.89	18	1.10		26.99
	Temporary Supply	0	0.00%	-	0	0		34.27	0	1.10		35.37
	Total Residential	**2,456**	**64.70%**	-	**66,103**	**66,103**			**2,417**			
	Commercial - A2											
	For peak load requirement less than 5 kW	109	2.86%	-	3,288	3,288		30.25	120	1.10		31.35
	For peak load requirement exceeding 5 kW											
	Regular	15	0.40%	14	434	448	500	28.27	17	1.12	500	29.39
	Time of Use (TOU) - Peak	25	0.66%	-	840	840		33.27	29	1.13		34.40
	Time of Use (TOU) - Off-Peak	162	4.25%	442	4,388	4,830	500	27.17	178	1.10	500	28.27
	Temporary Supply	0	0.00%	-	2	2		30.25	0	1.12		31.37
	Electric Vehicle Charging Station	0	0.00%	-	1	1		25.00	-			25.00
	Total Commercial	**311**	**8.19%**	**455**	**8,953**	**9,408**			**343**			
	General Services-A3	**143**	**3.77%**	-	**4,339**	**4,339**		**30.29**	**160**	**1.12**		**31.41**
	Industrial											
	B1	11	0.28%	-	308	308		28.97	12	1.10		30.07
	B1 Peak	8	0.21%	-	267	267		32.86	9	1.10		33.96
	B1 Off Peak	54	1.43%	-	1,456	1,456		26.76	60	1.10		27.86
	B2	15	0.41%	43	447	490	500	28.86	17	1.10	500	29.96
	B2 - TOU (Peak)	46	1.21%	-	1,508	1,508		32.86	50	1.10		33.96
	B2 - TOU (Off-peak)	299	7.86%	904	7,839	8,744	500	26.26	328	1.10	500	27.36
	B3 - TOU (Peak)	9	0.24%	-	303	303		32.86	10	1.10		33.96
	B3 - TOU (Off-peak)	44	1.17%	105	1,226	1,331	460	27.66	49	1.10	460	28.76
	B4 - TOU (Peak)	4	0.10%		130	130		32.86	4	1.10		33.96
	B4 - TOU (Off-peak)	19	0.51%	29	532	560	440	27.46	21	1.10	440	28.56
	Temporary Supply	1	0.01%	-	17	17		31.86	1	1.10		32.96
	Total Industrial	**510**	**13.45%**	**1,081**	**14,034**	**15,115**			**562**			
	Single Point Supply											
	C1(a) Supply at 400 Volts-less than 5 kW	2	0.06%	-	73	73		29.88	3	1.10		30.98
	C1(b) Supply at 400 Volts-exceeding 5 kW	22	0.57%	18	647	665	500	29.68	24	1.10	500	30.78
	Time of Use (TOU) - Peak	11	0.30%	-	375	375		33.27	12	1.10		34.37
	Time of Use (TOU) - Off-Peak	61	1.62%	107	1,636	1,743	500	26.67	67	1.10	500	27.77
	C2 Supply at 11 kV	13	0.35%	14	388	402	460	29.58	14	1.10	500	30.68
	Time of Use (TOU) - Peak	19	0.49%	-	622	622		33.27	21	1.10		34.37
	Time of Use (TOU) - Off-Peak	97	2.55%	144	2,713	2,857	460	28.07	106	1.10	460	29.17
	C3 Supply above 11 kV	0	0.00%	-	-	-	440	29.47	-	1.10	440	30.57
	Time of Use (TOU) - Peak	0	0.00%	-	-	-		33.27	-	1.10		34.37
	Time of Use (TOU) - Off-Peak	2	0.04%	-	44	44	440	27.87	2	1.10	440	28.97
	Total Single Point Supply	**227**	**5.98%**	**283**	**6,498**	**6,781**			**250**			
	Agricultural Tube-wells - Tariff D											
	Scarp	6	0.17%	-	187	187		29.88	7	1.10		30.98
	Time of Use (TOU) - Peak	1	0.04%	-	50	50		33.27	2	1.10		34.37
	Time of Use (TOU) - Off-Peak	8	0.20%	4	202	206	200	26.67	8	1.10	200	27.77
	Agricultual Tube-wells	8	0.22%	3	249	251	200	29.88	9	1.10	200	30.98
	Time of Use (TOU) - Peak	15	0.40%	-	507	507		33.27	17	1.10		34.37
	Time of Use (TOU) - Off-Peak	77	2.04%	142	2,062	2,204	200	26.67	85	1.10	200	27.77
	Total Agricultural	**116**	**3.06%**	**149**	**3,257**	**3,405**			**128**			
	Public Lighting - Tariff G	31	0.82%	-	1,049	1,049		33.57	34	1.10		34.67
	Residential Colonies	1	0.03%	-	41	41		33.87	1	1.10		34.97
	Grand Total	**3,796.22**	**100.00%**	**1,968**	**104,273**	**106,241**			**3,896**			

Note: The PYA 2021 column shall cease to exist after 1 year of notification of the instant decision.

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SCHEDULE OF ELECTRICITY TARIFFS FOR SUKKUR ELECTRIC POWER COMPANY (SEPCO)

A-1 GENERAL SUPPLY TARIFF - RESIDENTIAL

	Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh		PYA 2021 Rs/kWh		Total Variable Charges Rs/kWh	
			A	B		C		D	
	a)	For Sanctioned load less than 5 kW							
Protected	i	Up to 50 Units - Life Line	-	5.00		-		5.00	
Protected	ii	51 - 100 Units - Life Line	-	20.27		1.05		21.32	
Protected	iii	001 - 100 Units	-	23.27		1.08		24.35	
Protected	iv	101 - 200 Units	-	25.27		1.08		26.35	
Un-Protected	v	001 - 100 Units	-	25.89		1.08		26.97	
Un-Protected	vi	101 - 200 Units	-	29.08		1.08		30.16	
Un-Protected	iv	201 - 300 Units	-	29.59		1.08		30.67	
Un-Protected	viii	301 - 400 Units	-	30.83		1.09		31.92	
Un-Protected	ix	401 - 500 Units	-	31.27		1.10		32.37	
Un-Protected	x	501 - 600 Units	-	32.27		1.10		33.37	
Un-Protected	xi	601 - 700 Units	-	33.27		1.10		34.37	
Un-Protected	vi	Above 700 Units	-	34.27		1.10		35.37	
	b)	For Sanctioned load 5 kW & above		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
		Time Of Use	-	33.27	25.89	1.10	1.10	34.37	26.99

As per Authority's decision only protected residential consumers will be given the benefit of one previous slab.

As per Authority's decision, residential life line consumer will not be given any slab benefit.

Under tariff A-1, there shall be minimum monthly customer charge at the following rates even if no energy is consumed.

a) Single Phase Connections: Rs. 75/- per consumer per month
b) Three Phase Connections: Rs. 150/- per consumer per month

A-2 GENERAL SUPPLY TARIFF - COMMERCIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh		PYA 2021 Rs/kWh		Total Variable Charges Rs/kWh	
		A	B		C		D	
a)	For Sanctioned load less than 5 kW		30.25		1.10		31.35	
b)	For Sanctioned load 5 kW & above	500.00	28.27		1.12		29.39	
			Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
c)	Time Of Use	500.00	33.27	27.17	1.13	1.10	34.40	28.27
d)	Electric Vehicle Charging Station		25.00		-		25.00	

Under tariff A-2 (a), there shall be minimum monthly charges at the following rates even if no energy is consumed.
a) Single Phase Connections; Rs. 175/- per consumer per month

Fixed Charges shall be billed based on 50% of sanctioned Load or Actual MDI for the month which ever is higher. In such case there would be no minimum monthly charges even if no energy is consumed.

A-3 GENERAL SERVICES

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	PYA 2021 Rs/kWh	Total Variable Charges Rs/kWh
		A	B	C	D
a)	General Services	-	30.29	1.12	31.41

Under tariff A-3, there shall be minimum monthly charges at the following rates even if no energy is consumed.

a) Single Phase Connections; Rs. 175/- per consumer per month
b) Three Phase Connections: Rs. 350/- per consumer per month

B INDUSTRIAL SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh		PYA 2021 Rs/kWh		Total Variable Charges Rs/kWh	
		A	B		F		D	
B1	Upto 25 kW (at 400/230 Volts)	-	28.97		1.10		30.07	
B2(a)	exceeding 25-500 kW (at 400 Volts)	500.00	28.86		1.10		29.96	
	Time Of Use		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
B1 (b)	Up to 25 KW		32.86	26.76	1.10	1.10	33.96	27.86
B2(b)	exceeding 25-500 kW (at 400 Volts)	500.00	32.86	26.26	1.10	1.10	33.96	27.36
B3	For All Loads up to 5000 kW (at 11,33 kV)	460.00	32.86	27.66	1.10	1.10	33.96	28.76
B4	For All Loads (at 66,132 kV & above)	440.00	32.86	27.46	1.10	1.10	33.96	28.56

For B1 & B1(b) consumers there shall be a fixed minimum charge of Rs. 350 per month.
Fixed Charges shall be billed based on 50% of sanctioned Load or Actual MDI for the month which ever is higher. In such case there would be no minimum monthly charges even if no energy is consumed.

C - SINGLE-POINT SUPPLY

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh		PYA 2021 Rs/kWh		Total Variable Charges Rs/kWh	
		A	B		C		D	
C -1	For supply at 400/230 Volts							
a)	Sanctioned load less than 5 kW	-	29.88		1.10		30.98	
b)	Sanctioned load 5 kW & up to 500 kW	500.00	29.68		1.10		30.78	
C -2(a)	For supply at 11,33 kV up to and including 5000 kW	460.00	29.58		1.10		30.68	
C -3(a)	For supply at 66 kV & above and sanctioned load above 5000 kW	440.00	29.47		1.10		30.57	
	Time Of Use		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
C -1(c)	For supply at 400/230 Volts 5 kW & up to 500 kW	500.00	33.27	26.67	1.10	1.10	34.37	27.77
C -2(b)	For supply at 11,33 kV up to and including 5000 kW	460.00	33.27	28.07	1.10	1.10	34.37	29.17
C -3(b)	For supply at 66 kV & above and sanctioned load above 5000 kW	440.00	33.27	27.87	1.10	1.10	34.37	28.97

Fixed Charges shall be billed based on 50% of sanctioned Load or Actual MDI for the month which ever is higher.

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SCHEDULE OF ELECTRICITY TARIFFS
FOR SUKKUR ELECTRIC POWER COMPANY (SEPCO)
D - AGRICULTURE TARIFF

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh		PYA 2021 Rs/kWh		Total Variable Charges Rs/kWh	
		A	B		C		D	
D-1(a)	SCARP less than 5 kW	-	29.88		1.10		30.98	
D-2 (a)	Agricultural Tube Wells	200.00	29.88		1.10		30.98	
			Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
D-1(b)	SCARP 5 kW & above	200.00	33.27	26.67	1.10	1.10	34.37	27.77
D-2 (b)	Agricultural 5 kW & above	200.00	33.27	26.67	1.10	1.10	34.37	27.77

Under this tariff, there shall be minimum monthly charges Rs.2000/- per consumer per month, even if no energy is consumed.
Note:- The consumers having sanctioned load less than 5 kW can opt for TOU metering.

E - TEMPORARY SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	PYA 2021 Rs/kWh	Total Variable Charges Rs/kWh
		A	B	C	D
E-1(i)	Residential Supply	-	34.27	1.10	35.37
E-1(ii)	Commercial Supply	-	30.25	1.12	31.37
E-2	Industrial Supply	-	31.86	1.10	32.96

For the categories of E-1(i&ii) above, the minimum bill of the consumers shall be Rs. 50/- per day subject to a minimum of Rs.500/- for the entire period of supply, even if no energy is consumed.

F - SEASONAL INDUSTRIAL SUPPLY TARIFF

125% of relevant industrial tariff

Note: Tariff-F consumers will have the option to convert to Regular Tariff and vice versa. This option can be exercised at the time of a new connection or at the beginning of the season. Once exercised , the option remains in force for at least one year.

G- PUBLIC LIGHTING

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	PYA 2021 Rs/kWh	Total Variable Charges Rs/kWh
		A	B	C	D
	Street Lighting	-	33.57	1.10	34.67

Under Tariff G, there shall be a minimum monthly charge of Rs.500/- per month per kW of lamp capacity installed.

H - RESIDENTIAL COLONIES ATTACHED TO INDUSTRIAL PREMISES

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	PYA 2021 Rs/kWh	Total Variable Charges Rs/kWh
		A	B	C	D
	Residential Colonies attached to industrial premises	-	33.87	1.10	34.97

Note: The PYA 2021 column shall cease to exist after One (01) year of notification of the instant decision.

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Annes - IV

Description	July	August	September	October	November	December	January	February	March	April	May	June	Total
Units Purchased by DISCOs (GWh)	562	551	501	350	227	224	223	192	264	403	561	520	4,577

Rs./kWh

Fuel Cost Component	9.7441	9.8934	9.9114	9.1705	6.0762	9.3193	10.5541	7.2120	8.7122	8.3875	7.8281	7.5084	8.7993
Variable O&M	0.2198	0.2179	0.2288	0.2350	0.1599	0.2032	0.2433	0.1906	0.1935	0.2069	0.2031	0.2013	0.2110
Capacity	6.5778	6.9942	7.6294	10.4771	22.1476	16.6120	20.6490	19.2388	12.4014	11.2050	8.4743	7.4747	10.5963
UoSC	0.7102	0.7498	0.7941	1.0181	1.9386	1.4545	1.8482	1.6076	1.1539	0.8850	0.7127	0.6394	0.9712
Total PPP in Rs./kWh	17.2519	17.8552	18.5637	20.9007	30.3222	27.5890	33.2947	28.2491	22.4609	20.6844	17.2181	15.8238	20.5778

Rs. in million

Fuel Cost Component	5,472	5,448	4,969	3,206	1,378	2,084	2,348	1,384	2,304	3,380	4,393	3,904	40,270
Variable O&M	123	120	115	82	36	45	54	37	51	83	114	105	966
Capacity	3,694	3,851	3,825	3,662	5,022	3,716	4,595	3,693	3,279	4,515	4,756	3,886	48,494
UoSC	399	413	398	356	440	325	411	309	305	357	400	332	4,445
Total PPP in Rs./kWh	9,688	9,832	9,307	7,306	6,876	6,171	7,409	5,422	5,939	8,335	9,663	8,227	94,175

It is clarified that PPP is pass through for all the DISCOs and its monthly references would continue to exist irrespective of the financial year, unless the new SOT is revised and notified by the GoP

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Annex-V

TERMS AND CONDITIONS OF TARIFF
(FOR SUPPLY OF ELECTRIC POWER TO CONSUMERS BY DISTRIBUTION LICENSEES)

PART-I

GENERAL DEFINITIONS

The Company, for the purposes of these terms and conditions means Sukkur Electric Power Company (SEPCO) engaged in the business of distribution/supply of electricity within the territory mentioned in the licence granted to it for this purpose.

1. "Month or Billing Period", unless otherwise defined for any particular tariff category, means a billing month of 30 days or less reckoned from the date of last meter reading.
2. "Minimum Charge", means a charge to recover the costs for providing customer service to consumers even if no energy is consumed during the month.
3. "Fixed Charge" means the part of sale rate in a two-part tariff to be recovered on the basis of "Billing Demand" in kilowatt on monthly basis.
4. "Billing Demand" means the 50% of the sanction load or Actual maximum demand recorded in a month, whichever is higher, except in the case of agriculture tariff D2 where "Billing Demand" shall mean the sanctioned load.
5. "Variable Charge" means the sale rate per kilowatt-hour (kWh) as a single rate or part of a two-part tariff applicable to the actual kWh consumed by the consumer during a billing period.
6. "Maximum Demand" where applicable, means the maximum of the demand obtained in any month measured over successive periods each of 30 minutes' duration except in the case of consumption related to Arc Furnaces, where "Maximum Demand" shall mean the maximum of the demand obtained in any month measured over successive periods each of 15 minutes' duration.
7. "Sanctioned Load" where applicable means the load in kilowatt as applied for by the consumer and allowed/authorized by the Company for usage by the consumer.
8. "Power Factor" means the ratio of kWh to KVAh recorded during the month or the ratio of kWh to the square root of sum of square of kWh and kVARh,.
9. Point of supply means metering point where electricity is delivered to the consumer.
10. Peak and Off Peak hours for the application of Time Of Use (TOU) Tariff shall be the following time periods in a day:

	* PEAK TIMING	OFF-PEAK TIMING
Dec to Feb (inclusive)	5 PM to 9 PM	Remaining 20 hours of the day
Mar to May (inclusive)	6 PM to 10 PM	-do-
June to Aug (inclusive)	7 PM to 11 PM	-do-
Sept to Nov (inclusive)	6 PM to 10 PM	-do-

* To be duly adjusted in case of day light time saving

11. "Supply", means the supply for single-phase/three-phase appliances inclusive of both general and motive loads subject to the conditions that in case of connected or sanctioned load 5 kW and above supply shall be given at three-phase.
12. "Consumer" as defined in NEPRA Act.

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13. "Charitable Institution" means an institution, which works for the general welfare of the public on no profit basis and is registered with the Federal or Provincial Government as such and has been issued tax exemption certificate by Federal Board of Revenue (FBR).

14. NTDC means the National Transmission and Despatch Company.

15. CPPA(G) means Central Power Purchasing Agency Guarantee Limited (CPPA)(G).

16. The "Authority" means "The National Electric Power Regulatory Authority (NEPRA)" constituted under the Regulation of Generation, Transmission and Distribution of Electric Power Act.

GENERAL CONDITIONS

1. "The Company shall render bills to the consumers on a monthly basis or less on the specific request of a consumer for payment by the due date.

2. The Company shall ensure that bills are delivered to consumers at least seven days before the due date. If any bill is not paid by the consumer in full within the due date, a Late Payment Charge of 10% (ten percent) shall be levied on the amount billed excluding Govt. tax and duties etc. In case bill is not served at least seven days before the due date then late payment surcharge will be levied after 7^{th} day from the date of delivery of bill.

3. The supply provided to the consumers shall not be available for resale.

4. In the case of two-part tariff average Power Factor of a consumer at the point of supply shall not be less than 90%. In the event of the said Power factor falling below 90%, the consumer shall pay a penalty of two percent increase in the fixed charges determined with reference to maximum demand during the month corresponding to one percent decrease in the power factor below 90%.

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PART-II

(Definitions and Conditions for supply of power specific to each consumer category)

A-1 RESIDENTIAL

Definition

"Life Line Consumer" means those residential consumers having single phase electric connection with a sanctioned load up to 1 kW.

The lifeline consumers to include residential Non-Time of Use (Non-ToU) consumers having maximum of last twelve months and current month's consumption ≤100 units; two rates for ≤ 50 and ≤100 units will continue.

"Protected consumers" mean Non-ToU residential consumers consuming ≤ 200 kWh per month consistently for the past 6 months.

Residential Non-ToU consumers not falling under the protected category would be categorized under "Un-protected consumer category".

1. This Tariff is applicable for supply to;
   i) Residences,
   ii) Places of worship,
2. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. A-1(a) tariff.
3. All new consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangement and shall be billed on the basis of tariff A-l(b) as set out in the Schedule of Tariff.
4. All existing consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangement and converted to A- 1(b) Tariff by the Company.

A-2 COMMERCIAL

1. This tariff is applicable for supply to commercial offices and commercial establishments such as:
   i) Shops/Flower Nurseries/Cold Storage
   ii) Hotels, Hostels and Restaurants,
   iii) Petrol Pumps and Service Stations,
   iv) Compressed Natural Gas filling stations,
   v) Private Hospitals/Clinics/Dispensaries,
   vi) Places of Entertainment, Cinemas, Theaters, Clubs;
   vii) Guest Houses/Rest Houses,
   viii) Office of Lawyers, Solicitors, Law Associates and Consultants etc.
   ix) Electric Vehicle Charging Stations (EVCS)
2. Electric Vehicle Charging Stations shall be billed under A-2(d) tariff i.e. Rs./kWh for peak and off-peak hours. For the time being, the tariff design is with zero fixed charges, however, in future the Authority after considering the ground situation may design its tariff structure on two part basis i.e. fixed charges and variable charges.

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3. The Electric Vehicle Charging Station shall provide "charging service" to Electric Vehicle with a maximum cap as determined by the Authority from time to time. For the time being the Cap has been determined as Rs.50/kWh. The EVCS shall be billed by DISCOS under A-2(d) tariff. However, monthly FCAs either positive or negative shall not be applicable on EVCS.

4. Consumers under tariff A-2 having sanctioned load of less than 5 kW shall be billed under a Single-Part kWh rate A-2(a)

5. All existing consumers under tariff A-2 having sanctioned load 5 kW and above shall be billed on A-2(b) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff A-2(c).

6. The existing and prospective consumers having load of 5 kW and above shall be provided T.O.U metering arrangement and shall be billed under tariff A-2(c).

A-3 GENERAL SERVICES

1. This tariff is applicable to;

i. Approved religious and charitable institutions

ii. Government and Semi-Government offices and Institutions

iii. Government Hospitals and dispensaries

iv. Educational institutions

v. Water Supply schemes including water pumps and tube wells other than those meant for the irrigation or reclamation of Agriculture land.

Consumers under General Services (A-3) shall be billed on single-part kWh rate i.e. A-3(a) tariff.

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B INDUSTRIAL SUPPLY

Definitions

1. "Industrial Supply" means the supply for bona fide industrial purposes in factories including the supply required for the offices inside the premises and for normal working of the industry.

2. For the purposes of application of this tariff an "Industry" means a bona fide undertaking or establishment engaged in manufacturing, value addition and/or processing of goods.

3. This Tariff shall also be available for consumers having single-metering arrangement such as;

   i) Poultry Farms

   ii) Fish Hatcheries, fish farms, fish nurseries & Breeding Farms and

   iii) Software houses

Conditions

An industrial consumer shall have the option, to switch over to seasonal Tariff-F, provided his connection is seasonal in nature as defined under Tariff-F, and he undertakes to abide by the terms and conditions of Tariff-F and pays the difference of security deposit rates previously deposited and those applicable to tariff-F at the time of acceptance of option for seasonal tariff. Seasonal tariff will be applicable from the date of commencement of the season, as specified by the customers at the time of submitting the option for Tariff-F. Tariff-F consumers will have the option to convert to corresponding Regular Industrial Tariff category and vice versa. This option can be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.

B-1 SUPPLY AT 400 VOLTS THREEPHASE AND/OR 230 VOLTS SINGLE PHASE

1. This tariff is applicable for supply to Industries having sanctioned load upto 25 kW.
2. Consumers having sanctioned load upto 25 kW shall be billed on single-part kWh rate.
3. Consumers under tariff B-1 having sanctioned load of less than 5 kW shall be billed under a Single-Part kWh rate. However, B-1 consumers having sanctioned load of less than 5 kW may opt for ToU meter
4. The existing and prospective consumers having load of 5 kW and above shall be provided T.O.U metering arrangement and shall be billed under tariff B1(b).

B-2 SUPPLY AT 400 VOLTS

1. This tariff is applicable for supply to Industries having sanctioned load of more than 25 kW up to and including 500 kW.
2. All existing consumers under tariff B-2 shall be provided T.O.U metering arrangement by the Company and converted to B-2(b) Tariff.
3. All new applicants i.e. prospective consumers applying for service to the Company shall be provided T.O.U metering arrangement and charged according to the applicable T.O.U tariff.

B-3 SUPPLY AT 11 kV AND 33 kV

1. This tariff is applicable for supply to Industries having sanctioned load of more than 500 kW up to and including 5 MW and also for Industries having sanctioned load of 500 kW or below who opt for receiving supply at 11 kV or 33 kV.
2. The consumers may be allowed extension of load beyond 5MW upto 7.5MW from the DISCO's owned grid station subject to availability of load in the grid and capacity in the 11kV existing dedicated feeder. In such a case the consumer will bear 100% grid sharing charges including transmission line charges and 100% cost of land proportionate to load. However, only such consumers be allowed extension of load beyond 5MW upto 7.5MW whose connection is at least three (3) years old. While allowing extension in load, the DISCOs shall ensure that no additional line losses are incurred and additional loss, if any, shall be borne by the respective consumers.
3. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
4. The supply under this Tariff shall not be available to a prospective consumer unless he provides, to the satisfaction and approval of the Company, his own Transformer, Circuit Breakers and other necessary equipment as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the cost of service connection shall be regulated by the Eligibility Criteria laid down by the Authority read with Consumer Service Manual (CSM).
5. All B-3 Industrial Consumers shall be billed on the basis of T.O.U tariff given in the Schedule of Tariff.

B-4 SUPPLY AT 66 kV, 132 kV AND ABOVE

1. This tariff is applicable for supply to Industries for all loads of more than 5MW receiving supply at 66 kV, 132 kV and above and also for Industries having load of 5MW or below who opt to receive supply at 66 kV or 132 kV and above.

2. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.

3. If the Grid Station required for provision of supply falls within the purview of the dedicated system under the Eligibility Criteria laid down by the Authority read with CSM, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of cost of service connection shall be regulated by Eligibility Criteria laid down by the Authority read with CSM.

4. All B-4 Industrial Consumers shall be billed on the basis of two-part T.O.U tariff.

C BULK SUPPLY

"Bulk Supply" for the purpose of this Tariff, means the supply given at one point for self-consumption to mix-load consumer not selling to any other consumer such as residential, commercial, tube-well and others.

General Conditions

If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days no notice will be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days the fixed charges shall be assessed on proportionate basis for actual number of days between the date of old reading and the new reading.

C-I SUPPLY AT 400/230 VOLTS

1. This Tariff is applicable to a consumer having a metering arrangement at 400 volts, having sanctioned load of up to and including 500 kW.

2. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. C-I(a) tariff'.

3. All new consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangement and shall be billed on the basis of Time-of-Use (T.O.U) tariff C-1(c) given in the Schedule of Tariff.

4. All the existing consumers governed by this tariff having sanctioned load 5 kW and above shall be provided T.O.U metering arrangements.

C-2 SUPPLY AT 11 kV AND 33 kV

1. This tariff is applicable to consumers receiving supply at 11 kV or 33 kV at one-point metering arrangement and having sanctioned load of more than 500 kW up to and including 5 MW.

2. The consumers may be allowed extension of load beyond 5MW upto 7.5MW from the DISCO's owned grid station subject to availability of load in the grid and capacity in the 11kV existing dedicated feeder. In such a case the consumer will bear 100% grid sharing charges including transmission line charges and 100% cost of land proportionate to load. However, only such consumers be allowed extension of load beyond 5MW upto 7.5MW whose connection is at least three (3) years old. While allowing extension in load, the

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DISCOs shall ensure that no additional line losses are incurred and additional loss, if any, shall be borne by the respective consumers.

3. The supply under this Tariff shall not be available to a prospective consumer unless he provides, to the satisfaction and approval of the Company, his own Transformer, Circuit Breakers and other necessary equipment as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the cost of service connection shall be regulated by the Eligibility Criteria laid down by the Authority read with CSM.
4. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff C-2(b) as set out in the Schedule of Tariff.
5. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to C-2(b).

C-3 SUPPLY AT 66 kV AND ABOVE

1. This tariff is applicable to consumers having sanctioned load of more than 5000 kW receiving supply at 66 kV and above.
2. If the Grid Station required for provision of supply falls within the purview of the dedicated system under the Eligibility Criteria laid down by the Authority read with CSM, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of cost of service connection shall be regulated by Eligibility Criteria laid down by the Authority read with CSM.
3. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to C-3(b).
4. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff C-3(b) as set out in the Schedule of Tariff.

D AGRICULTURAL SUPPLY

"Agricultural Supply" means the supply for Lift Irrigation Pumps and/or pumps installed on Tube-wells intended solely for irrigation or reclamation of agricultural land or forests, and include supply for lighting of the tube-well chamber.

Special Conditions of Supply

1. This tariff shall apply to:

i) Reclamation and Drainage Operation under Salinity Control and Reclamation Projects (SCARP):

ii) Bona fide forests, agricultural tube-wells and lift irrigation pumps for the irrigation of agricultural land.

iii) Tube-wells meant for aqua-culture.

iv) Tube-wells installed in a dairy farm meant for cultivating crops as fodder and for upkeep of cattle.

2. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this

acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.

3. The lamps and fans consumption in the residential quarters, if any, attached to the tube-wells shall be charged entirely under Tariff A-1 for which separate metering arrangements should be installed.

4. The supply under this Tariff shall not be available to consumer using pumps for the irrigation of parks, meadows, gardens, orchards, attached to and forming part of the residential, commercial or industrial premises in which case the corresponding Tariff A-1, A-2 or Industrial Tariff B-1, B-2 shall be respectively applicable.

D-1

1. This tariff is applicable to all Reclamation and Drainage Operation pumping under SCARP related installation.
2. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. D-1(a) tariff given in the Schedule of Tariff.
3. All new consumers having sanctioned load 5 kW and above shall be provided TOU metering arrangement and shall be charged on the basis of Time-of- Use (T.O.U) tariff D-1(b) given in the Schedule of Tariff.
4. All the existing consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangements and shall be governed by D-1(a) till that time.

D-2

1. This tariff is applicable to consumers falling under Agriculture Supply excluding SCARP related installations.
2. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. D-2(a) tariff given in the Schedule of Tariff.
3. All new consumers having sanctioned load 5 kW and above shall be provided TOU metering arrangement and shall be charged on the basis of Time-of- Use (T.O.U) tariff D- 2(b) given in the Schedule of Tariff.
4. All the existing consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangements and shall be governed by D-2(a) till that time.

E -1 TEMPORARY RESIDENTIAL/COMMERCIAL SUPPLY

Temporary Residential/Commercial Supply means a supply given to persons temporarily on special occasions such as ceremonial, religious gatherings, festivals, fairs, exhibitions, political gathering, marriages and other civil or military functions. This also includes supply to touring cinemas and persons engaged in construction of house/buildings/plazas of single phase loads. A temporary electric power supply connection for the construction shall be provided by Distribution company initially for a period of six months which is further extendable on three month basis up to completion of the specific job/project for which the temporary connection was obtained. However, there is no minimum time period for provision of temporary connection. The temporary connection for illumination, lighting, weddings, festivals, functions, exhibitions, political gatherings or national and religious ceremonies, civil or military functions etc., testing of industrial equipment or any other emergent requirement of temporary nature, can be provided for specific time period not exceeding two weeks. The sanctioning officer shall ensure that the temporary connection will be utilized for temporary purpose only.

Special Conditions of Supply

This tariff shall apply to Residential and Commercial consumers for temporary supply.

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2. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.

E -2 TEMPORARY INDUSTRIAL SUPPLY

"Temporary Industrial Supply" means the supply given to an Industry for the bonafide purposes mentioned under the respective definitions of "Industrial Supply", during the construction phase prior to the commercial operation of the Industrial concern.

SPECIAL CONDITIONS OF SUPPLY

1. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.
2. Normally, temporary connections shall be allowed for a period of 3 months, which may be extended on three months basis subject to clearance of outstanding dues.

F SEASONAL INDUSTRIAL SUPPLY

"Seasonal Industry" for the purpose of application of this Tariff, means an industry which works only for part of the year to meet demand for goods or services arising during a particular season of the year. However, any seasonal industry running in combination with one or more seasonal industries, against one connection, in a manner that the former works in one season while the latter works in the other season (thus running throughout the year) will not be classified as a seasonal industry for the purpose of the application of this Tariff.

Definitions

"Year" means any period comprising twelve consecutive months.

1. All "Definitions" and "Special Conditions of Supply" as laid down under the corresponding Industrial Tariffs shall also form part of this Tariff so far as they may be relevant.

Special Conditions of Supply

1. This tariff is applicable to seasonal industry.
2. Fixed Charges per kilowatt per month under this tariff shall be levied at the rate of 125% of the corresponding regular Industrial Supply Tariff Rates and shall be recovered only for the period that the seasonal industry actually runs subject to minimum period of six consecutive months during any twelve consecutive months. The condition for recovery of Fixed Charges for a minimum period of six months shall not, however, apply to the seasonal industries, which are connected to the Company's Supply System for the first time during the course of a season.
3. The consumers falling within the purview of this Tariff shall have the option to change over to the corresponding industrial Supply Tariff, provided they undertake to abide by all the conditions and restrictions, which may, from time to time, be prescribed as an integral part of those Tariffs. The consumers under this Tariff will have the option to convert to Regular Tariff and vice versa. This option can be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.
4. All seasonal loads shall be disconnected from the Company's Supply System at the end of the season, specified by the consumer at the time of getting connection, for which the supply is given. In case, however, a consumer requires running the non-seasonal part of his load (e.g., lights, fans, tube-wells, etc.) throughout the year, he shall have to bring out

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separate circuits for such load so as to enable installation of separate meters for each type of load and charging the same at the relevant Tariff.

5. Where a "Seasonal Supply" consumer does not come forward to have his seasonal industry re-connected with the Company's Supply System in any ensuing season, the service line and equipment belonging to the Company and installed at his premises shall be removed after expiry of 60 days of the date of commencement of season previously specified by the consumer at the time of his obtaining new connection/re-connection. However, at least ten clear days notice in writing under registered post shall be necessary to be given to the consumer before removal of service line and equipment from his premises as aforesaid, to enable him to decide about the retention of connection or otherwise. No Supply Charges shall be recovered from a disconnected seasonal consumer for any season during which he does not come forward to have his seasonal industry re-connected with the Company's Supply System.

G PUBLIC LIGHTING SUPPLY

"Public Lighting Supply" means the supply for the purpose of illuminating public lamps. The supply under this tariff shall also be applicable for lamps used in public playgrounds and public parks.

Definitions

"Month" means a calendar month or a part thereof in excess of 15 days.

Special Conditions of Supply

The supply under this Tariff shall be used exclusively for public lighting installed on roads or premises used by General Public.

H RESIDENTIAL COLONIES ATTACHED TO INDUSTRIES

This tariff is applicable for one-point supply to residential colonies attached to the industrial supply consumers having their own distribution facilities.

Definitions

"One Point Supply" for the purpose of this Tariff, means the supply given by one point to Industrial Supply Consumers for general and domestic consumption in the residential colonies attached to their factory premises for a load of 5 Kilowatts and above. The purpose is further distribution to various persons residing in the attached residential colonies and also for perimeter lighting in the attached residential colonies.

"General and Domestic Consumption", for the purpose of this Tariff, means consumption for lamps, fans, domestic applications, including heated, cookers, radiators, air-conditioners, refrigerators and domestic tube-wells.

"Residential Colony" attached to the Industrial Supply Consumer, means a group of houses annexed with the factory premises constructed solely for residential purpose of the bonafide employees of the factory, the establishment or the factory owners or partners, etc.

Special Conditions of Supply

The supply under this Tariff shall not be available to persons who meet a part of their requirements from a separate source of supply at their premises.

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Annex – A (STG Projects)

STG Quantities:

S. No	Description	Unit	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	New Grid Station	No.	**1**	**3**	**2**	**1**	-	**7**
2	Conversion of 66 to 132 kV	No.	-	**3**	**2**	**1**	**3**	**9**
3	Extension of Power T/F	No.	**4**	-	-	**4**	-	**8**
4	Augmentation of Power T/F	No.	**6**	**4**	-	**1**	-	**11**
5	Extension of Line Bay	No.	**2**	-	-	-	-	**2**
6	New 132 kV T/L	km	**21**	**278.6**	**179**	**128**	**68**	**674.5**
8	Installation 132 kV Capacitors	No.	-	**1**	-	-	**1**	**2**
COST								
Million (Rs)			**1131**	**4862**	**2620**	**3098**	**1076**	**12787**
BENEFITS								
Energy Savings (GWh)			**39.41**	**69.67**	**78.91**	**88.58**	**97.54**	**97.54**

A. Grid Station Costing:

Sr. No.	Name of Grid Station	SCOPE	Cost Million Rs.	Year
1	132kv Grid Station Khairpur	Augmentation 26 To 40 MVA	73	2020-21
2	132kv Grid Station Gambat	Augmentation 26 To 40 MVA	73	
3	132kv Grid Station Larkana City	Augmentation 26 To 40 MVA	73	
4	132kv Grid Station Larkana New	Addition of 40 MVA P.T/F	73	
6	132kv Grid Station Dadu Old	Addition Of 40 MVA P.T/F	73	
7	132kv Grid Station Lakhi	New Grid	184	
8	132kv Arain Road	Replacement of Defective 40 MVA P.T/F With 26 MVA	73	
9	132kv Shikarpur	Replacement of Defective 40 MVA P.T/F With 40 MVA	73	
10	132kv Grid Station Rasool Abad	Augmentation 26 To 40 MVA	73	
11	132kv Grid Station Kandiaro	Augmentation 26 To 40 MVA	73	
12	132kv Grid Station Shah Ladhani	Augmentation 13 To 26 MVA	50	
13	132 KV Bhirya Road (New Grid)	1x26 MVA Transformer	104	2021-22
14	132 KV Ranipur (New Grid)	1x26 MVA Transformer	169	
15	132 KV Tangwani (New Grid)	1x26 MVA Transformer	169	
16	66 kV Kamber (Conversion 66 kv to 132 kv)	2x26 MVA Transformer	119	

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Sr. No.	Name of Grid Station	SCOPE	Cost Million Rs.	Year
17	66 kV Nara-1 (Conversion 66 kv to 132 kv)	1x26 MVA Transformer	133	
18	66 kV Warah (Conversion 66 kv to 132 kv)	1x26 MVA Transformer	122	
19	132 kV Naudero	(Augmentation 13-26 MVA)	23	
20	132 kV Jacobabad-2	(Augmentation 13-26 MVA)	23	
21	132 kV Kumb	(Augmentation 13-26 MVA)	23	
22	132 kV Tharu Shah	(Augmentation 13-26 MVA)	23	
23	132 KV Khan Wahan (New Grid)	1x26 MVA Transformer	169	
24	132 kvPiryalo (New Grid)	1x26 MVA Transformer	169	2022-23
25	66KV Pad Eidan (Conversion to 132 KV)	1x26 MVA Transformer	195	
26	66KV Dokri (Conversion to 132 KV)	1x26 MVA Transformer	122	
27	132kv Grid Station Dadu-2, New Grid	1x26 MVA Transformer	250	2023-24
28	66 KV ThariMirwah (Conversion to 132 Kv)	1x26 MVA Transformer	200	
29	132KV G/S Kashmore	(Addition of 26MVA)	81	
30	132KV G/s Kandhkot	(Addition of 40MVA)	96	
31	132kvG/S Thull	(Addition of 26MVA)	81	
32	132kv G/S BhanSaeedabad	(Addition of 26MVA)	81	
33	132KV G/S Naseer Abad	(Aug 13-26MVA)	65	
34	132 KV Radhan (New Grid)	1x26 MVA Transformer	169	2024-25
35	66 KV Nara-2 Conversion to 132 kV	1x26 MVA Transformer	122	
36	66 KV GarhiKhairo Conversion to 132 kv	1x26 MVA Transformer	116	
37	132KV G/S Kandiaro	24 MVAR Capacitor Bank	50	

B. Transmission Lines Costing:

Sr. No.	Name of Transmission Line	SCOPE	Length (KM)	Cost Million	Year
1	220 kV Shikarpur (Lodra-Lakhi) &	NEW LINE 21 KM	21	210	2020-21
2	Liberty-Deharki-TPS Guddu/Line	02-no. Line bays at 132 kvDeharki	-	30	
3	132 KV Transmission Line Feed For 132 KV Grid station Bhirya Road	(D/C T/L From Kandiaro-N.S.Feroze Section)	14	129	2021-22

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Sr. No.	Name of Transmission Line	SCOPE	Length (KM)	Cost Million	Year
4	132 KV Transmission Line Feed For 132 KV Grid Station Ranipur	(D/C T/L From Gambat --- Rasool Abad Section)	5	60	
5	132 KV Transmission Line Feed For 132 KV Grid station Tangwani	(D/C T/L From Thull --- Kandhkot Section)	5	60	
6	132 KV Transmission Line Feed For 132 KV Grid station Kamber	(S/C T/L From 132 KV Larkana Site)	30	297	
7	132 KV Transmission Line Feed For 132 KV Grid station Nara-1	(S/C T/L From 220 KV Rohri)	32	462	
8	132 KV Transmission Line Feed For 132 KV Grid station Warah	(S/C T/L From 132 KV Naseer Abad)	25	250	
9	500 KV Dadu New – Dadu Old	New Line	3.9	23	
10	132 KV ARAIN ROAD - SUKKUR SITE	New Circuit	15	201	
11	LIBERT-DEHRKI-GUDDU T/LINE	NEW CIRCUIT	65	1215	
12	220 KV New Shp - Arain Road Section-I (132KV New SHP – Lakhi (Completed 21-KM) Section-II, (132KV Lakhi – Arain Road	New Circuit	22	182	
13	132 KV Kashmore – Kandhkot Line	New Circuit	55	990	
14	Ratodero In & Out from 132 kV Shp – Larkana Line	In/Out Arrangement	6.7	35	
15	132KV G/S N'Feroze	36 MVAR Capacitor Bank	01 Set	50	
16	132 KV Transmission Line Feed For 132 KV Grid station Khan Wahan	(D/C T/L From 132 KV Gambat-Mehrabpur)	12	120	2022-23
17	132 KV Transmission Line Feed For 132 KV Grid station Piryalo	S/C T/L From 132 KV Pir-Jo Goth	8	62	
18	132 KV Transmission Line Feed For 132 KV Grid station Pad Eidan	(S/C T/L From 132 KV Bhirya)	25	136	
19	132 KV Transmission Line Feed For 132 KV Grid station Dokri	S/C T/L From 132 KV Larkana Site	30	233	
20	132 kv T/ (Kandhkot – Thull- Jacobabad)	New Line	72	1296	

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Sr. No.	Name of Transmission Line	SCOPE	Length (KM)	Cost Million	Year
21	220 KV Rohri	2ND Circuit (New Rohri – Nara-1)	32	118	
22	132 KV Transmission Line Feed For 132 KV Grid station Dadu 2	(S/C T/L From 500 KV Dadu)	15	180	2023-24
23	132 KV Transmission Line Feed For 132 KV Grid station TharîMirwah	S/C T/L From 132 KV Rasool Abad	15	300	
24	132 kV Liberty – Ghotki – PanoAkil – New Rohri	New Line	98	1764	
25	132 KV Transmission Line Feed For 132 KV Grid Station Radhan	(S/C T/L From 132 KV Mehar)	15	150	2024-25
26	132 KV Transmission Line Feed For 132 KV Grid Station Nara -2	(S/C T/L From 132 KV Choondko)	15	180	
27	132 KV Transmission Line Feed For 132 KV Grid Station GarhiKhairo	S/C T/L From 132 KV Shahdadkot)	35	309	
28	2nd ckt stringing 132 kV Dadu New – Dadu 2		03	30	

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Annex –B (DOP Projects)

DOP Quantities:

Description	2020-21	2021-22	2022-23	2023-24	2024-25	Total
11 KV Line (KM)	397.5	477.0	530.0	583.0	662.5	**2650**
LT Line (KM)	216.0	259.2	288.0	316.8	360.0	**1440**
Transformers (No.)	530	636	707	778	884	**3536**

DOP Costing:

No.	Description	Unit	COST (RS. IN THOUSANDS)					
			2020-21	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**TOTAL**
	COST RECOVERABLE FROM CONSUMERS:							
1)	**New H.T Line**							
a)	**Urban Areas (45%)**							
i)	Osprey (30%)		70,004	84,005	93,338	102,672	116,673	466,692
ii)	Dog (40%)		46,518	55,822	62,025	68,227	77,531	310,123
iii)	Rabbit (30%)		26,746	32,095	35,661	39,227	44,576	178,304
	Sub-Total		**143,268**	**171,921**	**191,024**	**210,126**	**238,780**	**955,119**
b)	**Rural Areas (55%)**							
i)	Dog (40%)		56,856	68,227	75,808	83,389	94,760	379,039
ii)	Rabbit (60%)		65,378	78,454	87,171	95,888	108,964	435,854
	Sub-Total		**122,234**	**146,681**	**162,979**	**179,276**	**203,723**	**814,893**
	Total of H.T Line (a+b)		**265,502**	**318,602**	**354,002**	**389,403**	**442,503**	**1,770,012**
2)	**New L.T Line,**							
a)	**3-Phase (80%)**							
i)	AAC Wasp (40%)		61,128	73,354	81,504	89,654	101,880	407,520
ii)	AAC Ant (60%)		62,381	74,857	83,174	91,491	103,968	415,870
	Sub-Total		**123,509**	**148,210**	**164,678**	**181,146**	**205,848**	**823,390**
b)	**1-Phase (20%)**							
1)	AAC Ant (100%)		19,757	23,708	26,343	28,977	32,928	131,713
	Total of L.T Line (a+b))		**143,265**	**171,919**	**191,021**	**210,123**	**238,776**	**955,103**
	Sub-Total of H.T/L.T Line (1+2)		**408,767**	**490,521**	**545,023**	**599,525**	**681,279**	**2,725,115**
3	**Sub-Stations**							
a.	25 KVA		41,801	50,161	55,734	61,307	69,668	278,670
b.	50 KVA		41,463	49,756	55,284	60,812	69,105	276,420
c.	100 KVA		45,262	54,315	60,350	66,385	75,437	301,749
d.	200 KVA		18,922	22,706	25,229	27,752	31,536	126,145
e.	400 KVA		5,154	6,185	6,872	7,560	8,590	34,362
f.	630 KVA		2,943	3,532	3,924	4,316	4,905	19,620
	Sub-Total		**155,545**	**186,654**	**207,393**	**228,133**	**259,242**	**1,036,966**

4	<u>Service Connections</u>						
a.	Single Phase	56,606	67,927	75,474	83,022	94,343	377,371
b.	Three Phase	64,236	77,084	85,649	94,213	107,061	428,243
c.	L.T TOU Meter	39,940	47,928	53,253	58,579	66,567	266,267
	Sub-Total	**160,782**	**192,939**	**214,376**	**235,814**	**267,970**	**1,071,881**
Sub-Total of H.T/L.T Line (1+2)		408,767	490,521	545,023	599,525	681,279	2,725,115
Sub-Total of Sub-Stations & Service		316,327	379,593	421,769	463,946	527,212	2,108,847
Sub-Total of H.T/L.T Line		725,094	870,113	966,792	1,063,472	1,208,491	4,833,962
Installation Charges (@ 21.2%)		155,895	210,567	233,964	257,360	292,455	1,150,241

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Annex – C (ELR Projects)

ELR Quantities:

S.NO	Description	Unit	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	HT Proposals	Nos.	15	16	17	18	19	**85**
2	LT Proposals	Nos.	262	275	289	304	320	**1450**
Details of ELR Quantities								
1	11 KV New line for New Feeders	KM	150	160	170	180	190	**850**
2	11 KV lines (Extension Due to LTP)	KM	87	92	96	101	107	**483**
3	11 KV Re-conductoring (Osprey, Dog, Rabbit, Gopher)	KM	90	96	102	108	114	**510**
4	11 KV 450 KVAR fixed capacitors	Nos.	15	16	17	18	19	**85**
5	Replacement of overloaded transformers	Nos.	270	288	306	324	342	**1530**
6	Replacement of D-Fitting	Nos.	135	144	153	162	171	**765**
7	New Transformers substations (Rehabilitation)		68	72	76	80	86	**382**
8	New 3-Phase LT line (WASP)	KM	8	9	9	10	11	**47**
9	New 3-Phase LT Line (ANT)	KM	25	26	28	30	31	**140**
10	LT line Reconductoring (3Phase WASP)	KM	16	17	18	19	20	**90**
11	LT line Reconductoring (3-Phase ANT)	KM	10	11	12	13	14	**60**
12	11 KV Sectionalizer (manual)	Nos.	30	32	34	36	38	**170**
13	11 KV Panels with Installation	Nos.	15	16	17	18	19	**85**

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14	Energy Meters 1-Phase & 3-Phase	NOS.	3000	3130	3370	3600	3750	**16850**
15	PVC Cables 7/0.52, 7/0.83 & 19/0.83	KM	119	127	135	143	154	**678**
16	11 KV 500 MCM XLPE Cable (85+20%) =102	KM	4.5	4.6	4.8	5.4	5.7	**25**

ELR Costing:

S.NO	Description	2021	2022	2023	2024	2025	Total
1	11 KV New line for New Feeders	357	381	405	429	453	**2025**
2	12 KV lines (Extension Due to LTP)	185	195	204	214	227	**1025**
3	11 KV Reconductoring (Osprey, Dog, Rabbit, Gopher)	114	122	130	137	145	**648**
4	11 KV 450 KVAR fixed capacitors	3	4	4	4	4	**19**
5	Replacement of overloaded transformers	210	224	238	252	265	**1188**
6	Replacement of D-Fitting	3	4	4	4	4	**19**
7	New Transformers substations (Rehabilitation)	54	57	60	64	69	**304**
8	New 3-Phase LT line (WASP)	16	18	18	20	22	**96**
9	New 3-Phase LT Line (ANT)	38	39	42	45	47	**211**
10	LT line Reconductoring (3Phase WASP)	24	25	27	28	30	**134**
11	LT line Reconductoring (3-Phase ANT)	10	10	11	12	13	**57**
12	11 KV Sectionalizers (manual)	3	3	3	3	3	**15**
13	11 KV Panels with Installation	23	25	26	28	29	**131**
14	Energy Meters 1-Phase & 3-Phase	6	7	7	8	8	**36**
15	PVC Cables 7/0.52, 7/0.83 & 19/0.83	14	14	15	16	18	**78**
16	11 KV 500 MCM XLPE Cable (85+20%) =102	5	6	6	7	7	**30**
A	Sub Total Cost	1065	1134	1200	1271	1344	**6015**
B	Installation Charges	85	91	96	102	108	**481**
C	Contract Work	185	197	209	221	233	**1044**
D=A+B+C	Total Cost	1335	1421	1505	1594	1685	**7540**
E=1.5% ON D	1.5% Vetting Charges on Total Cost	20	21	23	24	25	**113**
F=13% ON C	13% SRB Tax on Contract Work	24	26	27	29	30	**136**
G	T&P	2	2	2	2	2	**10**

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H=D+E+F+G	Gross Total Cost	1381	1470	1557	1648	1742	**7799**
I	Consultancy cost @ 1.2% (Average)	17	18	19	20	21	**94**
J	Audit & Inspection Charges @3%	41	44	47	49	52	**234**
K	less Retirement Cost	138	147	156	165	174	**779**
L=(H:K)	Net Capital Cost	1301	1385	1466	1553	1641	**7347**
L=(H:K)	Escalated Cost @ 6.5%	1386	1475	1562	1654	1748	**7824**

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Annex-D

HSE Objectives/Targets

Definition

1. **Goal:** Goals are general guidelines that explain what needs to be achieved by the Licensee with management intervention, providing resources and support. Goals should be specific, measurable, attainable, realistic, and time-sensitive (SMART).

2. **Objective/Target:** Objectives/Targets define strategies or implementation steps to attain the identified goals. They are more specific and outline the "who, what, when, where, and how" of reaching the goals.

3. **KPI:** A Key Performance Indicator is a measurable value that demonstrates how effectively Licensee is achieving goals and objectives. Key Performance Indicators (KPIs) in numbers for the goals and objectives to review and monitor its status for effective implementation.

HSE Objectives/Targets

DISCO's HSE Goal: Improve public and employee safety to achieve zero fatality incidents.

No.	Objective/Target	Key Performance Indicator
1.	Provide and maintain earthing/grounding to all HT/LT infrastructures, apparatus, and poles, along with stay wire. Earthing/grounding resistance shall be as per Distribution Design Code or manufacturer's instruction. In the absence of grounding instruction, the earthing resistance for HT/LT structures/ poles shall be not more than 5 Ohms and Distribution transformer shall be not more than 2.5 Ohms to determine the integrity of the grounding path to ensure protection from shock hazards. The earthing resistance for Grid Station/ Substation/ Switchyard equipment shall not be more than 2 Ohms. Verify integrity of fixed earthing/grounding by continuity and resistance measurement tests. In general, this cycle can range from 6 months to 3 years, depending on conditions and criticality. Wet locations testing should be 12 months and critical care shall be 6 months. Provide name	Earthing/grounding of infrastructures, apparatus, and poles, along with stay wire until June 30, 2022.
		Periodic verification of integrity of earthing/ grounding.
		On the basis of periodic continuity and resistance measurement tests, continually repair/rectify deteriorated earthing/grounding system within one month.

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No.	Objective/Target	Key Performance Indicator
	plate/ tag to all structures/ poles/ equipment's with numbers for tracking of earthing/ grounding testing record, etc. Original record of testing with structures/ poles/ equipment's numbers shall be retained and preserved by licensee for three (03) years.	
2.	Replace all substandard RORA fuses in each subdivision with standard fuses in accordance with approved design such as a high rupturing capacity fuse of standard size and rating. Install only standard fuses every time.	Installation of standard fuses until June 30, 2022.
3.	Conduct annual survey in each subdivision to identify hazardous points, deteriorated systems, hardware and conductors. Implement rehabilitation program to rectify/replace hazardous points, deteriorated systems, hardware and conductors.	Survey report of each subdivision until the end of each fiscal year. On the basis of survey report, rectify/replace hazardous points, deteriorated systems, hardware and conductors within three months.
4.	Conduct survey in each subdivision to identify conductors in narrower/ congested areas having less clearance from houses/ buildings. Re-organize/re-position or Install insulated conductors (aerial bundled cables/conductors) to achieve minimum horizontal and vertical safe clearance.	Survey report of each subdivision until the end of each fiscal year. On the basis of survey report, re-organize/re-position or install insulated conductors within three months.
5.	Conduct survey to identify substandard/obsolete electromechanical relays/protections for abnormal conditions (short-circuits, overloading, ground fault, broken conductor features, etc.) whose failure can result in serious injuries. Replace substandard/obsolete electromechanical relays/protections with high speed digital/programmable relays/protections.	Survey report until the end of each fiscal year. On the basis of survey report, replace relays/ protections within three months.
6.	Conduct a need assessment for authorized workshops. Establish authorized workshops with repair facilities having	Workshop Need Assessment Report until June 30, 2022.

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No.	Objective/Target	Key Performance Indicator
	testing facilities for transformer reliability and integrity to ensure fitness.	Established authorized workshops as per report until Dec 31, 2022.
7.	Arrange and maintain stock of following special PPE at each subdivision and Grid station for authorized employees/ contractors while working or handling energized systems against approved "Permit to Work" under the continuous direction and supervision of the job in-charge. 1. Full Face Shield (polycarbonate or similar non-melting type) 2. Insulated gloves with sleeves rated for the voltage involved. 3. Arc Flash Kit for Arc Flash Protection such as Category 4 Arc Flash Resistant Suite, Arc Flash Hood Arc-rated Gloves and Arc-rated Fall Protection while working at high voltages (more than 420 V). Arrange training at each subdivision and Grid station for these special PPE for authorized employees/ contractors. Ensure use of these special PPE in each subdivisions.	Maintain stock of full face shield, insulated gloves with sleeves and arc flash kit until June 30, 2022. Training by supplier until June 30, 2022. Use of full face shield, insulated gloves with sleeves and arc flash kit at each subdivision and Grid station until June 30, 2022.
8.	Arrange and maintain stock of Full Body Harness with front work positioning belt (positioning lanyard) along with double lanyard for 100% tie at each subdivision and Grid station for authorized employees/ contractors while working on height more than 6 feet/1.8 meter above the ground or impact level. Full Body Harness with front work positioning belt (positioning lanyard) along with double lanyard for 100% tie shall be used at heights more than 6 feet/1.8 meter above the ground when climbing poles, towers and structures including working through mobile elevated aerial platform, man-baskets,	Maintain stock of Full Body Harness with front work positioning belt (positioning lanyard) along with double lanyard until June 30, 2022. Training by supplier until June 30, 2022. Use of Full Body Harness at each subdivision and Grid station until June 30, 2022.

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No.	Objective/Target	Key Performance Indicator
	man-lift or bucket mounted vehicles. Full Body Harness with front work positioning belt is to allow an employee to be supported on an elevated vertical surface such as a wall or pole and to work with both hands free. Use of a body belt alone for fall arrest is prohibited. Full Body Harness with PVC coated hardware should be used when working in an explosive or electrically conductive environment. Anchor the safety harness lanyard on a rigged anchorage point at height, having a fall clearance safety factor of three (03) feet from impact level or ground level. Arrange training at each subdivision and Grid station for these special PPE for authorized employees/ contractors. Ensure use of these special PPE in each subdivision and Grid station.	

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