Registrar

National Electric Power Regulatory Authority
Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/R/ADG(Trf)/TRF-492/MEPCO-2019/46481-46483
December 24, 2020

Subject: **Determination of the Authority in the matter of Petition filed by Multan Electric Power Company Ltd. (MEPCO) for Determination of its Distribution Tariff for the FY 2018-19 & FY 2019-20** [Case # NEPRA/TRF-492/MEPCO-2019]

Dear Sir,

Please find enclosed herewith subject Determination of the Authority (58 Pages) in Case No. NEPRA/TRF-492/MEPCO-2019.

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.

Enclosure: As above

24 12 20
(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-492/MEPCO-2019

DETERMINATION OF DISTRIBUTION TARIFF PETITION
FOR
MULTAN ELECTRIC POWER COMPANY LIMITED (MEPCO)
FOR THE FY 2018-19 & FY 2019-20
UNDER
NEPRA TARIFF (STANDARDS AND PROCEDURE) RULES - 1998

Islamabad
December 29, 2020

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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
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
MW	Mega Watt

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

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DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY MULTAN ELECTRIC POWER COMPANY LIMITED (MEPCO) FOR DETERMINATION OF ITS DISTRIBUTION TARIFF FOR THE FY 2018-19 & FY 2019-20

CASE NO. NEPRA/TRF-492/MEPCO-2019

PETITIONER

Multan Electric Power Company Limited (MEPCO), Khanewal Road, Multan.

INTERVENER

M/s CM Pak Limited (ZONG)

COMMENTATOR

NIL

REPRESENTATION

i. Chief Executive Officer
ii. Finance Director
iii. General Manager (Customer Services)

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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.

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. Section 23E of the Act, provides NEPRA with the powers to grant Electric Power Supply License for the supply of electric power. Section 23E(1), however, provides that 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, Multan Electric Power Company Limited (MEPCO), 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 for the FY 2018-19 and FY 2019-20, in terms of Rule 3 (1) of Tariff Standards & Procedure Rules-1998 (hereinafter referred as "Rules").

1.6. The Petitioner, inter alia, has requested for a distribution cost of Rs.20,060 million i.e. Rs.2.21/kWh and Rs.22,299 million i.e. Rs.2.42/kWh for the FY 2018-19 and FY 2019-20 respectively as detailed below;

Description	Unit	FY 2018-19	FY 2019-20
Units Purchases	GWh	19,367	21,284
Units Lost	GWh	3,057	3,343
T&D Losses	%	15.78%	15.71%
Units to be Sold	GWh	16,310	17,941
O&M	Mln Rs.	23,609	28,448
Depreciation	Mln Rs.	4,612	5,099
Return on Regulatory Asset Base (RoRB)	Mln Rs.	8,197	11,170
Other Income	Mln Rs.	(3,898)	(4,234)
Prior Period Adjustment	Mln Rs.		127,365
Revenue Requirement	**Mln Rs.**	**32,520**	**167,848**
Distribution Margin	**Rs./kWh**	**1.99**	**9.36**
Investment	Mln Rs.	12,065	17,122

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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 on November 20, 2019. 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 scheduled on February 12, 2020, for which notice of admission / hearing along-with the title and brief description of the petition was published in newspapers on January 23, 2020 and also uploaded on NEPRA website; Individual notices were also issued to stakeholders/ interested parties.

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;

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

3.3. Whether the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments are justified?

3.4. As provided in NEPRA Amendment Act, 2018, MEPCO as Distribution Licensee shall be deemed to hold Supply License also for a period of 5-years. In this regard, MEPCO is required to explain its organizational restructuring in respect of segregation of responsibilities for Distribution Business and Sale Business?

3.5. As per NEPRA Amendment Act, 2018, obligations of procurement of assets including meters (for satisfying its services) and disconnection / reconnection services (on demand of Supplier) are with Distribution Licensee whereas procedure for metering, billing, collection of approved charges and recovery of arrears are the obligations of Supply Licensee. In this scenario, MEPCO is required to state the mode and manner being developed and followed for appropriate coordination between Distribution Licensee and Supply Licensee?

3.6. Whether the projected demand is reasonable?

3.7. Whether the projected Net Distribution Margin (excluding RoRB) is justified? The petitioner is required to provide Grid wise plan of its proposed O&M.

3.8. Whether the requested Prior Year Adjustment including the impact of postretirement benefit, is justified?

3.9. Whether the projected Return on Regulatory Asset base (RORB) is justified?

3.10. Whether the distribution margin should be recovered on Rs./kW or Rs./kWh basis?

3.11. Whether the requested T&D loss target is reasonable? Whether this target comprises of both Technical and Commercial losses? What are the proposed plans specifically for loss reduction and removal of overloading and system constraints?

3.12. Whether the ToU meters installed on Residential & General Services connections have the capability to record MDI?

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3.13. Whether MEPCO is currently facing network congestions? If yes, MEPCO is required to submit detailed analysis by identifying the grey areas which caused congestions in its transmission and distribution system. MEPCO is also required to submit load shedding policy in high loss areas.

3.14. Whether the requested investment without submission of five Year IGTDP as required is justified? Petitioner must provide the project wise detailed report along with rationale against the requested investment.

3.15. As per Amendment Act, 2018, responsibilities of DISCO and Supplier have been bifurcated. MEPCO is required to submit overall organogram which broadly describe its role/functions as DISCO and Supplier.

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

3.17. 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 CM Pak Limited (ZONG). A brief of the concerns raised by M/s CM Pak is as under;

4.2. The intervener highlighted issues being faced in terms of provision of electricity, coupled with over billing, deteriorating system and non-cooperative mechanism being adopted with respect to discharge of liabilities by the Petitioner. It was also submitted that provision of electricity connections despite paid demand notes ranges from 100-400 days, whereas, as per the rule 4 of NEPRA Performance Standards (Distribution) Rules, 2005, the time period prescribed for new connections is within 30 to 55 days. The Intervener accordingly requested the Authority to issue directions to the Petitioner for provision of electricity connection in accordance with law and decide the pending over billing complaints/issues within a specified time in accordance with law.

4.3. The Authority observed that the issues highlighted by the Intervener were primarily complaints in nature, therefore, directed the Petitioner, during the hearing, to ensure provision of pending connections without further delay. The Authority also directed the Petitioner to establish a corporate desk to facilitate its corporate clients in terms of provision of electricity and to address the issues of overbilling, if any, on priority basis. The Petitioner in the hearing submitted that during the period July to Dec. 2019, number of pending connections have been reduced from 78,262 to 57,587 which reflects decreasing trend. Further, during last financial year, No. of consumers increased @ 34,000 (approx.) per month, which tantamount to that No. of pending connections is less than two months average increase in consumers. It was also submitted that it takes at least a period of 3-4 months from start of procurement process to receipt of material against new connection (as per PPRA guidelines and market supply behavior). The Authority while analyzing the DISCOs performance statistics report published by PEPCO noted that as of June 2019, total applications pending for new connections in respect of the Petitioner were 128,616, which include 115,075 domestic, 7,424 commercial, 5,042 Agriculture, 1,062 industrial and 13 others applications. The Authority directs the Petitioner to provide electricity connections to all these pending applications without further delay and submit a quarterly progress report in this regard.

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4.4. 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. Directions given to the Petitioner in its Tariff determination for the FY 2017-18

5.1. The Authority gave certain directions to the Petitioner in its tariff determination for the FY 2017-18. The Authority understands that periodic monitoring of the directions given by the Authority is absolutely necessary in order to analyze the Petitioner's performance, therefore, the Authority has decided to have a half yearly review of the given directions, instead of discussing the same only during the tariff proceedings. However, the directions which are directly relevant to the tariff determination of the Petitioner are discussed hereunder;

6. To undertake village electrification after carrying out the technical evaluation and positive NPV of the Project and to spend at least 20% of the village electrification funds for improvement / up-gradation of the grid.

6.1. The Authority in the MYT determination of MEPCO for the FY 2016-17 and FY 2017-18, observed that the impact of all the investments may get diluted, if the Petitioner carry out village electrification imprudently as imprudent village electrification may result in overloading and increasing the T&D losses.

6.2. The Petitioner during the hearing submitted that MEPCO is Federation owned Distribution Company and undertakes village electrification projects in accordance with the instructions/SOP of the sponsor i.e. GOP which provides funds through public representatives (MNAs) for village electrification. As per SOP, no cushion was available for spending 20% of funds for improvement/up-gradation of the grids. Utmost care was exercised that MEPCO system should not be over loaded due to village electrification. However, MEPCO has referred the matter to the Ministry of Energy, Islamabad for advice regarding NEPRA directions pertaining to approval and execution of Village Electrification proposals, which is still awaited. MEPCO also submitted that village electrification will be undertaken strictly in accordance with advice/instructions in this regard.

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

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

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

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

7. **To restrain from unlawful utilization of receipts against deposit works and 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.**

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

7.2. The Petitioner during the hearing submitted that it utilizes the funds for the purpose, these are placed at its disposal by the consumers or any agency like Govt. of Pakistan, Provincial Govt., and Local Govt. etc. The funds at the disposal of MEPCO, received from the consumers, were exclusively utilized, specifically during the FY 2018-19. The Board of Directors of MEPCO ha also directed for consumption of the funds in only relevant head of account. The Petitioner submitted that a report with respect to separate disclosure of consumer finance spare & stores, work-in-progress & bank balances in the Financial Statements certified by reputed Chartered Accountant Firm, will be submitted within 45 days.

7.3. The Authority however for the FY 2018-19, has again observed that the Petitioner as per its audited 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.

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

7.5. In view thereof, the Authority has decided to take up this matter separately with the Petitioner through M&E/Legal Department, however, at the same again directs the Petitioner to ensure that in future consumer's deposits are not utilized for any other purpose. The Petitioner is also directed to restrain from unlawful utilization of receipts against deposit works and security deposits, failing which, the proceedings under the relevant law may be initiated against the Petitioner. The Petitioner is again directed to give clear

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disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance.

8. <u>To maintain proper record of its assets by way of tagging each asset for its proper tracking and also to provide explanation on the concerns raised by the Authority in terms of its R&M cost, not later than 30th September, 2018.</u>

8.1. The Authority in the previous tariff determinations of the Petitioner pertaining to the FY 2015-16, FY 2016-17 and FY 2017-18, observed that proper tagging of the assets is of utmost importance in order to enable the Petitioner to properly classify its cost in terms of capital or expense and accordingly, directed the Petitioner to maintain a proper record of its assets by way of tagging each asset for its proper tracking. In addition, the Petitioner was also directed to provide an explanation on the concerns raised by the Authority in terms of capitalization of costs which were being expensed out as R&M by the Petitioner. The Petitioner did not provide any update in this regard either during the hearing or afterwards. In view thereof, the Authority has decided to take up this matter separately with the Petitioner through M&E/Legal Department, however, at the same again directs the Petitioner to ensure proper tagging of its assets so that costs incurred are properly classified as per their nature and also to provide explanation on the concerns raised by the Authority in terms of its R&M costs.

9. <u>To create separate accounts or fund (as the case may be) for each head of post retirement liability and to deposit the whole amount into separate funds and accounts (as the case may be).</u>

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

10. <u>To share the details of late payment charges recovered from consumers and any invoice raised by CPPA (G) under the head of mark up on delayed payments for the FY 2014-15, FY 2015-16, FY 2016-17 and FY 2017-18.</u>

10.1. The Authority during the tariff determination of the Petitioner for the FY 2017-18 noted that CPPA-G did not raise any invoice to the Petitioner on account of late payment charges, therefore, the amount of LPS allowed in the FY 2015-16, FY 2016- 17 and FY 2017-18 shall be adjusted once the CPPA-G raises the late payment invoice. The Petitioner has not shared any details with respect to the invoices raised by CPPA (G) under the head of mark-up on delayed payments for the respective periods. In view thereof, the Authority has decided to take up this matter separately with the Petitioner through M&E/Legal Department, however, at the same again directs the Petitioner to provide the required details of late payment charges recovered from the consumers and invoices raised by CPPA (G) under the head of mark-up on delayed payments for the period from FY 2015-16 to FY 2019-20, in its next tariff petition.

11. <u>To submit Cost of Service Study based proposed consumer end tariff along with its next tariff petition.</u>

12. The Authority in the tariff determination of the Petitioner for the FY 2017-18, directed it to submit cost of service study based proposed tariff along-with the next tariff petition. However, no such study/ tariff has been submitted along-with the instant petitions for the FY 2018-19 and FY 2019-20.

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13. The Petitioner during the hearing submitted that it provide the Cost of Service Study conducted by USAID along with its Tariff Petition for FY 2014-15. Now, as per the Regulation of Generation, Transmission and Distribution of Electric Power (Amended Act) 2018, MEPCO is required to file two separate tariff petitions i.e. one for Supply of Electric Power and other for Distribution of Electric Power. Accordingly certain changes in Cost of Service Study are required. MEPCO had to immediately submit Tariff Petitions as per Amended Act. Accordingly, separate Tariff Petitions for Supply Business & Distribution Business were submitted as per the Amended NEPRA Act-2018. Cost of Service Study is being conducted, which will be submitted along-with next tariff petition.

14. The Authority again directs the Petitioner to submit its cost of service study based proposed tariff along-with the next tariff petition.

15. **To finalize the procurement process of HHUs at the earliest and convert its billing process on HHU basis in order to eliminate inefficiencies.**

16. **To ensure the visibility of the snap shot on the bills and also to maintain its record in soft form for at least a period of twelve (12) months**

16.1. In order to protect the interest of consumers in the matter of excessive billing, the Authority while considering the proposals floated by different XWDISCOs, during the proceedings of the tariff determination for the FY 2014-15 tariff determination process; agreed with the proposal submitted by PESCO regarding printing of snapshot of meter reading on the electricity bills of the consumers not only to enhance the level of confidence of the consumers but also to create an effective quality check on the Meter Readers.

16.2. In view of the aforementioned proposal regarding printing of snap shot of meter reading on the electricity bills, the Authority also considered the proposal of the Petitioner & MEPCO for allowing the cost of hand held meter reading units and principally decided to allow the cost of the hand held units to the Petitioner and directed it to submit its investment requirements for the implementation of the said plan along with the completion timelines.

16.3. The Petitioner, during the hearing submitted that it has shifted meter reading from HHUs to Mobile Phones, as the result of snaps taken by mobile phones is much better than HHUs due to high mega pixel camera and zoom facility. Further in case of HHU, retake option for snaps is not available and also software works slow where meter reader punches the reading on HHU and then takes snaps. It also submitted that MEPCO has shifted meter reading on Mobile Phones from HHUs due to better results and procurement of Mobile Phone has already been completed for all 180 No. Sub Divisions in MEPCO.

16.4. The Petitioner further submitted that visibility of meter reading snaps is being ensured on the printed electricity bills and annual average accuracy of snaps i.e. 98% has been achieved. Further, twelve months record of MR snaps is being retained by sub-divisions and MEPCO MIS Department as per instructions of the Authority.

16.5. The Authority during the proceedings of tariff petitions of XWDISCOs for the FY 2018-19 & FY 2019-20 noted that XWDISCOs have implemented printing of snap shot on bills through mobile phones meter reading instead of HHUs. It was also explained by various XWDISCOs that mobile meter reading, through application developed by PITC, is successfully being carried out through Mobiles, and also the cost of mobile phones is much lower than then HHUs. The Authority considers that purpose of the direction was to ensure printing of meter snap shots on consumer bills to eliminate inefficiencies, which as per the

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submissions made by the Petitioner, are being done through mobile phones and at a lower cost. Thus, the direction of the Authority has been complied with, however, the Petitioner is directed to address the problems of visibility of the snapshots appearing on the bills and to keep the record of snapshots till one year.

17. **Whether the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments are justified?**

18. **As provided in NEPRA Amendment Act, 2018, MEPCO as Distribution Licensee shall be deemed to hold Supply License also for a period of 5-years. In this regard, MEPCO is required to explain its organizational restructuring in respect of segregation of responsibilities for Distribution Business and Sale Business?**

19. **As per NEPRA Amendment Act, 2018, obligations of procurement of assets including meters (for satisfying its services) and disconnection / reconnection services (on demand of Supplier) are with Distribution Licensee whereas procedure for metering, billing, collection of approved charges and recovery of arrears are the obligations of Supply Licensee. In this scenario, MEPCO is required to state the mode and manner being developed and followed for appropriate coordination between Distribution Licensee and Supply Licensee?**

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

19.2. In light of the aforementioned provisions of the Act, the Petitioner was required to bifurcate its costs in terms of Distribution and Supply Function and provide basis thereof.

19.3. The Petitioner during the hearing submitted the following details regarding bifurcation of costs between supply & distribution segments based on functions, job description and activities;

DEPARTMENTS/ TASKS UNDER POWER SUPPLY BUSINESS	DEPARTMENTS/ TASKS UNDER POWER DISTRIBUTION BUSINESS
a. Commercial Directorate b. MIS Directorate c. Revenue Offices d. M&T Offices e. Meter Reading f. Bill Distribution g. Bill Collection	All the existing Departments/ Tasks excluding the Power Supply Business

19.4. The Petitioner also submitted during the hearing that;

i) Estimated expenses relating to Distribution business have been projected on the basis of available data in separate A/c heads (where possible) in combination with careful projections of the costs.

ii) Projected expenses relating to Revenue offices, Meter Reading Services, Bill Distribution Services, Collection charges, Commercial Department and MIS department are not included in Distribution business costs.

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iii) All fixed assets belong to Distribution business.

iv) CPPA issues power purchase invoices directly to the Power Supply Business and its payment is also the responsibility of the Power supply business.

v) Power Supply business will make payment of Revenue Requirement of the Distribution Business at the rate determined by the regulator, the same rate will be charged for wheeling of energy of other generator, Bulk Power Consumer etc.

vi) The recovery of outstanding balances of NTDC, CPPA and the payments to NTDC, CPPA and Distribution business is the responsibility of the Power Supply Business.

vii) Bad debts relate to supply business.

viii) The costs relating to Supply business are a sunk cost for MEPCO which do not depend upon the quantum of the business.

ix) MEPCO is a "Supplier of the last resort" which means that MEPCO is to keep and maintain supplier business setup to cope with any untoward situation.

x) The provision for employee's Post retirement benefits has been apportioned in the ratio of Salary, wages & Benefits expenses of the respective business.

xi) All equity, previous accumulated losses and prior year adjustments (PYA) belong to Distribution business.

xii) All arrears of recovery from consumers for the previous periods belong to Distribution business but supplier business is responsible for its recovery.

xiii) All previous long term loans and debt servicing is the responsibility of the Distribution Business.

xiv) All transmission and Distribution losses relate to Distribution business, however, MEPCO has some reservations on issue which are discussed in detail in the suggestion part of this petition.

xv) The claims and receipts of all subsidies including Tariff Differential Subsidy is the responsibility of the Supply business.

xvi) The receivable from associated companies regarding free supply will be dealt by the supply business.

xvii) The supply business is responsible for accumulated profit/ loss of its business only for the tariff purpose. However, MEPCO will take necessary steps to maintain separate books of accounts for Distribution and supply business in future.

xviii) The whole wire business from 132Kv to the consumer meter is owned and maintained by the distribution business. Therefore, the investment on the system also falls under the responsibility of the distribution business.

xix) The Late Payment surcharges and Supplemental charges belong to the Supplier's business and theses heads will knock off each other.

Segregation of Business

19.5. In terms of segregation of business, the Petitioner provided the following organogram in this regard;

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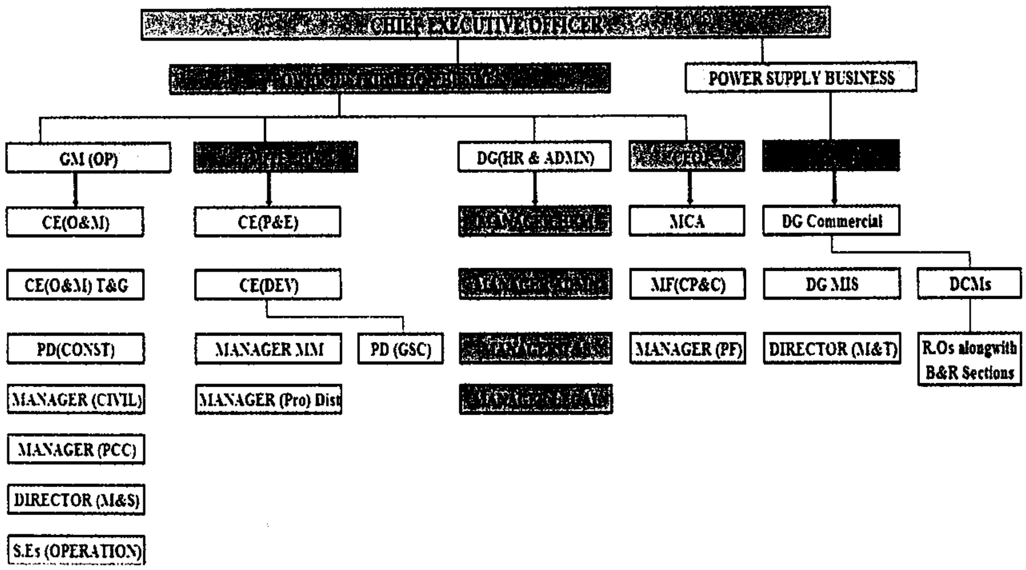

19.6. On the point of Coordination between two business, the Petitioner provided the following details;

- Board & CEO will supervise the activities of both businesses and their coordination.
- The service providing departments like HR, Finance, Audit, Civil, Marketing & Tariff etc. will operate in Distribution Business and will also coordinate under Board and CEO supervision with Power Supply Business to cater their requirement.
- Accounting, Regulatory and Taxation affairs will be looked after by the Finance Department for both the businesses in accordance with the relevant provisions of Law.
- However, all these areas will be subject to the Rules and Regulations of the Authority according to the best practices.
- As per Amended Act, it is implied that T&D losses will be the responsibility of Distribution Business.
- On the other hand, Meter reading portfolio will be under the Power Supply Business. Hence, it can manoeuver the situation towards benefit of Power Supply Business affecting the operating results of Distribution Business.
- Assigning the entire T&D losses to Distribution Business will adversely affect its financial viability as well as lead to vulnerability of Distribution Business towards manipulation by Power Supply Business without adequate safeguards. T&D loss issue, how it will be managed/ coordinated between Distribution and Supply business is a gray area, so that no party gets undue benefit from other due to this arrangement. Therefore MEPCO is looking to the Authority for clarification in this regard.

19.7. 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 metering, billing and collection form part of the Supply License.

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19.8. The Authority observed that the Petitioner has bifurcated its costs keeping in view the functions as provided in the Act, i.e. all non-sale elements of the distribution segment *(i.e. installation/investment, operation, maintenance and controlling of distribution networks)* as part of the Distribution License and all sale related activities *(metering, billing and collection)* as part of the Supply License.

19.9. The Petitioner has also shared its organizational restructuring program in respect of segregation of responsibilities for Distribution Business and Sale Business, whereby the Chief Commercial officer shall be the head of Supply Business and GM (Ops./ Tech.) shall be responsible for Distribution activities. Similarly, the Petitioner has also shared the manner being developed and followed for appropriate coordination between Distribution Licensee and Supply Licensee.

19.10. 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.

20. Whether the projected demand is reasonable?

20.1. The Petitioner, for the FY 2018-19, has proposed purchases of 19,367 GWh & sale of 16,310 GWh based on T&D losses of 15.78% and for the FY 2019-20, projected purchases of 21,284 GWh, with sales target of 17,941 GWh, based on T&D losses of 15.71% as given hereunder;

Description		Tariff Control Period		
		2018 (Actual)	2019	2020
Units Delivered	GWh	15,853	16,310	17,941
Receipt Growth	%age	19.61%	2.88%	10%
T&D Losses	%age	16.59%	15,78%	15.71%
Units Received	GWh	19,006	19,367	21,284
Receipt Growth	%age	19.14%	1.89%	9.89%
Avg. MDI	MW	3,760	3,956	4,348

20.2. The Petitioner also provided the following detail of its energy received and energy lost during the last five years;

Description		Actual FY				
		2015	2016	2017	2018	2019
Units Delivered	GWh	11,711	12,341	13,254	15,853	16,310
Receipt Growth	%age	2.40%	5.37%	7.40%	19.61%	2.88%
T&D Losses	%age	16.80%	16.45%	16.91%	16.59%	15.77%
Units Received	GWh	14,076	14,770	15,952	19,006	19,363
Receipt Growth	%age	1.6%	5%	8%	19.14%	1.88%
Avg. MDI	MW	2,686	2,912	3,280	3,760	3,956

20.3. The Petitioner during the hearing provided the following historical trend of its Power Purchases and he growth therein, for the last seven years;

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FINANCIAL YEAR	Units Purchased MkWh	Growth MkWh	Growth %age
2013-14	13,859	2,422	20.25
2014-15	14,073	214	1.54
2015-16	14,770	697	4.95
2016-17	15,952	1,182	8.00
2017-18	19,006	3,054	19.14
2018-19	19,367	361	1.90
2019-20 (Proj.)	21,284	1,917	9.90

*** The average growth of last 6 years remained 7.96%**

20.4. The Authority understands that issue of Power Purchase Price (PPP), is relevant with the Supplier tariff and therefore needs to be addressed in the Supply tariff of the Petitioner, dealing with the consumer end tariff. The matter has therefore been deliberated in detail in the Supply tariff Petition of the Petitioner for the FY 2018-19 and FY 2019-20.

21. <u>Whether the projected Net Distribution Margin (excluding RoRB) is justified? The petitioner is required to provide Grid wise plan of its proposed O&M?</u>

22. <u>Whether the projected Return on Regulatory Asset base (RORB) is justified?</u>

23. <u>Whether the requested Prior Year Adjustment including the impact of postretirement benefit, is justified?</u>

23.1. For projections or assessment of OPEX costs, two commonly used approaches are Ex-Ante 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. Secondly, the utility shares the savings or losses with consumers. The former approach 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.

23.2. 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. Considering the fact that the FY 2018-19 already elapsed, and the Petitioner has provided its Audited Accounts for the said period, the Authority considers it appropriate to use Ex-Post facto approach while determining O&M costs of the Petitioner for the FY 2018-19. For the FY 2019-20, since the actual costs of the Petitioner are not available, therefore, the Authority has made its own assessment for allowing the O&M costs.

23.3. The Petitioner in the distribution tariff petition requested an amount of Rs.32,520 million and Rs.40,483 million for the FY 2018-19 and FY 2019-20 respectively regarding Operation and Maintenance expenses, depreciation, RoRB and Other Income. In addition, the

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Petitioner has also requested an amount of Rs.127,635 million on account of Prior Year Adjustment for the FY 2019-20.

23.4. However, during hearing of the instant Petition, the Petitioner revised its distribution costs for the FY 2018-19 from Rs.32,520 million to Rs.30,592 million based on Audited results for the FY 2018-19. A summary of the revised amounts requested by the Petitioner is as under;

Rs. in Mln.

Description	FY 2018-19	FY 2019-20
Salaries & wages	7,013	9,185
Retirement Benefits	10,740	14,688
Repair & Maintenance Costs	1,726	2,092
Travelling	875	1,157
Transportation	364	506
Other Expenses	1,392	820
Sub-total	**22,110**	**28,448**
Depreciation	4,693	5,099
RoRB	8,197	11,170
Other Income	(4,408)	(4,234)
Prior Year Adj. – (PYA)		127,365
TOTAL	30,592	167,848

23.5. As per the Petitioner, the O&M costs includes Salaries & Wages (including Post-Retirement Benefit), Repair and Maintenance expenses, Travelling Expenses, Transportation Expenses, and Miscellaneous expenses.

24. <u>Salaries and Wages excluding postretirement benefits</u>

24.1. The Petitioner requested an amount of Rs.7,013 million and Rs.9,185 million under the head of Salaries & Wages excluding postretirement benefits for the FY 2018-19 and FY 2019-20 respectively. The Petitioner in this regard submitted that Board & CEO will supervise the activities of both businesses. The estimated expenses relating to Distribution business have been projected on the basis of available data in separate account heads (where possible) in combination with careful projections of the costs. The expenses relating to Revenue offices, Meter Reading Services, Bill Distribution Services, Collection charges, Commercial Department and MIS (Management Information System) department have not been included in the Distribution business costs. Further, the service providing departments like HR, Finance, Audit, Civil, Marketing & Tariff etc. will operate in Distribution Business and will also coordinate under Board and CEO supervision with Power Supply Business to cater their requirement. The Petitioner further in its petition included an amount of Rs.724 million being cost of proposed new hiring against vacant posts during the FY 2019-20.

24.2. The Petitioner submitted that salary is the major component of O & M costs. The GOP, in its annual budget for FY 2019-20 has allowed Adhoc Relief @ 10% & 5% of Basic pay for employees in BPS 1-16 and officers in BPS 17 and above respectively. It is effective from 01/07/2019 & its projected impact is Rs.567 (M) for FY 2019-20. Impact of annual increment on 01/12/2019 is Rs.128(M), increase in pay & allowances, due to promotions/ up-gradations etc. of employees is estimated as Rs. 158 (M) for FY 2019-20. Increase in employee's benefits including training & education, free supply and others due to inflationary impact is projected as Rs. 163 (M).

24.3. It was also submitted that MEPCO is facing acute shortage of line & staff on key posts, therefore, it is planned for induction of 2,927 employees including 23 SDOs, 1025 ALMs, 58

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Line Superintendents-II and others with a projected annual impact of Rs.822 million for the FY 2019-20. Furthermore, MEPCO is planning to create 02 Nos. new Divisions, 02 Nos. new Revenue Offices, 06 Nos. new Subdivisions (Operation) and 01 no. construction Sub Division. Total Impact of these new offices is Rs.182 million per annum. Out of this Rs.182 million, the cost of Rs.25 million of creation of 02 Nos. revenue offices falls under the expenses of the power supply business. It will enhance MEPCO's service delivery & imparting better operational results.

24.4. The Petitioner during the hearing also provided the following head wise detail of requested amount of Salaries & Wages along-with reason for increase therein;

Rs. in Mln

DESCRIPTION	FY 2018-19		FY 2019-20		Remarks
	Total	Per Employee	Total	Per Employee	
Basic Pay	4,204	0.303	4,877	0.352	Increase in Distribution Business is Rs. 2172 (M) and in Power Supply Business is Rs. 309 (M), total increase is Rs. 2481 (M)
Allowances	2,092	0.151	3,310	0.239	Adhoc Relief Rs. 567(M), Increment, Promotion Upgradation Rs. 286, Incentive/Honoraria Rs. 461 (M), Employee Benefits Rs.163(M), New induction Rs. 822 (M) & New Offices Rs. 182 (M)
Employee Benefits	717	0.052	998	0.072	
TOTAL	**7,013**	**0.506**	**9,185**	**0.663**	

24.5. Considering the fact that the FY 2018-19 and FY 2019-20, for which the costs are being assessed, have already lapsed, therefore, the Authority has decided to consider the actual costs incurred by the Petitioner in this regard. 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.

24.6. The actual payments reflected in the Audited accounts of the Petitioner for the FY 2018-19, for Salaries & Wages *(excluding postretirement benefits, discussed separately)* is Rs. 8,763 million. Accordingly, the same amount is being allowed to the Petitioner for the FY 2018-19 for the Salaries & Wages *(excluding postretirement benefits, discussed separately)*, for both the Distribution and Supply Functions.

24.7. Regarding, the FY 2019-20, till finalization of the instant determination, the financial statements of the Petitioner for the FY 2019-20 were not made available. Therefore, for assessment of Salaries & Wages costs for the FY 2019-20, the Authority has decided to incorporate the increases announced by the Government on Salaries and Wages in the Budget of FY 2019-20, on the amount allowed to the Petitioner under this head for the FY 2018-19. Accordingly, the Petitioner is allowed an amount of Rs.9,791 million for the Salaries & Wages costs *(excluding postretirement benefits, discussed separately)* for the FY 2019-20 for both the Distribution and Supply Functions.

24.8. The Audited accounts of the Petitioner, however, do not provide any bifurcation of the Salaries, Wages and other benefits costs in terms of Distribution and Supply Functions. Therefore, the Authority, has allocated the total cost of Salaries, Wages and other benefits proportionately to the Distribution and Supply Functions, based on the figures of Salaries,

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Wages and other benefits requested in the Distribution and Supply Petitions for both the FY 2018-19 and FY 2019-20. Accordingly, the cost of Salaries, Wages and other benefits *(excluding postretirement benefits)* for the FY 2018-19 and FY 2019-20 pertaining to the distribution function works out as Rs.7,013 million and Rs.7,998 million respectively.

24.9. Regarding cost of new recruitment, the Authority observed that Salaries & Wages cost for the FY 2018-19, is being allowed to the Petitioner as per the Audited accounts of the Petitioner for the FY 2018-19, therefore, impact of any new recruitment already made in the FY 2018-19 has been duly accounted for in both the FY 2018-19 and FY 2019-20. For the proposed recruitment to be carried out in FY 2019-20, the Authority understands that allowing cost of additional hiring, upfront would be unfair with the consumers, without considering/ analyzing the benefits of such recruitment. Therefore, the Authority may consider such costs once the actual recruitment is carried out and the Petitioner provides details of the actual cost incurred duly substantiated with the quantified benefits accrued.

25. Post-Retirement Benefits

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

25.2. The Petitioner during tariff proceedings for the FY 2015-16 submitted that it has created a separate post retirement fund and transferred an amount of Rs.100 million in the fund. The Petitioner in view thereof in its instant tariff petitions for the FY 2018-19 and FY 2019-20, requested that reduction made by the Authority out of MEPCO's demand for provision for Postretirement Benefits (based on Actuarial Valuation Reports) during previous years may kindly be allowed in the tariff for FY 2019-20 as Prior Year Adjustment (PYA) because MEPCO has created the Fund in compliance of Authority's direction. Thus, MEPCO, after collecting the same through tariff, could be able to deposit into the Fund created for the purpose. The Petitioner further submitted that provision for employee's Post retirement benefits has been apportioned in the ratio of Salary, wages & Benefits expenses of the respective businesses.

25.3. The Petitioner also submitted in the Petition that provision for Employees retirement Benefits for the FY 2018-19 are based on estimates and will be adjusted after availability of separate record for two businesses. The projected provision for the FY 2019-20, is Rs.17,980 million, (Rs.8,562 million against Provision for current year and Rs.9,418 million chargeable to Other Comprehensive Income. The current year provision of Rs.8,562 million is calculated by 10% increase from the previous year with an estimated additional impact of Regularization 2,371) Nos. of contract employees of different pay scales. This amount of Rs.17,980 (M) is comprised of Rs.14,688 million for Distribution Business and Rs.3,292 (M) for Power Supply Business. The Regulator has been disallowing provision for Retirement Benefits which are applicable on DISCOs under IAS 19. The regulator has cited the view that due to non-opening of retirement benefit trust fund account, the provisions will not be

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allowed as was being previously allowed to MEPCO. However, when MEPCO opened the fund account, the view by the regulator was given that the provisions will be allowed to the extent of the funds placed in the said account. This lead to the paradox, how MEPCO can arrange & manage that heavy amounts on its own. However, MEPCO on its own had managed to create fund to the tune of Rs.1,463 million to pension fund account and has also opened fund trust accounts of Compensated Absences (Leave encashment) & Free Medical.

25.4. It was also submitted that MFPCO was not allowed provisions in tariff determination of FY 2015-16, FY 2016-17 & FY 2017-18. Whereas, LESCO & IESCO were allowed provisions which were not at par with MEPCO on the compliance of authority instruction in this regard. The change in IAS 19 in 2016 abolished the 10% corridor approach which has drastically hampered the Balance Sheet of MEPCO (Rs.10 (13) on average). MEPCO is facing a huge impact in this regard which is projected to the tune of 10 Billion for FY 2018-19 also. The delay in allowing provision/ non allowing of provisions will only delay the cost as the actual expenditure has also substantially increased from FY 2012-13 to FY 2017-18. The actual payments increased from Rs.861 million in FY 2012-13 to Rs.3,211 million in FY 2017-18 which depicts an increase of 372 %. It is therefore imperative that MEPCO requests for Rs.41,935 million as Prior year adjustment may be considered.

25.5. The Authority in the tariff determination of the Petitioner for the FY 2017-18 noted that although the Petitioner complied with the direction of the Authority to the extent of creation of the separate Post Retirement Fund and transferred an amount of Rs.100 million into the fund. However, it is pertinent to mention here that the Authority had been allowing the provision for post-retirement benefits to the Petitioner as a part of its O&M cost till FY 2011-12 and it was only from FY 2012-13 that the Authority decided to allow the actual amount on account of pension benefits, due to non-compliance of the Authority's directions regarding creation of post retirement Fund. Thus, any post retirement liability pre FY 2012-13, is with the Petitioner. Accordingly, the Petitioner was directed in the previous tariff determinations to transfer the already collected provision into the Fund. The Petitioner in its instant Petition has not provided any update in the matter, however, has requested an amount of Rs.10,740 million and Rs.14,688 million, under the head of post-retirement benefits for the FY 2018-19 and FY 2019-20 respectively for its distribution function. In addition the Petitioner also included Rs.41,935 million in its working of PYA of previous provisions of postretirement benefits.

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

25.7. In view thereof, and considering the fact that FY 2018-19 has already lapsed, the Authority has decided to allow only actual payments made by the Petitioner on account of Post-retirement benefits made during the year as per the audited accounts provided by the Petitioner. The actual payments reflected in the Audited accounts of the Petitioner is Rs.4,232 million. Accordingly, the same amount is being allowed to the Petitioner for the FY 2018-19 for the postretirement benefits for both the Distribution and Supply Functions, including the impact of payments for the Ex- WAPDA employees retired before 1998.

25.8. Similarly for assessment of postretirement benefits for the FY 2019-20, the Authority has decided to incorporate the increases announced by the Government on Salaries, Wages &

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Post retirement benefits in the Budget of FY 2019-20, on the amount allowed to the Petitioner under this head for the FY 2018-19. Accordingly, the Petitioner is allowed an amount of Rs.4,656 million for the Post retirement benefits for the FY 2019-20 for both the Distribution and Supply Functions, including the impact of payments for the Ex-WAPDA employees retired before 1998.

25.9. Since, the Audited accounts submitted by the Petitioner do not provide any bifurcation of the post retirement cost in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed an amount of Rs.3,425 million and Rs.3,803 million , as Post retirement benefits for the FY 2018-19 and FY 2019-20 respectively, for its Distribution Function. The Petitioner is again directed to transfer the already collected provision on account of Post-Retirement benefits into the Fund and also provide break-up of the said postretirement benefits indicating the provision amount pertaining to the prior period and the current portion.

26. Repair & Maintenance Expenses

26.1. The Petitioner has requested an amount of Rs.1,726 million and Rs.2,092 million for the FY 2018-19 and FY 2019-20 respectively under the head of Repair & Maintenance for its Distribution function. The Petitioner while justifying its request submitted that the Authority allowed Rs.1,443 million for Repair and maintenance expense for the FY 2017-18 and the projected expenses for the FY 2018-19 are about 20% above the determined expenses. In this way MEPCO has assumed as Rs.2,092 (M) for FY 2019-20 with an increase of 20% from the previous year.

26.2. The Petitioner provided the following break-up of the requested amounts during the hearing;

Rs. in Mln.

DESCRIPTION	FY 2018-19	FY 2019-20
R&M Office Buildings	25	30
R&M G/Station & Line	77	93
R&M Distribution Transformers	611	741
Service Drop	507	615
Meter	428	519
R&M General Plant	43	52
R&M Residential Buildings	35	42
TOTAL	1,726	2,092

26.3. The Petitioner afterwards vide email dated November 05, 2020 provided the following justification of the requested R&M;

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FY 2018-19

Description	Amount (Rs. in Mln)	Remarks
R&M Buildings Offices & Stores	25.11	Annual major & minor Repair & Maintenance Work of Store, offices and others non-residential buildings.
132 KV Grid Station Equipment	58.24	Routine & co incidental repair of 132 KV Grid Station equipment including Power Transformers and allied G/S equipment like relays etc.
132 KV Distribution Lines	5.81	Routine & emergent repair & maintenance of 132 KV line including conductors.
11 KV Distribution Lines	10.07	Annual schedule/ un scheduled repair & maintenance of 11 KV feeders including conductors & accessories.
220 V Low Tension Lines	3.23	Annual schedule/ un scheduled repair & maintenance of 220V LT lines including conductors etc.
Distribution Transformers	610.66	MEPCO has a vast operational areas where consumers are located on scattered geographical locations. Therefore, transformer damage frequently. The new transformer installed under expansion & augmentation projects are Capitalized as assets and damaged transformers are not retired from assets and only cost of repair/ reclamation is charged to Repair & Maintenance expenses. Out of 169,938 Distribution transformers, MEPCO replaced approximately 10,604 damaged transformers during FY 2018-19. The major causes of damage transformers are as under : 1. During wind and storm situations, the lines get damaged which ultimately increase transformer damage ratio. 2. Harsh climate (Extreme hot weather) conditions in area of jurisdiction
Service Drop	506.89	It includes replacement of damaged poles, conductor, PVC & other hardware etc. The expenses under service drop increase due to: i) The consumers base of more than 6.8 million. ii) The vast operational and geographical area having average length of feeder i.e. 56 KM. iii) Very old distribution system. iv) Mostly domestic and rural consumers in scattered areas.
Meter	427.79	This expense includes replacement of damaged and faulty meters. Consumer base of MEPCO is mostly comprised of the domestic category living in rural areas. MEPCO is serving 89 % of consumers of domestic category on 30th June 2019. In domestic category, mostly single phase meters are used which carry a very small cost i.e. about Rs.1,200/- per meter. The individual record keeping of each meter is a gigantic task and not manageable under manual system. Secondly, the replacement of faulty and damage meters is a constant process, therefore the expense is booked to repair & maintenance head. MEPCO is in the process of implementation of ERP, through which the assets tagging and record keeping of such assets will be possible. Expenses are also being incurred on replacement of electromechanical meters with digital/ electronic meters.
sub-total	**1,622.69**	
Computer and Office Equipment	32.54	Annual routine and emergent repair & maintenance expenses of office equipment like computers, Printers, fax machines, scanners and photocopiers etc.
R&M Miscellaneous Assets	10.85	Repair and maintenance of Office furniture, workshop equipment, Laboratory equipment, Fire safety equipment and other allied equipment.
sub-total	**43.39**	
Residential Buildings	24.46	Annual major / minor repair & maintenance work of residential buildings, colonies and hostels etc.
Off-line/ Direct Expenses	10.05	It includes expenses on LT line accessories like connecting disks, stay rods etc.
GRAND TOTAL	**1,725.69**	

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FY 2019-20		
Description	**Rs. in Mln**	**Remarks**
R&M Buildings Offices & Stores	14.51	Annual major & minor Repair & Maintenance Work of Store, offices and others non-residential buildings.
132 KV Grid Station Equipment	46.64	Routine & co incidental repair of 132 KV Grid Station equipment including Power Transformers and allied G/S equipment like relays etc.
132 KV Distribution Lines	0.26	Routine & emergent repair & maintenance of 132 KV line including conductors.
11 KV Distribution Lines	6.36	Annual schedule/ un scheduled repair & maintenance of 11 KV feeders including conductors & accessories.
220 V Low Tension Lines	3.11	Annual schedule/ un scheduled repair & maintenance of 220V LT lines including conductors etc.
Distribution Transformers	687.82	Mepco has a vast operational areas where consumers are located on scattered geograhical locations. Therefore, transformer damage frequently. The new transformer installed under expansion & augumentation projects are Capitalized as assets and damaged transformers are not retired from assets and only cost of repair/ reclamation is charged to Repair & Maintenance expenses. Out of 179,577 Distribution transformers, MEPCO replaced approximately 11,158 damaged transformers during FY 2019-20 (Annex-1 attached). The major causes of damage transformers are as under : 1. During wind and storm situations, the lines get damaged which ultimately increase transformer damage ratio. 2. Harsh climatical (Extreme hot weather) condition in area of jurisdiction
Service Drop	399.06	It includes replacement of damaged poles, conductor, PVC & other hardware etc. The expenses under service drop increase due to: i) The consumers base of more than 6.8 million. ii) The vast operational and geographical area having average length of feeder i.e. 52 KM. iii) Very old distribution system. iv) Mostly domestic and rural consumers in scattered areas.
Meter	531.39	This expense includes replacement of damaged and faulty meters. Consumer base of MEPCO is mostly comprised of the domestic category living in rural areas. MEPCO is serving 89 % of consumers of domestic category on 30th June 2020. In domestic category, mostly single phase meters are used which carry a very small cost i.e. about Rs.1,200/- per meter. The individual record keeping of each meter is a gigantic task and not manageable under manual system. Secondly, the replacement of faulty and damage meters is a constant process, therefore the expense is booked to repair & maintenance head. MEPCO is in the process of implementation of ERP, through which the assets tagging and record keeping of such assets will be possible. Expenses are also being incurred on replacement of electromechanical meters with digital/ electronic meters.
sub-total	**1,674.64**	
Computer and Office Equipment	6.30	Annual routine and emergent repair & maintenance expenses of office equipment like computers, Printers, fax machines, scanners and photcopiers etc.
R&M Miscellaneous Assets	1.49	Repair and maintenance of Office furniture, workshop equipment, Laboratory equipment, Fire safety equipment and other allied equipment.
sub-total	**7.79**	
R&M Residential Buildings	21.95	Annual major / minor repair & maintenance work of residential buildings, colonies and hostels etc.
Of line/ Direct Expenses	9.79	It includes expenses on LT line accessories like connecting disks, stay rods etc.
GRAND TOTAL	**1,728.68**	

26.4. Considering the fact that FY 2018-19 has already lapsed, the Authority decided to analyze the actual expenditure incurred by the Petitioner for repair & Maintenance during the year. As per the Audited accounts provided by the Petitioner, its total actual expenditure under Repair & Maintenance is Rs.1,688 million, net of amount charged to CWIP. A historical trend of the Petitioner's actual R&M expenses during the last three years is as under;

Description	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
R&M Costs	1,686	1,888	1,299	1,688
% Change		12%	-31%	30%

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26.5. The above table shows that the Petitioner's R&M costs increased by around 30% for the FY 2018-19, as compared to the FY 2017-18, whereas, for the FY 2017-18 the same was reduced by around 31% as compared to the FY 2016-17. One of the possible reasons for this reduction could be the observation given by the Authority in the previous tariff determinations of the Petitioner, wherein the Authority noted that the Petitioner might be expensing out certain costs which were required to be capitalized i.e. Replacement of Transformers/ Meters. The Petitioner probably have started reporting its actual R&M costs and to capitalize costs relating to replacement of Transformers/ Meters in line with the Authority's directions.

26.6. For the FY 2018-19, the Authority while analyzing the actual costs of the Petitioner again noted that the Petitioner has included an amount of Rs.428 million on account of "Meters" in its R&M costs. Although, the Petitioner has provided its justification for not capitalizing the cost of meters, however, the Authority considers that such costs needs to be capitalized instead of expensing out, therefore, while assessing R&M costs of the Petitioner for the FY 2018-19, the Authority has decided to exclude the amount of Meters from the actual cost of R&M of the Petitioner for the FY 2018-19. Consequently, the assessed cost of the Petitioner for the FY 2018-19 for R&M works out as Rs.1,269 million after netting off the cost charged to CWIP.

26.7. The Authority believes that adherence to the service standards and improvement of customer services is only possible through continuous repair and maintenance of the distribution network. In view of the above discussion, and based on comparison with other XWDISCOs, the Authority considers that actual cost incurred by the Petitioner during the FY 2018-19, after excluding therefrom the cost of Meters, i.e. Rs.1,269 million is reasonable and hence allowed to the Petitioner for the FY 2018-19 for both its distribution and supply functions.

26.8. The Audited accounts submitted by the Petitioner do not provide any bifurcation of the R&M cost in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted, whereby, the Petitioner has requested the entire amount of R&M under its distribution function. Based on the same criteria, the Petitioner is allowed the entire amount of Rs.1,269 million for repair & maintenance for the FY 2018-19 under the Distribution Function.

26.9. For the FY 2019-20, the Petitioner has projected an increase of over 20% in its R&M expenses, as compared to actual cost incurred for the FY 2018-19, however, no cogent justification/rationale has been provided in support of the request. The actual R&M expenses trend of the Petitioner as presented in the table above also does not support the submissions of the Petitioner to allow Rs.2,092 million for the FY 2019-20. Accordingly, for the FY 2019-20, the Authority keeping in view the previous trend of the Petitioner's actual expenses & comparison with other DISCOs, has decided to allow inflationary increases on the amount of R&M allowed for the FY 2018-19. Accordingly, the cost for the FY 2019-20 works out as Rs.1,384 million which is hereby allowed to the Petitioner for both its distribution and supply functions.

26.10. For the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted, whereby the Petitioner allocated entire R&M amount

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to its distribution business. Based on the said criteria, the Petitioner is allowed the entire amount of Rs.1,384 million for repair & maintenance for the FY 2019-20, under the Distribution Function.

26.11. The Authority observed that the Petitioner is being directed since FY 2015-16, to maintain a proper record of its assets by way of tagging each asset for its proper tracking. In addition, the Petitioner was also directed to provide an explanation on the concerns raised by the Authority in terms of its R&M cost, however, no such explanation has been received from the Petitioner. In view thereof, the Authority has decided to take up this matter separately with the Petitioner through M&E/Legal Department, however, at the same again directs the Petitioner to maintain a proper record of its assets by way of tagging each asset for its proper tracking and also to provide explanation on the concerns raised by the Authority in terms of its R&M cost in earlier tariff determinations of the Petitioner.

27. Travelling Expenses

27.1. The Petitioner has requested an amount of Rs.875 million and Rs.1,157 million on account of travelling cost for the FY 2018-19 and FY 2019-20 respectively for its Distribution Function.

27.2. The Petitioner submitted that GoP has enhanced Travelling Daily Rates w.e.f. 01/07/2017, which has impacted actual expenditure in the FY 2017-18, FY 2018-19 & FY 2019-20 but Authority has almost ignored the same. The Authority allowed Rs.794 million against actual expense of Rs.988 million in the FY 2017-18. Therefore, the less allowed amount of Rs.194 million for FY 2017-18 may also be allowed. In present scenario, Rs.1,050 million projected for FY 2018-19 and Rs.1,282 million for the FY 2019-20 is quite justified. The increase in TA during FY 2019-20 includes Rs.81 million for new induction and creations of new offices. In view of the overall past trends and current requirements, travelling expenses have been projected for the FY 2019-20.

27.3. Here it is pertinent to mention that the Petitioner was allowed an amount of Rs.794 million for the FY 2017-18 for both its Distribution and Supply of Power Functions.

27.4. The Authority, considering the fact that FY 2018-19 has already lapsed, decided to analyze the actual expenditure incurred by the Petitioner under the head "Travelling". As per the Audited accounts of the Petitioner for the FY 2018-19, its actual expenditure under travelling for the FY 2018-19 is Rs.963 million. A comparison of the same with the amount allowed to the Petitioner for the FY 2017-18, showed that its actual Travelling cost for the FY 2018-19 has increased by around 21%. In view thereof, and comparison with other XWDISCOs, the Authority considers the cost of Rs.963 million incurred for Travelling for the FY 2018-19 as reasonable as it primarily includes inflationary impact, hence allowed to the Petitioner for the FY 2018-19 for both the Distribution and Supply Functions.

27.5. The Audited accounts submitted by the Petitioner however do not provide any bifurcation of the Travelling cost in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed an amount of Rs.855 million as travelling costs for the FY 2018-19 for its Distribution Function.

27.6. For the FY 2019-20, although the Petitioner has projected an increase of around 32% in its travelling expenses, as compared to actual cost incurred during the FY 2018-19, however,

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no cogent justification/rationale has been provided in support of the request. The Authority, therefore, keeping in view the Petitioner's previous trend, inflation and comparison with other DISCOs has decided to allow an amount of Rs.1,051 million for the travelling expenses for both the Distribution and Supply Functions.

27.7. For the purpose of bifurcation of cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed an amount of Rs.949 million as travelling costs for the FY 2019-20 for its Distribution function.

28. Transportation Expenses

28.1. The Petitioner has requested an amount of Rs.364 million and Rs.506 million on account of Transportation charges, including vehicle repair costs, for the FY 2018-19 and FY 2019-20 respectively for its distribution function, however, no further details or justification for the requested amounts has been provided. The Petitioner provide the following trend of its transportation expenses in its tariff petition;

Rs. In Million

Description	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	Five Year Average
Transportation	346	336	336	308	355	336

28.2. The Petitioner submitted that in view of the overall trend depicted above and current requirements, Transportation cost has been projected for the FY 2019-20. It includes 37.20 million for creation of new offices in FY 2019-20. Thus, the increase for FY 2019-20 is only about 15% of the actual expenses of FY 2018-19.

28.3. Here it is pertinent to mention that the Petitioner was allowed an amount of Rs.330 million for the FY 2017-18 for both its Distribution and Supply of Power Functions.

28.4. The Authority, considering the fact that FY 2018-19 has already lapsed, analyzed the actual expenditure incurred by the Petitioner under the head "Transportation". As per the Audited accounts of the Petitioner for the FY 2018-19, its actual expenditure under Transportation for the FY 2018-19 is around Rs.364 million.

28.5. A comparison of the same with the allowed cost of the Petitioner for the FY 2017-18 i.e. Rs.330 million, showed that actual total Transportation cost for the FY 2018-19 i.e. both for the Distribution and Supply functions, increased by around 10% as compared to the FY 2017-18.

28.6. In view of the foregoing discussion, keeping in view the actual costs for the FY 2018-19, Petitioner's service area, comparison with other XWDISCOs, and trend of inflation /fuel prices, the Authority, considers the cost incurred for Transportation for the FY 2018-19 as reasonable and hence the same is allowed to the Petitioner for the FY 2018-19 after excluding the amount charged to CWIP for both its Distribution and Supply Function i.e. Rs.356 million.

28.7. The audited accounts submitted by the Petitioner do not provide any bifurcation of the Transportation cost in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. The Petitioner has requested the entire amount of

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Transportation charges under its distribution function. Based on the said criteria, the Petitioner is allowed the entire amount of Rs.356 million as Transportation costs for the FY 2018-19 under the Distribution Function.

28.8. For the FY 2019-20, although the Petitioner has projected an increase of around 40% in its transportation expenses, as compared to actual cost incurred during the FY 2018-19, however, no cogent justification/rationale has been provided in support of the request. The Authority, therefore, keeping in view the Petitioner's previous trend, inflation and comparison with other DISCOs has decided to allow an amount of Rs.408 million for the Transportation expenses for both the Distribution and Supply Functions.

28.9. For the purpose of bifurcation of cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted, whereby the entire amount of Transportation expenses has been requested under the distribution function. Based on the said criteria, the Petitioner is allowed the entire amount of Rs.408 million as Transportation charges for the FY 2019-20 under the Distribution Function.

29. Other Expenses

29.1. The Petitioner has requested an amount of Rs.1,392 million and Rs.820 million on account of Other Expenses for its distribution function, which includes Rent, Rates and Taxes, utility expenses, communications, office supplies, legal & professional fees, audit fee, and management fee etc. The Petitioner during the hearing provided the following detail in this regard;

DESCRIPTION	FY 2018-19	FY 2019-20
Advertising	70	41
Office Supplies	247	146
Legal & Professional Fee	21	12
Audit Fee	1	1
Power, Light & Water	98	58
Computer & Outsource Services	319	188
Communication	61	36
Management Fee	226	133
Rent, Rate & Taxes	30	18
Insurance	35	21
Exchange Loss	1	1
Impairment of CWIP	18	11
Other Expenses	265	156
TOTAL	1,392	820

29.2. As per the Petitioner, the Professional Fees includes Legal Charges, Audit fees & professional fees etc. The Petitioner submitted that Professional Fees has been projected in view of the past trends and current requirements.

29.3. Regarding Management Fees, the Petitioner submitted that includes NEPRA fees and Supervisory charges of PEPCO and the same has been projected in view of the past trends and current requirements. The Petitioner submitted that PEPCO Management Fee was debited to MEPCO by CPPA, as it made the payment to PEPCO on behalf of DISCOs. The exercise for period pertaining to July 2008 to 2014 was approved by CFO PEPCO, therefore

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requested to allow cost of Rs.610 million in this regard as PYA.

29.4. Regarding office supplies, the Petitioner submitted that its Consumer base has increased @ 7% during FY 2018-19 & 6% is projected during FY 2019-20. The recovery against billing is also increasing in response to intensive recovery campaign from permanently disconnected consumers. Inflation has also impacted prices of office supplies like paper, photocopies and other items. In view of the above an increase of 25% is justified for FY 2019-20.

29.5. For the computer and outside services, the Petitioner submitted that total expenses under this head remained Rs.504 million for FY 2018-19 which consisted of Rs.331 million for Power Supply Business & Rs.173 million for Distribution Business. The projection under this head is Rs.524 million during FY 2019-20 comprising Rs.173 million for Distribution business & Rs.351 million. The above head includes projected payments of Rs.195 million to PITC for software license fee etc. Due to acute shortage of bill distribution staff Rs.156 million has been estimated for outsourcing of Bill distribution & meter reading staff. These projected expenses of Rs.351 million relate to Power Supply Business. Keeping in view the security issues of the country, MEPCO has projected Rs.162 million for outsourcing of security services till the induction of regular incumbent for proper handling of security matters. MEPCO has projected Rs.11 million for hiring of unskilled labor for different repair & maintenance works. In view of the overall past trends and current requirements, Computer & outside Services have been projected for the FY 2019-20.

29.6. Here it is pertinent to mention that the Petitioner was allowed an amount of Rs.1,122 million for the FY 2017-18 for both its distribution and Supply Functions.

29.7. The Authority, considering the fact that FY 2018-19 has already lapsed, analyzed the actual expenditure incurred by the Petitioner under the head "Other Expenses". As per the Audited accounts of the Petitioner for the FY 2018-19, its actual expenditure under this head has been Rs.4,467 million for both the Distribution and Supply Functions.

29.8. The Authority, during analysis of the Petitioner's financial statements observed that the Petitioner has included an amount of Rs.2,171 million on account of supplemental charges in its Other Expenses. The Authority noted that Supplemental charges are not allowed separately rather XWDISCOs are allowed to retain the amount of late Payment charges to off-set the impact of supplemental charges billed by CPPA-G, hence this cost has been excluded while assessing the Other Expenses of the Petitioner.

29.9. Further, the Petitioner included an amount of Rs.441 million as other charges without providing any breakup of the same. Similarly, provisions for CWIP of around Rs.29 million has also been claimed, for which no justification has been submitted.

29.10. In addition, PEPCO management fee of Rs.73 million has also been requested as Other Expenses. The Authority observed that each DISCO is an independent entity having its own board of Directors, thus, allowing any cost on the pretext of PEPCO Management fee is not logical. Further, the Ministry of Energy (MoE), itself in the Peshawar High Court submitted that PEPCO shall be dissolved after June 2011. In view thereof, the cost of PEPCO fee has not been allowed to the Petitioner.

29.11. In view of the above discussion, the Authority has decided not to accept the Petitioner's request being without any documentary evidence or rational. Accordingly, the Authority keeping in view the impact of inflation, comparison with other XWDISCOs and the Petitioner's historic allowed other expenses trend has decided to allow an amount of

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Rs.1,235, million as Other Expenses for the FY 2018-19 for both its distribution and supply functions.

29.12. The audited accounts submitted by the Petitioner do not provide any bifurcation of the Other Expenses in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed an amount of Rs.748 million as Other Expenses for the FY 2018-19 for its Distribution Function. The Petitioner is also directed to provide details of PEPCO Management Fees, if any, claimed previously so that same could be adjusted in the subsequent tariff determinations.

29.13. For the FY 2019-20, the Petitioner has requested a total amount of Rs.1,902 million under the head of Other Expenses including Rs.820 million for the distribution function and Rs.1,082 million for the Supply of Power Function. The claimed amount is around 54% higher than the amount allowed for the FY 2018-19, for which, no cogent justification is provided. The Authority, therefore, keeping in view the Petitioner's previous trend, inflation and comparison with other DISCOs has decided to allow an amount of Rs.1,347 million for the Other expenses for both the Distribution and Supply Functions.

29.14. For the purpose of bifurcation of cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed an amount of Rs.581 million as Other expenses costs for the FY 2019-20 for its Distribution Function.

30. Depreciation

30.1. The Petitioner on account of Depreciation Charges has requested an amount of Rs.4,693 million and Rs.5,099 million for the FY 2018-19 and FY 2019-20 respectively, for its distribution function. The Petitioner stated that Depreciation for FY 2018-19 is calculated on the basis of the value of existing Assets plus additions in assets during the FY 2017-18. The Petitioner also submitted that assets are depreciated on straight line method as per Utility practice i.e. land @ 0 %, buildings and civil works @ 2%, Plant and machinery @ 3.5%, office equipment and mobile plant @ 10% and other assets @ 10%.

30.2. Considering the fact that the period i.e. FY 2018-19, for which the cost is being assessed, has already lapsed, the Authority has decided to consider the actual cost incurred by the Petitioner in this regard for the FY 2018-19.

30.3. The Authority observed that as per the audited financial accounts provided by the Petitioner for the FY 2018-19, its actual expenditure under depreciation is around Rs.4,699 million, calculated on actual depreciation rates for each category of Assets, as per the Company's policy, based on historical costs of the assets i.e. excluding the impact of revaluation as detailed hereunder, which is hereby allowed for both the Distribution and Supply Functions;

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Rs. In Mln

Description	Cost	Amount
Land Free.Hold	27	-
Land Lease.Hold	26	-
Building	2,368	51
Dist. Equip.	40,604	1,170
Computers	111	2
Others	1,676	38
Total		**1,261**

30.4. The Audited accounts submitted by the Petitioner do not provide any bifurcation of the Other expenses in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its costs in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed an amount of Rs.4,699 million as part of its Depreciation function for the FY 2018-19. After carefully examining the relevant details and information pertaining to the deferred credit and amortization, the Authority has assessed amortization of deferred credit to the tune of Rs.2,756 million for the FY 2018-19, thus, consumers would bear net depreciation of Rs.1,940 million.

30.5. The Petitioner on account of Depreciation Charges for the FY 2019-20 requested an amount of Rs.3,042 million for the FY 2019-20.

30.6. In order to make fair assessment of the Petitioner's depreciation charges for the FY 2019-20, the Authority has taken into account the amount of investments allowed to the Petitioner for the instant year. After taking into account new investments, the Gross Fixed Assets in Operation for the FY 2019-20 have been worked out Rs158,163 million. Accordingly, the depreciation charge for the FY 2019-20, calculated on actual depreciation rates for each category of Assets as per the Company's policy, has been assessed as Rs.5,154 million. Based on the same criteria as adopted by the Petitioner to bifurcate its costs in terms of Distribution and Supply of Power Functions, the Authority has assessed an amount of Rs.5,154million on account of depreciation charges for the Distribution Function of the Petitioner for the FY 2019-20.After carefully examining the relevant details and information pertaining to the deferred credit and amortization, the Authority has assessed amortization of deferred credit to the tune of Rs.3,105 million for the FY 2019-20, thus, consumers would bear net depreciation of Rs.2,049 million.

31. Other Income

31.1. The Petitioner has projected "Other income" of Rs.4,408 million and Rs.4,234 million for the FY 2018-19 and FY 2019-20 respectively for the distribution function. The Petitioner submitted that main sources of other income include Profit on deposits with Banks, Amortization of Deferred Credit, Rental & Service Income etc.

31.2. Other income is considered as 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.

31.3. The Authority, considering the fact that FY 2018-19 has already lapsed, decided to consider the actual other income of the Petitioner for the FY 2018-19, which as per the Audited

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accounts of the Petitioner is around Rs.4,400 million, including the amount of amortization of deferred credit but exclusive of the amount of late payment charges. The Authority in consistency with its earlier decision, on the issue, has not included the amount of LPS while assessing the other income for FY 2018-19. The Petitioner is accordingly allowed other Income of Rs.4,400 million both for the Distribution and Supply Functions for the FY 2018-19, which does not include late payment charges but inclusive of amortization of deferred credit.

31.4. The Audited accounts submitted by the Petitioner do not provide any bifurcation of the Other Income in terms of Distribution and Supply Functions, therefore, for the purpose of bifurcation of the cost in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate its Other Income in Distribution and Supply functions has been adopted. Since, the Petitioner has requested the entire amount of Other Income under its Distribution Function, therefore, the total amount of Rs.1,376 million allowed as Other Income for the FY 2018-19 has been included in the Distribution Function of the Petitioner.

31.5. For the FY 2019-20, the Petitioner has projected Rs.4,234 million as Other income for its distribution function, exclusive of late payment surcharges.

31.6. The Authority has decided to consider the amount of Other Income as proposed by the Petitioner for the FY 2019-20, including the amount of amortization of deferred credit but exclusive of the amount of late payment charges. In view thereof, the Authority has assessed Rs.4,234 million as Other Income which does not include late payment charge but includes amortization of deferred credit. As per the criteria adopted by the Petitioner itself, the entire Other Income has been considered as part of Distribution Function.

31.7. The Authority in consistency with its earlier decision, on the issue, has not included the amount of LPS while assessing the other income for FY 2018-19 and FY 2019-20. 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.

31.8. In view thereof, the Authority, again directs the Petitioner to provide the required details of late payment charges recovered from the consumers and any invoice raised by CPPA (G) under the head of mark-up on delayed payments for the period from FY 2014-15 to FY 2019-20, in its next tariff petition.

32. <u>Whether the requested investment is justified? The Petitioner to explain project wise details along with rationale against the requested investment.</u>

32.1. The Petitioner initially in its tariff petitions, requested investments of Rs.12,064 million for the FY 2018-19 and Rs.17,122 million for the FY 2018-19 and FY 2019-20 respectively. The break-up of investment requested by the Petitioner is as under:

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Rs. in Mln

Investment Plan	2018-19 (Un-audited)	2019-20 Projected
DOP	556	1,200
ELR	1,582	3,000
STG (energy efficiency, capacitors)	3,533	4,000
Village Electrification / Deposit Work	1,831	1,500
Others (Capital receipts)	4,223	4,500
Vehicles (Utility & Others)	-	697
Enterprise Resource Planning (ERP)	12	25
Automated Meter Reading (AMR) meters	-	1,500
Others	327	650
Hospital Equipment	-	50
Total	12,064	17,122

32.2. The Petitioner, for the requested investment submitted the following financing arrangements;

Rs. in Mln

Financing Arrangement	2018-19 (Un-audited)	2019-20 (Projected)
Foreign Relent Loan	639	-
PSDP / Own Resources	3,234	11,122
Consumer Contribution	5,803	4,500
Others (Deposit Work)	2,388	1,500
Total	12,064	17,122

32.3. The Petitioner, submitted the following objectives against each project for the requested investment submitted the following financing arrangements;

Rs. In Million

Description	FY 2018-19	FY 2019-20	Objectives
Development of Power(DOP): a) Own Resources	884	1,900	Extension of existing distribution system by constructing new HT/LT lines up to 11KV & Augmentation of distribution system by enhancing the network capacity New Consumer connections (All categories)
b) Consumer Finance (CF)	4,223	4,500	Construction of residential and nonresidential buildings
Energy Loss Reduction (ELR)	1,582	3,000	Renovation and augmentation of distribution system for energy loss reduction by bifurcation of 11KV feeders
Secondary Transmission and Grids (STG)	3,533	4,000	Construction of 132KV new grids Construction of 132KV transmission lines Augmentation / Extension & Conversation of existing grids Augmentation of existing transmission lines
Enterprise Resource Planning (ERP)	12	25	Transformation of existing manual system into IT driven automated one in the following management areas: Finance Human Resource Inventory
Village Electrification (CF)	1,831	1,500	To boost up economic activities and living standard of rural population by providing electricity facilities, GoP through its programs: MDGs & SDGs, has been providing substantial amount of funds
Vehicles (Utility & Others)	-	697	Provision of suitable vehicle to carry out operational activities and management support for the existing and new offices
Automated Meter Reading (AMR)	-	1,500	Replacement of energy meters of the consumers with sanctioned load of 20KW & above as well tube well consumers to raise remote control aiming at reduction in AT &C losses through: Monitoring of consumption of electricity and timely reading for accurate billing Disconnection/ Reconnection to improve recovery Load management
Total	12,065	17,122	

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32.4. The Petitioner, however, during the hearing of the instant Petitions, revised its investment plan for the FY 2018-19 to Rs.13,560 million as given below;

Rs. In Mln

Description	FY 2018-19	FY 2019-20
	Projected	Projected
Village Elect. / Deposit Work	2,517	1,500
Other (Capital Receipts)	4,172	4,500
DOP	853	1,200
ELR	1,871	3,000
STG	3,403	4,000
Vehicles (Utility & Others)	3	697
ERP	12	25
AMR Meters	-	1,500
Others	729	650
Hospital Equipment	-	50
TOTAL	13,560	17,122

32.5. The Authority observed that the Petitioner was allowed an investment of Rs.11,416 million and Rs.13,000 million for the FY 2016-17 and FY 2017-18 respectively. The investment for the FY 2016-17 was allowed keeping in view the actual cost incurred by the Petitioner as the determination was issued after completion of FY 2016-17. For the FY 2017-18, the Petitioner has been able to utilize around 99% of the allowed investment i.e. Rs.12,924 million against allowed amount of Rs.13,000 million.

32.6. The Petitioner in the tariff determination for FY 2017-18 was also directed to provide:

- ✓ Cost/benefit analysis of investments made during last 05 years & technical/financial savings achieved.
- ✓ Project wise detailed report for the investments allowed for FY 2016-17 & 2017-18.

32.7. However, no such detail has been provided by the Petitioner either during the hearing or afterwards. The Authority has taken a serious notice of non-compliance of its direction in true letter & spirit by the Petitioner, which is serious violation of licensing terms that may lead to initiation of proceedings against the licensee under the relevant rules, and again directs the Petitioner to provide the required information.

32.8. Although, the Petitioner has failed to comply with the directions of the Authority in terms of providing cost benefit analysis of the investments carried out during the previous years, yet the importance of investments cannot be ignored in order to provide safe and reliable electricity to the consumers. Therefore, the Authority has carried out its own analysis / assessment of the Petitioner's Investment requirement for the FY 2018-19.

32.9. The Authority observed that the Petitioner did not file the required IGTDP, as required under the Consumer End Tariff Methodology 2015, for approval of the Authority prior to filing of the instant tariff petition. The Petitioner also stated during the hearing that the revised investment plan will be made as per the attached project-wise investment plan, however, no such plan has been provided.

32.10. Notwithstanding the above, the Authority, understands the significance of the investments, in order to cater for the future demands, minimize network constraints / overloading, improve performance standard indices and reduction in T&D losses. The Authority observed that since the period i.e. FY 2018-19, for which the Investment is being requested has

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already lapsed, therefore it would be more appropriate to consider the actual investments made by the Petitioner during the FY 2018-19. As per the Petitioner's audited accounts for the FY 2018-19, it has carried out an investment of Rs.13,439 million *(including deposit works)* during the FY 2018-19, which is hereby allowed to the Petitioner. The Petitioner is directed to provide project wise report for the investments carried out for the FY 2018-19 and for previous years i.e. FY 2016-17 & FY 2017-18 along-with its cost/benefit analysis and technical/financial savings achieved by December 31, 2020.

32.11. For the FY 2019-20, the Petitioner has requested an investment of Rs.17,122 million and also provided the breakup for the requested investment and its financing arrangement as under:

Rs. in Mln.

Description	Requested in Tariff Petition	Source of Funding
DOP	1,200	Own Resources
ELR	3,000	
STG	4,000	
Vehicles (Utility & Others)	697	
Hospital Equipment	50	
ERP	25	
Total – Own Resources	**8,972**	
Other (Capital Receipts)	4,500	Consumer Contribution
Village Electrification	1,500	Deposit Works
AMR Meters	1,500	Loan / Grant
Others	650	Loan / Grant
TOTAL	**17,122**	

32.12. The Authority noted that the Petitioner has not provided any detailed plans as per the required investment formats. Therefore, in order to assess the investment requirements of the Petitioner, the Authority relied upon the historical pattern of the investments allowed by NEPRA vis a vis actual utilization by the Petitioner. The comparison of investment requested, allowed and actual expenditure incurred from the FY 2013-14 to FY 2018-19 is given hereunder;

Investment	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Requested	7,992	20,458	14,781	12,050	18,000	13,560
Allowed	7,492	8,697	10,546	11,416	13,000	13,439
Actual	7,748	8,503	10,008	11,416	12,924	13,439
Excess/(Less)	256	(194)	(538)	-	(76)	-
%age	103	98	95	100	99	100

32.13. From the above table, the Authority observed that the Petitioner has been able to utilize 103.42% in the FY 2013-14, 97.77% in FY 2014-15, 94.90% in FY 2015-16 and 99.41% in FY 2017-18 of the allowed investment. Whereas, in FY 2016-17 and 2018-19, MEPCO utilized 100% of the allowed investment. The Authority also observed that MEPCO has spent the maximum of Rs.13,439 million in FY 2018-19 over the last six (06) years.

32.14. The Authority noted the following network additions in the MEPCO's territory due to execution of aforementioned planned investments over last six (06) years;

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Sr. #	Upto June	2014	2015	2016	2017	2018	2019
1	No. of Grid Stations (132kV, 66kV & 33kV)	122	125	126	129	129	133
2	Transmission Line Length (km) (132kV, 66kV & 33kV)	4,323	4,353	4,353	4,515	4,684	4,801
3	No. of 11kV feeders	1,039	1,139	1,165	1,241	1,324	1,392
4	Length of 11kV Lines (km)	69,453	71,102	71,971	72,899	74,061	76,057

32.15. It is obvious from the above, that the transmission and distribution networks of the Petitioner have expanded gradually during last 6 years. The Authority, being aware of the importance of investments for ensuring reliable, safe & smooth supply of electricity, observes the following performance standards over a period from FY 2014-15 to FY 2018-19;

Description	2014-15	2015-16	2016-17	2017-18	2018-19
SAIFI (nos.)	177.61	203	235	316.22	369.159
SAIDI (minutes)	15677.65	17592	20,411.32	26,822.35	31,419.30
Fatal Accidents	34	20	10	17	14
Actual T&D Losses (%)	15.5	16.45	16.92	16.59	15.77
New Connection Profile (%)*	9.15	5.7	5.14	5.28	7.9
Average Daily Load Shedding (hours)	4.25	3.2	3.35	1.3	0.43

* Indicates percentage of consumers who were not connected within due time frame.

32.16. From above, the Authority notes that the Petitioner's previous investments did not have a tangible impact in the provision of new connections within due time frame (5.28 % consumers were not connected in FY 2017-18 whereas 7.90 % consumers were not connected in FY 2018-19), SAIFI (316.22 in FY 2017-18 and 369.159 in FY 2018-19) and SAIDI (26,822.35 in FY 2017-18 and 31,419.30 in FY 2018-19). Further, the Authority notes the following improvements in MEPCO's performance indices;

- ✓ Reduction in number of Fatal Accidents (17 in FY 2017-18 and 14 in FY 2018-19).
- ✓ Daily load shedding duration has been improved from 1.30 hours in FY 2017-18 to 0.43 hours in FY 2018-19.
- ✓ Reduction in T&D losses has been observed as 16.59 % in FY 2017-18 and 15.77 % in FY 2018-19.

32.17. Keeping in view the above analysis, maximum investment utilization capability of MEPCO (Rs.13,439 million in FY 2018-19) and the significance of the investments required to cater for future demand, minimize network constraints / overloading, improve performance standard indices and reduce T&D losses, the Authority shows its satisfaction on MEPCO's competency to utilize allowed investments and also encourages the petitioner to further improve its capability to carry out more investment and accordingly decided to allow an investment of Rs.14,000 million for MEPCO for FY 2019-20.

32.18. The Petitioner in the tariff determination for the FY 2017-18 was directed to provide;

i. Cost/benefit analysis of investments made during last 05 years & technical/financial savings achieved.

ii. Project wise detailed report for the investments allowed for the FY 2016-17 & FY 2017-18.

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32.19. However, no such detail has been provided by the Petitioner either during the hearing or afterwards. The Authority has taken a serious notice of non-compliance of its direction in true letter & spirit by the Petitioner, which is serious violation of licensing terms that may lead to initiation of proceedings against the licensee under the relevant rules, and again directs the Petitioner to provide the required information.

32.20. Further, as per provisions of the NEPRA Act, the Petitioner is responsible to make such plans which are required to meet future demand and also to relieve the network overloading. Therefore, the Petitioner is directed to prepare such schemes to cater for future demand and for removal of system overloading/constraints. A detailed report shall be submitted by MESCO as part of its 5-years IGTDP for approval of the Authority before filing of next tariff petition as per requirement under NEPRA Guidelines for determination of Consumer End tariff (Methodology and Process) 2015.

33. **The Petitioner has requested T&D loss target in the supply of power petition, however, being relevant to the Distribution of Power business, whether the requested T&D loss target for the FY 2018-19 in the supply of power petition is reasonable? Whether this target comprises of both Technical and Commercial losses?**

33.1. The Petitioner, has requested T&D losses target of 15.79% for the FY 2018-19, with the following break-up;

FY 2018-19		
Technical	Administrative	**Total**
15.79%	00%	**15.79%**

33.2. The Petitioner in its tariff petition, provided the following segregation of technical losses as under;

Description	FY 2018-19
Transmission Losses at 132kV (%)	3.15
11kV Network Losses (%)	12.64
LT Line Losses (%)	*
Total Technical Losses (%)	**15.79**
Units Received (GWh)	19367
Units Sold (GWh)	16310
Units Lost (GWh)	3057
Technical Losses (%)	**15.79**
Administrative Losses (%)	-

**The petitioner has not provided the information in separate heads.*

33.3. In addition, the petitioner also submitted the following Historic trend of its T&D losses and Third Party losses study results;

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Period	Units Purchased	Units Sold	Units Lost	Losses
	GWh	GWh	GWh	%age
2010-11	12,471	10,189	2,282	18.30
2011-12	12,453	10,218	2,235	17.95
2012-13	11,962	9,913	2,049	17.13
2013-14	13,859	11,437	2,422	17.48
2014-15	14,073	11,711	2,362	16.78
2015-16	14,770	12,341	2,429	16.45
2016-17	15,952	13,254	2,698	16.91
2017-18	19,006	15,853	3,153	16.59
2018-19	19,367	16,310	3,057	15.79

33.4. MEPCO, through post hearing submissions, has also submitted its third party distribution losses study conducted by M/s PPI. The following table shows the results of the third party loss study and requested T&D losses for FY 2018-19;

Sr. #	Description	Losses (%)
1	Evaluated Transmission & Transformation Losses	3.9
2	Evaluated Energy Loss in 11kV Lines	6.67
3	Evaluated Energy Loss in Distribution Transformers	2.77
4	Evaluated Energy Loss in LT Networks	3.13
5	Evaluated Energy Loss in Service Cables	0.13
6	**Total**	**16.6**
7	Reduction in Losses due to Investments	-0.89
8	**Requested T&D Losses for FY 2018-19**	**15.79**

Transmission Losses;

33.5. It is noted that MEPCO submitted its third party transmission loss study conducted by M/s. PPI in FY 2017-18. The said study was conducted on the basis of MEPCO's transmission assets (132kV, 66kV and 33kV) statistics pertaining to FY 2015-16 which are tabulated as under;

Sr. #	Description	As on 30th June, 2016
1	Grid Stations	126 Nos.
2	Transmission line length	4353 kms.

33.6. The Authority, while evaluating the Transmission loss study, observed that third party consultant mentioned in the final report that:

"The data of actual line current flows, bus voltages and power transformer load currents for entire 132kV and 66kV system of MEPCO was gathered for the conditions of peak and off-peak hours of each month of 2015-16. Thus data for 24- snapshots of the year 2015-16 was captured and processed to be used as input to the Study. Thus the annual energy loss come out as 3.90%.

33.7. It is also observed that in the said study, the third party Consultant, keeping in view the

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higher transmission losses of 3.90% for MEPCO, recommended the following:

"For MEPCO, the installation of switched shunt capacitor banks at 11kV levels to bring the power factor of distribution network as high as possible is very important as during peak conditions the low voltage on the network causes heavier loading on the lines in order to meet the load demand, thus causing high losses. In addition, to relieve the heavily loaded transmission lines and power transformers by installing more lines and transformers or re-conducting heavily loaded lines using 132kV Rail Conductor to bring the loading reasonably below the limit to operate the system comfortably and with lower losses."

33.8. In view of the above, the Authority understands that MEPCO faced transmission network congestion / constraints and overloading situation in FY 2015-16 and when PPI conducted the said transmission losses study on the basis of transmission data pertaining to FY 2015-16, the transmission losses of 3.90% have been assessed by the third party consultant. The Authority also understands that the higher transmission losses of 3.90% were reflective of the above mentioned critical conditions. Therefore the Authority has no reservations on the results of the transmission losses study conducted by PPI at that time.

33.9. For the purpose of instant tariff petition, MEPCO requested transmission losses of 3.15% for FY 2018-19. In this regard, the Authority noted that MEPCO claimed lower transmission losses as compared to the results of third party study due to the following additions in its transmission networks (132kV and 66kV) as recommended earlier by the third party consultant in last 3 years;

Sr. #	Description	2017	2018	2019
1	No. of Grid Stations	129	129	133
2	MVA Capacity	7472	7838	8188
3	Transmission line length	4515	4684	4801

33.10. Foregoing in view, the Authority accepts the request of the petitioner for claiming lower transmission losses and accordingly allows transmission losses of 3.15% for FY 2018-19 for MEPCO.

Distribution Losses:

33.11. It is noted that the petitioner requested 12.64% distribution losses for FY 2018-19. The Authority, while considering the requested distribution losses by the petitioner, notes that the distribution losses of 12.64% as claimed in instant tariff petition for FY 2018-19 are based on the third party distribution loss study conducted by M/s. PPI and submitted by MEPCO during the proceedings of the instant tariff determination. It is also noted that the evaluated distribution losses of 12.64% are comprised of 9.45% (11kV distribution losses) and 3.19% (LT losses).

33.12. For the purpose of consistency, the Authority accepts the results of the distribution loss study conducted by M/s. PPI and accordingly, the Authority allows 12.64% distribution losses to MEPCO for FY 2018-19. The allowed margin of distribution losses of 12.64% include the following segregation:

- ✓ KV Feeder Losses including Distribution Transformers Losses= 9.45 %
  (Based on third party study)

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✓ LT Line Losses including Service Cable Losses = 3.19 %
(Based on third party study)

Detailed Break-Up of Allowed T&D Losses for MEPCO for FY 2018-19;

Transmission Losses	11 kV Network Losses	LT Line Losses	Total Allowed T&D Losses
3.15%	9.45%	3.19%	**15.79%**

T&D Losses for the FY 2019-20

33.13. Regarding FY 2019-20, the Petitioner has requested T&D losses of 15.71% as mentioned hereunder;

FY 2018-19		
Technical	Administrative	**Total**
15.71%	00%	**15.71%**

33.14. The Petitioner in its tariff petition, provided the following segregation of technical losses as under;

Description	FY 2019-20
Transmission Losses at 132kV (%)	3.15
11kV Network Losses (%)	12.56
LT Line Losses (%)	*
Total Technical Losses (%)	**15.71**
Units Received (GWh)	21284
Units Sold (GWh)	17941
Units Lost (GWh)	3344
Technical Losses (%)	**15.71**
Administrative Losses (%)	0

* *The petitioner has not provided the information in separate heads.*

33.15. In addition, the petitioner also submitted the following historic trend of its T&D losses and Third Party losses study results;

Period	Units Purchased	Units Sold	Units Lost	Losses
	GWh	GWh	GWh	%age
2010-11	12,471	10,189	2,282	18.30
2011-12	12,453	10,218	2,235	17.95
2012-13	11,962	9,913	2,049	17.13
2013-14	13,859	11,437	2,422	17.48
2014-15	14,073	11,711	2,362	16.78
2015-16	14,770	12,341	2,429	16.45
2016-17	15,952	13,254	2,698	16.91
2017-18	19,006	15,853	3,153	16.59
2018-19	19,367	16,310	3,057	15.79

33.16. MEPCO, through post hearing submissions, has also submitted its third party distribution losses study conducted by M/s PPI. The following table shows the results of the third party loss study and requested T&D losses for FY 2019-20;

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Sr. #	Description	Losses (%)
1	Evaluated Transmission & Transformation Losses	3.9
2	Evaluated Energy Loss in 11kV Lines	6.67
3	Evaluated Energy Loss in Distribution Transformers	2.77
4	Evaluated Energy Loss in LT Networks	3.13
5	Evaluated Energy Loss in Service Cables	0.13
6	**Total**	**16.6**
7	Reduction in Losses due to Investments	-0.89
8	**Requested T&D Losses for FY 2019-20**	**15.71**

Transmission Losses;

33.17. It is noted that MEPCO submitted its third party transmission loss study conducted by M/s. PPI in FY 2017-18. The said study was conducted on the basis of MEPCO's transmission assets (132kV, 66kV and 33kV) statistics pertaining to FY 2015-16 which are tabulated as under;

Sr. #	Description	As on 30th June, 2016
1	Grid Stations	126 Nos.
2	Transmission line length	4353 kms.

33.18. The Authority, while evaluating the Transmission loss study, observed that third party consultant mentioned in the final report that:

"The data of actual line current flows, bus voltages and power transformer load currents for entire 132kV and 66kV system of MEPCO was gathered for the conditions of peak and off-peak hours of each month of 2015-16. Thus data for 24- snapshots of the year 2015-16 was captured and processed to be used as input to the Study. Thus,Nepra@2019 the annual energy loss come out as 3.90%.

33.19. It is also observed that in the said study, the third party Consultant, keeping in view the higher transmission losses of 3.90% for MEPCO, recommended the following:

"For MEPCO, the installation of switched shunt capacitor banks at 11kV levels to bring the power factor of distribution network as high as possible is very important as during peak conditions the low voltage on the network causes heavier loading on the lines in order to meet the load demand, thus causing high losses. In addition, to relieve the heavily loaded transmission lines and power transformers by installing more lines and transformers or re-conducting heavily loaded lines using 132kV Rail Conductor to bring the loading reasonably below the limit to operate the system comfortably and with lower losses."

33.20. In view of the above, the Authority understands that MEPCO faced transmission network congestion / constraints and overloading situation in FY 2015-16 and when PPI conducted the said transmission losses study on the basis of transmission data pertaining to FY 2015-16, the transmission losses of 3.90% have been assessed by the third party consultant. The Authority also understands that the higher transmission losses of 3.90% were reflective of the above mentioned critical conditions. Therefore the Authority has no reservations on the results of the transmission losses study conducted by PPI at that time.

33.21. For the purpose of instant tariff petition, MEPCO requested transmission losses of 3.15% for

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FY 2019-20. In this regard, the Authority noted that MEPCO claimed lower transmission losses as compared to the results of third party study due to the following additions in its transmission networks (132kV and 66kV) as recommended earlier by the third party consultant in last 3 years:

Sr. #	Description	2017	2018	2019
1	No. of Grid Stations	129	129	133
2	MVA Capacity	7472	7838	8188
3	Transmission line length	4515	4684	4801

33.22. Foregoing in view, the Authority accepts the request of the petitioner for claiming lower transmission losses and accordingly allows transmission losses of 3.15% for FY 2019-20 for MEPCO.

Distribution Losses:

33.23. It is noted that the petitioner requested 12.56% distribution losses for FY 2019-20. The Authority that since MEPCO showed an overall reduction of 0.89% in distribution losses due to implementation of planned investment in the distribution sector during FY 2019-20 therefore, the Authority allows 11.75% distribution losses for MEPCO for FY 2019-20. The allowed margin of distribution losses of 11.75% include the following segregation:

- ✓ KV Feeder Losses including Distribution Transformers Losses= 8.56 %
  (based on 0.89% reduction)
- ✓ LT Line Losses including Service Cable Losses = 3.19 %
  (based on third party study)

Detailed Break-Up of Allowed T&D Losses for MEPCO for FY 2019-20;

Transmission Losses	11 kV Network Losses	LT Line Losses	Total Allowed T&D Losses
3.15%	8.56%	3.19%	**14.90%**

Summary of Directions to MEPCO:

33.24. The T&D losses being of critical importance, it is directed that MEPCO must 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 MEPCO in this respect. Similarly MEPCO is directed to carry out detailed analysis about hard and soft areas relative to its claims in earlier studies.

33.25. Considering T&D losses being of critical importance, the Authority directs the Petitioner 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 MEPCO in this respect. The Petitioner is also directed to carry out detailed analysis about hard and soft areas relative to its claims in earlier studies.

33.26. The Authority considers that the Petitioner can minimize its technical losses through prudent planning and engineering design practices, therefore, is directed to implement such activities and submit is plans in this regard to the Authority.

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33.27. The Petitioner is also directed to take remedial measures for achievement of performance standards as laid down in NEPRA Performance Standards (Distribution) Rules, 2005, for which a detailed plan be prepared, mentioning steps to be taken by the Petitioner, and submitted to the Authority accordingly.

34. Whether MEPCO is currently facing network congestions? If yes, PESCO is required to submit detailed analysis by identifying the grey areas which caused congestions in its transmission and distribution system. PESCO is also required to submit load shedding policy in high loss areas.

34.1. The Petitioner on the issue submitted the following details during the hearing;

STG NETWORK

Sr. #	Name	Remarks
1	220 kV G/S Vehari	Relates to NTDCL
2	220kV G/S Chishtian	
3	220kV G/S Bahawalpur	
4	66kV G/S McLoed Ganj	Conversion under progress. Shall be completed upto June 2020.
5	66kV G/S Minchinabad	
6	66kV G/S Karor Lal Esan	
7	66kV G/S Kot Sultan	
8	66kV G/S Maroot	
9	66kV G/S Head Rajkan	
10	132kV T/L KAPCO – Kot Adu	Proposed re-conductoring to be completed with a year.
11	132 kV T/L Vehari Rd – Multan New	
12	132 KV T/L Arifwala-Hota-Bahawal Nagar	

Network Congestion (11kV Feeders)

F.Year	Total No. of Feeders	Under Constraints			Constraints Removed	Work under Progress
		Previous	New due to load Growth	Total		
2013-14	1029	148	23	171	22	149
2014-15	1129	149	35	184	42	142
2015-16	1186	142	34	176	56	120
2016-17	1293	120	27	147	75	72
2017-18	1353	72	10	82	43	39
2018-19	1458	39	29	68	54	14
2019-20	1510	14	13	27	11	16

NETWORK CONGESTION (DISTRIBUTION TRANSFORMERS)

F.Year	Total No. of T/Fs	Previous	New due to Load	Total	Total Constraints Removed During Year	Work Under Progress
2013-14	149,368	6,604	265	6,869	438	6,431
2014-15	151,618	6,431	177	6,608	983	5,625
2015-16	156,460	5,625	1,480	7,105	869	6,236
2016-17	158,632	6,236	668	6,904	1,475	5,429
2017-18	161,197	5,429	415	5,844	2,287	3,557
2018-19	169,938	3,557	2,116	5,673	995	4,678
2019-20 (Up to 01-2020)	174,209	4,678	1,016	5,694	1,169	4,525

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34.2. The Authority observed that the claims of the Petitioner in terms of works being carried out for removal of congestion/ constraints in the network requires detailed analyses and scrutiny, therefore, the Authority has decided to analyze the submissions of the Petitioner during half yearly review of the directions given to the Petitioner.

35. Whether the projected Return on Regulatory Asset Base (RORB) for the FY 2018-19 is justified?

36. Whether the requested rate of return (ROR) is justified?

36.1. The Petitioner has requested an amount of Rs.8,197 million and Rs.11,170 million as RoRB for the FY 2018-19 and FY 2019-20 respectively for its distribution function, using a Rate of Return of 17.88% for the FY 2018-19 and 21.69% for the FY 2019-20. The Petitioner provided the following workings in this regard;

DESCRIPTION	FY 2017-18 Determined	FY 2018-19 Requested	FY 2019-20 Requested
Opening Fixed Assets in Operation	118,360	129,181	141,956
Assets Addition During the year	11,451	12,775	15,014
Closing Fixed Assets in Operation	29,810	141,956	156,970
Less: Accumulated Depreciation	41,269	45,982	51,081
Net Fixed Assets in Operation	88,542	95,974	105,889
Add: Capital Work In Progress-Net of D.Work	10,329	7,210	8,380
Investment in Fixed Assets	98,870	103,183	114,269
Less: Deferred Credits	58,235	55,343	59,104
Regulatory Assets Base	40,635	47,840	55,165
Average Regulatory Assets Base	38,384	45,843	51,503
Rate of Return	11.83%	17.88%	21.69%
Return on Rate Base	4,541	8,197	11,170

Description	Allowed FY 2017-18	Request FY 2018-19	Request FY 2019-20
Market Risk Premium %	7.00	7.00	7.00
Beta	1.10	1.10	1.10
Risk Free Rate %	8.97	10	13.25
RoE %	**16.67**	**17.7**	**20.95**
Cost of Debt (3 Month's KIBOR) %	9.76	10.55	13.02
WACC= [Ke x (E/V)] + [Kd x (D/V)] RATE (Without Tax Shield) [16.67% x 30%] + [9.76% x 70%] 5.001 + 6.83 = 11.831	11.83	12.7	15.4
Corporate Tax Rate		29.00	29.00
RATE (With Tax Shield)	17.31	17.88	21.69

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36.2. The Petitioner submitted that average rate of return is the return on the Profit Rate Base. The investment is typically financed with a combination of debt and equity, therefore the appropriate rate of return would be a market-based weighted average of the cost of capital. However, the Authority has been allowing WACC @ 11.83% using Plain Vanilla WACC approach by taking impact of tax shield as zero. Authority has allowed tax actually paid as a pass through item. MEPCO has calculated WACC @ 18.09% & 21.69% for FY 2018-19 & FY 2019-20 respectively. Cost of Debt to Equity has been taken as 70:30 for calculation of RORB rate. WACC @ 18.09% for FY 2018-19 is calculated by taking, already allowed, Market Risk Premium ® 7% with a beta of 1.10. By taking Risk free rate 10.50 (SBP Reverse Repo Rate applicable on 01/01/2019), Return on equity is calculated ® 18.20% (7.7% +10.50%). Cost of Debt is based on 3 month's KIBOR on 02/01/2019 @10.55%. By Applying formula;

WACC = [Ke x (EN)] + [Kd x (DN)]
= [18.20% x 30%] + [10.55% x 70%]
= 5.46% + 7.85% = 12.85%
By grossing up @29% = 18.09%

36.3. The WACC rate of 21.69% (7.7%+13.25%)for FY 2019-20, comprises Market Risk Premium 7% with beta of 1.10 as already allowed by the Authority with Risk free rate of 13.25% (SBP Policy (Target) Rate applicable on 17/ 07/ 2019). Applying the said rates with above formula, WACC for the FY 2019-20 is calculated as 21.69%. The Authority allowed post Tax RORB in tariff determination for FY 2017-18 with the view to consider any tax paid to be pass through cost but this approach nullified the benefit of tax shield due to carry forward of tax losses, However, due to change in tax laws the turn over tax w.e.f. 01/07/2017 has become minimum tax and its cost separately is not requested, as MEPCO is requesting for pre-tax rate of return on RAB.

36.4. The Authority noted that Section 31(3) of the amended NEPRA Act prescribes that;

(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;

36.5. The Authority allows Return to DISCOs based on WACC as no separate financial charges are allowed. For calculation of Return of Equity (RoE) component of the WACC, the Authority uses the Capital Asset Pricing Model (CAPM), being the most widely accepted model, applied by Regulatory agencies all over the world to estimate the cost of capital for regulated utilities. Since the Authority uses Plain Vanilla WACC, hence the impact of tax shield is taken as zero, and in case any tax is actually paid by the Petitioner, it is treated as pass through.

36.6. As per the 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.

36.7. For assessment of the RoE component for the FY 2018-19, weighted average yield on 05 Years Pakistan Investment Bond (PIB) as of June 13, 2018 has been considered as risk free rate which is 8.4795%. The expected return on any investment is the sum of the risk-free

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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.

36.8. To have an appropriate measure of the market rate of return, analyzed KSE-100 Index return, over a period of 8 years, which remained at around 15%. We have also considered Analysts' consensus/ research houses estimates in this regard. The risk premium used by different leading brokerage houses of the country ranges between 6% – 7%. The rate of return on KSE-100 index remained at around 15%, which also, translates into risk premium of around 6.521% *(with risk free rate of 8.4795%, Weighted Average Yield of 5-Year PIB as of June 13, 2018).* Therefore, keeping in view the aforementioned, Market Risk Premium of 6.521% is considered as reasonable for calculation of cost of equity component.

36.9. The Authority, keeping in view the earlier studies in the matter, range of betas used by international Regulators, and request of the Petitioner, has decided to maintain a beta of 1.10 while assessing the RoE component of the Petitioner.

36.10. 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 analyzed the financial statements of the DISCOs. The Authority noted that majority of loans obtained by XWDISCOs are relent loans, therefore, keeping in view the NEPRA (Benchmarks for Tariff Determination), Guidelines, 2018, and the loans obtained by K-Electric, the Authority considers cost of debt as 3 month's KIBOR + 2.00% spread as reasonable. Consequently, the cost of debt has been worked out as 8.93% i.e. 3 Months KIBOR of 6.93% as of 3rd July 2018 plus a spread of 2.00% *(200 basis points).*

36.11. Consequent to the aforementioned discussion, the Authority has re-worked the WACC as below;

Cost of Equity;
$Ke = R_F + (R_M - R_F) \times \beta$
= 8.4795% + (15%-8.4795% = 6.521% x 1.1) = 15.65%
Cost of Debt;
Kd = 8.93%

36.12. Accordingly, the WACC has been worked out as under;

WACC;
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 = ((15.65% x 30%) + (8.93% x 70%)) = 10.95%

36.13. Thus, using rate of return of 10.95%, the Authority has assessed Rs.4,122 million as return on rate base as per the following calculations:

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Description	FY 2017-18	FY 2018-19
Fixed Assets O/B	118,360	130,473
Addition	12,113	13,822
Fixed Assets C/B	130,473	144,295
Depreciation	41,606	46,305
Net Fixed Assets	88,867	97,990
Capital WIP C/B	11,162	10,899
Fixed Assets Inc. WIP	100,029	108,890
Less: Deferred Credits	65,011	68,595
Total	**35,017**	**40,295**
RAB		**37,656**
WACC		10.95%
RORB		**4,122**

36.14. For the purpose of bifurcation of RoRB in terms of Distribution and Supply Functions, since the Petitioner has requested the entire amount under the Distribution function, therefore, the entire assessed RORB of Rs.4,122 is being allowed under the Distribution Function for the FY 2018-19.

36.15. For assessment of the RoE component for the FY 2019-20, weighted average yield on 05 Years Pakistan Investment Bond (PIB) as of June 27, 2019 has been considered as risk free rate which is 13.7687%. 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.

36.16. To have an appropriate measure of the market rate of return, the return of KSE-100 Index, over a period of 8 years, has been analyzed which remained at around 15%, which translates into risk premium of around 1.23% *(with risk free rate of 13.7687%, Weighted Average Yield of 5-Year PIB as of June 27, 2019).* Therefore, keeping in view the aforementioned, Market Risk Premium of 1.23% is considered as reasonable for calculation of cost of equity component.

36.17. The Authority, keeping in view the earlier studies in the matter, range of betas used by international Regulators, and request of the Petitioner, has decided to maintain a beta of 1.10 while assessing the RoE component of the Petitioner.

36.18. 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 analyzed the financial statements of the DISCOs. The Authority noted that majority of loans obtained by XWDISCOs are relent loans, therefore, keeping in view the NEPRA (Benchmarks for Tariff Determination), Guidelines, 2018, and the loans obtained by K-Electric, the Authority considers cost of debt as 3 month's KIBOR + 2.00% spread as reasonable. Consequently, the cost of debt has been worked out as 14.97% i.e. 3 Months KIBOR of 12.97% as of 25th July 2019 plus a spread of 2.00% *(200 basis points).*

36.19. Consequent to the aforementioned discussion, the Authority has re-worked the WACC as below;

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Cost of Equity;
$Ke = R_F + (R_M - R_F) \times \beta$
(13.7687% + (15%-13.7687% = 1.23% x 1.1) = 15.12%
Cost of Debt;
Kd = 14.97%

36.20. Accordingly, the WACC has been worked out as under;

WACC;
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 = ((15.12% x 30%) + (14.97 % x 70%)) = 15.02%

36.21. Thus, using rate of return of 15.02%, the Authority has assessed Rs.6,610 million as return on rate base as per the following calculations:

Description	FY 2019-20
Fixed Assets O/B	144,295
Addition	13,868
Fixed Assets C/B	158,163
Depreciation	51,459
Net Fixed Assets	106,704
Capital WIP C/B	11,032
Fixed Assets Inc. WIP	117,736
Less: Deferred Credits	69,990
Total	**47,746**
RAB	**44,020**
WACC	15.02%
RORB	**6,610**

36.22. For the purpose of bifurcation of RoRB in terms of Distribution and Supply Functions, since the Petitioner has requested the entire amount under the Distribution function, therefore, the entire assessed RORB of Rs.6,840 is being allowed under the Distribution Function for the FY 2019-20.

36.23. The Authority during the tariff determination of the Petitioner for the FY 2015-16, noted that the Petitioner has insufficient cash balance as on 30th June 2015 against its pending liability of receipt against deposit works and consumer security deposits, which indicated that the amount received against the aforementioned heads has been utilized somewhere else and the Petitioner failed to provide details in this regard. The Authority is of the view that the amount collected as security deposit cannot be utilized for any other reason and any profit earned thereon has to be distributed to the consumers. Also, the amount collected under the head of receipt against deposit works has to be spent for the purpose for which it has been collected. The utilization of the money collected against deposit works and security deposits other than the works for which it has been received is illegal and unlawful. In view

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thereof, the Petitioner in the tariff determination for the FY 2015-16, FY 2016-17 and FY 2017-18 was directed to provide rational / justification for improper utilization of the money because the consumers have to suffer unnecessary delay on this account.

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

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

36.26. The Authority again directs the Petitioner to ensure that in future consumer's deposits are not utilized for any other purpose. The Petitioner is also directed to restrain from unlawful utilization of receipts against deposit works and security deposits, failing which, the proceedings under the relevant law may be initiated against the Petitioner. The Petitioner is also directed to give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance.

36.27. Based on the discussion made in the preceding paragraphs, incorporating all the aforementioned increases, the Authority has assessed Rs.18,087 million & Rs.22,654 million on account of Revenue Requirement i.e. salaries, wages and other benefits including post-retirement benefits, traveling, transportation, other expenses, repair & maintenance, Depreciation, RoRB and other income for the FY 2018-19 & FY 2019-20 respectively, as tabulated below;

Description	Unit	FY-19	FY-20
Pay & Allowances		7,013	7,998
Post Retirement Benefits		3,425	3,803
Repair & Maintainance		1,269	1,384
Traveling allowance		855	949
Vehicle maintenance		356	408
Other expenses		748	581
O&M Cost	**[Mln. Rs.]**	**13,666**	**15,124**
Depriciation		4,699	5,154
RORB		4,122	6,610
O.Income		(4,400)	(4,234)
Margin	[Mln. Rs.]	**18,087**	**22,654**

37. Prior Period Adjustment

37.1. The Petitioner, in the petition requested a positive amount of Rs.127,365 million on account of PYA for its distribution function for the FY 2019-20, as detailed below;

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Rs. in Million

Description	Requested	Remarks
Post Retirement Benefits FY 2015-16	13,237	Provision for Post Retirement Benefits is a bonafide expense recorded on the basis of actuarial report.
Post Retirement Benefits FY 2016-17	13,936	
Post Retirement Benefits FY 2017-18	14,761	
O&M Expenses FY 2015-16	2,170	This is the difference between actual audited expenses and determinations.
O&M Expenses FY 2016-17	1,367	
O&M Expenses FY 2017-18	3,211	
RORB FY 2015-16	3,133	This is the difference between RORB calculated on Actual asset base with post tax rate and the determined RORB.
RORB FY 2016-17	2,889	
RORB FY 2017-18	2,704	
Under Recovered PYA 2018	29,065	
Periodic Adj. 4 Quarter-FY 2018-19	40,282	
Management Fee	610	Share of PEPCO management fee for the
Total	**127,365**	

37.2. The Petitioner submitted that reduction made by the Authority out of MEPCO's demand for provision for Postretirement Benefits (based on Actuarial Valuation Reports) during previous years may kindly be allowed in the tariff for FY 2019-20 as Prior Year Adjustment (PYA) because MEPCO has created the Fund in compliance of Authority's direction. Thus, MEPCO, after collecting the same through tariff, could be able to deposit into the Fund created for the purpose.

37.3. The Petitioner also submitted that PEPCO Management Fee was debited to MEPCO by CPPA, as it made the payment to PEPCO on behalf of DISCOs. The exercise for period pertaining to July 2008 to 2014 was approved by CFO PEPCO, therefore, requested to allow cost of Rs.610 million in this regard as PYA.

37.4. The Petitioner has also included impact of Rs.444 million of second honorarium for the FY 2017-18 in its working of PYA, by stating that NEPRA allowed only one Honorarium in FY 2017-18 but MEPCO allowed two honorarium, amounting to Rs.911 (M) on the following grounds;

i) To encourage 100% accuracy of snapshots on electricity bills.
ii) To encourage staff for achieving 100% recovery

37.5. Regarding previous year postretirement provisions, the Authority has already discussed, this issue under the head of "Postretirement benefits" above, wherein the Authority noted that although the Petitioner complied with the direction of the Authority to the extent of creation of the Fund, however, the Authority had been allowing the provision for post-retirement benefits to the Petitioner as a part of its O&M cost till FY 2011-12 and it was only from FY 2012-13 that the Authority decided to allow the actual amounts on account of pension benefits, due to non-compliance of the Authority's directions regarding creation of post retirement Fund. Thus, any post retirement liability pre FY 2012-13, is with the Petitioner and accordingly, the Petitioner was directed in the previous tariff determinations to transfer the already collected provision into the Fund. The Petitioner in its instant Petition has not provided any update in the matter, therefore, the request of the Petitioner would be considered once it complies with the direction of the Authority regarding transfer of the already collected provision into the Fund. The Petitioner is accordingly directed to provide a complete reconciliation of the amount of provisions previously allowed by the

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Authority and the amount actually deposited by the Petitioner into the Fund for consideration of the Authority.

37.6. Regarding impact of O&M expenses for the FY 2015-16 to FY 2017-18, the Authority observed that the O&M expenses allowed to the Petitioner for the mentioned periods were assessed based on the available information at that time and does not include any provision for their actualization afterwards, thus, the request of the Petitioner is not allowed.

37.7. Regarding impact of Tax rate on RORB, the Authority observed that since it uses Plain Vanilla WACC, hence the impact of tax shield is taken as zero, and in case any tax is actually paid by the Petitioner, it is treated as pass through. Thus, tax paid by the Petitioner if any, would be considered separately as pass through cost, based on the documentary evidences in this regard.

37.8. The Prior Year Adjustment includes the impact of variation in the following;

i. Difference between the actual PPP billed and the amount recovered by the DISCO.
ii. Difference between the assessed DM and the amount actually recovered.
iii. Difference between the previously assessed PYA and the amount actually recovered.
iv. Difference between actual other income and the amount allowed
v. Variation due to Sales Mix.

37.9. 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 Quarterly/Bi-Annual Adjustment mechanism, therefore, the instant PYA includes accounts for the remaining components.

37.10. Here it is also pertinent to mention that the Authority through its interim decision dated September 27, 2019, in the matter of requests filed by Ministry of Energy (MoE) regarding Annual adjustment / indexation of Distribution Margin of DISCOs, allowed an amount of Rs.4,792 million as Interim adjustment to the Petitioner, strictly on provisional/ interim basis, subject to its adjustment once the annual adjustments of the Petitioner is finalized by the Authority. The said decision was notified by the Federal Government w.e.f. October 01, 2019 and would continue till September 30, 2020, whereby, the Petitioner has been allowed to recover the said amount through monthly billing as a separate tariff component. In view of thereof and the considering the fact that the Petitioner's adjustment request for the FY 2018-19 and FY 2019-20 is being finalized, the amount of Rs.4,792 million allowed on interim basis, has been adjusted back through PYA. Any under recovery of the allowed Interim DM and the amount actually recovered by the Petitioner would be adjusted subsequently as PYA.

37.11. Here it is also 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.1,366 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 amount shall be adjusted back subsequently. The tariff for the FY 2015-16 were notified by the Federal Government w.e.f. March 22, 2018, therefore, DISCOs were required to complete the process of Write-Offs till March 21, 2019.

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37.12. The Petitioner neither in its Petition nor during the hearing provided any details in terms of actual write offs for the amount provisionally allowed to the Petitioner. The Authority in view of the non-completion of the required process/ criteria and the fact that no amount has been written off by the Petitioner, has decided to adjust back the amount of write-offs of Rs.1,594 million actually recovered by the Petitioner against the allowed amount of Rs.1,366 million through PYA.

37.13. 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 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, which shows a net subsidy claim filed by the Petitioner.

37.14. The Authority in view of the above referred policy guidelines of GoP regarding rationalization of subsidy in the matter of XWDISCOs and in line with its earlier decision in the matter, has decided not to adjust the impact of negative FCA across different consumer categories. Thus, the 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.308 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. 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. Here it is pertinent to mention that the above figures have been worked on the basis of information provided by the Petitioner.

37.15. In addition to above, since the FY 2018-19 for which the assessment has been being made has already lapsed, therefore, any over / under recovery by the Petitioner in terms of its assessed Revenue Requirement for the FY 2018-19 vis a vis the amount actually recovered by the Petitioner during the same period based on the tariff that remained notified during this period, has also been included in the Prior Year Adjustment (PYA), while determining the Revenue Requirement of the Petitioner for the FY 2019-20. Similarly any over / under recovery of the assessed Distribution Margin for the FY 2017-18 and any previously allowed PYA has also been included as PYA in the Revenue requirement of the Petitioner for the FY 2019-20.

37.16. Based on the discussion made in the above paragraphs, the Authority has assessed the following PYA of the Petitioner for the FY 2018-19 & FY 2019-20;

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Description	Rs. Mln FY 2019-20	Rs. Mln FY 2018-19
PYA 2017		
Allowed	18,336	18,336
Recovered	21,403	21,403
Under/(Over) Recovery	**(3,067)**	**(3,067)**
PYA 2018		
Allowed	49,170	49,170
Recovered	45,226	45,226
Under/(Over) Recovery	**3,945**	**3,945**
Distribution Margin FY 2017-18		
Allowed	20,519	20,519
Recovered	18,288	18,288
Under/(Over) Recovery	**2,231**	**2,231**
Interim DM Adjusted Back	**(4,792)**	**(4,792)**
D.M FY 2018-19		
Allowed	21,238	
Recovered	19,336	
Under/(Over) Recovery	**1,902**	
Other Income FY 2017-18		
Allowed	(3,179)	(3,179)
Actual	(3,830)	(3,830)
Under/(Over) Recovery	**(651)**	**(651)**
Bad Debts		
Allowed	1,366	1,366
Revised allowed based on regulated sales	1,594	1,594
Adjustment	**(1,594)**	**(1,594)**
Sales Mix Variances		
FY 2017-18	1,161	1,161
FY 2018-19	2,112	
Total	**3,273**	**1,161**
Total Prior Period Adjustment	**1,248**	**(2,767)**

37.17. The Petitioner in its working has claimed the entire amount in its Distribution Function, therefore, the entire amount of PYA has been included in the Distribution function Revenue Requirement of the Petitioner for the FY 2018-19 & FY 2019-20.

38. Whether the existing Tariff Terms and Conditions needs to be modified to incorporate concerns raised by various consumers?

38.1. A lot of complaints have been received through Pakistan Citizen Portal, as well as in the Consumer Affairs Department of NEPRA, from XWDISCOs and other stakeholders,

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regarding clarification of Terms & Conditions with regard to applicability of tariff for different consumer categories, like Hostels (Commercial), Foreign Embassies, Water pumps & tube-wells, Fish farms etc.

38.2. In order to address these concerns, the Authority framed an issue for discussion during the hearing of DISCOs and for providing written comments in this regard. The Petitioner during the hearing requested for clarification regarding tariff to be charged to Cold storage, private hostels and fish farms/ hatcheries.

38.3. Further, the Ministry of Energy (MOE) vide letter dated May 20, 2020, forwarded request from the Government of Punjab for revision in Tariff Category for Water and Sanitation Agencies (WASA) in Punjab from A-3 General Service Category to D-1(b) SCARP (Salinity Control & Reclamation Program).

38.4. The Authority considers that SCARP is not the relevant Tariff category for Water Schemes as SCARP is applicable to all Reclamation and Drainage Operation pumping under SCARP related installation. Moreover, the purpose of creation of A-3 category was to reduce the undue benefit of Off-Peak rates for such consumers who although have TOU meters but only operate during day hours. In view thereof, the Authority has decided to maintain its earlier decision of inclusion of water schemes under A-3 category.

38.5. The Authority has also decided the other concerns of the DISCOs and other stakeholders by amending the terms & conditions of the tariff, if deemed correct, and the same are attached with the Supply Tariff determination of the Petitioner.

39. Whether the distribution margin should be recovered on Rs./kW or Rs./kWh basis?

39.1. For allocation of distribution network costs, different approaches are being used worldwide, however, there is no universally accepted methodology for allocating grid costs, and a variety of criteria have been adopted for this end. The most prominent classification is the distinction between capacity tariffs and volumetric tariffs or Hybrid Models, combining both Capacity and Volumetric tariffs. Capacity tariffs depend on the peak load as grid costs are mainly capacity driven, therefore, consumers with high peak loads pay the highest network costs, as the line or feeder is dimensioned to cope with the maximum power in kW or MW it is expected to carry at a certain point in time, not by the volume (kWh or MWh), it is expected to transmit over a certain time period. On the other hand, volumetric tariffs are charged for each kWh of electricity consumed from the grid and are easier to implement with conventional meters. Volumetric tariffs can be;

- ✓ proportionate: consumers pay per kWh, independent of volume level;
- ✓ progressive: the tariff per kWh increases with an increasing consumption level;
- ✓ regressive: the tariff per kWh decreases with an increasing consumption level; and,
- ✓ time-of-use: different tariffs in line with the available grid capacity (peak /off-peak).

39.2. The idea behind following any specific methodology for the cost recovery is that the DISCO, responsible for maintaining, developing and operating the distribution network, must be able to recuperate its prudently incurred costs. It must be reminded that DISCO is a natural monopoly, meaning that it is cheaper to have one company building and operating the distribution network rather to have multiple companies, duplicating the necessary lines and competing for consumers to connect to their network.

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39.3. In view thereof, the Authority for the sake of simplicity, ease of understanding, and the fact that the majority of the meters installed at consumer end level do not have the capability to record the peak load of consumers and also keeping in view the request of the Petitioner to allow a Rs./kWh rate, has decided to adopt the Rs./kWh approach for recovery of the allowed revenue requirement of the Petitioner from its consumers.

39.4. Here it is also pertinent to mention that the Petitioner is allowed a revenue cap target, whereby, it is hedged against any volume risk, as they make allowed revenues independent of the number of users served and energy delivered. Thus, in case on any over/ under recovery of the allowed revenues based on the allowed benchmarks of T&D losses and recovery, would be adjusted in the subsequent tariff settings of the Petitioners.

40. Whether the ToU meters installed on Residential and General Service connections have the capability to record MDI? Whether there should any Fixed Charges on residential and General Services consumers?

40.1. The Petitioner during the hearing submitted that although the TOU meters have the capability to record MDI, however, the billing software records KWh only.

40.2. The Authority observed that currently no fixed charges are being levied on Domestic consumers and General Service Category, i.e. such consumers only pay variable charge @ Rs./kWh, based on the amount of actual energy consumed during the month.

40.3. Considering the increase in capacity charges coupled with demand exiting the system due to net metering etc., the Authority is cognizant that there is a need to levy certain fixed charges for those domestic and general services consumers who have installed net metering facility, however, as the issue requires further deliberation, therefore, the Authority has decided not to levy any fixed charges on such consumers.

41. Whether the existing minimum monthly charges even, if no energy is consumed needs to be revised to assist in the recovery of fixed cost of the Petitioner?

41.1. The Authority noted 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 they have to be paid based on the plant availability, are charged to DISCOs based on their actual MDIs. However, the present consumer end tariff design is of volumetric nature whereby major portion of the Power Purchase Price (PPP) is charged / recovered from the consumers on units consumed basis i.e. per kWh and only a small amount of the total PPP is recovered on MDIs basis. The Authority considering the increased quantum of capacity charges, and the present volumetric nature of tariff, has decided to increase the rate of fixed charges currently applicable to certain categories, by around 10% i.e. from Rs.360/kW/M, 380/kW/M and 400/kW/M to Rs.400/kW/M, 420/kW/M, and 440/kW/M respectively. However, at the same time, the Authority, not to overburden such consumers who are levied fixed charges, has adjusted their variable rate, to minimize the impact of increase in fixed charges.

42. Wheeling Issues

42.1. The Authority approved National Electric Power Regulatory Authority (Wheeling of Electric Power) Regulations, 2016 (the Regulations) vide SRO dated June 13, 2016, in order to facilitate wheeling of power in the country. However, different stakeholders voiced their

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concerns on the Regulations in terms of treatment of T&D losses during wheeling, imposition of Cross subsidies, treatment of Stranded costs if any, applicability of Use of System charges of NTDC, Hybrid BPCs, and Banked Energy etc.

42.2. The Authority accordingly made two additional issues of Cross Subsidy charge and Stranded cost under the instant petition, for which advertisement was published in the leading newspapers on September 9th, 2020 and hearing in this regard was held on 17th September, 2020. Here it is also pertinent to mention that to get an international view on these issues, the Authority has also engaged an international consultant through USAID.

42.3. The Authority considering the impact of the above issues on the power sector, considers that the matter requires further deliberations, and has therefore decided to issue a separate additional decision on the aforementioned proceedings.

42.4. Thus, the Use of System Charge (UoSC) determined by the Authority in the instant decision, as mentioned under the Order part, may be revised accordingly, if required in light of the decision of the Authority on the wheeling issues, which will be issued separately.

43. <u>Order</u>

43.1. In view of the discussion made in preceding paragraphs and accounting for the adjustments discussed above, the revenue requirement of the Petitioner, for the FY 2018-19 and FY 2019-20, to the extent of its distribution function is summarized as under;;

Description	Unit	FY-19	FY-20
Pay & Allowances		7,013	7,998
Post Retirement Benefits		3,425	3,803
Repair & Maintainance		1,269	1,384
Traveling allowance		855	949
Vehicle maintenance		356	408
Other expenses		748	581
O&M Cost	**[Mln. Rs.]**	**13,666**	**15,124**
Depriciation		4,699	5,154
RORB		4,122	6,610
O.Income		(4,400)	(4,234)
Margin	[Mln. Rs.]	**18,087**	**22,654**
Prior Year Adjustment		(2,767)	1,248
Revenue Requirement	[Mln. Rs.]	**15,320**	**23,901**
Average Tariff	[Rs./kWh]		
Margin		1.10	1.36
PYA		(0.17)	0.07
Tariff	[Rs./kWh]	**0.93**	**1.44**

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43.2. Multan Electric Power Company (MEPCO) being a distribution licensee, is allowed to charge its consumers, the following "Use of system charge" (UOSC) for the FY 2018-19;

Description	For 132 kV Only	For 11 kV Only	For both 132 & 11 kV
Asset Alocation	23%	44%	67%
Level of Losses	3.15%	9.96%	12.80%
UoSC Rs./kWh	0.27	0.60	0.90

43.3. Multan Electric Power Company (MEPCO) being a distribution licensee, is allowed to charge its consumers, the following "Use of system charge" (UOSC) for the FY 2019-20;

Description	For 132 kV Only	For 11 kV Only	For both 132 & 11 kV
Asset Alocation	23%	44%	67%
Level of Losses	3.15%	9.03%	11.89%
UoSC Rs./kWh	0.33	0.70	1.07

43.4. Use of System Charge (UoSC), as mentioned above, may be revised accordingly, if required in light of the decision of the Authority on the wheeling issues, which will be issued separately.

43.5. 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,

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

43.7. 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;

43.8. To develop, maintain and publicly make available, with the prior approval of the Authority, an investment program for satisfying its service obligations and acquiring and selling its assets

43.9. 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.

43.10. 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.

44. Summary of Direction

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

i. File Multi Year Tariff Petition for a tariff control period of five year to avoid any delay in tariff determinations.

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ii. to immediately stop the existing practice of deducting 20% of SAP funds for grid augmentation and carry out the augmentation of the grid after coordinating with the Ministry of Energy and report be shared with the Authority by December 31, 2020.

iii. to immediately ensure that consumer's deposits are not utilized for any other purpose and the same is reflected in the Audited accounts for the FY 2020-21 & onward.

iv. to immediately restrain from unlawful utilization of receipts against deposit works and security deposits immediately, and the same is reflected in the Audited accounts for the FY 2020-21 & onward.

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

vi. to give clear disclosures in its Financial Statements with respect to the break-up of costs in terms of Distribution and Supply Businesses for the FY 2019-20 and onward.

vii. to ensure proper tagging of assets so that costs incurred are properly classified as per their nature and report be submitted to the Authority by June 30, 2021.

viii. to provide the required details of late payment charges recovered from the consumers and any invoice raised by CPPA (G) under the head of mark-up on delayed payments for the period from FY 2014-15 to FY 2019-20, by March 31, 2021.

ix. to prepare schemes to cater for future demand and for removal of system overloading/constraints. A detailed report shall be submitted as part of its 5-years IGTDP for approval of the Authority before filing of next tariff petition as per requirement under NEPRA Guidelines for determination of Consumer End tariff (Methodology and Process) 2015.

x. to immediately provide electricity connections to all the pending applications without further delay and submit a progress report in this regard by the end of each quarter.

xi. to immediately establish a corporate desk to facilitate its corporate clients in terms of provision of electricity and to address the issues of overbilling, if any, on priority basis and submit report to the Authority by March 31, 2021.

xii. to target high loss feeders to bring the overall losses down. A detailed plan be prepared and submitted to the Authority by March 31, 2021, for monitoring the progress of MEPCO in this respect.

xiii. transfer the already collected provision on account of Post-Retirement benefits into the Fund and also provide break-up of the said postretirement benefits indicating the provision amount pertaining to the prior period and the current portion by June 30, 2021.

xiv. to provide project wise report for the investments carried out for the FY 2018-19 and for previous years i.e. FY 2016-17 & FY 2017-18 along-with its cost/benefit analysis

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and technical/financial savings achieved by March 31, 2020.Carry out detailed analysis about the hard and soft areas relative to claims in earlier studies.

xv. Take remedial measures for achievement of performance standards as laid down in NEPRA Performance Standards (Distribution) Rules, 2005.

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

AUTHORITY

Engr. Bahadur Shah
Member

Rehmatullah Baloch
Member

Rafique Ahmed Shaikh
Member

Saif Ullah Chattha
Vice Chairman
14.12.2020

Tauseef H. Farooqi
Chairman

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