



Registrar

# National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/R/ADG(Trf)/TRF-526/GEPCO-2019/46498-46500  
December 24, 2020

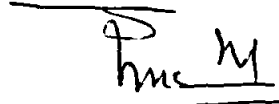
**Subject: Determination of the Authority in the matter of Petition filed by Gujranwala Electric Power Company Ltd. (GEPCO) for Determination of its Distribution Tariff for the FY 2019-20 [Case # NEPRA/TRF-526/GEPCO-2019]**

Dear Sir,

Please find enclosed herewith subject Determination of the Authority (30 Pages) in Case No. NEPRA/TRF-526/GEPCO-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.

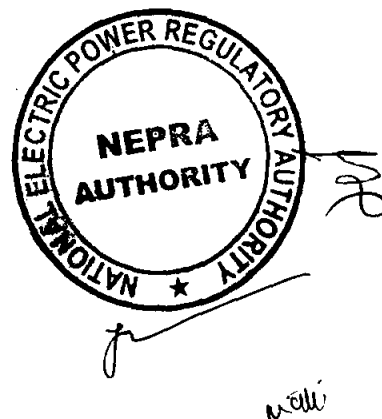


**National Electric Power Regulatory Authority  
(NEPRA)**

PETITION NO: NEPRA/TRF-526/GEPCO-2020

**DETERMINATION OF DISTRIBUTION TARIFF PETITION  
FOR  
GUJRANWALA ELECTRIC POWER COMPANY LIMITED (GEPCO)  
FOR THE FY 2019-20  
UNDER  
NEPRA TARIFF (STANDARDS AND PROCEDURE) RULES - 1998**

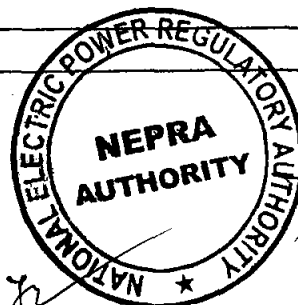
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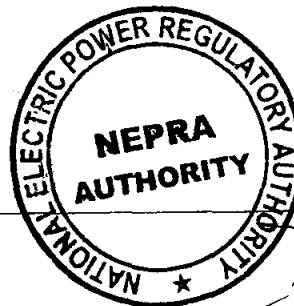
#### Abbreviations

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





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





**DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY  
GUJRANWALA ELECTRIC POWER COMPANY LIMITED (GEPKO) FOR DETERMINATION OF  
ITS DISTRIBUTION TARIFF FOR THE FY 2019-20**

CASE NO. NEPRA/TRF-526/GEPKO-2020

**PETITIONER**

Gujranwala Electric Power Company Limited (GEPKO), 565-A Model Town, Gujranwala.

**INTERVENER**

NIL

**COMMENTATOR**

Telenor Pakistan (Private) Limited, Gulberg Greens, Islamabad.

**REPRESENTATION**

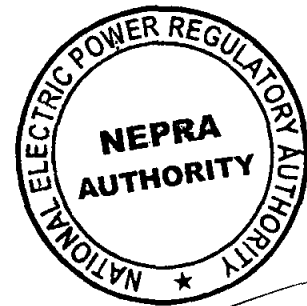
- |                          |                            |
|--------------------------|----------------------------|
| i. Muhammad Amin         | Chief Executive Officer    |
| ii. Iyaz Ahmad           | Finance Director           |
| iii. Tariq Mahmood Amjad | Manager Finance/CPC        |
| iv. Muhammad Akhtar Ali  | Manager GSO                |
| v. Muhammad Asif         | Deputy Manager Finance/CPC |



## 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 15<sup>th</sup> March, 2018, which was published in the official Gazette on 30<sup>th</sup> 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. In view thereof, Gujranwala Electric Power Company Limited (GEPCO), 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 in terms of Rule 3 (1) of Tariff Standards & Procedure Rules-1998 (hereinafter referred as "Rules").
- 1.5. The Petitioner in its petition, inter alia, has requested for a distribution cost of Rs.21,375 million for the FY 2019-20 i.e. Rs.2.0332/kWh based on projected sales of 10,513 GWh as detailed below;

Description	Units	FY 2019-20
Investment	[Mln Rs]	6,629
Units Received	GWh	11,636
Requested Units Lost	GWh	1,123
Requested Losses	%	9.65%
Units Sold	GWh	10,513
O&M	[Mln Rs]	14,457
Depreciation		2,440
RORB		5,008
Other Income		-530
<b>Total Revenue Requirement of Wire Business</b>	<b>[Mln Rs]</b>	<b>21,375</b>
<b>Distribution Margin</b>	<b>Rs./kWh</b>	<b>2.0332</b>



## 2. Proceedings

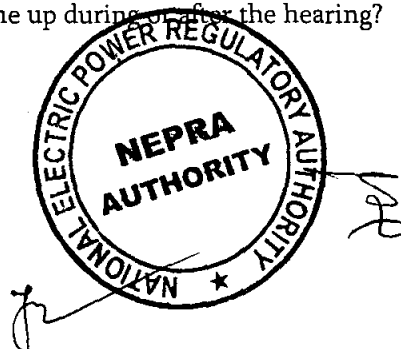
- 2.1. In terms of rule 4 of the Tariff standard and Procedure Rules, 1998 (hereinafter referred to as "Rules"), the petition was admitted by the Authority. Since the impact of any such adjustments has to be made part of the consumer end tariff, therefore, the Authority, in order to provide an opportunity of hearing to all the concerned and meet the ends of natural justice, decided to conduct a hearing in the matter.
- 2.2. Hearing in the matter was scheduled on September 09, 2020, for which notice of admission / hearing along-with the title and brief description of the petition was published in newspapers on

August 26, 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;

- i. Whether the Petitioner has complied with the direction of the Authority given in its earlier determination?
- ii. Whether the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments are justified?
- iii. As provided in NEPRA Amendment Act, 2018, GEPCO as Distribution Licensee shall be deemed to hold Supply License also for a period of 5-years. In this regard, GEPCO is required to explain its organizational restructuring in respect of segregation of responsibilities for Distribution Business and Sale Business?
- iv. 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, GEPCO is required to state the mode and manner being developed and followed for appropriate coordination between Distribution Licensee and Supply Licensee?
- v. Whether the projected energy to be sold is reasonable?
- vi. Whether the projected Net Distribution Margin (excluding RoRB) is justified?
- vii. Whether the projected Return on Regulatory Asset base (RORB) for the FY 2019-20 is justified?
- viii. Whether the distribution margin should be recovered on Rs./kW or Rs./kWh basis?
- ix. Whether the requested T&D loss target is reasonable?
- x. Why GEPCO did not submit its five year IGTDP as per requirements under NEPRA Consumer End Tariff Methodology for approval of the Authority? GEPCO is required to submit IGTDP on prescribed formats immediately.
- xi. 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.
- xii. Whether the ToU meters installed on Residential connections have the capability to record MDI?
- xiii. As per Amendment Act, 2018, responsibilities of DISCO and Supplier have been bifurcated. GEPCO is required to submit overall organogram which broadly describe its role/functions as DISCO and Supplier.
- xiv. Whether the concerns raised by the intervener/ commentator if any are justified?
- xv. Any other issue that may come up during or after the hearing?



**4. Filing Of Objections/ Comments**

- 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, comments were received from M/s Telenor Pakistan. A brief of the concerns raised by M/s Telenor Pakistan is as under;
- 4.2. The commentator while referring to the Telecom Policy of 2004, submitted that the Federal Government declared the Telecom Sector including Cellular Operators (CMOs) as an Industry vide notification dated 20.04.2004. The Ministry of Information Technology (MoIT) vide UO dated 18.06.2014 also endorsed the request of Telecom Sector including Cellular Operators to be classified as an Industrial undertaking under clause (b) of Section 2(29C) of the Income Tax Ordinance 2001. M/s Telenor accordingly requested NEPRA to recognize CMOs as an Industrial Undertaking so that CMOs are applied Industrial tariff instead of Commercial tariff, as NEPRA is in the process of determining Uniform tariff of DISCOs, including the current Petition filed by GEPCO.
- 4.3. GEPCO on the issue submitted during the hearing that a Cellular Mobile Operator is not an industry as defined in the Part II of the Tariff Terms & Conditions of the Tariff by virtue of that Industry means "a bona fide undertaking or establishment engaged in manufacturing, value addition and / or processing of goods."
- 4.4. The Authority observed that the issue highlighted by the commentator pertains to all the DISCOs including K-Electric as CMOs are operating all over Pakistan, therefore, the issue requires deliberations involving all stakeholders i.e. DISCOs, CMOs, Ministry of Energy, MoIT etc. The Authority noted that proceedings regarding Tariff petitions filed by all XWDISCOs for the FY 2018-19 and FY 2019-20, except GEPCO, have already been completed, therefore, the Authority has decided to consider the request of M/s Telenor as a separate issue during the proceedings for the upcoming tariff Petitions of DISCOs for the FY 2020-21 & onwards.
- 4.5. The Authority also discussed the matter of delay in installation of pending connections during the hearing. However, the Petitioner did not submit any details with respect to the pending connections as of June 2019. The Authority while analyzing the DISCOs performance statistics report published by PEPCO noted that total applications pending for new connections in respect of the Petitioner were 39,087, which include 33,149 domestic, 3,359 commercial, 2,022 Agriculture, and 557 industrial 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.
- 4.6. During the hearing, the Petitioner was represented by its Chief Executive Officer along-with its technical and financial teams; On the basis of pleadings, evidence/record produced and arguments raised during the hearing, issue-wise findings are given as under;

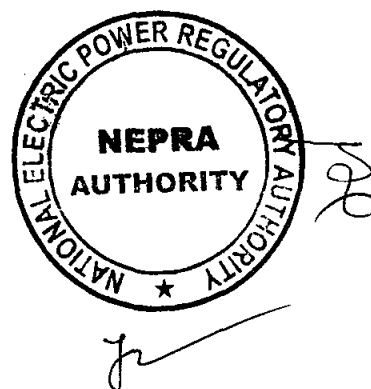
**5. Whether the Petitioner has complied with the direction of the Authority given in its earlier determination?**

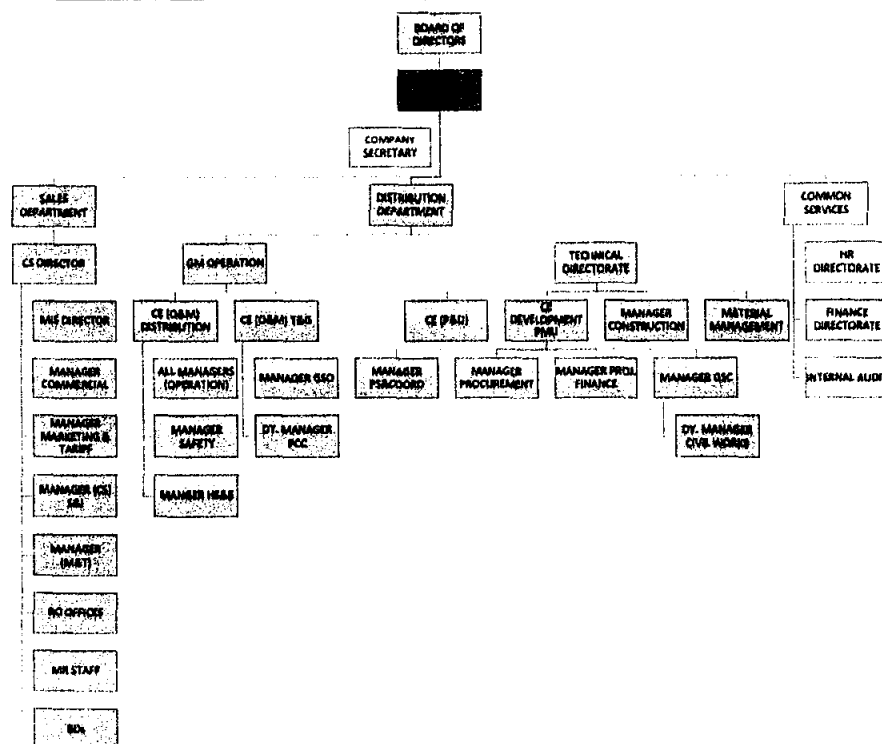
- 5.1. The Authority gave certain directions to the Petitioner in its tariff determination for the FY 2017-18, which have already been deliberated in detail in the distribution tariff determination of the Petitioner for the FY 2018-19, therefore, need not to be discussed again in the instant determination. The Authority further understands that periodic monitoring of the directions given by the Authority is absolutely necessary in order to analyze the Petitioner's performance, therefore, the Authority has decided to have a half yearly review of the given directions, instead



of discussing the same only during the tariff proceedings. Further, the directions given by the Authority in the distribution tariff determination to of the Petitioner for the FY 2018-19, have been reproduced in the instant decision for compliance by the Petitioner.

6. Whether the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments are justified?
7. As provided in NEPRA Amendment Act, 2018, GEPCO as Distribution Licensee shall be deemed to hold Supply License also for a period of 5-years. In this regard, GEPCO is required to explain its organizational restructuring in respect of segregation of responsibilities for Distribution Business and Sale Business?
8. 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, GEPCO is required to state the mode and manner being developed and followed for appropriate coordination between Distribution Licensee and Supply Licensee?
9. As per Amendment Act, 2018, responsibilities of DISCO and Supplier have been bifurcated. GEPCO is required to submit overall organogram which broadly describe its role/functions as DISCO and Supplier?
- 9.1. 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'.
- 9.2. 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.
- 9.3. The Petitioner during the hearing submitted that Bifurcation of costs into Supply and Distribution business is based on the guidelines sought from NEPRA. The Petitioner provided the following organogram in this regard;





- 9.4. Regarding allocation of costs into Distribution and Supply of Power Function, the Petitioner submitted as under;

**Specific costs attributable to Power Supply Business**

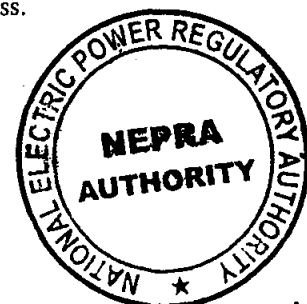
- ✓ **Power Purchase Price:**  
Entire Power Purchase Price has been allocated to Power Supply Business.
- ✓ **Salaries, Wages & Other Benefits:**  
Salaries & Wages of Meter Readers, Bill Distributors, Meter Inspectors, Meter Reader Supervisors, and Staff of Revenue Offices along with the services of MIS Directorate (Computer Centers) and Customer Services Directorate.
- ✓ **Bill Collection Charges and Late Payment Surcharges:**  
Revenue as well as Cost has been allocated to Power Supply Business.
- ✓ **Provision for Bad debts**

**Specific costs attributable to Distribution Business**

- ✓ Rent, Rates & taxes
- ✓ Advertisement expenses

**Common Costs:**

- ✓ **Salaries, wages & other benefits:**
- ✓ **Percentage Share of Power Supply Business:**  
On the basis of No. of Employees =  $2,597/12,296 = 21\%$   
On the basis of total Cost (Salaries, Wages & Other Benefits) =  $1,447/5,786 = 25\%$   
Percentage share of Power Supply Business has been adopted at 25% of the total employee cost rather than headcount.
- ✓ **Repair & Maintenance (Based on Value of Non-current Assets):**  
2% to Power Supply Business, remaining to Distribution Business
- ✓ **Transportation Expenses (Based on No. of Vehicles):**  
5% to Power Supply Business, remaining to Distribution Business



- ✓ Power, Light & Water (Based on Actual):  
10% to Power Supply Business, remaining to Distribution Business
- ✓ Office, Supplies & Others (Based on Actual):  
70% to Power Supply Business, remaining to Distribution Business
- ✓ Professional Fee (Based on Actual):  
70% to Power Supply Business, remaining to Distribution Business
- ✓ Injuries & Damages (Based on Actual):  
15% to Power Supply Business, remaining to Distribution Business
- ✓ Misc. Expenses (Based on Actual):  
10% to Power Supply Business, remaining to Distribution Business
- ✓ Depreciation (Based on Value of Non-current Assets):  
2% to Power Supply Business, remaining to Distribution Business

- 9.5. 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.
- 9.6. 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.
- 9.7. The Petitioner has also shared its organizational restructuring program in respect of segregation of responsibilities for Distribution Business and Sale Business.
- 9.8. 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.

**10. Whether the projected energy to be sold is reasonable?**

- 10.1. The Petitioner requested purchases of 11,636 GWh for the FY 2019-20 in its Petition and provided the following comparison of its actual purchases for the previous years along-with projections for the FY 2019-20;

Description	2019-20 (Provisional)	2018-19 (Actual)	2017-18 (Actual)
Units Purchased (MkWh)	11,636	11,100	10,987
Units Lost (Mkwh)	1,123	1,096	1,100
Units sold (MkWh)	10,513	10,004	9,887

- 10.2. However, during hearing, the Petitioner considering the fact that FY 2019-20 was lapsed, provided details of its actual Power Purchases as under:

Description	2019-20 (Actual)	2018-19 (Actual)	2017-18 (Actual)
Units Purchased (MkWh)	10,991	11,100	10,987
Units Lost (MkWh)	1,045	1,096	1,100
Units sold (MkWh)	9,946	10,004	9,887

Particulars	2019-20 (Actual)	
	Rs. (Million)	Rs./KWh
Energy Cost	63,627	5.79
Variable Charges	3,436	0.31
Capacity Charges	71,449	6.50
Use of System Charges	4,181	0.38
<b>Total</b>	<b>142,693</b>	<b>12.98</b>

10.3. The Authority understands that the issue of Power Purchase Price being relevant with the Supply Business needs to be deliberated in detail under the Supply of Power Tariff Petition of the Petitioner for the FY 2019-20. Accordingly, the matter has been discussed there.

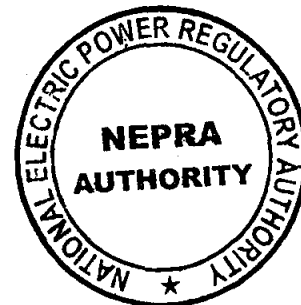
**11. Whether the projected Net Distribution Margin (excluding RoRB) is justified?**

11.1. The Petitioner in its petition requested a net Distribution margin exclusive of RoRB of Rs.16,367 million for its distribution function for the FY 2019-20 as detailed hereunder;

Rs. in Mln	
Description	Distribution Business
O&M	14,457
Depreciation	2,440
Other Income	(530)
<b>Total Revenue Requirement</b>	<b>16,367</b>

11.2. As per the Petitioner, its O&M costs includes Employees cost (including Post-Retirement Benefit), Admin Expenses, Repair and Maintenance expenses, Travelling Expenses, Transportation Expenses, Management Fee and Miscellaneous expenses related to its distribution function. The Petitioner provided the following breakup of the requested amount under O&M costs along-with percentage allocation of the costs to its distribution function as under;

Operation & Maintenance	Rs. in Mln		
	Distribution Business		Cost
	Total	%	
<b>1. Salaries, Wages &amp; Other Benefits</b>	<b>16,063</b>		<b>12,047</b>
Salaries & Wages	6,548	75	4,911
Employees Benefits	2,279	75	1,709
Retirement Benefits	7,236	75	5,427
<b>2. Travelling</b>	<b>380</b>	75	<b>285</b>
<b>3. Repair &amp; Maintenance</b>	<b>1,354</b>	98	<b>1,327</b>
<b>4. Transportation</b>	<b>390</b>	95	<b>371</b>
<b>5. Other Expenses:</b>	<b>1,026</b>		<b>428</b>
Bills Collection	283	-	-
Rent & Rates	7	100	7
Power, Light & Water	60	90	54
Office Supplies & Others	160	30	48
Advertising	25	100	25
Professional Fee	200	30	60
Injuries & damages	210	85	179
Provision for Bad Debts	20	-	-
Misc. Expenses	61	90	55
<b>Grand Total</b>	<b>19,213</b>		<b>14,457</b>



12. Here it is pertinent to mention that during hearing, the Petitioner submitted that its total O&M costs for both the Distribution and Supply Functions for the FY 2019-20, as per its unaudited accounts is Rs.19,373 million, as against the numbers already requested in its Distribution and Supply Petitions i.e. Rs.19,123 million. The Petitioner, however, did not provide any break-up of the revised cost of Rs.19,373 million in terms of Distribution Function and Supply of Power Function.

**13. Salaries Wages & Other Benefits excluding Postretirement benefits**

13.1. The Petitioner requested in its Distribution petition an amount of Rs.12,047 under the head of Salaries & Other Benefits, comprising of Rs.6,620 million for Salaries & Wages (excluding post-retirement benefits) and Rs.5,427 million on account of Postretirement benefits for its Distribution Function for the FY 2019-20. The Petitioner in the Petition submitted that its total cost of Salaries & Wages for the FY 2019-20 is Rs.16,063 million, (*inclusive of Salaries & Wages of Rs.8,827 million and post-retirement benefits of Rs.7,236 million*), out of which 75% cost has been allocated to the Distribution Function i.e. Rs.12,047 million.

13.2. Considering the fact that the period i.e. FY 2019-20, for which the cost is being assessed has already lapsed, therefore, the Authority considers it appropriate to also take into account the actual cost incurred by the Petitioner in this regard during the FY 2019-20. However, till finalization of the instant determination, the financial statements of the Petitioner for the FY 2019-20 were not made available. The Authority, however, understands that since the Petitioner is a public sector company, it is required to pay its employees, the increases in salaries & wages as announced by the Federal Government through Budget.

13.3. In view thereof, the Authority has decided to incorporate the increases announced by the Government on Salaries, Wages & Post retirement benefits in the Budget of FY 2019-20 and CPI increases where applicable, on the amount allowed to the Petitioner under the head of salaries & wages for the FY 2018-19. Accordingly, the total amount of salaries & wages for the FY 2019-20 for both the distribution and supply function works out as Rs.8,366 million, (*excluding postretirement benefits, discussed separately*).

13.4. 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. 6,275 million for Salaries, Wages & Other Benefits for the FY 2019-20 for its Distribution function (*excluding postretirement benefits, discussed separately*).

**14. Post-Retirement Benefits**

14.1. 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. Subsequently, this deadline was extended by the Authority. The rationale was that the creation of funds would ensure that the Petitioner records its 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.

14.2. Afterwards the Petitioner during proceedings of its tariff petition for the FY 2015-16 submitted that a separate Fund has been opened and Rs.100 million has been deposited in the Fund.

- 14.3. The Petitioner further in the tariff petition for the FY 2015-16, requested the Authority to allow provision for the postretirement benefits for FY 2015-16 as per the actuarial valuation report as on June 30, 2015. Similarly for the FY 2016-17 and FY 2017-18, the Petitioner again requested for allowing provision in respect of postretirement benefits.
- 14.4. The Authority 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, the Authority had been allowing provision for post-retirement benefits to the Petitioner as a part of its O&M cost till FY 2011-12. It was only from FY 2012-13 that the Authority decided to allow the actual amounts paid on account of pension benefits, due to non-compliance of the Authority's directions. Thus, any post retirement liability pre FY 2012-13 period, is with the Petitioner. In view thereof, the Authority directed the Petitioner in the tariff determination for the FY 2017-18, to also transfer the amount of already collected provision of postretirement benefits into the Fund.
- 14.5. The Petitioner in its instant Petition has not provided any update in the matter, however, requested an amount of Rs.5,427 million, under the head of Retirement benefits in the Distribution Tariff Petition.
- 14.6. The Authority, understands that payment of postretirement benefits to the retired employees is a compulsory obligation of the Petitioner which can be best fulfilled through a separate postretirement Fund having sufficient funds. However, failure of the Petitioner to deposit the amount of already collected provision of postretirement benefits into the Fund, would not absolve the Petitioner from its responsibility in this regard.
- 14.7. Considering the fact that the period i.e. FY 2019-20, for which the cost is being assessed has already lapsed, therefore, the Authority considers it appropriate to also take into account the actual cost incurred by the Petitioner in this regard during the FY 2019-20. However, till finalization of the instant determination, the financial statements of the Petitioner for the FY 2019-20 were not made available.
- 14.8. In view thereof, the Authority has decided to consider the increases announced by the Government on Postretirement benefits in the Budget of FY 2019-20. Accordingly, after incorporating the increases announced by the Government in the Budget of FY 2019-20, on the total amount of Postretirement benefits allowed to the Petitioner for the FY 2018-19, the Postretirement benefits for the FY 2019-20, including the impact of payments for the Ex-WAPDA employees retired before 1998, works out as Rs.3,385 million, which is hereby allowed to the Petitioner for both of its distribution and supply function. 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.2,539 million, as Post retirement benefits for the FY 2019-20 for Distribution Function. The Petitioner is again directed to transfer the already collected provision of postretirement benefits into the Fund.

**15. Remaining Operation & Maintenance Costs**

- 15.1. 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 expenses, 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.

- 15.2. The widely used approach is that no adjustments to allowed Revenues or OPEX allowances are made hence providing an incentive to the utility to improve its operations.
- 15.3. Although, the period i.e. FY 2019-20, for which the costs are being assessed, has already lapsed, however, the financial statements of the Petitioner for the FY 2019-20, to ascertain its actual costs incurred during the year have not been made available till finalization of the instant determination, therefore, the Authority has decided to make its own assessment in this regard.

**16. Repair & Maintenance Expenses**

- 16.1. The Petitioner requested an amount of Rs.1,327 million under Repair & maintenance in its Distribution Petition for the FY 2019-20. The Petitioner submitted that as per its Audited accounts for the FY 2018-19, its total expenditure under the head of Repair & Maintenance is Rs.969 million, wherefrom, 98% cost has been allocated to the Distribution Function. However, for the cost requested for the FY 2019-20, the Petitioner did not provide any justification or working.
- 16.2. The Authority in order to assess the request of the Petitioner, analyzed the same in comparison with the amount actually spent by the Petitioner for the FY 2018-19. As per the audited accounts submitted by the Petitioner, its actual R&M expenses for the FY 2018-19, remained at around Rs.969 million, out of which cost allocated to the Distribution Function @ 98% is around Rs.950 million. Thus, the Petitioner has requested an increase of around 40% for its distribution function for the FY 2019-20.
- 16.3. Although the Petitioner has not provided any justification for the requested increase, however, the Authority understands 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 has decided to allow the impact of inflation over the actual expenses of the Petitioner for the FY 2018-19. Accordingly, the total R&M of the Petitioner for the FY 2019-20 works out as Rs.1,058 million, for both the Distribution and Supply Functions. Based on the same criteria as used by the Petitioner to bifurcate its costs in terms of Distribution and Supply Functions, the Authority has assessed Rs.1,037 million as R&M cost for the Distribution Function of the Petitioner for the FY 2019-20 out of total allowed cost of Rs.1,058 million. The Petitioner is also directed to provide details of actual Grid Wise R&M for the FY 2019-20 along-with its next tariff Petition.
- 16.4. 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. The petitioner is therefore once again directed 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 the tariff determination for the FY 2015-16.

**17. Travelling Expenses**

- 17.1. The Petitioner has requested an amount of Rs.285 million under Travelling Expenses for its Distribution Function for the FY 2019-20. The Petitioner requested the following travelling expenses submitted

that actual total Travelling expenses of Rs.333 million for both the Distribution and Supply of Power Functions for the FY 2018-19 as per the Audited Accounts, have been apportioned on the basis of 75% allocation to Distribution Business because being paid on the basis of BPS, and thus are directly proportional to the employees' regularly paid salaries & wages. However, for the cost requested for the FY 2019-20, the Petitioner did not provide any justification or working.

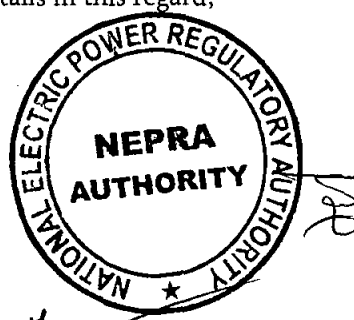
- 17.2. Although, the Petitioner, while requesting the amount of Rs.285 million for the FY 2019-20, did not substantiate its request with any evidence or details, however, as per the audited accounts submitted by the Petitioner for the FY 2018-19, its actual expenditure under travelling expenses for both the Distribution and Supply Function remained at around Rs.333 million. Since, the Petitioner did not substantiate its request for the FY 2019-20 with any evidence, therefore, the Authority for the FY 2019-20, has decided to allow the impact of inflation over the actual/allowed costs of the Petitioner for the FY 2018-19. In view of the foregoing discussion, after incorporating the impact of inflation over the allowed/ actual travelling expenses for the FY 2018-19, the Authority has assessed an amount of Rs.363 million as travelling expenses for both the distribution and supply function of the Petitioner for the FY 2019-20. Based on the same criteria as used by the Petitioner to bifurcate its costs in terms of Distribution and Supply Functions, the Authority has assessed Rs.273 million as Travelling cost for the Distribution Function of the Petitioner for the FY 2019-20 out of total allowed cost of Rs.363 million.

#### 18. Vehicle Expenses

- 18.1. The Petitioner has requested an amount of Rs.371 million for its Distribution Function, under Transportation expenses in the Petition for the FY 2019-20, which includes vehicle repair costs, fuel & oil and License & Insurance. The Petitioner submitted that its actual Transportation expenses of the FY 2018-19 as per the Audited Account are Rs.290 million, which have been apportioned on the basis of No. of Operational Vehicles used by the both business areas respectively. The Petitioner accordingly has allocated 95% of the actual cost to Distribution Function and 5% to Supply of Power Function. However, for the cost requested for the FY 2019-20, the Petitioner did not provide any justification or working.
- 18.2. Since, the Petitioner, while requesting the amount of Rs.371 million for the FY 2019-20, has not substantiated its request with any evidence or details, the Authority keeping in view the Petitioner's service area, past trends, comparison with other XWDISCOs, trend of fuel prices and including the impact of inflation over the allowed transportation costs for the FY 2018-19, has decided to allow an amount of Rs.290 million for both the distribution and supply functions for the FY 2019-20 under the head of Vehicle expenses. 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 same criteria, the Authority has assessed Rs.275 million as Transportation cost for the Distribution Function of the Petitioner for the FY 2019-20 out of total allowed cost of Rs.290 million.

#### 19. Other Miscellaneous Expenses

- 19.1. The Petitioner requested an amount of Rs.428 million under Other expenses in its Petition for the FY 2019-20 for its Distribution Function. The Petitioner submitted that Other Expenses include Rent & taxes, Power, Light & Water, Office Supplies & Others, Advertisements, Injuries & Damages and Professional Fees etc.
- 19.2. The Petitioner submitted the following details in this regard;





	Rs. in Mln
<b>Other Expenses</b>	<b>FY 2019-20</b>
Rent & Rates	7
Power, Light & Water	54
Office Supplies & Others	48
Advertising	25
Professional Fee	60
Injuries & damages	179
Misc. Expenses	55
<b>Total</b>	<b>428</b>

- 19.3. The Petitioner regarding Rents & Rates has requested Rs.7 million and stated that Rent & Rates purely pertains to the rentals paid for GEPCO's Complaint Offices located in various subdivisions hence, are entirely allocated to the GEPCO's Distribution Business.
- 19.4. The Petitioner regarding Power, Light & Water submitted that the total amount for the FY 2019-20 is Rs.60 Million under Distribution and supply business, out of which 90% allocated to the GEPCO's Distribution Business and 10% to Power Supply Business based on actual data of FY 2018-19. Accordingly, the Petitioner has requested Rs.54 million under Distribution business for the FY 2019-20.
- 19.5. The Petitioner regarding Office Supplies & Others submitted that total amount for the FY 2019-20 is Rs.160 million under Distribution and supply business. The Petitioner regarding apportionment of the said cost submitted that Office Supplies & Others are 30% allocated to the Distribution Business and 70% to the Power Supply Business based on actual data. The Petitioner while justifying the said cost submitted that main expenditure under this head pertains to procurement and printing of electricity bills and related CPs at GEPCO Computer Centers as well as in Revenue Offices. Accordingly, the Petitioner has requested Rs.48 million under Distribution business.
- 19.6. The Petitioner regarding Advertisement Expenses stated that the total amount for the FY 2019-20 is Rs.25 million. The Petitioner regarding apportionment stated that advertisement expenses are 100% allocated to the GEPCO's Distribution Business based on actual data for the FY 2018-19 being relating to procurement / development tendering, shut down notices etc.
- 19.7. The Petitioner regarding professional fee has stated that the total amount for the FY 2019-20 is Rs.200 million. The Petitioner regarding apportionment has stated that Professional Fee of Rs.200 million is allocated 70% to the Power Supply Business and 30% to Distribution Business based on actual data. The professional fee includes fees of lawyers, Licensing Fee, PITC Fee and CPPA-G Fee. Accordingly, the Petitioner requested Rs.60 million under Distribution business.
- 19.8. The Petitioner regarding Injuries & Damages expense stated that the total amount for the FY 2019-20 is Rs.211 million. The Petitioner allocated 85% of the Injuries & Damages expense to the Distribution Business and 15% to the Power Supply Business, on the basis of figures of actual expenditure pertaining to relevant offices. Accordingly, the Petitioner has requested Rs.179 million under Distribution business for the FY 2019-20.
- 19.9. The Petitioner regarding Misc. Expense stated that the total amount for the FY 2019-20 is Rs.61 million (Telephone, Postage, and Auditor's Fee etc.), out of which 90% is the share of Distribution Function and 10% of the Supply Function based on the actual audited expenditure of FY 2018-19. Accordingly, the Petitioner has requested Rs.55 million under Distribution business for the FY 2019-20.



- 19.10. Here it is pertinent to mention that the Petitioner has been allowed an amount of Rs.671million under this head for the FY 2018-19 for both its distribution and supply functions, after excluding therefrom certain costs which were not considered justified by the Authority.
- 19.11. The Petitioner, while requesting the amount of Rs.428 million for the FY 2019-20 for its distribution function, has not substantiated its request with any justification or details, therefore, the Authority for the FY 2019-20, has decided to allow the impact of inflation on the total amount of Other Expenses allowed to the Petitioner for the FY 2018-19. Accordingly, the total amount of Other expense allowed for the FY 2019-20 works out as Rs.732 million, for both its distribution and supply functions. 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.305 million for Other Expenses for the FY 2019-20 for its Distribution function.
- 19.12. Regarding PEPCO fees, 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 then Ministry of Water & Power, itself in the Peshawar High Court submitted that PEPCO shall be dissolved after June 2011. In view thereof, 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.

## 20. Depreciation

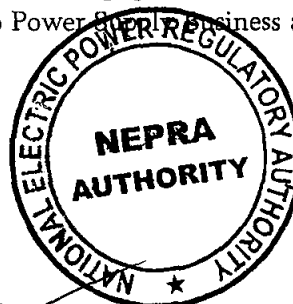
- 20.1. The Petitioner requested an amount of Rs.2,440 million under Depreciation Charges, in its Petition for the FY 2019-20 for the Distribution Function. The Petitioner regarding depreciation charges submitted that its total actual expenditure for the FY 2018-19 is Rs.2,112 million, out of which 98% has been allocated to the Distribution Function.
- 20.2. The Petitioner has provided that the position of its total net assets (after depreciation) as on 30.06.2019 is as follows:

Description	Million Rupees
Capital Work in Progress	6,401
Operating Assets	43,546
<b>Total Assets</b>	<b>49,947</b>

- 20.3. The Petitioner has further stated that the Operating Assets include Land of Rs.456 million and breakup of remaining Depreciable Operating Assets is as follows:

Description	Million Rupees	%
Distribution Equipment	41,315	95.88%
Mobile Plant	141	0.33%
Buildings	1,228	2.85%
Furniture	11	0.03%
Vehicles	395	0.91%
<b>Total Depreciable Assets</b>	<b>43,090</b>	<b>100%</b>

- 20.4. The Petitioner further submitted that Distribution Equipment is 95.88% of total depreciable assets hence, 2% depreciation has allocated to Power Business and 98% depreciation to



Distribution Business. The Petitioner accordingly requested Rs.2,440 million under Distribution business.

- 20.5. In order to make fair assessment of the Petitioner's depreciation charges, 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 Rs.66,917 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.2,175 million.
- 20.6. 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.1,016 million for the FY 2019-20, thus, consumers would bear net depreciation of Rs.1,159 million.
- 20.7. 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.2,132 million for Depreciation expenses for the FY 2019-20 for its Distribution function.

## 21. Other Income

- 21.1. The Petitioner requested Rs.530 million as Other income for the FY 2019-20 for its distribution function. The Petitioner regarding Other Income has stated that the total amount for the FY 2019-20 is Rs.1,767 million for both the Supply and Distribution functions. The Petitioner regarding apportionment of Other Income in terms of Distribution and Supply Business submitted that 70% of other income is allocated to Power Supply Business and 30% to Distribution Business based on audited figures for the FY 2018-19. Accordingly, the Petitioner has requested Rs.530 million as Other Income for the FY 2019-20 under its Distribution business.
- 21.2. However, during hearing of the instant Petition, the Petitioner submitted that its total Other Income for the FY 2019-20, based on unaudited results is Rs.4,021 million. The same if allocated to Distribution and Supply Functions, based on the criteria of 30% to Distribution Function and 70% to Supply Functions results in Rs.1,206 million for the Distribution function and Rs.2,815 million for the Supply Function for the FY 2019-20.
- 21.3. The Authority has assessed the amount of Other Income as Rs.1,267 million for both the Distribution and Supply Functions of the Petitioner for the FY 2019-20, including the amount of amortization of deferred credit but exclusive of the amount of late payment charges. Based on the same criteria as adopted by the Petitioner, the Other Income for the Distribution Function works out as Rs.380 million for the FY 2019-20.
- 21.4. 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 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.
- 21.5. In view thereof, the Authority, again directs the Petitioner to provide the required details of late payment charges recovered from the consumers and any amount 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.

22. Why GEPCO did not submit its five year IGTDTP as per requirements under NEPRA Consumer End Tariff Methodology for approval of the Authority? GEPCO is required to submit IGTDTP on prescribed formats immediately.
23. Whether the requested investment without submission of five Year IGTDTP as required is justified? Petitioner must provide the project wise detailed report along with rationale against the requested investment.
- 23.1. The Petitioner in its tariff petition, requested Investment of Rs.6,629 million for the FY 2019-20 as per the following break-up;

(Rs. in Mln.)

Description	2019-20
DOP	600
ELR	700
ERP	500
7 <sup>th</sup> STG	2,124
STG-ADB(GEPCO Own Sources)	286
Capital Contributions/Deposit	1,500
Customer Facilitation Program	919
<b>Total</b>	<b>6,629</b>

- 23.2. The Petitioner for the investment of Rs.6,629 million submitted the following financing arrangements;

(Mln. Rs.)

Description	2018-19
Own Sources	5,129
Foreign Currency	-
Capital Contributions/Grants	1,500
<b>Total</b>	<b>6,629</b>

- 23.3. The Authority noted that the Petitioner did not provide detailed plans as per required investment formats. Therefore, in order to assess the above 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 FY 2013-14 to FY 2018-19 is given hereunder:

(Million Rs.)

Investment	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Requested	5,989	5,058	5,644	4,040	3,518	4,524
Allowed	4,561	5,058	2,892	2,775	3,200	5,295
Actual	5,005	2,147	2,892	2,775	1,617	5,295
Excess/(Less)	444	(2,911)	0	0	(1,583)	0
%age	109.73	42.45	100.00	100.00	50.55	100.00

- 23.4. From above, the Authority observed that the Petitioner has utilized 109.73% in FY 2013-14, 42.45% in FY 2014-15, and 50.55% in FY 2017-18 of the allowed investment. Whereas, in FY

2015-16, FY 2016-17 and FY 2018-19, GEPCO utilized 100% of the allowed investment. The Authority also noted that GEPCO has spent the maximum of Rs.5,295 million in FY 2018-19 over the last six (06) years.

- 23.5. The Authority notes the following network additions in GEPCO territory due to execution of aforementioned planned investments over last six (06) years:

S. #	Upto June	2014	2015	2016	2017	2018	2019
1	No. of Grid Stations (132 kV, 66 kV & 33 kV)	55	56	58	59	60	60
2	Transmission Line Length (km) (132 kV, 66 kV & 33 kV)	2386	2680	2796	2801	2604	2604
3	No. of 11 kV feeders	725	745	779	805	835	864
4	Length of 11 kV Lines (km)	22216	22468	22604	22718	23458	23743

- 23.6. It is obvious from above that the transmission and distribution networks of GEPCO have expanded gradually during last 6 years by making planned investment. The Authority, being aware of the importance of investments for ensuring reliable, safe and smooth supply of electricity, observed 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.)	10.41	35.44	3.26	30.97	27.13
SAIDI (minutes)	13.20	59.49	55.03	53.67	45.19
Fatal Accidents	15	12	16	29	12
Actual T&D Losses (%)	10.72	10.58	10.23	10.01	9.87
New Connection Profile (%)*	8.60	8.60	12.35	18.79	21.90
Average Daily Load Shedding (hours)	4.00	4.00	3.25	11.00	0.50

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

- 23.7. From above, the Authority noted that the Petitioner's previous investments have a slight impact in reducing T&D losses in past two years (10.01% in FY 2017-18 and 9.87% in FY 2018-19). On the other hand, the new connection Profile has been worsened from 18.79 in FY 2017-18 to 21.90 in FY 2018-19. However, the Authority observed the following improvements in GEPCO's performance indices:

- SAIFI has been improved (30.97 in FY 2017-18 & 27.13 in FY 2018-19).
- SAIDI has been improved (53.67 in FY 2017-18 & 45.19 in FY 2018-19).
- Average daily load shed hrs. improved (11.00% in FY 2017-18 & 0.05% in FY 2018-19).
- Reduction in the number of Fatal Accidents (29 in FY 2017-18 & 12 in FY 2018-19).

- 23.8. Keeping in view the above analysis, maximum investment utilization capability of GEPCO (Rs.5,295 million in the 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 has decided to allow the Petitioner an investment of Rs.5,500 million for the FY 2019-20 against the requested investment of Rs.6,629 million.

- 23.9. 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 in this regard as part of its 5-years IGTD for approval of the Authority before filing of next tariff petition.

**24. Whether the requested T&D loss target is reasonable?**

24.1. The petitioner in its tariff petitions, requested T&D losses of 9.65% for FY 2019-20. The break-up of requested T&D losses submitted by the Petitioner for both years is as under:

FY 2019-20		
Technical	Administrative	Total
9.65%	-	9.65%

24.2. The Petitioner also provided the following segregation of its T&D losses in respect of its technical losses as under:

Description	2019-20 (Provisional)
Units Received at CDP Points	11,636
132kV transmission loss	0.97
Power Transformer Core Loss	0.27
<b>Transmission Loss (%)</b>	<b>1.24</b>
HT (11kV) Loss %	4.09
Dist. Transformer Loss %	1.144
LT + Service Loss %	3.170
<b>Distribution Loss (%)</b>	<b>8.404</b>
<b>Total T&amp;D Loss %</b>	<b>9.65</b>
Unit Loss (Mkwh)	1,123
Units sold to Consumers	10,513

24.3. GEPCO, however, during the hearing provided detail of its actual T&D losses for the FY 2018-19 i.e. 9.87% and for the FY 2019-20 i.e. 9.51%.

Description	2018-19 (Actual)	2019-20 (Petition)	2019-20 (Actual)
Units Purchased	11,100	11,636	10,991
Units Lost (Mkwh)	1,096	1,123	1,045
Units sold	10,004	10,513	9,946
<b>Units Lost %</b>	<b>9.87</b>	<b>9.65</b>	<b>9.51</b>

**Transmission Losses:**

24.4. The Authority noted that the Petitioner submitted its third party transmission loss study conducted by M/s PPI on dated 07.09.2012, during the proceedings of the Re-determination for the FY 2015-16. The Authority also observed that the Petitioner requested 1.51% (on actual basis) transmission losses which was lower than the results (2.064%) of third party transmission loss study, hence the Authority allowed 1.51% actual transmission losses to GEPCO in its earlier determinations pertaining to the FY 2015-16, FY 2016-17 and FY 2017-18. It is also noted that the Third Party Transmission Loss Study was conducted in FY 2012-13 on the basis of GEPCO's transmission assets (132kV, 66kV and 33kV) statistics reported to FY 2011-12 which are tabulated as under:

Sr. #	Description	As on 30.06.2013
1	Grid Stations (Nos.)	49
2	Transmission line length (kMs)	2478

- 24.5. It is further observed that in the said study, the third party consultant, keeping in view the results of transmission losses of 2.064% for GEPCO, recommended the following:

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

- 24.6. For the purpose of instant tariff Petition, GEPCO requested transmission losses of 1.24% for FY 2019-20. In this regard, the Authority noted that GEPCO claimed lower transmission losses as compared to the results (2.064%) 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 4 years:

Sr. #	Description	2016	2017	2018	2019
1	No. of Grid Stations	58	59	60	60
2	MVA Capacity	4120	4434	4847	4952
3	Transmission line length (kMs)	2796	2801	2604	2604

- 24.7. Foregoing in view, the Authority accepts the request of the Petitioner for claiming lower transmission losses and accordingly allows transmission losses of **1.24%** for the FY 2019-20.

**Distribution Losses:**

- 24.8. The Petitioner requested 8.4040% distribution losses for the FY 2019-20, which included 4.09% losses in 11kV networks, 1.144% distribution transformer losses and 3.170% LT line losses.
- 24.9. The Authority, while considering the above distribution losses requested by the Petitioner, noted that the distribution losses of 8.404% for the FY 2019-20 (claimed in instant tariff petition) are lower than the results (8.522%) of the third party distribution loss study conducted by M/s. PPI (which has already been accepted by the Authority during the proceedings of Re-Determination for FY 2015-16).
- 24.10. Similarly, the Authority also observed that the distribution losses of 8.27% for the FY 2019-20, as claimed by the Petitioner on actual basis during the hearing, are also lower than the results (8.522%) of the third party distribution loss study conducted by M/s. PPI. Since, the Petitioner claimed lower losses (on actual basis) than the third party loss study results, therefore, the Authority has decided to accept the request of the Petitioner and accordingly allows the requested distribution losses of 8.27% to GEPCO for the FY 2019-20. The allowed margin of distribution losses of **8.27%** includes the following segregation:

11kV Losses	LT Losses	Total Distribution Losses
5.234%	3.036%	8.27%

**Detailed Break-Up of Allowed T&D Losses for GEPCO for FY 2019-20:**

Transmission Losses	Distribution Losses		Total T&D Losses
	11 kV Losses	LT Losses	
1.24%	5.234%	3.036%	9.51%
	8.27%		

**Summary of directions regarding T&D losses:**

- 24.11. 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 GEPCO 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.
- 24.12. 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 its plans in this regard to the Authority.
- 24.13. 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.

**25. Whether the projected Return on Regulatory Asset base (RORB) for the FY 2019-20 is justified?**

- 25.1. The Petitioner has requested an amount of Rs.5,008 million as RoRB for the FY 2019-20, for its distribution function, using a Rate of Return of 16%. The Petitioner regarding apportionment of RoRB has stated that 98% of RORB is apportioned to Distribution Business and 2% Power Supply Business based on assets pertaining to each area. Thereby, the Petitioner has requested Rs.5,008 million for Distribution business, as detailed below;

Description	2019-20
	(Mln. Rs)
Gross Fixed Assets in Operation - Opening Bal	64,308
Addition in Fixed Assets	5,200
Gross Fixed Assets in Operation - Closing Bal	69,508
Less: Accumulated Depreciation	23,252
Net Fixed Assets in Operation	46,257
Add: Capital Work In Progress - Closing Bal	7,148
Investment in Fixed Assets	53,405
Less: Deferred Credits	20,876
Regulatory Assets Base	32,529
Average Regulatory Assets Base	31,950
Rate of Return	16.00%
Return on Rate Base	5,110

- 25.2. The Petitioner regarding Return on Equity submitted that NEPRA uses Capital Asset Pricing Model (CAPM) for calculation of Return on Equity (RoE) component of the WACC. The Authority uses Plain Vanilla WACC, taking tax shield as zero, and in case any tax is paid it is treated as pass through. The Authority for the FY 2017-18 determined RoE of 16.67%, wherein



- the Authority considered Market Risk Premium as 7% with a Beta of 1.10 and Risk Free Rate of 8.9652%. The same has been used to work out the RoE of 16.67%, as determined by the Authority.
- 25.3. The Petitioner regarding Cost of Debt submitted that the cost of debt is the interest rate on which it would get borrowing from the debt market / commercial banks i.e. a rate at which banks lend to their customers. The Authority for estimating the cost of debt for the FY 2017-18 considered 3 months KIBOR + 2.75% spread. The Petitioner submitted that based on the same criteria, the cost of debt, by using avg. KIBOR of June 2019 comes to  $13\% + 2.75\% = 15.75\%$ .
- 25.4. 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;*
- 25.5. 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.
- 25.6. 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.
- 25.7. 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.
- 25.8. 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.
- 25.9. 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.
- 25.10. 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

14.97% i.e. 3 Months KIBOR of 12.97% as of 25<sup>th</sup> July 2019 plus a spread of 2.00% (200 basis points).

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

<b>Cost of Equity;</b>
$K_e = R_F + (R_M - R_F) \times \beta$
$(13.7687\% + (15\% - 13.7687\% \times 1.1) = 15.12\%$
<b>Cost of Debt;</b>
$K_d = 14.97\%$

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

<b>WACC;</b>
$WACC = (K_e \times (E / V) + (K_d \times (D / V)))$
Where E/V and D/V are equity and debt ratios respectively taken as 30% and 70%;
$WACC = ((15.12\% \times 30\%) + (14.97\% \times 70\%)) = 15.02\%$

25.12. Thus, using rate of return of 15.02%, the Authority has assessed Rs.4,324 million as return on rate base as per the following calculations:

Description	FY 2019-20
Fixed Assets O/B	64,308
Addition	2,609
Fixed Assets C/B	66,917
Depreciation	22,937
Net Fixed Assets	43,979
Capital WIP C/B	9,292
Fixed Assets Inc. WIP	53,272
Less: Deferred Credits	23,056
<b>Total</b>	<b>30,216</b>
<b>RAB</b>	<b>28,795</b>
<b>WACC</b>	<b>15.02%</b>
<b>RORB</b>	<b>4,324</b>

25.13. For the purpose of bifurcation of RoRB in terms of Distribution and Supply Functions, the same criteria as adopted by the Petitioner itself to bifurcate RoRB in Distribution and Supply functions has been adopted. Based on the said criteria, the Petitioner is allowed Rs.4,237 million as part of its RoRB for Distribution function for the FY 2019-20.

25.14. The Authority during the tariff determination of the Petitioner for the FY 2015-16, noted that the Petitioner has insufficient cash balance as on 30<sup>th</sup> 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 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.

- 25.15. Similarly for the FY 2019-20, the Authority has again observed that the Petitioner had insufficient cash balance as on 30<sup>th</sup> 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.
- 25.16. 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.
- 25.17. 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.
26. Based on the discussion made in the preceding paragraphs, incorporating all the aforementioned increases, the Authority has assessed Rs.16,692 million on account of Distribution margin i.e. salaries, wages and other benefits including post-retirement benefits, traveling, Vehicle maintenance, other expenses, repair & maintenance, Depreciation, RoRB and other income for the FY 2018-19 as tabulated below;

Description	Unit	FY-20
Pay & Allowances		6,275
Post Retirement Benefits		2,539
Repair & Maintainance		1,037
Traveling allowance		273
Vehicle maintenance		275
Other expenses		305
<b>O&amp;M Cost</b>	[Mln. Rs.]	<b>10,703</b>
Depreciation		2,132
RORB		4,237
O. Income		(380)
<b>Margin</b>	[Mln. Rs.]	<b>16,692</b>

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

- 27.1. The Petitioner during the hearing submitted that Distribution Margin should be recovered on Rs./kwh on actual units sold.
- 27.2. 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 common 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).

- 27.3. 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.
- 27.4. 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.
- 27.5. 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.
28. **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?**
- 28.1. The Petitioner during the hearing submitted that although the TOU meters have the capability to record MDI, however, the billing software records KWh only.
- 28.2. 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.
- 28.3. 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 for such consumers.

## 29. Wheeling Issues

- 29.1. 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 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.
- 29.2. 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 9<sup>th</sup>, 2020 and hearing in this regard was held on 17<sup>th</sup> 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.
- 29.3. 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.
- 29.4. 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.

## 30. Order

- 30.1. 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, to the extent of its distribution function is summarized as under;

Description	Unit	FY-20
Pay & Allowances		6,275
Post Retirement Benefits		2,539
Repair & Maintainance		1,037
Traveling allowance		273
Vehicle maintenance		275
Other expenses		305
<b>O&amp;M Cost</b>	<b>[Min. Rs.]</b>	<b>10,703</b>
Depreciation		2,132
RORB		4,237
O.Income		(380)
<b>Margin</b>	<b>[Min. Rs.]</b>	<b>16,692</b>
<b>Average Tariff</b>	<b>[Rs./kWh]</b>	<b>1.6127</b>

- 30.2. Gujranwala Electric Power Company Limited (GEPCO), being a distribution licensee, is allowed to charge its consumers, the following "Use of system charge" (UOSC);

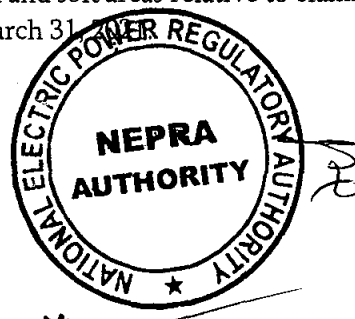
Description	For 132 kV Only	For 11 kV Only	For both 132 & 11 kV
Asset Allocation	39%	27%	66%
Level of Losses	1.24%	5.30%	6.47%
UoSC Rs./kWh	0.59	0.44	0.66

- 30.3. 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.
- 30.4. Responsible to provide distribution service within its service territory on a non-discriminatory basis to all the consumers who meet the eligibility criteria laid down by the Authority,
- 30.5. To make its system available for operation by any other licensee, consistent with applicable instructions established by the system operator.
- 30.6. To follow the performance standards laid down by the Authority for distribution and transmission of electric power, including safety, health and environmental protection instructions issued by the Authority or any Governmental agency [or Provincial Government;
- 30.7. 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
- 30.8. To disconnect the provision of electric power to a consumer for default in payment of power charges or to a consumer who is involved in theft of electric power on the request of Licensee.
- 30.9. The Petitioner shall comply with, all the existing or future applicable Rules, Regulations, orders of the Authority and other applicable documents as issued from time to time.

**31. Summary of Direction**

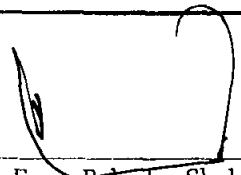
31.1. A summary of all directions passed in this determination by the Authority are reproduced hereunder. The Authority hereby directs the Petitioner to;

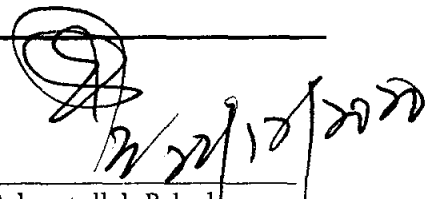
- i. File Multi Year Tariff Petition for a tariff control period of five year to avoid any delay in tariff determinations.
- ii. Transfer the already collected provision of postretirement benefits into the fund by June 30, 2021.
- iii. Maintain a proper record of its assets by way of tagging each asset for its proper tracking and also to provide explanation on the concerns raised by the Authority in terms of its R&M cost in the tariff determination for the FY 2015-16.
- iv. Provide details of PEPCO Management Fees, if any, claimed previously by March 31, 2021, so that same could be adjusted in the subsequent tariff determinations.
- v. 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 GEPCO in this respect by March 31, 2021.
- vi. Take remedial measures for achievement of performance standards as laid down in NEPRA Performance Standards (Distribution) Rules, 2005.
- vii. 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 by March 31, 2021.
- viii. Carry out detailed analysis about the hard and soft areas relative to claims in earlier studies and submit report to the Authority by March 31, 2021.

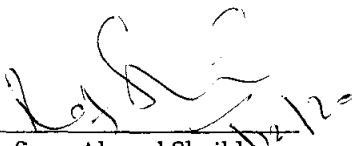


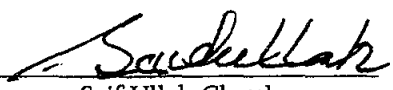
- ix. to give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance for the FY 2020-21 & onward.
- x. Segment reporting with clear break-up of costs in the financial statements for the FY 2019-20 and onward for Distribution and Supply Functions in light of the amended NEPRA Act.
- xi. 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.
- xii. 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.
- xiii. 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.
- xiv. 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.
- xv. Provide project wise detailed report for the investment carried out along-with their cost/benefit analysis and technical/financial savings achieved by June 30, 2021.
32. 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.

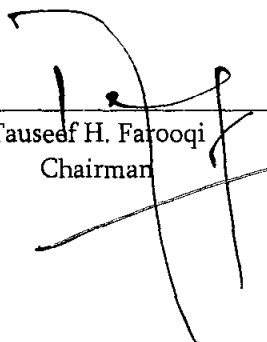
**AUTHORITY**

  
Eng. Bahadur Shah  
Member

  
Rehmatullah Baloch  
Member

  
Rafique Ahmed Shaikh  
Member

  
Saif Ullah Chattha  
Vice Chairman 22.12.2020

  
Tauseef H. Farooqi  
Chairman

