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No. NEPRA/R/ADG(Trf)/TRF-562/GEPCO-2021/8641-8643
June 2, 2022

Subject: **DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY GUJRANWALA ELECTRIC POWER COMPANY LTD. (GEPCO) FOR DETERMINATION OF DISTRIBUTION TARIFF UNDER MYT REGIME FOR THE FY 2020-21 TO FY 2024-25** [Case # NEPRA/TRF-562/GEPCO-2021]

Dear Sir,

Please find enclosed herewith subject Determination of the Authority along with Annex-A & B and additional note of Engr. Rafique Ahmed Shaikh, Member NEPRA (76 Pages) in Case No. NEPRA/TRF-562/GEPCO-2021.

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

Enclosure: As above

02.06.22
(Syed Safeer Hussain)

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

CC:

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

National Electric Power Regulatory Authority
(NEPRA)

PETITION NO: NEPRA/TRF-562/GEPCO-2021

DETERMINATION OF DISTRIBUTION TARIFF PETITION

FOR

GUJRANWALA ELECTRIC POWER COMPANY LIMITED (GEPCO)

FOR THE FY 2020-21 – FY 2024-25

UNDER

NEPRA TARIFF (STANDARDS AND PROCEDURE) RULES - 1998

Islamabad

2 - 6 -, 2022

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

Abbreviations

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

CASE NO. NEPRA/TRF-562/GEPCO-2021

PETITIONER

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

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

COMMENTATOR
NIL

REPRESENTATION

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

1. Background

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

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

1.3. The newly introduced section 23(E) of the Act, provides NEPRA with the powers to grant Electric Power Supply License for the supply of electric power. 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, 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 under the MYT Regime for a period of five years i.e. from FY 2020-21 to FY 2024-25, in terms of Rule 3 (1) of Tariff Standards & Procedure Rules-1998 (hereinafter referred as "Rules").

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

Description	Unit	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Investment	Mln Rs.	5.554	6.756	6.805	6.970	7.160
Units Received	GWh	11.875	12.455	13.064	13.702	14.370
Units Lost	GWh	1.118	1.159	1.205	1.250	1.294
% of T&D Losses	%	9.41%	9.31%	9.22%	9.12%	9.00%
Units Delivered	GWh	10.758	11.296	11.860	12.453	13.076
O&M	Mln Rs.	16.892	18.633	19.954	21.280	22.666
Depreciation	Mln Rs.	2.523	2.701	2.896	3.094	3.297
Return on Regulatory Asset Base (RoRB)	Mln Rs.	5.145	5.425	5.616	5.786	5.945
Other Income	Mln Rs.	(744)	(774)	(804)	(835)	(868)
Distribution Margin	**Mln Rs.**	**23.816**	**25.985**	**27.662**	**29.325**	**31.039**
Net Average Sale Rate	**Rs./kWh**	**2.21**	**2.30**	**2.33**	**2.35**	**2.37**

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. However, considering the fact that the distribution license of the Petitioner is valid only till April 2022, the Authority decided to deliberate the term of the MYT period as a separate issue during the hearing. Since the impact of any such adjustments has to be made part of the consumer end tariff, therefore, the Authority, in order to provide an opportunity of hearing to all the concerned and meet the ends of natural justice, decided to conduct a hearing in the matter.

2.2. Hearing in the matter was scheduled on August 04, 2021, for which notice of admission / hearing along-with the title and brief description of the petition was published in newspapers on July 14, 2021 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 request of Petitioner to allow MYT for a period of five years is justified, considering the fact that distribution license is valid till April 2022?

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

iii. Whether the projected energy purchases are justified?

iv. Whether the requested O&M is justified?

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

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

vii. What should be the adjustment mechanisms during the MYT? Whether there should any efficiency factor (X Factor)? Whether the salaries, allowance and post-retirement benefits shall linked with GoP increase or otherwise?

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

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

x. Why GEPCO did not submit its five years IGTDP/DIIP plans as per requirements under Para 23 of NEPRA Consumer End Tariff Methodology for approval of the Authority prior to file the instant MYT petition? GEPCO is required to submit IGTDP/DIIP plans on prescribed formats immediately to avoid further delays in its MYT determination.

Whether GEPCO is currently facing network constraints and overloading? If yes, GEPCO is required to submit detailed analysis by identifying the grey areas which

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

caused congestions in its transmission and distribution system.

xii. Whether load shedding policy on the basis of high AT&C losses being implemented in GEPCO jurisdiction? GEPCO is required to submit details in this regard.

xiii. What steps were taken by GEPCO to bring down T&D losses? Whether a detailed plan in this regard was furnished?

xiv. What are the remedial measures taken for the achievement of performance standards are as laid down in Performance Standards (Distribution) Rules 2005?

xv. Whether GEPCO has provided at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005? Why quarterly report in this regard was not submitted yet?

xvi. Provide a project-wise detailed report for the investment carried out along with their impacts on system improvement?

xvii. Progress regarding the installation of AMI meters at the consumer end.

xviii. Progress of installation of ABC cable to control theft of electricity, which causes the increase in transmission and distribution losses.

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

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

xxi. What is the load-shedding criteria in the jurisdiction of GEPCO?

xxii. What steps were taken to control the theft of electricity?

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

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

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

4.1. Comments/replies and filing of Intervention Request (IR), if any, were desired from the interested person/ party within 7 days of the publication of notice of admission in terms of Rule 6, 7 & 8 of the Rules. In response thereof, IR has been filed by M/s PTCL, M/s Pak Telecom Mobile, M/s Telenor, M/s Nayatel and M/s CM Pak (Zong). Written comments also received from M/s Deodar PMCL (Jazz). A brief of the concerns raised in the IR/ comments is as under;

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

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

"The Authority observed that the issue highlighted by the commentator M/s Telenor Pakistan regarding applicability of Industrial tariff to Cellular Mobile Operator (CMOs)

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

4.4. In view thereof, in the instant tariff Petition, the subject matter has been discussed as a separate issue in the Supply of power Tariff determination of the Petitioner.

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

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

6.1. The Authority noted that the Petitioner has filed its MYT Petition for a period of five years i.e. FY 2020-21 to FY 2024-25, however, the Distribution license of the Petitioner is valid only till 30.04.2022. In view thereof, the Authority decided to deliberate the matter during the hearing.

6.2. The Petitioner during the hearing submitted that GEPCO has a stable financial position to the tune of Rs.165 billion total asset base, comprising of distribution infrastructure & equipment. It possesses more than 20 years post incorporation experience as Distribution Utility with an existing 3.93 million customer base and ranked as one of the best DISCO. The Petitioner submitted that all these credentials make GEPCO the best candidate on merit for renewal of both licenses.

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

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

8. <u>**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**</u>

8.1. The Authority in the MYT determination of GEPCO for the FY 2019-20 directed the Petitioner to stop the existing practice of deducting 20% of SAP funds for grid augmentation and carry out the augmentation of the grid after coordinating with the Ministry of Energy.

8.2. The Petitioner during the hearing submitted that no deduction is being made on account of SAP funds for grid augmentations.

9. <u>**Maintain a proper record of its assets by way of tagging each asset for its proper tracking**</u>

9.1. The Petitioner during the hearing submitted that process of Assets Tagging through Third Party has been initiated and RFP has been drafted and is under consideration of BOD-GEPCO.

9.2. The Authority noted that despite repeated directions and lapse of significant time, the Petitioner has not been able to comply with the directions of the Authority. 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 complete tagging of its assets by December 31, 2022.

10. <u>**Transfer the already collected provision of postretirement benefits into the fund by June 30, 2021.**</u>

10.1. The Petitioner submitted during the hearing that NEPRA allowed provision of post-retirement benefits (FY 2006-07 to 2011-12) which was adjusted against actual post-retirement benefits paid. The Petitioner provided the following detail in this regard;

Years	Audited Salary / benefits expenses (without provision)	NEPRA Allowed Salaries & benefits (inclusive of provision)	NEPRA Allowed Provision for Post Rtd. Benefits	Audited Actual Provision for Post Rtd.	Actual Post Rtd. Benefits paid
1	2	3	4(3-2)	5	6
2006-07	1,331	1,863	533	650	238
2007-08	1,520	1,863	343	571	242
2008-09	1,858	2,343	485	686	290
2009-10	2,113	2,694	581	927	379
2010-11	2,917	3,099	182	1,190	437
2011-12	3,670	3,563	-107	1,369	524
Total	13,410	15,425	2,016	5,393	2,110

10.2. The matter has been discussed in detail the ensuing paragraphs.

11. <u>**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**</u>.

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

11.3. The Petitioner during the hearing submitted that it did not claim any amount on account of PEPCO Management Fee from NEPRA, as debit notes issued by CPPA-G amounting to Rs.629.778 million regarding PEPCO Management Fee are still outstating as reconciliation item between GEPCO & CPPA-G as on 30.06.2021.

12. <u>To give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance for the FY 2020-2 1 & onward</u>

<u>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.</u>

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

12.2. Similarly for the FY 2018-19 & FY 2019-20, the Authority again observed that the Petitioner as per its provisional accounts had insufficient cash balance, against its pending liability of receipt against deposit works and consumer security deposits, thus, indicating that the amount received against the aforementioned heads has been utilized somewhere else for which no details have been provided.

12.3. Accordingly, the Authority decided, to include the amount of receipts against deposit works as a part of Deferred Credits for RAB for FY 2018-19 & FY 2019-20, after excluding therefrom cash/ bank balances and amount of stores & Spares available with the Petitioner and also directed the Petitioner to restrain from unlawful utilization of receipts against deposit works & security deposits, and to give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance.

12.4. The Petitioner during the hearing submitted that SAP FICO, MM & PS Modules are being implemented in GEPCO and requisite disclosures will be made upon completion of the project which is under final stage i.e. User Acceptance Testing is under process.

12.5. It also stated that Rs.3.50 billion were paid to PEPCO from Consumer Security deposits with the approval of BOD-GEPCO as a loan. Now as on 30th June-2021, 100 % recovery has been made through monthly instalments and deposited the same in to separate bank accounts.

12.6. The matter has been deliberated in detail under the issue of RoRB.

13. <u>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.</u>

13.1. The Authority in the tariff determination of the Petitioner for the FY 2019-20 directed it to provide the details of late payment charges recovered from the consumer and the invoices raised by CPPA-G under the head of mark-up on delayed payments for the period from FY 2014-15 to FY 2019-20.

13.2. The Petitioner provided the following details in this regard;

Years	LPS - Collected from Consumers	LPS - Charged by CPPA-G
2015-16	1,053.37	192.13
2016-17	1,110.43	67.97
2017-18	1,054.12	43.35
2018-19	1,117.90	490.721
2019-20	1,215.31	1,230.35
Total	5,551.13	2,024.52

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

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

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

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

14.2. The Petitioner further submitted that it requested CPPA-G vide letter dated 23-02-2021 for the provision of Power Purchase Price (PPP) data, which was provided by CPPA-G, projected for the FY 2020-21 to 2024-25 vide letter dated 22-03-2021 as shown below;

Years	Units Purchased	Units sold	Units Lost	Line Losses
	MKWH			%
2018-19 (Determined)	11,438	10,351	1,087	9.51
2019-20 (Audited)	10,991	9,946	1,045	9.51
2020-21	11,877	10,760	1,118	9.41
2021-22	11,535	10,461	1,074	9.31
2022-23	11,820	10,731	1,089	9.21
2023-24	14,898	13,541	1,357	9.11
2024-25	16,177	14,721	1,456	9

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

14.3. However, as the units purchased of GEPCO for the FY 2020-21 during July-20 to April-21 are on greater side than CPPAG projections, the units purchased and sold based on five percent average growth for FY 2021-22 to 2024-25 have been considered in the instant tariff petition as mentioned below;

Years	Units Purchased	Units sold	Units Lost	Line Losses
	MKWH			%
2019-20 (Determined)	11,438	10,351	1,087	9.51
2019-20 (Audited)	10,991	9,946	1,045	9.51
2020-21	11,875	10,758	1,118	9.41
2021-22	12,455	11,296	1,159	9.31
2022-23	13,064	11,860	1,204	9.21
2023-24	13,702	12,453	1,249	9.11
2024-25	14,370	13,076	1,294	9

14.4. The Petitioner accordingly projected the following Power Purchase Price;

Years	Energy Cost	Variable Charges	Capacity Charges	Use of System Charges	Total
2019-20 (Determined)	62,106	4,478	75,589	4,150	146,322
2019-20 (Audited)	63,856	4,331	71,449	4,181	143,817
2020-21	60,953	4,741	70,699	5,170	141,563
2021-22	52,394	6,234	116,000	9,851	184,478
2022-23	50,151	6,639	145,794	11,308	213,893
2023-24	60,383	8,086	147,413	10,912	226,794
2024-25	64,125	9,333	169,050	11,302	253,810

14.5. The Petitioner also submitted that it has allocated the entire Power Purchase Price to the Supply of Power Business and the Authority also in Tariff Determination FY 2019-20 adopted the same principle, therefore Power Purchase Price for the years 2020-21 to 2024-25 has been allocated to Power Supply Business.

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

15. <u>Whether the basis used by the Petitioner for bifurcation of its costs into supply and distribution segments is justified?</u>

15.1. The Petitioner in its Petition provided the following basis for bifurcation of its costs into supply and distribution segments;

<u>Power Purchase Price (PPP):</u>

Distribution Business	=	NIL
Power Supply Business	=	100%

15.2. The Petitioner has submitted that PPP being a pass through hence, nothing allocated to Distribution Business and entire Power Purchase Price is allocated to Power Supply Business.

<u>Salaries, Wages & Other Benefits:</u>

Total Cost (Audited)	=	Rs. 14,357 Million
Distribution Business	=	75%
Power Supply Business	=	25%

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

15.3. The cost of regularly paid Salaries & Wages of Meter Readers, Bill Distributers, Meter Inspectors, Meter Reader Supervisors, and Staff of Revenue Offices along with the services of **MIS Directorate** (Computer Centers) and **Customer Services Directorate (CSD)**at HQ specifically allocated to its Power Supply Business.

15.4. The actual audited cost of the aforesaid offices for the Financial Year 2018-19 summarized as follows:

Designation	No. of Employees	Million Rupees
Meter Readers/BD/MI/MRSS	1,929	967
Revenue Office Staff	437	272
DCM/ROs / CSD	21	27
MIS (Computer Centers)	210	181
Total	2,597	1,447

The total number of GEPCO's employees = 12,256
% of employees of Power Supply = 2,597/12,256 = **21%**
% of employees of Distribution Business = 79%
The total cost of GEPCO's employees = 5,786 Million
% of cost of employees of Power Supply = 1,447/ 5,786 = **25%**
% of cost of employees of Distribution Business = 75%

15.5. The Petitioner submitted that in view of the above, the following uniform principle established and adopted for apportionment of costs:

15.6. "Specific Identifiable Costs relating to Distribution Business to be taken at actual rupee value whereas, Other Common Costs* to be apportioned on the basis of 75% (worked out as above)."

15.7. These costs pertain to the services of GEPCO Head Quarter staff including HR Directorate, Regional Training Centre, Internal Audit, and Finance Directorate.

15.8. The Petitioner regarding other employee benefits has submitted that not being of regular nature (Over Time, Off-Days Wages, Dual Charge Allowances etc. as tabulated below) amounting to Rs. 1,842 Million apportioned on the basis of principle derived above i.e. 75% to Distribution Business as mainly being directly proportionate to the Regularly Paid Salaries & Wages.

Description	Mln. Rs.
Overtime / Off-day Wages	618
Power, Light & Water	390
Awards & Gratuity	296
Medical Expenses	250
Education & Training	70
Misc.	218
Total	1,842

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

15.9. The Petitioner regarding provision for retirement benefits amounting to Rs. 6,729 Million has submitted that it is apportioned on the basis of principle derived above i.e. 75% to Distribution Business.

16. **Travelling Expenses**

16.1. Regarding travelling expenses the Petitioner has submitted the following;

Distribution Business = 75%

Power Supply Business = 25%

16.2. Travelling Expenses apportioned on the basis of principle derived at Para 3.1.2 (c) above i.e. 75% to Distribution Business because being paid on the basis of BPS having direct proportionate relationship to the employees' regularly paid salaries & wages.

17. **Repair & Maintenance**

17.1. Regarding Repair & Maintenance the Petitioner has submitted that following;

Distribution Business = 98%

Power Supply Business = 2%

17.2. As per Audited Financial Statements of FY 2018-19, the breakup of total expense of Rs.969 Million of Repair & Maintenance was as follows:

Description	MLN Rs.	%
Distribution Plant & Equipment	917	95%
Civil Works Division	43	4%
General Plant & Equipment	9	1%
Total	**969**	**100%**

17.3. By considering the above table, Repair & Maintenance Expense allocated 98% to the GEPCO's Distribution Business and 2% to Power Supply Business as per actual audited data for the FY 2018-19.

18. **Transportation Expenses**

18.1. Regarding transportation expenses the Petitioner submitted the following;

Distribution Business = 95%

Power Supply Business = 5%

18.2. Transportation Expenses apportioned on the basis of No. of Operational Vehicles used by the both business areas respectively.

19. **Bills Collection Charges**

19.1. Regarding bill collection the Petitioner submissions are as under;

Distribution Business = NIL

Power Supply Business = 100%

19.2. Being related to Recovery Activities of Power Supply Business, entire Bill Collection Charges allocated to the GEPCO's Power Supply Business and NIL to Distribution Business.

20. **Rent & Rates:**

20.1. Regarding rent & rates the Petitioner submissions are as under;

Distribution Business = 100%

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Power Supply Business = NIL

20.2. Rents covered under Rent & Rates purely pertaining to the rentals paid for GEPCO's Complaint Offices located in various subdivisions hence, entirely allocated to the GEPCO's Distribution Business.

21. Power, Light & Water:

21.1. Regarding power, light & power the Petitioner submissions are as under;

Distribution Business	=	90%
Power Supply Business	=	10%

21.2. Power, Light & Water 90% allocated to the GEPCO's Distribution Business and 10% to Power Supply Business based on actual data of FY 2018-19.

22. Office Supplies & Others:

22.1. Regarding Office Supplies & Others the Petitioner submissions are as under;

Distribution Business = 30%

Power Supply Business = 70%

22.2. Office Supplies & Others 30% allocated to the GEPCO's Distribution Business and 70% to Power Supply Business based on actual data.

22.3. The 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.

23. Advertising:

23.1. Regarding advertisement the Petitioner submissions are as under;

Distribution Business	=	100%
Power Supply Business	=	NIL

23.2. 100% Advertisement Expenses 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.

24. Professional Fees:

24.1. Regarding Professional Fee the Petitioner submissions are as under;

Distribution Business	=	30%
Power Supply Business	=	70%

24.2. All Professional Fee allocated 70% to the GEPCO's 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 Fee.

25. Injuries & Damages:

25.1. Regarding Injuries & Damages the Petitioner submissions are as under;

Distribution Business	=	85%
Power Supply Business	=	15%

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

25.2. 85% Injuries & Damages Expense allocated to the GEPCO's Distribution Business and 15% to GEPCO's Power Supply Business on the basis of figures of actual expenditure pertaining to relevant offices.

26. Late Payment Surcharge - CPPAG:

26.1. Regarding Late Payment Surcharges the Petitioner submissions are as under;

Distribution Business	=	NIL
Power Supply Business	=	100%

26.2. CPPA issues power purchase invoices directly to the Power Supply Business and its payment is also the responsibility of the Power Supply Business and accordingly Late Payment Surcharge by CPPAG allocated 100% to Power Supply Business.

27. Provision for Bad Debts:

27.1. Regarding provision for bad debts the Petitioner submissions are as under;

Distribution Business	=	NIL
Power Supply Business	=	100%

27.2. 100% bad debts relate to Power Supply Business as Metering, Billing & Collection are the activities covered under Power Supply Business.

28. Misc. Expenses:

28.1. Regarding Misc. Expenses the Petitioner submissions are as under;

Distribution Business	=	90%
Power Supply Business	=	10%

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

28.2. Distribution Business share is 90% and the allocation of Misc. expenses (Telephone, Postage, and Auditor's Fee etc.) made on the basis of actual audited expenditure of FY 2018-19 pertaining to respective business segments.

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

28.4. The Authority in the determination of GEPCO for the FY 2019-20 decided the following;

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

prepared to be implemented by all the public sector DISCOs in order to have a uniformity and consistency in the structure."

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

29. Whether the projected O&M is justified?

29.1. The Petitioner submitted during hearing that the requested O&M is justified as these expenses have been estimated on the basis of Actual Audited Expenses of FY 2019-20 and FY 2020-21 (Un-audited) as substantiated below: The Petitioner's submitted that the requested O&M expenses includes salaries and other benefits of employees, repair and maintenance expenses, traveling allowance, vehicle maintenance allowance and other operating costs related to its distribution and supply business. A summary of the final O&M costs requested by the Petitioner during the hearing under the MYT control period for its Distribution function is as under:

Description	2020-21	2021-22	2022-23	2023-24	2024-25
a) O & M:					
Salaries & Other Benefits	6,488	7,543	8,141	8,792	9,502
Post Retirement Benefits	7,885	8,295	8,750	9,134	9,495
Repair & Maintenance	1,498	1,648	1,813	1,994	2,194
Travelling	251	264	277	291	305
Transportation	323	361	399	437	475
Other Expenses	447	522	574	632	695
Total O & M	16,892	18,633	19,954	21,280	22,666
b) Depreciation	2,523	2,701	2,896	3,094	3,297
c) Return on Rate Base(RORB)	5,145	5,425	5,616	5,786	5,945
d) Other Income	(744)	(774)	(804)	(835)	(868)
Distribution Margin Total	23,816	25,985	27,662	29,325	31,039
Distribution Margin Per Unit	2.21	2.30	2.33	2.35	2.37

30. Salaries, Wages & Other Benefits:

30.1. The Petitioner further stated that average 7 % annual increment Effect has been considered in estimations. The impact of 25% Disparity Reduction Allowance has been incorporated. It also mentioned that on average10 % ad-hoc relief announced by the Federal Government is accounted for in the projected data. A 5% growth in Travelling Expenses is being projected due to future recruitment, promotions, transfers etc. Regarding provision for Retirement Benefits, it stated that it is based on Audited Figure for the FY 2019-20 as per Actuarial Report. Projections are made keeping in view the number of employees to be retired in next 5 years.

31. Other O & M Expenses:

31.1 For Other O&M expense, around 10% increase for the FY 2021-22 to 2024-25 over provisional figures of 2020-21 is projected for Other O & M Expenses (Repair & Maintenance, Vehicle Running Expenses and Other Expenses) as per NEPRA Mechanism by considering CPI which is 11% for April.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

32. **Provision for Post-Retirement Benefits:**

32.1 The Petitioner has submitted that GEPCO fully understands its legal obligation to record and pay Post-Retirement Benefits Liabilities and has been making payments to its all retired employees. The Authority in previous tariff determinations of GEPCO allowed only the amount of actual payments made for the Post-Retirement Benefits rather than provision charged to Profit & Loss Account. The Authority's denial of retirement benefits is inconsistent with the requirements of International Accounting Standard 19(IAS-19). As per audited accounts for the FY 2019-20, there is liability of Rs.80 Billion on account of Post-Retirement Benefits. Due to liquidity position, GEPCO is unable to transfer this amount to a separate fund, therefore, it is proposed that by considering the proposed privatization of GEPCO, dynamics of multi-year tariff regime and the fact that GEPCO has created a separate account for Post-Retirement Benefits in compliance to NEPRA direction, the Authority is requested to allow the Provision for Post-Retirement Benefits as per Audited Financial Statements based on Independent Actuarial Report in accordance with IAS-19. GEPCO will deposit the whole amount allowed into separate account and in case of failure to transfer the whole amount, the Authority may adjust the deficit payment in next year's provision and from thereon, only actual amounts paid and amount transferred into the fund to be allowed.

32.2 The Authority observed that the Amended NEPRA Act under Section 31(3), inter alia, has prescribed that the following general guidelines shall be applicable to the Authority in the determination, modification or revision of rates, charges and terms and conditions for provision of electric power services;

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

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

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

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

33 Salaries, Wages and Other benefits (excluding post-retirement benefits)

33.1 The Authority noted that head of Salaries, Wages and Other Benefits include employees Pay & Allowances and Post-retirement benefits and accounts for around 85% of the Petitioner's total O&M costs, excluding therefrom depreciation. The Authority understands that employees of XWDISCOs are hired on Government pay scales, thus, any salary increase announced by the Federal Government in Fiscal Budget is also applicable on the employees of XWDISCOs. Therefore, salaries & wages cost of employees can be considered as un-controllable cost for XWDISCOs as long as they remain in public sector.

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

33.3 The actual total cost reflected in the Audited accounts of the Petitioner for the FY 2019-20, under Salaries & Wages (excluding postretirement benefits, discussed separately) is Rs.7,044 million. Accordingly, the said amount has been considered as base cost and by applying thereon the increases as approved by the Federal Government on Salaries and Wages in the Federal Budget for the FY 2020-21, the cost of Salaries & Wages (excluding postretirement benefits, discussed separately), for both the Distribution and Supply functions works out as Rs.7,781 million. The same is hereby allowed to the Petitioner for the FY 2020-21 for both its distribution and Supply Functions as reference cost, to be adjusted in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

33.4 Since the Audited accounts of the Petitioner, do not provide bifurcation of the Salaries, Wages and other benefits costs in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of total cost of Salaries, Wages and other benefits in terms of

Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of Salaries, Wages and other benefits (excluding postretirement benefits) for the FY 2020-21 pertaining to the distribution function works out as Rs.5,836 million.

33.5 The assessed Salaries & Wages costs for the FY 2020-21 i.e. Rs.5,836 million, shall be considered as the reference cost for working out future Salaries & Wages expenses, in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

34 Additional Recruitment

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

35 Hiring for MIRAD

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

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

36 Post-Retirement Benefits

36.1 Since the Petitioner was incorporated as company in compliance with power sector reform policy of Government of Pakistan and the WAPDA employees working in Area Electricity Board gradually become employees of the company in terms of the Man Power Transition

Plan, therefore it had to maintain the GOP pay scales and the terms of employment for the employees which were prevalent in WAPDA.

36.2 The last four years pension payment as provided by the Petitioner is as under;

Sr.	Paid Rs in mln	FY 2020	FY 2019	FY 2018	FY 2017
1	Post retirement benefits	2,748	2,659	2,041	1,668
2	Medical Facilities	337	317	270	203
3	Free Electricity	113	102	93	82
	Total	3,198	3,078	2,404	1,953

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

Rs mln

	FY 21	FY 22	FY 23	FY 24	FY 25
Post retirement benefits	6,774	7,126	7,517	7,847	8,157
Medical Facilities	832	875	923	963	1,001
Free Electricity	280	294	310	324	337
	7,885	8,295	8,750	9,134	9,495

36.4 The Authority noted that the head of Post-retirement benefit includes employees' pension, free electricity and medical facility. The Authority also understands that employees of XWDSICSOs are hired on Government pay scales, thus thus, any pension increase announced by the Federal Government in the Budget is also applicable on the retired employees of XWDISCOs.

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

36.6 In compliance with the Authority's direction, the Petitioner has created a separate Fund for its post-retirement benefits. The Authority has considered the submissions of the Petitioners and has also analyzed the performance of the Petitioner in terms of Regulatory benchmarks of T&D losses and Recoveries. The Authority observed that the Petitioner has been able to achieve the target of T&D losses given by the Authority and its recovery position has remained close to 94% in FY 2019-20 primarily due to COVID impact. For the FY 2020-21, the Petitioner has been able to recover 105% of its billed amount.

36.7 Considering the aforementioned performance of the Petitioner, the Authority has decided to allow provision for Post-retirement benefit for the first year of the MYT control period amounting to Rs.10,513 million for the FY 2020-21, as per the amount requested by the Petitioner for the FY 2020-21.

36.8 However, the Petitioner is directed to deposit the amount of provision, over and above their actual post-retirement benefit payments, in the Fund and in case of failure to deposit the excess amount in the Fund, the same shall be adjusted/deducted in the subsequent tariff determination and from thereon, only actual amounts paid and amount transferred into the fund would be allowed.

36.9 Since the Audited accounts of the Petitioner, do not provide bifurcation of post-retirement benefits in terms of Distribution and Supply Functions, therefore, for the purpose of

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

allocation of total cost of post-retirement benefits in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of post-retirement benefits for the FY 2020-21 pertaining to the Distribution Function works out as Rs.8,139 million, to be adjusted in the MYT Control period as per the adjustment mechanism provided in the instant determination.

37 **Repair & Maintenance Costs**

37.1 The Petitioner has requested the following regarding repair and maintenance cost during the control period;

Mln. Rs.

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Repair & Maintenance	1,498	1,648	1,813	1,994	2,194

37.2 No doubt that the adherence to service standards and improvement of customer services is only possible through continuous repair and maintenance of distribution network, however, at the same time the Petitioner has also requested for huge CAPEX of over Rs.45,000 million for making additional investment in Fixed Assets, resulting in new, expensive and efficient equipment, leading to overall reduction in R&M cost and increasing the total Assets base. It has also been noted that the Petitioner has not been able to spend more than Rs.647 million under the R&M head during the last three years for supply and distribution business, excluding the amount related to meters.

37.3 In view of the foregoing and keeping in view the current approved tariff methodology, the Authority has decided to allow an amount of Rs.709 million under R&M head, for the FY 2020-21, after incorporating the inflationary impact on the R&M cost as per the audited accounts of the Petitioner for the FY 2019-20 for both the Distribution and Supply Functions, excluding amount related to meters. The same is hereby allowed to the Petitioner for the FY 2020-21 for both its distribution and Supply Functions.

37.4 Since the Audited accounts of the Petitioner, do not provide bifurcation of the R&M costs in terms of Distribution and Supply Functions, therefore, for the purpose of allocation of total cost of R&M costs in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of R&M for the FY 2020-21 pertaining to the Distribution Function works out as Rs.694 million.

37.5 The assessed repair and maintenance cost for the FY 2020-21 i.e. Rs.694 million, shall be considered as the reference cost for working out future repair and maintenance expenses, in the remaining control period as per the adjustment mechanism prescribed in the instant determination.

37.6 The Authority noted that the Petitioner instead of capitalizing the cost of meters is expensing out the same, therefore, while assessing the R&M costs of the Petitioner for the FY 2020-21, the Authority has excluded the amount related to Meters from the actual cost of R&M of the Petitioner for the FY 2019-20. The Petitioner is directed to capitalize the cost of meters instead of expensing out the same.

38 **Other O&M Expenses**

38.1 Other O&M expenses includes Travelling costs, Transportation and Other Expenses. The Petitioner requested the following under the heads;

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

Mln. Rs.

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Travelling	251	264	277	291	305
Transportation	323	361	399	437	475
Other Expenses	447	522	574	632	695
Total	**1,021**	**1,147**	**1,250**	**1,360**	**1,475**

38.2 The Authority noted that as per the approved tariff methodology, all other operating expenses are part of O&M costs which are to be assessed through CPI-X formulae for the whole tariff control period. Accordingly, for the assessment pertaining to the FY 2020-21 (reference cost), the Authority, keeping in view the cost as per the Audited accounts of the Petitioner for the FY 2019-20 has decided to accept the request of the petitioner except for the transportation expenses which have been assessed based on audited accounts for the FY 2019-20. Accordingly, the amount of Rs.1,709 million is allowed for the FY 2020-21, for both the Distribution and Supply of Power Function.

38.3 Since the Audited accounts of the Petitioner, do not provide bifurcation of the Other O&M costs in terms of Distribution and Supply of Power Functions, therefore, for the purpose of allocation of total cost of Other O&M costs in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the cost of Other O&M costs for the FY 2020-21 pertaining to the Distribution function works out as Rs.785 million.

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

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

39 **Whether the requested Return on Regulatory Asset base (RORB), Depreciation & Other Income is justified?**

39.1 **Depreciation**

39.2 Regarding Depreciation, the Petitioner has submitted that Depreciation is reckoned on the basis of the investments proposed for next five years by applying the applicable depreciation rates.

Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Depreciation	2,523	2,701	2,896	3,094	3,297

39.3 The Petitioner has also submitted that 2% of the requested depreciation has been allocated to Power Supply Business and 98% to Distribution Business. The Position of GEPCO's total net assets (after depreciation) as on 30.06.2019 was as follows:

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

NEPRA AUTHORITY
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

39.4 The Operating Assets included Land of Rs. 456 Million and breakup of remaining Depreciable Operating Assets was 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%
Total Depreciable Assets	43,090	100%

39.5 The above table shows that Distribution Equipment is 95.88% of total depreciable assets hence, 2% depreciation allocated to GEPCO Power Supply Business and 98% depreciation to GEPCO Distribution Business.

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

39.7 In order to make fair assessment of the depreciation expense, the Authority accounts for the investments approved for the year. After taking into account the new investments, the Gross Fixed Assets in Operation for the FY 2020-21 have been worked out as Rs.74,646 million. Accordingly, the depreciation charge for the FY 2020-21 has been assessed as Rs.2,415 million calculated on actual depreciation rates for each category of Assets as per the company policy, which will be considered as reference cost for working out future depreciation expenses for the remaining tariff control period, to be adjusted as per the mechanism provided in the instant determination.

39.8 After carefully examining the relevant details and information pertaining to the deferred credit and amortization as per the accounts for the FY 2019-20, the Authority has projected amortization of deferred credit to the tune of Rs.1,133 million for the FY 2020- 21. Accordingly, the consumers would bear net depreciation of Rs.1,282 million.

39.9 The actual depreciation reflected in the audited accounts of the Petitioner for the FY 2019-20, do not provide bifurcation of depreciation cost in terms of Distribution and Supply functions, therefore, for the purpose of allocation of depreciation cost in terms of Distribution and Supply Functions, the criteria as adopted by the Petitioner has been used. Accordingly, the depreciation cost for the FY 2020-21 pertaining to the Distribution Function works out as Rs.2,367 million. The same would be adjusted during the MYT control period as per the mechanism provided in the instant determination.

40 **Return on Rate Base (RORB)**

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

Weighted Average Cost of Capital (WACC) X Rate Base

41 **Weighted Average Cost of Capital:**

41.1 It also stated that as per the NEPRA determination of Consumer-end-Tariff (Methodology & Process) Guidelines, 2015, 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.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

NEPRA uses the following formula for calculation of WACC Where E/V and D/V are equity and debt ratios respectively taken as 30% and 70%. Accordingly, the rate calculated for GEPCO is:

$$WACC = [\, Ke \times (E/V)] + [Kd \times (D/V)]$$

42 **<u>Return on Equity:</u>**

42.1 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. GEPCO has taken the RoE as 15.12%.

43 **<u>Cost of Debt:</u>**

43.1 The cost of debt is the interest rate on which GEPCO would get borrowing from the debt market / commercial banks i.e. a rate at which banks lend to their customers. The Authority used the following formula for estimating the cost of debt;

Three months KIBOR + 2.00% spread

43.2 GEPCO has taken the cost of debt @14.97% and accordingly WACC of 15.02% keeping in view its financial costs.

43.3 The Petitioner in its petition requested the following on account of RoRB;

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Total Return on Rate Base	5,250	5,535	5,731	5,904	6,066
Allocated to Distribution	5,145	5,424	5,616	5,786	5,945
Allocated to Power Supply	105	111	115	118	121

43.4 However, during the hearing the Petitioner revised its working and provided the following working for both function i.e. supply & distribution;

(Rs. In Million)

Description	Determination FY 2019-20	2020-21 Projected	2021-22 Projected	2022-23 Projected	2023-24 Projected	2024-25 Projected
Gross Fixed Assets in Operation - Opening	64,308	69,372	73,995	82,747	88,306	93,995
Addition in Fixed Assets	2,609	4,623	8,753	5,559	5,689	5,837
Gross Fixed Assets in Operation - Closing	66,917	73,995	82,747	88,306	93,995	99,832
Less: Accumulated Depreciation	22,937	25,597	28,411	31,483	34,757	38,237
Net Fixed Assets in Operation	43,980	48,398	54,336	56,823	59,238	61,595
Add: Capital Work In Progress - Closing	9,292	8,451	10,865	12,112	13,393	14,716
Investment in Fixed Assets	53,272	56,849	65,201	68,935	72,631	76,310
Less: Deferred Credits	23,056	20,695	23,815	26,465	29,165	31,915
Regulatory Assets Base	30,216	36,154	41,386	42,470	43,466	44,395
Average Regulatory Assets Base	28,795	34,955	38,770	41,928	42,968	43,931
Rate of Return	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%
Return on Rate Base	4,324	5,250	5,823	6,298	6,454	6,598

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

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

NEPRA AUTHORITY NATIONAL ELECTRIC POWER REGULATORY AUTHORITY *(c) tariffs should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service;*

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

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

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

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

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

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

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

Cost of Equity;
$Ke = R_F + (R_M - R_F) \times \beta$
$= 8.2139\% + (13.9\% - 8.2139\% = 5.686\% \times 1.1) = 14.47\%$
The cost of debt is;
$Kd = 9.03\%$

WACC= ((Ke x (E / V) + (Kd x (D / V))
Where E/V and D/V are equity and debt ratios respectively taken as 30% and 70%;

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

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

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

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

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

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RAB calculation: net approach

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

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

where:

OB - opening value of regulatory assets for year t of the regulatory period;

Inv - investment (capital expenditures) for year t of the regulatory period;

D - depreciation for year t of regulatory period;

AD - assets disposal for year t of regulatory period;

DC - annual change over year t in the value of assets funded by capital contributions;

DWC - annual change over year t in working capital;

CB - closing value of regulatory assets for year t of the regulatory period

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

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

Description	FY 2019-20	FY 2020-21
Fixed Assets O/B	64,308	69,372
Addition	5,064	5,274
Fixed Assets C/B	69,372	74,646
Depreciation	23,022	25,437
Net Fixed Assets	46,349	49,209
Capital WIP C/B	-	-
Fixed Assets Inc. WIP	46,349	49,209
Less: Deferred Credits	25,574	26,892
Total	20,775	22,317
RAB		**21,546**
WACC		10.66%
RORB		**2,297**
Capital WIP C/B		8,343
Equity Portion of CWIP 30%		2,503
ROE on CWIP		362
Total RORB		**2,659**

NEPRA AUTHORITY
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

45.5 The total amount of RoRB as worked out above has been allocated in terms of Distribution and Supply Functions, as per the criteria adopted by the Petitioner itself. Accordingly, the RORB for the FY 2020-21 pertaining to the Distribution Function works out as Rs.2,606 million.

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

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

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

45.9 The Petitioner during the hearing submitted that SAP FICO, MM & PS Modules are being implemented in GEPCO and requisite disclosures will be made upon completion of the project which is under final stage i.e. User Acceptance Testing is under process.

45.10 It also stated that Rs.3.50 billion were paid to PEPCO from Consumer Security deposits with the approval of BOD-GEPCO as a loan. Now as on 30th June-2021, 100 % recovery has been made through monthly instalments and deposited the same in to separate bank accounts.

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

46 <u>Other Income</u>

46.1 Regarding Other Income, the Petitioner has submitted that 70% of other income is allocated to Power Supply Business and 30% to Distribution Business. The Petitioner has submitted that 4% increase in Other Income is projected keeping in view the previous trend and future outlook. The Petitioner has proposed the following other income;

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Total Other Income	2,482	2,579	2,680	2,785	2,895
Allocated to Distribution	744	774	804	835	868
Allocated to Power Supply	1,737	1,805	1,876	1,949	2,026

46.2 Since the other income would be trued up every year as per the mechanism provided in the instant determination, therefore, for the FY 2020-21, the Authority has decided to consider the amount as requested by the Petitioner, 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.2,481 million as Other Income for the both Distribution and supply functions for the FY 2020-21, which does not include late payment charge but includes amortization of deferred credit.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

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

46.4. The Authority, therefore, 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 2020-21 to FY 2022-23, in its subsequent tariff adjustment request.

46.5. The total amount of Other Income as worked out above has been allocated in terms of Distribution and Supply Functions, as per the criteria adopted by the Petitioner itself. Accordingly, Other Income for the FY 2020-21 pertaining to the Distribution Function works out as Rs.744 million, which is hereby allowed.

47 What should be the adjustment mechanisms during the MYT? Whether there should any efficiency factor (X Factor)? Whether the salaries, allowance and post-retirement benefits shall linked with GoP increase or otherwise?

47.1 Regarding adjustment mechanism of different components, the Petitioner submitted as under;

48 Indexation of O & M Expenses:

48.1 As per the NEPRA Determination of Consumer-end-Tariff (Methodology & Process) Guidelines, 2015, the O&M part of Distribution Margin shall be indexed with CPI subject to adjustment for efficiency gains (X factor). Accordingly, the O&M will be indexed every year according to the following formula:

O & M (Rev) = O & M (Ref) X [1 + (ΔCPI-X)]

Where
O &M (Rev) = Revised O&M Expense for the Current Year
O &M (Ref)= Reference O&M Expense for the Reference Year
ΔCPI = Change in Consumer Price Index published by Pakistan Bureau of Statistics latest available on 1st July against the CPI as on 1st July of the Reference Year in terms of percentage
X = Efficiency factor

49 Depreciation

49.1 As per the NEPRA Determination of Consumer-end-Tariff (Methodology & Process) Guidelines, 2015, Depreciation expense for future years will be assessed in accordance with the following formula/mechanism:

DEP (Rev) = DEP (Ref) X GFAIO(Rev) / GFAIO (Ref)
DEP (Rev) = Revised Depreciation Expense for the Current Year
DEP(Ref) = Reference Depreciation Expense for the Reference Year
GFAIO (Rev) = Revised Gross Fixed Assets in Operation for the Current Year
GFAIO (Ref) = Reference Gross Fixed Assets in Operation for Reference Year

50 RoRB

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

50.1 As per the NEPRA determination of Consumer-end-Tariff (Methodology & Process) Guidelines, 2015, annual RORB assessment will be made in accordance with the following formula/mechanism:

RORB(Rev) =RORB (Ref) X RAB (Rev) / RAB(Ref)

Where

RORB(Rev) = Revised Return on Rate Base for the Current Year

RORB(Ref) = Reference Return on Rate Base for the Reference Year

RAB(Rev) = Revised Rate Base for the Current Year

RAB(Ref) = Reference Rate Base for the Reference Year

51 <u>Other Income</u>

51.1 As per the NEPRA determination of Consumer-end-Tariff (Methodology & Process) Guidelines, 2015, Other income assessment will be made in accordance with the following formula/mechanism:

OI(Rev) = OI(I) - OI(I)

Where:

OI(Rev) = Revised Other Income for the Current Year

OI(I) = Actual Other Income as per latest Financial Statements.

OI(0) = Actual/Assessed Other Income used in the previous year.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

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

51.4 Regarding adjustment of O&M costs with the efficiency factor X, the Authority noted that the Petitioner although has proposed to index its O&M costs with CPI minus X, however, at the same time it has been requested to keep the X-factor as zero. The Authority in line with its decisions in the matter of XWDISCOs which have been allowed MYTs, has decided to keep the efficiency factor "X", as 30% of increase in CPI for the relevant year of the MYT control period. The Authority has further decided to implement the efficiency factor from the 3rd year of the control period, in order to provide the Petitioner with an opportunity to improve its operational performance, before sharing such gains with the consumers.

51.5 The Authority also noted that as per the approved tariff methodology the Power Purchase Price is the only uncontrollable cost which is allowed a pass through item. The other remaining costs are to be treated as controllable costs. Accordingly, the Authority prescribes the following mechanism for adjustment of costs allowed as part of Distribution Margin, during the MYT control period;

52 Salaries & Wages and Post-retirement Benefits;

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

53 Post-retirement benefits

53.1 Post-retirement benefits would be allowed based on the actuarial valuation report for the year for which assessment is being made or as per the latest available audited financial statements. It would be mandatory for the Petitioner to deposit the whole amount of allowed Post retirement benefits into the separate Fund and route all its pension payments through the Fund. If the Petitioner fails to transfer the whole amount of postretirement benefits into the Fund, the Authority would adjust the deficit payments in the next year's provision and from thereon, only actual amounts paid and amount transferred into the fund would be allowed.

54 O&M Costs

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

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

55 RORB

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

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

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

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

56 Depreciation Expenses

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

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

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

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

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

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

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

57 Other Income

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

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

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

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

58 Whether the requested Prior Years Adjustment is justified?

58.1 The Petitioner has requested total PYA of Rs.4,886 million. The Petitioner submitted that the Prior Year Adjustment (PYA) includes an amount of minimum Tax paid during FY 2019-20 under Section 113 amounting to Rs.1,492 million as allowed by the Authority as per previous determinations. The balance amount of Rs.3,394 million requested as tariff claim represents the past FPA Subsidy (51-350 units) as the Authority decided in the Tariff Determination for FY 2012-13 to claim it from the Govt. as "separate subsidy". The claims for the same were not acknowledged by the Engineering Adviser, GoP Subsidy Cell on the plea that these claims have not been notified by the Federal Government as the Authority discussed and decided the issue, and did not make it a part of the Revenue Requirement.

58.2 The Prior Year Adjustment includes the impact of variation in the following, based on the Authority's allowed benchmarks of T&D losses and recoveries;

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

58.3 It is important to highlight that variation between the PPP billed to DISCOs by CPPA-G and the amount recovered by the DISCOs, based on the Authority's allowed benchmarks of T&D losses and recoveries, are being accounted for separately through Quarterly/Bi-Annual Adjustment mechanism, therefore, the instant PYA includes only the remaining components.

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

58.5 Regarding past FPA subsidy of Rs.3,394 million, the Authority observed that the same issue was also raised by the Petitioner in its previous petitions, whereby the Authority decided as under;

- *"For the amount of Rs.3,394 million claimed as FPA subsidy, the Petitioner itself has submitted that this pertains to the Fuel Price Adjustment Subsidy which was not entertained by the Government, therefore, the petitioner needs to take up this issue with the Federal Government for release of subsidy. Here it is pertinent to mention that NEPRA has already determined / notified the FPA decisions for the period mentioned by the Petitioner and nothing is pending at the part of NEPRA".*

58.6 In view thereof, and the fact the no new evidence/ grounds have been submitted by the Petitioner, the Authority does not see any justification to revisit its earlier decision, hence the request of the Petitioner is declined.

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

58.8 The Authority also noted in the tariff determination of the Petitioner for the FY 2019-20, it directed the Petitioner to provide the details of late payment charges recovered from the consumer and the invoices raised by CPPA-G under the head of mark-up on delayed payments for the period from FY 2014-15 to FY 2019-20.

58.9 The Petitioner provided the following details in this regard;

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Years	LPS - Collected from Consumers	LPS - Charged by CPPA-G
2015-16	1,053.37	192.13
2016-17	1,110.43	67.97
2017-18	1,054.12	43.35
2018-19	1,117.90	490.721
2019-20	1,215.31	1,230.35
Total	5,551.13	2,024.52

58.10 From the details submitted by GEPCO in this regard, it is evident that it has recovered LPS of an amount of Rs.3,542 million in excess of supplemental charges billed by CPPA-G to GEPCO from FY 2015-16 to FY 2019-20 worked out on yearly basis, therefore, the Authority in line with its earlier decisions in the matter, has adjusted the excess amount of Rs.3,542 million in the instant determination of the Petitioner, as part of PYA. Here it is pertinent to mention that while accounting for LPS against Supplemental Charges, NEPRA individually accounts for the amount of LPS against each DISCO's supplemental charges as per the decision of the Authority.

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

Description	Rs. Mln GEPCO
1st & 2nd Qtr. FY 2018-19	
Allowed Amount	15,853
Qtr. Rs./kWh	1.1756
Recovered	16,161
Under/(Over) Recovery	(308)
3rd & 4th Qtr. FY 2018-19	
Allowed Amount	1,334
Qtr. Rs./kWh	0.1236
Recovered	1,252
Under/(Over) Recovery	82
Interim D.M FY 2018-19	
Allowed Amount	2,898
Qtr. Rs./kWh	0.2686
Recovered	2,722
Under/(Over) Recovery	176
1st Qtr. FY 2019-20	
Allowed Amount	1,431
Qtr. Rs./kWh	0.1327
Recovered	1,359
Under/(Over) Recovery	72
Distribution Margin FY 2019-20	
Allowed	19,427
Recovered	12,805
Under/(Over) Recovery	6,622
Other Income FY 2019-20	
Allowed	(1,267)
Actual	(2,388)
Under/(Over) Recovery	(1,121)
Sales Mix Variances	
FY 2019-20	(4,964)
	(4,964)
Late Payment Charges in Excess to Supplemental charges FY 2014-15 to FY 2019-20	(3,542)
Distribution Margin FY 2020-21	
Allowed	19,427
Recovered	16,441
Under/(Over) Recovery	2,986
Total Prior Period Adjustment	3

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

58.13 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 has also worked out the impact of positive FCAs not recovered by the Petitioner from life line consumers. The Authority also considered the relevant clauses of the S.R.O. 189 (1)/2015 dated March 05, 2015 issued by GoP and the amount of subsidy claims filed by the Petitioner for the FY 2019-20.

58.14 After considering all the aforementioned factors, the Authority observed that the Petitioner has retained a net amount of Rs.1,253 million on account of negative FCA for the FY 2019-20, pertaining to the lifeline consumers, domestic consumers (consuming up-to 300 units) and Agriculture Consumers, which is still lying with the Petitioner. The

Authority also considered the amount of subsidy claims filed by the Petitioner for the FY 2019-20, which shows a net subsidy claim filed by the Petitioner.

58.15 The Authority in view of the above and in line with its earlier decisions, has decided not to adjust the impact of negative FCA across different consumer categories. Thus, the net negative FCA amount pertaining to the lifeline consumers, domestic consumers (consuming up-to 300 units) and Agriculture Consumers for the FY 2019-20 i.e. Rs.1,253 million, which is still lying with the Petitioner, must be adjusted by the Federal Government, against the overall Tariff Differential Subsidy claim in the matter of the Petitioner eventually reducing GOP's overall Tariff Differential Subsidy burden. The above working has been carried out based on the data/ information provided by PITC, as DISCOs have not submitted the required information. In case DISCOs own calculations are different from the aforementioned numbers, keeping in view the last slab benefits etc., the same may be shared with the Authority in its subsequent adjustment request. This decision of the Authority is only applicable under a subsidy regime, whereby aforementioned classes of consumers are receiving subsidy directly in their base tariff.

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

59 <u>Whether the requested T&D loss targets stated in the instant MYT Petition are justified?</u>

59.1 The Petitioner in its MYT petition submitted that GEPCO will reduce T&D losses from 9.51% in FY 2019-20 to 9.0% by FY 2024-25. The year wise projected reduction in Technical Losses as provided by Petitioner is given below:

Year	2019-20 (Actual)	2020-21	2021-22	2022-23	2023-24	2024-25
T&D Losses	9.51%	9.41%	9.31%	9.21%	9.11%	9.00%

59.2 The Petitioner provided the following detailed breakup regarding projected losses:

Year	Units Purchased (GWh)	Units Sold (GWh)	Units Lost (GWh)	T&D (%)	Breakup of T&D Losses %		Breakup of Technical Losses%		
					Technical	Administrative	132 kV	11 kV	L.T
2019-20 (Actual)	10,991	9,946	1,045	9.51	9.51	-	1.10	5.27	3.14
2020-21	11,875	10,758	1,118	9.41	9.41	-	1.09	5.22	3.10
2021-22	12,455	11,296	1,159	9.31	9.31	-	1.08	5.16	3.07
2022-23	13,064	11,860	1,204	9.21	9.21	-	1.07	5.11	3.03
2023-24	13,702	12,453	1,249	9.11	9.11	-	1.05	5.05	3.00
2024-25	14,370	13,076	1,294	9.00	9.00	-	1.09	4.99	2.97

NEPRA AUTHORITY
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

59.3 Further, GEPCO in its Petition has stated that as per directions given by the Authority it has carried out the losses study from the third party and the same has been completed. The summary of losses as per independent assessment is given below:

Description	Transmission Losses 132 kV	11 kV Losses	Distribution Transformer Losses	LT Line Losses	Total Technical Losses
Third Party Assessed Losses	2.06 %	4.21 %	1.13 %	3.18 %	**10.58 %**

59.4 GEPCO also submitted historical record of its actual losses for last five years as under:

Financial Year	T&D Actual Losses
2014-15	10.72 %
2015-16	10.58 %
2016-17	10.23 %
2017-18	10.01 %
2018-19	9.87 %
2019-20	9.51 %

59.5 GEPCO has claimed following line losses during the hearing dated 4-8-2021:

Years	Units Purchased (GWh)	Units sold (GWh)	Units Lost (GWh)	Line Losses (%)
2020-21(Actual)	12,032	10,922	1,110	9.23
2021-22	12,533	11,468	1,065	8.50
2022-23	13,146	12,041	1,105	8.40
2023-24	13,788	12,643	1,145	8.30
2024-25	14,463	13,277	1,186	8.20

59.6 GEPCO submitted following T&D losses in its DIIP:

Year	2019-20 (Actual)	2020-21	2021-22	2022-23	2023-24	2024-25
T&D Losses	9.51 %	9.23 %	9.20 %	9.10 %	9.00 %	8.90 %

59.7 GEPCO claimed that in order to achieve the T&D losses targets, GEPCO has prepared DIIP which includes formation of new grids, conversion of existing grids, revamping of secondary transmission lines, augmentation of HT & LT lines, provision of T&P items, induction of low loss transformers, theft detection by enforcement agencies and replacement of meters, with static meters and upgrade to Automated Meter Reading (AMR). The summary of proposed additions as provided by petitioner in Optimally Achievable Case is given below:

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Description	No.	MVA	kMs
New Grid Stations	5	400	-
Conversions	-	-	-
Augmentation	33	222	-
Extension T/F Bay	10	451	-
Extension L/Bay	18	-	-
Capacitor Banks (132 kV)	-	211.2 MVAR	-
L.T Capacitors	250	-	-
New 132 kV T/Lines	-	-	204.16
Rehabilitation/up gradation of existing 132 kV Lines	-	-	163.48
Reconductoring/Re-routing of existing 132 kV Line	-	-	304.8
New HT Lines	25	-	75
HT Line reconductoring	-	-	378
HT Line bifurcation	-	-	442
HT Line Re-routing	-	-	59
11 kV Capacitors	30	-	
New LT Lines	120	-	70
LT Line Reconductoring	-	-	621
Length of new LT Lines	-	-	1288
Replacement of over loaded dist. transformers	1585	-	-
Replacement of Defective Transformers	3666	-	-
New Distribution Transformers	2500	-	-

59.8 Moreover, GEPCO vide letter dated 11-01-2021 submitted the revised T&D losses aligned with the DIIP (prepared for optimally achievable case) for the period from FY 2020-21 to FY 2024-25 for consideration of the Authority. The final figures of T&D losses targets along with their bi-furcation as submitted by GEPCO vide above referred letter are given below:

S. #	Description	3rd Party Study	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-24
1	Total 132 kV Transmission Loss (%)	2.06	1.24	1.10	0.96	0.95	0.94	0.93	0.92
2	11kV Losses (%)	4.21	4.27	4.16	4.09	4.09	4.05	4.00	3.95
3	Distribution Transformers Losses (%)	1.13	1.14	1.11	1.10	1.09	1.08	1.07	1.06
4	LT Line Losses (%)	3.18	3.22	3.14	3.08	3.07	3.03	3.00	2.97
5	Total Distribution Loss %	8.52	8.63	8.41	8.27	8.25	8.16	8.07	7.98
T&D Losses %		10.58	9.87	9.51	9.23	9.20	9.10	9.00	8.90

59.9 The petitioner also provided the following segregation of its revised T&D losses:

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Transmission Losses at 132kV (%)	0.96	0.95	0.94	0.93	0.92
11kV Network Losses (%)	5.19	5.18	5.13	5.07	5.01
LT Losses (%)	3.08	3.07	3.03	3.00	2.97
Total Technical Losses (%)	**9.23**	**9.20**	**9.10**	**9.00**	**8.90**
Energy Balances					
Units Received (GWh)	12032	12455	13064	13702	14370
Units Sold (GWh)	10922	11309	11875	12469	13091
Units Lost (GWh)	1110	1146	1189	1233	1279

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

Period	Actual Losses %	Notified Losses %	Breach %	Impact of Breach Rs. mln	Impact of Notified Rs. mln	Impact of Actual Rs. mln
FY 2016	10.6	10.0	0.6	585	9,731	10,317
FY 2017	10.2	10.0	0.3	289	11,094	11,383
FY 2018	10.0	10.0	0.0	24	12,185	12,209
FY 2019	9.9	10.0	-0.2	(265)	16,612	16,347
FY 2020	9.5	10.0	-0.5	(880)	16,977	16,097

60 Transmission Losses pertaining to Instant MYT Control Period:

60.1 It is noted that GEPCO requested following transmission losses for MYT control period:

Description	2020-21	2021-22	2022-23	2023-24	2024-25
Transmission Losses at 132kV	0.96 %	0.95 %	0.94 %	0.93 %	0.92 %

60.2 It is also noted that GEPCO's requested transmission losses as mentioned above are much lower than its transmission losses of 2.064% as assessed by the third party consultant. In this regard, it is important to mention here that GEPCO submitted its third party transmission loss study conducted by M/s Power Planner International (PPI) during the proceedings of the Re-Determination for FY 2015-16. For that tariff period i.e. FY 2015-16, the petitioner requested 1.51% transmission losses on actual basis which was allowed in the Authority's earlier determinations pertaining to FY 2015-16, FY 2016-17 and FY 2017-18 being lower than third party assessed transmission losses accordingly. It is also important to mention here 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 pertaining to FY 2011-12 which are tabulated as under:

Sr. #	Description	As on 30th June, 2013
1	Grid Stations (Nos.)	49
2	Transmission line length (kMs)	2478

60.3 It is 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.*"

60.4 It is evident from the available record that GEPCO requested transmission losses of 1.24% for FY 2018-19 and FY 2019-20 on actual basis which were allowed by the Authority being lower than the results of third party study and achieved by GEPCO as a result of implementation of the following additions in GEPCO's transmission networks (132kV and 66kV) as recommended earlier by the third party consultant in last few years:

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

60.5 For the purpose of instant MYT petition and in order to set a starting point with respect to GEPCO's transmission network losses, the Authority noted that since the requested transmission losses of 0.96% for FY 2020-21 are much lower than the third party's assessment, therefore the same margin is allowed to GEPCO for the first year of MYT control period i.e. FY 2020-21. For rest of the four years of MYT control period, the requested margin of reduction in transmission network losses is allowed to GEPCO as per following:

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Allowed Transmission Losses	0.96 %	0.95 %	0.94 %	0.93 %	0.92 %

61 <u>Distribution Losses at 11kV Level pertaining to Instant MYT Control Period:</u>

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

2020-21	2021-22	2022-23	2023-24	2024-25
5.19 %	5.18 %	5.13 %	5.07 %	5.01 %

61.2 While considering the above distribution losses at 11kV level, it is noted that the above requested losses are lower than the losses of 5.34% assessed in the distribution loss study conducted by third party consultant i.e. M/s PPI. The Authority in view of the fact that since the requested 11kV network losses as mentioned above are lower than the losses assessed through the third party consultant, has decided to allow the requested margin of 11kV network losses to GEPCO as per following:

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Allowed Losses at 11kV	5.19 %	5.18 %	5.13 %	5.07 %	5.01 %

62 **Distribution Losses at LT Level pertaining to Instant MYT Control Period:**

62.1 It is noted that for the purpose of instant MYT petition, GEPCO requested following losses for its LT networks:

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

2020-21	2021-22	2022-23	2023-24	2024-25
3.08 %	3.07 %	3.03 %	3.00 %	2.97 %

62.2 While considering the above requested LT network losses, it is noted that these losses are lower than the losses of 3.18% assessed in the distribution loss study conducted by third party consultant i.e. M/s PPI. The Authority therefore in view of the fact that since the requested LT network losses as mentioned above are lower than the losses assessed through the third party consultant has decided to allow the requested margin of LT network losses to GEPCO as per following:

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Allowed LT Losses	3.08 %	3.07 %	3.03 %	3.00 %	2.97 %

63 <u>ALLOWED LEVEL OF T&D LOSSES PERTAINING TO INSTANT MYT PERIOD:</u>

63.1 The summary of the allowed level of T&D losses for GEPCO for the MYT period is as under:

Year	Transmission Losses (%)	11kV Distribution Losses (%)	LT Network Losses (%)	Total T&D Losses (%)
2020-21	0.96	5.19	3.08	**9.23**
2021-22	0.95	5.18	3.07	**9.20**
2022-23	0.94	5.13	3.03	**9.10**
2023-24	0.93	5.07	3.00	**9.00**
2024-25	0.92	5.01	2.97	**8.90**

64 <u>What steps were taken by GEPCO to bring down T&D losses? Whether a detailed plan in this regard was furnished?</u>

64.1 The Authority in the previous tariff determination directed the Petitioner to provide the details of steps taken by GEPCO to bring down T&D losses and furnished a detailed plan to NEPRA in this regard.

64.2 The Petitioner during the hearing submitted that the expected load growth of GEPCO is approximate 5% and accordingly the line losses will exponentially increase due to rise in the load demand. The proposed CAPEX will cater to this increase in line losses due to load demand and will also reduce the existing level of line losses. Furthermore, GEPCO has already reduced its line losses from 11% to 9.23% from 2014 to 2021, and further an ambitious target of 8.50% is being projected subject to investments allowed and completion of works.

64.3 The Authority has considered the submissions of GEPCO and is of the firm opinion that GEPCO should plan and take measures in parallel to load growth such as up-gradation and augmentation of power transformers, conversion of grid stations from low voltage to high voltage levels and regular maintenance of existing distribution network etc. GEPCO should carry out an analysis which indicates the amount of investment vs 1% loss reduction by clearly mentioning to scope of work. As per international best practices, GEPCO's target should be 5% to 6%.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

65 **<u>What are the remedial measures taken by GEPCO for the achievement of performance standards as laid down in NEPRA Performance Standards?</u>**

65.1 The Authority in the previous tariff determination directed the Petitioner to submit the details of remedial measures taken by GEPCO for the achievement of performance standards as laid down in NEPRA Performance Standards.

65.2 The Petitioner during the hearing submitted the following:

- Company has carried out the maintenance program of the 11KV & LT Distribution system.
- Old, deteriorated conductors have been replaced and 428km 11KV Line added and 75Km of LT line have been added
- Customer complaint management system (CCMS) has been introduced to redress and resolve customer complaints related to supply.
- By adopting the CCMS and establishment of Customer Complaint Redressal Centre 118, it became possible to resolve the supply-related complaints in the minimum time to improve the SAIFI & SAIDI parameters.
- Rehabilitation of 60 No. 11KV feeders has been proposed for the year 2021-22.
- 2000 No. LT proposals have been proposed for the year 2021-22.
- 4118 No. Distribution transformers have been installed against the overloaded and augmentation cases.

Description	2017-18	2018-19	2019-20
SAIFI (Nos)	30.97	27.13	25.64
SAIDI (minutes)	53.67	45.19	42.4
Fatal Accidents	29	12	8
Actual T&D Losses (%)	10.01	9.87	9.51
Average Daily Load Shedding (hours)	11.00	0.50	0
Recovery (%)	97.00	98.00	94.36
New Connection Profile	18.79	21.90	22.9

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

65.3 The Authority has considered the submissions of GEPCO and is of the view that GEPCO has submitted the measures being taken by it to achieve the Performance Standards (Distribution) Rules 2005, however, it has not fully achieved. The figures related to SAIFI and SAIDI also need to be verified as it seems away from ground realities. GEPCO has submitted that its SAIFI is 25.64 which means that averagely GEPCO's each consumer experienced only 25 interruptions in whole year of 2019-20, which is far away from ground facts. The performance of GEPCO in terms of new connections has also declined. GEPCO has claimed that there is zero load shedding in its service territory which also needs to be checked as some time media reports are in contradiction to GEPCO's claims. Therefore, GEPCO is directed to review and resubmit the same in the light of said comments for consideration of the Authority.

66 **Whether GEPCO has provided at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005.**

66.1 The Authority in the previous tariff determination directed the Petitioner to provide at least 95% of new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005.

66.2 The Petitioner during the hearing submitted that GEPCO is already providing new connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005. Further, Total 216,378 new connections were installed during FY 2020-21.

66.3 The Authority has considered the submissions of GEPCO and is of the opinion that GEPCO has only submitted the number of installed connections, however, it has not given the total number of applied connections through which it can be assessed that whether GEPCO provided 95% of applied connections or otherwise. This indicates that GEPCO has failed to provide the actual picture, and has failed to provide at least 95% of new connections to its eligible consumers within the time frame as specified in Performance Standards (Distribution) Rules, 2005. Therefore, GEPCO is strictly directed to clear all pending connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005 and submit a detailed compliance report to NEPRA on a monthly basis.

67 **Provide a project-wise detailed report for the investment carried out along with their impacts on system improvement.**

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

68.1 The Petitioner submitted that it has fully utilized the investments allowed previously in FY 2018-19 and FY 2019-20 as against NEPRA allowed of 5,295 Million & 5,500 Million GEPCO made actual investment of 5,295 Million & 6,749 Million respectively. The head wise details of investment utilization as provided by Petitioner are given below:

47. (Million Rs.)

Description	2017-18	2018-19	2019-20
DOP	245	265	450
ELR	410	587	520
STG – Own	1,338	1,163	1,688
STG – ADB	287	339	30
ERP	3	86	285
Customer Facilitation Program	-	-	507
Deposit Works	1,960	2,855	3,269
Total	**4,243**	**5,295**	**6,749**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

68.2 Further, GEPCO has submitted following details/benefits achieved through investments:

Description	Unit	2017-18	2018-19	2019-20

NEPRA Loss Target	%	10.03	10.03	10.03
Actual Loss	%	10.01	9.87	9.51
Savings Achieved (%)	%	0.02	0.16	0.52
Units Purchased	GWh	10,987	11,100	10,991
Savings Achieved (Units)	GWh	2.20	17.76	57.15
Average Sale Rate (NEPRA)	Rs./KWh	10.40	13.24	14.73
Savings Achieved (Financial Terms)	Rs. Million	23	235	842
Fatal Accidents	Nos.	19	12	8
SAIFI	Nos.	30.97	27.13	25.64
SAIDI	Mins.	53.67	45.19	42.4
Aggregate Savings of Rs.1,629 Million from 2017-18 to 2020-21				

68.3 The above information submitted by the petitioner has been reviewed and it is observed that GEPCO has made actual investments amounting to Rs.5,295 million (against allowed investment of same amount) for FY 2018-19 and Rs.6,749 million (against allowed investment of Rs. 5,500 million) for FY 2019-20. The above actual investments have also been verified from the audited accounts pertaining to FY 2018-19 and FY 2019-20 as provided by GEPCO.

68.4 The Authority has considered the submissions of GEPCO and noted that GEPCO's submissions are not in line with the issue framed. GEPCO has not submitted the project wise detailed report for investment carried out.

68.5 GEPCO should also have provided detail of each & every project, investment made and impacts on system improvements due to execution of these projects in terms of reliability & quality of power supply, customer satisfaction, and safety of public and its properties. Therefore, GEPCO is directed to submit the same for consideration of the Authority.

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

69.1 The Authority in the previous tariff determination directed the Petitioner to submit the progress regarding the installation of AMI/AMR meters at the consumer end.

69.2 The Petitioner during the hearing submitted that GEPCO has planned to install AMI meters against all its Tube Wells and Industrial connections in the first phase. The plan for installation of AMR meters for FY 2021-22 with cost of Rs. 2030 Million approved by BOD GEPCO.

69.3 The Authority has considered the submissions of GEPCO and is of the considered opinion that GEPCO should also plan to install AMR meters for residential and commercial consumers in order to improve reliability & quality of power supply and to improve system efficiency. GEPCO is directed to submit a plan to NEPRA for the installation of AMR meters at least on PMT level in its service territory along with cost incurred and specified timelines.

70 <u>Progress of installation of ABC cable to control theft of electricity, which causes the increase in transmission and distribution losses.</u>

70.1 The Authority in the previous tariff determination directed the Petitioner to submit the progress pertaining to installation of ABC cable to control theft of electricity, which causes the increase in transmission and distribution losses.

70.2 The Petitioner during the hearing submitted that there is no installation of ABC cable in the GEPCO distribution system.

70.3 The Authority has considered the submissions of GEPCO and is of the opinion that this issue may be discussed in detail with GEPCO for getting clarification about the quantum of theft of power and power reliability & quality issues in its service territory. GEPCO should better explain whether there is need of ABC for its LT distribution system or otherwise. Therefore, GEPCO is directed to submit detailed response along with reasoning behind such non-installation of ABC Cable and non-adoption of latest technology.

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

71.1 The Authority in the previous tariff determination directed the Petitioner to Provide details of preventive measures taken during FY 2020-21 to cater to the safety incidents?

71.2 The Petitioner during the hearing submitted that following preventive measures have been taken during FY 2020-21 to cater for the Safety incidents:

- PPE/T&P has been provided to each & every working LM
- Each & every LM is well trained from RTC / CTC
- GEPCO Safety Directorate persistently conducting scheduled PPE/T&P parades & Safety awareness lectures (161 parades during FY 2020-21)
- Surprise visits of complaint centers
- Surprise visits of morning assemblies
- Appreciation letters for line staff members working according to safety SOPs
- Disciplinary actions recommended for line staff members not working according to safety SOPs
- Removal of safety hazards (226 No. costing Rs. 96 Million)
- Publications & distribution of safety posters, booklets, flexes, etc.
- Procurement of PPE/T&P items (Rs. 163 Million FY 2019-20 & Rs. 175 Million FY 2020-21)
- Public awareness campaign for saving precious public lives through print and electronic media and announcements in MASAJIDS.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

71.3 The Authority has considered the submissions of GEPCO and is of the view that the data shows the decrease in number of fatal accidents during last three years, however, GEPCO should take more efforts to achieve zero fatality target.

72 <u>What is the load shedding criteria of GEPCO to meet the load demand?</u>

73 <u>Whether load shedding policy on the basis of high AT&C losses being implemented in GEPCO jurisdiction? GEPCO is required to submit details in this regard.</u>

73.1 The Authority in the previous tariff determination directed the Petitioner to submit the load shedding criteria to meet the load demand and load shedding policy on the basis of high AT&C losses being implemented in GEPCO.

73.2 The Petitioner during the hearing submitted that GEPCO is carrying out load shedding on the basis of AT&C losses based criteria. The same is as follows:

Losses	Load Shedding
0 -10%	00 Hours
10-20%	00 Hours
20-30%	02 Hours
30-40%	04 Hours
40-60%	08 Hours
60-80%	12 Hours
Above 80%	16 Hours

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

73.3 However, 908 feeders out of 910 are exempted from load shedding as they fall in first two categories, therefore, there is no load shedding in GEPCO.

73.4 The Authority has considered the submissions of GEPCO and is of the considered opinion that although as per GEPCO claim, there is no load shedding in GEPCO, but the criteria submitted by GEPCO is not in accordance with Performance Standards (Distribution) Rules 2005. NEPRA never recognizes the same as it creates discrimination among the consumers. If needed, load shedding only to be carried out in accordance with Rule 4 (f) of Performance Standard (Distribution) Rules, 2005.

74 <u>What steps were taken to control the theft of electricity?</u>

74.1 The Authority in the previous tariff determination directed the Petitioner to provide the details of the steps taken to control the theft of electricity.

74.2 The Petitioner during the hearing submitted the following:

- that proper surveillance of the field to arrest the theft of energy has been carried out and 5,081 & 2,535 No. FIRs during FY 2019-20 & 2020-21 respectively have been registered against the culprits.
- Immediate replacement of defective energy meters.
- Replacement of mechanical/old sluggish meters with new healthy and more accurate digital meters.
- Proper securing of Distribution system i.e., Transformers, meters, etc.

74.3 The Authority has considered the submissions of GEPCO and is of the opinion that as per details submitted by GEPCO, there is an element of theft in GEPCO areas. GEPCO should submit facts and figures indicating the losses in terms of theft only so that NEPRA may direct GEPCO to adopt ABC cabling option in high theft areas. Moreover, GEPCO should have submitted the number of replaced defective/mechanical/old sluggish meters and its impact on administrative losses, so that an assessment could be made. Therefore, GEPCO is directed to submit same in this regard, for consideration of the Authority.

75 **Why GEPCO did not submit its five years IGTDP/DIIP plans as per requirements under Para 23 of NEPRA Consumer End Tariff Methodology for approval of the Authority prior to file the instant MYT petition? GEPCO is required to submit IGTDP/DIIP plans on prescribed formats immediately to avoid further delays in its MYT determination.**

75.1 GEPCO, vide its letter dated 07-09-2021 submitted the following five years Distribution Integrated Investment Plan (DIIP) under Optimally Achievable Case:

Mln. Rs.

Investment Head	2020-21	2021-22	2022-23	2023-24	2024-25	Total
STG (Own Source & ADB Loan)	1,732	2,199	2,150	2,270	2,400	10,751
ELR	550	600	700	700	700	3,250
DOP	276	280	280	280	280	1396
ERP	185	186	55	30	30	486
Vehicles, T&P and New Office Building	325	621	400	295	245	1886
AMR and IT Center	36	590	610	570	610	2416
HR Improvements	14	21	60	15	10	120
MIS Improvements	270	186	55	56	40	607
Sub Total / Own Resources	**3,388**	**4,683**	**4,310**	**4,216**	**4,315**	**20,912**
Consumer Contribution	2,450	2,600	2,650	2,700	2,750	13,150
Grand Total	**5,838**	**7,283**	**6,960**	**6,916**	**7,065**	**34,062**

75.2 GEPCO submitted the following funding arrangements required to undertake the aforementioned investment plans under Optimally Achievable Case:

Mln. Rs.

Description	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Own Resources	3,388	4,683	4,310	4,216	4,315	20,912
Consumer Contribution	2,450	2,600	2,650	2,700	2,750	13,150
Total	5,838	7,283	6,960	6,916	7,065	34,062

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

75.3 In order to arrive an informed decision on the investments claimed by GEPCO for its five years tariff control period, the Authority desired the petitioner to present its investment plan before the Authority. Accordingly, GEPCO team presented its investment plan on 16-2-2022. The petitioner apprised the Authority that GEPCO has signed Strategic Roadmap with Ministry of Energy (Power Division) which will require changes in its already submitted investment plan, therefore, the Authority is requested to have a reopener in respect of revised Investment Plan (STG Projects & Projects agreed per Strategic Roadmap).

75.4 Keeping in view the above submission of GEPCO regarding opener in investment plan to accommodate the projects as per Strategic Roadmap, the Authority provided seven (07) days' time to GEPCO to revise its investment plan (if required) keeping in view the commitments of Strategic Roadmap. Subsequently, GEPCO submitted its revised investment plan vide letter dated 23-02-2022. The basis of revision made by GEPCO are hereunder:

i. Transmission System Expansion Plan (TSEP) of NTDC, currently under development phase in coordination with GEPCO and other XW-DISCOs. Noting that the said under development TSEP, essentially being an integrated plan, has direct bearing on Transmission Plans (132 KV STG Projects) of GEPCO and vice versa the Transmission Plans of GEPCO have direct impact on meaningful TSEP for congestion free dispersal of IGCEP capacities up to the user loads.

ii. As per Strategic Roadmap (2021-22 – 2025-26) agreed by GEPCO BOD & Management with Ministry of Energy (Power Division), Government of Pakistan, GEPCO has pledged installation of 113,000 AMI based meters at (Above 25 KW load) industrial, commercial and tube-well consumers by end of FY 2024-25; compared to 35,000 meters as per submitted DIIP during the same time period.

iii. As per the said Strategic Roadmap, GEPCO has also committed to install SCADA Phase-4 at its 132 KV transmission network.

75.5 The updated/revised investment submitted by GEPCO is given below:

(Mln. Rs.)

Sr. #	Item	2021	2022	2023	2024	2025	Total
A	STG	1,732	2,199	4,439	6,591	5,971	20,932
B	DOP	460	533	712	712	856	3,273
C	AMR/AMI (DOP)	-	288	900	843	-	2,031
D	ELR	550	600	700	700	700	3,250
E	Deposit Works	2,450	2,600	2,650	2,700	2,750	13,150
F	SCADA	-	-	158	420	473	1,051
G	ERP	185	186	55	30	30	486
H	Customer Facilitation	177	350	250	270	280	1,327
Total	5,554	6,756	9,864	12,266	11,060	45,500	

75.6 Further, the petitioner submitted comparison of costs (cost differential) between earlier submitted case and revised case as follows:

Mln. Rs.

Sr. #	Item	2021	2022	2023	2024	2025	Total
A	STG	-	-	2,289	4,321	3,571	10,181
B	AMR/AMI (DOP)	-	-	612	555	(144)	1,023
C	SCADA	-	-	158	420	473	1,051
	Total	-	-	3,059	5,296	3,900	12,255

75.7 GEPCO provided following summary of projects to be executed under the head of STG as per revised submissions. The project wise details are given at **Annex-A**:

Sr. #	Item	Unit	2021	2022	2023	2024	2025	Total
i	New Grids	No.	0	1	2	5	6	14
ii	Augmentation	No.	3	12	12	5	7	39
iii	Extension	No.	1	3	8	9	3	24
iv	New T/Ls	No.	3	5	2	7	11	28
v	T/Ls Re-conductoring	No.	3	4	5	3	1	16
vi	Line Bays	No.	3	1	4	16	22	46
vii	Capacitors	MVAR	5	10	11	19	15	60

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

75.8 The Petitioner provided following tangible benefits which it intends to achieve through revised STG projects:

i. Alignment with latest Demand Forecast of GEPCO, IGCEP and TSEP.

ii. Compliance to the Grid Code and avoiding penalties for non-compliance:

Description	Contingency Condition	Grid Code Reference
Power Transformer (Loading)	N-0 = 100% ; N-1 = 110%	TPCS 4.1.4
Transmission Line (Loading)	N-0 = 100% ; N-1 = 100%	TPCS 4.1.4
Voltage Limits	N-0 = +/- 5% ; N-1 = +/- 10%	TPCS 4.2.3
Frequency Limits (Hz)	N-0 = 49.8 ~ 50.2 ; N-1 = 49.4 ~ 50.5	TPCS 4.4
Power Factor	0.95 (At connection Point)	TPCS 4.7

iii. Extended system / network outreach.

iv. Assured system reliability and constraint free dispersal of electric power.

v. Capably meeting the customer (including BPCs) needs:

Year	Purchase (GWh)	Sold (GWh)	Growth (%) in purchases
2019-20	10,991	9,946	Base
2020-21	11,875	10,758	8.0
2021-22	12,455	11,296	4.9
2022-23	13,064	11,860	4.9
2023-24	13,702	12,453	4.9
2024-25	14,370	13,076	4.9

vi. Incremental revenue due to additional sales and service:

Year	Purchase	T&D Loss (MYT Target)		T&D Loss (Load Based)		Difference	Value @ Rs.15/kWh
	GWh	%	GWh	%	GWh	GWh	M PKR
2019-20	10,991	9.51%	1,045	9.51%	1,045	-	-
2020-21	11,875	9.41%	1,117	10.27%	1,220	102	1,532
2021-22	12,455	9.31%	1,160	10.77%	1,341	182	2,728
2022-23	13,064	9.22%	1,205	11.30%	1,476	272	4,076
2023-24	13,702	9.12%	1,250	11.85%	1,624	374	5,611
2024-25	14,370	9.00%	1,293	12.43%	1,786	493	7,393
	76,457		7,070		8,492	1,423	21,340

vii. Avoiding possible Liquidated Damages due to performance failures as per Interconnection Agreements with BPCs and embedded generators.

viii. Complying with Market Code / CTBCM requirements.

ix. Removal of hazards and ensuring safety of personnel, public and property.

x. Reduction in T&D Losses: Petitioner claimed that it in order to limit the losses up to 8.9% it will require above claimed investment. Further, petitioner claimed that with zero investment scenario its losses will swell up to 12.43%. The detailed working provided by petitioner is tabulated below:

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Year	As per submitted MYT 2020-21 to 2024-25					%Loss Target as per Strategic Roadmap	Medium Term Load Forecast (PMS) for the period 2020-21 to 2030-31					
	Energy Purchased (GWh)	Energy Sold (GWh)	Energy Lost (GWh)	Growth Rate as per MYT %	Impact of growth on % Loss (with zero investment)		Max. Demand (MW)	Energy Sent out at 132 kV (GWh)	Energy Sale (GWh)	T&D Loss (GWh)	%T&D Loss	Growth Rate (%)
2019-20	10,991	9,946	1,045				2,344	10,991	9,946	1,045	9.51	
2020-21	11,875	10,758	1,117	8	10.27	9.23	2,605	12,032	10,922	1,110	9.23	9.5
2021-22	12,455	11,296	1,159	5	10.77	9.2	2,739	12,682	11,514	1,168	9.21	5.4
2022-23	13,064	11,860	1,204	5	11.3	9.1	2,880	13,417	12,196	1,221	9.1	5.9
2023-24	13,702	12,453	1,249	5	11.85	9	3,045	14,177	12,901	1,276	9	5.8
2024-25	14,370	13,076	1,294	5	12.43	8.9	3,218	14,972	13,639	1,333	8.9	5.7

75.9 In addition to above, GEPCO submitted following details of strategic roadmap signed by GEPCO with MoE;

Strategic Action	Measurement Mode	2021	2022	2023	2024	2025
SCADA Phase 4 roll-out at 132kV voltage level	SCADA implemented	Phase-1	Phase-2	Phase-3	Phase-3	
Technical Control of network through AMI deployment	Phase 1 = Feasibility & roadmap completed	15000	50000	47000		
	Phase 2 = Progressive implementation					
Business process automation through Enterprise Resource Planning		Will be completed				
GIS mapping of network	Phase 1 = HT mapping	100%	-	-	-	-
	Phase 2 = LT mapping		30%	40%	30%	-

75.10 As per requirement under Para 23 of NEPRA's Consumer-end Tariff Methodology Guidelines, 2015, GEPCO was required to provide its investment plans for next 5-years under MTY regime. It is noted that, under Optimally Achievable Case, GEPCO is required to prepare its investment plans which are foreseen to represent the minimum requirement to meet the performance targets determined by the Authority.

75.11 Pursuant to above requirements, GEPCO, in the first instance, submitted a 5-years investment plan amounting to Rs.34,062 million which has accordingly been revised on the directions of the Authority amounting to Rs.45,500 million against following heads:

(Million Rs.)

Sr. #	Item	2021	2022	2023	2024	2025	Total
A	STG	1,732	2,199	4,439	6,591	5,971	**20,932**
B	DOP	460	533	712	712	856	**3,273**
C	AMR/AMI (DOP)	-	288	900	843	-	**2,031**
D	ELR	550	600	700	700	700	**3,250**
E	Deposit Works	2,450	2,600	2,650	2,700	2,750	**13,150**
F	SCADA	-	-	158	420	473	**1,051**
G	ERP	185	186	55	30	30	**486**
H	Customer Facilitation	177	350	250	270	280	**1,327**
Total		5,554	6,756	9,864	12,266	11,060	**45,500**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

76 Observations on Strategy Adopted for Preparation of Investment Plans:

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

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

Description	Unit	Quantity
Grid Stations		
132 kV Grid Stations	No.	59
66 kV Grid Stations	No.	01
33 kV Grid Stations	No.	NIL
132 kV Consumer Owned Grid Stations	No.	NIL
Power Transformers	No.	174
Capacity of Power Transformers	MVA	5111
Transmission Lines (132 kV & 66 kV)		
Total Length of 132kV Transmission Lines	KM	2611
Total Length of 66kV Transmission Lines	KM	179
Total Length of 33kV Transmission Lines	KM	NIL
Distribution System		
11 kV Feeders	No.	910
Total Length of 11 kV Lines	KM	24659
Total Length of LT Lines	KM	18456
Distribution Transformers	No.	76125
Capacity of Distribution Transformers	KVA	4745000
Existing HT / LT Ratio	Ratio	1.34
Average Length of 11kV Feeder	KM	27.1

Constraints in Existing System of GEPCO:

Description	Unit	Quantity
Overloaded Power Transformers	No.	34
Overloaded 11 kV Feeders	No.	106
Overloaded Distribution Transformers	No.	1883

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

(Million Rs.)

Description	2015-16	2016-17	2017-18	2018-19	2019-20	Total
STG	1,542	1,953	1,083	1,322	1,645	**7,545**
DOP	270	288	273	830	1,650	**3,311**
ELR	368	522	368	552	644	2,454

Others	2,291	2,039	2,520	2,591	2,810	**12,251**
Total	**4,471**	**4,802**	**4,244**	**5,295**	**6,749**	**25,561**

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

(Million Rs.)

Description	2015-16	2016-17	2017-18	2018-19	2019-20	TOTAL
Requested	5,644	4,040	3,518	4,525	6,629	**24,356**
Allowed	2,892	2,775	3,200	5,295	5,500	**19,662**
Actual	2,892	2,775	1,617	5,295	6,749	**19,328**
Excess/(Less)	-	-	(1,583)	-	1,249	**(334)**
%age	100.00	100.00	50.53	100.00	122.71	**98.30**

76.4 From above, it is observed that during last 5-years, GEPCO has utilized 100% of the allowed investment in FY 2015-16, FY 2016-17 and FY 2018-19 whereas, it has spent 122.71% of the allowed investment i.e. Rs. 6,749 million in FY 2019-20 over the last five years period.

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

(Million Rs.)

Description	Requested under Optimal Case	Allowed Investments
STG	20,932	**20,932**
DOP	3,273	**3,273**
AMR/AMI (DOP)	2,031	**2,031**
ELR	3,250	**3,250**
Deposit Works	13,150	**13,150**
SCADA	1,051	**1,051**
ERP	486	**486**
Customer Facilitation	1,327	**1,327**
TOTAL	45,500	**45,500**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

Total MVA Addition at New 132 kV Grids:	1036 MVA
MVA Addition through Augmentation:	549 MVA
MVA Addition through Extension of Transformer Bays:	653 MVA
MVA Addition through Extension of Line Bays:	1073 MVA
New Transmission Lines at 132kV:	204 kMs
New HT (11 kV) Lines:	954 kMs

New LT (415/230 V) Overhead Lines: 1979 kMs
New Distribution Transformers Addition: 8226 Nos.

76.7 Based on the above, a year-wise detail of the allowed investments under Optimally Achievable Case are tabulated hereunder. Further, detailed scope of work under each head of Investment allowed by the Authority is attached as **Annex-A.**

(Million Rs.)

Sr. #	Item	2021	2022	2023	2024	2025	Total
A	STG	1,732	2,199	4,439	6,591	5,971	20,932
B	DOP	460	533	712	712	856	3,273
C	AMR/AMI (DOP)	-	288	900	843	-	2,031
D	ELR	550	600	700	700	700	3,250
E	Deposit Works	2,450	2,600	2,650	2,700	2,750	13,150
F	SCADA	-	-	158	420	473	1,051
G	ERP	185	186	55	30	30	486
H	Customer Facilitation	177	350	250	270	280	1,327
Total		5,554	6,756	9,864	12,266	11,060	45,500

76.8 In order to examine the investments made by GEPCO viz-a-viz the amount allowed and the yearly targets, the Authority has decided to carryout quarterly monitoring of the allowed investments.

76.9 The Authority also directs GEPCO to prioritize its investments claimed under STG, DOP and ELR etc. In this respect, removal of system constraints for transferring power from NTDC system must be the first priority, followed by reduction in T&D losses and improvement in metering systems through ELR and overloaded grids and 11kV feeders. The main components would include STG, DOP, ELR and Commercial Improvement.

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

77. <u>Order</u>

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

Distribution of Power (DOP)

Description	Unit	FY 2020-21 DOP	FY 2021-22 DOP	FY 2022-23 DOP
Units Received	[MkWh]	11,438	11,438	12,820
Units Sold	[MkWh]	10,383	10,386	11,653
Units Lost	[MkWh]	1,056	1,052	1,167
Allowed T&D Losses	[%]	9.23%	9.20%	9.10%
Investment	[Mln. Rs.]	5,554	6,756	9,864
Pay & Allowances		5,836	7,145	7,917
Post Retirement Benefits		7,885	8,953	9,848
Repair & Maintainance		694	782	849
Traveling allowance		251	283	307
Vehicle maintenance		313	353	383
Other expenses		220	248	269
O&M Cost	[Mln. Rs.]	15,200	17,764	19,574
Depriciation		2,367	2,554	2,791
RORB		2,606	2,883	3,266
O.Income		(744)	(774)	(774)
Margin	[Mln. Rs.]	19,428	22,426	24,857
Average Tariff	[Rs./kWh]	1.87	2.16	2.13

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

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

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

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

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

Description	For 132 kV only	For 11 kV only	For both 132kV & 11 kV
Asset Allocation	36.67%	37.68%	74.35%
Level of Losses	0.94%	5.29%	6.18%
UoSC Rs./kWh	0.74	0.82	1.60

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

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

77.6 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;

77.7 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

77.8 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.

77.9 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.

78 <u>Summary of Direction</u>

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

i. To complete tagging of its assets by December 31, 2022.

ii. To capitalize the cost of meters instead of expensing out.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

iii. To restrain from unlawful utilization of receipts against deposit works & security deposits, and to give clear disclosures in its Financial Statements with respect to the consumer financed spares and stores, work in progress and cash & bank balance.

iv. To provide its working regarding under/(over) recovery of quarterly adjustments along-with break-up of units sold for each category for the period from FY 2019-20 till FY 2021-22, for consideration of the Authority.

v. To submit the details of remedial measures taken by GEPCO for the achievement of performance standards as laid down in NEPRA Performance Standards.

vi. To clear all pending connections to its eligible consumers as specified in the Consumer Eligibility Criteria and Performance Standard Distribution Rules, 2005 and submit a detailed compliance report to NEPRA on a monthly basis.

vii. To provided detail of each & every project, investment made and impacts on system improvements due to execution of these projects in terms of reliability & quality of power supply, customer satisfaction, and safety of public and its properties

viii. To submit a plan to NEPRA for the installation of AMR meters at least on PMT level in its service territory along with cost incurred and specified timelines.

ix. To submit detailed response along with reasoning behind for non-installation of ABC Cable and non-adoption of latest technology.

x. To submit the load shedding criteria to meet the load demand and load shedding policy on the basis of high AT&C losses being implemented in GEPCO.

xi. To provide the details of the steps taken to control the theft of electricity.

xii. To make all necessary efforts to carry out its proposed investment plans under Optimally Achievable Case so that MYT regime proves to be a success.

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

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

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

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

xviii. The DISCO through Market Implementation & Regulatory Affairs Department (MIRAD) shall prepare and develop the medium-term demand forecast, transmission plans and business plan for submission of the same to the Authority.

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

xx. MIRAD shall be adequately staffed at all times as per the approved organochart for effective and efficient performance of its functions. MIRAD shall develop the dashboard for effective monitoring and reporting of above plans. The CEO along with the functional in-charge of each department will be responsible for presenting the above mentioned progress to the Authority and also submit the monthly, quarterly and annual progress reports in the matter.

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

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

xxiii. STG and HT connectivity proposals should be reflective of the new grid stations as planned and approved under TSEP.

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

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

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

79 The determination of the Authority along-with Annexure-A & B, 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.

AUTHORITY

Rafique Ahmed Shaikh Member 2/6/22	Engr. Maqsood Anwar Khan Member

Tauseef H. Farooqi
Chairman

(X) My additional note is attached herewith.

2/6/22

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
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Additional Note:

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

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

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

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

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

2/6/22

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
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Annexure-A

Revised scope of STG Projects for 2022-23 to 2024-25

A. New Grids

Sr#	Name of Grid Station	Scope	Year of Implementation
1	132 kV Daulat Nagar	2 x 31.5/40	**2021-22**
2	City Housing Gujranwala	2 x 31.5/40	2022-23
3	Wando	2 x 31.5/40	
4	G.T Road Gujranwala	2 x 31.5/40	2023-24
5	Garden Town	2 x 31.5/40	
6	Sialkot bypaas, Gujranwala	2 x 31.5/40	
7	Ahmed Nagar	2 x 31.5/40	
8	Sialkot Road Wazirabad	2 x 31.5/40	
9	Daska Industrial II	2 x 31.5/40	2024-25
10	Badiana	2 x 31.5/40	
11	Gondalawala	2 x 31.5/40	
12	Essa	2 x 20/26	
13	Chak Shahbaz	2 x 20/26	
14	Mandi Bahaudin II	2 x 20/26	

B. Augmentation of Power Transformers:

Sr#	Name of Grid Station	Scope	Year
1	132 KV Therisansi T-2	Augmentation of 26MVA with 40MVA Power Transformer	2020-21
2	132 KV Sukheki Mandi T-3	Augmentation of 13MVA with 26MVA Power Transformer	
3	132KV Pasrur Rd GujranwalaT-2	Augmentation of 26MVA with 40MVA Power Transformer	
4	132KV Daska Industrial T-3	Augmentation of 26 MVA with 40MVA Power Transformer	2021-22
5	132KV Eminabad Grid Station	Augmentation of 26 MVA with 40MVA Power Transformer	
6	132KV Q.D Singh T-4	Augmentation of 13MVA with 40MVA Power Transformer	
7	132KV Kot Agha T-1	Augmentation of 13MVA with 26 MVA Power Transformer	
8	132KV Pasrur Road Sialkot	Augmentation of 26MVA with 40MVA Power Transformer	
9	132KV Cantt Sialkot-T2	Augmentation of 26MVA with 40MVA Power Transformer	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

-61-

Annexure-A

10	132KV Zafarwal T-2	Augmentation of 13MVA with 26 MVA Power Transformer	
11	132KV Grid station Kamoki T-2	Augmentation of 26MVA with 40MVA Power Transformer	
12	132 KV Gujrat-I T-2	Augmentation of 26MVA with 40 MVA Power Transformer	
13	132 KV Hafizabad Road Grw T-3	Augmentation of 26MVA with 40 MVA Power Transformer	
14	132 KV Cantt Grw T-1	Augmentation of 26MVA with 40 MVA Power Transformer	
15	132 KV Chianwali T-1	Augmentation of 26MVA with 40 MVA Power Transformer	
16	Cantt Sialkot	T-2 20/26 to 40 MVA	2022-23
17	P.Rd Sialkot	T-3 20/26 to 40 MVA	
18	Eminabad	T-1 20/26 to 40 MVA	
19	Gujrat-1	T-3 20/26 to 40 MVA	
20	Gujrat-2	T-2 20/26 to 40 MVA	
21	Pasrur Road Gujranwala	T-2 20/26 to 40 MVA	
22	Lalamusa	T-1 20/26 to 40 MVA	
23	Qilla Deedar Singh	T-3 10/13 to 26 MVA	
24	Kot Agha	T-1 10/13 to 26 MVA	
25	Sukheki	T-3 10/13 to 26 MVA	
26	Kharian	T-2 20/26 to 40 MVA	
27	Eminabad	T-2 20/26 to 40 MVA	
28	Cantt Gujranwala	T-1 20/26 to 40 MVA	2023-24
29	Hafizabad Road GWL	T-3 20/26 to 40 MVA	
30	Hafizabad Old	T-3 13 to 40 MVA	
31	Shakar Garh	T-2 20/26 to 40 MVA	
32	Sukheki	T-2 14.8 to 26 MVA	
33	Fateh Pur	T-1 20/26 to 40 MVA	2024-25
34	M. B. Din	T-2 20/26 to 40 MVA	
35	Aroop	T-1 20/26 to 40 MVA	
36	Aroop	T-4 20/26 to 40	
37	Mangowal	T-2 13 to 26 MVA	
38	New Sialkot	T-4 20/26 to 40 MVA	
39	Wazirabad	T-1 20/26 to 40 MVA	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Annexure-A

C. Addition of Power Transformers:

SR#	Name of Grid Station	Scope	Year
1	132 KV Jalalpur Jattan	Addition of 26 MVA Power Transformer	2020-21
2	132KV Lala Musa	Addition of 26 MVA Power Transformer	2021-22
3	132 KV Phalia	Addition of 26 MVA Power Transformer	
4	132 KV City Sialkot	Addition of 26 MVA Power Transformer	
5	Cantt Sialkot	T-4 40 MVA	2022-23
6	Fatehpur	T-4 26 MVA	
7	Kamoke	T-4 40 MVA	
8	Narowal	T-4 26 MVA	
9	Chianwali	T-4 40 MVA	
10	Zafarwal	T-4 26 MVA	
11	Shaheenabad, Gujranwala	T-5 26 MVA	
12	Siranwali	T-4 37.5 MVA	
13	Ghuinki	T-4 26 MVA	2023-24
14	P.Rd Sialkot	T-4 40MVA	
15	Jalalpur Bhattian	T-4 26 MVA	
16	Kolo Tarar	T-5 13 MVA	
17	Lalamusa	T-4 26 MVA	
18	N Vikran	T-4 26 MVA	
19	Pasrur	T-4 26 MVA	
20	Thera Sansi	T-4 40 MVA	
21	Head Rasool	T-2 13 MVA	
22	Helan	T-4 13 MVA	2024-25
23	Phalia	T-3 13 MVA	
24	Sambrial	T-4 26 MVA	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Annexure-A

D. New Transmission Lines:

Sr#	Name & Description	Length (Km)	Circuit Type	Year
1	In & Out of 132KV T/Line Lala Musa-J.P Jattan at proposed 132KV Daulat Nagar G/S	D/C	10KM	2020-21
2	In & Out of 132KV T/Line BaddoMalhi-K.S.K at proposed 132KV Wahndo G/S	D/C	16KM	
3	In & Out of 132KV T/Line Gakhar-Fateh Pur at proposed 132KV Ahmad Nagar G/S	D/C	8.16KM	
4	In & Out of 132KV T/Line Narowal-Zafarwal at proposed 132KV Essa G/S	D/C	13KM	2021-22
5	In & Out of 132KV T/Line Wazirabad-Sambrial at proposed 132KV Jaora G/S	D/C	12KM	
6	In & Out of 132 KV T/Line Kolo tarar_J.P.NAU at proposed 132 KV Vanikey Tarar G/S.	D/C	12.5KM	
7	In & Out of 132 KV T/Line Chianwali – Therisansi at proposed 132 KV City Housing Grw G/S.	D/C	1.5KM	
8	In & Out of 132KV T/Line Gakhar_Fateh Pur at proposed 132KV Gondlan Wala G/S	D/C	1KM	
9	132kV In/Out T/L for City Housing, Gujranwala G/S from Chianwali to Theri Sansi T/L	1	DC	2022-23
10	132kV In/Out T/L for Wando G/S from K.S.K to Badomali T/L	23	DC	
11	132kV D/C T/L for G.T. Road from Gujranwala G/S	3	DC	2023-24
12	132kV In/Out T/L for Garden Town G/S from Ghakkar to Aroop T/L	2.5	DC	
13	132kV In/Out T/L for Sialkot Bypass G/S from Nandipur to Aroop T/L	3	DC	
14	132kV In/Out T/L for Ahmed Nagar G/S from Gakhar to Fatehpur T/L	10	DC	
15	132kV In/Out T/L for SKT Rd Wazirabad G/S from Wazirabad to Sambrial T/L	2	DC	
16	132kV In/Out T/L for H.Faqiran G/S from Malikwal to Khutila Shaikhan T/L	24	DC	
17	132kV In/Out T/L for New Gujrat G/S from M.B.Din to Helan T/L	35	DC	
18	132kV In/Out T/L for Gondalwala G/S from Gakhar to Hafizabad Road T/L	3	DC	2024-25

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

-64-

Annexure-A

19	132kV In/Out T/L for Essa G/S from Narowal to Shakar Garh T/L	5	DC	
20	132kV In/Out T/L for Essa G/S from Narowal to Zafarwal T/L	13.28	DC	
21	132kV In/Out T/L for Chak Shahbaz G/S from Malikwal to Bhalwal T/L	7	DC	
22	132kV In/Out T/L for Mandi Bahauddin - II G/S from Mandi Bahauddin to New Gujrat T/L	7	DC	
23	132kV In/Out T/L for Gujranwala - II G/S from Eminabad to Their Sansi T/L	7.75	DC	
24	132 kV In/Out T/L for Gujranwala - II G/S from Pasrur Rd to Sheranwala Bagh T/L	11.75	DC	
25	132 kV In/Out T/L for Gujranwala - II G/S from Pasrur Rd to Lahore Road T/L	9.5	DC	
26	132 kV S/C T/L from Gujranwala - II to Wando G/S	15	SDT	
27	132 kV In/Out T/L for Daska Industrial II G/S from Ghakkar to Daska Industrial T/L	5	DC	
28	132 kV In/Out T/L for Badiana G/S from P. Road Sialkot to Lalapur T/L	7	DC	

E. Reconductoring of Transmission Lines:

Sr#	Name & Description	Length (KM)	Circuit Type	Year
1	132KV T/Line Kotli Loharan to Cantt Skt (Lynx to Rail)	D/C	16.47KM	2020-21
2	132KV D/C from 220KV KSK to Narang (Lynx to Rail)	D/C	34.79KM	
3	132KV T/Line LalaMusa-Gujrat-1 (Lynx to Rail)	D/C	48.69 KM	
4	132KV T/Line Ghakhar-HafizAbad Road GRW (Lynx to Rail)	D/C	17KM	2021-22
5	132KV T/Line Sahowala -- Kotli Loharan (Lynx to Rail)	S/C	30KM	
6	132KV T/Line Cantt Grw-College Road Grw(Lynx to Rail)	D/C	19KM	
7	132KV D/C from 132KV G/S Narang to Badhomalhi (Lynx to Rail)	D/C	33KM	
8	Recondoctoring of 132kV S/C T/L fromSahuwala to SP Road G/S	25	S/C	2022-23
9	Recondoctoring of 132kV S/C T/L from Nokharto QD Singh G/S	10	S/C	
10	Recondoctoring of 132kV S/C T/L from Lalamusto J.P.Jattan G/S	28	S/C	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Annexure-A

11	Recondoctoring of remaining 132kV S/C T/Lfrom K.S.K to Badomali G/S	56	S/C	
12	Recondoctoring of 132kV S/C T/L from K.S.K toNarang to Narowal G/S	89	S/C	
13	Recondoctoring of 132kV S/C T/L fromWazirabad to Sambrial G/S	22	S/C	
14	Recondoctoring of 132kV S/C T/L fromSahuwala to K-Loharan G/S (T-off at Godhpur)	29	S/C	2023-24
15	Recondoctoring of 132kV S/C T/L fromSahuwala to K-Loharan G/S (Direct)	20	S/C	
16	Reconductoring of remaining 132kV S/C T/Lfrom Gakhar to Hafizabad Road G/S	20	S/C	2024-25

A. **Addition of Line Bays**

Sr. No.	Name of Grid Station	No. of Line Bays to be added	Remarks
1	Kotli Loharan	1	
2	Awan Sharif	1	2020-21
3	Cantt Skt	1	
4	Gujrat-1	1	2021-22
5	City Housing Gujranwala	2	2022-23
6	Wando	2	
7	G.T Road Gujranwala	2	
8	Gujranwala	2	
9	Garden Town	2	
10	Sialkot bypaas, Gujranwala	2	2023-24
11	Ahmad Nagar	2	
12	Skt Rd Wazirabad	2	
13	Head Faqiran	2	
14	New Gujrat	2	
15	Gondalawala	2	
16	Essa	4	
17	Chak Shahbaz	2	
18	Mandi Bahaudin-II	2	2024-25
19	Daska Industrial II	2	
20	Badiana	2	
21	Gujranwala II	7	
22	Wando	1	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Annexure-A

B. Detail of Capacitors:

Sr. #	Name of Grid Station	Scope	Proposed Year of Completion
1	Narowal	1 x 2.4 MVAR	2020-21
2	Hellan	1 x 2.4 MVAR	
3	Zafarwal	1 x 2.4 MVAR	
4	Therisansi	1 x 2.4 MVAR	
5	Sukheki Mandi	1 x 3.6 MVAR	
6	Pasrur road Gujranwala	1 x 2.4 MVAR	2021-22
7	Daska Industrial	1 x 2.4 MVAR	
8	Eminabad Grid Station	1 x 2.4 MVAR	
9	Q.D Singh	1 x 6.0 MVAR	
10	Kot Agha	1 x 3.6 MVAR	
11	Pasrur Road Sialkot	1 x 2.4 MVAR	
12	Cantt Sialkot	1 x 2.4 MVAR	
13	Zafarwal	1 x 3.6 MVAR	
14	Kamoki	1 x 2.4 MVAR	
15	Gujrat-I	1 x 3.6 MVAR	
16	City Housing Gujranwala	2 x 9.6 MVAR	2022-23
17	Wando	2 x 9.6 MVAR	
18	Cantt Sialkot	1 x 9.6 MVAR	
19	Fatehpur	1 x 7.2 MVAR	
20	Kamoke	1 x 9.6 MVAR	
21	Narowal	1 x 7.2 MVAR	
22	Chianwali	1 x 9.6 MVAR	
23	Zafarwal	1 x 7.2 MVAR	
24	Shaheenabad	1 x 7.2 MVAR	
25	G.T Road Gujranwala	2 x 9.6 MVAR	2023-24
26	Garden Town	2 x 9.6 MVAR	
27	Sialkot bypaas, Gujranwala	2 x 9.6 MVAR	
28	Ahmad Nagar	2 x 9.6 MVAR	
29	Skt Rd Wazirabad	2 x 9.6 MVAR	
30	Ghuinki	1 x 7.2 MVAR	
31	P.Rd Sialkot	1 x 9.6 MVAR	
32	jalalpur Bhattian	1 x 7.2 MVAR	
33	Kolo Tarrar	1 x 4.8 MVAR	2023-24
34	Lalamusa	1 x 7.2 MVAR	
35	N/Virkan	1 x 7.2 MVAR	
36	Pasrur	1 x 7.2 MVAR	
37	Theri Sansi	1 x 9.6 MVAR	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Annexure-A

38	66 kV Head Rasool	1 x 4.8 MVAR	
39	Gondalawala	2 x 9.6 MVAR	2024-25
40	Essa	2 x 7.2 MVAR	
41	Chak Shahbaz	2 x 7.2 MVAR	
42	Mandi Bahaudin-II	2 x 7.2 MVAR	
43	Daska Industrial II	2 x 9.6 MVAR	
44	Badiana	2 x 9.6 MVAR	
45	Helan	1 x 4.8 MVAR	
46	Phalia	1 x 4.8 MVAR	
47	Sambrial	1 x 7.2 MVAR	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

Annexure-A

A. Distribution of Power (DOP):

Sr. No.	Description	Unit	Quantities					
			2020-21	2021-22	2022-23	2023-24	2024-25	Total
Scope of Work for 11 kV and Below Expansion								
1	**New HT Lines**							
	Number of proposals	Nos.	5	5	5	5	5	25
	Length of new HT line	Km	15	15	15	15	15	75
2	**Transformers**							
	50 KVA	Nos.	0	0	0	0	0	0
	100 KVA	Nos.	0	0	0	0	0	0
	200 KVA	Nos.	95	95	95	95	95	475
	others KVA	Nos.	0	0	0	0	0	0
	Sub Total	Nos.	95	95	95	95	95	475
3	**11 KV Capacitors**							
	a. Fixed 450 KVAR	Nos.	6	6	6	6	6	30
	b. Fixed 900 KVAR	Nos.	-	-	-	-	-	-
	c. Others	Nos.	-	-	-	-	-	-
	Sub Total	Nos.	6	6	6	6	6	30
4	**11 KV Panel**	Nos.	3	3	3	3	3	15
Scope of Work for LT Expansion								
1	**New LT Lines**							
	Number of proposals	Nos.	240	240	240	240	240	1200
	Length of new LT line	Km	14	14	14	14	14	70
2	**LT Capacitors**							
	a. Different KVARs	Nos.	-	-	-	-	-	-

C. DOP Cost: **(Million Rs.)**

Sr. No.	Description	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**H.T Expansion Cost**						
	New H.T Lines	40.31	35	35	35	35	180.31
	HT line Reconductoring	33.63	30	30	30	30	153.63
	Transformers	126.52	130	130	130	130	646.52
	Capacitors	0.9	0.9	0.9	0.9	0.9	4.5
	11 KV Panel	4.5	4.5	4.5	4.5	4.5	22.5
2	**L.T Expansion Cost**						
	new LT line	17.6	20	20	20	20	97.6
	Total	**223.46**	**220.4**	**220.4**	**220.4**	**220.4**	**1105.06**
3	Contract Charges (9.135%)	20.41	20.13	20.13	20.13	20.13	100.95
4	Installation Charges (8%)	17.88	17.63	17.63	17.63	17.63	88.40

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Math.

-69-

Annexure-A

5	Less Dismantlement (-)	2.35	2.35	2.35	2.35	2.35	11.75
6	Others	16.50	24.25	24.25	24.25	24.50	113.50
7	**Grand Total**	**275.90**	**280.07**	**280.07**	**280.07**	**280.32**	**1396.16**

D. Vehicles / T&P / New Office & Building Cost for DOP: **(Million Rs.)**

Description		2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**Vehicles**						
	GEPCO Transport	0	330	180	75	25	**610**
	Light Vehicles	141	0	0	0	0	**141**
	MIRAD	0	71	0	0	0	**71**
2	**T&P**	58.93	111.58	86.85	90.5	127.53	**475.39**
3	**New Office & Building**	125.1	108	133.1	129.5	92.5	**588.2**
Total		**325.03**	**620.58**	**399.95**	**295.00**	**245.03**	**1885.56**

B. Energy Loss Reduction (ELR):

Scope of Work for 11 kV and Below Rehabilitation		unit	2020-21	2021-22	2022-23	2023-24	2024-25	Total
1	**Rehabilitation of HT Lines**							
	Number of proposals	Nos.	15	17	20	20	20	92
	Bifurcation	km	62	80	100	100	100	442
	Reconductoring	Km	58	80	80	80	80	378
	Rerouting	Km	12	11	12	12	12	59
2	**Replacement of Overloaded T/Fs**							
	a. 50 KVA	Nos.	40	70	70	70	70	320
	b. 100 KVA	Nos.	120	170	170	170	170	800
	c. 200 KVA	Nos.	25	40	50	50	50	215
	d. others	Nos.	0	0	0	0	0	0
	Sub Total	Nos.	185	350	350	350	350	1585
3	**Replacement of Defective/Burned**							
	a. 50 KVA	Nos.	160	200	200	200	200	960
	b. 100 KVA	Nos.	280	350	350	350	350	1680
	c. 200 KVA	Nos.	186	210	210	210	210	1026
	d. others	Nos.	0	0	0	0	0	0
	Sub Total	Nos.	626	760	760	760	760	3666
4	**Replacement of 11 kV Panels**	Nos.	10	10	10	10	10	50
5	**11 kV Capacitor**							
	a. Fixed 450 KVAR	Nos.	50	50	50	50	50	250

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY

-70-

Annexure-A

	b. Fixed 900 KVAR	Nos.	-	-	-	-	-	-
	c. Others	Nos.	-	-	-	-	-	-
	Sub Total	Nos.	50	50	50	50	50	250
B. Scope of Work for LT Rehabilitation								
1	**LT Lines Rehabilitation**							
	No. of Proposals	Nos.	650	700	800	800	800	3750
	New LT Line	Km	78	250	320	320	320	1288
	Reconductoring of LT Line	Km	61	140	140	140	140	621
2	**Transformers**							
	a. 50 KVA	Nos.	150	150	150	150	150	750
	b. 100 KVA	Nos.	300	300	300	300	300	1500
	c. 200 KVA	Nos.	50	50	50	50	50	250
	d. others	Nos.	0	0	0	0	0	0
	Sub Total	Nos.	500	500	500	500	500	2500
3	**L.T Capacitors**							
	Different kVARs	Nos.	50	50	50	50	50	250
4	**GIS Mapping**							
	No of Feeders	Nos.	136	708				910
	Length of Feeders	Km	3617	19248				24660
	No of LT Lines	Nos.	50	50	50	50	50	250
	Length of LT Line	Km	1150	1150	1150	1150	1150	5750
	GIS Mapping Software Licenses	Nos.	1	1	1	1	1	5
	GIS Hardware devices	Nos.	1	1	1	1	1	5

E. ELR Cost: **(Million Rs.)**

Scope of Work for 11 kV and Below Rehabilitation		**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**Total**
1	**H.T Lines**						
	Bifurcation	63.5	70.5	80.39	80.39	80.39	375.17
	Reconductoring	54.01	60.5	68.59	68.59	68.59	320.28
	Rerouting	8.1	10.29	10.29	10.29	10.29	49.26
2	**Augmentation**						
	a. 50 KVA	10.1	10.1	12.83	12.83	12.83	58.69
	b. 100 KVA	33.1	33.1	42.04	42.04	42.04	192.32
	c. 200 KVA	15.2	15.2	19.30	19.30	19.30	88.3
3	**Addition**						
	a. 50 KVA	25.8	32.77	32.77	32.77	32.77	156.88
	b. 100 KVA	52.1	66.17	66.17	66.17	66.17	316.78

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

-71-

Annexure-A

	c. 200 KVA	80.2	90	101.85	101.85	101.85	475.75
	Sub Total						0
4	**Replacement of 11 kV Panels**	15	19.05	19.05	19.05	19.05	91.2
5	**11 kV Capacitor**	6.67	8.47	8.47	8.47	8.47	40.55
6	**L.T Lines**						
	New LT Line	87	90	110.49	110.49	110.49	508.47
	Reconductoring of LT Line	21.1	26.8	26.8	26.8	26.8	128.3
7	**Capacitors**						
	Different kVARs	0.34	0.34	0.34	0.34	0.34	1.7
	Sub total	**472.22**	**533.29**	**599.38**	**599.38**	**599.38**	**2803.65**
8	Contract Charges (9.135%)	43.14	48.72	54.75	54.75	54.75	256.11
9	Installation Charges (8%)	37.78	42.66	47.95	47.95	47.95	224.29
10	Less Dismantlement (-)	21.3	35.41	35.41	35.41	35.41	162.94
11	Others	18.7	10.51	33.4	33.4	33.4	129.41
12	**Grand Total**	**550.53**	**599.77**	**700.07**	**700.07**	**700.07**	**3250.53**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

Annex-B

HSE Objectives/Targets

Definition

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

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

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

HSE Objectives/Targets

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

-73-

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

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

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