



# GUJRANWALA ELECTRIC POWER COMPANY LIMITED

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ROAD GUJRANWALA

No. MIRAD/ 282-88

Dated 27 / 01 / 2023.

The Registrar,  
National Electric Power Regulatory Authority (NEPRA),  
NEPRA Tower, Attaturk Avenue (East), G5/1,  
Islamabad.

Subject: PETITION FOR DETERMINATION OF USE OF SYSTEM CHARGES (UoSC).

In pursuance of Regulation 7 of NEPRA Open Access (Interconnection and Wheeling of Electric Power) Regulations, 2022 whereby, a distribution company shall prepare and submit a separate petition to the honorable Authority for determination of its use of system charges; we are pleased to submit attached herewith Use of System Charges for kind consideration and approval of Authority. It may kindly be noted that the instant petition includes Cost of Service Study of GEPCO (FY 2022-23) as Annex-2, thereto forming fundamental basis for the instant petition.

For any clarification or additional information or any other matter relating to the said petition Mr. Irfan Rafique (Director General MIRAD) GEPCO (0318-3991820, email: [gepco.dgmirad@gmail.com](mailto:gepco.dgmirad@gmail.com)) is designated as focal person.

## TARIFF (DEPARTMENT)

Dir (T-I)..... Dir (T-II).....  
Dir (T-III)..... Dir (T-IV).....  
Dir (T-V)..... Addl. Dir (RE).....  
Date: 08-02-2023

CHIEF EXECUTIVE OFFICER  
GEPCO GUJRANWALA

DA/ as above.

Copy to :-

1. DG MIRAD, GEPCO Gujranwala for information.
2. Chief Financial Officer, GEPCO Gujranwala for information.
3. General Manager (Technical) GEPCO Gujranwala for information.
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For info and further n/a pl.	
1 DG (M&E)	2 DG (Licencing)
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9 LA	10 ALA
10 Consultant	12 Consultant
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By No. 1434  
Dated: 7-2-2023

For info and further n/a pl.

1 DG (Lic)
2 Master File
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CC: 1 Chairman  
2 Member (Lic)

Tariff Division Record

By No. 924  
Dated: 9-2-23

FY 2022-23

# Petition for Determination of Use of System Charges FY 2022-23



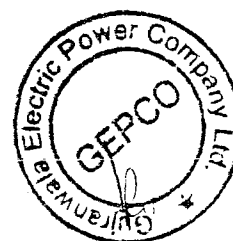
**Providing Power for Progress and Prosperity**

January 27, 2023

**GUJRANWALA ELECTRIC POWER COMPANY LIMITED**

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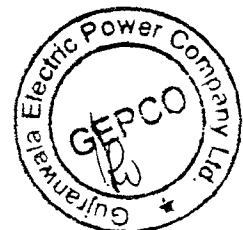
## **Gujranwala Electric Power Company (GEPCO) Ltd.**

### **Background**

As a result of restructuring of Gujranwala Electric Power Company (GEPCO) was incorporated on 25<sup>th</sup> April 1998 and obtained certificate for commencement of business on 5<sup>th</sup> June, 1998. The GEPCO is responsible for the electricity delivery to over 4.3 million consumers of seven civil districts of Gujranwala and Gujrat Divisions (Gujranwala, Gujrat, Sialkot, Narowal, Hafizabad, Mandi Bahauddin and Wazirabad), Pakistan as set out in GEPCO's Distribution License no. 04/DL/2002, granted by NEPRA under the NEPRA Act on April 23, 2002. The company started its actual commercial operations, as GEPCO, effective from July 1, 1998. The Company is headed by a Chief Executive Officer (CEO) and GEPCO Board of Directors.

Under the provisions of Regulation of Generation, Transmission & Distribution of Electric Power (Amendment) Act, 2018, GEPCO is deemed to hold a license for supply of electric power to perform the function of sale of electric power in addition to existing licensee as Distribution Company. The Distribution function now shall, under Section 20, be limited to ownership, operation, management or control of distribution facilities for the movement or delivery to consumers of electric power. The deemed licensee status is expiring on May 01, 2023 and, accordingly, GEPCO has already submitted a petition for grant of licence for supply of electric power with the Authority.

After the approval of Competitive Trading and Bilateral Contracts Market (CTBCM) by the honorable Authority on November 12, 2020 (No. NEPRA/R/DL/LAM-01/40691-98) several implementation actions were taken. This included issuance of License for the Market Operator (MO), approval of Market Commercial Code (MCC) and promulgation of several Regulations to ensure smooth implementation of CTBCM and create balance in roles, rights and obligations of the stakeholders in the CTBCM.



## Grounds of Petition:

Pursuant to the relevant directions of National Electricity Policy (NE Policy) read with regulation 7 of NEPRA Open Access (Interconnection and Wheeling of Electric Power) Regulations, 2022 (“Open Access Regulations”), following are the grounds for petition for determination of use of system charges:

- a. In compliance with the Clause 4.4, Clause 5.5.2(f), Clause 5.5.2(g), Clause 5.5.4 and Clause 5.6.5 of NE Policy and
- b. In compliance with the regulation 7 Open Access Regulations, each distribution licensee, in consultation with the respective supplier of last resort shall, within ninety days following the date of notification of Open Access Regulation, submit separate petition to the Authority for determination of use of system charges.

## Directions in National Electricity Policy

The National Electricity Policy, 2021 issued under Section 14A of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (“The Act”) was prepared by the the Government of Pakistan for the development, reform, improvement and sustainability of the power market and power sector.

The National Electricity Policy identifies the major goals sought to be achieved for the power sector, and in this respect, provides policy directions. It also provides the key guiding principles to develop subservient frameworks that will steer the decisionmaking in the power sector to achieve identified goals.

Various sections of the said National Electricity Policy, 2021, as relevant to the instant case, are provided in the below lines.



Clause 4.4 (Financial Viability) of the National Electricity Policy provides that sustainability of the entire power sector pivots around the financial and commercial viability of its individual sub-sectors. This will be done by:

- a) *promoting investments on least cost basis balanced with development in the underserved areas;*
- b) *having cost-reflective tariffs in transmission and distribution, to the extent feasible;*
- c) *timely passing of costs to the consumers, while netting off any subsidies funded by the Government; and*
- d) *recovery of costs arising on account of open access, distributed generation, etc.*

Clause 5.5.2(f) of National Electricity Policy also provides:

*“providing a level playing field to all market participants through uniform application of cross-subsidization and other grid charges to consumers of all suppliers;*

Clause 5.5.2(g) of National Electricity Policy also provides:

*“the Government shall take a decision on the recovery of costs that arise due to advent of the open access and market liberalization;”*

Clause 5.5.4 of National Electricity Policy further directs:

*“In order to ensure implementation of wholesale market design and its further evolution, the Regulator shall in a timely manner frame, modify and evolve regulatory framework for, inter alia, supply, procurement, open access / wheeling, competitive bidding, import of power, and ensure effective market monitoring and enforcement. Provided that after implementation of CTBCM, every transmission licensee and distribution licensee shall offer, to all market participants, non-discriminatory open access / wheeling to its respective transmission or distribution system and interconnection services in accordance with CTBCM on the terms determined under the policy and legal framework.”*



**Clause 5.6.5 of National Electricity Policy stipulates:**

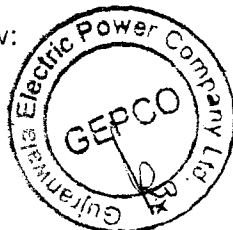
*“The Regulator, in order to ensure liquidity of the power sector, provide a level playing field for the development of wholesale market and to facilitate prudent projects of the Government, may impose additional charge(s) which shall be deemed to be costs incurred by the distribution companies / electric power supplier(s). Such additional charge may take into account the sustainability, socio-economic objectives and commercial viability of the sector, affordability for the consumers and the policy of uniform tariff. Similarly, the Government may also incorporate, in the consumer-end tariff, any surcharge imposed by it, which shall also be deemed to be cost incurred by the distribution companies / electric power supplier(s) and shall be collected by them in discharge of their public service obligations.”*

## **Legal and Regulatory Framework**

The approved design of Competitive Trading and Bilateral Contracting Market (CTBCM) provides the right of choice to the eligible Bulk Power Consumers (BPCs) to opt for any Supplier of Electric Power. The design, within the framework of the Act, also provides the concept of Competitive Supplier of electric power besides the Supplier of Last Resort, for the purposes of said right of choice to the BPCs within the said wholesale market design.

As directed in Clause 5.5.4 of the said National Electricity Policy, 2021, the honorable Authority promulgated / specified several Regulations to ensure effective implementation of the market regime in Pakistan. This included promulgation of National Electric Power Regulatory Authority Open Access (Interconnection and Wheeling of Electric Power) Regulations, 2022 (“Open Access Regulations”).

For the purpose of this petition for determination of Use of System Charges in terms of mentioned Open Access Regulations, following terms as defined in the legal and regulatory framework are reproduced as below:



As per Section 2(ii) of the Act 1997:

*"bulk-power consumer" means a consumer who purchases or receives electric power, at one premises, in an amount of one megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may specify and the Authority may specify different amounts and voltage levels and with such other characteristics for different areas"*

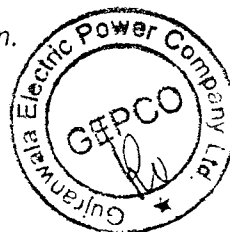
Important definitions provided in Regulation 2 of Open Access Regulations are provided below:

*2(1)(m) "open access" means the access to a network licensee's system or its associated facilities for movement and delivery of electric power, subject to the terms and conditions as provided in the Act, these regulations and use of system agreement, on non-discriminatory basis to:*

- (i) an electric power supplier for supply of electric power to its consumer(s); or*
- (ii) a captive generating plant for delivery of the electric power from generation facility to the destination of its use; or*
- (iii) any other person, including a licensee for delivery of electric power from a designated place to another designated place;*

*2(1)(n) "open access user" means any person who is availing open access under these regulations;*

*2(1)(r) "use of system charges" shall include all charges related to use of distribution system, use of transmission system, system operator services, market operator services, metering service provider services and any other charges as determined by the Authority that may arise due to advent of the open access and market liberalization.*



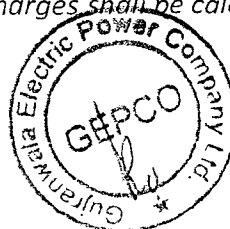


**Part-III (OPEN ACCESS) Regulation 5 (Obligation to provide open access)** of Open Access Regulations is reproduced hereunder:

- (1) *"A network licensee shall establish, operate and maintain its distribution system or transmission system, as the case may be, in a manner that ensure non-discriminatory open access in accordance with the Act, these regulations, Market Commercial Code, Grid Code, Distribution Code and other applicable documents.*
- (2) *A network licensee shall, on an annual basis, prepare an open access report demonstrating compliance with these regulations and licence terms and conditions, with the detail of its open access users, available and planned capacity, any issues identified in provision of open access, and any instances where open access was denied along with justification thereof. The said report shall also be made available on the website of the network licensee.*
- (3) *The report required under sub-regulation (2) shall be prepared and submitted to the Authority within a period of one month from the date of end of respective financial year and shall also be made available on the website of the network licensee.*
- (4) *The distribution company shall develop the use of system agreement in accordance with the minimum provisions provided in Schedule I within ninety days of the notification of these regulations and shall obtain the approval of the Authority and publish the same in its website."*

**Regulation 7 (Filing of petition and determination of use of system charges)** of Open Access Regulations provides as under:

*"Within ninety days following the date of notification of these regulations, each distribution licensee, in consultation with the respective supplier of last resort, shall prepare and submit separate petition to the Authority for determination of its use of system charges. Such petition shall be accompanied with a statement which will set out the basis upon which the use of system charges shall be calculated in such manner and with such details as shall be necessary."*



**Regulation 8 (Wheeling of electric power)** of Open Access Regulations states under:

*“An open access user shall be entitled to wheel electric power using system of network licensee subject to compliance with these regulations and the Market Commercial Code, upon coming into effect, and use of system agreement.”*

## **Technical and Financial Attributes**

Adjoining the purposes of CTBCM, directions of the National Electricity Policy, 2021 and stipulations of the legal and regulatory framework; following understandings are inferred:

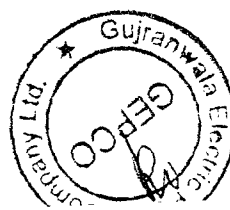
- i) The network licensee, the GEPCO for the purposes of instant petition, is obligated to provide open access, to its network, to the open access users on non-discriminatory basis.
- ii) For the said obligation, the GEPCO is entitled for recovery of use of system charges in line with use of system agreement, as determined by the honorable Authority.
- iii) The use of system charges shall include:
  - a. Transmission Use of System Charges (NTDC, PGC) irrespective of the placement of BPC and the respective generator.
  - b. System Operator Charges
  - c. Metering Service Provider Charges
  - d. Market Operator Charges
  - e. Distribution Margin Charges w.r.t. to the voltage level (132kV, 11kV etc) and consumer category wise for all possible BPCs.
  - f. Cross-Subsidy Charges (consumer category wise for all possible BPCs)
  - g. Stranded Cost/Capacity (consumer category wise for all possible BPCs)
  - h. Technical Transmission and Distribution Losses
- iv) With reference to the above elements of use of system charges, following clarification shall apply for clarity of application:



- a. Currently applicable Transmission Use of System (TUoS) Charges, as already determined by the honorable Authority, compositely represent the charges relating to Transmission Network Operator(s)/Licensee(s), System Operator and Metering Service Provider. Accordingly, the said TUoS Charges remain part of use of system charges till separate charges for each of the said service providers are separately determined by the honorable Authority.
- b. Market Operator Fee / Charges (MOF) will be recovered by Market Operator as per the mechanism provided in the Market Commercial Code. Accordingly, without prejudice to being part of Cost of Service of GEPCO, these shall not form part of use of system charges to be recovered directly by GEPCO.
- c. Cross subsidy will be assessed based on Cost of Service analysis for the applicable consumer categories of all possible BPCs, which is according to the principles of uniformity as provided in the National Electricity Policy (referred above).
- d. Subject to the decision of the Government on the recovery of costs that arise due to advent of the open access and market liberalization, the Stranded Capacity Costs will be included in the use of system charges.
- e. As the transmission and distribution losses will be charged to market participants of open access through the mechanism as explained in the Market Commercial Code, therefore, such charges shall not be levied under these use of system charges as requested under this instant petition.

Explanation:

The use of system charges will be determined in terms of metered quantities (kWh or kW), in consideration of allowed %age of losses and also that arrangements under the Market Commercial Code the parties (the BPC, Competitive Supplier and/or Generator) shall be committing to the Capacity Obligation (including all losses and reserve margin up to bus-bar) through Firm Capacity, therefore, such transmission or distribution losses, as the case may be, will not be charged separately. However, for the purposes of transparency of charges, the impact of such losses may be separately disclosed.



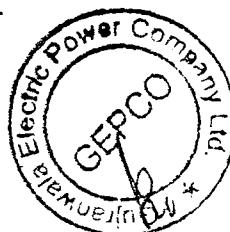
- f. The use of system charges, including the Distribution Margin Charges, as requested by GEPCO and to the extent approved by Authority, will be applicable with reference to those eligible Bulk Power Consumers (BPCs) who opt for supply from a competitive supplier, other than supplier of last resort.
- g. The use of system charges shall be with reference to the voltage level (132/66 kV, 11/33 kV) for the applicable consumer categories of all possible BPCs. The component-wise Cost of Service as per outcome detailed Cost of Service Study [Annex-2] and consequent assessment, as detailed above, of component-wise Use of System Charges for the applicable BPCs is provided at Annex – 1.
- h. Power Factor Penalty as provided in applicable documents shall remain applicable in addition to the Use of System Charges.
- i. Any taxes and surcharges as imposed by the Government shall be applicable.

Summarizing the above, following is the abstract of entitled entities for each element of the use of system charges:

Sr. No.	Use of System Charge Element	Entitled Entity
1.	Transmission Use of System Charge	NTDC and other TSPs through NTDC/NGC.
2.	System Operator Charge / Fee	System Operator through NTDC.
3.	MSP Charge / Fee	MSP through NTDC
4.	Distribution Use of System Charge	GEPCO as Distribution Licensee
5.	Cross Subsidy	GEPCO as SOLR (Supply Licensee)
6.	Stranded Capacity Costs	GEPCO as SOLR (Supply Licensee)

## Basis of Use of System Charges

The instant petition for determination of use of system charges has been developed based on Cost of Service Study (FY 2022-23) carried out by GEPCO forming integral part of this petition and provided separately as attached hereto as Annex-2.



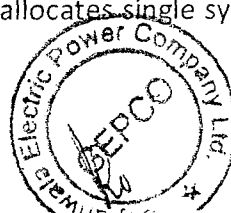
## Method for recovery of Use of System Charges

The instant petition is for determination of use of system charges for recovery of costs and charges relating to service providers (SO, TNO, TSP, DNO), stranded capacity costs and the cross-subsidy currently being contributed by the eligible BPCs. It is pertinent to mention that most, if not all, costs and charges are fixed in nature, the natural mode of recovery should be the fixed (in terms of Rs./kW/Month) charge. However, following options are available for consideration and determination:

- i) Use of system charges recovery in term of Rs./kW/Month metered shall provide guaranteed stream of revenue to cover for costs which are fixed in nature. This may, however, over burden the relevant consumers thus undermining the very purpose of CTBCM and open access regime.
- ii) Use of system charges recovery in term of Rs./kWh will render the service providers and the SOLR to face the revenue loss arising from low load factor of the eligible BPCs. On the other hand the open access users shall be benefitted for any favorable Energy or Capacity Imbalance at the Market this option may not provide a balanced approach to promised sharing of risks and rewards under CTBCM regime.
- iii) Use of system charges recovery through a hybrid approach, i.e. partly through fixed charge in terms of Rs./kW/Month (subject to minimum MDI compared to the contracted load) and partly in terms of Rs./kWh may provide a balanced plausible approach for all the involved parties. It is submitted that, in order to ensure level playing field for consumers of SOLR and Competitive Supplier, the recovery of use of system charges may have same charging mechanism.

As already mentioned, **Annex-1** to this petition also include proposed rates to be charged under each of the Three (3) options narrated above.

It is, however, noted that the methodology and process as per FACOS model, for the purpose of allocation of demand (kW or MW) related costs, allocates single system peak



demand (of GEPCO) to different categories to arrive at the allocation base. This allocation, irrespective of being rational, judicious and in line with international norms, results in less than actual (billable) MDIs of respective customers. Accordingly, taking the same MW demand as denominator for demand (MW) based rate making will result in higher per MW rates. In consideration thereof, a second proposal (Proposal-2) for arriving at demand based rates as per option (i) above, i.e. whole cost recovery in terms of Rs./kW and option (iii), hybrid partial cost recovery in terms of Rs./kW; has been developed **based on billable MDIs** of B-3 and C-2 customer categories and provided as **Annex-1A** herewith.

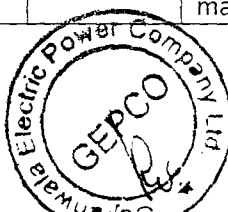
### Mechanism for Adjustment/Indexation of Use of System Charges

Each component of use of system charges detailed in the instant petition shall be subject to periodic adjustment/indexations. Whenever these components are adjusted for regulated consumers of the suppliers of last resort, at the same time, the corresponding adjustment in the relevant component of the proposed Use of System Charges for eligible BPCs shall simultaneously be made.

### Applicable Categories / Classification of eligible BPCs

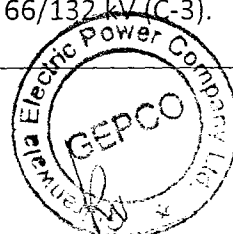
While, in terms of existing stipulation contained in the Act, a consumer who purchases or receives electric power, at one premises, in an amount of one megawatt or more is considered as Bulk Power Consumer, following position, with regard to consumer with one megawatt or more load at connection voltage 11 kV and above, is brought out for consideration:

Sr. No.	Consumption Category	Tariff Category	Voltage Level	Remarks
1.	General	A-2 & A-3	N/A	As per the existing tariffs, no kW sanctioned load quantification or connection voltage is applicable to A-2 and A-3 tariff categories. Accordingly these are not considered BPC for the purposes of this petition. However, these costumer, based on the sanctioned load, may be connected at 11 KV level, as



**GEPCO – Petition for Determination Use of System Charges (January, 2023)**

				required. Any such customer falling within the definition of BPC, and subject to the approval of the Authority, will be considered in the analogy of C2.
2.	Industrial Consumer ranging from 500 kW to 5 MW. [extendable to 7.5 MW under conditions]	B-3	11/33 kV	<p>B 3 consumer ranges from 500 kW to 5 MW.[Extendable to 7.5 MW under conditions]</p> <p>It is clarified here that the consumers of this category below 1MW shall not be treated as eligible BPCs for CTBCM. The use of system charges indicated for B-3 category will apply in case of eligible BPC.</p>
3.	Industrial	B-4	66/132 kV and above	<p>Currently there is no B-4 consumer in GEPCO Service Territory. Accordingly, the Cost of Service assessment could not be made. However, the use of system charges for B-4 category of consumers are assessed in the analogy of B-3 adjusted with differential of allowed losses at 11/33 kV (B-3) and 66/132 kV (B-4).</p>
4.	Bulk Supply Ranging from 500 kW to 5 MW. [extendable to 7.5 MW under conditions]	C-2(b)	11/33 kV	<p>Bulk Supply consumer ranges from 500 kW to 5 MW. [Extendable to 7.5 MW under conditions]</p> <p>Although the Bulk Supply C-2 customers are at 11/33 KV connection level. It is clarified here that the consumers of this category below 1MW shall not be treated as eligible BPCs for CTBCM. The use of system charges indicated for C-2 category will apply in case of BPC at one premises.</p> <p>Further, the consumers falling under the resale shall not be considered as eligible BPC.</p>
5.	Bulk Supply	C-3(b)	66 kV and above	<p>Currently there is no C-3 consumer in GEPCO Service Territory. Accordingly, the Cost of Service assessment could not be made. However, the use of system charges for C-3(b) category of consumers are assessed in the analogy of C-2(b) adjusted with differential of allowed losses at 11/33 kV (C-2) and 66/132 kV (C-3).</p>



				The consumers falling under the resale shall not be considered as eligible BPC.
6.	Housing Colonies attached to Industries	H	N/A	As per the existing tariffs, no kW sanctioned load quantification or connection voltage is applicable to H tariff category. Further, these connections are resale in nature. Accordingly these are not considered BPC for the purposes of this petition.
7.	Azad Jammu & Kashmir	K	N/A	The supply feed for AJK customer category is more than 1 MW at 11 kV level. However, the same is primarily for resale purpose, therefore, not considered as BPC.

## Other Important Aspects

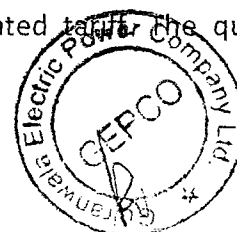
Following paragraphs of the petition highlights other important aspects which shall be taken into account while determining the said charges.

### Government Subsidies

Any subsidy provided by the Government to the industrial or any other eligible BPC, as applicable, will be dealt with according to the directions and terms and conditions thereof as decided by the Government. However, for the purposes of this petition, such subsidies are not considered.

### Captive Power Producers and Users

- (1) A captive power producer / user using the GEPCO network for wheeling of power to User destination will be considered "Market Participant" in terms of Market Commercial Code and will be dealt with accordingly. The use of system charges, except the Cross-Susidy and Stranded Capacity cost, shall fully apply.
- (2) The cases of captive generation and consumption points at the same location taking additional supply from the local supplier of last resort (SOLR) shall be considered a regulated consumer of the SOLR with applicable regulated tariffs. The quantum of





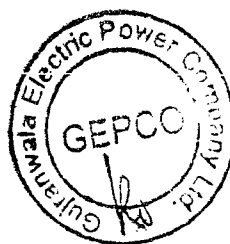
the total generation capacity charges recovered from the equally placed bulk power consumers of the suppliers of last resort either in a volumetric form (kWh) and/or through fixed charges and such charges shall continue to be paid till such time as may be decided by the Federal Government as per the National Electricity Policy.

### **Applicability of Use of System Charges on New Eligible BPCs**

The Use of System Charges provided in the instant petition shall be applicable to all such BPCs who will opt to get supply of electric power from competitive supplier including the captive generator using the network to wheel its power to the destination of its use. Such charges shall be fully applicable to any new eligible BPC or incremental consumption, obtaining supply of electric power from competitive supplier without any exception.

### **Prayer:**

In view of the above submissions, it is humbly requested that the Authority may kindly consider and determine the Use of System Charges as calculated in the attached Annex-1 and/or Annex-1A which contain detailed analysis.



**GEPCO – Petition for Determination of Use of System Charges (January, 2023) – Annex-1**

**Gujranwala Electric Power Company (GEPCO) Ltd.**

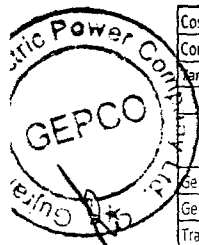
**Cost of Service & Proposed Use of System Charges  
For Possible Eligible Bulk Power Consumers (One MW or More at One Premises)  
(PROPOSAL – 1)**

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)			
Consumption Category	Industrial				Industrial				Industrial B-3 (1 MW or More)			
Tariff Category	B-3				B-3				MDI Based	Volumetric	Hybrid	
	Variable	Fixed	Total		Variable	Fixed	Total		Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh				
Generation Cost - Energy	9.514			9.514	9.032			9.032	359.82	0.582		0.582
Generation Cost - Capacity		3,862.12	6.243	6.243		3,628.45	5.865	5.865	3,628.45	5.865	1,088.54	4.106
Transmission Charges		354.50	0.573	0.573		333.05	0.538	0.538	333.05	0.538	99.92	0.377
Market Operator's Fee		1.68	0.003	0.003		1.58	0.003	0.003				
Distribution Use of System		1,260.62	2.038	2.038		1,184.35	1.915	1.915	1,184.35	1.915	355.31	1.340
<b>Total Applicable Costs</b>	<b>9.614</b>	<b>5,478.92</b>	<b>8.857</b>	<b>18.470</b>	<b>9.032</b>	<b>5,147.44</b>	<b>8.321</b>	<b>17.353</b>	<b>5,505.67</b>	<b>8.900</b>	<b>1,543.76</b>	<b>6.404</b>
Impact of allowed losses					0.082	46.75	0.081	0.163	331.48	0.536	99.44	0.375
<b>Total Cost of Service</b>	<b>9.614</b>	<b>5,478.92</b>	<b>8.857</b>	<b>18.470</b>	<b>9.614</b>	<b>5,478.92</b>	<b>8.857</b>	<b>18.470</b>	<b>5,837.15</b>	<b>9.436</b>	<b>1,643.20</b>	<b>6.780</b>
Cross Subsidy				6.273				6.373	3,342.69	5.373		5.373
<b>Average Applicable Tariff</b>				<b>24.344</b>				<b>24.344</b>	<b>9,779.84</b>	<b>15.809</b>	<b>1,643.20</b>	<b>13.153</b>

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)			
Consumption Category	Bulk Supply				Bulk Supply				Bulk Supply C-2(b) (1 MW or More)			
Tariff Category	C2(b)				C2(b)				MDI Based	Volumetric	Hybrid	
	Variable	Fixed	Total		Variable	Fixed	Total		Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh				
Generation Cost - Energy	9.614			9.614	9.032			9.032	332.11	0.582		0.582
Generation Cost - Capacity		3,362.12	6.764	6.764		3,628.45	6.355	6.355	3,628.45	6.355	1,088.54	4.448
Transmission Charges		354.50	0.621	0.621		333.05	0.583	0.583	333.05	0.583	99.92	0.408
Market Operator's Fee		1.58	0.003	0.003		1.58	0.003	0.003				
Distribution Use of System		1,220.36	2.137	2.137		1,146.52	2.008	2.008	1,146.52	2.008	343.96	1.406
<b>Total Applicable Costs</b>	<b>9.614</b>	<b>5,438.55</b>	<b>9.525</b>	<b>19.139</b>	<b>9.032</b>	<b>5,109.61</b>	<b>8.949</b>	<b>17.981</b>	<b>5,440.14</b>	<b>9.528</b>	<b>1,532.41</b>	<b>6.844</b>
Impact of allowed losses					0.582	329.04	0.576	1.158	329.04	0.576	98.71	0.40
<b>Total Cost of Service</b>	<b>9.614</b>	<b>5,438.55</b>	<b>9.525</b>	<b>19.139</b>	<b>9.614</b>	<b>5,438.65</b>	<b>9.525</b>	<b>19.139</b>	<b>5,769.19</b>	<b>10.104</b>	<b>1,631.12</b>	<b>7.247</b>
Cross Subsidy				5.758				5.758	3,287.52	5.758		5.758
<b>Average Applicable Tariff</b>				<b>24.896</b>				<b>24.896</b>	<b>9,056.71</b>	<b>15.861</b>	<b>1,631.12</b>	<b>13.005</b>

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)			
Consumption Category	Industrial				Industrial				Industrial B-4			
Tariff Category	B4				B4				MDI Based	Volumetric	Hybrid	
	Variable	Fixed	Total		Variable	Fixed	Total		Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh				
Generation Cost - Energy	9.114			9.114	9.032			9.032	50.74	0.082		0.082
Generation Cost - Capacity		3,661.41	6.412	6.412		3,628.45	6.355	6.355	3,628.45	6.355	1,088.54	4.448
Transmission Charges		336.08	0.589	0.589		333.05	0.583	0.583	333.05	0.583	99.92	0.408
Market Operator's Fee		1.59	0.003	0.003		1.58	0.003	0.003				
Distribution Use of System		1,195.11	2.026	2.026		1,184.35	2.008	2.008	1,184.35	2.008	355.31	1.406
<b>Total Applicable Costs</b>	<b>9.114</b>	<b>5,194.18</b>	<b>9.030</b>	<b>18.144</b>	<b>9.032</b>	<b>5,147.44</b>	<b>8.949</b>	<b>17.981</b>	<b>5,196.60</b>	<b>9.028</b>	<b>1,543.76</b>	<b>6.344</b>
Impact of allowed losses					0.082	46.75	0.081	0.163	46.75	0.081	14.02	0.057
<b>Total Cost of Service</b>	<b>9.114</b>	<b>5,194.18</b>	<b>9.030</b>	<b>18.144</b>	<b>9.114</b>	<b>5,194.18</b>	<b>9.030</b>	<b>18.144</b>	<b>5,243.35</b>	<b>9.109</b>	<b>1,557.78</b>	<b>6.401</b>
Cross Subsidy				6.025				6.025	3,727.21	6.025		6.025
<b>Average Applicable Tariff</b>				<b>24.169</b>				<b>24.169</b>	<b>8,970.56</b>	<b>15.134</b>	<b>1,557.78</b>	<b>12.426</b>

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)			
Consumption Category	Bulk Supply				Bulk Supply				Bulk Supply C-3(b)			
Tariff Category	C3(b)				C3(b)				MDI Based	Volumetric	Hybrid	
	Variable	Fixed	Total		Variable	Fixed	Total		Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh				
Generation Cost - Energy	9.114			9.114	9.032			9.032	46.84	0.082		0.082
Generation Cost - Capacity		3,661.41	6.412	6.412		3,628.45	6.355	6.355	3,628.45	6.355	1,088.54	4.448
Transmission Charges		336.08	0.589	0.589		333.05	0.583	0.583	333.05	0.583	99.92	0.408
Market Operator's Fee		1.59	0.003	0.003		1.58	0.003	0.003				
Distribution Use of System		1,156.94	2.026	2.026		1,146.52	2.008	2.008	1,146.52	2.008	343.96	1.406
<b>Total Applicable Costs</b>	<b>9.114</b>	<b>5,156.01</b>	<b>9.030</b>	<b>18.144</b>	<b>9.032</b>	<b>5,109.61</b>	<b>8.949</b>	<b>17.981</b>	<b>5,154.87</b>	<b>9.028</b>	<b>1,532.41</b>	<b>6.344</b>
Impact of allowed losses					0.082	46.40	0.081	0.163	46.40	0.081	13.921	0.057
<b>Total Cost of Service</b>	<b>9.114</b>	<b>5,156.01</b>	<b>9.030</b>	<b>18.144</b>	<b>9.114</b>	<b>5,156.01</b>	<b>9.030</b>	<b>18.144</b>	<b>5,201.27</b>	<b>9.109</b>	<b>1,990.20</b>	<b>8.215</b>
Cross Subsidy				6.139				6.139	3,505.10	6.139		6.139
<b>Average Applicable Tariff</b>				<b>24.283</b>				<b>24.283</b>	<b>8,706.38</b>	<b>15.248</b>	<b>1,990.20</b>	<b>14.354</b>



GEPCO – Petition for Determination of Use of System Charges (January, 2023) – Annex-1A

Gujranwala Electric Power Company (GEPCO) Ltd.

Cost of Service & Proposed Use of System Charges

For Possible Eligible Bulk Power Consumers (One MW or More at One Premises)

(PROPOSAL – 2)

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-2)			
Consumption Category	Industrial				Industrial				Industrial B-3 (1 MW or More)			
Tariff Category	B-3				B-3							
Functional Cost Element	Variable	Fixed		Total	Variable	Fixed		Total	MDI Based	Volumetric	Hybrid	
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
Generation Cost - Energy	9.614			9.614	9.032			9.032	201.75	0.582		0.582
Generation Cost - Capacity		2,165.60	6.243	6.243		2,034.58	5.865	5.865	2,034.58	5.865	610.37	4.106
Transmission Charges		198.78	0.573	0.573		186.75	0.538	0.538	186.75	0.538	56.03	0.377
Market Operator's Fee		0.94	0.003	0.003		0.88	0.003	0.003				
Distribution Use of System		706.87	2.038	2.038		664.10	1.915	1.915	664.10	1.915	199.23	1.340
Total Applicable Costs	9.614	3,072.18	8.857	18.470	9.032	2,886.31	8.321	17.353	3,087.19	8.900	865.63	6.404
Impact of allowed losses					0.582	185.37	0.538	1.117	185.37	0.538	55.75	0.375
Total Cost of Service	9.614	3,072.18	8.857	18.470	9.614	3,072.18	8.857	18.470	3,273.06	9.436	921.39	6.780
Cross Subsidy				6.373				6.373	2,210.78	6.373		6.373
Average Applicable Tariff				24.844				24.844	5,483.83	15.809	921.39	13.153

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-2)			
Consumption Category	Bulk Supply				Bulk Supply				Bulk Supply C-2(b) (1 MW or More)			
Tariff Category	C2(b)				C2(b)							
Functional Cost Element	Variable	Fixed		Total	Variable	Fixed		Total	MDI Based	Volumetric	Hybrid	
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
Generation Cost - Energy	9.614			9.614	9.032			9.032	240.62	0.582		0.582
Generation Cost - Capacity		2,798.15	6.764	6.764		2,628.86	6.355	6.355	2,628.86	6.355	788.66	4.448
Transmission Charges		256.84	0.621	0.621		241.30	0.583	0.583	241.30	0.583	72.39	0.408
Market Operator's Fee		1.14	0.003	0.003		1.14	0.003	0.003				
Distribution Use of System		884.16	2.137	2.137		830.67	2.008	2.008	830.67	2.008	249.20	1.406
Total Applicable Costs	9.614	3,940.29	9.525	19.139	9.032	3,701.97	8.949	17.981	3,941.44	9.528	1,110.25	6.844
Impact of allowed losses					0.582	238.40	0.576	1.158	238.40	0.576	71.52	0.40
Total Cost of Service	9.614	3,940.29	9.525	19.139	9.614	3,940.37	9.525	19.139	4,179.84	10.104	1,181.77	7.247
Cross Subsidy				5.758				5.758	2,381.85	5.758		5.758
Average Applicable Tariff				24.896				24.896	6,561.69	15.861	1,181.77	13.005

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-2)			
Consumption Category	Industrial				Industrial				Industrial B-4			
Tariff Category	B4				B4							
Functional Cost Element	Variable	Fixed		Total	Variable	Fixed		Total	MDI Based	Volumetric	Hybrid	
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
Generation Cost - Energy	9.114			9.114	9.032			9.032	28.45	0.082		0.082
Generation Cost - Capacity		2,053.05	6.412	6.412		2,034.58	5.865	5.865	2,034.58	5.865	610.37	4.106
Transmission Charges		188.45	0.589	0.589		186.75	0.538	0.538	186.75	0.538	56.03	0.377
Market Operator's Fee		0.89	0.003	0.003		0.88	0.003	0.003				
Distribution Use of System		670.13	2.026	2.026		664.10	1.915	1.915	664.10	1.915	199.23	1.340
Total Applicable Costs	9.114	2,912.52	9.030	18.144	9.032	2,886.31	8.321	17.353	2,913.88	8.400	865.63	5.905
Impact of allowed losses					0.082	26.21	0.709	0.791	26.21	0.709	7.86	0.496
Total Cost of Service	9.114	2,912.52	9.030	18.144	9.114	2,912.52	9.030	18.144	2,940.09	9.109	873.49	6.401
Cross Subsidy				6.025				6.025	2,089.95	6.025		6.025
Average Applicable Tariff				24.169				24.169	5,030.05	15.134	873.49	12.426

Cost Assessment Level	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-2)			
Consumption Category	Bulk Supply				Bulk Supply				Bulk Supply C-3(b)			
Tariff Category	C3(b)				C3(b)							
Functional Cost Element	Variable	Fixed		Total	Variable	Fixed		Total	MDI Based	Volumetric	Hybrid	
	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kWh	Rs./kW/ Month	Rs./kWh
Generation Cost - Energy	9.114			9.114	9.032			9.032	33.93	0.082		0.082
Generation Cost - Capacity		2,652.73	6.412	6.412		2,628.86	6.355	6.355	2,628.86	6.355	788.66	4.448
Transmission Charges		243.49	0.589	0.589		241.30	0.583	0.583	241.30	0.583	72.39	0.408
Market Operator's Fee		1.15	0.003	0.003		1.14	0.003	0.003				
Distribution Use of System		838.21	2.026	2.026		830.67	2.008	2.008	830.67	2.008	249.20	1.406
Total Applicable Costs	9.114	3,735.59	9.030	18.144	9.032	3,701.97	8.949	17.981	3,734.76	9.028	1,110.25	6.344
Impact of allowed losses					0.082	33.62	0.081	0.163	33.62	0.081	10.086	0.057
Total Cost of Service	9.114	3,735.59	9.030	18.144	9.114	3,735.59	9.030	18.144	3,768.38	9.109	1,441.93	8.215
Cross Subsidy				6.139				6.139	2,539.49	6.139		6.139
Average Applicable Tariff				24.283				24.283	6,307.87	15.248	1,441.93	14.354



FY 2022-23

# GEPCO Cost of Service Study

## FY 2022-23

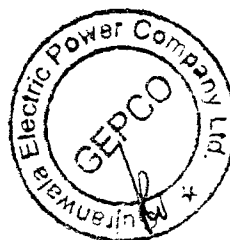


Providing Power for Progress and Prosperity

**GUJRANWALA ELECTRIC POWER COMPANY LIMITED**

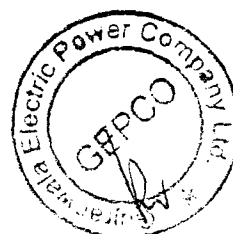
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## Gujranwala Electric Power Company (GEPCO) Ltd.

### Cost of Service Study

A Cost of Service (COS) study is the fundamental tool for evaluating and establishing utility rates. With industry and technology changes, utilities are expanding the scope and use of COS studies and are preparing studies that distinguish full and partial requirements customer classes. This is due to the increasing presence of distributed energy resources and/or to accommodate customers' expectations of having more control over their usage and utility bills.

**Cost of Service** is the total cost incurred by a utility company/DISCO in providing services to its customers and the allocation of the same to customer classes and/or voltage levels.

### Fully Allocated Cost of Service Study (FACOS) Model

FACOS is a model developed in MS Excel with the support of USAID for DISCO's to conduct Cost of Service Study. The methodology used to build the FACOS Model follows very closely the standards that are used internationally. The Model performs the standard three steps encompassed in most of Cost Studies, namely, functionalization, classification, and allocation.

### Major Steps of Cost of Service Study

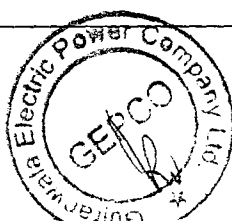
A class cost of service study begins with a detailed documentation of the numerous budgetary elements of the total revenue requirement. The detailed revenue requirements are the data inputs to the FACOS. At a high level, the FACOS process consists of the following three (3) basic steps:

1. **Functionalization** – The identification of each cost element as one of the basic utility service "functions" (e.g. generation/Power Purchase Price, transmission, distribution and customer).
2. **Classification** – The classification of the functionalized costs based on the billing component/determinant that each is associated with (e.g. kW of capacity, kWh of energy or number of customers).
3. **Allocation** – The allocation of the functionalized and classified costs to customer classes, based on respective service requirements / parameters (e.g. kW of capacity, kWh of energy and the number of customers) of each class.

### Fundamental Assumptions

Table 1

Description	FY 2022-23
Allowed Rate of Return (WACC) (NEPRA Determination). Currently WACC is calculated as 17.68%	10.66%
Capital Work in Progress ("CWIP")	CWIP 100%
Working Capital Allowance to be included in Rate Base	NO
Prior Year Adjustment (Rs. in Million)	3,881
Demand Allocation Methodology (highest coincident peak in the year). Alternative is 12CP that means average of 12 months' coincident peak)	1 CP (Single Annual Peak)
Customer Growth %	5.29%
Model Year	FY 2022-23
Base Year	FY 2020-21

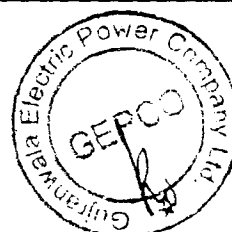


### Projections and Revenue Requirement for Financial Year 2022-23

The Revenue Requirement (RR) is the fundamental input to the Cost of Service of GEPCO for allocation to different categories of consumers based on Capacity (kW), Energy (kWh) and number of consumers. The **Table 2** below explains the basis and sources for arriving at Revenue Requirement (or overall Cost of Service) of GEPCO.

**Table 2**

Description	FY 2022-23	Source
Units Purchases (MkWh)	12,952	Demand Forecast (Dec-2022)
Units Sales (MkWh)	11,777	
Assessed T&D Losses	9.07%	
Consumer Growth	5.29%	
Average Monthly MDI (MW) (Non-coincidental at CDPs)	2,534	Demand Forecast (Dec-2022). Used only for calculation of Capacity related charges of Generation Cost, TUoSC and MOF.
Peak Demand (MW at 11 kv Coincident)	2,724	Demand Forecast (Dec-2022). Allocated to customer categories after impact of losses at each voltage for calculation of fixed charge of Cost of Service
Avg. Monthly MDI Recorded (MW) (Non-coincidental at meters)	1,889	Demand Forecast (Dec-2022). Used only for calculation of Fixed Charge Revenue where applicable.
Energy Charge (Rs/kWh)	9.03	These rates are calculated from Tariff Determination FY 2022-23. However average rates of energy, capacity and T.UoSC for Current Financial Year (2022-23 five months) are Rs. 11.07/kWh, Rs. 3074/kW/M and Rs.306/kW/M respectively.
Capacity Charge (Rs/kW/Month)	3,935.9	
T.UoSC (Rs/kW/Month)	361.28	
MOF (Rs/kW/Month)	1.71	
Energy Charges (Rs. M)	116,981	Calculated by using above rates and quantitative parameters.
Capacity Charges (Rs. M)	119,684	
T.UoSC (Rs. M)	10,986	
MOF (Rs. M)	52	
<b>Power Purchase Price</b>	<b>247,703</b>	
O&M Cost (Million Rs.)	26,329	Business Plan (Revised)
Depreciation (Million Rs.)	3,270	
RORB (Million Rs.)	4,407	
Other Income (Million Rs.)	(3,102)	
Prior Year Adjustment (Rs. M)	3,881	NEPRA Tariff Determination FY 2022-23
<b>Revenue Requirement (Rs. M)</b>	<b>282,488</b>	
Cost per kWh (sold)	23.99	





## Summary of Revenue Requirement

The extract of Revenue Requirement is provided in the **Table 3** below:

**Table 3**

Summary of Revenue Requirement	
Description	FY 2022-23 Rs. (M)
Energy Charges	116,981
Capacity Charges	119,684
T.UoSC	10,986
MOF	52
<b>Power Purchase Price</b>	<b>247,703</b>
O&M Cost	26,329
Depreciation	3,270
RORB	4,407
Other Income	(3,102)
<b>Distribution Margin</b>	<b>30,904</b>
Prior Year Adjustment	3,881
<b>Revenue Requirement</b>	<b>282,488</b>

## Line Losses Charged on Voltage Levels

Line losses taken from GEPCO Demand Forecast (Dec-2022) as a percentage on purchased units is given in **Table 4**. Line losses as a percentage on received units at each voltage level are calculated on the basis of sales data of FY 2021-22.

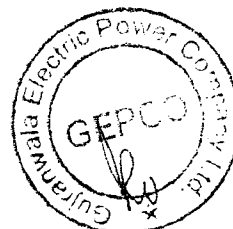
**Table 4**

Losses FY 2022-23						
Voltage Level	0.2 kV	0.4 kV	11 kV	132kV	Total	Source
Losses %age on purchased units	3.02%		5.15%	0.90%	9.07%	Target as per Nepra Determination is 9.10%. Actual losses for FY 2021-22 was 9.07%, Therefore, losses for FY 2022-23 are taken as 9.07%.
Losses %age on received units	3.73%		5.20%	0.90%		calculated as applied on units received at each voltage level.
Losses %age charged on purchased units	9.55%		6.05%	0.90%		Reversed calculated to show affective %age of losses vs. units purchased for each voltage level.

Overall the effective %age of energy losses, i.e. (total kWh purchases – total kWh sold)/total kWh purchased remains 9.07% as per target.

## Customer Classification by Voltage Level

While the Cost of Service study is based on allocation of the Revenue Requirement on Classes (categories) of the consumers at different voltage levels; the **Table 5** below provides mapping of existing categories of consumers on the basis of applicable voltage levels.



**Table 5**

Classification by Voltage Level				
Voltage	132/66kV	11kV	0.4kV	0.2 kV
Customer Class	B4	B3	A1b	A1a
	C3a	C2a	A2b	A2a
	C3b	C2b	A2c	B1a
		H1	A3a	C1a
		H2	B1b	E1i
		K1a	B2a	E1ii
		K1b	B2b	E2
			C1b	
			C1c	
			D1a	
			D1b	
			D2a	
			D2b	
			G1	
			G2	

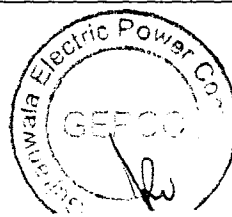
**GEPCO Tariff determined by NEPRA in July-2022.**

Tariffs for various categories of GEPCO consumers as determined by NEPRA vide their determination No. NEPRA/RIADG(Tariff)/ TRF- 100/X WDISCOs/13540- 13542 dated 22-07-2022 are provided in **Table 6** below.



Table 6

NEPRA DETERMINED TARIFF (22-07-2022)			
TARIFF CATEGORIES		Fixed Charges Rs./KW/M	Variable Charges Rs./kWh
i	Up to 50 Units Life line		5.00
ii	51-100 units Life line		15.03
iii	01-100 Units		18.03
iv	101-200 Units		20.03
v	01-100 Units		20.67
vi	101-200 Units		23.82
vii	201-300 Units		24.33
viii	301-400Units		25.57
ix	401-500Units		26.01
x	501-600Units		27.01
xi	601-700Units		28.01
xii	Above 700 Units		29.01
A1(b)	Time of Use (TOU) - Peak		28.01
	Time of Use (TOU) - Off-Peak		20.63
E-1(i)	Temporary E-1 (i)		29.01
<b>COMMERCIAL - A2</b>			
A2 (a)	Commercial - For peak load up to 5 kW		24.99
A2 (b)	Sanctioned load 5 kw and above	500	23.03
A2 (c)	Time of Use (TOU) - Peak (A-2)	500	28.04
	Time of Use (TOU) - Off-Peak	500	21.91
E-1 (ii)	Temporary E-1 (ii)		25.01
<b>INDUSTRIAL</b>			
B1(a)	B1		24.07
B1(b)	B1- TOU (Peak)		27.96
	B1 - TOU (Off-peak)		21.86
B2 (a)	B2	500	23.96
B2 (b)	B2 - TOU (Peak)	500	27.96
	B2 - TOU (Off-peak)	500	21.36
B3	B3 - TOU (Peak)	460	27.96
	B3 - TOU (Off-peak)	460	22.76
B4	B4 - TOU (Peak)	440	27.96
	B4 - TOU (Off-peak)	440	22.56
E-2	Temporary E-2		26.96
<b>BULK</b>			
C1 (a)	C1(a) up to 5 kW		24.62
C1 (b)	C1(b) exceeding 5 kW	500	24.42
C1 (c)	Time of Use (TOU) - Peak	500	28.01
	Time of Use (TOU) - Off-Peak	500	21.41
C2 (a)	C2 Supply at 11 kV	460	24.32
C2 (b)	Time of Use (TOU) - Peak	460	28.01
	Time of Use (TOU) - Off-Peak	460	22.81
C3 (a)	C3 Supply above 11 kV	440	24.21
C3 (b)	Time of Use (TOU) - Peak	440	28.01
	Time of Use (TOU) - Off-Peak	440	22.61
<b>AGRICULTURAL TUBE WELLS - Tariff D</b>			
D1 (a)	D1 Scarp		24.62
D2 (a)	D2 Agricultural Tube-wells	200	24.62
D1 (b)	Time of Use (TOU) - Peak	200	28.01
	Time of Use (TOU) - Off-Peak	200	21.41
D2 (b)	Time of Use (TOU) - Peak	200	28.01
	Time of Use (TOU) - Off-Peak	200	21.41
G	Public Lighting G		28.31
H	Residential Colonies H		28.61
K1	Special Contracts - Tariff K (AJK)	440	24.62
K1 (i)	Time of Use (TOU) - Peak	440	28.01
	Time of Use (TOU) - Off-Peak	440	21.41
A3	General Service		24.78



**Results from FACOS Model****Revenue Requirement Allocation (in Percentage)**

While developing the Fully Allocated Cost of Service Model, the detailed study for allocation of cost of service and rate base (for each component) to cost drivers (energy, demand and customer) was developed. Overall summary of the allocation is given in below **Table 7**

**Table 7**

<b>Revenue Requirement Allocation %age</b>				
<b>Description</b>	<b>Energy</b>	<b>Demand</b>	<b>Customer</b>	<b>Total</b>
Energy Charges	100%	-	-	100%
Capacity Charges	-	100%	-	100%
T.UoSC	-	100%	-	100%
MOF	-	100%	-	100%
O&M Cost	-	65%	35%	100%
Depreciation	-	80%	20%	100%
RORB	-	82%	18%	100%
Other Income	-	82%	18%	100%
Prior Year Adjustment	-	65%	35%	100%

**Revenue Requirement Allocation to Energy, Demand and Customer.**

Based on the allocation percentages given in above table, the revenue requirement allocated to energy, demand and customer (cost triggers) is shown in **Table 8** below.

**Table 8**

<b>Revenue Requirement Allocation Rs. (M)</b>				
<b>Description</b>	<b>Energy</b>	<b>Demand</b>	<b>Customer</b>	<b>Total</b>
Energy Charges	116,981	-	-	116,981
Capacity Charges	-	119,684	-	119,684
T.UoSC	-	10,986	-	10,986
MOF	-	52	-	52
<b>Power Purchase Price</b>	<b>116,981</b>	<b>130,722</b>	<b>-</b>	<b>247,703</b>
O&M Cost	-	17,035	9,294	26,329
Depreciation	-	2,612	658	3,270
RORB	-	3,628	779	4,407
Other Income	-	(2,539)	(563)	(3,102)
<b>Distribution Margin</b>	<b>-</b>	<b>20,736</b>	<b>10,168</b>	<b>30,904</b>
Prior Year Adjustment	-	2,506	1,375	3,881
<b>Revenue Requirement</b>	<b>116,981</b>	<b>153,964</b>	<b>11,543</b>	<b>282,488</b>

**Revenue as per NEPRA Tariff by Customer Category and Voltage Level**

The **Table 9** below provides detailed category-wise estimated revenue and average (Rs./kWh) thereof. Whereas the **Table 10** is summary of the said category-wise estimated revenue based on the supply Voltage level of relevant customer category, with average rate (Rs./kWh) thereof. As already mentioned, the calculation of revenue is based on NEPRA Tariff determined vide No. NEPRA/RIADG(Tariff)/ TRF- 100/X WDISCOs/13540- 13542 dated 22-07-2022 already provided in (Table 6).

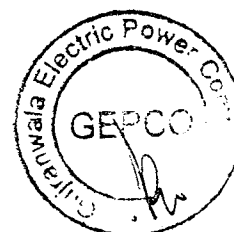
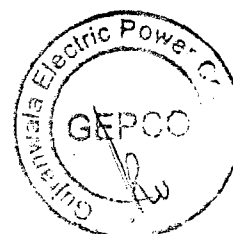


Table 9

FY 2022-23						
Customer Category	MDI MW	Sales (GWh)	Fixed Charge Rs. (M)	Variable Charge Rs. (M)	Total Revenue Rs.(M)	Rs./kWh
Residential -- A1(a)	-	6,765.74	-	156,570	156,570	23.14
Residential -- A1(b)	-	196.67	-	4,327	4,327	22.00
Commercial -- A2(a)	-	400.17	-	10,000	10,000	24.99
Commercial -- A2(b)	0.13	0.44	1	10	11	24.79
Commercial -- A2(c)	155.08	358.82	930	8,307	9,237	25.74
Industrial -- B1(a)	-	38.96	-	938	938	24.07
Industrial -- B2(a)	-	-	-	-	-	-
Industrial -- B1(b)	566.48	497.90	-	11,290	11,290	22.67
Industrial -- B2(b)	473.17	1,086.54	2,839	24,234	27,073	24.92
Industrial -- B3	296.43	1,233.90	1,536	29,018	30,555	24.84
Industrial -- B4	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.01	0.06	-	1	1	24.62
Single Point Supply -- C1(b)	0.15	0.18	1	5	5	29.30
Single Point Supply -- C2(a)	-	-	-	-	-	-
Single Point Supply -- C3(a)	-	-	-	-	-	-
Single Point Supply -- C1(c)	3.24	10.67	19	238	257	24.13
Single Point Supply -- C2(b)	34.29	170.22	189	4,049	4,238	24.90
Single Point Supply -- C3(b)	-	-	-	-	-	-
Agricultural --D1(a)	-	0.03	-	1	1	24.62
Agricultural --D2(a)	-	79.99	-	1,969	1,969	24.62
Agricultural --D2(b)	353.33	466.51	848	10,443	11,291	24.20
Agricultural --D1(b)	0.04	0.09	0	2	2	23.59
Temporary Supply -- E1(i)	-	1.12	-	32	32	29.01
Temporary Supply -- E1(ii)	-	14.63	-	366	366	25.01
Temporary Supply -- E2	-	0.39	-	10	10	26.96
Public Lighting -- G	-	13.64	-	386	386	28.31
Residential Colonies -- H	-	0.72	-	20	20	28.61
Azad Jammu Kashmir - K1a	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	6.45	269.56	34	6,637	6,671	24.75
A3 General	-	170.05	-	4,214	4,214	24.78
<b>Total</b>	<b>1,889</b>	<b>11,777</b>	<b>6,498</b>	<b>273,068</b>	<b>279,566</b>	<b>23.74</b>

Table 10

FY 2022-23						
Customer Class	MDI MW	Sales (GWh)	Fixed Charge Rs. (M)	Variable Charge Rs. (M)	Total Revenue	Rs./kWh
0.2 kV	0.01	7,221	-	167,918	167,918	23.25
0.4 kV	1,552	2,882	4,639	65,425	70,064	24.31
11 Kv	337	1,674	1,860	39,724	41,584	24.84
132 kv	-	-	-	-	-	-
<b>G. TOTAL</b>	<b>1,889</b>	<b>11,777</b>	<b>6,498</b>	<b>273,068</b>	<b>279,566</b>	<b>23.74</b>



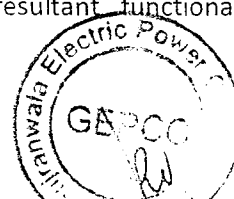
**Cost of Service Functionalized Rates (Tariff Wise)**

Based on the allocation of overall Revenue Requirement of GEPCO to customers categories, the resultant functional amounts (Rs. in million) for each customer category are summarized at **Table 11** below. Currently there is no customer at 132kv in GEPCO. Cost of Service at 132kv will be discussed later in this document.

**Table 11**

<b>FY 2022-23</b>											
Classes	Volt. Level	No. of Customers	Energy	Demand	Generation Cost		Transm	MOF	Distribution		Total Cost
			GWh	MW	Energy (Rs.M)	Demand (Rs.M)	Cost (Rs.M)	Cost (Rs.M)	Demand (Rs.M)	Cust. Cost (Rs.M)	
Residential -- A1(a)	0.2kv	3,640,578	6,766	1,487	67,562	71,588	6,571	31	13,925	7,202	166,879
Residential -- A1(b)	0.4kv	33,115	197	41	1,954	1,930	183	1	387	167	4,691
Commercial -- A2(a)	0.2kv	403,793	400	112	3,996	5,408	496	2	1,052	426	11,380
Commercial -- A2(b)	0.4kv	28	0	0	4	6	1	0	1	0	12
Commercial -- A2(c)	0.4kv	17,170	359	87	3,583	4,172	383	2	812	304	9,256
Industrial -- B1(a)	0.2kv	15,224	39	14	389	664	61	0	129	41	1,285
Industrial -- B2(a)	0.4kv	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kv	55,698	498	130	4,972	6,259	574	3	1,217	422	13,447
Industrial -- B2(b)	0.4kv	11,364	1,087	228	10,850	10,975	1,007	5	2,135	921	25,893
Industrial -- B3	11kv	293	1,234	166	11,862	7,703	707	3	1,471	1,043	22,791
Industrial -- B4	132kv	-	-	-	-	-	-	-	-	-	-
Single P. Supply C1(a)	0.2kv	29	0	0	1	1	0	0	0	0	1
Single P. Supply C1(b)	0.4kv	5	0	0	2	3	0	0	1	0	5
Single P. Supply C2(a)	11kv	4	-	-	-	-	-	-	-	-	-
Single P. Supply C3(a)	132kv	-	-	-	-	-	-	-	-	-	-
Single P. Supply C1(c)	0.4kv	76	11	3	107	138	13	0	27	9	293
Single P. Supply C2(b)	11kv	40	170	25	1,636	1,151	106	1	220	144	3,258
Single P. Supply C3(b)	132kv	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kv	424	0	0	0	0	0	0	0	0	1
Agricultural -- D2(a)	0.4kv	17,703	80	13	799	620	57	0	121	68	1,664
Agricultural -- D2(b)	0.4kv	38,605	467	92	4,659	4,444	408	2	865	395	10,773
Agricultural -- D1(b)	0.4kv	13	0	0	1	1	0	0	0	0	2
Temp. Supply - E1(i)	0.2kv	863	1	0	11	13	1	0	2	1	29
Temp. Supply - E1(ii)	0.2kv	2,369	15	3	146	141	13	0	27	16	343
Temp. Supply - E2	0.2kv	24	0	0	4	5	0	0	1	0	10
Public Lighting -- G	0.4kv	674	14	5	136	240	22	0	47	12	456
Res. Colonies -- H	11kv	16	1	0	7	6	1	0	1	1	16
AJK - K1a	11kv	-	-	-	-	-	-	-	-	-	-
AJK - K1b	11kv	17	270	48	2,592	2,215	203	1	423	228	5,662
A3 General	0.4kv	22,661	170	40	1,698	1,942	178	1	378	144	4,341
<b>Total</b>		<b>4,260,789</b>	<b>11,777</b>	<b>2,495</b>	<b>116,981</b>	<b>119,684</b>	<b>10,986</b>	<b>52</b>	<b>23,242</b>	<b>11,543</b>	<b>282,488</b>

Based on the cost drivers (energy, demand & customers) based allocation of overall Revenue Requirement of GEPCO to the customers categories, the resultant functional (generation,



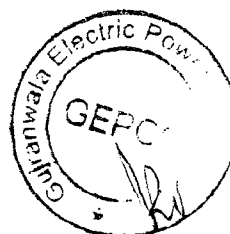
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transmission, MO Fee & Distribution) rates (in terms of Rs./kWh, Rs./kW/Month and Rs./Customer / Month, as applicable) are summarized at **Table 12** below.

**Table 12**

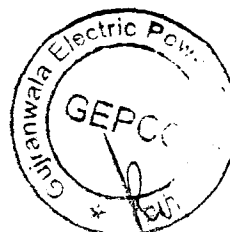
<b>FY 2022-23</b>											
Classes	Volt. Level	No. of Customers	Energy	Demand	Generation Cost		Transm	MOF	Distribution		Total Rs./ kWh
			GWh	MW	Energy (Rs/kWh)	Demand (Rs/kW/ Month)	(Rs/kW /Month)	(Rs/kW/ Month)	(Rs/kW/ Month)	(Rs./ Cust/ Month)	
Residential -- A1(a)	0.2kV	3,640,578	6,766	1,487	9.99	4,011.65	368.23	1.74	780.34	164.84	24.67
Residential -- A1(b)	0.4kV	33,116	197	41	9.99	4,011.65	368.23	1.74	780.34	419.32	23.85
Commercial -- A2(a)	0.2kV	403,793	400	112	9.99	4,011.65	368.23	1.74	780.34	87.90	28.44
Commercial -- A2(b)	0.4kV	28	0	0	9.99	4,011.65	368.23	1.74	780.34	1,094.41	26.96
Commercial -- A2(c)	0.2kV	17,170	359	87	9.99	4,011.65	368.23	1.74	780.34	1,475.50	25.80
Industrial -- B1(a)	0.2kV	15,224	39	14	9.99	4,011.65	368.23	1.74	780.34	227.02	32.98
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	55,698	498	130	9.99	4,011.65	368.23	1.74	780.34	631.14	27.01
Industrial -- B2(b)	0.4kV	11,364	1,087	228	9.99	4,011.65	368.23	1.74	780.34	6,750.50	23.83
Industrial -- B3	11kV	293	1,234	166	9.61	3,862.12	354.50	1.68	737.72	296,934	18.47
Industrial -- B4	132kV	-	-	-	-	-	-	-	-	-	-
Single P. Supply C1(a)	0.2kV	29	0	0	9.61	4,011.65	368.23	1.74	780.34	172.76	25.88
Single P. Supply C1(b)	0.4kV	5	0	0	9.99	4,011.65	368.23	1.74	780.34	2,479.68	28.86
Single P. Supply C2(a)	11kV	4	-	-	-	-	-	-	-	-	-
Single P. Supply C3(a)	132kV	-	-	-	-	-	-	-	-	-	-
Single P. Supply C1(c)	0.4kV	76	11	3	9.99	4,011.65	368.23	1.74	780.34	9,935.88	27.49
Single P. Supply C2(b)	11kV	40	170	25	9.61	3,862.12	354.50	1.68	737.72	299,682	19.14
Single P. Supply C3(b)	132kV	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	424	0	0	9.99	4,011.65	368.23	1.74	780.34	5.04	25.46
Agricultural -- D2(a)	0.4kV	17,703	80	13	9.99	4,011.65	368.23	1.74	780.34	319.03	20.81
Agricultural -- D2(b)	0.4kV	38,605	467	92	9.99	4,011.65	368.23	1.74	780.34	853.19	23.09
Agricultural -- D1(b)	0.4kV	13	0	0	9.99	4,011.65	368.23	1.74	780.34	490.30	24.64
Temp. Supply - E1(i)	0.2kV	863	1	0	9.99	4,011.65	368.23	1.74	780.34	114.85	25.75
Temp. Supply- E1(ii)	0.2kV	2,369	15	3	9.99	4,011.65	368.23	1.74	780.34	547.53	23.45
Temp. Supply - E2	0.2kV	24	0	0	9.99	4,011.65	368.23	1.74	780.34	1,407.43	26.72
Public Lighting -- G	0.4kV	674	14	5	9.99	4,011.65	368.23	1.74	780.34	1,428.77	33.44
Res. Colonies -- H	11kV	16	1	0	9.61	3,862.12	354.50	1.68	737.72	3,191.85	22.04
AJK - K1a	11kV	-	-	-	-	-	-	-	-	-	-
AJK - K1b	11kV	17	270	48	9.61	3,862.12	354.50	1.68	737.72	1,127,106	21.00
A3 General	0.4kV	22,661	170	40	9.99	4,011.65	368.23	1.74	780.34	529.81	25.53
<b>Total/Average</b>		<b>4,260,789</b>	<b>11,777</b>	<b>2,495</b>	<b>9.93</b>	<b>3,997.33</b>	<b>366.91</b>	<b>1.74</b>	<b>776.26</b>	<b>225.76</b>	<b>23.99</b>

The above detailed functional rates recapitulated, in terms of Rs./kW/Month, for each function is given in table **Table 13** below.



**Table 13****FY 2022-23**

Classes	Volt. Level	No. of Customers	Energy	Demand	Generation Cost		Transm	MOF	Distribution		Total Rs./kW/ Month
			G/Wh	MW	Energy (Rs./kW/ Month)	Demand (Rs./kW/ Month)	(Rs./kW /Month)	(Rs./kW/ Month)	(Rs./kW/ Month)	(Rs./ kW/ Month)	
Residential -- A1(a)	0.2kV	3,640,578	6,766	1,487	3,786.06	4,011.65	368.23	1.74	780.34	403.56	9,351.58
Residential -- A1(b)	0.4kV	33,116	197	41	3,959.88	4,011.65	368.23	1.74	780.34	335.97	9,457.82
Commercial -- A2(a)	0.2kV	403,793	400	112	2,964.49	4,011.65	368.23	1.74	780.34	315.99	8,442.44
Commercial -- A2(b)	0.4kV	28	0	0	3,196.25	4,011.65	368.23	1.74	780.34	271.18	8,629.39
Commercial -- A2(c)	0.4kV	17,170	359	87	3,445.12	4,011.65	368.23	1.74	780.34	292.30	8,899.38
Industrial -- B1(a)	0.2kV	15,224	39	14	2,350.58	4,011.65	368.23	1.74	780.34	250.55	7,763.09
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	55,698	498	130	3,186.86	4,011.65	368.23	1.74	780.34	270.39	8,619.21
Industrial -- B2(b)	0.4kV	11,364	1,087	228	3,965.94	4,011.65	368.23	1.74	780.34	336.49	9,464.39
Industrial -- B3	11kV	293	1,234	166	5,947.24	3,862.12	354.50	1.68	737.72	522.90	11,426.16
Industrial -- B4	132kV	-	-	-	-	-	-	-	-	-	-
Single P. Supply C1(a)	0.2kV	29	0	0	3,265.19	4,011.65	368.23	1.74	780.34	361.51	8,788.66
Single P. Supply C1(b)	0.4kV	5	0	0	2,859.35	4,011.65	368.23	1.74	780.34	242.60	8,263.91
Single P. Supply C2(a)	11kV	4	-	-	-	-	-	-	-	-	-
Single P. Supply C3(a)	132kV	-	-	-	-	-	-	-	-	-	-
Single P. Supply C1(c)	0.4kV	76	11	3	3,093.92	4,011.65	368.23	1.74	780.34	262.50	8,518.38
Single P. Supply C2(b)	11kV	40	170	25	5,489.30	3,862.12	354.50	1.68	737.72	482.64	10,927.96
Single P. Supply C3(b)	132kV	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	424	0	0	3,524.08	4,011.65	368.23	1.74	780.34	299.00	8,985.04
Agricultural -- D2(a)	0.4kV	17,703	80	13	5,167.46	4,011.65	368.23	1.74	780.34	438.43	10,767.85
Agricultural -- D2(b)	0.4kV	38,605	467	92	4,204.97	4,011.65	368.23	1.74	780.34	356.77	9,723.70
Agricultural -- D1(b)	0.4kV	13	0	0	3,733.01	4,011.65	368.23	1.74	780.34	316.72	9,211.70
Temp. Supply - E1(i)	0.2kV	863	1	0	3,506.50	4,011.65	368.23	1.74	780.34	373.76	9,042.22
Temp. Supply - E1(ii)	0.2kV	2,369	15	3	4,158.29	4,011.65	368.23	1.74	780.34	443.24	9,763.49
Temp. Supply - E2	0.2kV	24	0	0	3,290.15	4,011.65	368.23	1.74	780.34	350.70	8,802.82
Public Lighting -- G	0.4kV	674	14	5	2,280.14	4,011.65	368.23	1.74	780.34	193.46	7,635.56
Res. Colonies -- H	11kV	16	1	0	4,113.97	3,862.12	354.50	1.68	737.72	361.71	9,431.71
AJK - K1a	11kV	-	-	-	-	-	-	-	-	-	-
AJK - K1b	11kV	17	270	48	4,518.79	3,862.12	354.50	1.68	737.72	397.30	9,872.12
A3 General	0.4kV	22,661	170	40	3,507.97	4,011.65	368.23	1.74	780.34	297.63	8,967.57
<b>Total</b>		<b>4,260,789</b>	<b>11,777</b>	<b>2,495</b>	<b>3,907.04</b>	<b>3,997.33</b>	<b>366.91</b>	<b>1.74</b>	<b>776.26</b>	<b>385.52</b>	<b>9,434.80</b>



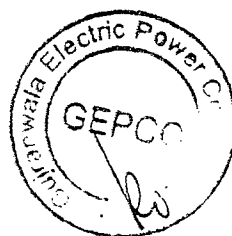


**Unbundled Rates Rs./kWh (Tariff Wise)**

The functional allocation of Revenue Requirement of GEPCO (Generation, Transmission, MO Fee and Distribution Cost) to customers categories, in Rs./kWh are shown in **Table 14** below.

**Table 14**

FY 2022-23								
Customer Category	Voltage level	Sales GWh	Demand MW	Generation Rs./kWh	T. UoSC Rs./kWh	MOF Rs./kWh	D. UoSC Rs./kWh	Total Rate Rs./kWh
Residential -- A1(a)	0.2kV	6,766	1,487	20.57	0.97	0.005	3.12	24.67
Residential -- A1(b)	0.4kV	197	41	20.10	0.93	0.004	2.82	23.85
Commercial -- A2(a)	0.2kV	400	112	23.50	1.24	0.006	3.69	28.44
Commercial -- A2(b)	0.4kV	0	0	22.52	1.15	0.005	3.29	26.96
Commercial -- A2(c)	0.4kV	359	87	21.61	1.07	0.005	3.11	25.80
Industrial -- B1(a)	0.2kV	39	14	27.03	1.56	0.007	4.38	32.98
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	130	22.56	1.15	0.005	3.29	27.01
Industrial -- B2(b)	0.4kV	1,087	228	20.09	0.93	0.004	2.81	23.83
Industrial -- B3	11kV	1,234	166	15.86	0.57	0.003	2.04	18.47
Industrial -- B4	132kV	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	21.43	1.08	0.005	3.36	25.88
Single Point Supply -- C1(b)	0.4kV	0	0	24.00	1.29	0.006	3.57	28.86
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132kV	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	3	22.93	1.19	0.006	3.37	27.49
Single Point Supply -- C2(b)	11kV	170	25	16.38	0.62	0.003	2.14	19.14
Single Point Supply -- C3(b)	132kV	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	21.35	1.04	0.005	3.06	25.46
Agricultural -- D2(a)	0.4kV	80	13	17.74	0.71	0.003	2.36	20.81
Agricultural -- D2(b)	0.4kV	467	92	19.51	0.87	0.004	2.70	23.09
Agricultural -- D1(b)	0.4kV	0	0	20.72	0.99	0.005	2.93	24.64
Temporary Supply -- E1(i)	0.2kV	1	0	21.41	1.05	0.005	3.29	25.75
Temporary Supply -- E1(ii)	0.2kV	15	3	19.62	0.88	0.004	2.94	23.45
Temporary Supply -- E2	0.2kV	0	0	22.16	1.12	0.005	3.43	26.72
Public Lighting -- G	0.4kV	14	5	27.56	1.61	0.008	4.26	33.44
Residential Colonies -- H	11kV	1	0	18.64	0.83	0.004	2.57	22.04
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	48	17.83	0.75	0.004	2.41	21.00
A3 General	0.4kV	170	40	21.41	1.05	0.005	3.07	25.53
<b>Total</b>		<b>11,777</b>	<b>2,495</b>	<b>20.10</b>	<b>0.93</b>	<b>0.004</b>	<b>2.95</b>	<b>23.99</b>



### Volumetric Rates at Each Customer Category

The above functional rates combined in terms of the nature (Fixed or Variable) and resultant rates in terms of Rs./kW/Month and/or Rs./kWh are provided in **Table 15** below.

**Table 15**

FY 2022-23							
Customer Category	Voltage Level	Sales GWh	Allocated Cost Rs. (M)		Fixed Charge Rs/kW/Month	Variable Charge Rs/kWh	Total Rate Rs/kWh
			Fixed Cost	Variable Cost			
Residential -- A1(a)	0.2kV	6,766	92,115	74,764	5,162	11.05	24.67
Residential -- A1(b)	0.4kV	197	2,560	2,131	5,162	10.83	23.85
Commercial -- A2(a)	0.2kV	400	6,958	4,422	5,162	11.05	28.44
Commercial -- A2(b)	0.4kV	0	7	5	5,162	10.83	26.96
Commercial -- A2(c)	0.4kV	359	5,369	3,887	5,162	10.83	25.80
Industrial -- B1(a)	0.2kV	39	854	431	5,162	11.05	32.98
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	8,053	5,394	5,162	10.83	27.01
Industrial -- B2(b)	0.4kV	1,087	14,122	11,771	5,162	10.83	23.83
Industrial -- B3	11kV	1,234	9,885	12,905	4,956	10.46	18.47
Industrial -- B4	132/66kV	-	-	-	-	-	-
Single P. Supply C1(a)	0.2kV	0	1	1	5,162	10.68	25.88
Single P. Supply C1(b)	0.4kV	0	3	2	5,162	10.83	28.86
Single P. Supply C2(a)	11kV	-	-	-	-	-	-
Single P. Supply C3(a)	132/66kV	-	-	-	-	-	-
Single P. Supply C1(c)	0.4kV	11	178	116	5,162	10.83	27.49
Single P. Supply C2(b)	11kV	170	1,477	1,780	4,956	10.46	19.14
Single P. Supply C3(b)	132/66kV	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	5,162	10.83	25.46
Agricultural -- D2(a)	0.4kV	80	798	867	5,162	10.83	20.81
Agricultural -- D2(b)	0.4kV	467	5,719	5,054	5,162	10.83	23.09
Agricultural -- D1(b)	0.4kV	0	1	1	5,162	10.83	24.64
Temp. Supply - E1(i)	0.2kV	1	16	12	5,162	11.05	25.75
Temp. Supply - E1(ii)	0.2kV	15	181	162	5,162	11.05	23.45
Temp. Supply - E2	0.2kV	0	6	4	5,162	11.05	26.72
Public Lighting -- G	0.4kV	14	308	148	5,162	10.83	33.44
Res. Colonies -- H	11kV	1	8	7	4,956	10.46	22.04
AJK - K1a	11kV	-	-	-	-	-	-
AJK - K1b	11kV	270	2,842	2,819	4,956	10.46	21.00
A3 General	0.4kV	170	2,499	1,842	5,162	10.83	25.53
<b>Total</b>		<b>11,777</b>	<b>153,964</b>	<b>128,524</b>	<b>5,142</b>	<b>10.91</b>	<b>23.99</b>

**Note:** Variable Cost in **Table 15** includes energy cost and customer services cost.

### Revenue, Cost of Service and Subsidies (Tariff Category Wise)

Based on assessment of revenue and the cost of service for each category of consumer, as per the details provided herein before, the Subsidy or Cross Subsidy (the difference between revenue and cost) in terms of million rupees against each customer tariff category is provided in **Table 16** below. It may be noted that the negative figure means the customer is subsidized (revenue less than cost)



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whereas the positive figure shows that the customer is cross subsidizing (revenue more than cost). Average, in terms of Rs./kWh, assessment of subsidy or cross-subsidy, as the case may be, is also arrived in the last column of Table 16 below.

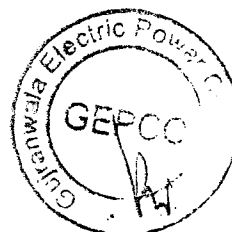
**Table 16**

FY 2022-23											
Customer Class	Voltage	Sales GWh	Demand MW	Revenue as per NEPRA Tariff			Cost of Service			Difference Subsidy M. PKR	subsidy Rs./kWh
				Demand Charge (M.PKR)	Energy Charge M.PKR	Total M. PKR	Demand Cost (M.PKR)	Energy Cost M.PKR	Total M. PKR		
Residential A1(a)	0.2kV	6,766	1,487	-	156,570	156,570	92,115	74,764	166,879	(10,309)	(1.52)
Residential A1(b)	0.4kV	197	41	-	4,327	4,327	2,560	2,131	4,691	(364)	(1.85)
Commercial A2(a)	0.2kV	400	112	-	10,000	10,000	6,958	4,422	11,380	(1,380)	(3.45)
Commercial A2(b)	0.4kV	0.44	0.11	-	10	11	7	5	12	(1)	(2.17)
Commercial A2(c)	0.4kV	359	87	930	8,307	9,237	5,369	3,887	9,256	(19)	(0.05)
Industrial B1(a)	0.2kV	39	14	-	938	938	854	431	1,285	(347)	(8.91)
Industrial B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-
Industrial B1(b)	0.4kV	498	130	-	11,290	11,290	8,053	5,394	13,447	(2,158)	(4.33)
Industrial B2(b)	0.4kV	1,087	228	2,839	24,234	27,073	14,122	11,771	25,893	1,180	1.09
Industrial B3	11kV	1,234	166	1,636	29,018	30,655	9,885	12,905	22,791	7,864	6.37
Industrial B4	132kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C1(a)	0.2kV	0.06	0.01	-	1	1	1	1	1	(0)	(1.26)
Bulk Supply C1(b)	0.4kV	0.18	0.05	1	5	5	3	2	5	0	0.44
Bulk Supply C2(a)	11kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C3(a)	132kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C1(c)	0.4kV	11	3	19	238	257	178	116	293	(36)	(3.36)
Bulk Supply C2(b)	11kV	170	25	189	4,049	4,238	1,477	1,780	3,258	980	5.76
Bulk Supply C3(b)	132kV	-	-	-	-	-	-	-	-	-	-
Agricultural D1(a)	0.4kV	0.03	0.007	-	1	1	0	0	1	(0)	(0.84)
Agricultural D2(a)	0.4kV	80	13	-	1,969	1,969	798	867	1,664	305	3.81
Agricultural D2(b)	0.4kV	467	92	848	10,443	11,291	5,719	5,054	10,773	519	1.11
Agricultural D1(b)	0.4kV	0.088	0.020	0	2	2	1	1	2	(0)	(1.05)
Temporary E1(i)	0.2kV	1	0	-	32	32	16	12	29	4	3.26
Temporary E1(ii)	0.2kV	15	3	-	366	366	181	162	343	23	1.56
Temporary E2	0.2kV	0.386	0.098	-	10	10	6	4	10	0	0.24
Public Lighting G	0.4kV	14	5	-	386	386	308	148	456	(70)	(5.13)
Residential Col.H	11kV	1	0	-	20	20	8	7	16	5	6.57
A J K K1a	11kV	-	-	-	-	-	-	-	-	-	-
A J K K1b	11kV	270	48	34	6,637	6,671	2,842	2,819	5,662	1,009	3.74
A3 General	0.4kV	170	40	0	4,214	4,214	2,499	1,842	4,341	(127)	(0.75)
Total		11,777	2,495	6,498	273,068	279,566	153,964	128,524	282,488	(2,922)	(0.25)

**Revenue, Cost of Service, Subsidy and Revenue to Cost Ratios**

Revenue, Cost of Service and Subsidy in terms of million rupees for each category of the consumers is shown in **Table 17** below. The Table also provides the Revenue to Cost Ratio which shows that:

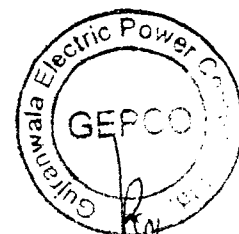
- If this ratio is less than one, the relevant customer class is subsidized, i.e. the tariff revenue is less than the allocated cost;



- If this ratio is greater than one, the relevant customer class is cross subsidizing, i.e. the tariff revenue is higher than the allocated cost; and
- If this ratio is equal to one, the customer class is at adequately priced vis-à-vis the allocated cost.

Table 17

FY 2022-23											
Customer Class	Voltage	Sales GWh	Demand MW	Revenue as per NEPRA Tariff		Cost of Service		Difference/Subsidy M. PKR		Revenue to Cost Ratio	
				Fixed (Rs.M)	Variable (Rs. M)	Fixed (Rs.M)	Variable (Rs. M)	Fixed Rs. M	Variable Rs. M	Fixed	Variable
Residential A1(a)	0.2kV	6,766	1,487	-	156,570	92,115	74,764	92,115	(81,806)	-	2.09
Residential A1(b)	0.4kV	197	41	-	4,327	2,560	2,131	2,560	(2,196)	-	2.03
Commercial A2(a)	0.2kV	400	112	-	10,000	6,958	4,422	6,958	(5,578)	-	2.26
Commercial A2(b)	0.4kV	0.44	0.11	1	10	7	5	6	(5)	0.11	2.13
Commercial A2(c)	0.4kV	359	87	930	8,307	5,369	3,887	4,438	(4,419)	0.17	2.14
Industrial B1(a)	0.2kV	39	14	-	938	854	431	854	(507)	-	2.18
Industrial B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-
Industrial B1(b)	0.4kV	498	130	-	11,290	8,053	5,394	8,053	(5,896)	-	2.09
Industrial B2(b)	0.4kV	1,087	228	2,839	24,234	14,122	11,771	11,283	(12,463)	0.20	2.06
Industrial B3	11kV	1,234	166	1,636	29,018	9,885	12,905	8,249	(16,113)	0.17	2.25
Industrial B4	132kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C1(a)	0.2kV	0.06	0.01	-	1	1	1	1	(1)	-	2.31
Bulk Supply C1(b)	0.4kV	0.18	0.05	1	5	3	2	2	(3)	0.27	2.25
Bulk Supply C2(a)	11kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C3(a)	132kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C1(c)	0.4kV	11	3	19	238	178	116	158	(122)	0.11	2.06
Bulk Supply C2(b)	11kV	170	25	189	4,049	1,477	1,780	1,288	(2,268)	0.13	2.27
Bulk Supply C3(b)	132kV	-	-	-	-	-	-	-	-	-	-
Agricultural D1(a)	0.4kV	0.03	0.007	-	1	0	0	0	(0)	-	2.27
Agricultural D2(a)	0.4kV	80	13	-	1,969	798	867	798	(1,103)	-	2.27
Agricultural D2(b)	0.4kV	467	92	848	10,443	5,719	5,054	4,871	(5,390)	0.15	2.07
Agricultural D1(b)	0.4kV	0.088	0.020	0	2	1	1	1	(1)	0.09	2.07
Temporary E1(i)	0.2kV	1	0	-	32	16	12	16	(20)	-	2.63
Temporary E1(ii)	0.2kV	15	3	-	366	181	162	181	(204)	-	2.26
Temporary E2	0.2kV	0.386	0.098	-	10	6	4	6	(6)	-	2.44
Public Lighting G	0.4kV	14	5	-	386	308	148	308	(238)	-	2.61
Residential Col.H	11kV	1	0	-	20	8	7	8	(13)	-	2.74
A J K K1a	11kV	-	-	-	-	-	-	-	-	-	-
A J K K1b	11kV	270	48	34	6,637	2,842	2,819	2,808	(3,817)	0.01	2.35
A3 General	0.4kV	170	40	0	4,214	2,499	1,842	2,499	(2,372)	-	2.29
Total		11,777	2,495	6,498	273,068	153,964	128,524	147,465	(144,544)	0.04	2.12

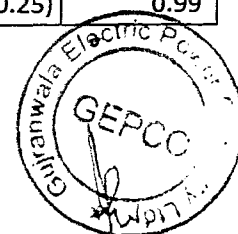


**Revenue, Cost of Service and Subsidies (Rs./kWh)**

Revenue, Cost of Service and Subsidy in terms of Rs./kWh for each category of the consumers is shown in Table 18 below. The Table also provides the Revenue to Cost Ratio.

Table 18

FY 2022-23						
Customer Class	Voltage	Sales GWh	Revenue Rs./kWh	Cost of Service Rs./kWh	Subsidy Rs./kWh	Revenue to Cost Ratio
Residential A1(a)	0.2kV	6,766	23.14	24.67	(1.52)	0.94
Residential A1(b)	0.4kV	197	22.00	23.85	(1.85)	0.92
Commercial A2(a)	0.2kV	400	24.99	28.44	(3.45)	0.88
Commercial A2(b)	0.4kV	0	24.79	26.96	(2.17)	0.92
Commercial A2(c)	0.4kV	359	25.74	25.80	(0.05)	1.00
Industrial B1(a)	0.2kV	39	24.07	32.98	(8.91)	0.73
Industrial B2(a)	0.4kV	-	-	-	-	-
Industrial B1(b)	0.4kV	498	22.67	27.01	(4.33)	0.84
Industrial B2(b)	0.4kV	1,087	24.92	23.83	1.09	1.05
Industrial B3	11kV	1,234	24.84	18.47	6.37	1.35
Industrial B4	132kV	-	-	-	-	-
Bulk Supply C1(a)	0.2kV	0	24.62	25.88	(1.26)	0.95
Bulk Supply C1(b)	0.4kV	0	29.30	28.86	0.44	1.02
Bulk Supply C2(a)	11kV	-	-	-	-	-
Bulk Supply C3(a)	132kV	-	-	-	-	-
Bulk Supply C1(c)	0.4kV	11	24.13	27.49	(3.36)	0.88
Bulk Supply C2(b)	11kV	170	24.90	19.14	5.76	1.30
Bulk Supply C3(b)	132kV	-	-	-	-	-
Agricultural D1(a)	0.4kV	0	24.62	25.46	(0.84)	0.97
Agricultural D2(a)	0.4kV	80	24.62	20.81	3.81	1.18
Agricultural D2(b)	0.4kV	467	24.20	23.09	1.11	1.05
Agricultural D1(b)	0.4kV	0	23.59	24.64	(1.05)	0.96
Temporary E1(i)	0.2kV	1	29.01	25.75	3.26	1.13
Temporary E1(ii)	0.2kV	15	25.01	23.45	1.56	1.07
Temporary E2	0.2kV	0	26.96	26.72	0.24	1.01
Public Lighting G	0.4kV	14	28.31	33.44	(5.13)	0.85
Residential Col.H	11kV	1	28.61	22.04	6.57	1.30
A J K K1a	11kV	-	-	-	-	-
A J K K1b	11kV	270	24.75	21.00	3.74	1.18
A3 General	0.4kV	170	24.78	25.53	(0.75)	0.97
Sub Total		11,777	23.74	23.99	(0.25)	0.99



### Revenue, Cost of Service and Subsidies (11 kV and Above)

The revenue, cost of service and subsidies for customer categories that fall under 11kv are summarized at Table 19 below.

Table 19

FY 2022-23											
Customer Class	Voltage	Sales GWh	Demand MW	Revenue as per NEPRA Tariff			Cost of Service			Difference Subsidy M. PKR	Subsidy Rs./kWh
				Demand Charge (M.PKR)	Energy Charge M.PKR	Total M. PKR	Demand Cost (M.PKR)	Energy Cost M.PKR	Total M. PKR		
Industrial B3	11kV	1,234	166	1,536	29,018	30,555	9,885	12,905	22,791	7,864	6.37
Bulk Supply C2(a)	11kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C2(b)	11kV	170	25	189	4,049	4,238	1,477	1,780	3,258	980	5.76
Residential Col.H	11kV	1	0	-	20	20	8	7	16	5	6.57
A J K K1a	11kV	-	-	-	-	-	-	-	-	-	-
A J K K1b	11kV	270	48	34	6,637	6,671	2,842	2,819	5,662	1,009	3.74

### Revenue/kWh, Cost of Service/kWh and Subsidies/kWh (BPC only)

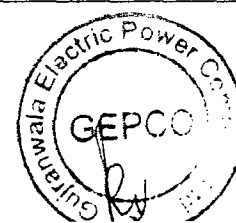
With regard to the above analysis, the following points are emphasized:

1. Currently, there is no 132/66 KV customer within GEPCO, therefore, in the absence of real data, no values thereof could be assessed. A broad assessment of the Cost of Service of such customers can, however, be inferred based on analogy of other closest category of customers (e.g. B-3 for B-4 and C-2 for C-3) by incorporating differential of energy losses.
2. Although the Industrial B-3 and Bulk Supply C2 customers are at 11 KV connection level, however, any of these customers may not fall within the definition of BPC as contained in NEPRA Act, 1997, being less than 1 kW.
3. The customer categories A-2 and A-3, for purposes of cost of service assessment, have been considered at 0.4 KV level. However, these costumers, based on the sanctioned load, may be connected at 11 KV level, as required.
4. Consumer category for tariff H, i.e. housing colonies attached to industries, despite being connected at 11 kV, cannot be considered as BPC for (i) principally being resale in nature and (ii) being less than 1 MW.
5. The supply feed for AJK customer category is primarily for resale purpose, therefore, not entitled for consideration as BPC.

Based on the above clarification, the abstract of Revenue (Rs./kWh), the Cost of Service (Rs./kWh) and resultant cross-subsidy (Rs./kWh) is appended at Table 20 below.

Table 20

FY 2022-23					
Customer Class	Voltage	Sales GWh	Revenue Rs./kWh	Cost of Service Rs./kWh	Subsidy Rs./kWh
Industrial B3	11kV	1,234	24.84	18.47	6.37
Bulk Supply C2(b)	11kV	170	24.90	19.14	5.76

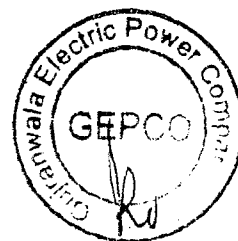


## Master Data for Results of GEPCO's Cost of Service Study (FY 2022-23)

For interest of the readers to glance through overall master data for result of GEPCO's Cost of Service Study (FY 2022-23), following Tables (Table 21 to Table 27) are added separately.

### Final Remarks:

- The above Cost of Service Study Report (FY 2022-23) is a sincere human effort to arrive at judicious assessment of functional (generation, transmission, market operator, distribution and customer services) costs for each category of consumers demonstrating the needs and parameters associated with relevant category.
- The results of the study are to be used for the purposes of rate making of Use of System Charges for possible eligible Bulk Power Consumers.
- The Fully Allocated Cost of Service (FACOS) model used for the purpose of this study is realistically elaborate, professionally structured in line with international practices and reasonably accurate to provide equitable results in terms of costs associated with demonstrated needs of the customers. Human errors and omissions are, however, expected.
- The underlying assumptions made and considerations relied upon in carrying out this Cost of Service Study were adopted with all possible care, without any prejudice and have been disclosed in details to the extent possible.
- Inherent and unforeseen limitations of the FACOS model, assumptions made and consideration relied upon may not be as exhaustive as expected; accordingly, for the purposes of rate making of Use of System Charges, certain out of the model iterations may be necessary.
- While the Cost of Service is substantially (99%) covered by the determined tariffs, inherent cross subsidization and possibility of stranded costs need considerate, careful, concerted and continuous attention for proactive mitigation thereof.
- While currently certain classes of consumers are enjoying benefit of inter and intra tariff subsidies, the other categories of consumers are paying huge (30~35%) cross-subsidies. For a robust, vibrant and successful wholesale, and later retail, power market, minimization, if not elimination, of intra and inter tariff subsidies shall remain fundamental requirement.



GEPCO – Petition for Determination Use of System Charges (January, 2023) **Annex-2****Table 21**

<b>COST OF SERVICE FY 2022-23</b>														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Cost (Rs. M)	Cost Rs./kWh sold	Cost Rs./kWh Purchased
		Sold	Purchased	at Meter	at CDP	Energy (Rs.M)	Demand (Rs.M)	Cost (Rs.M)	Cost (Rs.M)	Demand (Rs.M)	cust. Cost (Rs.M)			
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	67,562	71,588	6,571	31	13,925	7,202	166,879	24.67	22.31
Residential -- A1(b)	0.4kV	197	217	41	46	1,964	1,990	183	1	587	167	4,691	23.85	21.57
Commercial -- A2(a)	0.2kV	400	442	112	124	3,996	5,408	496	2	1,052	426	11,380	28.44	25.72
Commercial -- A2(b)	0.4kV	0	0	0	0	4	6	1	0	1	0	12	26.96	24.39
Commercial -- A2(c)	0.4kV	359	397	87	96	3,583	4,172	383	2	812	304	9,256	25.80	23.33
Industrial -- B1(a)	0.2kV	39	43	14	15	389	664	61	0	129	41	1,285	32.98	29.83
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	4,972	6,259	574	3	1,217	422	13,447	27.01	24.43
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	10,850	10,975	1,007	5	2,135	921	25,893	23.83	21.55
Industrial -- B3	11kV	1,234	1,313	166	177	11,862	7,703	707	3	1,771	1,043	22,791	18.47	17.35
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	1	1	0	0	0	0	1	25.88	23.40
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	2	3	0	0	1	0	5	28.86	26.10
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	107	138	13	0	27	9	293	27.49	24.87
Single Point Supply -- C2(b)	11kV	170	181	25	26	1,636	1,151	106	1	220	144	3,258	19.14	17.98
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	0	0	0	0	0	0	1	25.46	23.03
Agricultural -- D2(a)	0.4kV	80	88	13	14	799	620	57	0	121	68	1,664	20.81	18.82
Agricultural -- D2(b)	0.4kV	467	516	92	102	4,659	4,444	408	2	965	395	10,773	23.09	20.89
Agricultural -- D1(b)	0.4kV	0	0	0	0	1	1	0	0	0	0	2	24.64	22.29
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	11	13	1	0	2	1	29	25.75	23.29
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	146	141	13	0	27	16	343	23.45	21.21
Temporary Supply -- E2	0.2kV	0	0	0	0	4	5	0	0	1	0	10	26.72	24.17
Public Lighting -- G	0.4kV	14	15	5	6	136	240	22	0	47	12	456	33.44	30.25
Residential Colonies -- H	11kV	1	1	0	0	7	6	1	0	1	1	16	22.04	20.71
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	2,592	2,215	203	1	423	228	5,662	21.00	19.73
A3 General	0.4kV	170	188	40	45	1,698	1,942	178	1	378	144	4,341	25.53	23.09
<b>Total</b>		<b>11,777</b>	<b>12,952</b>	<b>2,495</b>	<b>2,749</b>	<b>116,981</b>	<b>119,684</b>	<b>10,986</b>	<b>52</b>	<b>23,242</b>	<b>11,543</b>	<b>282,488</b>	<b>23.99</b>	<b>21.81</b>

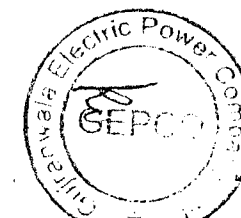




Table 22

COST OF SERVICE FY 2022-23 (per kW or kWh SOLD)														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Fixed Cost	Total Cost
		Sold	Purchased	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kW/M)	Cost (Rs./kW/M)	Cost (Rs./kW/M)	Demand (Rs./kW/M)	cust. Cost (Rs./kW/M)	(Rs./kW/ M)	Rs./kWh sold	Rs./kWh Sold
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	9.99	4,011.65	368.23	1.74	780.34	403.56	5,565.52	14.68	24.67
Residential -- A1(b)	0.4kV	197	217	41	46	9.99	4,011.65	368.23	1.74	780.34	335.97	5,497.94	13.86	23.85
Commercial -- A2(a)	0.2kV	400	442	112	124	9.99	4,011.65	368.23	1.74	780.34	315.99	5,477.95	18.45	28.44
Commercial -- A2(b)	0.4kV	0	0	0	0	9.99	4,011.65	368.23	1.74	780.34	271.18	5,433.15	16.97	26.96
Commercial -- A2(c)	0.4kV	359	397	87	96	9.99	4,011.65	368.23	1.74	780.34	292.30	5,454.26	15.81	25.80
Industrial -- B1(a)	0.2kV	39	43	14	15	9.99	4,011.65	368.23	1.74	780.34	250.55	5,412.51	22.99	32.98
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	9.99	4,011.65	368.23	1.74	780.34	270.39	5,432.35	17.02	27.01
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	9.99	4,011.65	368.23	1.74	780.34	336.49	5,498.45	13.84	23.83
Industrial -- B3	11kV	1,234	1,313	166	177	9.61	3,862.12	354.50	1.68	737.72	522.90	5,478.92	8.86	18.47
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	9.61	4,011.65	368.23	1.74	780.34	361.51	5,523.48	16.26	25.88
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	9.99	4,011.65	368.23	1.74	780.34	242.60	5,404.56	18.87	28.86
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	9.99	4,011.65	368.23	1.74	780.34	262.50	5,424.46	17.51	27.49
Single Point Supply -- C2(b)	11kV	170	181	25	26	9.61	3,862.12	354.50	1.68	737.72	482.64	5,438.65	9.52	19.14
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	9.99	4,011.65	368.23	1.74	780.34	299.00	5,460.96	15.47	25.46
Agricultural -- D2(a)	0.4kV	80	88	13	14	9.99	4,011.65	368.23	1.74	780.34	438.43	5,600.39	10.82	20.81
Agricultural -- D2(b)	0.4kV	467	516	92	102	9.99	4,011.65	368.23	1.74	780.34	356.77	5,518.73	13.11	23.09
Agricultural -- D1(b)	0.4kV	0	0	0	0	9.99	4,011.65	368.23	1.74	780.34	316.72	5,478.69	14.66	24.64
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	9.99	4,011.65	368.23	1.74	780.34	373.76	5,535.72	15.76	25.75
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	9.99	4,011.65	368.23	1.74	780.34	443.24	5,605.20	13.46	23.45
Temporary Supply -- E2	0.2kV	0	0	0	0	9.99	4,011.65	368.23	1.74	780.34	350.70	5,512.66	16.73	26.72
Public Lighting -- G	0.4kV	14	15	5	6	9.99	4,011.65	368.23	1.74	780.34	193.46	5,355.42	23.45	33.44
Residential Colonies -- H	11kV	1	1	0	0	9.61	3,862.12	354.50	1.68	737.72	361.71	5,317.73	12.43	22.04
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	9.61	3,862.12	354.50	1.68	737.72	397.30	5,353.32	11.39	21.00
A3 General	0.4kV	170	188	40	45	9.99	4,011.65	368.23	1.74	780.34	297.63	5,459.59	15.54	25.53
Total		11,777	12,952	2,495	2,749	9.93	3,997.33	366.91	1.74	776.26	385.52	5,527.76	14.05	23.99

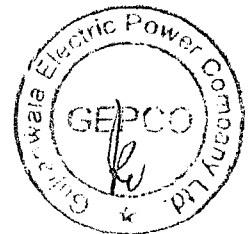
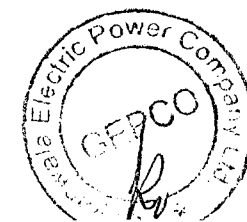


Table 23

COST OF SERVICE FY 2022-23 (per kW or kWh at Purchased)														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Fixed Cost	Total Cost
		Sold	Purchased	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kW/M)	Cost (Rs./kW/M)	Cost (Rs./kW/M)	Demand (Rs./kW/M)	cust. Cost (Rs./kW/M)	Cost (Rs./kW/M)	Rs./kWh Purchased	Rs./kWh Purchased
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	9.03	3,628.45	333.05	1.58	705.81	365.01	5,033.90	13.28	22.31
Residential -- A1(b)	0.4kV	197	217	41	46	9.03	3,628.45	333.05	1.58	705.81	303.88	4,972.77	12.54	21.57
Commercial -- A2(a)	0.2kV	400	442	112	124	9.03	3,628.45	333.05	1.58	705.81	285.80	4,954.69	16.69	25.72
Commercial -- A2(b)	0.4kV	0	0	0	0	9.03	3,628.45	333.05	1.58	705.81	245.28	4,914.17	15.35	24.39
Commercial -- A2(c)	0.4kV	359	397	87	96	9.03	3,628.45	333.05	1.58	705.81	264.38	4,933.27	14.30	23.33
Industrial -- B1(a)	0.2kV	39	43	14	15	9.03	3,628.45	333.05	1.58	705.81	226.62	4,895.51	20.80	29.83
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	9.03	3,628.45	333.05	1.58	705.81	244.56	4,913.45	15.40	24.43
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	9.03	3,628.45	333.05	1.58	705.81	304.35	4,973.23	12.52	21.55
Industrial -- B3	11kV	1,234	1,313	166	177	9.03	3,628.45	333.05	1.58	693.09	491.26	5,147.44	8.32	17.35
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	8.70	3,628.45	333.05	1.58	705.81	326.98	4,995.87	14.71	23.40
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	9.03	3,628.45	333.05	1.58	705.81	219.43	4,888.31	17.07	26.10
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	9.03	3,628.45	333.05	1.58	705.81	237.43	4,906.32	15.84	24.87
Single Point Supply -- C2(b)	11kV	170	181	25	26	9.03	3,628.45	333.05	1.58	693.09	453.44	5,109.61	8.95	17.98
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	9.03	3,628.45	333.05	1.58	705.81	270.44	4,939.33	14.00	23.03
Agricultural -- D2(a)	0.4kV	80	88	13	14	9.03	3,628.45	333.05	1.58	705.81	396.55	5,065.44	9.79	18.82
Agricultural -- D2(b)	0.4kV	467	516	92	102	9.03	3,628.45	333.05	1.58	705.81	322.69	4,991.58	11.85	20.89
Agricultural -- D1(b)	0.4kV	0	0	0	0	9.03	3,628.45	333.05	1.58	705.81	286.47	4,955.36	13.26	22.29
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	9.03	3,628.45	333.05	1.58	705.81	338.06	5,006.95	14.26	23.29
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	9.03	3,628.45	333.05	1.58	705.81	400.90	5,069.79	12.17	21.21
Temporary Supply -- E2	0.2kV	0	0	0	0	9.03	3,628.45	333.05	1.58	705.81	317.20	4,986.09	15.13	24.17
Public Lighting -- G	0.4kV	14	15	5	6	9.03	3,628.45	333.05	1.58	705.81	174.98	4,843.87	21.21	30.25
Residential Colonies -- H	11kV	1	1	0	0	9.03	3,628.45	333.05	1.58	693.09	339.83	4,996.00	11.67	20.71
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	9.03	3,628.45	333.05	1.58	693.09	373.27	5,029.44	10.70	19.73
A3 General	0.4kV	170	188	40	45	9.03	3,628.45	333.05	1.58	705.81	269.20	4,938.09	14.06	23.09
<b>Total</b>		<b>11,777</b>	<b>12,952</b>	<b>2,495</b>	<b>2,749</b>	<b>9.03</b>	<b>3,628.45</b>	<b>333.05</b>	<b>1.58</b>	<b>704.63</b>	<b>349.94</b>	<b>5,017.66</b>	<b>12.78</b>	<b>21.81</b>



**Table 24**

<b>COST OF SERVICE FY 2022-23 (per kWh SOLD)</b>														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Fixed Cost	Total Cost
		Sold	Purchased	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kWh)	Cost (Rs./kWh)	Cost (Rs./kWh)	Demand (Rs./kWh)	cust. Cost (Rs./kWh)	(Rs./kWh)	Rs./kWh Purchased	Rs./kWh Sold
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	9.99	10.58	0.97	0.005	2.06	1.06	14.68	14.68	24.67
Residential -- A1(b)	0.4kV	197	217	41	46	9.99	10.12	0.93	0.004	1.97	0.85	13.86	13.86	23.85
Commercial -- A2(a)	0.2kV	400	442	112	124	9.99	13.51	1.24	0.006	2.63	1.06	18.45	18.45	28.44
Commercial -- A2(b)	0.4kV	0	0	0	0	9.99	12.53	1.15	0.005	2.44	0.85	16.97	16.97	26.96
Commercial -- A2(c)	0.4kV	359	397	87	96	9.99	11.63	1.07	0.005	2.26	0.85	15.81	15.81	25.80
Industrial -- B1(a)	0.2kV	39	43	14	15	9.99	17.04	1.56	0.007	3.32	1.06	22.99	22.99	32.98
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	9.99	12.57	1.15	0.005	2.45	0.85	17.02	17.02	27.01
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	9.99	10.10	0.93	0.004	1.96	0.85	13.84	13.84	23.83
Industrial -- B3	11kV	1,234	1,313	166	177	9.61	6.24	0.57	0.003	1.19	0.85	8.86	8.86	18.47
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	9.61	11.81	1.08	0.005	2.30	1.06	16.26	16.26	25.88
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	9.99	14.01	1.29	0.006	2.73	0.85	18.87	18.87	28.86
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	9.99	12.95	1.19	0.006	2.52	0.85	17.51	17.51	27.49
Single Point Supply -- C2(b)	11kV	170	181	25	26	9.61	6.76	0.62	0.003	1.29	0.85	9.52	9.52	19.14
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural --D1(a)	0.4kV	0	0	0	0	9.99	11.37	1.04	0.005	2.21	0.85	15.47	15.47	25.46
Agricultural --D2(a)	0.4kV	80	88	13	14	9.99	7.75	0.71	0.003	1.51	0.85	10.82	10.82	20.81
Agricultural --D2(b)	0.4kV	467	516	92	102	9.99	9.53	0.87	0.004	1.85	0.85	13.11	13.11	23.09
Agricultural --D1(b)	0.4kV	0	0	0	0	9.99	10.73	0.99	0.005	2.09	0.85	14.66	14.66	24.64
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	9.99	11.42	1.05	0.005	2.22	1.06	15.76	15.76	25.75
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	9.99	9.63	0.88	0.004	1.87	1.06	13.46	13.46	23.45
Temporary Supply -- E2	0.2kV	0	0	0	0	9.99	12.18	1.12	0.005	2.37	1.06	16.73	16.73	26.72
Public Lighting -- G	0.4kV	14	15	5	6	9.99	17.57	1.61	0.008	3.42	0.85	23.45	23.45	33.44
Residential Colonies -- H	11kV	1	1	0	0	9.61	9.03	0.83	0.004	1.72	0.85	12.43	12.43	22.04
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	9.61	8.22	0.75	0.004	1.57	0.85	11.39	11.39	21.00
A3 General	0.4kV	170	188	40	45	9.99	11.42	1.05	0.005	2.22	0.85	15.54	15.54	25.53
<b>Total</b>		<b>11,777</b>	<b>12,952</b>	<b>2,495</b>	<b>2,749</b>	<b>9.93</b>	<b>10.16</b>	<b>0.93</b>	<b>0.004</b>	<b>1.97</b>	<b>0.98</b>	<b>14.05</b>	<b>14.05</b>	<b>23.99</b>



**Table 25**

<b>COST OF SERVICE FY 2022-23 (per kWh Purchased)</b>														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Fixed Cost	Total Cost
		Sold	Purchased	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kWh)	Cost (Rs./kWh)	Cost (Rs./kWh)	Demand (Rs./kWh)	cust. Cost (Rs./kWh)	Cost (Rs./kWh)	Rs./kWh Purchased	Rs./kWh Purchased
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	9.03	9.57	0.88	0.004	1.86	0.96	13.28	13.28	22.31
Residential -- A1(b)	0.4kV	197	217	41	46	9.03	9.15	0.84	0.004	1.78	0.77	12.54	12.54	21.57
Commercial -- A2(a)	0.2kV	400	442	112	124	9.03	12.22	1.12	0.005	2.38	0.96	16.69	16.69	25.72
Commercial -- A2(b)	0.4kV	0	0	0	0	9.03	11.34	1.04	0.005	2.21	0.77	15.35	15.35	24.39
Commercial -- A2(c)	0.4kV	359	397	87	96	9.03	10.52	0.97	0.005	2.05	0.77	14.30	14.30	23.33
Industrial -- B1(a)	0.2kV	39	43	14	15	9.03	15.41	1.41	0.007	3.00	0.96	20.80	20.80	29.83
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	9.03	11.37	1.04	0.005	2.21	0.77	15.40	15.40	24.43
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	9.03	9.14	0.84	0.004	1.78	0.77	12.52	12.52	21.55
Industrial -- B3	11kV	1,234	1,313	166	177	9.03	5.87	0.54	0.003	1.12	0.79	8.32	8.32	17.35
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	8.70	10.68	0.98	0.005	2.08	0.96	14.71	14.71	23.40
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	9.03	12.67	1.16	0.006	2.46	0.77	17.07	17.07	26.10
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	9.03	11.71	1.07	0.005	2.28	0.77	15.84	15.84	24.87
Single Point Supply -- C2(b)	11kV	170	181	25	26	9.03	6.35	0.58	0.003	1.21	0.79	8.95	8.95	17.98
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	9.03	10.28	0.94	0.004	2.00	0.77	14.00	14.00	23.03
Agricultural -- D2(a)	0.4kV	80	88	13	14	9.03	7.01	0.64	0.003	1.36	0.77	9.79	9.79	18.82
Agricultural -- D2(b)	0.4kV	467	516	92	102	9.03	8.62	0.79	0.004	1.68	0.77	11.85	11.85	20.89
Agricultural -- D1(b)	0.4kV	0	0	0	0	9.03	9.71	0.89	0.004	1.89	0.77	13.26	13.26	22.29
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	9.03	10.33	0.95	0.004	2.01	0.96	14.26	14.26	23.29
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	9.03	8.71	0.80	0.004	1.69	0.96	12.17	12.17	21.21
Temporary Supply -- E2	0.2kV	0	0	0	0	9.03	11.01	1.01	0.005	2.14	0.96	15.13	15.13	24.17
Public Lighting -- G	0.4kV	14	15	5	6	9.03	15.89	1.46	0.007	3.09	0.77	21.21	21.21	30.25
Residential Colonies -- H	11kV	1	1	0	0	9.03	8.48	0.78	0.004	1.62	0.79	11.67	11.67	20.71
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	9.03	7.72	0.71	0.003	1.47	0.79	10.70	10.70	19.73
A3 General	0.4kV	170	188	40	45	9.03	10.33	0.95	0.004	2.01	0.77	14.06	14.06	23.09
<b>Total</b>		<b>11,777</b>	<b>12,952</b>	<b>2,495</b>	<b>2,749</b>	<b>9.03</b>	<b>9.24</b>	<b>0.85</b>	<b>0.004</b>	<b>1.79</b>	<b>0.89</b>	<b>12.78</b>	<b>12.78</b>	<b>21.81</b>

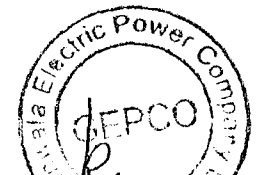


Table 26

FY 2022-23 (Impact of Losses on per kW or kWh basis)														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Total Fixed Cost	Total Cost
		Sold	Purchased	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kW/M)	Cost (Rs./kW/M)	Cost (Rs./kW/M)	Demand (Rs./kW/M)	cust. Cost (Rs./kW/M)	(Rs./kW/ M)	(Rs./kWh)	(Rs./kWh)
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	0.95	383.20	35.17	0.17	74.54	38.55	531.62	1.40	2.36
Residential -- A1(b)	0.4kV	197	217	41	46	0.95	383.20	35.17	0.17	74.54	32.09	525.17	1.32	2.28
Commercial -- A2(a)	0.2kV	400	442	112	124	0.95	383.20	35.17	0.17	74.54	30.18	523.26	1.76	2.72
Commercial -- A2(b)	0.4kV	0	0	0	0	0.95	383.20	35.17	0.17	74.54	25.90	518.98	1.62	2.58
Commercial -- A2(c)	0.4kV	359	397	87	96	0.95	383.20	35.17	0.17	74.54	27.92	520.99	1.51	2.46
Industrial -- B1(a)	0.2kV	39	43	14	15	0.95	383.20	35.17	0.17	74.54	23.93	517.01	2.20	3.15
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	0.95	383.20	35.17	0.17	74.54	25.83	518.90	1.63	2.58
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	0.95	383.20	35.17	0.17	74.54	32.14	525.22	1.32	2.28
Industrial -- B3	11kV	1,234	1,313	166	177	0.58	233.66	21.45	0.10	44.63	31.64	331.48	0.54	1.12
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	0.92	383.20	35.17	0.17	74.54	34.53	527.61	1.55	2.47
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	0.95	383.20	35.17	0.17	74.54	23.17	516.25	1.80	2.76
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	0.95	383.20	35.17	0.17	74.54	25.07	518.15	1.67	2.63
Single Point Supply -- C2(b)	11kV	170	181	25	26	0.58	233.66	21.45	0.10	44.63	29.20	329.04	0.58	1.16
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	0.95	383.20	35.17	0.17	74.54	28.56	521.63	1.48	2.43
Agricultural -- D2(a)	0.4kV	80	88	13	14	0.95	383.20	35.17	0.17	74.54	41.88	534.95	1.03	1.99
Agricultural -- D2(b)	0.4kV	467	516	92	102	0.95	383.20	35.17	0.17	74.54	34.08	527.15	1.25	2.21
Agricultural -- D1(b)	0.4kV	0	0	0	0	0.95	383.20	35.17	0.17	74.54	30.25	523.33	1.40	2.35
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	0.95	383.20	35.17	0.17	74.54	35.70	528.78	1.51	2.46
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	0.95	383.20	35.17	0.17	74.54	42.34	535.41	1.29	2.24
Temporary Supply -- E2	0.2kV	0	0	0	0	0.95	383.20	35.17	0.17	74.54	33.50	526.57	1.60	2.55
Public Lighting -- G	0.4kV	14	15	5	6	0.95	383.20	35.17	0.17	74.54	18.48	511.55	2.24	3.19
Residential Colonies -- H	11kV	1	1	0	0	0.58	233.66	21.45	0.10	44.63	21.88	321.73	0.75	1.33
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	0.58	233.66	21.45	0.10	44.63	24.04	323.88	0.69	1.27
A3 General	0.4kV	170	188	40	45	0.95	383.20	35.17	0.17	74.54	28.43	521.50	1.48	2.44
<b>Total</b>		<b>11,777</b>	<b>12,952</b>	<b>2,495</b>	<b>2,749</b>	<b>0.90</b>	<b>368.87</b>	<b>33.86</b>	<b>0.16</b>	<b>71.63</b>	<b>35.58</b>	<b>510.10</b>	<b>1.27</b>	<b>2.18</b>

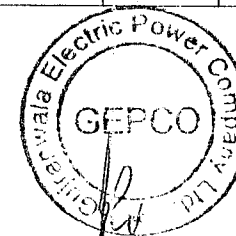


Table 27

FY 2022-23 (Impact of Losses on per kWh basis)														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Total Fixed Cost	Total Cost
		Sold	Purchased	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kW/M)	Cost (Rs./kW/M)	Cost (Rs./kW/M)	Demand (Rs./kW/M)	cust. Cost (Rs./kW/M)	Cost (Rs./kW/M)	Cost (Rs./kWh)	Cost (Rs./kWh)
Residential -- A1(a)	0.2kV	6,766	7,480	1,487	1,644	0.95	1.01	0.09	0.0004	0.20	0.10	1.40	1.40	2.36
Residential -- A1(b)	0.4kV	197	217	41	46	0.95	0.97	0.09	0.0004	0.19	0.08	1.32	1.32	2.28
Commercial -- A2(a)	0.2kV	400	442	112	124	0.95	1.29	0.12	0.0006	0.25	0.10	1.76	1.76	2.72
Commercial -- A2(b)	0.4kV	0	0	0	0	0.95	1.20	0.11	0.0005	0.23	0.08	1.62	1.62	2.58
Commercial -- A2(c)	0.4kV	359	397	87	96	0.95	1.11	0.10	0.0005	0.22	0.08	1.51	1.51	2.46
Industrial -- B1(a)	0.2kV	39	43	14	15	0.95	1.63	0.15	0.0007	0.32	0.10	2.20	2.20	3.15
Industrial -- B2(a)	0.4kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial -- B1(b)	0.4kV	498	550	130	144	0.95	1.20	0.11	0.0005	0.23	0.08	1.63	1.63	2.58
Industrial -- B2(b)	0.4kV	1,087	1,201	228	252	0.95	0.96	0.09	0.0004	0.19	0.08	1.32	1.32	2.28
Industrial -- B3	11kV	1,234	1,313	166	177	0.58	0.38	0.03	0.0002	0.07	0.05	0.54	0.54	1.12
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	0.92	1.13	0.10	0.0005	0.22	0.10	1.55	1.55	2.47
Single Point Supply -- C1(b)	0.4kV	0	0	0	0	0.95	1.34	0.12	0.0006	0.26	0.08	1.80	1.80	2.76
Single Point Supply -- C2(a)	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	11	12	3	3	0.95	1.24	0.11	0.0005	0.24	0.08	1.67	1.67	2.63
Single Point Supply -- C2(b)	11kV	170	181	25	26	0.58	0.41	0.04	0.0002	0.08	0.05	0.58	0.58	1.16
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	0.95	1.09	0.10	0.0005	0.21	0.08	1.48	1.48	2.43
Agricultural -- D2(a)	0.4kV	80	88	13	14	0.95	0.74	0.07	0.0003	0.14	0.08	1.03	1.03	1.99
Agricultural -- D2(b)	0.4kV	467	516	92	102	0.95	0.91	0.08	0.0004	0.18	0.08	1.25	1.25	2.21
Agricultural -- D1(b)	0.4kV	0	0	0	0	0.95	1.03	0.09	0.0004	0.20	0.08	1.40	1.40	2.35
Temporary Supply -- E1(i)	0.2kV	1	1	0	0	0.95	1.09	0.10	0.0005	0.21	0.10	1.51	1.51	2.46
Temporary Supply -- E1(ii)	0.2kV	15	16	3	3	0.95	0.92	0.08	0.0004	0.18	0.10	1.29	1.29	2.24
Temporary Supply -- E2	0.2kV	0	0	0	0	0.95	1.16	0.11	0.0005	0.23	0.10	1.60	1.60	2.55
Public Lighting -- G	0.4kV	14	15	5	6	0.95	1.68	0.15	0.0007	0.23	0.08	2.24	2.24	3.19
Residential Colonies -- H	11kV	1	1	0	0	0.58	0.55	0.05	0.0002	0.10	0.05	0.75	0.75	1.33
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	270	287	48	51	0.58	0.50	0.05	0.0002	0.09	0.05	0.69	0.69	1.27
A3 General	0.4kV	170	188	40	45	0.95	1.09	0.10	0.0005	0.21	0.08	1.48	1.48	2.44
<b>Total</b>		<b>11,777</b>	<b>12,952</b>	<b>2,495</b>	<b>2,749</b>	<b>0.90</b>	<b>0.92</b>	<b>0.08</b>	<b>0.0004</b>	<b>0.18</b>	<b>0.09</b>	<b>1.27</b>	<b>1.27</b>	<b>2.18</b>

