



QUETTA ELECTRIC SUPPLY COMPANY LIMITED

Office of the Chief Executive Officer
QESCO, Zarghoon Road, Quetta Cantt:
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No. CEO/QESCO/ 10550

15, March 2023

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

Subject: PETITION FOR DETERMINATION OF USE OF SYSTEM CHARGES

1. In pursuance of Section-07 of NEPRA's Open Access (Interconnection Wheeling of Electrical Power) Regulations 2022, whereby a Distribution Company shall prepare & submit a separate petition to the honourable Authority for determination of its Use of System Charges.

2. Therefore, in this context enclosed please find herewith the petition for determination of Use of System Charges including Cost of Service Study (CoSS) of QESCO (FY 2022-23) as Annex-A, thereto forming fundamental basis for instant petition, for kind perusal & approval of Authority.

3. For any clarification or additional information or any other matter relating to this application Mr. Yasir Faheem, Director General (MIRAD) QESCO, Quetta (Cell No. 0321-8103243 email: mirad.quesco@gmail.com) is designated focal person.

D/A (as above)

Engr. Abdul Kareem Jamali
Chief Executive Officer
QESCO, Quetta

Tariff Division Record
By No. 18003
Dated 21-3-23

REGISTRAR OFFICE

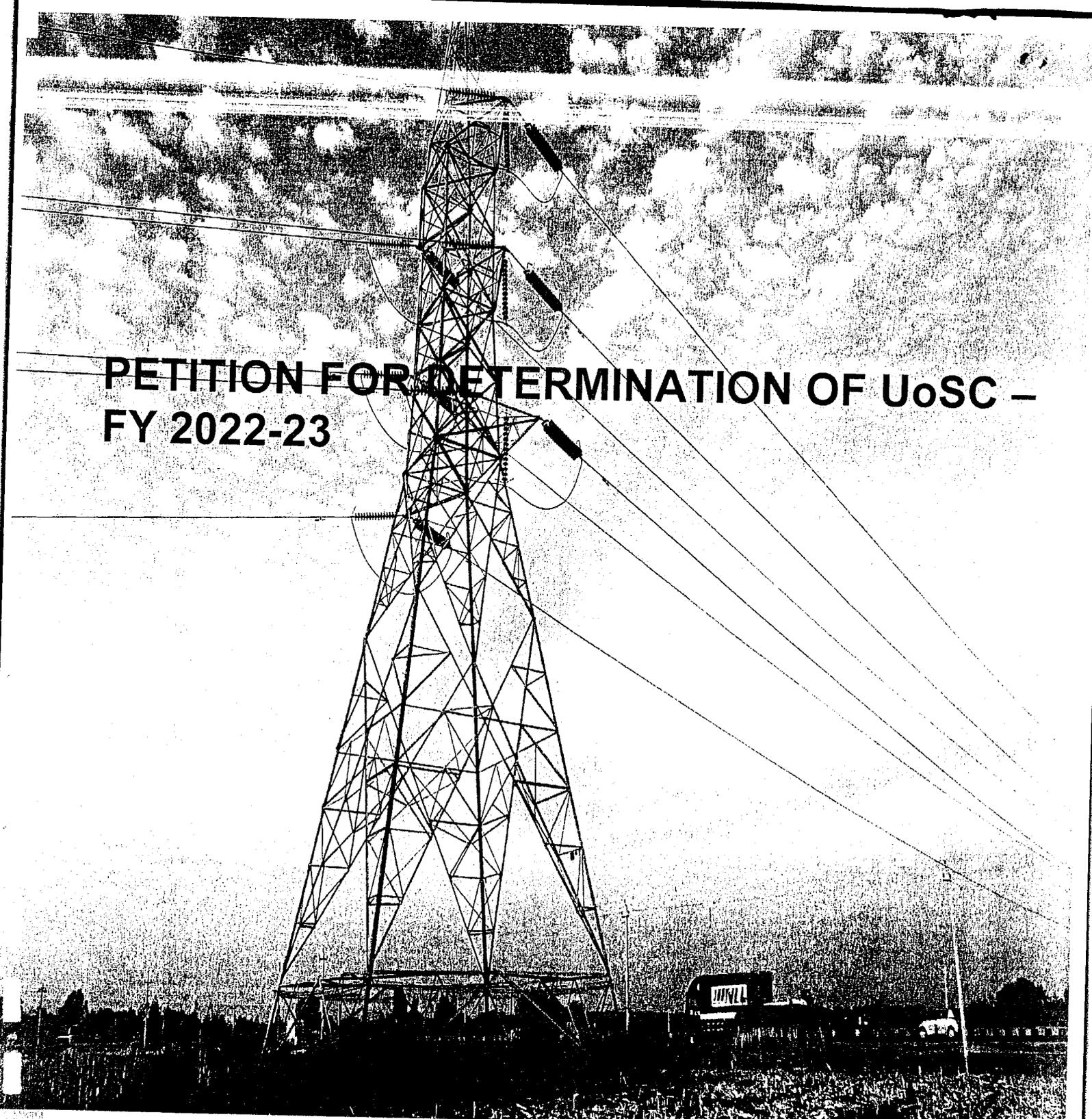
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For kind information please:
1. Chairman 2. M (Tech.)
3. M (Lic.) 4. M (Trf. & Fin.)
5. M (Law)

Handwritten signatures and initials: Engr. Abdul Kareem Jamali, 22/3, Dir. (Tech.), CTBCM, DG (CR02)



**PETITION FOR DETERMINATION OF UoSC –
FY 2022-23**

QUETTA ELECTRIC SUPPLY COMPANY



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Background

As a result, of restructuring, QUETTA Electric Supply Company (QESCO) obtained Certificate for Commencement of Business on 13th May, 1998 bearing # L 09520 of 1997-98. The QESCO is responsible for Supply of Electricity to almost 0.685 Million Consumers of different categories of 34 Districts (namely Awaran, Barkhan, Kachhi, Chagai, Chaman, Dera Bughti, Duki, Gwadar, Harnai, Jafarabad, Jhal Magsi, Kalat, Kech, Kalat, Kharan, Kohlu, Khuzdar, Lesbela, Loralai, Mastung, Musakhel, Nasirabad, Nushki, Qilla Abdullah, Qilla Saifullah, Panjgur, Pishin, Sherani, Sibi, Sohbatpur, Surab, Washuk, Zhob,,Karezat, Usta Muhammad & Quetta) of Balochistan Province except district Lasbella, as set out in QESCO's Distribution License No.08/DL/2002, granted by NEPRA under the NEPRA Act on April 30, 2002. The Company is Headed by a Chief Executive Officer (CEO) and QESCO Board of Directors.

Under the Provisions of Regulation of Generation, Transmission & Distribution of Electric Power (Amendment) Act, 2018, QESCO 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 April 30, 2023 and accordingly QESCO will submitted an Application for Grant of License for Supply of Electric Power to the Authority with in due course of time.

After the approval of Competitive Trading Bilateral Contract Market (*CTBCM*) by the honorable Authority on November 12, 2020, several steps have been taken wherein, 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 also established balance in roles, rights and obligations of the stakeholders in the CTBCM are included.

Grounds of Petition:

Pursuant to the relevant directions of National Electricity Policy 2021 (“*NE Policy-2021*”) read with Section-7 of the NEPRA’s 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 (UoSC):

- a. In compliance with the NE Policy-2021 Clause 4.4, Clause 5.5.2(f), Clause 5.5.2(g), Clause 5.5.4 and Clause 5.6.5 and;
- b. In compliance with the Section-7 of Open Access Regulations, each distribution licensee, in consultation with the respective supplier of last resort shall, within ninety days following the date of notification (*i.e. 02.11.2022*) of Open Access Regulation, submit separate petition to the Authority for Determination of Use of System Charges (*UoSC*).

Directions in National Electricity Policy, 2021:

The National Electricity Policy, 2021 issued under Section 14A of the NEPRA’s Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (“The Act”) was prepared by 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 decision making in the power sector to achieve identified goals.

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

Clause 4.4 (Financial Viability):

Clause 4.4.1 “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 (Market Development and Operation):

Clause 5.5.2(f) *“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) *“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 *“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 (Cost of Service, Tariff and Subsidies):

Clause 5.6.5 *“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 Bilateral Contract 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 per provision of 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:

Clause 2 (Definition) of the NEPRA's Act 1997 (Amended):

Clause 2(ii) "*bulk-power consumer*" means a consumer who purchases or receives electric power, at one premises, in an amount of one megawatt (01MW) 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 Section-2 of NEPRA's 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) Section-5 (Obligation to provide open access) 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."*

Section-7 (Filing of petition and determination of use of system charges) is reproduced hereunder:

“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.”

Section-8 (Wheeling of electric power) is reproduced hereunder:

“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 QESCO 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 QESCO is entitled for recovery of Use of System Charges (*UoSC*) 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. 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. At present applicable Transmission Use of System (TUoS) Charges has 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 QESCO, these shall not form part of use of system charges to be recovered directly by QESCO.
- 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, 2021 (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 this 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 QESCO 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 (132/66kV, 11/33kV) for the applicable consumer categories of all possible BPCs. The component-wise Cost of Service as per outcome detailed Cost of Service Study *Annex-A* and consequent assessment, as detailed above, of component-wise Use of System Charges for the applicable BPCs is provided at *Annex-B*.
- 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	QESCO as Distribution Licensee
5.	Cross Subsidy	QESCO as SOLR (Supply Licensee)
6.	Stranded Capacity Costs	QESCO 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 QESCO forming integral part of this petition and provided separately as attached here to as *Annex-A*.

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, MSP, 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-B* 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 QESCO) 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, B-4, C-2(b) & C-3(a) customer categories and provided as *Annex-BI* 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.	Industrial Consumer ranging from 500 kW to 5000 kW.	B-3	11/33 kV	B-3 consumer ranges from 500 kW to 5000 kW. 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.
2.	Industrial	B-4	66/132 kV	B-4 consumer ranges above 5000 kW.
3.	Bulk Supply Ranging from 500 kW to 5000 kW.	C-2(b)	11/33 kV	Bulk Supply consumer ranges from 500 kW to 5000 kW. Although, the Bulk Supply C-2(a) 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(b) category will apply for C-2(a). Further, the consumers falling under the resale shall not be considered as eligible BPC.
4.	Bulk Supply	C-3(a)	66/132 kV	C-3(a) consumer ranges above 5000 kW. The use of system charges indicated for C-3(a) category will apply for C-3(b).
5.	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.

Other Important Aspects:

Following paragraphs of the petition highlights other important aspects which shall be considered 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 in line with the directions and terms & 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 QESCO's 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-Subsidy and Stranded Capacity cost, shall fully apply.
- (2) The cases of captive generation (if any) 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 tariff. The quantum of additional sanctioned / contracted load (in terms of MW) shall be considered to determine its status as BPC in terms of the Act. In case, such BPC choose to exercise option for a competitive supplier, the use of system charges shall apply in full.

Applicability of Stranded Capacity Costs

The costs arising on account of market liberalization and advent of open access shall be the capacity charges/stranded costs to be paid by all eligible BPCs of a competitive supplier as detailed in this instant petition and the amount of such capacity charges shall be the same as 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, 2021.

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-B* and/or *Annex-BI*, which contain detailed analysis.



Annex-A

QUETTA ELECTRIC SUPPLY COMPANY



COST OF SERVICE STUDY

FOR

FY 2022-23



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Cost of Service (COS) Study:

A Cost of Service (COS) study is the fundamental tool for evaluating and establishing utility rates. As the scope of industry and technology changes, the utilities are also expanding their scope with the extensive COS studies and thus subsequently converge their studies that distinguish full and partial requirements to serve various customer classes/ categories. This will not cope the increasing presence of distributed energy resources as well as it helps to accommodate customers' expectations with 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 the 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 international methodology, standards & practices has been used to build the FACOS Model. This Model performs the standard three steps encompassed in most of Cost Studies are 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. As already described in preceding para that 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)	10.66%
Capital Work in Progress ("CWIP")	CWIP 100%
Working Capital Allowance to be included in Rate Base	NO
Prior Year Adjustment (Rs. In Millions)	13,612,000,000
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 %	3.00%
Model Year	FY 2022-23
Base Year	FY 2021-22

Projections and Revenue Requirement for Financial Year 2022-23:

The Revenue Requirement (RR) is the fundamental input to the Cost of Service of QESCO 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 QESCO.

Table 2

Description	FY 2022-23	Source
Units Purchased (GWh)	7,336.59	NEPRA MYT Determination FY 2022-23
Units Sold (GWh)	5,253.00	
Assessed T&D Losses	28.40%	
Consumer Growth	3.00%	
Average Monthly MDI (MW) (Non-Coincidence at CDPs)	1,340.00	
Energy Purchase Price (Rs/kWh)	8.93	These rates are calculated from Tariff Determination FY 2022-23.
Capacity Charges (Rs/kW/Month)	4,354.00	
T.UoS Rate (Rs/kW/Month)	394.23	
MOF (Rs/kW/Month)	2.77	Actual basis in FY 2022-23
Energy Charges (Rs. M)	65,515.76	Calculated by using above rates
Capacity Charges (Rs. M)	70,012.32	
T.UoS Rate (Rs. M)	6,339.22	
MOF (Rs. M)	44.54	
Power Purchase Price (Rs. M)	141,911.836	
O&M Cost (Rs. M)	9,880.00	NEPRA MYT Determination FY 2022-23



O&M Cost (Rs. M)	9,880.00	NEPRA MYT Determination FY 2022-23
Depreciation (Rs. M)	3,780.43	
RORB (Rs. M)	8,207.13	
Other Income (Rs. M)	1,337.00	
Prior Year Adjustment (Rs. M)	13,612.00	
Revenue Requirement (Rs. M)	176,054.40	
Cost per KWH (Sold)	33.52	

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	65,515.76
Capacity Charges	70,012.32
T.UoS Rate	6,339.22
MOF	44.54
Power Purchase Price	141,911.84
O&M Cost	9,880.00
Depreciation	3,780.43
RORB	8,207.13
Other Income	1,337.00
Distribution Margin	20,530.56
Prior Year Adjustment	13,612.00
Revenue Requirement	176,054.40

Line Losses Charged on Voltage Levels:

Line losses taken from QESCO's MYT Determination for FY 2022-23 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	0.4KV	11KV	132KV	Total	Source
Losses %age on purchased units	3.77%		22.73%	1.90%	28.40%	Target as per NEPRA Determination is 14.27%
Losses %age on received units	3.77%		22.73%	1.90%		Calculated as applied on units received at each voltage level.



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		

QESCO Tariff determined by NEPRA in July-2022:

Tariffs for various categories of QESCO consumers as determined by NEPRA vide their determination No.NEPRA/R/ADG(Tariff)/TR-100/XWDISCOs/13540-13542 dated 22-07-2022 are provided in **Table 6** below.

Table 6

NEPRA DETERMINED TARIFF (22-07-2022)			
TARIFF CATAGORIES		Fixed Charges	Variable Charges
		Rs/kW/M	Rs/kWh
A1 (a)	RESIDENTIAL -A1		
I	Up to 50 Units Life line		5.00
ii	51-100 units Life line		17.55
iii	01-100 Units		20.55
iv	101-200 Units		22.54



Annex-A

V	01-100 Units		23.16
vi	101-200 Units		26.35
vii	201-300 Units		26.86
viii	301-400Units		28.10
ix	401-500Units		28.54
X	501-600Units		29.54
xi	601-700Units		30.54
xii	Above 700 Units		31.54
A1(b)	Time of Use (TOU) - Peak		30.53
	Time of Use (TOU) - Off-Peak		23.15
E-1(i)	Temporary E-1 (i)		31.53
	COMMERCIAL - A2		
A2 (a)	Commercial - For peak load requirement up to 5 kW		27.51
A2 (b)	Sanctioned load 5 kw and above	500	25.55
A2 (c)	Time of Use (TOU) - Peak (A-2)	500	30.56
	Time of Use (TOU) - Off-Peak	500	24.43
E-1 (ii)	Temporary E-1 (ii)		27.53
	INDUSTRIAL		
B1(a)	B1		26.06
B1(b)	B1- TOU (Peak)		29.95
	B1 - TOU (Off-peak)		23.85
B2 (a)	B2	500	25.95
B2 (b)	B2 - TOU (Peak)	500	29.95
	B2 - TOU (Off-peak)	500	23.35
B3	B3 - TOU (Peak)	460	29.95
	B3 - TOU (Off-peak)	460	24.75
B4	B4 - TOU (Peak)	440	29.95
	B4 - TOU (Off-peak)	440	24.55
E-2	Temporary E-2		28.95
	BULK		
C1 (a)	C1(a) up to 5 kW		27.14
C1 (b)	C1(b) exceeding 5 kW	500	26.94
C1 (c)	Time of Use (TOU) - Peak	500	30.53
	Time of Use (TOU) - Off-Peak	500	23.93
C2 (a)	C2 Supply at 11 kV	460	26.84
C2 (b)	Time of Use (TOU) - Peak	460	30.53
	Time of Use (TOU) - Off-Peak	460	25.37
C3 (a)	C3 Supply above 11 kV	440	26.73
C3 (b)	Time of Use (TOU) - Peak	440	30.53



	Time of Use (TOU) - Off-Peak	440	25.13
AGRICULTURAL TUBE WELLS - Tariff D			
D1 (a)	D1 Scarp		27.13
D2 (a)	D2 Agricultural Tube-wells	200	30.52
D1 (b)	Time of Use (TOU) - Peak	200	23.93
D2 (b)	Time of Use (TOU) - Off-Peak	200	27.12
	Time of Use (TOU) - Peak	200	30.51
	Time of Use (TOU) - Off-Peak	200	23.91
G	Public Lighting G		30.83
H	Residential Colonies H		31.13
K1	Special Contracts - Tariff K (AJK)	440	0.00
K1 (i)	Time of Use (TOU) - Peak	440	0.00
	Time of Use (TOU) - Off-Peak	440	0.00
A3	General Service		27.57

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 **Table 7** below:

Table 7

Revenue Requirement Allocation %age				
Description	Energy	Demand	Customer	Total
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

Revenue Requirement Allocation Rs. (M)				
Description	Energy	Demand	Customer	Total
Energy Charges	65,516	-	-	65,516
Capacity Charges	-	70,012	-	70,012
T.UoS	-	6,339	-	6,339
MOF	-	45	-	45
Power Purchase Price	65,516	76,396	-	141,912
O&M Cost	-	6,422	3,458	9,880
Depreciation	-	3,024	756	3,780
RORB	-	6,730	1,477	8,207
Other Income	-	1,096	241	- 1,337
Distribution Margin	-	17,273	5,932	20,531
Prior Year Adjustment	-	8,848	4,764	13,612
Revenue Requirements	65,516	102,516	10,696	176,054

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/R/ADG(Tariff)/TRF-100/XWDISCOs/13540-13542 dated 22-07-2022 already provided in (Table 6 above).

Table 9

FY 2022-23						
Consumer Category	MDI MW	Sales (GWh)	Fixed Charge Rs. (M)	Variable Charge Rs. (M)	Total Revenue Rs. (M)	Rs./KWH
Residential -- A1(a)		631.55		30,921.30	30,921	48.96
Residential -- A1(b)		12.08	-	1,219.72	1,220	100.98
Commercial -- A2(a)		82.66	-	7,074.86	7,075	85.59



Commercial -- A2(b)	0.05	-	-	-	-	-
Commercial -- A2(c)	68.49	81.41	15,791.64	2,086.65	17,878	219.62
Industrial -- B1(a)		0.16	-	491.51	492	2,990.17
Industrial -- B2(a)	0.39	0.02		245.60	246	15,849.30
Industrial -- B1(b)		9.54		2,165.48	2,165	227.10
Industrial -- B2(b)	174.69	91.60	23,350.28	2,231.49	25,582	279.29
Industrial -- B3	89.97	86.19	814.22	2,173.55	2,988	34.66
Industrial -- B4	43.71	-	-	-	-	-
Single Point Supply -- C1(a)		0.02	-	51.76	52	2,990.17
Single Point Supply -- C1(b)	2.38	1.14	612.83	30.69	644	564.96
Single Point Supply -- C1(c)	7.87	2.25	3,283.20	622.05	3,905	1,731.99
Single Point Supply -- C2(a)	3.62	-	63.42	60.52	124	-
Single Point Supply -- C2(b)	6.79	24.72	4,963.28	3,289.05	8,252	333.82
Single Point Supply -- C3(a)	7.40	124.94	-	-	-	-
Single Point Supply -- C3(b)	0.00	-	-	-	-	-
Agricultural --D1(a)		0.00	-	0.11	0	28.77
Agricultural --D2(a)		3,822.48	-	52,952.33	52,952	13.85
Agricultural --D1(b)	10.44	0.46	1,520.96	8.25	1,529	3,299.77
Agricultural --D2(b)	84.07	0.60	871.51	6.42	878	1,474.91
Temporary Supply -- E1(i)		-	-	-	-	-
Temporary Supply -- E1(ii)		-	-	-	-	-
Temporary Supply -- E2		-	-	-	-	-
Public Lighting -- G		11.93	-	343.36	343	28.77

**Annex-A**

Residential Colonies -- H		0.09	-	2.73	3	31.13
Azad Jammu Kashmir - K1a		-	-	-	-	-
Azad Jammu Kashmir - K1b		-	-	-	-	-
A3 General		269.16	-	11,092.22	11,092	41.21
Total	499.8 7	5,253.0 0	51,271.3 3	117,069.64	168,340.9 8	32.05

Table 10

FY 2022-23						
Consumer Class	MDI MW	Sales (GWh)	Fixed Charge Rs. (M)	Variable Charge	Total Revenue Rs. (M)	Rs./KWH
0.2 KV	312.24	714.39	-	134,318.86	83,798.07	117.30
0.4 KV	543.87	4,325.13	574.46	13,322.23	41,617.99	9.62
11 KV	15.87	213.48	312.14	5,525.86	13,376.15	62.66
132 KV	0.00	-	-	-	-	-
G. TOTAL	871.98	5,253.00	886.59	153,166.95	154,053.54	29.33



Cost of Service Functionalized Rates (Tariff Wise)

Based on the allocation of overall Revenue Requirement of QESCO to customers categories, the resultant functional amounts (Rs. in million) for each customer category are summarized at **Table 11** below.

Table 11

FY 2022-23												
Classes	Voltage Level	No of Customers	Energy Demand		Generation Cost		Transmission	MOF		Distribution Cost		Total Cost
			GWH	MW	Energy (Rs. M)	Demand (Rs. M)	Cost (Rs. M)	Cost (Rs. M)	Demand (Rs. M)	Customer (Rs. M)		
Residential -- A1(a)	0.2kV	478,222	631.55	258.08	8,591.97	22,573.58	2,043.91	14.36	5,993.02	277.35	39,494	
Residential -- A1(b)	0.4kV	2,184	12.08	8.87	164.33	775.72	70.24	0.49	205.94	3.00	1,220	
Commercial -- A2(a)	0.2kV	129,950	82.66	49.84	1,124.55	4,359.21	394.70	2.77	1,157.32	36.30	7,075	
Commercial -- A2(b)	0.4kV	11	-	0.04	-	3.39	0.31	0.00	0.90	-	5	
Commercial -- A2(c)	0.4kV	2,839	81.41	39.42	1,107.49	3,447.75	312.17	2.19	915.34	20.21	5,805	
Industrial -- B1(a)	0.2kV	897	0.16	4.12	2.24	360.59	32.65	0.23	95.73	0.07	492	
Industrial -- B2(a)	0.4kV	95	0.02	2.07	0.21	180.87	16.38	0.12	48.02	0.00	246	
Industrial -- B1(b)	0.4kV	1,575	9.54	17.14	129.73	1,498.81	135.71	0.95	397.92	2.37	2,165	
Industrial -- B2(b)	0.4kV	888	91.60	58.28	1,246.14	5,098.00	461.60	3.24	1,353.46	22.74	8,185	
Industrial -- B3	11kV	29	86.19	2.21	1,105.08	182.33	16.51	0.12	42.22	19.11	1,365	
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	
Single Point Supply -- C1(a)	0.2kV	8	0.02	0.03	0.22	2.94	0.27	0.00	0.78	0.01	4	
Single Point Supply -- C1(b)	0.4kV	51	1.14	1.53	15.50	133.80	12.11	0.09	35.52	0.28	197	
Single Point Supply -- C2(a)	11kV	8	2.25	0.17	28.91	14.20	1.29	0.01	3.29	0.50	48	
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	
Single Point Supply -- C1(c)	0.4kV	171	24.72	8.20	336.32	716.81	64.90	0.46	190.31	6.14	1,315	
Single Point Supply -- C2(b)	11kV	59	124.94	13.48	1,601.85	1,111.41	100.63	0.71	257.36	27.70	3,100	
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	
Agricultural -- D1(a)	0.4kV	10	0.00	0.23	0.05	20.04	1.81	0.01	5.32	0.00	27	
Agricultural -- D2(a)	0.4kV	30,277	3,822.48	329.51	52,003.50	28,821.37	2,609.61	18.34	7,651.73	948.84	92,053	
Agricultural -- D2(b)	0.4kV	68	0.46	2.18	6.30	190.27	17.23	0.12	50.52	0.12	265	
Agricultural -- D1(b)	0.4kV	164	0.60	3.80	8.10	332.07	30.07	0.21	88.16	0.15	459	
Temporary Supply -- E1(i)	0.2kV	-	-	0.06	-	5.53	0.50	0.00	1.47	-	8	
Temporary Supply -- E1(ii)	0.2kV	-	-	0.11	-	9.28	0.84	0.01	2.46	-	13	
Temporary Supply -- E2	0.2kV	-	-	0.00	-	0.33	0.03	0.00	0.09	-	0	
Public Lighting -- G	0.4kV	290	11.93	1.50	162.34	131.60	11.92	0.08	34.94	2.96	344	
Residential Colonies -- H	11kV	4	0.09	0.00	1.13	0.09	0.01	0.00	0.02	0.02	1	
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	
A3 General	0.4kV	9,964	269.16	71.13	3,661.89	6,221.25	563.30	3.96	1,651.67	66.81	12,169	
Total	-	657,764	5,253.00	871.98	71,297.83	76,191.24	6,898.68	48.47	20,183.49	1,434.67	176,054.40	



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 Class	Voltage	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	632	30,624.87	8,869.33	9,888.83	14.04	62.54
Residential -- A1 (b)	0.4kV	12	1,052.39	167.33	9,888.83	13.85	100.98
Commercial -- A2 (a)	0.2kV	83	5,914.01	1,160.85	9,888.83	14.04	85.59
Commercial -- A2 (b)	0.4kV	-	4.60	-	9,888.83	-	-
Commercial -- A2 (c)	0.4kV	81	4,677.45	1,127.70	9,888.83	13.85	71.31
Industrial -- B1 (a)	0.2kV	0	489.20	2.31	9,888.83	14.04	2,990.17
Industrial -- B2 (a)	0.4kV	0	245.38	0.21	9,888.83	13.85	15,849.30
Industrial -- B1 (b)	0.4kV	10	2,033.38	132.09	9,888.83	13.85	227.10
Industrial -- B2 (b)	0.4kV	92	6,916.30	1,268.88	9,888.83	13.85	89.36
Industrial -- B3	11kV	86	241.17	1,124.18	9,085.96	13.04	15.84
Industrial -- B4	132/66kV	-	-	-	-	-	-
Single P. Supply C1(a)	0.2kV	0	3.99	0.23	9,888.83	13.26	243.55
Single P. Supply C1(b)	0.4kV	1	181.52	15.78	9,888.83	13.85	173.21
Single P. Supply C2(a)	11kV	2	18.79	29.41	9,085.96	13.04	21.37
Single P. Supply C3(a)	132/66kV	-	-	-	-	-	-
Single P. Supply C1(c)	0.4kV	25	972.48	342.46	9,888.83	13.85	53.19
Single P. Supply C2(b)	11kV	125	1,470.11	1,629.54	9,085.96	13.04	24.81
Single P. Supply C3(b)	132/66kV	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	27.19	0.05	9,888.83	13.85	7,214.86
Agricultural -- D2(a)	0.4kV	3,822	39,101.05	52,952.33	9,888.83	13.85	24.08
Agricultural -- D2(b)	0.4kV	0	258.14	6.42	9,888.83	13.85	570.87
Agricultural -- D1(b)	0.4kV	1	450.50	8.25	9,888.83	13.85	770.70
Temporary - E1 (i)	0.2kV	-	7.50	-	9,888.83	-	-
Temporary - E1 (ii)	0.2kV	-	12.58	-	9,888.83	-	-
Temporary - E2	0.2kV	-	0.45	-	9,888.83	-	-
Public Lighting -- G	0.4kV	12	178.53	165.30	9,888.83	13.85	28.81
Res Colonies -- H	11kV	0	0.12	1.14	9,085.96	13.04	14.42
A J K - K1a	11kV	-	-	-	-	-	-
A J K - K1b	11kV	-	-	-	-	-	-
A3 General	0.4kV	269	8,440.18	3,728.70	9,888.83	13.85	45.21
Total	-	5,253	103,321.89	72,732.50	244,009.27	13.85	33.52

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) 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	631.55	258.08	-	15,377.92	15,377.92	-	39,494.20	39,494.20	(24,116.28)	(38.19)
Residential A1 (b)	0.4kV	12.08	8.87	-	297.86	297.86	-	1,219.72	1,219.72	(921.86)	(76.32)
Commercial A2 (a)	0.2kV	82.66	49.84	-	2,273.96	2,273.96	-	7,074.86	7,074.86	(4,800.90)	(58.08)
Commercial A2 (b)	0.4kV	-	0.04	-	-	-	-	4.60	4.60	(4.60)	-
Commercial A2 (c)	0.4kV	81.41	39.42	203.94	2,086.65	2,290.59	4,677.45	1,127.70	5,805.15	(3,514.56)	(43.17)
Industrial B1 (a)	0.2kV	0.16	4.12	-	4.28	4.28	-	491.51	491.51	(487.22)	(2,964.11)
Industrial B2 (a)	0.4kV	0.02	2.07	-	0.40	0.40	-	245.60	245.60	(245.20)	(15,823.35)
Industrial B1 (b)	0.4kV	9.54	17.14	-	236.78	236.78	-	2,165.48	2,165.48	(1,928.70)	(202.27)
Industrial B2 (b)	0.4kV	91.60	58.28	322.07	2,231.49	2,553.56	6,916.30	1,268.88	8,185.18	(5,631.62)	(61.48)
Industrial B3	11kV	86.19	2.21	153.64	2,173.55	2,327.19	241.17	1,124.18	1,365.35	961.84	11.16
Industrial B4	132/66kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C1(a)	0.2kV	0.02	0.03	-	0.47	0.47	-	4.22	4.22	(3.75)	(216.41)
Bulk Supply C1(b)	0.4kV	1.14	1.53	2.05	30.69	32.74	181.52	15.78	197.30	(164.56)	(144.47)
Bulk Supply C2(a)	11kV	2.25	0.17	4.73	60.52	65.25	18.79	29.41	48.19	17.05	7.56
Bulk Supply C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C1(c)	0.4kV	24.72	8.20	44.85	622.05	666.90	972.48	342.46	1,314.94	(648.04)	(26.21)
Bulk Supply C2(b)	11kV	124.94	13.48	153.77	3,289.05	3,442.83	1,470.11	1,629.54	3,099.66	343.17	2.75
Bulk Supply C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-
Agricultural D1(a)	0.4kV	0.00	0.23	-	0.10	0.10	-	27.24	27.24	(27.14)	(7,187.73)
Agricultural D2(a)	0.4kV	3,822.48	329.51	-	116,662.13	116,662.13	-	92,053.39	92,053.39	24,608.74	6.44
Agricultural D2(b)	0.4kV	0.46	2.18	1.35	11.64	13.00	258.14	6.42	264.56	(251.56)	(542.83)
Agricultural D1(b)	0.4kV	0.60	3.80	0.19	15.92	16.11	450.50	8.25	458.75	(442.64)	(743.64)
Temporary E1 (i)	0.2kV	-	0.06	-	-	-	-	7.50	7.50	(7.50)	-
Temporary E1 (ii)	0.2kV	-	0.11	-	-	-	-	12.58	12.58	(12.58)	-
Temporary E2	0.2kV	-	0.00	-	-	-	-	0.45	0.45	(0.45)	-
Public Lighting G	0.4kV	11.93	1.50	-	367.88	367.88	-	343.84	343.84	24.05	2.02
Residential Col. H	11kV	0.09	0.00	-	2.73	2.73	-	1.27	1.27	1.47	16.71
A J K K1a	11kV	-	-	-	-	-	-	-	-	-	-
A J K K1b	11kV	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269.16	71.13	-	7,420.86	7,420.86	-	12,168.88	12,168.88	(4,748.01)	(17.64)
Total	-	5,253.00	871.98	886.59	153,166.95	154,053.54	15,186.46	160,867.94	176,054.40	(22,000.85)	(4.19)



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		Cost of Service		Difference/ Subsidy		Revenue to	
				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	631.55	258.08	-	15,377.92	-	39,494.20	-	(24,116.28)	1.00	0.39
Residential A1 (b)	0.4kV	12.08	8.87	-	297.86	-	1,219.72	-	(921.86)	1.00	0.24
Commercial A2 (a)	0.2kV	82.66	49.84	-	2,273.96	-	7,074.86	-	(4,800.90)	1.00	0.32
Commercial A2 (b)	0.4kV	-	0.04	-	-	-	4.60	-	(4.60)	1.00	1.00
Commercial A2 (c)	0.4kV	81.41	39.42	203.94	2,086.65	4,677.45	1,127.70	(4,473.51)	958.95	0.04	1.85
Industrial B1 (a)	0.2kV	0.16	4.12	-	4.28	-	491.51	-	(487.22)	1.00	0.01
Industrial B2 (a)	0.4kV	0.02	2.07	-	0.40	-	245.60	-	(245.20)	1.00	0.00
Industrial B1 (b)	0.4kV	9.54	17.14	-	236.78	-	2,165.48	-	(1,928.70)	1.00	0.11
Industrial B2 (b)	0.4kV	91.60	58.28	322.07	2,231.49	6,916.30	1,268.88	(6,594.24)	962.62	0.05	1.76
Industrial B3	11kV	86.19	2.21	153.64	2,173.55	241.17	1,124.18	(87.53)	1,049.37	0.64	1.93
Industrial B4	132/66kV	-	-	-	-	-	-	-	-	1.00	1.00
Bulk Supply C1(a)	0.2kV	0.02	0.03	-	0.47	-	4.22	-	(3.75)	1.00	0.11
Bulk Supply C1(b)	0.4kV	1.14	1.53	2.05	30.69	181.52	15.78	(179.47)	14.91	0.01	1.94
Bulk Supply C2(a)	11kV	2.25	0.17	4.73	60.52	18.79	29.41	(14.06)	31.11	0.25	2.06
Bulk Supply C3(a)	132/66kV	-	-	-	-	-	-	-	-	1.00	1.00
Bulk Supply C1(c)	0.4kV	24.72	8.20	44.85	622.05	972.48	342.46	(927.62)	279.59	0.05	1.82
Bulk Supply C2(b)	11kV	124.94	13.48	153.77	3,289.05	1,470.11	1,629.54	(1,316.34)	1,659.51	0.10	2.02
Bulk Supply C3(b)	132/66kV	-	-	-	-	-	-	-	-	1.00	1.00
Agricultural D1(a)	0.4kV	0.00	0.23	-	0.10	-	27.24	-	(27.14)	1.00	0.00
Agricultural D2(a)	0.4kV	3,822.48	329.51	-	116,662.13	-	92,053.39	-	24,608.74	1.00	1.27
Agricultural D2(b)	0.4kV	0.46	2.18	1.35	11.64	258.14	6.42	(256.78)	5.22	0.01	1.81
Agricultural D1(b)	0.4kV	0.60	3.80	0.19	15.92	450.50	8.25	(450.32)	7.67	0.00	1.93
Temporary E1 (i)	0.2kV	-	0.06	-	-	-	7.50	-	(7.50)	1.00	1.00
Temporary E1 (ii)	0.2kV	-	0.11	-	-	-	12.58	-	(12.58)	1.00	1.00
Temporary E2	0.2kV	-	0.00	-	-	-	0.45	-	(0.45)	1.00	1.00
Public Lighting G	0.4kV	11.93	1.50	-	367.88	-	343.84	-	24.05	1.00	1.07
Residential Col. H	11kV	0.09	0.00	-	2.73	-	1.27	-	1.47	1.00	2.16
A J K K1a	11kV	-	-	-	-	-	-	-	-	1.00	1.00
A J K K1b	11kV	-	-	-	-	-	-	-	-	1.00	1.00
A3 General	0.4kV	269.16	71.13	-	7,420.86	-	12,168.88	-	(4,748.01)	1.00	0.61
Total	-	5,253.00	871.98	886.59	153,166.95	15,186.46	160,867.94	(14,299.86)	(7,700.99)	0.06	0.95

**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	631.55	24.35	62.54	(38.19)	0.39
Residential A1 (b)	0.4kV	12.08	24.66	100.98	(76.32)	0.24
Commercial A2 (a)	0.2kV	82.66	27.51	85.59	(58.08)	0.32
Commercial A2 (b)	0.4kV	-	-	-	-	0.00
Commercial A2 (c)	0.4kV	81.41	28.14	71.31	(43.17)	0.39
Industrial B1 (a)	0.2kV	0.16	26.06	2,990.17	(2,964.11)	0.01
Industrial B2 (a)	0.4kV	0.02	25.95	15,849.30	(15,823.35)	0.00
Industrial B1 (b)	0.4kV	9.54	24.83	227.10	(202.27)	0.11
Industrial B2 (b)	0.4kV	91.60	27.88	89.36	(61.48)	0.31
Industrial B3	11kV	86.19	27.00	15.84	11.16	1.70
Industrial B4	132/66kV	-	-	-	-	0.00
Bulk Supply C1(a)	0.2kV	0.02	27.14	243.55	(216.41)	0.11
Bulk Supply C1(b)	0.4kV	1.14	28.74	173.21	(144.47)	0.17
Bulk Supply C2(a)	11kV	2.25	28.94	21.37	7.56	1.35
Bulk Supply C3(a)	132/66kV	-	-	-	-	0.00
Bulk Supply C1(c)	0.4kV	24.72	26.98	53.19	(26.21)	0.51
Bulk Supply C2(b)	11kV	124.94	27.56	24.81	2.75	1.11
Bulk Supply C3(b)	132/66kV	-	-	-	-	-
Agricultural D1(a)	0.4kV	0.00	27.13	7,214.86	(7,187.73)	0.00
Agricultural D2(a)	0.4kV	3,822.48	30.52	24.08	6.44	1.27
Agricultural D2(b)	0.4kV	0.46	28.05	570.87	(542.83)	0.05
Agricultural D1(b)	0.4kV	0.60	27.06	770.70	(743.64)	0.04
Temporary E1 (i)	0.2kV	-	-	-	-	0.00
Temporary E1 (ii)	0.2kV	-	-	-	-	0.00
Temporary E2	0.2kV	-	-	-	-	0.00
Public Lighting G	0.4kV	11.93	30.83	28.81	2.02	1.07
Residential Col. H	11kV	0.09	31.13	14.42	16.71	2.16
A J K K1a	11kV	-	-	-	-	-
A J K K1b	11kV	-	-	-	-	-
A3 General	0.4kV	269.16	27.57	45.21	(17.64)	0.61
Total	-	5,253.00	29.33	33.52	(4.19)	0.88



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	86.19	2.21	153.64	2,173.55	2,327.19	241.17	1,124.18	1,365.35	961.84	11.16
Industrial B4	132/66kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C2(a)	11kV	2.25	0.17	4.73	60.52	65.25	18.79	29.41	48.19	17.05	7.56
Bulk Supply C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-
Bulk Supply C2(b)	11kV	124.94	13.48	153.77	3,289.05	3,442.83	1,470.11	1,629.54	3,099.66	343.17	2.75
Bulk Supply C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-
Residential Col. H	11kV	0.09	0.00	-	2.73	2.73	-	1.27	1.27	1.47	16.71

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

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

1. 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.
2. 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 customers, based on the sanctioned load, may be connected at 11 KV level, as required.
3. 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.

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	Sale GWh	Revenue Rs. /KWh	Cost of Service Rs. /KWh	Subsidy Rs. /KWh
Industrial B3	11kV	86.19	27.00	15.84	11.16
Industrial B4	132/66kV	-	-	-	-
Bulk Supply C2(b)	11kV	124.94	27.56	24.81	2.75
Bulk Supply C3(a)	132/66kV	-	-	-	-



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

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



Table 21

FY 2022-23												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Cost (Rs. M)
		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	631.55	884	258	361	8,592	22,574	2,044	14	5,993	277	39,494
Residential -- A1(b)	0.4kV	12.08	17	9	12	164	776	70	0	206	3	1,220
Commercial -- A2(a)	0.2kV	82.66	116	50	70	1,125	4,359	395	3	1,157	36	7,075
Commercial -- A2(b)	0.4kV	-	-	0	0	-	3	0	0	1	-	5
Commercial -- A2(c)	0.4kV	81.41	114	39	55	1,107	3,448	312	2	915	20	5,805
Industrial -- B1(a)	0.2kV	0.16	0	4	6	2	361	33	0	96	0	492
Industrial -- B2(a)	0.4kV	0.02	0	2	3	0	181	16	0	48	0	246
Industrial -- B1(b)	0.4kV	9.54	13	17	24	130	1,499	136	1	398	2	2,165
Industrial -- B2(b)	0.4kV	91.60	128	58	82	1,246	5,098	462	3	1,353	23	8,185
Industrial -- B3	11kV	86.19	114	2	3	1,105	182	17	0	42	19	1,365
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0.02	0	0	0	0	3	0	0	1	0	4
Single Point Supply -- C1(b)	0.4kV	1.14	2	2	2	15	134	12	0	36	0	197
Single Point Supply -- C2(a)	11kV	2.25	3	0	0	29	14	1	0	3	0	48
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	24.72	35	8	11	336	717	65	0	190	6	1,315
Single Point Supply -- C2(b)	11kV	124.94	165	13	18	1,602	1,111	101	1	257	28	3,100
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural --D1(a)	0.4kV	0.0038	0.0053	0	0	0	20	2	0	5	0	27
Agricultural --D2(a)	0.4kV	3,822.48	5,351	330	461	52,003	28,821	2,610	18	7,652	949	92,053
Agricultural --D2(b)	0.4kV	0.46	1	2	3	6	190	17	0	51	0	265
Agricultural --D1(b)	0.4kV	0.60	1	4	5	8	332	30	0	88	0	459
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	6	1	0	1	-	8
Temporary Supply -- E1(ii)	0.2kV	-	-	0	0	-	9	1	0	2	-	13
Temporary Supply -- E2	0.2kV	-	-	0	0	-	0	0	0	0	-	0
Public Lighting -- G	0.4kV	11.93	17	2	2	162	132	12	0	35	3	344
Residential Colonies -- H	11kV	0.09	0	0	0	1	0	0	0	0	0	1
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269.16	377	71	100	3,662	6,221	563	4	1,652	67	12,169
Total		5,253	7,337	872	1,219	71,298	76,191	6,899	48	20,183	1,435	176,054



Table 22

FY 2022-23 (kW or kWh at Consumer)												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed 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)	
Residential -- A1(a)	0.2kV	632	884	258	361	13.60	7,289.05	659.98	4.64	1,935.16	89.56	9,978.39
Residential -- A1(b)	0.4kV	12	17	9	12	13.60	7,289.05	659.98	4.64	1,935.16	28.17	9,917.00
Commercial -- A2(a)	0.2kV	83	116	50	70	13.60	7,289.05	659.98	4.64	1,935.16	60.70	9,949.53
Commercial -- A2(b)	0.4kV	-	-	0	0	-	7,289.05	659.98	4.64	1,935.16	-	9,888.83
Commercial -- A2(c)	0.4kV	81	114	39	55	13.60	7,289.05	659.98	4.64	1,935.16	42.72	9,931.55
Industrial -- B1(a)	0.2kV	0	0	4	6	13.60	7,289.05	659.98	4.64	1,935.16	1.46	9,890.29
Industrial -- B2(a)	0.4kV	0	0	2	3	13.60	7,289.05	659.98	4.64	1,935.16	0.16	9,888.99
Industrial -- B1(b)	0.4kV	10	13	17	24	13.60	7,289.05	659.98	4.64	1,935.16	11.51	9,900.34
Industrial -- B2(b)	0.4kV	92	128	58	82	13.60	7,289.05	659.98	4.64	1,935.16	32.51	9,921.34
Industrial -- B3	11kV	86	114	2	3	12.82	6,869.05	621.95	4.37	1,590.59	719.90	9,805.86
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	12.82	7,289.05	659.98	4.64	1,935.16	18.86	9,907.69
Single Point Supply -- C1(b)	0.4kV	1	2	2	2	13.60	7,289.05	659.98	4.64	1,935.16	15.40	9,904.23
Single Point Supply -- C2(a)	11kV	2	3	0	0	12.82	6,869.05	621.95	4.37	1,590.59	241.77	9,327.73
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	25	35	8	11	13.60	7,289.05	659.98	4.64	1,935.16	62.40	9,951.23
Single Point Supply -- C2(b)	11kV	125	165	13	18	12.82	6,869.05	621.95	4.37	1,590.59	171.19	9,257.15
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	13.60	7,289.05	659.98	4.64	1,935.16	0.34	9,889.17
Agricultural -- D2(a)	0.4kV	3,822	5,351	330	461	13.60	7,289.05	659.98	4.64	1,935.16	239.96	10,128.79
Agricultural -- D2(b)	0.4kV	0	1	2	3	13.60	7,289.05	659.98	4.64	1,935.16	4.41	9,893.24
Agricultural -- D1(b)	0.4kV	1	1	4	5	13.60	7,289.05	659.98	4.64	1,935.16	3.24	9,892.07
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	7,289.05	659.98	4.64	1,935.16	-	9,888.83
Temporary Supply -- E1(ii)	0.2kV	-	-	0	0	-	7,289.05	659.98	4.64	1,935.16	-	9,888.83
Temporary Supply -- E2	0.2kV	-	-	0	0	-	7,289.05	659.98	4.64	1,935.16	-	9,888.83
Public Lighting -- G	0.4kV	12	17	2	2	13.60	7,289.05	659.98	4.64	1,935.16	164.06	10,052.89
Residential Colonies -- H	11kV	0	0	0	0	12.82	6,869.05	621.95	4.37	1,590.59	1,463.44	10,549.40
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269	377	71	100	13.60	7,289.05	659.98	4.64	1,935.16	78.28	9,967.11
Total		5,253	7,337	872	1,219	13.57	7,281.41	659.29		1,928.89	137.11	10,006.69



Table 23

FY 2022-23 (kW or kWh CDP)

Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed 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)
Residential -- A1(a)	0.2kV	632	884	258	361	9.72	5,206.74	471.44	3.31	1,382.33	63.97	7,127.80
Residential -- A1(b)	0.4kV	12	17	9	12	9.72	5,206.74	471.44	3.31	1,382.33	20.13	7,083.95
Commercial -- A2(a)	0.2kV	83	116	50	70	9.72	5,206.74	471.44	3.31	1,382.33	43.36	7,107.18
Commercial -- A2(b)	0.4kV	-	-	0	0	-	5,206.74	471.44	3.31	1,382.33	-	7,063.82
Commercial -- A2(c)	0.4kV	81	114	39	55	9.72	5,206.74	471.44	3.31	1,382.33	30.52	7,094.34
Industrial -- B1(a)	0.2kV	0	0	4	6	9.72	5,206.74	471.44	3.31	1,382.33	1.04	7,064.86
Industrial -- B2(a)	0.4kV	0	0	2	3	9.72	5,206.74	471.44	3.31	1,382.33	0.11	7,063.93
Industrial -- B1(b)	0.4kV	10	13	17	24	9.72	5,206.74	471.44	3.31	1,382.33	8.22	7,072.04
Industrial -- B2(b)	0.4kV	92	128	58	82	9.72	5,206.74	471.44	3.31	1,382.33	23.22	7,087.04
Industrial -- B3	11kV	86	114	2	3	9.72	5,206.74	471.44	3.31	1,205.66	545.69	7,432.85
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	9.72	5,206.74	471.44	3.31	1,382.33	13.47	7,077.29
Single Point Supply -- C1(b)	0.4kV	1	2	2	2	9.72	5,206.74	471.44	3.31	1,382.33	11.00	7,074.83
Single Point Supply -- C2(a)	11kV	2	3	0	0	9.72	5,206.74	471.44	3.31	1,205.66	183.26	7,070.42
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	25	35	8	11	9.72	5,206.74	471.44	3.31	1,382.33	44.57	7,108.40
Single Point Supply -- C2(b)	11kV	125	165	13	18	9.72	5,206.74	471.44	3.31	1,205.66	129.76	7,016.92
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	9.72	5,206.74	471.44	3.31	1,382.33	0.24	7,064.07
Agricultural -- D2(a)	0.4kV	3,822	5,351	330	461	9.72	5,206.74	471.44	3.31	1,382.33	171.41	7,235.23
Agricultural -- D2(b)	0.4kV	0	1	2	3	9.72	5,206.74	471.44	3.31	1,382.33	3.15	7,066.97
Agricultural -- D1(b)	0.4kV	1	1	4	5	9.72	5,206.74	471.44	3.31	1,382.33	2.32	7,066.14
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	5,206.74	471.44	3.31	1,382.33	-	7,063.82
Temporary Supply -- E1(ii)	0.2kV	-	-	0	0	-	5,206.74	471.44	3.31	1,382.33	-	7,063.82
Temporary Supply -- E2	0.2kV	-	-	0	0	-	5,206.74	471.44	3.31	1,382.33	-	7,063.82
Public Lighting -- G	0.4kV	12	17	2	2	9.72	5,206.74	471.44	3.31	1,382.33	117.19	7,181.01
Residential Colonies -- H	11kV	0	0	0	0	9.72	5,206.74	471.44	3.31	1,205.66	1,109.28	7,996.44
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269	377	71	100	9.72	5,206.74	471.44	3.31	1,382.33	55.92	7,119.74
Total		5,253	7,337	872	1,219	9.72	5,206.74	471.44	3.31	1,379.30	98.04	7,158.83



Table 24

FY 2022-23 (kWh at Consumer)												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost (Rs./kWh)
		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)	
Residential -- A1(a)	0.2kV	632	884	258	361	13.60	35.74	3.24	0.02	9.49	0.44	48.93
Residential -- A1(b)	0.4kV	12	17	9	12	13.60	64.22	5.81	0.04	17.05	0.25	87.37
Commercial -- A2(a)	0.2kV	83	116	50	70	13.60	52.74	4.78	0.03	14.00	0.44	71.99
Commercial -- A2(b)	0.4kV	-	-	0	0	-	-	-	-	-	-	-
Commercial -- A2(c)	0.4kV	81	114	39	55	13.60	42.35	3.83	0.03	11.24	0.25	57.71
Industrial -- B1(a)	0.2kV	0	0	4	6	13.60	2,193.70	198.63	1.40	582.40	0.44	2,976.57
Industrial -- B2(a)	0.4kV	0	0	2	3	13.60	11,672.30	1,056.86	7.43	3,098.86	0.25	15,835.69
Industrial -- B1(b)	0.4kV	10	13	17	24	13.60	157.18	14.23	0.10	41.73	0.25	213.49
Industrial -- B2(b)	0.4kV	92	128	58	82	13.60	55.66	5.04	0.04	14.78	0.25	75.76
Industrial -- B3	11kV	86	114	2	3	12.82	2.12	0.19	0.00	0.49	0.22	3.02
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	12.82	169.74	15.37	0.11	45.06	0.44	230.73
Single Point Supply -- C1(b)	0.4kV	1	2	2	2	13.60	117.46	10.64	0.07	31.19	0.25	159.61
Single Point Supply -- C2(a)	11kV	2	3	0	0	12.82	6.30	0.57	0.00	1.46	0.22	8.55
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	25	35	8	11	13.60	29.00	2.63	0.02	7.70	0.25	39.59
Single Point Supply -- C2(b)	11kV	125	165	13	18	12.82	8.90	0.81	0.01	2.06	0.22	11.99
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	13.60	5,307.86	480.60	3.38	1,409.17	0.25	7,201.26
Agricultural -- D2(a)	0.4kV	3,822	5,351	330	461	13.60	7.54	0.68	0.00	2.00	0.25	10.48
Agricultural -- D2(b)	0.4kV	0	1	2	3	13.60	410.58	37.18	0.26	109.00	0.25	557.27
Agricultural -- D1(b)	0.4kV	1	1	4	5	13.60	557.87	50.51	0.35	148.11	0.25	757.09
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Temporary Supply -- E1(ii)	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Temporary Supply -- E2	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Public Lighting -- G	0.4kV	12	17	2	2	13.60	11.03	1.00	0.01	2.93	0.25	15.21
Residential Colonies -- H	11kV	0	0	0	0	12.82	1.04	0.09	0.00	0.24	0.22	1.60
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269	377	71	100	13.60	23.11	2.09	0.01	6.14	0.25	31.61
Total		5,253	7,337	872	1,219	13.57	14.50	1.31	0.01	3.84	0.27	19.94



Table 25

FY 2022-23 (kWh at CDP)												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost (Rs./kWh)
		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)	
Residential -- A1(a)	0.2kV	632	884	258	361	9.72	25.53	2.31	0.02	6.78	0.31	34.95
Residential -- A1(b)	0.4kV	12	17	9	12	9.72	45.87	4.15	0.03	12.18	0.18	62.41
Commercial -- A2(a)	0.2kV	83	116	50	70	9.72	37.67	3.41	0.02	10.00	0.31	51.42
Commercial -- A2(b)	0.4kV	-	-	0	0	-	-	-	-	-	-	-
Commercial -- A2(c)	0.4kV	81	114	39	55	9.72	30.25	2.74	0.02	8.03	0.18	41.22
Industrial -- B1(a)	0.2kV	0	0	4	6	9.72	1,567.01	141.88	1.00	416.02	0.31	2,126.23
Industrial -- B2(a)	0.4kV	0	0	2	3	9.72	8,337.80	754.94	5.30	2,213.59	0.18	11,311.80
Industrial -- B1(b)	0.4kV	10	13	17	24	9.72	112.28	10.17	0.07	29.81	0.18	152.50
Industrial -- B2(b)	0.4kV	92	128	58	82	9.72	39.76	3.60	0.03	10.56	0.18	54.11
Industrial -- B3	11kV	86	114	2	3	9.72	1.60	0.15	0.00	0.37	0.17	2.29
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	9.72	128.67	11.65	0.08	34.16	0.33	174.89
Single Point Supply -- C1(b)	0.4kV	1	2	2	2	9.72	83.91	7.60	0.05	22.28	0.18	114.01
Single Point Supply -- C2(a)	11kV	2	3	0	0	9.72	4.77	0.43	0.00	1.11	0.17	6.48
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	25	35	8	11	9.72	20.71	1.88	0.01	5.50	0.18	28.28
Single Point Supply -- C2(b)	11kV	125	165	13	18	9.72	6.74	0.61	0.00	1.56	0.17	9.09
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	9.72	3,791.53	343.30	2.41	1,006.61	0.18	5,144.03
Agricultural -- D2(a)	0.4kV	3,822	5,351	330	461	9.72	5.39	0.49	0.00	1.43	0.18	7.48
Agricultural -- D2(b)	0.4kV	0	1	2	3	9.72	293.29	26.56	0.19	77.86	0.18	398.07
Agricultural -- D1(b)	0.4kV	1	1	4	5	9.72	398.50	36.08	0.25	105.80	0.18	540.81
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Temporary Supply -- E1(ii)	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Temporary Supply -- E2	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Public Lighting -- G	0.4kV	12	17	2	2	9.72	7.88	0.71	0.01	2.09	0.18	10.86
Residential Colonies -- H	11kV	0	0	0	0	9.72	0.79	0.07	0.00	0.18	0.17	1.21
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269	377	71	100	9.72	16.51	1.49	0.01	4.38	0.18	22.58
Total		5,253	7,337	872	1,219	9.72	10.39	0.94	0.01	2.75	0.20	14.28



Table 26

FY 2022-23 (Cost of Losses on kW or kWh)												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost (Rs./kW/ M)
		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)	
Residential -- A1(a)	0.2kV	632	884	258	361	3.89	2,082.31	188.54	1.32	552.83	25.58	2,850.59
Residential -- A1(b)	0.4kV	12	17	9	12	3.89	2,082.31	188.54	1.32	552.83	8.05	2,833.06
Commercial -- A2(a)	0.2kV	83	116	50	70	3.89	2,082.31	188.54	1.32	552.83	17.34	2,842.35
Commercial -- A2(b)	0.4kV	-	-	0	0	-	2,082.31	188.54	1.32	552.83	-	2,825.01
Commercial -- A2(c)	0.4kV	81	114	39	55	3.89	2,082.31	188.54	1.32	552.83	12.20	2,837.21
Industrial -- B1(a)	0.2kV	0	0	4	6	3.89	2,082.31	188.54	1.32	552.83	0.42	2,825.42
Industrial -- B2(a)	0.4kV	0	0	2	3	3.89	2,082.31	188.54	1.32	552.83	0.04	2,825.05
Industrial -- B1(b)	0.4kV	10	13	17	24	3.89	2,082.31	188.54	1.32	552.83	3.29	2,828.30
Industrial -- B2(b)	0.4kV	92	128	58	82	3.89	2,082.31	188.54	1.32	552.83	9.29	2,834.29
Industrial -- B3	11kV	86	114	2	3	3.10	1,662.31	150.51	1.06	384.92	174.22	2,373.02
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	3.10	2,082.31	188.54	1.32	552.83	5.39	2,830.40
Single Point Supply -- C1(b)	0.4kV	1	2	2	2	3.89	2,082.31	188.54	1.32	552.83	4.40	2,829.41
Single Point Supply -- C2(a)	11kV	2	3	0	0	3.10	1,662.31	150.51	1.06	384.92	58.51	2,257.31
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	25	35	8	11	3.89	2,082.31	188.54	1.32	552.83	17.83	2,842.83
Single Point Supply -- C2(b)	11kV	125	165	13	18	3.10	1,662.31	150.51	1.06	384.92	41.43	2,240.23
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	3.89	2,082.31	188.54	1.32	552.83	0.10	2,825.11
Agricultural -- D2(a)	0.4kV	3,822	5,351	330	461	3.89	2,082.31	188.54	1.32	552.83	68.55	2,893.56
Agricultural -- D2(b)	0.4kV	0	1	2	3	3.89	2,082.31	188.54	1.32	552.83	1.26	2,826.27
Agricultural -- D1(b)	0.4kV	1	1	4	5	3.89	2,082.31	188.54	1.32	552.83	0.93	2,825.93
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	2,082.31	188.54	1.32	552.83	-	2,825.01
Temporary Supply -- E1(j)	0.2kV	-	-	0	0	-	2,082.31	188.54	1.32	552.83	-	2,825.01
Temporary Supply -- E2	0.2kV	-	-	0	0	-	2,082.31	188.54	1.32	552.83	-	2,825.01
Public Lighting -- G	0.4kV	12	17	2	2	3.89	2,082.31	188.54	1.32	552.83	46.87	2,871.88
Residential Colonies -- H	11kV	0	0	0	0	3.10	1,662.31	150.51	1.06	384.92	354.15	2,552.95
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269	377	71	100	3.89	2,082.31	188.54	1.32	552.83	22.36	2,847.37
Total		5,253	7,337	872	1,219	3.85	2,074.67	187.85	(3.31)	549.59	39.07	2,847.86



Table 27

FY 2022-23 (Cost of Losses on kWh)												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed 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)
Residential -- A1(a)	0.2kV	632	884	258	361	3.89	10.21	0.92	0.01	2.71	0.13	13.98
Residential -- A1(b)	0.4kV	12	17	9	12	3.89	18.35	1.66	0.01	4.87	0.07	24.96
Commercial -- A2(a)	0.2kV	83	116	50	70	3.89	15.07	1.36	0.01	4.00	0.13	20.56
Commercial -- A2(b)	0.4kV	-	-	0	0	-	-	-	-	-	-	-
Commercial -- A2(c)	0.4kV	81	114	39	55	3.89	12.10	1.10	0.01	3.21	0.07	16.49
Industrial -- B1(a)	0.2kV	0	0	4	6	3.89	626.69	56.74	0.40	166.38	0.13	850.34
Industrial -- B2(a)	0.4kV	0	0	2	3	3.89	3,334.50	301.92	2.12	885.27	0.07	4,523.89
Industrial -- B1(b)	0.4kV	10	13	17	24	3.89	44.90	4.07	0.03	11.92	0.07	60.99
Industrial -- B2(b)	0.4kV	92	128	58	82	3.89	15.90	1.44	0.01	4.22	0.07	21.64
Industrial -- B3	11kV	86	114	2	3	3.10	0.51	0.05	0.00	0.12	0.05	0.73
Industrial -- B4	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(a)	0.2kV	0	0	0	0	3.10	41.08	3.72	0.03	10.91	0.11	55.84
Single Point Supply -- C1(b)	0.4kV	1	2	2	2	3.89	33.56	3.04	0.02	8.91	0.07	45.60
Single Point Supply -- C2(a)	11kV	2	3	0	0	3.10	1.52	0.14	0.00	0.35	0.05	2.07
Single Point Supply -- C3(a)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Single Point Supply -- C1(c)	0.4kV	25	35	8	11	3.89	8.28	0.75	0.01	2.20	0.07	11.31
Single Point Supply -- C2(b)	11kV	125	165	13	18	3.10	2.15	0.19	0.00	0.50	0.05	2.90
Single Point Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	0	0	0	0	3.89	1,516.33	137.30	0.96	402.57	0.07	2,057.23
Single Point Supply -- C1(b)	0.4kV	3,822	5,351	330	461	3.89	2.15	0.20	0.00	0.57	0.07	2.99
Agricultural -- D2(b)	0.4kV	0	1	2	3	3.89	117.29	10.62	0.07	31.14	0.07	159.20
Agricultural -- D1(b)	0.4kV	1	1	4	5	3.89	159.37	14.43	0.10	42.31	0.07	216.28
Temporary Supply -- E1(i)	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Temporary Supply -- E1(ii)	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Temporary Supply -- E2	0.2kV	-	-	0	0	-	-	-	-	-	-	-
Public Lighting -- G	0.4kV	12	17	2	2	3.89	3.15	0.29	0.00	0.84	0.07	4.35
Residential Colonies -- H	11kV	0	0	0	0	3.10	0.25	0.02	0.00	0.06	0.05	0.39
Azad Jammu Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	269	377	71	100	3.89	6.60	0.60	0.00	1.75	0.07	9.03
Total		5,253	7,337	872	1,219	3.85	4.12	0.37	0.00	1.09	0.08	5.66



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 (96%) 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.



Quetta Electric Supply Company (QESCO)

Annex-B

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 Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)				
	Industrial				Industrial				Industrial B-3 (1 MW or More)				
	B-3		B-3		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	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh
Generation Cost - Energy	12.82			12.82	9.72			9.72	10,075.28	3.10			3.10
Generation Cost - Capacity		6,869.05	2.12	2.12		5,206.74	1.60	1.60	5,206.74	1.60	1,562.02	1.12	1.12
Transmission Charges		621.95	0.19	0.19		471.44	0.15	0.15	471.44	0.15	141.43	0.10	0.10
Market Operator's Fee		4.37	0.00	0.00		3.31	0.00	0.00					
Distribution Use of System		2,310.49	0.71	0.71		1,751.35	0.54	0.54	1,751.35	0.54	525.41	0.38	0.38
Total Applicable Costs	12.82	9,805.86	3.02	15.84	9.72	7,432.85	2.29	12.01	17,504.81	5.39	2,228.86	4.70	4.70
Impact of allowed losses						3.10	2,373.02	0.73	3.83	2,373.02	0.73	711.91	0.51
Total Cost of Service	12.82	9,805.86	3.02	15.8404	12.82	9,805.86	3.02	15.84	19,877.83	6.12	2,940.77	5.22	5.22
Cross Subsidy				11.16				11.16	36,237.00	11.16			11.16
Average Applicable Tariff				27.00				27.00	56,114.83	17.28	2,940.77	16.37	16.37

Cost Assessment Level Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)				
	Bulk Supply				Bulk Supply				Bulk Supply C-2(b) (1 MW or More)				
	C2(b)		C2(b)		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	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh
Generation Cost - Energy	12.82			12.82	9.72			9.72	2,395.83	3.10			3.10
Generation Cost - Capacity		6,869.05	8.90	8.90		5,206.74	6.74	6.74	5,206.74	6.74	1,562.02	4.72	4.72
Transmission Charges		621.95	0.81	0.81		471.44	0.61	0.61	471.44	0.61	141.43	0.43	0.43
Market Operator's Fee		4.37	0.01	0.01		3.31	0.00	0.00					
Distribution Use of System		171.19	2.28	2.28		1,335.42	1.73	1.73	1,335.42	1.73	400.63	1.21	1.21
Total Applicable Costs	12.82	7,666.56	11.99	24.81	9.72	7,016.92	9.09	18.81	9,409.44	12.19	2,104.08	9.46	9.46
Impact of allowed losses						3.10	2,240.23	2.90	6.00	2,240.23	2.90	672.07	2.03
Total Cost of Service	12.82	7,666.56	11.99	24.8088	12.82	9,257.15	11.99	24.81	11,649.67	15.09	2,776.15	11.49	11.49
Cross Subsidy				2.75				2.75	2,120.94	2.75			2.75
Average Applicable Tariff				27.56				27.56	13,770.61	17.83	2,776.15	14.24	14.24

Cost Assessment Level Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)				
	Industrial				Industrial				Industrial B-4				
	B4		B4		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	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh
Generation Cost - Energy	-			-	-			-	-				-
Generation Cost - Capacity	-			-	-			-	-				-
Transmission Charges	-			-	-			-	-				-
Market Operator's Fee	-			-	-			-	-				-
Distribution Use of System	-			-	-			-	-				-
Total Applicable Costs	-			-	-			-	-				-
Impact of allowed losses	-			-	-			-	-				-
Total Cost of Service	-			-	-			-	-				-
Cross Subsidy	-			-	-			-	-				-
Average Applicable Tariff	-			-	-			-	-				-

Cost Assessment Level Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact)				Cost of Service (Separated Energy Loss Impact)				PROPOSED Use of System Charges (Proposal-1)				
	Bulk Supply				Bulk Supply				Bulk Supply C-3(a)				
	C3(a)		C3(a)		C3(a)		C3(a)		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	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh
Generation Cost - Energy	-			-	-			-	-				-
Generation Cost - Capacity	-			-	-			-	-				-
Transmission Charges	-			-	-			-	-				-
Market Operator's Fee	-			-	-			-	-				-
Distribution Use of System	-			-	-			-	-				-
Total Applicable Costs	-			-	-			-	-				-
Impact of allowed losses	-			-	-			-	-				-
Total Cost of Service	-			-	-			-	-				-
Cross Subsidy	-			-	-			-	-				-
Average Applicable Tariff	-			-	-			-	-				-



Quetta Electric Supply Company (QESCO)

Annex-B-1

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 Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact) Industrial B-3				Cost of Service (Separated Energy Loss Impact) Industrial B-3				PROPOSED Use of System Charges (Proposed) Industrial B-3 (1 MW or More)				
	Variable		Fixed		Variable		Fixed		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	Rs./kWh
Generation Cost - Energy	12.82				9.72								
Generation Cost - Capacity		7,596.89	2.12			7,455.24	1.60		11,142.85	3.103			3.103
Transmission Charges		687.86	0.19			675.03	0.15		7,455.24	1.603	2,236.57		1.122
Market Operator's Fee		4.83	0.00			4.74	0.00		675.03	0.145	202.51		0.102
Distribution Use of System		2,555.31	0.71			2,507.66	0.54		2,507.66	0.539	752.30		0.378
Total Applicable Costs	12.821	10,844.89	3.020	15.840	9.718	10,642.68	2.289	12.007	21,780.79	5.390	3,191.38		4.704
Impact of allowed losses					3.10	202.21	0.73	3.833	202.21	0.731	60.66		0.512
Total Cost of Service	12.821	10,844.89	3.020	15.840	12.821	10,844.89	3.020	15.840	21,983.00	6.121	3,252.04		5.216
Cross Subsidy									40,076.65	11.159			11.159
Average Applicable Tariff				27.00				27.00	62,059.66	17.280	3,252.04		16.375

Cost Assessment Level Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact) Bulk Supply C2(b)				Cost of Service (Separated Energy Loss Impact) Bulk Supply C2(b)				PROPOSED Use of System Charges (Proposed) Bulk Supply C-2(b) (1 MW or More)				
	Variable		Fixed		Variable		Fixed		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	Rs./kWh
Generation Cost - Energy	12.82				9.72				2,484.92	3.103			3.103
Generation Cost - Capacity		7,124.45	8.90			6,991.61	6.74		6,991.61	6.743	2,097.48		4.720
Transmission Charges		645.08	0.81			633.05	0.61		633.05	0.611	189.92		0.427
Market Operator's Fee		4.53	0.01			4.45	0.00						
Distribution Use of System		177.55	2.28			1,793.21	1.73		1,793.21	1.729	537.96		1.211
Total Applicable Costs	12.821	7,951.62	11.988	24.809	9.718	9,422.32	9.087	18.805	11,902.79	12.185	2,825.36		9.460
Impact of allowed losses					3.10	179.02	2.90	6.004	179.02	2.901	53.71		2.03
Total Cost of Service	12.821	7,951.62	11.988	24.809	12.821	9,601.34	11.988	24.809	12,081.81	15.086	2,879.07		11.491
Cross Subsidy									2,199.80	2.747			2.747
Average Applicable Tariff				27.56				27.56	14,281.61	17.833	2,879.07		14.238

Cost Assessment Level Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact) Industrial B4				Cost of Service (Separated Energy Loss Impact) Industrial B4				PROPOSED Use of System Charges (Proposed) Industrial B-4				
	Variable		Fixed		Variable		Fixed		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	Rs./kWh
Generation Cost - Energy	-				-				-				-
Generation Cost - Capacity	-				-				-				-
Transmission Charges	-				-				-				-
Market Operator's Fee	-				-				-				-
Distribution Use of System	-				-				-				-
Total Applicable Costs	-				-				-				-
Impact of allowed losses	-				-				-				-
Total Cost of Service	-				-				-				-
Cross Subsidy	-				-				-				-
Average Applicable Tariff	-				-				-				-

Cost Assessment Level Consumption Category Tariff Category	Cost of Service (Inclusive of Energy Loss Impact) Bulk Supply C3(a)				Cost of Service (Separated Energy Loss Impact) Bulk Supply C3(a)				PROPOSED Use of System Charges (Proposed) Bulk Supply C-3(a)				
	Variable		Fixed		Variable		Fixed		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	Rs./kWh
Generation Cost - Energy	-				-				-				-
Generation Cost - Capacity	-				-				-				-
Transmission Charges	-				-				-				-
Market Operator's Fee	-				-				-				-
Distribution Use of System	-				-				-				-
Total Applicable Costs	-				-				-				-
Impact of allowed losses	-				-				-				-
Total Cost of Service	-				-				-				-
Cross Subsidy	-				-				-				-
Average Applicable Tariff	-				-				-				-