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No.CEO/HESCO/DG(MIRAD)/13672-74

Office of the Director General (MIRAD),

2nd Floor, WAPDA Offices Complex,

Hussainabad, Hyderabad.

Dated: 22.11.2023

The Deputy Director (Registrar Office),

National Electric Power Regulatory Authority (NEPRA),

NEPRA Tower, Attaturk Avenue (East), G-5/1,

ISLAMABAD.

Subject:- **Petition for Determination of Use of System Charges (UoSC) – Addendum.**

Reference: 1. This office letter No.CEO/HESCO/DG(MIRAD)/11374-76 dated 05.10.2023.
2. NEPRA's Office letter No.NEPA/DG(Tariff)/TRF-100/33375-84 dated 13.09.2023.

1. This is in continuation of the Petition for Determination of Use of System Charges for FY 2023-24 submitted by HESCO vide this office letter referred above at Sr. No.1.

2. As detailed in the Petition for determination UoSC, the proposed UoSCs were calculated after incorporating:

- The Revenue Requirements and the tariff numbers as determined by the Authority for the FY 2023-24 through Annual Tariff Adjustment,
- Units sold and purchased (kWh) rounding to GWh as considered in the tariff determination,
- Sales mix of FY 2022-23 as Base Year,
- Revenue calculated on Billable MDI; and
- The Cross-Subsidy as part of UoSCs was taken as the difference of relevant Cost of Service and average Determined Tariff of relevant category.

3. However, based on the deliberation with the representatives of Ministry of Energy (Power Division) GoP, Islamabad, calculation of revised UoSC for FY 2023-24 became necessary for considering and incorporating the followings:

- Revenue calculated on GoP notified tariff instead of Determined Tariff and hence Cross-Subsidy forming part of UoSC is the difference of Cost of Service and average notified GoP tariff for the relevant category.
- Units Sold and Purchased are taken in kWh instead of rounding them to GWh.
- The Sale Mix and MDI is also taken from the underlying calculations forming basis for tariff determination.

4. Foregoing in view, the **Annex-A**, **Annex-A1** and the Cost of Service **Annex-B** are being submitted attached herewith as **Addendum** to the UoSC Petition already submitted vide this office letter referred above at Sr. No.1.

5. Additionally, an **Annex-C** is being added herewith to show the summary of differences in the Category-Wise Cost of Service and the proposed Use of System Charges in the original Petition versus the values submitted as per this **Addendum**.

D.A/as above

C.C to:-

- Chief Financial Officer HESCO, Hyderabad, for information and necessary action as & when required.
- PSO to CEO HESCO, Hyderabad.
- Master File.

Cover Letter UoSC Petition - Addendum for FY 2023-24

TARIFF (DEPARTMENT)

Dir (T-1)..... Dir (T-2).....

Dir (T-3)..... Dir (T-4).....

Dir (T-5)..... Addl. Dir (RE).....

Date: 22/11/23

Director General (MIRAD),
HESCO, Hyderabad.

Forwarded please:

☒ For nec action ☐ for information

1. DG (Lic.)	2. DG (Admn./HR)
3. DG (M&E)	4. DG (CAD)
5. DG (Trf.)	6. Dir. (Fin.)
7. Dir. (Tech.)	8. Consultant
9. LA	10. Dir. (IT)

For kind information please

Chairman

S. M (Lic.)

S. M (Law)

S. M (Tech.)

S. M (Trf. & Fin)

REGISTRAR OFFICE

Diary No: 16549

Date: 22.11.23

Tariff Division Record
By No. 7548
Dated. 27-11-23



Annex-A & A1

PROPOSED USE OF SYSTEM CHRGES (UoSC) FOR FY 2023-24



HYDERABAD ELECTRIC SUPPLY COMPANY

WAPDA OFFICES COMPLEX HUSSAINABAD HYDERABAD

(PROPOSAL - 1)

Annex-A

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	Vol	Hybrid	
	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	7.69			7.69	6.73			6.73				
Generation Cost – Capacity		11,962.20	23.27	23.27		10,479.98	20.38	20.38	10,479.98	20.38	3,144.00	14.27
Transmission Charges		960.05	1.87	1.87		841.09	1.64	1.64	841.09	1.64	252.33	1.15
Market Operator's Fee		6.94	0.01	0.01		6.08	0.01	0.01				
Distribution Use of System		3,677.73	7.15	7.15		3,222.03	6.27	6.27	3,222.03	6.27	966.61	4.39
Total Applicable Costs	7.69	16,606.93	32.30	39.99	6.73	14,549.19	28.30	35.03	14,543.11	28.28	4,362.93	19.80
Impact of allowed losses					0.95	2,057.74	4.00	4.95	2,057.74	4.00	617.32	2.80
Total Cost of Service	7.69	16,606.93	32.30	39.99	7.69	16,606.93	32.30	39.99	16,600.84	32.29	4,980.25	22.60
Cross Subsidy				(5.11)				(5.11)	(2,626.23)	(5.11)		(5.11)
Avg. Applicable Tariff				34.88				34.88	13,974.61	27.18	4,980.25	17.49
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 C2(b) (1 MW or More)			
Tariff Category	C2(b)				C2(b)				MDI Based	Vol	Hybrid	
	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	7.69			7.69	6.73			6.73				
Generation Cost – Capacity		11,962.20	22.68	22.68		10,479.98	19.87	19.87	10,479.98	19.87	3,144.00	13.91
Transmission Charges		960.05	1.82	1.82		841.09	1.59	1.59	841.09	1.59	252.33	1.12
Market Operator's Fee		6.94	0.01	0.01		6.08	0.01	0.01				
Distribution Use of System		477.55	6.99	6.99		3,232.63	6.13	6.13	3,232.63	6.13	969.79	4.29
Total Applicable Costs	7.69	13,406.74	31.50	39.19	6.73	14,559.79	27.60	34.33	14,553.71	27.59	4,366.11	19.31
Impact of allowed losses					0.95	2,059.23	3.90	4.86	2,059.23	3.90	617.77	2.73
Total Cost of Service	7.69	13,406.74	31.50	39.19	7.69	16,619.02	31.50	39.19	16,612.94	31.49	4,983.88	22.04
Cross Subsidy				(2.58)				(2.58)	(1,363.27)	(2.58)		(2.58)
Avg. Applicable Tariff				36.61				36.61	15,249.67	28.91	4,983.88	19.46
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	B-4				B-4				MDI Based	Vol	Hybrid	
	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	6.93			6.93	6.73			6.73				
Generation Cost – Capacity		10,788.54	24.29	24.29		10,479.98	23.59	23.59	10,479.98	23.59	3,144.00	16.52
Transmission Charges		865.86	1.95	1.95		841.09	1.89	1.89	841.09	1.89	252.33	1.33
Market Operator's Fee		6.26	0.01	0.01		6.08	0.01	0.01				
Distribution Use of System		325.43	3.91	3.91		1,689.17	3.80	3.80	1,689.17	3.80	506.75	2.66
Total Applicable Costs	6.93	11,986.08	30.17	37.10	6.73	13,016.33	29.30	36.04	13,010.25	29.29	3,903.08	20.50
Impact of allowed losses					0.20	383.23	0.86	1.06	383.23	0.86	114.97	0.60
Total Cost of Service	6.93	11,986.08	30.17	37.10	6.93	13,399.56	30.17	37.10	13,393.48	30.15	4,018.04	21.11
Cross Subsidy				(3.21)				(3.21)	(1,650.66)	(3.21)		(3.21)
Avg. Applicable Tariff				33.89				33.89	11,742.82	26.94	4,018.04	17.90
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 C3(a)			
Tariff Category	C3(a)				C3(a)				MDI Based	Vol	Hybrid	
	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	(Variable) Rs./kWh	Fixed Rs./kWh Month	Rs. /kWh	Total Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	6.93			6.93	6.73			6.73				
Generation Cost – Capacity		10,788.54	28.82	28.82		10,479.98	27.99	27.99	10,479.98	27.99	3,144.00	19.59
Transmission Charges		865.86	2.31	2.31		841.09	2.25	2.25	841.09	2.25	252.33	1.57
Market Operator's Fee		6.26	0.02	0.02		6.08	0.02	0.02				
Distribution Use of System		274.28	4.51	4.51		1,639.49	4.38	4.38	1,639.49	4.38	491.85	3.07
Total Applicable Costs	6.93	11,934.94	35.65	42.59	6.73	12,966.65	34.63	41.37	12,960.57	34.62	3,888.17	24.23
Impact of allowed losses					0.20	381.76	1.02	1.22	381.76	1.02	114.53	0.71
Total Cost of Service	6.93	11,934.94	35.65	42.59	6.93	13,348.42	35.65	42.59	13,342.34	35.64	4,746.88	24.95
Cross Subsidy				(3.77)				(3.77)	(1,991.18)	(3.77)		(3.77)
Avg. Applicable Tariff				38.81				38.81	11,351.16	27.86	4,746.88	21.17

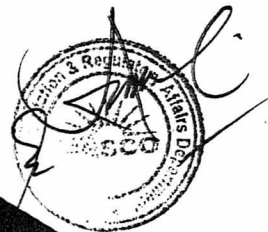


(PROPOSAL - 2)

Annex-A1

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	Vol	Hybrid	
	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	7.69			7.69	6.73			6.73				
Generation Cost – Capacity		8,296.50	23.27	23.27		7,793.61	20.38	20.38	7,793.61	20.38	2,338.08	14.27
Transmission Charges		665.77	1.87	1.87		625.49	1.64	1.64	625.49	1.64	187.65	1.15
Market Operator's Fee		4.81	0.01	0.01		4.52	0.01	0.01				
Distribution Use of System		2,550.42	7.15	7.15		2,396.12	6.27	6.27	2,396.12	6.27	718.84	4.39
Total Applicable Costs	7.69	11,516.51	32.30	39.99	6.73	10,819.75	28.30	35.03	10,815.23	28.28	3,244.57	19.80
Impact of allowed losses					0.95	696.76	4.00	4.95	696.76	4.00	209.03	2.80
Total Cost of Service	7.69	11,516.51	32.30	39.99	7.69	11,516.51	32.30	39.99	11,511.99	32.29	3,453.60	22.60
Cross Subsidy				(5.11)				(5.11)	(1,821.23)	(5.11)		(5.11)
Avg. Applicable Tariff				34.88				34.88	9,690.76	27.18	3,453.60	17.49
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 C2(b) (1 MW or More)			
Tariff Category	C2(b)				C2(b)				MDI Based	Vol	Hybrid	
	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	7.69			7.69	6.73			6.73				
Generation Cost – Capacity		15,186.92	22.68	22.68		14,268.09	19.87	19.87	14,268.09	19.87	4,280.43	13.91
Transmission Charges		1,218.86	1.82	1.82		1,145.12	1.59	1.59	1,145.12	1.59	343.54	1.12
Market Operator's Fee		8.81	0.01	0.01		8.28	0.01	0.01				
Distribution Use of System		606.28	6.99	6.99		4,401.10	6.13	6.13	4,401.10	6.13	1,320.33	4.29
Total Applicable Costs	7.69	17,020.88	31.50	39.19	6.73	19,822.59	27.60	34.33	19,814.31	27.59	5,944.29	19.31
Impact of allowed losses					0.95	1,276.52	3.90	4.86	1,276.52	3.90	382.96	2.73
Total Cost of Service	7.69	17,020.88	31.50	39.19	7.69	21,099.11	31.50	39.19	21,090.83	31.49	6,327.25	22.04
Cross Subsidy				(2.58)				(2.58)	(1,730.78)	(2.58)		(2.58)
Avg. Applicable Tariff				36.61				36.61	19,360.06	28.91	6,327.25	19.46
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	B-4				B-4				MDI Based	Vol	Hybrid	
	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	6.93			6.93	6.73			6.73				
Generation Cost – Capacity		11,669.15	24.29	24.29		10,963.15	23.59	23.59	10,963.15	23.59	3,288.94	16.52
Transmission Charges		936.53	1.95	1.95		879.87	1.89	1.89	879.87	1.89	263.96	1.33
Market Operator's Fee		6.77	0.01	0.01		6.36	0.01	0.01				
Distribution Use of System		351.99	3.91	3.91		1,767.05	3.80	3.80	1,767.05	3.80	530.12	2.66
Total Applicable Costs	6.93	12,964.44	30.17	37.10	6.73	13,616.43	29.30	36.04	13,610.07	29.29	4,083.02	20.50
Impact of allowed losses					0.20	876.86	0.86	1.06	876.86	0.86	263.06	0.60
Total Cost of Service	6.93	12,964.44	30.17	37.10	6.93	14,493.30	30.17	37.10	14,486.93	30.15	4,346.08	21.11
Cross Subsidy				(3.21)				(3.21)	(1,144.69)	(3.21)		(3.21)
Avg. Applicable Tariff				33.89				33.89	13,342.24	26.94	4,346.08	17.90
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 C3(a)			
Tariff Category	C3(a)				C3(a)				MDI Based	Vol	Hybrid	
	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	(Variable) Rs./kWh	Rs./kWh Month	Rs. /kWh	Rs. /kWh	Rs./kWh Month	Rs. /kWh	Rs./kWh Month	Rs. /kWh
Generation Cost – Energy	6.93			6.93	6.73			6.73				
Generation Cost – Capacity		6,530.56	28.82	28.82		6,135.45	27.99	27.99	6,135.45	27.99	1,840.64	19.59
Transmission Charges		524.12	2.31	2.31		492.41	2.25	2.25	492.41	2.25	147.72	1.57
Market Operator's Fee		3.79	0.02	0.02		3.56	0.02	0.02				
Distribution Use of System		166.03	4.51	4.51		959.83	4.38	4.38	959.83	4.38	287.95	3.07
Total Applicable Costs	6.93	7,224.50	35.65	42.59	6.73	7,591.26	34.63	41.37	7,587.70	34.62	2,276.31	24.23
Impact of allowed losses					0.20	488.86	1.02	1.22	488.86	1.02	146.66	0.71
Total Cost of Service	6.93	7,224.50	35.65	42.59	6.93	8,080.12	35.65	42.59	8,076.56	35.64	2,858.64	29.58
Cross Subsidy				(3.77)				(3.77)	(2,527.95)	(3.77)		(3.77)
Avg. Applicable Tariff				38.81				38.81	5,548.60	31.85	2,858.64	25.81

COST OF SERVICE STUDY FOR FY 2023-24



HYDERABAD ELECTRIC SUPPLY COMPANY

WAPDA OFFICES COMPLEX HUSSAINABAD HYDERABAD

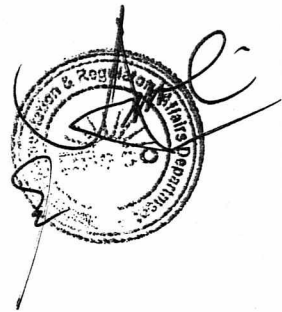
Table of Contents

Cost of Service Study	1
Fully Allocated Cost of Service Study (FACOS) Model	1
Major Steps of Cost of Service Study	1
Fundamental Assumptions	2
Projections and Revenue Requirement for Financial Year 2023-24	2
Summary of Revenue Requirement	3
Line Losses Charged on Voltage Levels	3
Customer Classification by Voltage Level	3-4
GoP Tariff Notified by NEPRA in July-2023	4-5
Results from FACOS Model	5
Revenue Requirement Allocation (in Percentage)	5-6
Revenue Requirement Allocation to Energy, Demand and Customer	6
Revenue as per GoP Tariff by Customer Category and Voltage Level	6-7
Cost of Service Functionalized Rates (Tariff Wise)	8-13
Unbundled Rates Rs./kWh (Tariff Wise)	14
Volumetric Rates at Each Customer Category	15
Revenue, Cost of Service and Subsidies (Tariff Category Wise)	16-17
Revenue, Cost of Service, Subsidy and Revenue to Cost Ratios	18-19
Revenue, Cost of Service and Subsidies (Rs./kWh)	20
Revenue, Cost of Service and Subsidies (11 kV and Above)	21
Revenue/kWh, Cost of Service/kWh and Subsidies/kWh (BPC only)	21-22
Master Data for Results of HESCO's Cost of Service Study (FY 2023-24)	22
Final Remarks	22



List of Tables

Table No.	Page No.	Description
Table 1:	2	Fundamental Assumptions
Table 2:	2	Projections and Revenue Requirement for Financial Year 2023-24
Table 3:	3	Summary of Revenue Requirement
Table 4:	3	Line Losses Charged on Voltage Levels
Table 5:	4	Customer Classification by Voltage Level
Table 6:	4-5	GoP Tariff Notified by NEPRA in July-2023.
Table 7:	6	Revenue Requirement Allocation in percentage
Table 8:	6	Revenue Requirement Allocation to Energy, Demand and Customer.
Table 9:	7	Revenue as per GoP Tariff by Customer Category
Table 10:	7	Revenue as per GoP Tariff by Voltage Level
Table 11 (A&B):	8-9	Cost of Service Functionalized (Tariff Wise)
Table 12 (A&B):	10-11	Cost of Service Functionalized Rates (Tariff Wise)
Table 13 (A&B):	12-13	Cost of Service Functionalized Rates Rs./kW/Month (Tariff Wise)
Table 14:	14	Unbundled Rates Rs./kWh (Tariff Wise)
Table 15:	15	Volumetric Rates at Each Customer Category
Table 16 (A&B):	16-17	Revenue, Cost of Service and Subsidies (Tariff Category Wise)
Table 17 (A&B):	18-19	Revenue, Cost of Service, Subsidy and Revenue to Cost Ratios
Table 18:	20	Revenue, Cost of Service and Subsidies (Rs./kWh)
Table 19:	21	Revenue, Cost of Service and Subsidies (11 kV and Above)
Table 20:	22	Revenue/kWh, Cost of Service/kWh and Subsidies/kWh (BPC only)
Table 21:	23	Master Data for Results of HESCO's Cost of Service Study (FY 2022-23)
Table 22:	24	Cost of Service FY 2023-24 (per kw or kwh sold)
Table 23:	25	Cost of Service FY 2023-24 (per kw or kwh at purchased)
Table 24:	26	Cost of Service FY 2023-24 (per kwh sold)
Table 25:	27	Cost of Service FY 2023-24 (per kwh purchased)
Table 26:	28	Cost of Service FY 2023-24 (Impact of Losses on per kW or kWh basis)
Table 27:	29	Cost of Service FY 2023-24 (Impact of Losses on per kWh basis)



Cost of Service (COS) 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.



HESCO
COST OF SERVICE STUDY FOR FY 2023-24

Fundamental Assumptions:

Table 1

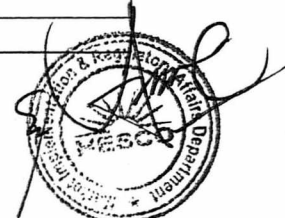
Description	FY 2023-24
Allowed Rate of Return (WACC) (NEPRA Determination)	21.14%
Capital Work in Progress ("CWIP")	CWIP 100%
Working Capital Allowance to be included in Rate Base	NO
Prior Year Adjustment (Rs. In Millions)	11,774.00
Demand Allocation Methodology (highest coincident peak in the year). Alternative is 12CP that means average of 12 months coincident peak.	1 CP (Single Annual Peak)
Customer Growth %	3.00%
Model Year	FY 2023-24
Base Year	FY 2021-22
Prior Year (Billing)	FY 2022-23

Projections and Revenue Requirement for Financial Year 2023-24:

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

Table 2

Description	FY 2023-24	Source
Units Purchased (MkWh)	5,921.11	Projection approved by NEPRA for FY 2023-24
Units Sold (MkWh)	4,851.79	
Assessed T&D Losses	18.06%	NEPRA MYT Determination FY 2022-23
Consumer Growth	3.00%	
Average Monthly MDI (MW) (Non-Coincidence at CDPs)	1,611.00	Projection approved by NEPRA for FY 2023-24
Energy Purchase Price (Rs/kWh)	6.73	These rates are calculated from Tariff Determination FY 2023-24.
Capacity Charges (Rs/kW/Month)	5,996.56	
T.UoS Rate (Rs/kW/Month)	481.27	
MOF (Rs/kW/Month)	3.48	Approved by NEPRA for FY 2022-23
Energy Charges (Rs. M)	39,878.64	Projection approved by NEPRA for FY 2023-24
Capacity Charges (Rs. M)	115,925.52	
T.UoS Rate (Rs. M)	9,303.86	
MOF (Rs. M)	67.28	
Power Purchase Price (Rs. M)	165,175.30	
O&M Cost (Rs. M)	13,943.88	Projection approved by NEPRA for FY 2023-24
Depreciation (Rs. M)	1,532.17	
RORB (Rs. M)	11,411.17	
Other Income (Rs. M)	-2,920.54	
Prior Year Adjustment (Rs. M)	11,773.58	
Revenue Requirement (Rs. M)	200,915.55	
Cost per KWH (Sold)	41.41	



Summary of Revenue Requirement:

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

Table 3

Summary of Revenue Requirement	
Description	FY 2023-24 Rs. (M)
Energy Charges	39,878.64
Capacity Charges	115,925.52
T.UoS Rate	9,303.86
MOF	67.28
Power Purchase Price	165,175.30
O&M Cost	13,943.88
Depreciation	1,532.17
RORB	11,411.17
Other Income	- 2,920.54
Distribution Margin	23,966.68
Prior Year Adjustment	11,773.58
Revenue Requirement	200,915.55

Line Losses Charged on Voltage Levels:

Line losses taken from HESCO's MYT Determination for FY 2023-24 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 2022-23.

Table 4

Losses FY 2023-24					
Voltage Level	0.2 KV	0.4KV	11KV	132KV	Total
Losses %age on purchased units	6.12%		9.08%	2.86%	18.06%
Losses %age on received units	8.07%		9.81%	2.86%	20.75%
Source Target as per NEPRA Determination is 18.06% 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.

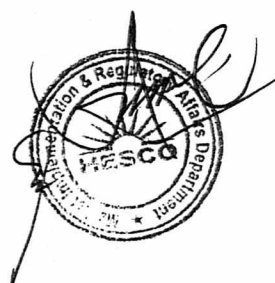


Table 5

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	A2d	C1a
		H2	A3a	E1i
		K1a	B1b	E1ii
		K1b	B2a	E2
			B2b	
			C1b	
			C1c	
			D1a	
			D1b	
			D2a	
			D2b	
			G1	
			G2	

GoP Tariff Notified by NEPRA in July-2023:

GoP tariffs for various categories of consumers as notified by NEPRA vide No.NEPRA/R/DG (Trf)/TRF-100/19271-19290 dated 25-07-2023 are provided in Table 6 below.

Table 6

GoP Tariff Notified by NEPRA (25-07-2023)			
TARIFF CATEGORIES		Fixed Charges	Variable Charges
		Rs/kW/M	Rs/kWh
A1 (a)	RESIDENTIAL - A1		
I	Up to 50 Units Life line		3.95
ii	51-100 units Life line		7.74
iii	01-100 Units		7.74
iv	101-200 Units		10.06
V	01-100 Units		16.48
Vi	101-200 Units		22.95
Vii	201-300 Units		27.14
Viii	301-400Units		32.03
ix	401-500Units		35.24
X	501-600Units		36.66
Xi	601-700Units		37.80
Xii	Above 700 Units		42.72
A1(b)	Time of Use (TOU) – Peak		41.89
	Time of Use (TOU) - Off-Peak		35.57
E-1(i)	Temporary E-1 (i)		42.03
	COMMERCIAL - A2		
A2 (a)	Commercial - For peak load requirement up to 5kW		37.75
A2 (b)	Sanctioned load 5 kw and above	500	39.43
A2 (c)	Time of Use (TOU) - Peak (A-2)	500	41.35
	Time of Use (TOU) - Off-Peak		35.38
E-1 (ii)	Temporary E-1 (ii)		38.14
A2 (d)	Electric Vehicles		39.43



HESCO
COST OF SERVICE STUDY FOR FY 2023-24

	INDUSTRIAL		
B1(a)	B1		34.33
B1(b)	B1- TOU (Peak)		37.89
	B1 - TOU (Off-peak)		32.33
B2 (a)	B2	500	33.83
B2 (b)	B2 - TOU (Peak)	500	37.83
	B2 - TOU (Off-peak)		32.12
B3	B3 - TOU (Peak)	460	37.83
	B3 - TOU (Off-peak)		32.03
B4	B4 - TOU (Peak)	440	37.83
	B4 - TOU (Off-peak)		31.93
E-2	Temporary E-2		35.41
	BULK		
C1 (a)	C1(a) up to 5 kW		38.43
C1 (b)	C1(b) exceeding 5 kW	500	37.93
C1 (c)	Time of Use (TOU) – Peak	500	41.35
	Time of Use (TOU) - Off-Peak		34.75
C2 (a)	C2 Supply at 11 kV	460	37.73
C2 (b)	Time of Use (TOU) – Peak	460	41.35
	Time of Use (TOU) - Off-Peak		34.55
C3 (a)	C3 Supply above 11 kV	440	37.63
C3 (b)	Time of Use (TOU) – Peak	440	41.35
	Time of Use (TOU) - Off-Peak		34.45
	AGRICULTURAL TUBE WELLS - Tariff D		
D1 (a)	D1 Scarp		34.43
D2 (a)	D2 Agricultural Tube-wells	200	24.10
D1 (b)	Time of Use (TOU) – Peak	200	37.35
	Time of Use (TOU) - Off-Peak		30.10
D2 (b)	Time of Use (TOU) – Peak	200	24.10
	Time of Use (TOU) - Off-Peak		24.10
G	Public Lighting G		37.43
H	Residential Colonies H		37.43
K1	Special Contracts - Tariff K (AJK)		
K1 (i)	Time of Use (TOU) – Peak		
	Time of Use (TOU) - Off-Peak		
A3	General Service		37.31

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	-	85%	15%	100%
Depreciation	-	88%	12%	100%
RORB	-	88%	12%	100%
Other Income	-	95%	5%	100%
Prior Year Adjustment	-	84%	16%	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	39,878.64	-	-	39,878.64
Capacity Charges	-	115,925.52	-	115,925.52
T.UoSC	-	9,303.86	-	9,303.86
MOF	-	67.28	-	67.28
Power Purchase Price	39,878.64	125,296.65	-	165,175.30
O&M Cost	-	11,918.93	2,024.96	13,943.88
Depreciation	-	1,343.07	189.10	1,532.17
RORB	-	9,977.13	1,434.03	11,411.17
Other Income	-	-2,774.51	-146.03	-2,920.54
Distribution Margin	-	20,464.62	3,502.06	23,966.68
Prior Year Adjustment	-	9,834.35	1,939.23	11,773.58
Revenue Requirements	39,878.64	155,595.62	5,441.29	200,915.55

Revenue as per GoP 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 GoP Tariff notified by NEPRA vide No.NEPRA/R/DG(Trf)/TRF-100/19271-19290 dated 25-07-2023 already provided in (Table 6 above).

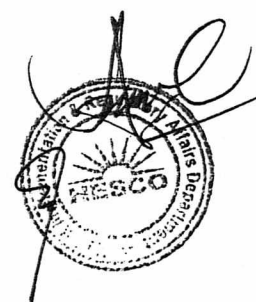


Table 9

FY 2023-24

Consumer Category	MDI MW	Sales (GWh)	Fixed Charge Rs. (M)	Variable Charge Rs. (M)	Total Revenue Rs. (M)	Rs./kWh
Residential -- A1(a)	0.00	2,656.04	-	54,042.53	54,043	20.35
Residential -- A1(b)	0.00	50.13	-	1,837.69	1,838	36.65
Commercial -- A2(a)	0.00	143.20	-	5,405.85	5,406	37.75
Commercial -- A2(b)	0.01	0.03	0.06	1.04	1	41.53
Commercial -- A2(c)	67.28	179.60	403.68	6,564.06	6,968	38.80
Commercial -- A2(d)	0.00	0.05	-	1.91	2	39.43
Industrial -- B1(a)	0.00	5.33	-	182.92	183	34.33
Industrial -- B2(a)	0.10	0.30	0.61	9.99	11	35.90
Industrial -- B1(b)	0.00	73.23	-	2,434.20	2,434	33.24
Industrial -- B2(b)	197.72	409.07	1,186.31	13,501.39	14,688	35.90
Industrial -- B3	132.25	384.91	730.02	12,695.28	13,425	34.88
Industrial -- B4	48.71	251.95	257.21	8,281.05	8,538	33.89
Bulk Supply -- C1(a)	0.00	0.39	-	15.16	15	38.43
Bulk Supply -- C1(b)	1.96	7.70	11.78	292.11	304	39.46
Bulk Supply -- C2(a)	5.90	10.91	-	1,051.60	1,052	96.40
Bulk Supply -- C3(a)	2.30	20.12	12.71	411.60	424	21.08
Bulk Supply -- C1(c)	13.26	29.55	73.18	1,924.46	1,998	67.61
Bulk Supply -- C2(b)	4.51	54.57	23.81	757.27	781	14.31
Bulk Supply -- C3(b)	0.00	-	-	-	-	-
Agricultural --D1(a)	0.00	4.86	-	167.48	167	34.43
Agricultural --D2(a)	0.44	1.91	1.04	45.95	47	24.65
Agricultural --D2(b)	22.90	119.59	54.97	3,109.76	3,165	26.46
Agricultural --D1(b)	27.30	100.32	65.53	2,882.05	2,948	29.38
Temporary Supply -- E1(i)	0.00	0.01	-	0.28	0	42.03
Temporary Supply -- E1(ii)	0.00	2.83	-	107.92	108	38.14
Temporary Supply -- E2	0.00	0.15	-	5.43	5	35.41
Public Lighting -- G	0.00	41.05	-	1,536.46	1,536	37.43
Residential Colonies -- H	0.00	3.62	-	135.67	136	37.43
Azad Jammu Kashmir - K1a	0.00	-	-	-	-	-
Azad Jammu Kashmir - K1b	0.00	-	-	-	-	-
A3 General	0.00	300.37	-	11,206.87	11,207	37.31
Total	524.65	4,851.79	2,820.92	128,607.97	131,428.90	27.09

Table 10

FY 2023-24

Consumer Class	MDI MW	Sales (GWh)	Fixed Charge Rs. (M)	Variable Charge	Total Revenue Rs. (M)	Rs./kWh
0.2 KV	0.00	2,807.95	-	59,760.08	59,760.08	21.28
0.4 KV	323.61	1,317.75	1,723.98	44,642.56	46,366.55	35.19
11 KV	147.81	454.02	815.92	15,167.01	15,982.93	35.20
132 KV	53.22	272.07	281.02	9,038.32	9,319.34	34.25
G. TOTAL	524.65	4,851.79	2,820.92	128,607.97	131,428.90	27.09



Cost of Service Functionalized Rates (Tariff Wise):

Based on the allocation of overall Revenue Requirement of HESCO to customer's categories, the resultant functional amounts (Rs. in million) for each customer category are summarized at **Table 11 (A & B)** below;

Table 11 (A)

FY 2023-24						
Classes	Voltage Level	No. of Customers	Energy	Demand	Generation Cost	
			GWH	MW	Energy (Rs. M)	Demand (Rs. M)
Residential -- A1(a)	0.2kV	1,014,053	2,656.04	398.99	22,211.81	62,304.63
Residential -- A1(b)	0.4kV	5,627	50.13	8.02	419.27	1,252.63
Commercial -- A2(a)	0.2kV	171,558	143.20	23.37	1,197.56	3,648.87
Commercial -- A2(b)	0.4kV	46	0.03	0.00	0.22	0.65
Commercial -- A2(c)	0.4kV	6,462	179.60	29.38	1,501.96	4,587.61
Commercial -- A2(d)	0.4kV	1	0.05	-	0.41	-
Industrial -- B1(a)	0.2kV	4,915	5.33	0.87	44.56	136.01
Industrial -- B2(a)	0.4kV	301	0.30	0.05	2.47	7.22
Industrial -- B1(b)	0.4kV	7,121	73.23	12.15	612.40	1,897.89
Industrial -- B2(b)	0.4kV	3,509	409.07	65.10	3,420.98	10,165.40
Industrial -- B3	11kV	252	384.91	62.39	2,959.05	8,955.16
Industrial -- B4	132/66kV	9	251.95	47.27	1,746.82	6,119.30
Bulk Supply -- C1(a)	0.2kV	44	0.39	0.06	3.03	9.86
Bulk Supply -- C1(b)	0.4kV	106	7.70	1.26	64.40	197.53
Bulk Supply -- C2(a)	11kV	12	10.91	1.80	83.86	257.76
Bulk Supply -- C3(a)	132/66kV	3	20.12	4.48	139.53	579.91
Bulk Supply -- C1(c)	0.4kV	168	29.55	4.50	247.08	702.09
Bulk Supply -- C2(b)	11kV	23	54.57	8.62	419.51	1,237.43
Bulk Supply -- C3(b)	132/66kV	1	-	-	-	-
Agricultural --D1(a)	0.4kV	426	4.86	0.62	40.68	96.84
Agricultural --D2(a)	0.4kV	3,912	1.91	0.30	15.95	47.44
Agricultural --D2(b)	0.4kV	9,025	119.59	18.98	1,000.08	2,963.45
Agricultural --D1(b)	0.4kV	2,891	100.32	11.60	838.94	1,811.11
Temp. Supply -- E1(i)	0.2kV	29	0.01	0.00	0.05	0.17
Temp. Supply -- E1(ii)	0.2kV	458	2.83	0.43	23.66	67.70
Temp. Supply -- E2	0.2kV	31	0.15	0.02	1.28	3.66
Public Lighting -- G	0.4kV	598	41.05	6.11	343.28	954.72
Resident. Colonies --	11kV	116	3.62	0.59	27.86	84.26
Azad J. Kashmir - K1a	11Kv	-	-	-	-	-
Azad J. - K1b	11Kv	-	-	-	-	-
A3 General	0.4Kv	14,264	300.37	50.18	2,511.94	7,836.23
Total	-	1,245,960	4,851.79	757.15	39,878.64	115,925.52

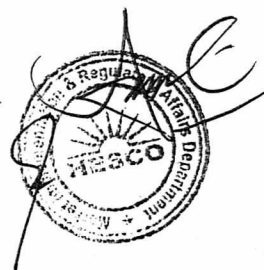


Table 11 (B)

Classes	Transmission	MOF	Distribution Cost		Total Cost
	Cost (Rs. M)	Cost (Rs. M)	Demand (Rs. M)	Customer (Rs. M)	
Residential -- A1(a)	5,000.40	36.16	16,787.89	3,439.81	109,781
Residential -- A1(b)	100.53	0.73	337.52	45.44	2,156
Commercial -- A2(a)	292.85	2.12	983.18	185.46	6,310
Commercial -- A2(b)	0.05	0.00	0.17	0.02	1
Commercial -- A2(c)	368.19	2.66	1,236.12	162.79	7,859
Commercial -- A2(d)	-	-	-	0.04	0
Industrial -- B1(a)	10.92	0.08	36.65	6.90	235
Industrial -- B2(a)	0.58	0.00	1.95	0.27	12
Industrial -- B1(b)	152.32	1.10	511.38	66.38	3,241
Industrial -- B2(b)	815.85	5.90	2,739.05	370.78	17,518
Industrial -- B3	718.72	5.20	2,404.78	348.44	15,391
Industrial -- B4	491.12	3.55	801.73	184.58	9,347
Bulk Supply -- C1(a)	0.79	0.01	2.66	0.51	17
Bulk Supply -- C1(b)	15.85	0.11	53.22	6.98	338
Bulk Supply -- C2(a)	20.69	0.15	69.22	9.88	442
Bulk Supply -- C3(a)	46.54	0.34	75.98	14.74	857
Bulk Supply -- C1(c)	56.35	0.41	189.18	26.78	1,222
Bulk Supply -- C2(b)	99.31	0.72	332.29	49.40	2,139
Bulk Supply -- C3(b)	-	-	-	-	-
Agricultural --D1(a)	7.77	0.06	26.09	4.41	176
Agricultural --D2(a)	3.81	0.03	12.78	1.73	82
Agricultural --D2(b)	237.84	1.72	798.50	108.39	5,110
Agricultural --D1(b)	145.35	1.05	488.00	90.93	3,375
Temp. Supply -- E1(i)	0.01	0.00	0.05	0.01	0
Temp. Supply -- E1(ii)	5.43	0.04	18.24	3.66	119
Temp. Supply -- E2	0.29	0.00	0.99	0.20	6
Public Lighting -- G	76.62	0.55	257.25	37.21	1,670
Resident. Colonies --	6.76	0.05	22.63	3.28	145
Azad J. Kashmir - K1a	-	-	-	-	-
Azad J. - K1b	-	-	-	-	-
A3 General	628.91	4.55	2,111.46	272.26	13,365
Total	9,303.86	67.28	30,298.97	5,441.29	200,915.55

Based on the cost drivers (energy, demand & customers) based allocation of overall Revenue Requirement of HESCO to the customers categories, the resultant functional (generation, transmission, MO Fee & Distribution) rates (in terms of Rs./kWh, Rs./kW/Month and Rs./Customer / Month, as applicable) are summarized at **Table 12 (A & B)** below;



Table 12 (A)

FY 2023-24						
Classes	Voltage Level	No. of Customers	Energy	Demand	Generation Cost	
			GWH	MW	Energy (Rs./kWh)	Demand (Rs./kW/Month)
Residential -- A1(a)	0.2kV	1,014,053	2,656.04	398.99	8.36	13,012.88
Residential -- A1(b)	0.4kV	5,627	50.13	8.02	8.36	13,012.88
Commercial -- A2(a)	0.2kV	171,558	143.20	23.37	8.36	13,012.88
Commercial -- A2(b)	0.4kV	46	0.03	0.00	8.36	13,012.88
Commercial -- A2(c)	0.4kV	6,462	179.60	29.38	8.36	13,012.88
Commercial -- A2(d)	0.4kV	1	0.05	-	8.36	-
Industrial -- B1(a)	0.2kV	4,915	5.33	0.87	8.36	13,012.88
Industrial -- B2(a)	0.4kV	301	0.30	0.05	8.36	13,012.88
Industrial -- B1(b)	0.4kV	7,121	73.23	12.15	8.36	13,012.88
Industrial -- B2(b)	0.4kV	3,509	409.07	65.10	8.36	13,012.88
Industrial -- B3	11kV	252	384.91	62.39	7.69	11,962.20
Industrial -- B4	132/66kV	9	251.95	47.27	6.93	10,788.54
Bulk Supply -- C1(a)	0.2kV	44	0.39	0.06	7.69	13,012.88
Bulk Supply -- C1(b)	0.4kV	106	7.70	1.26	8.36	13,012.88
Bulk Supply -- C2(a)	11kV	12	10.91	1.80	7.69	11,962.20
Bulk Supply -- C3(a)	132/66kV	3	20.12	4.48	6.93	10,788.54
Bulk Supply -- C1(c)	0.4kV	168	29.55	4.50	8.36	13,012.88
Bulk Supply -- C2(b)	11kV	23	54.57	8.62	7.69	11,962.20
Bulk Supply -- C3(b)	132/66kV	1	-	-	-	-
Agricultural --D1(a)	0.4kV	426	4.86	0.62	8.36	13,012.88
Agricultural --D2(a)	0.4kV	3,912	1.91	0.30	8.36	13,012.88
Agricultural --D2(b)	0.4kV	9,025	119.59	18.98	8.36	13,012.88
Agricultural --D1(b)	0.4kV	2,891	100.32	11.60	8.36	13,012.88
Temp. Supply -- E1(i)	0.2kV	29	0.01	0.00	8.36	13,012.88
Temp. Supply -- E1(ii)	0.2kV	458	2.83	0.43	8.36	13,012.88
Temp. Supply -- E2	0.2kV	31	0.15	0.02	8.36	13,012.88
Public Lighting -- G	0.4kV	598	41.05	6.11	8.36	13,012.88
Resident. Colonies --	11kV	116	3.62	0.59	7.69	11,962.20
Azad J. Kashmir - K1a	11Kv	-	-	-	-	-
Azad J. - K1b	11Kv	-	-	-	-	-
A3 General	0.4Kv	14,264	300.37	50.18	8.36	13,012.88
Total	-	1,245,960	4,851.79	757.15	8.22	12,759.02



Table 12 (B)

Classes	Transmission	MOF	Distribution Cost		Total Rs./kWh
	(Rs./kW/ Month)	(Rs./kW/ Month)	Demand (Rs./kW/ Month)	Customer (Rs./kW/ Month)	
Residential -- A1(a)	1,044.38	7.55	3,506.30	718.44	41.33
Residential -- A1(b)	1,044.38	7.55	3,506.30	472.07	43.01
Commercial -- A2(a)	1,044.38	7.55	3,506.30	661.40	44.06
Commercial -- A2(b)	1,044.38	7.55	3,506.30	481.03	42.38
Commercial -- A2(c)	1,044.38	7.55	3,506.30	461.76	43.76
Commercial -- A2(d)	-	-	-	-	8.36
Industrial -- B1(a)	1,044.38	7.55	3,506.30	660.20	44.13
Industrial -- B2(a)	1,044.38	7.55	3,506.30	482.37	42.29
Industrial -- B1(b)	1,044.38	7.55	3,506.30	455.10	44.26
Industrial -- B2(b)	1,044.38	7.55	3,506.30	474.65	42.82
Industrial -- B3	960.05	6.94	3,212.28	465.45	39.99
Industrial -- B4	865.86	6.26	1,413.48	325.43	37.10
Bulk Supply -- C1(a)	1,044.38	7.55	3,506.30	674.55	42.72
Bulk Supply -- C1(b)	1,044.38	7.55	3,506.30	459.85	43.90
Bulk Supply -- C2(a)	960.05	6.94	3,212.28	458.31	40.48
Bulk Supply -- C3(a)	865.86	6.26	1,413.48	274.28	42.59
Bulk Supply -- C1(c)	1,044.38	7.55	3,506.30	496.35	41.36
Bulk Supply -- C2(b)	960.05	6.94	3,212.28	477.55	39.19
Bulk Supply -- C3(b)	-	-	-	-	-
Agricultural --D1(a)	1,044.38	7.55	3,506.30	592.49	36.15
Agricultural --D2(a)	1,044.38	7.55	3,506.30	474.00	42.87
Agricultural --D2(b)	1,044.38	7.55	3,506.30	475.97	42.73
Agricultural --D1(b)	1,044.38	7.55	3,506.30	653.33	33.65
Temp. Supply -- E1(i)	1,044.38	7.55	3,506.30	655.45	44.38
Temp. Supply -- E1(ii)	1,044.38	7.55	3,506.30	704.33	41.97
Temp. Supply -- E2	1,044.38	7.55	3,506.30	706.15	41.88
Public Lighting -- G	1,044.38	7.55	3,506.30	507.13	40.67
Resident. Colonies --	960.05	6.94	3,212.28	465.82	39.96
Azad J. Kashmir - K1a	-	-	-	-	-
Azad J. - K1b	-	-	-	-	-
A3 General	1,044.38	7.55	3,506.30	452.11	44.50
Total	1,024.00	7.40	3,334.77	598.88	41.41

The above detailed functional rates recapitulated, in terms of Rs./kW/Month, for each function is given in Table 13 (A & B) below.



Table 13 (A)

FY 2023-24

Classes	Voltage Level	No. of Customers	Energy	Demand	Generation Cost	
			GWH	MW	Energy (Rs./kW/ Month)	Demand (Rs./kW/ Month)
Residential -- A1(a)	0.2kV	1,014,053	2,656.04	398.99	4,639.14	13,012.88
Residential -- A1(b)	0.4kV	5,627	50.13	8.02	4,355.53	13,012.88
Commercial -- A2(a)	0.2kV	171,558	143.20	23.37	4,270.82	13,012.88
Commercial -- A2(b)	0.4kV	46	0.03	0.00	4,438.19	13,012.88
Commercial -- A2(c)	0.4kV	6,462	179.60	29.38	4,260.35	13,012.88
Commercial -- A2(d)	0.4kV	1	0.05	-	-	-
Industrial -- B1(a)	0.2kV	4,915	5.33	0.87	4,263.07	13,012.88
Industrial -- B2(a)	0.4kV	301	0.30	0.05	4,450.53	13,012.88
Industrial -- B1(b)	0.4kV	7,121	73.23	12.15	4,198.95	13,012.88
Industrial -- B2(b)	0.4kV	3,509	409.07	65.10	4,379.24	13,012.88
Industrial -- B3	11kV	252	384.91	62.39	3,952.66	11,962.20
Industrial -- B4	132/66kV	9	251.95	47.27	3,079.70	10,788.54
Bulk Supply -- C1(a)	0.2kV	44	0.39	0.06	4,004.09	13,012.88
Bulk Supply -- C1(b)	0.4kV	106	7.70	1.26	4,242.78	13,012.88
Bulk Supply -- C2(a)	11kV	12	10.91	1.80	3,892.08	11,962.20
Bulk Supply -- C3(a)	132/66kV	3	20.12	4.48	2,595.70	10,788.54
Bulk Supply -- C1(c)	0.4kV	168	29.55	4.50	4,579.49	13,012.88
Bulk Supply -- C2(b)	11kV	23	54.57	8.62	4,055.41	11,962.20
Bulk Supply -- C3(b)	132/66kV	1	-	-	-	-
Agricultural -- D1(a)	0.4kV	426	4.86	0.62	5,466.55	13,012.88
Agricultural -- D2(a)	0.4kV	3,912	1.91	0.30	4,373.32	13,012.88
Agricultural -- D2(b)	0.4kV	9,025	119.59	18.98	4,391.47	13,012.88
Agricultural -- D1(b)	0.4kV	2,891	100.32	11.60	6,027.84	13,012.88
Temp. Supply -- E1(i)	0.2kV	29	0.01	0.00	4,232.41	13,012.88
Temp. Supply -- E1(ii)	0.2kV	458	2.83	0.43	4,548.04	13,012.88
Temp. Supply -- E2	0.2kV	31	0.15	0.02	4,559.78	13,012.88
Public Lighting -- G	0.4kV	598	41.05	6.11	4,678.96	13,012.88
Resident. Colonies --	11kV	116	3.62	0.59	3,955.79	11,962.20
Azad J. Kashmir - K1a	11kV	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-
A3 General	0.4kV	14,264	300.37	50.18	4,171.34	13,012.88
Total	-	1,245,960	4,851.79	757.15	4,389.13	12,759.02

Table 13 (B)

Classes	Transmission	MOF	Distribution Cost		Total Rs./kW/ Month
	(Rs./kW/ Month)	(Rs./kW/ Month)	Demand (Rs./kW/ Month)	Customer (Rs./kW/ Month)	
Residential -- A1(a)	1,044.38	7.55	3,506.30	718.44	22,928.68
Residential -- A1(b)	1,044.38	7.55	3,506.30	472.07	22,398.71
Commercial -- A2(a)	1,044.38	7.55	3,506.30	661.40	22,503.33
Commercial -- A2(b)	1,044.38	7.55	3,506.30	481.03	22,490.33
Commercial -- A2(c)	1,044.38	7.55	3,506.30	461.76	22,293.22
Commercial -- A2(d)	-	-	-	-	-
Industrial -- B1(a)	1,044.38	7.55	3,506.30	660.20	22,494.37
Industrial -- B2(a)	1,044.38	7.55	3,506.30	482.37	22,504.02
Industrial -- B1(b)	1,044.38	7.55	3,506.30	455.10	22,225.17
Industrial -- B2(b)	1,044.38	7.55	3,506.30	474.65	22,425.00
Industrial -- B3	960.05	6.94	3,212.28	465.45	20,559.59
Industrial -- B4	865.86	6.26	1,413.48	325.43	16,479.26
Bulk Supply -- C1(a)	1,044.38	7.55	3,506.30	674.55	22,249.75
Bulk Supply -- C1(b)	1,044.38	7.55	3,506.30	459.85	22,273.74
Bulk Supply -- C2(a)	960.05	6.94	3,212.28	458.31	20,491.87
Bulk Supply -- C3(a)	865.86	6.26	1,413.48	274.28	15,944.12
Bulk Supply -- C1(c)	1,044.38	7.55	3,506.30	496.35	22,646.95
Bulk Supply -- C2(b)	960.05	6.94	3,212.28	477.55	20,674.43
Bulk Supply -- C3(b)	-	-	-	-	-
Agricultural --D1(a)	1,044.38	7.55	3,506.30	592.49	23,630.16
Agricultural --D2(a)	1,044.38	7.55	3,506.30	474.00	22,418.44
Agricultural --D2(b)	1,044.38	7.55	3,506.30	475.97	22,438.55
Agricultural --D1(b)	1,044.38	7.55	3,506.30	653.33	24,252.28
Temp. Supply -- E1(i)	1,044.38	7.55	3,506.30	655.45	22,458.96
Temp. Supply -- E1(ii)	1,044.38	7.55	3,506.30	704.33	22,823.48
Temp. Supply -- E2	1,044.38	7.55	3,506.30	706.15	22,837.04
Public Lighting -- G	1,044.38	7.55	3,506.30	507.13	22,757.20
Resident. Colonies --	960.05	6.94	3,212.28	465.82	20,563.08
Azad J. Kashmir - K1a	-	-	-	-	-
Azad J. - K1b	-	-	-	-	-
A3 General	1,044.38	7.55	3,506.30	452.11	22,194.56
Total	1,024.00	7.40	3,334.77	598.88	22,113.21



Unbundled Rates Rs./kWh (Tariff Wise):

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

Table 14

FY 2023-24							
Customer Class	Sales GWh	Demand MW	Gen. Rs./kWh	T. UoSC Rs./kWh	MOF Rs./kWh	D. UoSC Rs./kWh	Total Rate Rs./kWh
Residential -- A1(a)	2,656	398.99	31.82	1.88	0.01	7.62	41.33
Residential -- A1(b)	50	8.02	33.35	2.01	0.01	7.64	43.01
Commercial -- A2(a)	143	23.37	33.84	2.05	0.01	8.16	44.06
Commercial -- A2(b)	0	0.00	32.88	1.97	0.01	7.51	42.38
Commercial -- A2(c)	180	29.38	33.91	2.05	0.01	7.79	43.76
Commercial -- A2(d)	0	-	8.36	-	-	0.91	9.27
Industrial -- B1(a)	5	0.87	33.89	2.05	0.01	8.17	44.13
Industrial -- B2(a)	0	0.05	32.81	1.96	0.01	7.49	42.29
Industrial -- B1(b)	73	12.15	34.28	2.08	0.02	7.89	44.26
Industrial -- B2(b)	409	65.10	33.21	1.99	0.01	7.60	42.82
Industrial -- B3	385	62.39	30.95	1.87	0.01	7.15	39.99
Industrial -- B4	252	47.27	31.22	1.95	0.01	3.91	37.10
Bulk Supply -- C1(a)	0	0.06	32.67	2.01	0.01	8.03	42.72
Bulk Supply -- C1(b)	8	1.26	34.01	2.06	0.01	7.82	43.90
Bulk Supply -- C2(a)	11	1.80	31.31	1.90	0.01	7.25	40.48
Bulk Supply -- C3(a)	20	4.48	35.75	2.31	0.02	4.51	42.59
Bulk Supply -- C1(c)	30	4.50	32.13	1.91	0.01	7.31	41.36
Bulk Supply -- C2(b)	55	8.62	30.36	1.82	0.01	6.99	39.19
Bulk Supply -- C3(b)	-	-	-	-	-	-	-
Agricultural --D1(a)	5	0.62	28.27	1.60	0.01	6.27	36.15
Agricultural --D2(a)	2	0.30	33.25	2.00	0.01	7.61	42.87
Agricultural --D2(b)	120	18.98	33.14	1.99	0.01	7.58	42.73
Agricultural --D1(b)	100	11.60	26.42	1.45	0.01	5.77	33.65
Temp. Supply -- E1(i)	0	0.00	34.07	2.06	0.01	8.22	44.38
Temp. Supply -- E1(ii)	3	0.43	32.29	1.92	0.01	7.74	41.97
Temp. Supply -- E2	0	0.02	32.23	1.92	0.01	7.73	41.88
Public Lighting -- G	41	6.11	31.62	1.87	0.01	7.17	40.67
Resident. Colonies --	4	0.59	30.93	1.87	0.01	7.15	39.96
Azad J. Kashmir - K1a	-	-	-	-	-	-	-
Azad J. - K1b	-	-	-	-	-	-	-
A3 General	300	50.18	34.45	2.09	0.02	7.94	44.50
Total	4,852	757.15	32.11	1.92	0.01	7.37	41.41



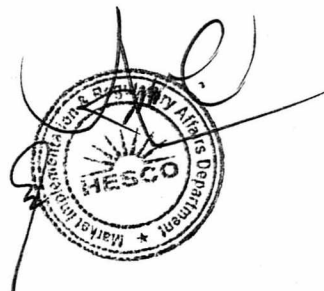
Volumetric Rates at Each Customer Category:

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

Customer Class	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)	2,656	84,129.07	25,651.62	17,571.11	9.66	41.33
Residential -- A1(b)	50	1,691.41	464.71	17,571.11	9.27	43.01
Commercial -- A2(a)	143	4,927.02	1,383.02	17,571.11	9.66	44.06
Commercial -- A2(b)	0	0.88	0.25	17,571.11	9.27	42.38
Commercial -- A2(c)	180	6,194.59	1,664.75	17,571.11	9.27	43.76
Commercial -- A2(d)	0	-	0.45	-	9.27	9.27
Industrial -- B1(a)	5	183.66	51.46	17,571.11	9.66	44.13
Industrial -- B2(a)	0	9.75	2.74	17,571.11	9.27	42.29
Industrial -- B1(b)	73	2,562.69	678.78	17,571.11	9.27	44.26
Industrial -- B2(b)	409	13,726.20	3,791.76	17,571.11	9.27	42.82
Industrial -- B3	385	12,083.86	3,307.49	16,141.48	8.59	39.99
Industrial -- B4	252	7,415.70	1,931.40	13,074.13	7.67	37.10
Bulk Supply -- C1(a)	0	13.31	3.54	17,571.11	8.98	42.72
Bulk Supply -- C1(b)	8	266.72	71.38	17,571.11	9.27	43.90
Bulk Supply -- C2(a)	11	347.81	93.74	16,141.48	8.59	40.48
Bulk Supply -- C3(a)	20	702.77	154.27	13,074.13	7.67	42.59
Bulk Supply -- C1(c)	30	948.02	273.86	17,571.11	9.27	41.36
Bulk Supply -- C2(b)	55	1,669.76	468.91	16,141.48	8.59	39.19
Bulk Supply -- C3(b)	-	-	-	-	-	-
Agricultural --D1(a)	5	130.76	45.09	17,571.11	9.27	36.15
Agricultural --D2(a)	2	64.06	17.67	17,571.11	9.27	42.87
Agricultural --D2(b)	120	4,001.50	1,108.47	17,571.11	9.27	42.73
Agricultural --D1(b)	100	2,445.51	929.87	17,571.11	9.27	33.65
Temp. Supply -- E1(i)	0	0.23	0.06	17,571.11	9.66	44.38
Temp. Supply -- E1(ii)	3	91.42	27.33	17,571.11	9.66	41.97
Temp. Supply -- E2	0	4.94	1.48	17,571.11	9.66	41.88
Public Lighting -- G	41	1,289.14	380.49	17,571.11	9.27	40.67
Resident. Colonies --	4	113.70	31.15	16,141.48	8.59	39.96
Azad J. Kashmir - K1a	-	-	-	-	-	-
Azad J. - K1b	-	-	-	-	-	-
A3 General	300	10,581.15	2,784.19	17,571.11	9.27	44.50
Total	4,852	155,595.62	45,319.93	17,125.20	9.34	41.41

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 (A & B)** 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 (B) below.

Table 16 (A)

FY 2023-24						
Customer Class	Voltage	Sales GWh	Demand MW	Revenue As Per GoP Tariff		
				Demand Charge (M.PKR)	Energy Charge M.PKR	Total M.PKR
Residential -- A1(a)	0.2kV	2,656.04	398.99	-	54,042.53	54,042.53
Residential -- A1(b)	0.4kV	50.13	8.02	-	1,837.69	1,837.69
Commercial -- A2(a)	0.2kV	143.20	23.37	-	5,405.85	5,405.85
Commercial -- A2(b)	0.4kV	0.03	0.00	0.06	1.04	1.10
Commercial -- A2(c)	0.4kV	179.60	29.38	403.68	6,564.06	6,967.75
Commercial -- A2(d)	0.4kV	0.05	-	-	1.91	1.91
Industrial -- B1(a)	0.2kV	5.33	0.87	-	182.92	182.92
Industrial -- B2(a)	0.4kV	0.30	0.05	0.61	9.99	10.61
Industrial -- B1(b)	0.4kV	73.23	12.15	-	2,434.20	2,434.20
Industrial -- B2(b)	0.4kV	409.07	65.10	1,186.31	13,501.39	14,687.70
Industrial -- B3	11kV	384.91	62.39	730.02	12,695.28	13,425.30
Industrial -- B4	32/66kV	251.95	47.27	257.21	8,281.05	8,538.26
Bulk Supply -- C1(a)	0.2kV	0.39	0.06	-	15.16	15.16
Bulk Supply -- C1(b)	0.4kV	7.70	1.26	11.78	292.11	303.89
Bulk Supply -- C2(a)	11kV	10.91	1.80	12.71	411.60	424.32
Bulk Supply -- C3(a)	132/66kV	20.12	4.48	23.81	757.27	781.08
Bulk Supply -- C1(c)	0.4kV	29.55	4.50	-	1,051.60	1,051.60
Bulk Supply -- C2(b)	11kV	54.57	8.62	73.18	1,924.46	1,997.64
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-
Agricultural --D1(a)	0.4kV	4.86	0.62	-	167.48	167.48
Agricultural --D2(a)	0.4kV	1.91	0.30	1.04	45.95	47.00
Agricultural --D2(b)	0.4kV	119.59	18.98	65.53	2,882.05	2,947.57
Agricultural --D1(b)	0.4kV	100.32	11.60	54.97	3,109.76	3,164.73
Temp. Supply -- E1(i)	0.2kV	0.01	0.00	-	0.28	0.28
Temp. Supply -- E1(ii)	0.2kV	2.83	0.43	-	107.92	107.92
Temp. Supply -- E2	0.2kV	0.15	0.02	-	5.43	5.43
Public Lighting -- G	0.4kV	41.05	6.11	-	1,536.46	1,536.46
Resident. Colonies --	11kV	3.62	0.59	-	135.67	135.67
Azad J. Kashmir - K1a	11kV	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-
A3 General	0.4kV	300.37	50.18	-	11,206.87	11,206.87
Total	-	4,851.79	757.15	2,820.92	128,607.97	131,428.90

Table 16 (B)

FY 2023-24					
Customer Class	Cost of Service			Difference Subsidy M.PKR	Subsidy Rs.kWh
	Demand Cost (M.PKR)	Energy Cost M.PKR	Total M.PKR		
Residential -- A1(a)	-	109,780.69	109,780.69	(55,738.17)	(20.99)
Residential -- A1(b)	-	2,156.11	2,156.11	(318.43)	(6.35)
Commercial -- A2(a)	-	6,310.04	6,310.04	(904.19)	(6.31)
Commercial -- A2(b)	0.88	0.25	1.12	(0.02)	(0.84)
Commercial -- A2(c)	6,194.59	1,664.75	7,859.34	(891.59)	(4.96)
Commercial -- A2(d)	-	0.45	0.45	1.46	30.16
Industrial -- B1(a)	-	235.12	235.12	(52.20)	(9.80)
Industrial -- B2(a)	9.75	2.74	12.49	(1.89)	(6.38)
Industrial -- B1(b)	-	3,241.47	3,241.47	(807.27)	(11.02)
Industrial -- B2(b)	13,726.20	3,791.76	17,517.96	(2,830.26)	(6.92)
Industrial -- B3	12,083.86	3,307.49	15,391.35	(1,966.05)	(5.11)
Industrial -- B4	7,415.70	1,931.40	9,347.10	(808.84)	(3.21)
Bulk Supply -- C1(a)	-	16.85	16.85	(1.69)	(4.29)
Bulk Supply -- C1(b)	266.72	71.38	338.10	(34.22)	(4.44)
Bulk Supply -- C2(a)	347.81	93.74	441.55	(17.23)	(1.58)
Bulk Supply -- C3(a)	702.77	154.27	857.04	(75.96)	(3.77)
Bulk Supply -- C1(c)	-	1,221.88	1,221.88	(170.27)	(5.76)
Bulk Supply -- C2(b)	1,669.76	468.91	2,138.67	(141.02)	(2.58)
Bulk Supply -- C3(b)	-	-	-	-	-
Agricultural --D1(a)	-	175.85	175.85	(8.36)	(1.72)
Agricultural --D2(a)	64.06	17.67	81.74	(34.74)	(18.22)
Agricultural --D2(b)	4,001.50	1,108.47	5,109.97	(2,162.40)	(18.08)
Agricultural --D1(b)	2,445.51	929.87	3,375.38	(210.66)	(2.10)
Temp. Supply -- E1(i)	-	0.29	0.29	(0.02)	(2.35)
Temp. Supply -- E1(ii)	-	118.74	118.74	(10.83)	(3.83)
Temp. Supply -- E2	-	6.42	6.42	(0.99)	(6.47)
Public Lighting -- G	-	1,669.63	1,669.63	(133.17)	(3.24)
Resident. Colonies --	-	144.85	144.85	(9.18)	(2.53)
Azad J. Kashmir - K1a	-	-	-	-	-
Azad J. - K1b	-	-	-	-	-
A3 General	-	13,365.34	13,365.34	(2,158.47)	(7.19)
Total	48,929.11	151,986.45	200,915.55	(69,486.66)	(14.32)



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 (A & B)** 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 (A)**FY 2023-24**

Customer Class	Voltage	Sales GWh	Demand MW	Revenue As Per GoP Tariff	
				Fixed (Rs. M)	Variable (Rs. M)
Residential -- A1(a)	0.2kV	2,656.04	398.99	-	54,042.53
Residential -- A1(b)	0.4kV	50.13	8.02	-	1,837.69
Commercial -- A2(a)	0.2kV	143.20	23.37	-	5,405.85
Commercial -- A2(b)	0.4kV	0.03	0.00	0.06	1.04
Commercial -- A2(c)	0.4kV	179.60	29.38	403.68	6,564.06
Commercial -- A2(d)	0.4kV	0.05	-	-	1.91
Industrial -- B1(a)	0.2kV	5.33	0.87	-	182.92
Industrial -- B2(a)	0.4kV	0.30	0.05	0.61	9.99
Industrial -- B1(b)	0.4kV	73.23	12.15	-	2,434.20
Industrial -- B2(b)	0.4kV	409.07	65.10	1,186.31	13,501.39
Industrial -- B3	11kV	384.91	62.39	730.02	12,695.28
Industrial -- B4	132/66kV	251.95	47.27	257.21	8,281.05
Bulk Supply -- C1(a)	0.2kV	0.39	0.06	-	15.16
Bulk Supply -- C1(b)	0.4kV	7.70	1.26	11.78	292.11
Bulk Supply -- C2(a)	11kV	10.91	1.80	12.71	411.60
Bulk Supply -- C3(a)	132/66kV	20.12	4.48	23.81	757.27
Bulk Supply -- C1(c)	0.4kV	29.55	4.50	-	1,051.60
Bulk Supply -- C2(b)	11kV	54.57	8.62	73.18	1,924.46
Bulk Supply -- C3(b)	132/66kV	-	-	-	-
Agricultural --D1(a)	0.4kV	4.86	0.62	-	167.48
Agricultural --D2(a)	0.4kV	1.91	0.30	1.04	45.95
Agricultural --D2(b)	0.4kV	119.59	18.98	65.53	2,882.05
Agricultural --D1(b)	0.4kV	100.32	11.60	54.97	3,109.76
Temp. Supply -- E1(i)	0.2kV	0.01	0.00	-	0.28
Temp. Supply -- E1(ii)	0.2kV	2.83	0.43	-	107.92
Temp. Supply -- E2	0.2kV	0.15	0.02	-	5.43
Public Lighting -- G	0.4kV	41.05	6.11	-	1,536.46
Resident. Colonies --	11kV	3.62	0.59	-	135.67
Azad J. Kashmir - K1a	11kV	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-
A3 General	0.4kV	300.37	50.18	-	11,206.87
Total	-	4,851.79	757.15	2,820.92	128,607.97

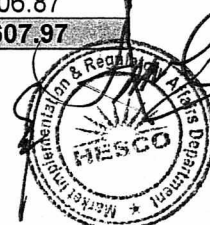


Table 17 (B)

FY 2023-24						
Customer Class	Cost of Service		Difference/ Subsidy		Revenue to Cost Ratio	
	Fixed (Rs. M)	Variable (Rs. M)	Fixed (Rs. M)	Variable (Rs. M)	Fixed	Variable
Residential -- A1(a)	-	109,780.69	-	(55,738.17)	1.00	0.49
Residential -- A1(b)	-	2,156.11	-	(318.43)	1.00	0.85
Commercial -- A2(a)	-	6,310.04	-	(904.19)	1.00	0.86
Commercial -- A2(b)	0.88	0.25	(0.82)	0.80	0.06	4.25
Commercial -- A2(c)	6,194.59	1,664.75	(5,790.90)	4,899.31	0.07	3.94
Commercial -- A2(d)	-	0.45	-	1.46	1.00	4.25
Industrial -- B1(a)	-	235.12	-	(52.20)	1.00	0.78
Industrial -- B2(a)	9.75	2.74	(9.14)	7.26	0.06	3.65
Industrial -- B1(b)	-	3,241.47	-	(807.27)	1.00	0.75
Industrial -- B2(b)	13,726.20	3,791.76	(12,539.89)	9,709.63	0.09	3.56
Industrial -- B3	12,083.86	3,307.49	(11,353.84)	9,387.78	0.06	3.84
Industrial -- B4	7,415.70	1,931.40	(7,158.49)	6,349.65	0.03	4.29
Bulk Supply -- C1(a)	-	16.85	-	(1.69)	1.00	0.90
Bulk Supply -- C1(b)	266.72	71.38	(254.94)	220.72	0.04	4.09
Bulk Supply -- C2(a)	347.81	93.74	(335.09)	317.86	0.04	4.39
Bulk Supply -- C3(a)	702.77	154.27	(678.96)	603.00	0.03	4.91
Bulk Supply -- C1(c)	-	1,221.88	-	(170.27)	1.00	0.86
Bulk Supply -- C2(b)	1,669.76	468.91	(1,596.57)	1,455.55	0.04	4.10
Bulk Supply -- C3(b)	-	-	-	-	1.00	1.00
Agricultural --D1(a)	-	175.85	-	(8.36)	1.00	0.95
Agricultural --D2(a)	64.06	17.67	(63.02)	28.28	0.02	2.60
Agricultural --D2(b)	4,001.50	1,108.47	(3,935.97)	1,773.58	0.02	2.60
Agricultural --D1(b)	2,445.51	929.87	(2,390.54)	2,179.89	0.02	3.34
Temp. Supply -- E1(i)	-	0.29	-	(0.02)	1.00	0.95
Temp. Supply -- E1(ii)	-	118.74	-	(10.83)	1.00	0.91
Temp. Supply -- E2	-	6.42	-	(0.99)	1.00	0.85
Public Lighting -- G	-	1,669.63	-	(133.17)	1.00	0.92
Resident. Colonies --	-	144.85	-	(9.18)	1.00	0.94
Azad J. Kashmir - K1a	-	-	-	-	1.00	1.00
Azad J. - K1b	-	-	-	-	1.00	1.00
A3 General	-	13,365.34	-	(2,158.47)	1.00	0.84
Total	48,929.11	151,986.45	(46,108.18)	(23,378.47)	0.06	0.85



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 2023-24**

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	2,656.04	20.35	41.33	(20.99)	0.49
Residential -- A1(b)	0.4kV	50.13	36.65	43.01	(6.35)	0.85
Commercial -- A2(a)	0.2kV	143.20	37.75	44.06	(6.31)	0.86
Commercial -- A2(b)	0.4kV	0.03	41.53	42.38	(0.84)	0.98
Commercial -- A2(c)	0.4kV	179.60	38.80	43.76	(4.96)	0.89
Commercial -- A2(d)	0.4kV	0.05	39.43	9.27	30.16	4.25
Industrial -- B1(a)	0.2kV	5.33	34.33	44.13	(9.80)	0.78
Industrial -- B2(a)	0.4kV	0.30	35.90	42.29	(6.38)	0.85
Industrial -- B1(b)	0.4kV	73.23	33.24	44.26	(11.02)	0.75
Industrial -- B2(b)	0.4kV	409.07	35.90	42.82	(6.92)	0.84
Industrial -- B3	11kV	384.91	34.88	39.99	(5.11)	0.87
Industrial -- B4	32/66kV	251.95	33.89	37.10	(3.21)	0.91
Bulk Supply -- C1(a)	0.2kV	0.39	38.43	42.72	(4.29)	0.90
Bulk Supply -- C1(b)	0.4kV	7.70	39.46	43.90	(4.44)	0.90
Bulk Supply -- C2(a)	11kV	10.91	38.90	40.48	(1.58)	0.96
Bulk Supply -- C3(a)	132/66kV	20.12	38.81	42.59	(3.77)	0.91
Bulk Supply -- C1(c)	0.4kV	29.55	35.59	41.36	(5.76)	0.86
Bulk Supply -- C2(b)	11kV	54.57	36.61	39.19	(2.58)	0.93
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	0.00
Agricultural --D1(a)	0.4kV	4.86	34.43	36.15	(1.72)	0.95
Agricultural --D2(a)	0.4kV	1.91	24.65	42.87	(18.22)	0.57
Agricultural --D2(b)	0.4kV	119.59	24.65	42.73	(18.08)	0.58
Agricultural --D1(b)	0.4kV	100.32	31.55	33.65	(2.10)	0.94
Temp. Supply -- E1(i)	0.2kV	0.01	42.03	44.38	(2.35)	0.95
Temp. Supply -- E1(ii)	0.2kV	2.83	38.14	41.97	(3.83)	0.91
Temp. Supply -- E2	0.2kV	0.15	35.41	41.88	(6.47)	0.85
Public Lighting -- G	0.4kV	41.05	37.43	40.67	(3.24)	0.92
Resident. Colonies --	11kV	3.62	37.43	39.96	(2.53)	0.94
Azad J. Kashmir - K1a	11kV	-	-	-	-	0.00
Azad J. - K1b	11kV	-	-	-	-	0.00
A3 General	0.4kV	300.37	37.31	44.50	(7.19)	0.84
Total	-	4,851.79	27.09	41.41	(14.32)	0.65



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 2023-24						
Customer Class	Voltage	Sales GWh	Demand MW	Revenue As Per GoP Tariff		
				Demand Charge (M.PKR)	Energy Charge M.PKR	Total M.PKR
Industrial -- B3	11kV	384.91	62.39	730.02	12,695.28	13,425.30
Industrial -- B4	132/66kV	251.95	47.27	257.21	8,281.05	8,538.26
Bulk Supply -- C2(a)	11kV	10.91	1.80	12.71	411.60	424.32
Bulk Supply -- C3(a)	132/66kV	20.12	4.48	23.81	757.27	781.08
Bulk Supply -- C2(b)	11kV	54.57	8.62	73.18	1,924.46	1,997.64
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-
Residential Colonies --H	11kV	3.62	0.59	-	135.67	135.67
Cost of Service			Difference Subsidy M.PKR	Subsidy Rs.kWh		
Demand Cost (M.PKR)	Energy Cost M.PKR	Total M.PKR				
12,083.86	3,307.49	15,391.35	(1,966.05)	(5.11)		
7,415.70	1,931.40	9,347.10	(808.84)	(3.21)		
347.81	93.74	441.55	(17.23)	(1.58)		
702.77	154.27	857.04	(75.96)	(3.77)		
1,669.76	468.91	2,138.67	(141.02)	(2.58)		
-	-	-	-	-		
-	144.85	144.85	(9.18)	(2.53)		

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 11kV 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 MW.
2. The customer categories A-2 and A-3, for purposes of cost of service assessment, have been considered at 0.4kV level. However, these customers, based on the sanctioned load, may be connected at 11kV level, as required.
3. Consumer category for tariff H, i.e. housing colonies attached to industries, despite being connected at 11kV, 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 2023-24					
Customer Class	Voltage	Sale GWH	Revenue Rs. /KWH	Cost of Service Rs. /KWh	Subsidy Rs. /KWh
Industrial B3	11kV	384.91	34.88	39.99	(5.11)
Industrial B4	132/66kV	251.95	33.89	37.10	(3.21)
Bulk Supply C2(b)	11kV	54.57	36.61	39.19	(2.58)
Bulk Supply C3(a)	132/66kV	20.12	38.81	42.59	(3.77)

Master Data for Results of HESCO's Cost of Service Study (FY 2023-24):

For interest of the readers to glance through overall master data for result of HESCO's Cost of Service Study (FY 2023-24), following Tables (Table 21 to Table 27) are added separately.

Final Remarks:

- The above Cost of Service Study Report (FY 2023-24) 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 (100%) covered by the GoP notified 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 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.
- Based on assessment of revenue and the cost of service for each category of consumer, the Subsidy or Cross Subsidy is the difference between revenue and cost in terms of million rupees against each customer tariff category is provided in Table 16 above. It may be noted that the negative figure represent that the customer is subsidized (GoP revenue is less than HESCO's Cost of Service).



Table-21

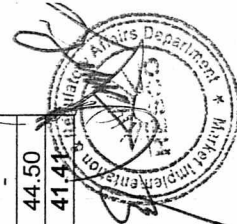
Cost of Service FY 2023-24														
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Cost (Rs. M)	Cost Rs./kWh sold	Cost Rs./kWh Purchased
		Sold	Purchased	at Meter	at CDP	Energy (Rs.M)	Demand (Rs.M)	Cost (Rs.M)	Cost (Rs.M)	Demand (Rs.M)	cust. Cost (Rs.M)			
Residential -- A1(a)	0.2kV	2,656	3,298	399	495	22,212	62,305	5,000	36	16,788	3,440	109,781	41.33	33.29
Residential -- A1(b)	0.4kV	50	62	8	10	419	1,253	101	1	338	45	2,156	43.01	34.64
Commercial -- A2(a)	0.2kV	143	178	23	29	1,198	3,649	293	2	983	185	6,310	44.06	35.49
Commercial -- A2(b)	0.4kV	0	0	0	0	0	1	0	0	0	0	1	42.38	34.13
Commercial -- A2(c)	0.4kV	180	223	29	36	1,502	4,588	368	3	1,236	163	7,859	43.76	35.24
Commercial -- A2(d)	0.4kV	0	0	-	-	0	-	-	-	-	0	0	9.27	7.46
Industrial -- B1(a)	0.2kV	5	7	1	1	45	136	11	0	37	7	235	44.13	35.54
Industrial -- B2(a)	0.4kV	0	0	0	0	2	7	1	0	2	0	12	42.29	34.06
Industrial -- B1(b)	0.4kV	73	91	12	15	612	1,898	152	1	511	66	3,241	44.26	35.65
Industrial -- B2(b)	0.4kV	409	508	65	81	3,421	10,165	816	6	2,739	371	17,518	42.82	34.49
Industrial -- B3	11kV	385	439	62	71	2,959	8,955	719	5	2,405	348	15,391	39.99	35.03
Industrial -- B4	132/66kV	252	259	47	49	1,747	6,119	491	4	802	185	9,347	37.10	36.04
Bulk Supply -- C1(a)	0.2kV	0	0	0	0	3	10	1	0	3	1	17	42.72	37.42
Bulk Supply -- C1(b)	0.4kV	8	10	1	2	64	198	16	0	53	7	338	43.90	35.36
Bulk Supply -- C2(a)	11kV	11	12	2	2	84	258	21	0	69	10	442	40.48	35.46
Bulk Supply -- C3(a)	132/66kV	20	21	4	5	140	580	47	0	76	15	857	42.59	41.37
Bulk Supply -- C1(c)	0.4kV	30	37	4	6	247	702	56	0	189	27	1,222	41.36	33.31
Bulk Supply -- C2(b)	11kV	55	62	9	10	420	1,237	99	1	332	49	2,139	39.19	34.33
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural --D1(a)	0.4kV	5	6	1	1	41	97	8	0	26	4	176	36.15	29.11
Agricultural --D2(a)	0.4kV	2	2	0	0	16	47	4	0	13	2	82	42.87	34.52
Agricultural --D2(b)	0.4kV	120	148	19	24	1,000	2,963	238	2	798	108	5,110	42.73	34.41
Agricultural --D1(b)	0.4kV	100	125	12	14	839	1,811	145	1	488	91	3,375	33.65	27.10
Temp. Supply -- E1(i)	0.2kV	0	0	0	0	0	0	0	0	0	0	0	44.38	35.74
Temp. Supply -- E1(ii)	0.2kV	3	4	0	1	24	68	5	0	18	4	119	41.97	33.80
Temp. Supply -- E2	0.2kV	0	0	0	0	1	4	0	0	1	0	6	41.88	33.73
Public Lighting -- G	0.4kV	41	51	6	8	343	955	77	1	257	37	1,670	40.67	32.76
Resident. Colonies --	11kV	4	4	1	1	28	84	7	0	23	3	145	39.96	35.01
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	2,512	7,836	629	5	2,111	272	13,365	44.50	35.84
Total		4,852	5,921	757	922	39,879	115,926	9,304	67	30,299	5,441	200,916	41.41	33.93

Table-22

HESCO
COST OF SERVICE STUDY FOR FY 2023-24

Cost of Service FY 2023-24 (per kW or kWh at Sold)													
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm Cost (Rs./kW)	MOF Cost (Rs./kW)	Distribution		Total Fixed Cost (Rs./kW/ M)	Fixed Cost Rs./ kWh sold
		Sold	Purchase	at Meter	at CDP	Energy (Rs./kW)	Demand (Rs./kW)			Demand (Rs./kW)	cust Cost (Rs./kW)		
Residential -- A1(a)	0.2kV	2,656	3,298	399	495	8.36	13,012.88	1,044.38	7.55	3,506.30	718.44	18,289.55	32.97
Residential -- A1(b)	0.4kV	50	62	8	10	8.36	13,012.88	1,044.38	7.55	3,506.30	472.07	18,043.18	34.64
Commercial -- A2(a)	0.2kV	143	178	23	29	8.36	13,012.88	1,044.38	7.55	3,506.30	661.40	18,232.51	35.70
Commercial -- A2(b)	0.4kV	0	0	0	0	8.36	13,012.88	1,044.38	7.55	3,506.30	481.03	18,052.14	34.02
Commercial -- A2(c)	0.4kV	180	223	29	36	8.36	13,012.88	1,044.38	7.55	3,506.30	461.76	18,032.87	35.40
Commercial -- A2(d)	0.4kV	0	0	-	-	8.36	-	-	-	-	-	-	-
Industrial -- B1(a)	0.2kV	5	7	1	1	8.36	13,012.88	1,044.38	7.55	3,506.30	660.20	18,231.31	35.76
Industrial -- B2(a)	0.4kV	0	0	0	0	8.36	13,012.88	1,044.38	7.55	3,506.30	482.37	18,053.48	33.92
Industrial -- B1(b)	0.4kV	73	91	12	15	8.36	13,012.88	1,044.38	7.55	3,506.30	455.10	18,026.21	35.90
Industrial -- B2(b)	0.4kV	409	508	65	81	8.36	13,012.88	1,044.38	7.55	3,506.30	474.65	18,045.76	34.46
Industrial -- B3	11kV	385	439	62	71	7.69	11,962.20	960.05	6.94	3,212.28	465.45	16,606.93	32.30
Industrial -- B4	132/66kV	252	259	47	49	6.93	10,788.54	865.86	6.26	1,413.48	325.43	13,399.56	30.17
Bulk Supply -- C1(a)	0.2kV	0	0	0	0	7.69	13,012.88	1,044.38	7.55	3,506.30	674.55	18,245.66	35.03
Bulk Supply -- C1(b)	0.4kV	8	10	1	2	8.36	13,012.88	1,044.38	7.55	3,506.30	459.85	18,030.96	35.54
Bulk Supply -- C2(a)	11kV	11	12	2	2	7.69	11,962.20	960.05	6.94	3,212.28	458.31	16,599.79	32.79
Bulk Supply -- C3(a)	132/66kV	20	21	4	5	6.93	10,788.54	865.86	6.26	1,413.48	274.28	13,348.42	35.65
Bulk Supply -- C1(c)	0.4kV	30	37	4	6	8.36	13,012.88	1,044.38	7.55	3,506.30	496.35	18,067.46	32.99
Bulk Supply -- C2(b)	11kV	55	62	9	10	7.69	11,962.20	960.05	6.94	3,212.28	477.55	16,619.02	31.50
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	5	6	1	1	8.36	13,012.88	1,044.38	7.55	3,506.30	592.49	18,163.60	27.79
Agricultural -- D2(a)	0.4kV	2	2	0	0	8.36	13,012.88	1,044.38	7.55	3,506.30	474.00	18,045.11	34.51
Agricultural -- D2(b)	0.4kV	120	148	19	24	8.36	13,012.88	1,044.38	7.55	3,506.30	475.97	18,047.08	34.37
Agricultural -- D1(b)	0.4kV	100	125	12	14	8.36	13,012.88	1,044.38	7.55	3,506.30	653.33	18,224.44	25.28
Temp. Supply -- E1(i)	0.2kV	0	0	0	0	8.36	13,012.88	1,044.38	7.55	3,506.30	655.45	18,226.56	36.01
Temp. Supply -- E1(ii)	0.2kV	3	4	0	1	8.36	13,012.88	1,044.38	7.55	3,506.30	704.33	18,275.44	33.60
Temp. Supply -- E2	0.2kV	0	0	0	0	8.36	13,012.88	1,044.38	7.55	3,506.30	706.15	18,277.26	33.52
Public Lighting -- G	0.4kV	41	51	6	8	8.36	13,012.88	1,044.38	7.55	3,506.30	507.13	18,078.24	32.31
Resident. Colonies --	11kV	4	4	1	1	7.69	11,962.20	960.05	6.94	3,212.28	465.82	16,607.29	32.27
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	8.36	13,012.88	1,044.38	7.55	3,506.30	452.11	18,023.22	36.13
Total		4,852	5,921	757	922	8.22	12,759.02	1,024.00	7.40	3,334.77	598.88	17,724.08	33.19

Table-23



HESCO
COST OF SERVICE STUDY FOR FY 2023-24

Cost of Service FY 2023-24 (per kW or kWh at Purchased)													
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm Cost (Rs./kW)	MOF (Rs./kW)	Distribution		Total Fixed Cost (Rs./kW/M)	Fixed Cost Rs./kWh Purchased
		Sold	Purchase	at Meter	at CDP	Energy (Rs./kW)	Demand (Rs./kW)			Demand (Rs./kW)	cust. Cost (Rs./kW)		
Residential -- A1(a)	0.2kV	2,656	3,298	399	495	6.73	10,479.98	841.09	6.08	2,823.82	578.60	14,729.57	26.55
Residential -- A1(b)	0.4kV	50	62	8	10	6.73	10,479.98	841.09	6.08	2,823.82	380.19	14,531.16	27.90
Commercial -- A2(a)	0.2kV	143	178	23	29	6.73	10,479.98	841.09	6.08	2,823.82	532.66	14,683.63	28.75
Commercial -- A2(b)	0.4kV	0	0	0	0	6.73	10,479.98	841.09	6.08	2,823.82	387.40	14,538.38	27.39
Commercial -- A2(c)	0.4kV	180	223	29	36	6.73	10,479.98	841.09	6.08	2,823.82	371.88	14,522.86	28.51
Commercial -- A2(d)	0.4kV	0	0	-	-	6.73	-	-	-	-	-	-	-
Industrial -- B1(a)	0.2kV	5	7	1	1	6.73	10,479.98	841.09	6.08	2,823.82	531.69	14,682.67	28.80
Industrial -- B2(a)	0.4kV	0	0	0	0	6.73	10,479.98	841.09	6.08	2,823.82	388.48	14,539.46	27.32
Industrial -- B1(b)	0.4kV	73	91	12	15	6.73	10,479.98	841.09	6.08	2,823.82	366.52	14,517.50	28.91
Industrial -- B2(b)	0.4kV	409	508	65	81	6.73	10,479.98	841.09	6.08	2,823.82	382.26	14,533.23	27.75
Industrial -- B3	11kV	385	439	62	71	6.73	10,479.98	841.09	6.08	2,814.26	407.78	14,549.19	28.30
Industrial -- B4	132/66kV	252	259	47	49	6.73	10,479.98	841.09	6.08	1,373.05	316.12	13,016.33	29.30
Bulk Supply -- C1(a)	0.2kV	0	0	0	0	6.73	10,479.98	841.09	6.08	2,823.82	543.26	14,694.23	30.69
Bulk Supply -- C1(b)	0.4kV	8	10	1	2	6.73	10,479.98	841.09	6.08	2,823.82	370.35	14,521.32	28.62
Bulk Supply -- C2(a)	11kV	11	12	2	2	6.73	10,479.98	841.09	6.08	2,814.26	401.53	14,542.94	28.72
Bulk Supply -- C3(a)	132/66kV	20	21	4	5	6.73	10,479.98	841.09	6.08	1,373.05	266.44	12,966.65	34.63
Bulk Supply -- C1(c)	0.4kV	30	37	4	6	6.73	10,479.98	841.09	6.08	2,823.82	399.74	14,550.71	26.57
Bulk Supply -- C2(b)	11kV	55	62	9	10	6.73	10,479.98	841.09	6.08	2,814.26	418.38	14,559.79	27.60
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	5	6	1	1	6.73	10,479.98	841.09	6.08	2,823.82	477.17	14,628.14	22.38
Agricultural -- D2(a)	0.4kV	2	2	0	0	6.73	10,479.98	841.09	6.08	2,823.82	381.74	14,532.72	27.79
Agricultural -- D2(b)	0.4kV	120	148	19	24	6.73	10,479.98	841.09	6.08	2,823.82	383.33	14,534.30	27.68
Agricultural -- D1(b)	0.4kV	100	125	12	14	6.73	10,479.98	841.09	6.08	2,823.82	526.16	14,677.14	20.36
Temp. Supply -- E1(i)	0.2kV	0	0	0	0	6.73	10,479.98	841.09	6.08	2,823.82	527.87	14,678.84	29.00
Temp. Supply -- E1(ii)	0.2kV	3	4	0	1	6.73	10,479.98	841.09	6.08	2,823.82	567.23	14,718.21	27.06
Temp. Supply -- E2	0.2kV	0	0	0	0	6.73	10,479.98	841.09	6.08	2,823.82	568.70	14,719.67	27.00
Public Lighting -- G	0.4kV	41	51	6	8	6.73	10,479.98	841.09	6.08	2,823.82	408.42	14,559.40	26.02
Resident. Colonies --	11kV	4	4	1	1	6.73	10,479.98	841.09	6.08	2,814.26	408.10	14,549.51	28.27
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	6.73	10,479.98	841.09	6.08	2,823.82	364.11	14,515.09	29.10
Total		4,852	5,921	757	922	6.73	10,479.98	841.09	6.08	2,739.11	491.91	14,558.18	27.20

Table-24

Cost of Service FY 2023-24 (per kWh Sold)

Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm	MOF	Distribution		Total Fixed Cost	Fixed Cost	Total Cost
		Sold	Purchase	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	Rs./kWh
Residential -- A1(a)	0.2kV	2,656	3,298	399	495	8.36	23.46	1.88	0.01	6.32	1.30	32.97	32.97	41.33
Residential -- A1(b)	0.4kV	50	62	8	10	8.36	24.99	2.01	0.01	6.73	0.91	34.64	34.64	43.01
Commercial -- A2(a)	0.2kV	143	178	23	29	8.36	25.48	2.05	0.01	6.87	1.30	35.70	35.70	44.06
Commercial -- A2(b)	0.4kV	0	0	0	0	8.36	24.52	1.97	0.01	6.61	0.91	34.02	34.02	42.38
Commercial -- A2(c)	0.4kV	180	223	29	36	8.36	25.54	2.05	0.01	6.88	0.91	35.40	35.40	43.76
Commercial -- A2(d)	0.4kV	0	0	-	-	8.36	-	-	-	-	0.91	0.91	0.91	9.27
Industrial -- B1(a)	0.2kV	5	7	1	1	8.36	25.53	2.05	0.01	6.88	1.30	35.76	35.76	44.13
Industrial -- B2(a)	0.4kV	0	0	0	0	8.36	24.45	1.96	0.01	6.59	0.91	33.92	33.92	42.29
Industrial -- B1(b)	0.4kV	73	91	12	15	8.36	25.92	2.08	0.02	6.98	0.91	35.90	35.90	44.26
Industrial -- B2(b)	0.4kV	409	508	65	81	8.36	24.85	1.99	0.01	6.70	0.91	34.46	34.46	42.82
Industrial -- B3	11kV	385	439	62	71	7.69	23.27	1.87	0.01	6.25	0.91	32.30	32.30	39.99
Industrial -- B4	132/66kV	252	259	47	49	6.93	24.29	1.95	0.01	3.18	0.73	30.17	30.17	37.10
Bulk Supply -- C1(a)	0.2kV	0	0	0	0	7.69	24.98	2.01	0.01	6.73	1.30	35.03	35.03	42.72
Bulk Supply -- C1(b)	0.4kV	8	10	1	2	8.36	25.65	2.06	0.01	6.91	0.91	35.54	35.54	43.90
Bulk Supply -- C2(a)	11kV	11	12	2	2	7.69	23.63	1.90	0.01	6.34	0.91	32.79	32.79	40.48
Bulk Supply -- C3(a)	132/66kV	20	21	4	5	6.93	28.82	2.31	0.02	3.78	0.73	35.65	35.65	42.59
Bulk Supply -- C1(c)	0.4kV	30	37	4	6	8.36	23.76	1.91	0.01	6.40	0.91	32.99	32.99	41.36
Bulk Supply -- C2(b)	11kV	55	62	9	10	7.69	22.68	1.82	0.01	6.09	0.91	31.50	31.50	39.19
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	5	6	1	1	8.36	19.91	1.60	0.01	5.36	0.91	27.79	27.79	36.15
Agricultural -- D2(a)	0.4kV	2	2	0	0	8.36	24.88	2.00	0.01	6.70	0.91	34.51	34.51	42.87
Agricultural -- D2(b)	0.4kV	120	148	19	24	8.36	24.78	1.99	0.01	6.68	0.91	34.37	34.37	42.73
Agricultural -- D1(b)	0.4kV	100	125	12	14	8.36	18.05	1.45	0.01	4.86	0.91	25.28	25.28	33.65
Temp. Supply -- E1(i)	0.2kV	0	0	0	0	8.36	25.71	2.06	0.01	6.93	1.30	36.01	36.01	44.38
Temp. Supply -- E1(ii)	0.2kV	3	4	0	1	8.36	23.93	1.92	0.01	6.45	1.30	33.60	33.60	41.97
Temp. Supply -- E2	0.2kV	0	0	0	0	8.36	23.87	1.92	0.01	6.43	1.30	33.52	33.52	41.88
Public Lighting -- G	0.4kV	41	51	6	8	8.36	23.26	1.87	0.01	6.27	0.91	32.31	32.31	40.67
Resident. Colonies --	11kV	4	4	1	1	7.69	23.25	1.87	0.01	6.24	0.91	32.27	32.27	39.96
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	8.36	26.09	2.09	0.02	7.03	0.91	36.13	36.13	44.50
Total		4,852	5,921	757	922	8.22	23.89	1.92	0.01	6.24	1.12	33.19	33.19	41.41

Table-25

Cost of Service FY 2023-24 (per kWh Purchased)													
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm Cost (Rs./kWh)	MOF Cost (Rs./kWh)	Distribution		Total Fixed Cost (Rs./kWh)	Fixed Cost Rs./kWh Purchased
		Sold	Purchase	at Meter	at GDP	Energy (Rs./kWh)	Demand (Rs./kWh)			Demand (Rs./kWh)	cust Cost (Rs./kWh)		
Residential -- A1(a)	0.2kV	2,656	3,298	399	495	6.73	18.89	1.52	0.01	5.09	1.04	26.55	26.55
Residential -- A1(b)	0.4kV	50	62	8	10	6.73	20.12	1.61	0.01	5.42	0.73	27.90	27.90
Commercial -- A2(a)	0.2kV	143	178	23	29	6.73	20.52	1.65	0.01	5.53	1.04	28.75	28.75
Commercial -- A2(b)	0.4kV	0	0	0	0	6.73	19.75	1.58	0.01	5.32	0.73	27.39	27.39
Commercial -- A2(c)	0.4kV	180	223	29	36	6.73	20.57	1.65	0.01	5.54	0.73	28.51	28.51
Commercial -- A2(d)	0.4kV	0	0	-	-	6.73	-	-	-	-	0.73	0.73	0.73
Industrial -- B1(a)	0.2kV	5	7	1	1	6.73	20.56	1.65	0.01	5.54	1.04	28.80	28.80
Industrial -- B2(a)	0.4kV	0	0	0	0	6.73	19.69	1.58	0.01	5.31	0.73	27.32	27.32
Industrial -- B1(b)	0.4kV	73	91	12	15	6.73	20.87	1.68	0.01	5.62	0.73	28.91	28.91
Industrial -- B2(b)	0.4kV	409	508	65	81	6.73	20.01	1.61	0.01	5.39	0.73	27.75	27.75
Industrial -- B3	11kV	385	439	62	71	6.73	20.38	1.64	0.01	5.47	0.79	28.30	28.30
Industrial -- B4	132/66kV	252	259	47	49	6.73	23.59	1.89	0.01	3.09	0.71	29.30	29.30
Bulk Supply -- C1(a)	0.2kV	0	0	0	0	6.73	21.89	1.76	0.01	5.90	1.13	30.69	30.69
Bulk Supply -- C1(b)	0.4kV	8	10	1	2	6.73	20.66	1.66	0.01	5.57	0.73	28.62	28.62
Bulk Supply -- C2(a)	11kV	11	12	2	2	6.73	20.70	1.66	0.01	5.56	0.79	28.72	28.72
Bulk Supply -- C3(a)	132/66kV	20	21	4	5	6.73	27.99	2.25	0.02	3.67	0.71	34.63	34.63
Bulk Supply -- C1(c)	0.4kV	30	37	4	6	6.73	19.14	1.54	0.01	5.16	0.73	26.57	26.57
Bulk Supply -- C2(b)	11kV	55	62	9	10	6.73	19.87	1.59	0.01	5.33	0.79	27.60	27.60
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	5	6	1	1	6.73	16.03	1.29	0.01	4.32	0.73	22.38	22.38
Agricultural -- D2(a)	0.4kV	2	2	0	0	6.73	20.04	1.61	0.01	5.40	0.73	27.79	27.79
Agricultural -- D2(b)	0.4kV	120	148	19	24	6.73	19.96	1.60	0.01	5.38	0.73	27.68	27.68
Agricultural -- D1(b)	0.4kV	100	125	12	14	6.73	14.54	1.17	0.01	3.92	0.73	20.36	20.36
Temp. Supply -- E1(i)	0.2kV	0	0	0	0	6.73	20.71	1.66	0.01	5.58	1.04	29.00	29.00
Temp. Supply -- E1(ii)	0.2kV	3	4	0	1	6.73	19.27	1.55	0.01	5.19	1.04	27.06	27.06
Temp. Supply -- E2	0.2kV	0	0	0	0	6.73	19.22	1.54	0.01	5.18	1.04	27.00	27.00
Public Lighting -- G	0.4kV	41	51	6	8	6.73	18.73	1.50	0.01	5.05	0.73	26.02	26.02
Resident. Colonies --	11kV	4	4	1	1	6.73	20.37	1.63	0.01	5.47	0.79	28.27	28.27
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	6.73	21.01	1.69	0.01	5.66	0.73	29.10	29.10
Total		4,852	5,921	757	922	6.73	19.58	1.57	0.01	5.12	0.92	27.20	27.20

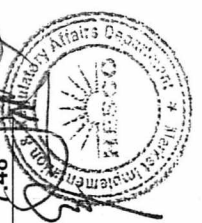
Table-26



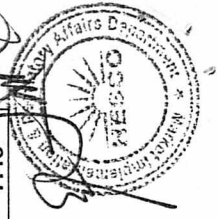
Cost of Service FY 2023-24 (Impact of Losses on per kW or kWh basis)

Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm Cost (Rs./kW)	MOF Cost (Rs./kW)	Distribution		Total Fixed Cost (Rs./kW/M)	Total Fixed Cost (Rs./kWh)	Total Cost (Rs./kWh)
		Sold	Purchase	at Meter	at GDP	Energy (Rs./kWh)	Demand (Rs./kW)			Demand (Rs./kW)	Cust Cost (Rs./kW)			
Residential – A1(a)	0.2kV	2,656	3,298	399	495	1.63	2,532.90	203.28	1.47	682.49	139.84	3,559.97	6.42	8.05
Residential – A1(b)	0.4kV	50	62	8	10	1.63	2,532.90	203.28	1.47	682.49	91.89	3,512.02	6.74	8.37
Commercial – A2(a)	0.2kV	143	178	23	29	1.63	2,532.90	203.28	1.47	682.49	128.74	3,548.87	6.95	8.58
Commercial – A2(b)	0.4kV	0	0	0	0	1.63	2,532.90	203.28	1.47	682.49	93.63	3,513.77	6.62	8.25
Commercial – A2(c)	0.4kV	180	223	29	36	1.63	2,532.90	203.28	1.47	682.49	89.88	3,510.01	6.89	8.52
Commercial – A2(d)	0.4kV	0	0	-	-	1.63	-	-	-	-	-	-	0.18	1.80
Industrial – B1(a)	0.2kV	5	7	1	1	1.63	2,532.90	203.28	1.47	682.49	128.50	3,548.64	6.96	8.59
Industrial – B2(a)	0.4kV	0	0	0	0	1.63	2,532.90	203.28	1.47	682.49	93.89	3,514.03	6.60	8.23
Industrial – B1(b)	0.4kV	73	91	12	15	1.63	2,532.90	203.28	1.47	682.49	88.58	3,508.72	6.99	8.62
Industrial – B2(b)	0.4kV	409	508	65	81	1.63	2,532.90	203.28	1.47	682.49	92.39	3,512.52	6.71	8.34
Industrial – B3	11kV	385	439	62	71	0.95	1,482.22	118.96	0.86	398.03	57.67	2,057.74	4.00	4.95
Industrial – B4	132/66kV	252	259	47	49	0.20	308.55	24.76	0.18	40.43	9.31	383.23	0.86	1.06
Bulk Supply – C1(a)	0.2kV	0	0	0	0	0.95	2,532.90	203.28	1.47	682.49	131.30	3,551.43	4.34	5.29
Bulk Supply – C1(b)	0.4kV	8	10	1	2	1.63	2,532.90	203.28	1.47	682.49	89.51	3,509.64	6.92	8.55
Bulk Supply – C2(a)	11kV	11	12	2	2	0.95	1,482.22	118.96	0.86	398.03	56.79	2,056.85	4.06	5.02
Bulk Supply – C3(a)	132/66kV	20	21	4	5	0.20	308.55	24.76	0.18	40.43	7.84	381.76	1.02	1.22
Bulk Supply – C1(c)	0.4kV	30	37	4	6	1.63	2,532.90	203.28	1.47	682.49	96.61	3,516.75	6.42	8.05
Bulk Supply – C2(b)	11kV	55	62	9	10	0.95	1,482.22	118.96	0.86	398.03	59.17	2,059.23	3.90	4.86
Bulk Supply – C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural – D1(a)	0.4kV	5	6	1	1	1.63	2,532.90	203.28	1.47	682.49	115.33	3,535.46	5.41	7.04
Agricultural – D2(a)	0.4kV	2	2	0	0	1.63	2,532.90	203.28	1.47	682.49	92.26	3,512.40	6.72	8.34
Agricultural – D2(b)	0.4kV	120	148	19	24	1.63	2,532.90	203.28	1.47	682.49	92.65	3,512.78	6.69	8.32
Agricultural – D1(b)	0.4kV	100	125	12	14	1.63	2,532.90	203.28	1.47	682.49	127.17	3,547.30	4.92	6.55
Temp. Supply – E1(i)	0.2kV	0	0	0	0	1.63	2,532.90	203.28	1.47	682.49	127.58	3,547.71	7.01	8.64
Temp. Supply – E1(ii)	0.2kV	3	4	0	1	1.63	2,532.90	203.28	1.47	682.49	137.09	3,557.23	6.54	8.17
Temp. Supply – E2	0.2kV	0	0	0	0	1.63	2,532.90	203.28	1.47	682.49	137.45	3,557.58	6.52	8.15
Public Lighting – G	0.4kV	41	51	6	8	1.63	2,532.90	203.28	1.47	682.49	98.71	3,518.84	6.29	7.92
Resident. Colonies –	11kV	4	4	1	1	0.95	1,482.22	118.96	0.86	398.03	57.72	2,057.78	4.00	4.95
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	1.63	2,532.90	203.28	1.47	682.49	88.00	3,508.14	7.03	8.66
Total		4,852	5,921	757	922	1.48	2,279.04	182.91	(6.08)	595.66	106.97	3,158.50	5.99	7.48

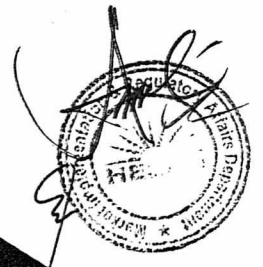
Table-27



Cost of Service FY 2023-24 (Impact of Losses on per kWh basis)												
Classes	Voltage Level	Energy GWh		Demand MW		Generation Cost		Transm. Cost (Rs./kWh)	MOF Cost (Rs./kWh)	Distribution		Total Fixed Cost (Rs./kWh)
		Sold	Purchase	at Meter	at CDP	Energy (Rs./kWh)	Demand (Rs./kWh)			Demand (Rs./kWh)	cust. Cost (Rs./kWh)	
Residential -- A1(a)	0.2kV	2,656	3,298	399	495	1.63	4.57	0.37	0.00	1.23	0.25	6.42
Residential -- A1(b)	0.4kV	50	62	8	10	1.63	4.86	0.39	0.00	1.31	0.18	6.74
Commercial -- A2(a)	0.2kV	143	178	23	29	1.63	4.96	0.40	0.00	1.34	0.25	6.95
Commercial -- A2(b)	0.4kV	0	0	0	0	1.63	4.77	0.38	0.00	1.29	0.18	6.62
Commercial -- A2(c)	0.4kV	180	223	29	36	1.63	4.97	0.40	0.00	1.34	0.18	6.89
Commercial -- A2(d)	0.4kV	0	0	-	-	1.63	-	-	-	-	0.18	1.80
Industrial -- B1(a)	0.2kV	5	7	1	1	1.63	4.97	0.40	0.00	1.34	0.25	6.96
Industrial -- B2(a)	0.4kV	0	0	0	0	1.63	4.76	0.38	0.00	1.28	0.18	6.60
Industrial -- B1(b)	0.4kV	73	91	12	15	1.63	5.04	0.40	0.00	1.36	0.18	6.99
Industrial -- B2(b)	0.4kV	409	508	65	81	1.63	4.84	0.39	0.00	1.30	0.18	6.71
Industrial -- B3	11kV	385	439	62	71	0.95	2.88	0.23	0.00	0.77	0.11	4.00
Industrial -- B4	132/66kV	252	259	47	49	0.20	0.69	0.06	0.00	0.09	0.02	0.86
Bulk Supply -- C1(a)	0.2kV	0	0	0	0	0.95	3.10	0.25	0.00	0.83	0.16	4.34
Bulk Supply -- C1(b)	0.4kV	8	10	1	2	1.63	4.99	0.40	0.00	1.35	0.18	6.92
Bulk Supply -- C2(a)	11kV	11	12	2	2	0.95	2.93	0.23	0.00	0.79	0.11	4.06
Bulk Supply -- C3(a)	132/66kV	20	21	4	5	0.20	0.82	0.07	0.00	0.11	0.02	1.02
Bulk Supply -- C1(c)	0.4kV	30	37	4	6	1.63	4.63	0.37	0.00	1.25	0.18	6.42
Bulk Supply -- C2(b)	11kV	55	62	9	10	0.95	2.81	0.23	0.00	0.75	0.11	3.90
Bulk Supply -- C3(b)	132/66kV	-	-	-	-	-	-	-	-	-	-	-
Agricultural -- D1(a)	0.4kV	5	6	1	1	1.63	3.87	0.31	0.00	1.04	0.18	5.41
Agricultural -- D2(a)	0.4kV	2	2	0	0	1.63	4.84	0.39	0.00	1.31	0.18	6.72
Agricultural -- D2(b)	0.4kV	120	148	19	24	1.63	4.82	0.39	0.00	1.30	0.18	6.69
Agricultural -- D1(b)	0.4kV	100	125	12	14	1.63	3.51	0.28	0.00	0.95	0.18	4.92
Temp. Supply -- E1(i)	0.2kV	0	0	0	0	1.63	5.00	0.40	0.00	1.35	0.25	7.01
Temp. Supply -- E1(ii)	0.2kV	3	4	0	1	1.63	4.66	0.37	0.00	1.25	0.25	6.54
Temp. Supply -- E2	0.2kV	0	0	0	0	1.63	4.65	0.37	0.00	1.25	0.25	6.52
Public Lighting -- G	0.4kV	41	51	6	8	1.63	4.53	0.36	0.00	1.22	0.18	6.29
Resident. Colonies --	11kV	4	4	1	1	0.95	2.88	0.23	0.00	0.77	0.11	4.00
Azad J. Kashmir - K1a	11kV	-	-	-	-	-	-	-	-	-	-	-
Azad J. - K1b	11kV	-	-	-	-	-	-	-	-	-	-	-
A3 General	0.4kV	300	373	50	62	1.63	5.08	0.41	0.00	1.37	0.18	7.03
Total		4,852	5,921	757	922	1.48	4.32	0.35	0.00	1.13	0.20	5.99
												7.48



SUMMARY OF DIFFERENCES



HYDERABAD ELECTRIC SUPPLY COMPANY

WAPDA OFFICES COMPLEX HUSSAINABAD HYDERABAD

Summary of Differences in the Category-Wise Cost of Service and the Proposed Use of System Charges in the Original Petition versus the values submitted as per this Addendum for FY 2023-24

Change in Cost of Service				
FY 2023-24				
Customer Class	Voltage	CoS Rs./kWh		
		Original	Addendum	Difference
Residential -- A1(a)	0.2kV	41.35	41.33	0.02
Residential -- A1(b)	0.4kV	42.92	43.01	(0.09)
Commercial -- A2(a)	0.2kV	44.53	44.06	0.47
Commercial -- A2(b)	0.4kV	42.44	42.38	0.06
Commercial -- A2(c)	0.4kV	44.17	43.76	0.41
Commercial -- A2(d)	0.4kV	-	9.27	(9.27)
Industrial -- B1(a)	0.2kV	43.97	44.13	(0.16)
Industrial -- B2(a)	0.4kV	42.71	42.29	0.42
Industrial -- B1(b)	0.4kV	44.45	44.26	0.19
Industrial -- B2(b)	0.4kV	42.58	42.82	(0.24)
Industrial -- B3	11kV	38.62	39.99	(1.37)
Industrial -- B4	132/66kV	37.82	37.10	0.72
Bulk Supply -- C1(a)	0.2kV	44.44	42.72	1.72
Bulk Supply -- C1(b)	0.4kV	44.51	43.90	0.61
Bulk Supply -- C2(a)	11kV	40.86	40.48	0.38
Bulk Supply -- C3(a)	132/66kV	41.91	42.59	(0.68)
Bulk Supply -- C1(c)	0.4kV	40.80	41.36	(0.56)
Bulk Supply -- C2(b)	11kV	39.01	39.19	(0.18)
Bulk Supply -- C3(b)	132/66kV	-	-	-
Agricultural --D1(a)	0.4kV	36.17	36.15	0.02
Agricultural --D2(a)	0.4kV	43.41	42.87	0.54
Agricultural --D2(b)	0.4kV	43.22	42.73	0.49
Agricultural --D1(b)	0.4kV	34.45	33.65	0.80
Temporary Supply -- E1(i)	0.2kV	38.75	44.38	(5.63)
Temporary Supply -- E1(ii)	0.2kV	41.87	41.97	(0.10)
Temporary Supply -- E2	0.2kV	42.51	41.88	0.63
Public Lighting -- G	0.4kV	41.78	40.67	1.11
Residential Colonies -- H	11kV	39.89	39.96	(0.07)
Azad Jammu Kashmir - K1a	11kV	-	-	-
Azad Jammu Kashmir - K1b	11kV	-	-	-
A3 General	0.4kV	44.89	44.50	0.39
Total		41.41	41.41	(0.00)

Changes in Use of System Charges				
FY 2023-24				
Customer Class	Voltage	CoS Rs./kWh		
		Original	Addendum	Difference
Industrial -- B3	11kV	38.62	39.99	(1.37)
Industrial -- B4	132/66kV	37.82	37.10	0.72
Bulk Supply -- C2(b)	11kV	39.01	39.19	(0.18)
Bulk Supply -- C3(a)	132/66kV	41.91	42.59	(0.68)

