



# **KARNATAKA ELECTRICITY REGULATORY COMMISSION**

## **TARIFF ORDER 2024**

**OF**

**KPTCL**

**ANNUAL PERFORMANCE REVIEW FOR FY23,**

**REVISION OF ANNUAL REVENUE REQUIREMENT  
FOR FY25**

**&**

**REVISION of TRANSMISSION TARIFF FOR FY25**

**28<sup>TH</sup> FEBRUARY, 2024**

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ABBREVIATIONS	
ABT	Availability Based Tariff
A & G	Administrative & General Expenses
ALDC	Area Load Dispatch Centre
APR	Annual Performance Review
ARR	Annual Revenue Requirement
ATE	Appellate Tribunal for Electricity
BESCOM	Bangalore Electricity Supply Company
CAPEX	Capital Expenditure
CERC	Central Electricity Regulatory Commission
CEA	Central Electricity Authority
CESC	Chamundeshwari Electricity Supply Corporation
CPI	Consumer Price Index
CWIP	Capital Work in Progress
DA	Dearness Allowance
DPR	Detailed Project Report
EA	Electricity Act
EC	Energy Charges
ERC	Expected Revenue From Charges
ESAAR	Electricity Supply Annual Accounting Rules
ESCOMs	Electricity Supply Companies
FoR	Forum of Regulators
FY	Financial Year
GESCOM	Gulbarga Electricity Supply Company
GFA	Gross Fixed Assets
GoI	Government Of India
GoK	Government Of Karnataka
HESCOM	Hubli Electricity Supply Company
HP	Horse Power
ICAI	Institute of Chartered Accountants of India
IFC	Interest and Finance Charges
IEGC	Indian Electricity Grid Code
IW	Industrial Worker
KASSIA	Karnataka Small Scale Industries Association
KEB	Karnataka Electricity Board
KER Act	Karnataka Electricity Reform Act
KM/Km	Kilometre
KPCL	Karnataka Power Corporation Limited
kV	Kilo Volts
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWH	Kilo Watt Hour
LDC	Load Despatch Centre
MAT	Minimum Alternate Tax
MD	Managing Director
MESCOM	Mangalore Electricity Supply Company
MFA	Miscellaneous First Appeal

MIS	Management Information System
MoP	Ministry of Power
MU	Million Units
MVA	Mega Volt Ampere
MW	Mega Watt
MYT	Multi Year Tariff
NFA	Net Fixed Assets
NTP	National Tariff Policy
O&M	Operation & Maintenance
P & L	Profit & Loss Account
PCKL	Power Corporation of Karnataka Ltd.
P & G Trust	Pension & Gratuity Trust
PLR	Prime Lending Rate
PPA	Power Purchase Agreement
R & M	Repairs and Maintenance
ROE	Return on Equity
ROW	Right of Way
SBI	State Bank of India
SCADA	Supervisory Control and Data Acquisition System
SLDC	State Load Despatch Centre
SRLDC	Southern Regional Load Dispatch Centre
STU	State Transmission Utility
TSA	Transmission System Availability
TCC	Total Contracted Capacity
TR	Transmission Rate
WPI	Wholesale Price Index
WC	Working Capital

**KARNATAKA ELECTRICITY REGULATORY COMMISSION****No.16C-1. Miller Tank Bed Area, Vasanthnagar  
BENGALURU - 560 052****Dated 28<sup>th</sup> February, 2024****In the matter of:**

***Application of the Karnataka Power Transmission Corporation Limited, in respect of the Annual Performance Review for FY23, and consequential revision of Annual Revenue Requirement for FY25 and Revision of Transmission Tariff for FY25.***

**Present:       Shri P. Ravi Kumar  
                    Shri M.D. Ravi**

**Chairman  
Member**

**O R D E R**

The Karnataka Power Transmission Corporation Ltd (hereinafter referred to as KPTCL) is a Transmission Licensee, under the provisions of the Electricity Act, 2003. KPTCL, in terms of the provisions of the KERC (Tariff) Regulations, 2000 and KERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2006, as amended from time to time, has filed its application on 29<sup>th</sup> November, 2023, for Annual Performance Review for FY23, as per the audited accounts and consequential revision of ARR and transmission tariff for FY25.

In exercise of the powers conferred under Sections 62 and 64 and other provisions of the Electricity Act, 2003 and the KERC (Tariff) Regulations, 2000

read with the KERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2006, as amended from time to time and other enabling Regulations, the Commission has considered the application of the KPTCL. The item-wise analysis, review and the Commission's decisions thereon are brought out in the subsequent Chapters of this Order.



## CHAPTER – 1

### INTRODUCTION

#### 1.0 A brief Profile of the State Transmission Utility - KPTCL

The Karnataka Power Transmission Corporation Limited, (KPTCL) is a transmission licensee under Section 14 and a State Transmission Utility (STU) under Section 39 of the Electricity Act, 2003 (hereinafter, referred to as the Act).

The KPTCL is a Company incorporated on 28<sup>th</sup> July, 1999, registered under the Companies Act, 1956 and has commenced its operations from 1<sup>st</sup> August, 1999. Initially the KPTCL performed the functions of both Transmission and Distribution of electricity in the State, which were earlier carried out by the erstwhile the Karnataka Electricity Board (KEB).

After unbundling and formation of separate Distribution Companies, the KPTCL was assigned with the functions of transmission of power from 1<sup>st</sup> June, 2002 as a Transmission Company, which also functions as the State Transmission Utility (STU) in Karnataka. The Distribution business was entrusted to the newly created Electricity Supply Companies (ESCOMs).

The bulk power purchase activity was separated from the functions of KPTCL as per the Electricity Act, 2003 from 10<sup>th</sup> June, 2005 and the KPTCL became an exclusive transmission company. The co-ordination of bulk power purchase activities has been vested with the newly formed Power Company of Karnataka Ltd., (PCKL).

The KPTCL enables the ESCOMs to supply electricity to around 285.97 lakhs consumers of different categories spread over the State covering an area of about 1.92 lakh square kilometers. To transmit power from different sources of generation, besides the CTU network, KPTCL, as on 31.03.2023, has 1339 substations and 41913 Ckt. kms of transmission lines which include 66 kV, 110 kV, 220 kV and 400 kV lines spread over the State.

To carry out its functions in a smooth and effective manner, the KPTCL has created six transmission zones, each headed by a Chief Engineer; sixteen circles, each headed by a Superintending Engineer; and fifty divisions, each

headed by an Executive Engineer. The operation and maintenance of the transmission system in the State is looked after by thirty-five Transmission Line and Substation Maintenance Sub-divisions. Also, there are fifteen Transmission major works divisions to carry out the construction activities related to transmission system of the State.

Further, there are six Relay testing Circles covering sixteen relay Testing Divisions for protection, troubleshooting and maintenance of protective relays, metering and testing. These relay testing wings also carry out the pre-commissioning tests of new sub-stations, besides testing of interface meters at regular periods. Separate Hotline wing headed by the Chief Engineer is established. Separate hotline Circle is established with 2 hotline Divisions and 6 Sub-divisions to facilitate live line work (without taking LC) using hot stick method and also bare hand technique using insulated elevated platform for replacing punctured / broken insulator / deteriorated jumps and establish connectivity of receiving station / sub-station.

### 1.1 KPTCL at a glance:

Sl. No	Particulars		31.03.2023
1.	<b>Generation Capacity (connected to Transmission System)</b>	MW	
	a) KPC Hydro and Thermal	MW	8852
	b) CGS (Karnataka Share)	MW	4294
	c) NCE, IPPs and Others	MW	18261
	d) Damodar Valley Corporation	MW	450
2.	<b>No. of Receiving Sub-Stations</b>		
	a) 400 kV	Nos.	9
	b) 220 kV	Nos.	131
	c) 110 kV	Nos.	485
	d) 66 kV	Nos.	714
3	<b>Length of Tr. Lines</b>		
	a) 400 kV	CKms.	3936
	b) 220 kV	CKms.	12997
	c) 110 kV	CKms.	12334
	d) 66 kV	CKms.	12646
3.	Gross Assets as at the end of FY23	Rs. in Crores	30,832.73
4.	<b>Total employees:</b>		
	a) Sanctioned	Nos.	16,333
	b) Working	Nos.	9,496
5.	Demand for Transmission charges of Power to ESCOMs (FY23), wheeling and Miscellaneous Charges	Rs. in Crores	4931.36
6.	Collection of transmission charges	Rs. in Crores	4297.17
<b>Source: KPTCL –SLDC load curve, KPTCL Website, APR Filing and Annual Accounts</b>			

**1.2 Transmission capacity of KPTCL in FY23:**

The total transmission capacity in the State was 27630 MW during FY23. The ESCOM-wise transmission capacity for FY23 is as follows:

**ESCOM-WISE TRANSMISSION CAPACITY IN MW – FY23**

Company	Capacity in MW
BESCOM	13681
MESCOM	2125
CESC	3102
HESCOM	5577
GESCOM	3145
<b>TOTAL</b>	<b>27630</b>

## CHAPTER – 2

### TARIFF APPLICATION PROCESS

#### 2.1 BACKGROUND:

The Commission has approved the ARR and transmission tariff of KPTCL for FY23 in its Tariff Order dated 4<sup>th</sup> April, 2022. The KPTCL in its application dated 29<sup>th</sup> November, 2023, has sought approval of the revised ARR under APR for FY23 and consequential revision of ARR and Transmission Tariff for FY25.

#### 2.2 Commission's Directives and Compliance by KPTCL:

The Commission, in its Tariff Order dated 4<sup>th</sup> April, 2022, has issued directives on various matters pertaining to transmission system maintained and operated by the KPTCL. The Commission has directed the KPTCL to ensure full compliance of the directives in a time bound manner.

The summary of the directives issued by the Commission and compliance by the KPTCL thereof, is appended vide Appendix, to this Order.

#### 2.3 Public Hearing Process:

On receipt of the application of the KPTCL dated 29<sup>th</sup> November, 2023 filed for APR for FY23 and consequential revision of ARR and transmission tariff for FY25, the Commission has communicated its preliminary observations on its application on 6<sup>th</sup> December, 2023. The KPTCL has filed its replies on 16<sup>th</sup> December, 2023.

The Commission, vide its letter dated 2<sup>nd</sup> January, 2024, informed KPTCL that its tariff application has been treated as petition in terms of the Tariff Regulations subject to further verification and validation. Accordingly, the KPTCL was directed to publish the summary of the application in the newspapers within five days, in accordance with Clause 5(1) of the KERC (Tariff) Regulations, 2000, as amended from time to time.

In compliance of the above directions of the Commission, the KPTCL has published the summary of its application in the following newspapers on 05.01.2024 and 06.01.2024.

- Deccan Herald
- The Hindu
- Prajavani
- Udayavani

The KPTCL's Application for approval of APR for FY23 and consequential revision of ARR and Transmission tariff for FY25, was also made available on the websites of the KPTCL and the Commission. In response to the notices published in the above newspapers calling for objections on the approval of APR for FY23 and revision of ARR and transmission tariff of the KPTCL for FY24.

The Commission held a Public Hearing on **13<sup>th</sup> February, 2024** in the Court Hall of the Commission and the details of public consultations are discussed in Chapter-3 of this Order.

#### **2.4 Consultation with Advisory Committee of the Commission:**

The meeting of the Advisory Committee of the Commission was held on 23.02.2024. The various issues involved in the KPTCL's application were discussed in the meeting and the Members offered valuable suggestions. The Commission has taken note of these suggestions, while finalising this Order.

## CHAPTER – 3

### PUBLIC CONSULTATION

#### SUGGESTIONS / OBJECTIONS & REPLIES

**3.1** In terms of the provisions of Section 64 of the Electricity Act, 2003, the Commission has undertaken the process of public consultations duly inviting suggestions / views / objections from the stakeholders/ interested persons on the Application filed by the KPTCL for taking up Annual Performance Review (APR) for FY23 and for consequential revision of ARR and Transmission Tariff for FY25. Accordingly, the Commission held a Public Hearing on 13<sup>th</sup> February, 2024, in the Commission's Court Hall to provide an opportunity to the persons who are interested in expressing their views/ objections on the above application filed by KPTCL.

**3.2 Written Objections:**

The Commission has not received any written objections from the stakeholders.

**3.3 Public Hearing:**

a. During the Public Hearing held on 13<sup>th</sup> February, 2024, the Managing Director, KPTCL, made a brief presentation on the profile, performance and achievements of KPTCL for the Financial year 2022-23. He informed the Commission that during FY23, the transmission losses were slightly high as compared with the approved targets. The Commission enquired the reasons for higher losses, the MD KPTCL informed that due to low voltage in the 66kV network and due to reactive power from RE generators, the transmission loss has been little high in the 66 kV lines. He stresses the need to strengthen the same with 110 kV lines.

b. KPTCL submitted that during FY23, there has been an increase in the actual O & M expenses which has been included in the current filing. On a question from the Commission as to the reasons for increase in O & M expenses, KPTCL informed the Commission that due to revision of pay scales of its employees, there is increase in the employee cost.

After completing the presentation KPTCL requested the Commission to approve the revised ARR of FY23 after Annual Performance Review for FY23 and approve the revised ARR and Transmission Tariff for FY25.

- c. On inclusion of Government portion of pension contribution in the KPTCL tariff application for being recovered through consumers 'tariff, KPTCL informed the Commission that after amendment of Karnataka Electricity Reform (Transfer of Undertaking of KPTCL and its personnel to Electricity Distribution and Retail Supply Companies) Rules 2002 and G.O. dated 15.11.2022, Corrigendum dated 24.11.2022 and as per the directions of the Government, KPTCL has included an amount of Rs.1486.23 Crores in the APR application for FY23.
- d. Name of the persons, who have made oral submissions during the public hearing held on 13.02.2024.

Sl. No	Name & Address of objectors
1	M.G.Prabhakar FKCCI, Bangalore
2	Krishnappa, Electrical Contractor, Bengaluru

- e. The summary of points raised during public hearing is as follows:

1. Sri.M.G. Prabhakar representing FKCCI Bangalore, submitted that the Hon'ble High Court of Karnataka, in its Order dated 20<sup>th</sup> April, 2023 in Petition No. 4010/2023(GM-KEB), has issued an interim stay on the collection Government's portion of Pension Contribution from tariff, in so far it relates to the Petitioner (FKCCI) until next hearing. The last hearing was held on 31.05.2023 and the interim stay is extended till next hearing. He stated that this fact has not been brought to the notice of the Commission.

The Commission informed Mr. Prabhakar that the expenditure towards the pension contribution has not been incurred by KPTCL and hence cannot be considered as a part of KPTCL ARR and that the Commission would examine the same and would take a view in the matter, in this tariff Order.

2. Sri G.N. Krishnappa Electrical Contractor, Bengaluru submitted that there has been inordinate delay in commissioning of Mandur Station though the construction has started in 2014.

KPTCL informed the Commission that there were RoW issues for laying of transmission lines and the same has since been sorted out. As regards completing the station work, it was informed that tenders have been finalised and work award has been issued. KPTCL expects the work to be completed in an year.

Sri. Krishnappa also informed that while sanctioning power, the provisions of Conditions of Supply regarding feasibility and connectivity, are not being complied with by KPTCL and BESCOM.

The Commission informed Sri Krishnappa that these are non-tariff issues and hence the same could be taken up separately.



## CHAPTER – 4

### ANNUAL PERFORMANCE REVIEW FOR FY23

#### 4.0 KPTCL's Application for APR for FY23:

The KPTCL, in its application dated 29<sup>th</sup> November, 2023, has requested the Commission to approve the revision of ARR for FY23 based on the audited accounts and approve the revised ARR and transmission tariff for FY25.

The Commission, in its MYT Order dated 4<sup>th</sup> April, 2022 approved Annual Revenue Requirement (ARR) of Rs.5093.77 Crores for FY23, which was inclusive of the deficit of Rs.49.55 Crores per APR for FY21 and amortized regulatory asset of Rs.331.41 Crores as per the Hon'ble ATE order dated 05.10.2020.

In this Chapter, the Commission has reviewed the Annual Performance of KPTCL for FY23, in accordance with the provisions of the MYT Regulations, keeping in view the KPTCL's application, the Audited Accounts for FY23, Commission's observations and the replies thereon furnished by KPTCL. The item-wise analysis of expenditure and revenue and the decisions, thereon, of the Commission are discussed in the following paragraphs:

#### 4.1 KPTCL's Submission:

The KPTCL has submitted the details of revenue earned and item-wise expenditure incurred during FY23 for the purpose of carrying out APR as indicated below:

TABLE - 4.1			
Amount in Rs. Crores			
KPTCL's filing – APR FY23			
Sl. No.	Particulars	As approved in TO-2022 04.04.2022	As filed
1	Energy available for transmission in MU	71645.88	80512.17
2	Energy sold at IF Points in MU	69593.94	78115.49
3	Transmission Losses in MU	2051.94	2396.68
4	Transmission Loss in %	2.864%	2.977%

5	Installed Capacity in MW	25053	27629.75
<b>Income:</b>			
6	Revenue from Transmission Charges	5093.77	4794.23
7	Miscellaneous Revenue		137.13
	<b>Total Income:</b>	<b>5093.77</b>	<b>4931.36</b>
<b>Expenditure:</b>			
8	Employee Cost	2050.59	1631.73
9	Repairs & Maintenance		445.66
10	Admin, & General Expenses		197.49
11	<b>Sub-Total (8+9+10)</b>	<b>2050.59</b>	<b>2274.88</b>
12	Depreciation	1146.33	1365.20
13	Interest & Finance Charges	638.93	680.36
14	Interest on working capital	113.67	61.50
15	<b>Sub-Total (13+14)</b>	<b>752.60</b>	<b>741.86</b>
16	Less: Capitalized O&M Expenses	(67.69)	(72.36)
17	Less: Capitalized Depreciation	(103.17)	(0.71)
18	Less: Capitalized Interest Charges	-	(98.81)
19	Other Debits	-	49.23
20	Extraordinary / Exceptional items	-	-
21	Net Prior Period Income/Charges	-	-
22	Income Tax	-	191.12
23	Less: Other Income	(93.54)	(280.09)
	<b>Total Expenditure:</b>	<b>3685.12</b>	<b>4170.32</b>
24	Return on Equity	1027.69	975.86
25	Carry forward of Deficit of previous year as per APR	49.55	-
26	Amortized Regulatory Assets-As per Hon'ble APTEL Order dated 05.10.2020)	331.41	-
27	Less: Penalty for exceeding Target Tr. Loss	-	-
28	Less: Disallowance of imprudent capex for FY23	-	-
29	<b>Sub-Total (24+25+26+27+28+29)</b>	<b>1408.65</b>	<b>975.86</b>
	<b>Aggregate Revenue Requirement</b>	<b>5093.77</b>	<b>5146.19</b>
	<b>Revenue Surplus / (Deficit)</b>	<b>-</b>	<b>(214.82)</b>
	Transmission charges per unit in paise	71.10	63.92
	<b>Transmission Charges in Rs. /MW/Month</b>	<b>1,69,433</b>	<b>1,55,213</b>

As per the APR application, KPTCL has reported a gap of Rs.214.82 Crores in revenue for FY23, as indicated above and has requested the Commission to approve the revised ARR of Rs.5146.19 Crores for FY23. In addition to the above, KPTCL has included Rs.1486.23 Crores towards Government portion of contribution towards P & G Trust for FY23 proposed to be claimed through tariff as per G.O dated 15.11.2022 and corrigendum Order dated 24.11.2022. Thus, KPTCL has claimed a total revenue gap of Rs.1701.05 Crores for FY23.

## 4.2 Financial Performance of KPTCL as per Audited Accounts for FY23:

The overview of the financial performance of KPTCL for the FY23, as per its Audited Accounts, is as follows:

<b>TABLE – 4.2</b>		
<b>Financial Performance of the KPTCL as per Audited Accounts for FY23</b>		
<b>Rupees in Crores.</b>		
<b>Sl. No.</b>	<b>Particulars</b>	<b>FY23</b>
<b>Revenue</b>		
1	Revenue from Operations	4931.37
2	Other Income	242.47
3	<b>Total Revenue</b>	<b>5173.84</b>
<b>Expenditure:</b>		
4	<b>O &amp; M Expenses</b>	
	Employee Cost	1631.73
	Repairs & maintenance	445.66
	A & G Expenses	197.49
5	Depreciation	1364.50
6	Interest & Finance Charges	741.84
7	Other Debits	49.23
8	Less Expenses capitalised	(171.16)
	<b>Total Expenditure</b>	<b>4259.29</b>
	Profit before Tax	914.55
9	Provision for Taxation	191.12
	Net Profit/ Surplus	723.43

As per the Audited Accounts, the KPTCL has earned a profit/ Surplus of Rs.723.43 Crores for the FY23. Cumulative surplus earned by the Company, as per the audited accounts, at the end of FY23 is Rs.4800.60 Crores, which is inclusive of profit earned during FY23.

## 4.3 Annual Performance Review for FY23:

The Commission has considered the actual revenue and expenses reported by KPTCL as per the Audited Accounts, vis-à-vis the expenses / targets approved by the Commission, in its Tariff Order dated 4<sup>th</sup> April, 2022.

The Annual Performance Review (APR) of KPTCL for FY23, has been taken up by the Commission, in accordance with the provisions of the KERC (Tariff) Regulations 2000 and KERC (Terms and Conditions for Determination of

Transmission Tariff) Regulations, 2006, as amended from time to time. The analysis of item-wise expenditure and the decisions of the Commission thereon, are discussed in the following paragraphs:

**i) Transmission Losses for FY23:**

The Commission in its Tariff Order 2022, had fixed the average transmission loss target at 2.864% with upper and lower range of 2.914% and 2.814% respectively for FY23.

The KPTCL, in its filings, has reported transmission loss of 2.977%, as against the Commission approved annual average transmission loss of 2.864% for the FY23.

**Commission's preliminary observations and KPTCL's reply:**

- On the insistence of the Commission, KPTCL had got conducted a study to ascertain the reasons for higher transmission losses at 220 kV level and submitted the report to the Commission 27.09.2023. The Commission desired KPTCL to submit action taken report on the study report.

**KPTCL Reply:**

After furnishing certain explanations, the KPTCL has stated that the suggestions of M/s PRDCL are to be carried out on a continuous basis and KPTCL is taking time bound measures to reduce the losses at all voltage levels, which can be seen through continuous reduction losses over the years.

- There is significance difference in the energy at IF points considered by KPTCL for calculation of transmission loss viz-a-viz the IF point energy consumption considered by ESCOMs.

<b>TABLE – 4.3</b>			
<b>Comparison of IF points As per KPTCL v/s ESCOMs</b>			
<b>in MUs</b>			
<b>As per KPTCL</b>		<b>As per ESCOMs</b>	
EHT	7857.29	BESCOM	32513.91
IPP	1884.41	MESCOM	6112.96
ESCOMs IF Point	68373.79	CESC	7282.06
	0	HESCOM	14637.16
	0	GESCOM	9429.68
	<b>78115.49</b>	<b>Total</b>	<b>69975.77</b>

Examine the reasons for the difference and reassess the power purchase quantum to arrive at the transmission loss for FY23.

**KPTCL Reply:**

After furnishing certain explanations and data, KPTCL has took an inference that the ESCOMs might have considered the consumption prior to the reconciliation.

- Explain the reasons for not achieving the transmission loss target fixed by the Commission for FY23.

**KPTCL Reply:**

KPTCL has stated that it is reducing losses year on year and continue to strive hard to keep the losses at lower levels.

**Commission's Analysis and Decision:**

Transmission loss trajectory approved by the Commission for FY23 in the Tariff Order-2022 dated 04.04.2022 is as below;

<b>TABLE – 4.4</b>	
<b>Transmission Loss Trajectory allowed by the Commission for FY23 in Tariff Order-2022</b>	
Upper Limit	2.914%
Average	2.864%
Lower Limit	2.814%

The Commission has taken note of the details / explanation furnished by KPTCL and proceeded to approve the transmission loss for FY23 as follows;

<b>TABLE - 4.5</b>	
<b>Transmission Loss – As filed</b>	
<b>Particulars</b>	<b>In MUs</b>
Energy Input to Transmission System of KPTCL	80512.17
Energy Transmitted to ESCOMs at IF points	78115.49
Transmission Loss	2396.68
<b>Transmission Loss (%)</b>	<b>2.977%</b>

The Commission has taken note that the actual transmission loss of 2.977% achieved by the KPTCL is higher by 0.063% compared to the upper limit of approved targeted transmission loss of 2.914%. Hence, the Commission, in accordance with the provisions of Clause 3.4 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, has proceeded to levy the penalty for under achievement of transmission loss, as follows;

<b>TABLE - 4.6</b>	
<b>Penalty for under achievement of Transmission Loss for FY23</b>	
<b>Particulars</b>	<b>FY23</b>
1% of RoE (Rupees in Crores)	9.7586
Actual Transmission Loss in %	2.977%
Upper Limit of targeted Transmission Loss in %	2.914%
Under achievement of transmission loss by (%)	0.063%
<b>Penalty imposed Rs. In Crores</b>	<b>1.23</b>

Thus the Commission has approved for levy of penalty of Rs.1.23 Crores to KPTCL for under achievement of Transmission Loss in FY23.

#### ii) Transmission System Availability (TSA):

KPTCL, in its Petition has submitted that it has achieved Transmission System Availability (TSA) of 98.687% and has requested an incentive for achieving system availability above the target availability of 98% as specified under the KERC MYT Regulations.

The details of Transmission System Availability (TSA) of the transmission lines, transformers and the reactors in the transmission system, as submitted by KPTCL vide its letter dated 23.11.2023 for FY23, are as follows

<b>TABLE - 4.7</b> <b>Transmission System Availability FY23</b>							
Name of the Transmission Zone	Total No of AC Tr. Lines	% Availability	Total No of ICT's	% Availability	Total No of Switched BUS Reactors	% Availability	% Availability for the system
Bagalkote Zone	558	99.701%	691	99.882%	1	100.000%	<b>99.8013%</b>
Bengaluru Zone	512	99.911%	759	99.929%	7	81.415%	<b>99.8201%</b>
Kalaburagi Zone	348	99.674%	449	99.965%	0	0.000%	<b>99.8378%</b>
Hassan Zone	259	99.427%	407	99.793%	4	100.000%	<b>99.6530%</b>
Mysuru Zone	279	99.077%	357	98.841%	0	0.000%	<b>98.9446%</b>
Tumakuru Zone	207	88.006%	439	99.681%	7	99.991%	<b>95.9833%</b>
<b>Total</b>	<b>2163</b>	<b>97.157%</b>	<b>3102</b>	<b>99.793%</b>	<b>19</b>	<b>92.485%</b>	<b>98.6873%</b>

KPTCL has requested the Commission to allow incentive for achieving better transmission availability, as per MYT Regulations.

#### **Commission's Analysis and Decision:**

The Commission, vide letter dated 22.12.2023 & reminder e-mail dated 18.01.2024 had directed the ESCOMs to confirm the percentage of zone-wise Transmission System Availability (TSA) of KPTCL for the period April 2022 to March 2023. The Commission has received replies from BESCOM, MESCOM and HESCOM in the matter, they have concurred with the TSA as submitted by KPTCL for their respective zones.

The Commission, after duly validating the submissions made by the KPTCL, has considered the TSA at 98.6873%, and directs KPTCL to consistently improve and maintain its TSA, by monitoring and taking remedial measures in respect of the transmission elements which are prone to show lower availability. The Commission would like to reiterate that **KPTCL shall ensure that no RE Generation is affected by transmission system constraints.**

The Commission has taken note of the details furnished by KPTCL and has determined the incentive for achievement of better transmission availability for FY23, in accordance with the provisions of Clause 3.17 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, as follows;

<b>TABLE - 4.8</b>	
<b>Incentive on Transmission Availability</b>	
<b>Particulars</b>	<b>FY23</b>
System Target Availability (%)	98.000%
Actual System Availability (%)	98.687%
No incentive allowed beyond 99.75% as per MYT Regulations	99.750%
Availability beyond target level	0.687%
Incentives linked to approved ARR	Rs.35.57 Cr.
`50% to be shared with the ESCOMs and balance to be retained by KPTCL	Rs.17.78 Cr

**The Commission, therefore, directs the KPTCL to recover the above incentive of Rs.17.78 Crores from the ESCOMs, in proportion to their actual transmission capacity for the FY23. It is reiterated that KPTCL shall utilize the incentive received towards adoption of technological advancements in tools & machineries and also to impart advanced training to its officers and employees, to improve their efficiency in performance and report compliance thereof, to the Commission.**

**iii) Operation and Maintenance Expenses:**

**KPTCL's Submission:**

<b>TABLE - 4.9</b>		
<b>O and M Expenses – KPTCL Submission</b>		
<b>Rs.in Crores</b>		
<b>Particulars</b>	<b>As approved in TO-2022 04.04.2022</b>	<b>As claimed</b>
Employee Cost	2050.59	1631.74
Repairs & Maintenance		445.66
Admin, & General Expenses		197.49
<b>Total:</b>	<b>2050.59</b>	<b>2274.89</b>



**Commission's preliminary observations and KPTCL's reply:**

- a. There is an increased expense under salary account by Rs.127.70 Crores in FY23 compared to FY22. KPTCL shall submit details for the same and explain whether it had made provision towards pay revision due from 01.04.2022 for FY23.

**KPTCL Reply:**

Consequent to the pay scale revision, the provision is made towards salary, DA, HRA etc., for an amount of Rs.222.06 Crores in FY23 accounts.

- b. There is an increase in expense under R&M to Plant & Machinery and R&M to Buildings by Rs.26.86 Crores and Rs.15.32 Crores, respectively. KPTCL shall explain the reasons.

**KPTCL Reply:**

Due to addition of 40 sub stations during FY23, there is increase in maintenance costs. Consequent to the pay scale revision, the provision is made towards salary, DA, HRA etc., for an amount of Rs.222.06 Crores in FY23 accounts.

- c. KPTCL has claimed an amount of Rs.1486.23 Crores which is said to be Government portion of contribution towards P&G Trust for FY23, as per G.O. dated 15.11.2022 and corrigendum dated 24.11.2022. In this regard, attention is drawn to the discussions made in the Tariff Order 2023 dated 12.05.2023 on the subject. In the Order, the Commission has amply made it clear that the Government is responsible to provided their committed portion to P&G Trust and that the same cannot be passed on to consumers in tariff. Despite clear directions from the Commission that the amount is payable by the Government, KPTCL has claimed the said amount. Reasons for the same need to be furnished.

**KPTCL Reply:**

KPTCL has reiterated that the Government of Karnataka vide G.O dated 15.11.2022 and Corrigendum dated 24.11.2022, had directed KPTCL to claim the GoK portion of Contribution from FY23-24 onwards in the tariff.

KPTCL has furnished the supplementary details relating to SLDC charges, earned leave and half pay leave accounted in the audited accounts, expenditure incurred towards Corporate Social Responsibility, etc., as sought by the Commission.

**Commission's Analysis and Decision:**

The Commission has taken note of the details furnished by KPTCL and has proceeded to revise the Operation and Maintenance for FY23, in accordance with the provisions of Clause 3.11.1 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, as follows;

The Commission has also considered Rs.192.86 Crores of additional Employee expenses consequent to revision of pay scales of employees with effect from 1<sup>st</sup> April 2022 which had not been factored in the Transmission Tariff for FY23 in the Tariff Order 2022 dated 04.04.2022.

<b>TABLE - 4.10</b>							
<b>Computation of Inflation Rate</b>							
<b>Year</b>	<b>WPI</b>	<b>CPI</b>	<b>Composite Series</b>	<b>Yt/Y1=Rt</b>	<b>Ln Rt</b>	<b>Year (t-1)</b>	<b>Product [(t-1)* (LnRt)]</b>
2011	98.2	66.5	72.84				
2012	105.7	72.7	79.3	1.09	0.08	1	0.08
2013	111.1	80.6	86.7	1.19	0.17	2	0.35
2014	114.8	85.7	91.52	1.26	0.23	3	0.68
2015	110.3	90.8	94.7	1.30	0.26	4	1.05
2016	110.3	95.3	98.3	1.35	0.30	5	1.50
2017	114.1	97.6	100.9	1.39	0.33	6	1.96
2018	118.9	102.4	105.7	1.45	0.37	7	2.61
2019	121.2	110.2	112.4	1.54	0.43	8	3.47
2020	121.8	116.3	117.4	1.61	0.48	9	4.30
2021	135.0	122.0	124.6	1.71	0.54	10	5.37

2022	151.3	129.2	133.62	1.83	0.61	11	6.67
A= Sum of the product column							28.04
B= 6 Times of A							168.22
C= (n-1)*n*(2n-1) where n= No of years of data=12							3036.00
D=B/C							0.06
g(Exponential factor)= Exponential (D)-1							0.0570
e=Annual Escalation Rate (%)=g*100							5.69733
As per CERC Notification No. Eco T 2 (Old SBD) / 2023-CERC dated 05.10.2023 with weightage of 80% on CPI and 20% on WPI							

**TABLE - 4.11**  
**DATA FOR BASE YEAR FY22**

Particulars	FY22
1. Actual O&M Expenses as per Accounts (Rs.in Crores)	1791.40
2. Less: Half Pay Leave Provision (Rs.in Crores)	7.48
3. O&M Expenses relating to KPTCL (Rs.in Crores)	1783.92
4. Less: Terminal Benefits (Rs.in Crores)	427.35
5. O&M Expenses (excluding Terminal Benefits) (Rs.in Crores)	1356.57
6. Number of Bays	26009
7. Length of lines in CKMs	40304
<b>8. O&amp;M Expenses per Bay (Rs.in Thousands)</b>	<b>365.10</b>
<b>9. O&amp;M Expenses per CKM of line (Rs.in Thousands)</b>	<b>100.98</b>

**TABLE - 4.12**  
**Revised O&M Expenses as approved by the Commission for FY23**

Particulars	FY23
1. Inflation Rate	5.69733
1a. Growth rate of Bays and Tr. Lines	3.8477
1b. Growth Index considered by the Commission	5.69733%
2. Number of Bays (As filed)	27209
3. Length of lines in CKMs (As filed)	41913
4. Revised O&M Expenses per Bay (Rs.in Thousands) [Base Year Cost grossed up with Inflation Rate]	385.91
5. Revised O&M Expenses per CKM of line (Rs.in Thousands) [Base Year Cost grossed up with Inflation Rate]	106.73
6. O&M Expenses relating to Bay & Lines (Rs.in Thousands) [(2 x 4)+(3 x 5)]	1497.34
7. Pay Revision Arrears paid in FY23 (Rupees in Crores)	192.86
8. Actual Terminal Benefits as per Accounts.	487.47
<b>9. Normative O&amp;M Expenses (6+7+8)</b>	<b>2177.67</b>
10. O&M Expenses Claimed (including half pay leave provision)	2274.88
<b>11. Revised O&amp;M Expenses Approved by the Commission Rs.in Crores</b>	<b>2177.67</b>

Further, after adequate discussions, the Commission has already placed on record its decision in the Tariff Order - 2023 that the Government portion of P&G Trust contribution cannot be passed on to consumers in tariff. The same is

reiterated once again. Further, these expenses do not form part of the KPTCL's ARR and hence the question of considering the same does not arise.

Thus the Commission has approved the revised O&M Expenses of Rs.2232.20 Crores for FY23.

**iv) Depreciation:**

**KPTCL's Submission:**

TABLE - 4.13 Depreciation – KPTCL Submission		
Amount in Rs.Crores		
Sl. No.	Particulars	FY23
1	Buildings	30.94
2	Hydraulic Works	8.82
3	Civil works	15.85
4	Plant & M/c	1298.90
5	Vehicles	5.80
6	Furniture	1.57
7	Office Equipment	0.25
8	Land & Rights	1.84
9	Intangible assets	1.23
	<b>Total:</b>	<b>1365.20</b>

**Commission's preliminary observations and KPTCL's reply:**

The Commission had sought details in respect of the assets created out of consumer contribution / grants, opening Balance and Closing Balance, addition during the year and deprecation thereon, for FY23.

KPTCL has furnished the details in respect of the assets created out of consumer contribution / grants, opening Balance and Closing Balance, addition during the year and deprecation thereon, for FY23 (Actuals), FY24 (estimated) and FY25 (estimated), as sought by the Commission.

**Commission's Analysis and Decision:**

The Commission has taken note of the details furnished by KPTCL and proceeded to revise the depreciation amount for FY23, in accordance with the provisions of Clause 3.9.1 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, as follows;

TABLE - 4.14		
Depreciation – As allowed by the Commission for FY23		
Amount in Rs.Crores		
Sl. No.	Particulars	FY23
1	Buildings	30.94
2	Hydraulic Works	8.82
3	Civil works	15.85
4	Plant & M/c	1298.90
5	Vehicles	5.80
6	Furniture	1.57
7	Office Equipment	0.25
8	Land & Rights	1.84
9	Intangible assets	1.23
	<b>Total:</b>	<b>1365.20</b>
10	Less: Depreciation amount relating to assets created out of consumer contribution / grants	(145.77)
11	Less: Depreciation amount relating to SLDC	(0.22)
	<b>Allowable Depreciation amount</b>	<b>1219.21</b>

Thus the Commission has approved the revised depreciation amount of Rs.1219.21 Crores for FY23.

v) Capital Expenditure for FY23:

KPTCL's Submission:

In FY23, KPTCL has stated that they have achieved the following targets by incurring capital expenditure.

TABLE - 4.15					
Capital Expenditure Incurred in FY23			Rs.3624.08 Crores		
Achievements					
Particulars	Commissioning of new sub stations		Augmentation of sub stations		Addition of new lines
	Nos.	MVA Added	Nos.	MVA Added	CKMs
400 kV	1	500	1	500	234.11
220 kV	7	1400	12	1105	375.02
110 KV	20	290	78	810	503.89
66 kV	12	209	106	790	495.83
Total:	40	2399	197	3205	1608.85

**Commission's preliminary observations and KPTCL's reply:**

In FY23 KPTCL has incurred CAPEX of Rs.3624.08 Crores, which is abnormally higher than what was approved by the Commission, which is without prior approval. Only post-facto approval was sought, vide KPTCL's letters dated 03.02.2023, 11.05.2023 and 25.07.2023. Later the KPTCL has furnished replies justifying the need for capex over and above the amount approved by the Commission.

**The Gist of the replies furnished;**

- i. Year-on-year, construction of transmission lines and stations are being taken up as per the requirement of ESCOMs.
- ii. Commissioning of large sub-stations at 400 kV and 220 kV voltage levels will result in enormously higher cost.
- iii. Huge number of Augmentation works of 197 numbers have been carried out as part of the statutory duties of STU.
- iv. Capex is used for creating infrastructure for the benefit of the consumers which is assessed by the KERC through a third party prudence check.
- v. Commission, while determining the tariff based on the proposal of KPTCL approves Capex as a lump sum without providing work-wise details. In the absence of work-wise details it becomes difficult for KPTCL to pinpoint which are the works that exceeded the approved amount of Capex.
- vi. As Capex is incurred for creation of assets as per the request of ESCOMs, which are useful for meeting the power supply policy of State, it may happen that it exceeds the lump sum amount approved by the Commission.
- vii. Considering the ever evolving dynamic power scenarios with technological developments, limiting or regulating the capital investment plan to Rs.2500 Crores by comparing it with the earlier year's capital expenditures may not work well for the utilities.
- viii. KPTCL has furnished the details relating to spill over works, Green Energy Corridor Projects Phase-I & Phase-II, etc., as sought by the Commission.
- ix. KPTCL has stated that the reasons for exceeding Capex of Rs.2500 Crores for FY23 with work wise nomenclature sought by KERC will be provided in due course.

**Commission's Analysis and Decision:**

The Commission has examined the replies of KPTCL furnished to the preliminary observations and reply dated 13.02.2024 submitted during public hearing. KPTCL is supposed to plan the capital works well in advance and adhered to the planned expenditure, to the extent possible. Being a public utility in the public domain, KPTCL is expected to plan its long-term capital investment in order to have a robust infrastructure for the state transmission network and reasonably maintain the financial austerity and foresee the impact of expenditure on the consumers' tariff also.

In view of the above, the Commission has recognized the capital expenditure for FY23 and has allowed the interest on capital loans as per actuals with reference to the audited accounts.

**Prudence Check of Capital Expenditure for FY21 and FY22:**

The Commission, in its Tariff Orders dated: 4<sup>th</sup> November 2020 and 9<sup>th</sup> June 2021, had allowed Capital expenditure incurred by the KPTCL for the period FY21 and FY22 respectively, subject to carrying out the prudence check of the various works undertaken by KPTCL. Accordingly, the Commission had entrusted conducting prudence check of capital expenditure of KPTCL to M/s TERI, Bengaluru.

M/s TERI, Bengaluru, have submitted the report in the matter. As per their report, the following is the summary of findings in respect of work of Prudence Check for FY21 and FY22:

<b>TABLE-4.16</b>				
<b>Details of works executed and selected for prudence check</b>				
<b>Particulars</b>	<b>FY21</b>		<b>FY22</b>	
	<b>Nos</b>	<b>Amount Rs.in Cr.</b>	<b>Nos</b>	<b>Amount Rs.in Cr.</b>
Works considered for carrying out prudence check	39	844	55	1,261
<b><u>Abstract of Prudent/ Non-prudent works</u></b>				
No. of Non-prudent works	1	3	1	4
No. of conditionally prudent works	-	-	1	65
<b><u>Abstract of cost overrun works</u></b>				
No. of works with no cost overrun	14	106	22	323
No. of works with cost overrun upto 10%	15	575	12	300
No. of works with cost overrun upto 10% to 25%	8	146	8	148
No. of works with cost overrun exceeding 25%	2	16	13	489
<b><u>Abstract of time overrun works</u></b>				
No. of works with no time overrun	4	150	5	32
No. of works with no time upto 1 year	28	509	40	824
No. of works with no time between 1 year to 2 years	6	177	2	15
No. of works with time over run more than 2 years	1	7	8	390

The Commission after analyzing the replies of KPTCL, BESCOM, CESC and HESCOM, on the Consultant's Report, has decided to disallow the corresponding depreciation and interest on loans pertaining to the imprudent works of FY21 and FY22 along with previous years' imprudent works, which continue to be imprudent, for the period indicated are as under:



TABLE-4.17					
Details of Imprudent Works					
Sl. No.	Name of the work	Actual Cost Rs.in Cr.	Commission's Decision	Period for which amount to be disallowed	Disallowance Amount Rs.in Cr.
<b>Imprudent works of FY20</b>					
1	Establishing 2x31.5 MVA, 66/11 kV Badanaguppe S/s with associated line.	33.34	Imprudent	01.04.2021 to 31.03.2023	6.650
2	Establishing 2x8MVA, 66/11 kV S/S at Malladihalli (Hosadurga Taluk) with associated 66 kV line from proposed 220 KV Station, Benkikere, Tumakuru Zone	6.40	Prudent from 11.10.2022 onwards	01.04.2021 to 31.03.2023	0.970
<b>Imprudent works of FY21</b>					
3	Providing additional 1 x 20MVA, 110/11 kV transformer at 110/33/11 kV Manipal sub-station in Udupi taluk and district	3.16	Prudent from 24.04.2023 onwards	25.01.2023 to 31.03.2023	0.050
<b>Note: From 08.03.2021 to 24.01.2023, the amount of Rs.0.59 Crores is disallowed in APR of FY23 of MESCOM, as the said period is attributable to MESCOM.</b>					
<b>Imprudent works of FY22</b>					
4	Establishing 1x20 MVA, 110/33 kV reference in 110kV Yelparahatti S/s with in Bagalkot Zone.	3.30	Prudent from 10.01.2023 onwards	13.07.2021 to 10.01.2023	0.490
5	Construction of 220KV SC line on DC towers from existing 400KV PGCIL station at Beeranahalli (Hiriyur) to existing 220/66/11KV KPTCL station at Hiriyur in Chitradurga district in existing corridor of 220KV SC line from Hoysalakatte to 220/66/11KV Station Hiriyur	65.29	Prudent from 01.01.2023 onwards	01.04.2022 to 31.12.2022	5.050
<b>HESCOM imprudent works attributable to KPTCL</b>					
6	Construction of 6.5 Km Link Line on over loaded F-3 Janamatti IP feeder from 110/11KV Kataraki MUSS to near Ramanna Jogi farm in Kataraki Section, Mudhol Division for FY21.	0.21	Imprudent	28.06.2020 to 29.12.2022	0.100
<b>Note: From 30.12.2022 to 06.03.2023 in respect of HESCOM, the amount of Rs.0.005 Crores is disallowed in APR of FY23 of HESCOM, as the said period is attributable to HESCOM.</b>					
<b>BESCOM Imprudent works attributable to KPTCL</b>					
7	11KV feeder from Pillagumppa MUSS to bifurcate over loaded F-4 Industrial feeder in Pillagumppa section Hosakote Sub Division for FY21.	0.27	Prudent from 17.11.2023 onwards	18.03.2021 to 17.11.2023	0.058
8	Providing Express feeder from EDC Station to an extent of 1.72 KM using 3x 400 Sq mm XLPE cable to bifurcate overloaded F12 B Station at Magrath road Police Mess RMU in Someshwara O&M Unit of E3 Sub Division, Indiranagar Division under Rate Contract Basis for FY22.	1.26	Imprudent	01.12.2021 to 31.03.2023	0.175
9	Providing new evacuation line from proposed 220kv KIADB station to bifurcation of load from over loaded feeder of F8 KIADB Feeders of Hanumanthanagar muss in Harohalli section HSD for FY22.	0.67	Prudent from 29.11.2022 onwards	01.04.2022 to 29.11.2022.	0.051
<b>CESC Imprudent works attributable to KPTCL</b>					
10	Work of Link Line to transfer load of F7 Ganiga IP feeder (Basaralu muss) to proposed Chakanahalli feeder to avoid over load of F7 IP feeder in Basaralu section for FY21.	0.13	Prudent from 24.03.2023 onwards	03.08.2020 to 24.03.2023	0.040
<b>TOTAL:</b>					<b>13.634</b>

While arriving at the above amounts for disallowance, **the weighted average rate of interest on loans and depreciation** considered as below:

TABLE - 4.18 Weighted Average Rate of Depreciation and Interest on Loans						
Name of the licensee	FY21		FY22		FY23	
	Wt. Avg. Depreciation rate	Wt. Avg. Interest	Wt. Avg. Depreciation rate	Wt. Avg. Interest	Wt. Avg. Depreciation rate	Wt. Avg. Interest
KPTCL	4.76%	7.61%	5.28%	7.06%	5.28%	7.87%
BESCOM	5.63%	10.21%	5.28%	9.22%	5.28%	7.85%
HESCOM	4.76%	11.24%	5.28%	10.29%	5.28%	10.47%
CESC	5.63%	10.21%	5.28%	9.22%	5.28%	9.92%

#### Conditionally prudent works:

The Commission has considered two works of BESCOM namely i.e., Evacuation of New 11Kv Link line from Ungra Muss to Yadavanahalli limits Gubbi Sub division and Evacuation of New 11KV Link line from Nittur Muss to Kodihalli, Nittur sub division, as conditionally Prudent which are to attributable to KPTCL for amounting to Rs.0.42 Crores. Hence, KPTCL is directed to complete these works as early as possible so as to derive the benefits envisaged in the DPR. The status of these works will be reviewed in next Tariff Order along with the works which are being treated as imprudent.

**In view of the above, the Commission hereby disallows Rs.13.63 Crores for FY23 towards depreciation and interest on loans allowed in respect of imprudent works. Accordingly, the same is ordered to be deducted in KPTCL APR of FY23.**

KPTCL is directed to note the following suggestions made in the Report of Prudence Check and take suitable actions/measures in future while implementing a scheme / project in order to avoid disallowance of amounts towards imprudent works and also to realize the benefits as envisaged in the DPR.

- (a) The DPR that is prepared for each project is generic in addressing the loss reduction and in improvement of Voltage regulation. The loss reduction should be estimated accurately so that the energy savings that are realized are quantified.

- (b) The DPR should correctly envisage the projected load growth year on year. If the load growth does not happen as in anticipated rate, it results in non-utilization of assets in efficient manner. Software should be used for calculating the techno economic benefits and the results should be included in the DPR.
- (c) For the proposals which do not have alternatives should be clearly mentioned in the DPR or addressed in the TCCM to avoid the reduction of marks for evaluation of project.
- (d) Post commissioning, voltage regulation should be periodically monitored with instrument and records should be documented.
- (e) In many stations the 11kV power evacuation has not happened concurrently with the completion of sub stations. This result in the non-realization of financial benefits after the assets categorization. KPTCL and ESCOMs should ensure effective co-ordination to ensure there is no delay in the power evacuation from the downstream end.
- (f) Energy audit assessment of sub-stations as to be conducted regularly in order to identify the losses and estimation of operating efficiency. For the reduction of energy losses and efficiency improvement on sub-station levels, action plan can be effectively implemented. Ensuring meter accuracies and effective guidance to station operators for monitoring the load based on active power (MW) and not on current (in amps).
- (g) As the prudence exercise identifies major works project which are not realizing the financial benefits and significantly impacts the tariff analysis, the prudence audit should be covered for all the projects. Preparation of formats to monitor the post commissioning and compare the benefits as intended in the DPR with actuals realized.
- (h) Given the competitive market cost and vast experience of KPTCL in the transmission sector projects, actual cost for completion of project should be close to true cost of DPR.

- (i) Creation of 33 kV reference should be meticulously planned considering the asset life utilization period and intended benefits.
- (j) Asset shall be monitored for the revenue realization after the commissioning of projects by respective accounts division.
- (k) Projects established with dedicated load such as anticipation of industrial area growth and residential layouts, should be justified appropriately in the DPR with specification of alternative arrangement, when there is substantial delay more than year.

**vi) Interest on Capital Loan:**

**KPTCL's Submission:**

<b>TABLE - 4.19</b>	
<b>Interest on Capital Loan- KPTCL's Submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
CAPEX Loan Opening Balance as on 01.04.2022	8420.93
ADD: Loan availed during the year	2488.00
LESS: Repayments	790.94
CAPEX Loan Closing Balance as on 31.03.2023	10117.99
<b>Interest incurred during the year</b>	<b>680.35</b>

**Commission's Analysis and Decision:**

The Commission has considered the capital expenditure borrowing details depicted in the audited accounts and also the decision of the Commission in the matter of capital loan in the section "Capital Expenditure", above and proceeded to revise the Interest on capital borrowings in accordance with the provisions of Clause 3.8 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, as follows;

<b>TABLE - 4.20</b> <b>Approved Interest on Capital Loans</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
CAPEX Loan Opening Balance as on 01.04.2022	8420.93
ADD: Loan availed during the year	2488.00
LESS: Repayments	790.94
CAPEX Loan Closing Balance as on 31.03.2023	10117.99
Average Loan	9269.46
<b>Interest incurred during the year</b>	<b>679.77</b>
<b>Weighted Average Rate of Interest</b>	<b>7.33%</b>

Considering the prevailing SBI MCLR rates for long-term borrowing for above 3 years, the weighted average rate of interest of 7.33% is considered as reasonable. Hence, the Commission has approved the revised interest amount of Rs.679.77 Crores on the capital borrowings for FY23.

**vii) Interest on Working Capital:**

**KPTCL's Submission:**

<b>TABLE - 4.21</b> <b>Interest on Working Capital- KPTCL submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Working Capital Loan Opening Balance as on 01.04.2022	1161.41
ADD: Loan availed during the year	1786.00
LESS: Repayments	1925.00
Working Capital Loan Closing Balance as on 31.03.2023	1022.41
<b>Interest incurred during the year</b>	<b>61.50</b>

**Commission's Analysis and Decision:**

The Commission has considered the working capital loan details depicted in the audited accounts and proceeded to revise the Interest on working capital loan in accordance with the provisions of Clause 3.12 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, as follows:

<b>TABLE - 4.22</b>	
<b>Normative Interest on Working Capital Interest</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Revenue	4931.36
1/6 <sup>th</sup> of Revenue	821.89
O&M Expenses	2177.69
1/12 <sup>th</sup> of O&M Expenses	181.47
Opening GFA	28235.69
1% of Opening GFA	282.36
Normative Working Capital Requirement	1285.72
1 Year SBI MCLR + 250 points as on 01.04.2022	<b>9.50%</b>
<b>Normative Interest on Working Capital</b>	<b>122.14</b>

<b>TABLE - 4.23</b>	
<b>Allowable Interest on Working Capital</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Actual Working Capital Interest incurred during the year	61.49
ADD: 50% of difference (savings) between actual and normative	30.33
<b>Approved Interest on Working Capital for FY23</b>	<b>91.82</b>

Thus, the Commission has approved the revised interest amount of Rs.91.82 Crores as interest on working capital for FY23.

viii) Capitalization of Interest:

KPTCL's Submission:

<b>TABLE - 4.24</b>	
<b>Capitalization of Interest – KPTCL Submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Capitalized O&M Expenses	72.36
Capitalized Depreciation	0.71
Capitalized Interest Charges	98.81
<b>Total:</b>	<b>171.88</b>

Commission's Analysis and Decision:

The Commission has considered the amount of **Rs.171.88 Crores** of capitalization of interest, as per the above table and deducted the same out of the revised ARR for FY23.

**ix) Other Debits:****KPTCL's Submission:**

<b>TABLE - 4.25 Other Debits- KPTCL Submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
As filed (Note-32 of the Audited Accounts)	49.23

**Commission's Analysis and Decision:**

The Commission has not considered the amount of **Rs.14.17 Crores** relating to the provision for bad and doubtful debts for FY23. However, the amount of actual bad debts as per audited accounts have been allowed:

<b>TABLE - 4.26 Other Debits – As allowed by the Commission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
As filed (Note-32 of the Audited Accounts)	49.23
Less: Provision for Bad and Doubtful debts	(14.17)
<b>Allowable amount under 'Other Debits'</b>	<b>35.06</b>

Thus, the Commission has approved an amount of Rs.35.06 Crores under the head 'Other Debits' for FY23.

**x) Return on Equity:****KPTCL's Submission:**

<b>TABLE - 4.27 Return on Equity- KPTCL Submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Paid Up Share Capital	2182.32
Share Deposit	36.35
Accumulated Profit/Loss	4077.17
Total Equity	6295.84
ROE Rate with effective MAT Rate	18.78150%
<b>Return of Equity</b>	<b>975.86</b>

### Commission's Analysis and Decision:

The Commission, in compliance of the Orders of the Hon'ble ATE in Appeal No.46/2014, has to indicate the details of opening and closing balances of gross fixed assets along with break-up of equity and loan component. Accordingly, the same has been indicated and compared in the below table for FY23.

<b>TABLE - 4.28</b>		
<b>Comparison of Debt and Equity to Capital Base</b>		
<b>Particulars</b>	<b>Rs.in Crores</b>	
	<b>Opening Balance</b>	<b>Closing Balance</b>
1. GFA	25817.95	28076.25
2. Actual Debt	8420.93	10117.98
3. Actual Equity (Net worth)	6295.84	7043.27
4. Normative Debt [70% of GFA]	18072.57	19653.38
5. Normative Equity [30% of GFA]	7745.39	8422.88
<b>6. %age of actual Debt on GFA</b>	<b>32.62%</b>	<b>36.03%</b>
<b>7. %age of actual Equity on GFA</b>	<b>24.39%</b>	<b>25.09%</b>

It is evident from the above comparison that the actual debt equity ratio is within the normative debt equity ratio of 70 : 30, on the opening and closing balances of GFA for FY23.

Therefore, in accordance with the provisions of Clause 3.10 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, the Commission hereby decides to allow RoE at 15.50% on the opening balance of actual equity (Net worth) as follows:

<b>TABLE - 4.29</b>	
<b>Approved Return on Equity</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Paid Up Share Capital	2182.32
Share Deposit	36.35
Accumulated Profit/Loss	4077.17
Total Equity	6295.84
ROE Rate with effective MAT Rate	18.78150%
<b>Allowable Return of Equity</b>	<b>975.86</b>

Allowing tax on income is dealt with in the following paragraph.



Thus, the Commission has approved the Return on Equity of Rs.975.86 Crores for FY23.

**xi) Provision for Taxation:**

**KPTCL's Submission:**

TABLE - 4.30 Provision for Taxation- KPTCL's Claim	
Particulars	Rs.in Crores
Income Tax	164.42
Deferred Tax	26.70
<b>Total</b>	<b>191.12</b>

**Commission's preliminary observations and KPTCL's reply:**

The Commission in its preliminary observations had sought details of computation of Tax Liability of Rs.164.42 Crores and Deferred Tax Liability of Rs.26.70 Crores for FY23 as indicated in the statement of Profit and Loss Account.

**KPTCL Reply:**

KPTCL has submitted the required details.

**Commission's Analysis and Decision:**

The Commission has taken note of KPTCL's computation of income tax on the profits earned. Whereas, the provisions of KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006 provides to allow actual income tax accounted as per the audited accounts subject to a maximum income tax payable on the allowable Return on equity (RoE) grossed up with MAT rates.

Therefore, in accordance with the provisions of Clause 3.13 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, the Commission hereby decides to allow the tax on income as follows;

<b>TABLE - 4.31</b>	
<b>Approved Income tax payable on RoE</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
1. ROE at base Rate	975.86
2. ROE with effective MAT	1182.45
3. Income Tax	206.59
4. Actual Income as per Audited Accounts	164.42
<b>Allowable Income Tax (lower of 3 &amp; 4 above)</b>	<b>164.42</b>

Thus, the Commission has approved the tax on income of Rs.164.42 Crores for FY23.

**xii) Other Income:**

**KPTCL's Submission:**

<b>TABLE - 4.32</b>	
<b>Other Income- KPTCL's Claim</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
As per Note-26 of the Audited Accounts	242.47
Income from Non ISTS Lines FY18, FY19 & FY20 [As filed in page No.39 of the filing]	37.62
<b>Total:</b>	<b>280.09</b>

**Commission's Analysis and Decision:**

The Commission has considered the Other Income as per the Audited Accounts for FY23, as follows;

<b>TABLE - 4.33</b>	
<b>Other Income-As Allowed by Commission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
As per Note-26 of the Audited Accounts	242.47
Less: Revenue recognized on Assets created out of Consumer contribution / grants	(145.77)
<b>Total:</b>	<b>96.70</b>

Thus, the Commission has allowed the Other Income of Rs.96.70 Crores for FY23.

**xiii) SLDC Charges:****KPTCL's Submission:**

<b>TABLE - 4.34</b>	
<b>SLDC Charges – KPTCL Submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
1. Employee cost	4.99
2. A & G Expenses	24.40
3. Repairs & Maintenance Expenses	8.35
4. Depreciation	0.22
<b>Total:</b>	<b>37.96</b>

**Commission's preliminary observations and KPTCL's reply:**

KPTCL was required to submit the Trial Balance relating of SLDC for FY23.

**KPTCL Reply:**

KPTCL has furnished the Trial Balance of SLDC for FY23.

**Commission's Analysis and Decision:**

The Commission has considered the SLDC expenses for FY23 as per the Trial Balance and proceeded to determine the additional SLDC charges by the ESCOMs as follows;

<b>TABLE - 4.35</b>		
<b>Additional SLDC Charges for FY23 as allowed by the Commission</b>		
		<b>Rs.in Crores</b>
<b>SLDC Charges for FY23 as per TO-2022 dated 04.04.2022</b>	<b>Actual SLDC Charges as per Trial Balance</b>	<b>Difference (Additional charges to be paid by ESCOMs)</b>
32.98	37.96	4.98

Thus, the Commission decides to allow the additional SLDC charges of Rs.4.98 Crores for FY23 to be collected by ESCOMs. The ESCOMs-wise allocation of additional SLDC charges is dealt with in the subsequent chapter of this Order.

**xiv) Revenue:****KPTCL's Submission:**

<b>TABLE - 4.36</b>	
<b>Revenue from Transmission Charges- KPTCL Submission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
From BESCOM	2,424.00
From MESCOM	354.86
From CESC	527.81
From HESCOM	893.10
From GESCOM	562.58
From other Open Access Customers	31.88
<b>Total Revenue from Transmission activity</b>	<b>4,794.23</b>
Miscellaneous Revenue	137.13
<b>Total:</b>	<b>4931.36</b>

**Commission's Analysis and Decision:**

The Commission has examined the revenue filed by the KPTCL with reference to the Audited Accounts and decides to consider an amount of Rs.4931.36 Crores for FY23.

**xv) Abstract of Approved ARR for FY23 as per APR:**

Based on the above decisions the consolidated Statement of approved revised ARR as per APR for FY23 is indicated in the below table;

<b>TABLE - 4.37</b>				
<b>Abstract of Approved revised ARR for FY23 as per APR</b>				
<b>Sl. No.</b>	<b>Particulars</b>	<b>As Approved in TO-2022 04.04.2022</b>	<b>As filed on 29.11.2023</b>	<b>As Approved in APR</b>
1	Energy available for transmission in MU	71,645.88	80,512.17	80,512.17
2	Energy sold at IF Points	69,593.94	78,115.49	78,115.49
3	Transmission Losses in MU	2,051.94	2,396.68	2,396.68
4	Transmission Loss in %	2.864%	2.977%	2.977%
5	Installed Capacity in MW	25,053.00	27,629.75	27,629.75
	Income:			
6	Revenue from Transmission	5,093.77	4,794.23	4,794.23
7	Miscellaneous Revenue	-	137.13	137.13
	<b>Total Income:</b>	<b>5,093.77</b>	<b>4,931.36</b>	<b>4,931.36</b>

	Expenditure:			
8	Employee Cost		1,631.73	
9	Repairs & Maintenance	2,050.59	445.66	2,177.69
10	Admin & General Expenses		197.49	
11	<b>Sub-Total (8+9+10):</b>	<b>2,050.59</b>	<b>2,274.88</b>	<b>2,177.69</b>
12	Depreciation	1,146.33	1,365.20	1,219.21
13	Interest & Finance Charges	638.93	680.36	679.76
14	Interest on working capital	113.67	61.50	91.82
15	<b>Sub-Total (13+14):</b>	<b>752.60</b>	<b>741.86</b>	<b>771.58</b>
16	Less: Capitalized O&M Expenses	(67.69)	(72.36)	(72.36)
17	Less: Capitalized Depreciation		(0.71)	(0.71)
18	Less: Capitalized Interest Charges	(103.17)	(98.81)	(98.81)
19	Other Debits	-	49.23	35.06
20	Extraordinary items/ Exceptional Items	-	-	-
21	Net Prior Period Income /Charges	-	-	-
22	Income Tax	-	191.12	164.42
23	Less: Other Income	(93.54)	(280.09)	(96.70)
	<b>Total Expenditure:</b>	<b>3,685.12</b>	<b>4,170.32</b>	<b>4,099.38</b>
24	Return on Equity	1,027.69	975.86	975.86
25	Carry forward of Deficit of pr. year as per APR	49.55	-	-
26	Amortized Reg. Assets -As per ATE Dt. 05.10.2020	331.41	-	-
27	P&G Trust Contribution - Government portion	-	-	-
28	Less: Penalty for exceeding target Tr. Loss	-	-	(1.23)
29	Less: Disallowance of imprudent capex for FY22	-	-	(13.63)
30	<b>Sub-Total (24+25+26+27+28):</b>	<b>1,408.65</b>	<b>975.86</b>	<b>961.00</b>
	<b>Aggregate Revenue Requirement</b>	<b>5,093.77</b>	<b>5,146.18</b>	<b>5,060.38</b>
	<b>Revenue SURPLUS / (GAP)</b>	<b>-</b>	<b>(214.82)</b>	<b>(129.01)</b>

The Commission, as decided in the foregoing discussions of Annual Performance Review, hereby approves the net ARR of Rs.5060.38 Crores for FY23. On account of the revised ARR the net revenue deficit of KPTCL for FY23 is Rs.129.01 Crores.

#### 4.4 Treatment of revenue deficit of FY23:

The Commission decides to carry forward the revenue deficit of Rs.129.01 Crores as per APR of FY23 to the ARR for FY25, as discussed in the subsequent Chapter of this Order.

## CHAPTER – 5

### REVISED ANNUAL REVENUE REQUIREMENT FOR FY25

#### 5.1 Approved ARR for FY25:

KPTCL in its application dated 29<sup>th</sup> November, 2023, has requested the Commission to allow recovery of the proposed ARR of Rs.6018.61 Crores (Approved ARR of FY25 of Rs.5803.79 Crores + Rs.214.82 Crores-Gap of FY23) from ESCOMs with effect from 01.04.2024.

KPTCL has also prayed for modifying the short-term open access charges and to allow recovery of actual SLDC charges of Rs.37.96 Crores for FY23.

#### Commission's Analysis and Decision:

The Commission, in its Tariff Order dated 4<sup>th</sup> April, 2022 had approved ARR and Transmission Tariff for the control period FY23 to FY25. In the said Tariff Order, the Commission had approved an ARR of Rs.5803.79 Crores for FY25.

As discussed in Chapter-4, the Commission has determined the revenue deficit of Rs.129.01 Crores for FY23. The Commission has also decided not to consider the Government portion of P&G Trust contribution, as proposed by KPTCL, for passing on the same to the consumers in the tariff as per the decision of the Commission made out in the Tariff Order - 2023.

Further, the Commission has also considered the additional employee cost of Rs.215.46 Crores for FY25 towards additional employee cost consequent to revision of pay scale of employees with effect from 1<sup>st</sup> April 2022.

<b>TABLE - 5.1</b> <b>Additional O and M Expenses allowed by the Commission for FY25</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
Additional Employee Cost accrued for FY23	192.86
Growth Index as per Table 4.9 of Chapter-4	5.69733%
Additional Employee Expenses for FY25	215.46

Accordingly, the revised ARR for FY25 is as below;

<b>TABLE - 5.2</b> <b>ARR for FY25 allowed by the Commission</b>	
<b>Particulars</b>	<b>Rs.in Crores</b>
ARR for FY25, as approved by the Commission in the Tariff Order 2022 dated 04.04.2022.	5803.79
Revenue Gap approved by the Commission for FY23	129.01
Additional Employee Expenses as per Table 5.2 above	215.46
<b>Total Revenue Deficit allowed:</b>	<b>6148.26</b>

Thus, the Commission has approved the Revised ARR of Rs.6148.26 Crores for FY25.

## 5.2 Revised Transmission Tariff for FY25:

The Commission in its Tariff Order dated 4<sup>th</sup> April, 2022 had considered the ESCOM-wise transmission capacity and determined the transmission charges for FY25 as below;

<b>TABLE - 5.3</b> <b>Transmission Charges- As approved in Tariff Order-2022</b>				
<b>ESCOMs</b>	<b>Capacity Allocation (MW)</b>	<b>Transmission Charges for FY25 (Rs.in Cr per Annum)</b>	<b>Transmission Charges for FY25 (Rs.in Cr per Month)</b>	<b>Transmission Charges per MW per Month (In Rupees)</b>
BESCOM	14123	3013.16	251.10	<b>1,77,793/-</b>
MESCOM	1985	423.50	35.29	
CESC	2850	608.05	50.67	
HESCOM	5025	1072.09	89.34	
GESCOM	3220	686.99	57.25	
<b>Total:</b>	<b>27203</b>	<b>5803.79</b>	<b>483.65</b>	

Based on the data furnished by KPTCL, the Commission has considered the revised ESCOM-wise transmission capacity and determined the ESCOM-wise revised transmission charges for FY25, as below;

<b>TABLE - 5.4</b> <b>Revised Transmission Charges for FY25</b>				
<b>ESCOMs</b>	<b>Capacity Allocation (MW)</b>	<b>Transmission Charges for FY25 (Rs.in Crs. per Annum)</b>	<b>Transmission Charges for FY25 (Rs.in Crs. per Month)</b>	<b>Transmission Charges per MW per Month (In Rupees)</b>
BESCOM	15963	3136.92	261.41	<b>1,63,760/-</b>
MESCOM	2225	437.24	36.44	
CESC	3102	609.58	50.80	
HESCOM	6517	1280.67	106.72	
GESCOM	3480	683.86	56.99	
<b>Total:</b>	<b>31287</b>	<b>6148.26</b>	<b>512.36</b>	

### 5.3 Revised SLDC Charges for FY25:

The Commission, in its Tariff Order dated 4<sup>th</sup> April, 2022 had considered the ESCOM-wise transmission capacity and determined the SLDC charges for FY25 as below;

<b>TABLE - 5.5</b> <b>SLDC Charges- As approved in Tariff Order-2022</b>		
<b>ESCOMs</b>	<b>Capacity Allocation (MW)</b>	<b>SLDC Charges for FY25 (Rs.in Cr per Annum)</b>
BESCOM	14123	17.97
MESCOM	1985	2.53
CESC	2850	3.63
HESCOM	5025	6.39
GESCOM	3220	4.10
<b>Total:</b>	<b>27203</b>	<b>34.62</b>

The Commission has considered the actual SLDC expenditure of Rs.37.96 Crores for FY23 and revised the SLDC charges for FY25 as below;



<b>TABLE - 5.6</b>		
<b>Revised SLDC Charges for FY25</b>		
<b>Particulars</b>		<b>Rs.in Crores</b>
SLDC Charges Approved for FY23 in TO-2022		32.98
Actual SLDC Charges		37.96
Difference		4.98
SLDC Charges Approved for FY25 in TO-2022		34.62
<b>Revised SLDC Charges for FY25</b>		<b>39.60</b>
<b>ESCOMs</b>	<b>Capacity Allocation (MW)</b>	<b>SLDC Charges for FY25 (Rs.in Cr per Annum)</b>
BESCOM	15963	20.20
MESCOM	2225	2.82
CESC	3102	3.93
HESCOM	6517	8.25
GESCOM	3480	4.40
<b>Total:</b>	<b>31287</b>	<b>39.60</b>

#### 5.4 Transmission Charges and SLDC Charges for all Open Access Consumers:

The Commission notes that, apart from the ESCOMs, the open access consumers/Railways/IPPs are also availing the services of the transmission network / SLDC and hence they should also bear the expenses incurred by the transmission licensee / SLDC.

As determined above, transmission charges of Rs.1,63,760/- per MW month and SLDC charges of Rs. 34.87 per MW per day is applicable to all long term and medium term open access customers including GEOA transactions for FY25 (excluding non GEOA RE projects, for which separate orders issued by the Commission from time to time shall be applicable).

### 5.5 Revised Transmission Charges and SLDC Charges for Short Term Open Access Consumers for FY25:

The Commission in its Tariff Order dated 4<sup>th</sup> April, 2022 had determined the Transmission Charges and SLDC charges for Short Term Open Access Consumers for FY25 as below;

<b>TABLE - 5.7</b> <b>Transmission and SLDC Charges for FY25- As approved in TO-2022</b> <b>(Amount in Rupees)</b>		
Particulars	Transmission Charges (per MW per Day)	SLDC Charges (per MW per Day)
More than 12 hrs & upto 24 hrs in a day in one block	1461.31	34.87
More than 6 hrs & upto 12 hrs in a day in one block	730.65	
Upto 6 hrs in a day in one block	365.33	

In accordance with the provisions of Clause 3.15 of the KERC (Terms and Conditions for Determination of Transmission) Regulations, 2006, as amended from time to time, the Commission has determined the revised Transmission and SLDC charges for Short Term Open Access Consumers for FY25 as below;

<b>TABLE - 5.8</b> <b>Revised Transmission and SLDC Charges for Short Term Open Access Consumers for FY25</b> <b>(Amount in Rupees)</b>		
Particulars	Transmission Charges (per MW per Day)	SLDC Charges (per MW per Day)
More than 12 hrs & upto 24 hrs in a day in one block	1345.97	34.68
More than 6 hrs & upto 12 hrs in a day in one block	672.99	
Upto 6 hrs in a day in one block	336.50	

**ORDER**

1. In exercise of the powers conferred on the Commission under Sections 62 and 64 and other enabling provisions of the Electricity Act 2003, the Commission hereby approves the revised ARR as per Annual Performance Review for FY23 and determines and hereby notifies the revised Annual Revenue Requirement and Transmission Tariff of KPTCL and SLDC charges for FY25 as approved in this Order.
2. The tariff determined in this Order shall come into effect from 1<sup>st</sup> April, 2024 and remain in force until further orders.
3. This Order is signed dated and issued by the Karnataka Electricity Regulatory Commission at Bengaluru, this day, the 28<sup>th</sup> of February, 2024.

(P. Ravi Kumar)  
Chairman

(M.D. Ravi)  
Member

## APPENDIX

### COMMISSION'S DIRECTIVES AND COMPLIANCE BY THE KPTCL

The Commission, in its Tariff Order dated 12<sup>th</sup> May, 2023 and the earlier Tariff Orders, has issued several Directives. The Commission has been reviewing the compliance thereof, on a regular basis. In the present proceedings also, the Commission has reviewed the compliance to the Directives. The Commission decides not to pursue few of the Directives which were dropped in the earlier Tariff Order as they are routine functions and the KPTCL is expected to attend to them in the discharge of its functions. The KPTCL has been making efforts to comply with the Directives issued by the Commission but the progress achieved by KPTCL is not adequate and KPTCL needs to put forth more efforts in implementing the Directives.

#### 1) Issue of Evacuation Clearance by KPTCL:

The Commission in its Order dated 12<sup>th</sup> May, 2023, had directed KPTCL to issue the evacuation clearance within a reasonable time in order to avoid delays and consequent litigations in the matter. The Commission also directed KPTCL to furnish the details of applications received and cleared within the time-line and cleared after the timeline duly giving reasons for the delay, on a regular basis.

#### Compliance of Directive by the KPTCL:

KPTCL in its Petition, has submitted that the details of evacuation clearance issued by KPTCL for the first quarter and the second quarter of FY23, vide its letter dated 04.09.2023 and 24.11.2023 respectively.

#### Commission's Views:

The Commission, in its preliminary observations, had once again directed KPTCL to furnish the details of evacuation clearance applications received and cleared within the time-line and after the timeline, duly giving reasons for the delay till November 2023. In accordance with the directions of the Commission, KPTCL in

its reply to the preliminary observations, has submitted the details of applications received for evacuation clearance and cleared within the time line and those cleared after the timeline, duly giving reasons for the delay till November 2023, which is noted by the Commission.

**The Commission, while reiterating its directive that the evacuation clearance shall be given within the time frame, in order to avoid delays and consequent litigations in the matter accordingly, decides to drop this Directive since this a routine matter to be disposed of by the KPTCL.**

**2) Issue of No Objections Certificates (NOC) for Wheeling and Banking facility to Open Access Consumers/ Captive generators:**

The Commission in its Order dated 12<sup>th</sup> May, 2023, had directed KPTCL to ensure issue of No Objection Certificates (NOC) for Wheeling and Banking facility to Open Access Consumers/Captive Generators within the time frame prescribed by the Commission under relevant Regulations. Further, KPTCL was directed to furnish the details of applications received, NOC issued within the time frame and details of NOCs issued after the timeline, duly giving reasons for the delay.

**Compliance of Directive by the KPTCL:**

The details of applications received, NOC issued within the time frame and details of NOCs issued after the timeline, duly giving reasons for the delay for the month of July 2023 to September 2023, was furnished by KPTCL to the Commission vide two separate letters dated 04.09.2023 and 24.11.2023.

The Commission, while perusing the details of NOC submitted by KPTCL vide its letters mentioned above, has noted the following:

- a) First column 'date of application received' does not provide clarity as to whether the date indicates application received by KPTCL or the SLDC.
- b) Type of generating plant has not been specified;

- c) In many cases the NOC has been issued beyond the time frame specified by the Commission in the KERC (Terms and Conditions for Green Energy Open Access) Regulations, 2022.

KPTCL in its reply to the preliminary observations, has submitted the following:

- a) In the first column "the date of application received' is the date application received at State Load Despatch Centre (SLDC).
- b) The type of plant will be included in forthcoming monthly statistics to be submitted to the Commission.
- c) NOC's are being issued within the time frame specified by the KERC.

The Commission take note of the reply submitted by KPTCL and once again directs KPTCL to follow the timelines specified by the Commission in the relevant Regulations issued from time to time. **Since this is a routine function of KPTCL, the Commission decides not to pursue this Directive and accordingly the Commission decides to drop this Directive.**

### **3) Directive on prevention of electrical accidents**

The Commission, in its earlier Orders, had issued directives for identification of hazardous locations for the minimizing electrical accidents. On a review of the compliance of the said directive, the Commission notes with displeasure that despite KPTCL taking action, the no. of accidents has not come down resulting in more no. of fatal accidents and loss of life. KPTCL shall have to take stringent action to identify and set right hazardous locations and shall initiate aggressive steps to identify the hazardous locations and set them right to avoid fatal accidents and consequent losses of lives of human beings and livestock.

**Therefore, the Commission reiterates the directive to the KPTCL to speed up the work of identification and rectification of hazardous locations and also to submit a strategic action plan along with the details of number of locations identified, rectified and the balance number of such locations to prevent electrical accidents in transmission lines and substations quarterly, to the Commission.**

**4) Reactive Power compensation and restoration of failed Capacitors**

The Commission, in its Order dated 12<sup>th</sup> May, 2023, had directed KPTCL to restore failed capacitors (if any) within 20 days from the date of its going out of service and to regularly submit the monthly status report of capacitor banks duly furnishing the following details:

- i. Reactive energy charges paid to the CTU every month; and
- ii. Action plan for restoring the remaining failed capacitors.
- iii. Maintain at least 5% of spare capacitor of each type in terms of physical dimension and rating together with associated equipment/components of capacitor bank available, for replacement of failed capacitors.

**Compliance of Directive by the KPTCL:**

KPTCL, in its Petition, has submitted that the monthly status report of capacitor banks is being periodically submitted to the Commission. Further, the Chief Engineers of the Transmission Zone are taking timely action to restore the failed capacitors, as and when they fail. KPTCL has also informed that its corporate office has directed zonal Chief Engineers to maintain sufficient spares of capacitor banks so as to improve the percentage working of capacitor banks both in respect of numbers and capacity and also to reduce the outage period. An average of 1% to 3% of spare capacitor cells of particular ratings/dimensions is being maintained in all the transmission zones. KPTCL has stated that it has submitted the status of Capacitor Banks as on August, 2023, along with details of reactive energy charges received from CTU upto the month of August 2023, to the Commission vide its letter dated 12.10.2023. Further, in accordance with the directions of the Commission, KPTCL has also furnished the details of Reactive Energy Charges during the FY23 to the Commission vide its letter dated 21.06.2023.

**Commission's Views:**

The Commission, while perusing the status of working capacitors as submitted by KPTCL, has observed that no. of capacitor banks installed at the end of March, 2023 are 1979, whereas the number of capacitors working at the end of the

month are 1925. Further, total installed capacity in MVAR at the end of the month is 9042.803 MVAR, whereas total working capacity in MVAR at the end of the month is 8151.177 MVAR which amounts to 90.14% of the total installed capacity. Accordingly, KPTCL is required to submit the following details:

- a. Average number of days taken for replacement of faulty capacitors;
- b. Action plan for restoring the remaining failed capacitors;

Accordingly, KPTCL was directed to clarify as to why an average of 1% to 3% of spare capacitor cells of particular dimension/rating is only being maintained in all transmission zones as against 5% of all types of capacitor banks as directed by the Commission.

KPTCL in its reply to the preliminary observations, had informed the Commission that the total number of installed Capacitor Banks at the end of October 2023 is 2054, out of which 2004 numbers of capacitor banks are working, (97.57% of installed numbers). The total installed capacity in MVAR as at the end of October 2023 is 9265.51 MVAR out of which 8639.66 MVAR is in service, (93.25% of installed capacity). It may be noted that, during the period November 2022 to October 2023, total 149 numbers of capacitor banks have developed problems whereas 198 numbers have been restored to service.

KPTCL has further informed that depending on the availability of the materials, minimum of 3 days to maximum of 60 days has been taken to restore the faulty capacitor bank. Higher numbers of days have been taken in case the materials needed to be procured through tendering. KPTCL has stated that at the end of October 2023, total 50 numbers of capacitor banks are out of service. Out of the above 50 numbers, action taken details till date are as below:

1. Restored – 06 Nos.
2. Purchase Order (PO) placed for necessary spares – 14 Nos.
3. Processing for placing PO under progress – 03 Nos.
4. Enquiry floated – 09 Nos.
5. Action being taken up at present – 15 Nos.



6. Dismantled due to SS upgradation work – 01 No.
7. Proposed for dismantling 66kV capacitor bank and installation of lower voltage class – 02 Nos.

As regards procurement of spares, KPTCL has informed that it is being done in the O/o. CEE/SEE/EE, within their power of delegation. An average of 1 to 3% of spare Capacitor Cells of particular dimension/ rating is being maintained in all transmission zones. After any replacement of the failed equipment, it is being recouped within maximum of 30 days. Transmission zones have been insisted to ensure always 5% of spares available at respective stores.

Note: The transmission zones have expressed the following:

- a) Restoration of Capacitor Banks by procurement of required spares is being delayed due to code of conduct for state elections and further restriction on procurement.
- b) Non-availability of e-procurement portal due to migration of e-procurement portal from eprocurement.com to kppp.gov.in.

The Commission has taken note of the reply furnished by KPTCL and also notes the increase in the capacity of working MVAR as compared to the installed MVAR capacity, from March 2023 to October, 2023. Timely maintenance of capacitors helps in effective reactive power management in an electrical system. Thus, KPTCL should maintain its capacitor banks in a healthy condition and restore the failed capacitors as and when they fail so as to put them back to service quickly. In order to ensure efficient grid management, it is imperative to provide desired reactive power compensation in the transmission network by installing adequate capacitor banks into the system.

KPTCL, in accordance with the Commission's earlier Orders, is submitting month-wise details of status of capacitor banks regularly to the Commission. The Commission notes that KPTCL has not paid any amount to PGCIL towards reactive energy charges, instead it has received Rs.20,37,27,635 towards reactive energy charges from PGCIL for FY23. **Although, failing of capacitors and restoration of failed capacitors is a continuous process and KPTCL is taking**

measures to restore the failed capacitors in its transmission network and is installing additional capacity of capacitor banks into the system to achieve the desired reactive compensation in the transmission network KPTCL is once again directed to:

- a. Restore any failed capacitors within three weeks from the date it is out of service; and
- b. Regularly submit the monthly status report of capacitor banks duly furnishing the following details:
  - i. Reactive energy charges paid to the CTU/ received every month; and
  - ii. Action plan for restoring the remaining failed capacitors.
  - iii. Maintain at least 5% of spare capacitor of each type in terms of physical dimension and rating together with associated equipment/components of capacitor bank available for replacement of failed capacitors.

**5) Implementation of Intra State ABT:**

The Commission, vide its Order dated 12<sup>th</sup> May, 2023, had directed KPCL to complete the ABT metering by 30<sup>th</sup> June, 2023 in order to implement intra-state ABT. The KPTCL, SLDC and ESCOMs were directed to conduct a meeting under the chairmanship of MD KPTCL to try and sort out the issues and implement billing under Intra-State ABT, once KPCL completes installation of ABT meters of its hydel by June, 2023.

**Compliance of Directive by the KPTCL:**

KPTCL vide its Petition, has informed that ABT compliant meter replacement by KPCL is pending at Shiva generating station and AMR integration is in process at Linganamakki Power House (LPH). KPTCL has addressed a letter to KPCL on 31.07.2023 with a request to furnish the present status of Intra-State ABT meters at their generating stations so as to hold a meeting to sort out the issues in implementation of intra-state ABT mechanism.

**Commission's Views:**

The Commission, in its preliminary observation, vide its letter dated 16.08.2023 has directed KPTCL to take necessary action as per the proceedings of the meeting

on Intra State Deviation Settlement Mechanism and related matters held on 11.07.2023, and has also directed to submit the compliance to the Commission within 7 days from the date of the receipt of the letter dated 16.08.2023. However, KPTCL has not submitted its response on the above direction. In this regard, KPTCL was directed to submit the action taken report on the proceedings of the meeting. KPTCL was also directed to submit the expected date for completion of integration of Linganamakki Power house and Shiva generating stations with the SLDC MDAS system.

KPTCL, in its reply to preliminary observations, has submitted that the infrastructure available to implement Intra- State Deviation Settlement Mechanism is as follows;

- a. KPCL has installed ABT feature energy meters at all its generators billing points. AMR solution for theses meters is implemented by KPCL and data is made available to SLDC. However, LPH and Shiva generating station AMR integration to SLDC is pending as on December 2023.
- b. KPTCL has installed ABT feature energy meters at all its 11KV and 33KV Bank IF Points. Also, KPTCL is in the process of installation of DCUs at its stations to facilitate 11KV and 33KV Banks AMR.
- c. Head End Software for Intra-State ABT implementation: Meter data acquisition module to acquire the above said energy meters' data, scheduling and DSM billing module are envisaged under SAMAST.
- d. All Non- Conventional Energy Plants (NCEP) are in the process of installing ABT featured Energy Meters and integrating it to SLDC through AMR Solution.

**The Commission notes that a meeting under the chairmanship of MD KPTCL to try and sort out the issues with regards to billing methodology under Intra-State ABT is yet to take place as KPCL has not yet completed the installation of ABT meters. As such, KPCL is directed to complete the ABT metering by 30<sup>th</sup> June, 2024 in order to implement intra-state ABT. The KPTCL, SLDC and ESCOMs are once again directed to conduct a meeting under the chairmanship of MD KPTCL to try and sort out the issues and implement billing under Intra-State ABT, once KPCL completes installation of ABT meters and ABT integration of its hydel by June, 2024.**