

## K P T C L

### Preliminary Observations on the Applications filed by the KPTCL for approval of APR for FY21, ARR & Transmission Tariff for FY23 to FY25 under MYT Framework

#### **A. Observations on APR for FY21:**

##### **a. Transmission Availability for FY21:**

1. KPTCL in its letter No. KPTCL/B36/ 2021-22/22453/1182-86 dated 15.11.2021 has furnished the status of working of capacitor banks installed at the end of September, 2021. In this regard the Commission has observed that the no. of installed capacitor is 1798 whereas the number of capacitors working at the end of the month are 1700. The Commission has also observed that 13 capacitor banks have failed during the month whereas only 10 capacitor banks were repaired and restored during the month. Further, the total installed capacity in MVAR as at the end of the month is 8544.68 MVAR, whereas total working capacity in MVAR at the end of the month is 7283.34 MVAR which amounts to 85.24% 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. Average percentage 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.
  - c. Action plan for restoring the remaining failed capacitors;
2. The Commission has observed that while computing the Transmission system availability of Transmission lines and ICTs, KPTCL has not considered all the values with regards to Availability and Weightage factor. For example, while computing the transmission system availability of transmission lines for Hassan zone, it has not considered the Availability and Weightage factor of Arsikere-Nittur (B4) line, Mugulavalli (M2) – Hassan line, Hassan M2 - PGCIL

Shantigrama line and Mugulavalli-Balehonnuru line. Similarly, while computing the transmission system availability of ICTs for Hasan zone, KPTCL has not considered the Availability and Weightage factor of Arasikere and Arasikere-2 ICTs, Yemmedoddi-1 and Yemmedoddi-2 ICT and Arehally and Arehally-2. KPTCL is directed to re-examine the computations with regards to transmission System availability of all the components and resubmit it to the Commission.

3. KPTCL shall submit the details of all the forced outages in respect of RE generators for want of transmission network and submit necessary action plan to address the outages.

**b. Transmission Losses:**

1. KPTCL has filed actual voltage-wise losses, is as detailed below:

Voltage (in kV)	Losses(in %)		
	<b>FY 19</b>	<b>FY20</b>	<b>FY21</b>
400kV	0.325	<b>0.288</b>	<b>0.292</b>
220kV	1.506	1.507	1.440
110kV	0.381	0.393	0.339
66kV	<b>0.949</b>	<b>0.941</b>	<b>0.968</b>

It is seen from the above Table that during FY21, there is increase in loss levels in respect of 400kV and 66kV transmission system. KPTCL shall furnished the reason for increase in the transmission losses under 66kV voltage class for FY21 over FY20 and FY19. KPTCL may also furnish the reason for increase in the transmission losses under 400kV and 66Kv voltage class for FY21 over FY20. The Commission, in its Tariff Order dated 04.11.2020, has directed the KPTCL to make a detailed study in the matter of higher transmission losses at 220 kV level and submit a report to the Commission, within three months from the date of issue the Order, which has not been complied with by KPTCL. Hence,

KPTCL is directed to submit the study report to the Commission by 15.01.2022 positively.

2. In the tariff application filed by the KPTCL, the energy to be handled has been clubbed into one figure as 71271.690 MU and the energy transmitted at IF points with ESCOMs is shown as 69105.430 MU which includes EHT, IPP and ESCOM energy consumptions.

Energy Consumptions(in MU)		
EHT	IPP	ESCOMs IF points
5517.762	1807.439	61780.229
Total:		69105.430

The ESCOMs, in their tariff applications have filed the requirement of energy at IF points after deducting the transmission losses, as detailed below:

Energy Consumption by ESCOMs at IF Point for FY21 (in MU)(excluding energy from HERCS and AEQUS)					
BESCOM	MESCOM	CESC	HESCOM	GESCOM	Total
28586.62	5611.33	7223.77	12650.23	7931.86	62003.81

Whereas, as per KPTCL filing the ESCOM's energy at Interface point is 61780.229, including energy drawn by ESCOM at 11kV and 33kV IF points, which also includes wheeled energy, auxiliary energy and energy drawn under STOA.

In order to arrive at the actual requirement of ESCOMs (which is based on their sales), KPTCL shall segregate the energy requirement figures and furnish the same in the following format:

Sl. No	FY21	Energy in MU
1	Energy drawn by ESCOM at 11kV IF points	
	Energy drawn by ESCOM at 33kV IF points	
	Total Energy drawn by ESCOMs at IF points	
2	Wheeled energy	
3	Auxiliary energy	
4	Energy drawn under STOA	
6	Total	

3. Further, as per the Energy Flow Diagram under Form T19, the energy at different voltage-wise, interface points of ESCOMs may be indicated duly reconciling the same with the ESCOMs.

**c. Observations on Capex works for FY21:**

The Commission, in its MYT Order 2019 had recognized Rs.2000 Crores as capex and had considered Rs.1500 Crores for determination of ARR and transmission tariff computation for FY21, subject to prudence check and directed KPTCL that, if it requires any additional capex, it shall incur the same through re-appropriation of the amounts saved in other heads of expenditure, with proper justification. KPTCL in its APR filing for FY21, has stated, that it has incurred a capex of 2211.32 Crores, which exceeds the approved capex amount.

In view of the above, KPTCL shall furnish the following details:

- a) Reasons for exceeding capex of Rs.2000 Crores for FY21 without Commissions approval;
- b) the source of funding to the actual capital expenditure of Rs.2211.32 Crores incurred during FY21;
- c) the details of works in respect of Stations and Lines as per Annexure-1.**
- d) breakup of Capital expenditure for completion of Stations, Lines and other works as per **Annexure-2.**
- e) MVA Added in Augmentation works as per the progress furnished in Table-9 in comparison with progress indicated in the Table-7.

## B. Observation on ARR for FY 23-25:

### 1. Transmission Losses:

- a. KPTCL, in its application for approval of ARR for FY23-25, has projected the transmission losses of 2.878%, 2.828% and 2.778% respectively for FY23-25 as follows:

Particulars	As per KPTCL filing		
	2022-23	2023-24	2024-25
Input Energy in KPTCL Grid (MU) as estimated by ESCOMs	71185.49	73479.73	75893.72
Energy at interface point (MU)	69136.77	71401.72	73785.39
Transmission loss in MU	2048.72	2078.01	2108.33
Transmission loss in %	2.878	2.828	2.778

The actual transmission losses are indicated as 3.161% for FY19, 3.129% for FY 20 and 3.039% for FY21. As compared to the losses in FY20, KPTCL has filed the transmission loss for FY21 by reducing 0.09 over to FY20. Considering the huge capex proposed for the control period, the projected transmission losses, with a reduction of the 0.05 percentage point uniformly for all the years of the control period, is not justifiable. KPTCL shall furnish the justification for considering the reduction of 0.05 percentage point for each year of the control period and may reconsider revising the projected transmission losses for FY23-25.

- b. Further, as per the Energy Flow Diagram shown in Form T19, the energy at different voltage-wise interface points of ESCOMs may be indicated.

### 2. Perspective Plan and Business Plan:

KPTCL has submitted its proposal for incurring the capital expenditure for next control period involving substantial capital investment. As per MYT Regulation, the Capex Plan is required to be prepared keeping in view the perspective plan and Business plan of the Power Sector.

The Commission had directed KPTCL during July and September, 2021 to submit its Perspective Plan (for 5 years) and Business Plan for the next control

period. However, KPTCL is yet to submit the same. In the absence of any Perspective Plan and Business Plan, the basis on which KPTCL has prepared the Capex Plan involving huge investments, need to be furnished. KPTCL is also directed to submit the prospective plan of Business Plan immediately.

### 3. Capital Investment Plan for FY23 to FY25:

KPTCL in its filling has proposed Capital Investment Plan for the next control period is as under:

<b>Financial Year</b>	<b>No. of Works</b>	<b>Capex proposed (Rs. Crores)</b>
FY23	1299	3521.83
FY24	929	3562.75
FY25	688	3523.94

The Commission notes that the number of works and the capex amounts proposed is towards the works that are completed, which are likely to be completed and new works during the control period FY23 to FY25. On a review of the list of proposed capex, the following observations are made:

#### a) Rationale for Capital Investment Programme for FY 23, FY 24 and FY 25

- i. The KPTCL shall provide the details of its planning and implementation of the Green Energy Corridor Projects in the State vis-à-vis the existing / envisaged RE generation projects and likely growth in RE capacity. KPTCL shall provide complete details of works being carried out and to be carried out, to facilitate timely evacuation of green power. To justify the capital investment towards green corridor, KPTCL shall furnish area-wise details of upcoming/ planned RE generation projects in the State.
- ii. KPTCL shall furnish the break-up of work-wise details against the proposed '24X7 Power for All' Programme under Joint Initiative of Government of India and Government of Karnataka which has begun few years ago.
- iii. Whether KPTCL has done Analysis on:
  - a. Impact of delay in projects on increase in cost and increase in per unit of cost of transmission.

- b. KPTCL shall explain as to how the proposed capital investment will result in cost effective delivery of power to the consumers.

**b) List of capital Works:**

It is seen from the tariff application that a list containing 1490 number of capital works, prepared in a chronological order. The list is supposed to be for the works to be executed during the control period-FY23 to FY25. However, on a scrutiny of the list it is seen that the works which are already completed during FY21-22 are included. It is also seen that against some of the works the amount to be incurred is left blank. The necessity to include the works without indicating any amount needs to be explained. KPTCL is directed to submit a list of works pertaining to FY23-FY25 with all necessary details, duly giving an abstract duly tallied with Table -11 (a).

- c) In Format T-9, the source of funding is indicated as loans from commercial for the entire capex. For meeting the capex, why KPTCL has not considered the internal sources of funding need to be explained.

**d) Budget for Completed works:**

The Budget for the completed works is indicated as Rs.793.85 Crores, Rs.670.52 Crores and Rs.1091.00 Crores for FY23, FY24 and FY25 respectively. It is understandable that for the completed works, any outstanding amount towards non-submission of bills, disputes in the quantification of additional works/ deviations etc. would be paid in the immediate next year of completion of work, by providing the budget, in the immediate next year i.e. FY23. But the purpose for providing budgets towards completed works for the subsequent two years (FY24 & FY25) that too by making provision of huge amounts of Rs. 670.52 Crores and Rs. 1091.00 Crores respectively, is not clear. KPTCL shall suitably clarify the same.

- e) KPTCL has included the R & M works in the list of proposed Capital works vide Sl. Nos. 197, 198, 199, 200 and 920. The reasons for including R & M works in Capital works need to be explained. The same shall be excluded

from the list of proposed capex, if these works are to be undertaken under R & M, which is required to be met as revenue expenditure under O & M expenses.

**f) Huge amount of works in progress for FY21 to be categorised into assets:**

Further, it is seen from the audited accounts for FY21 that as on 31.03.2021, an amount of Rs. 3514.68 Crores is remaining under the head of account 'Work in Progress'. This is a huge amount representing the money which is already spent but the assets thereon are not yet commissioned. It is to be pointed out here that, the capital works taken up shall be completed in a time bound manner by addressing all the issues (like RoW etc.) and if the assets are not put to use despite incurring huge capex, the capital investment will become idle and the consumers are made to bear the interest burden without deriving any benefit from such works, for an indefinite period. The KPTCL shall analyse the work-in-progress by preparing an age-wise analysis and explain the reasons for the keeping such a huge amount under work- in-progress, besides taking remedial action to reduce the huge balance under the 'Work In Progress'.

**4. Observations on Annual Revenue Requirement for FY23-25:**

- a. KPTCL in its filing under format T-15 has indicated Rs.22,135.53 Crores and Rs.24249.79 Crores as the opening and closing balance of GFA. KPTCL shall submit the bifurcated figure of GFA created out of consumers contribution and grants at the end of FY20 and FY21 and also the amount included in the projected closing balances of GFA for FY23 to FY25 to verify the fulfilment of the conditions by KPTCL in terms of Hon'ble ATE Order in OP 46/2014
- b. KPTCL, as per Format T-4 has indicated as per Audited Accounts Rs.93.78 Crores towards withdrawal of depreciation on asset created out of consumer contribution for FY21 and not projected the same for FY23, FY24 and FY25 respectively. KPTCL shall furnish the details of the consumers' contribution for having claimed the depreciation on assets created out of



consumer contribution for FY21 duly projecting the same for FY23 to FY25 (OB, CB of GFA and depreciation rate and amount of depreciation thereon.

c. KPTCL, as per Table – 10 (page 27), has revised the ARR for FY22 by re-estimating the requirement of ARR of Rs.4461.75 Crores by recasting the expenditure under each item, as against the approval ARR of Rs.3944.67 Crores as per KERC Tariff Order dated 09.06.2021, which is not provided for under the provisions of MYT Regulation. The Commission, in its Tariff Order dated 30.05.2019 has determined the ARR for FY20 to FY22 and after that based on the approved revenue gap as per APR of previous year, the approved ARR can be revised to that extent only. KPTCL has to restrict its expenditure to that level and any variation will be reviewed under APR for FY22, with reference to actual expenditure incurred as per audited accounts and the provisions of MYT Regulation. As such KPTCL shall submit the reasons for revising the ARR for FY22 which is not provided for as per MYT Regulations.

d. KPTCL in its filing of ARR has projected the no. of Bays and transmission details for FY22 to FY25 in projecting the O&M expenses as under:

Year	No. of Bays for FY02	Transmission lines in CKms
FY22	25930	40730
FY23	27424	42313
FY24	28817	44319
FY25	30302	46138

The basis for the estimated No. of Bays and transmission lines with reference to the actual Transmission lines and Bays as at the end of FY21, shall be submitted keeping in view the capital works proposed in Annexure-1 and ongoing works.

e. KPTCL in its filing of ARR for FY23 to FY25 has projected the Transmission capacity of each ESCOMs and total to recover the approved revenue from the ESCOMs.

<b>Financial Year</b>	<b>Transmission Capacity</b>
FY21	24438
FY22	27328
FY23	28730
FY24	30855
FY25	32725

KPTCL shall submit the details for the ESCOM-wise capacity to be added during each year, based on the capital programme envisaged.

- f. KPTCL in its filing of ARR has projected the work in progress of details for FY23 to FY25 as under:

<b>Amount in Rs. Crores</b>						
<b>Particulars</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	
Opening Balance of W.I.P.	2832.06	3181.15	3514.67	4564.68	5814.68	7164.68
Capital Expenditure incurred ... projected	2231.63	2211.32	3215.67	3820.65	4325.78	4881.06
Expenditure capitalised	2373.69	2622.39	2753.99	2932.24	3194.96	
Closing balance of WIP	3181.15	3514.67	4564.68	5814.68	7164.68	8184.68

KPTCL has projected the closing balance of work-in-progress considering meagre amount of capitalization of assets during each year of the control period as compared with the opening balance of WIP and the capital expenditure to be incurred by showing huge/abnormal amount of closing balances under WIP. Though KPTCL has proposed huge amount of capex for FY23 to FY25, the expenditure to be capitalized into asset are comparatively less indicating that huge amounts of assets are not going to be commissioned, on time, thus denying the consumers of the benefits of the commissioned assets though they have to pay increased transmission charges due to increase in the ARR. Hence, KPTCL needs to take appropriate action to capitalize the assets in a time bound manner so as to reduce the closing balance of WIP and ensure that the new assets earn adequate revenue to KPTCL. KPTCL shall therefore consider revising the capex and the commissioning of assets appropriately, for the control period FY23 to FY25.

g. KPTCL, in its filing of ARR (Format T6), has projected Terminal benefits and other staff welfare expenses etc., at Rs.362.49 Crores, Rs.456.73 Crores, Rs.520.68 Crores and Rs.593.57 Crores respectively for FY22 to FY25. KPTCL shall furnish the basis and the computation statement showing the details for claiming the amount in respect of employees recruited prior to 31.03.2002 and those employees covered under NDCPS scheme.

## **5. Directives:**

### **Prevention of Electrical Accidents:**

KPTCL vide letter No KPTCL/B36/2020-21/1189/1195 dated 15.11.2021 has submitted the details of electrical accidents along with the action plan for prevention of electrical accidents and the details of hazardous locations rectified during the 4<sup>th</sup> Quarter of FY21 i.e., for the period January 2021 to March 2021.

As per the details of hazardous locations furnished for the 4<sup>th</sup> Quarter of FY21, it could be seen that, it has rectified only 06 hazardous locations as against 158 identified locations as at the end of the 4<sup>th</sup> Quarter of FY21. The Commission notes that only 3.79% of identified hazardous locations have been rectified. KPTCL shall provide appropriate reasons for not initiating a strategic action plan to rectify all the hazardous locations at an early date in order to avoid accidents.

KPTCL, vide letter No KPTCL/B36/2021-22/26196/1203-206 dated 17.11.2021 has submitted the details of electrical accidents occurred during the 1<sup>st</sup> and 2<sup>nd</sup> Quarter of FY22 i.e. for the period April 2021 to September 2021.

KPTCL is directed to furnish the,

- 1) Details of the status of identification and rectification of hazardous locations during this period.
- 2) Compliance to the directions given by the Commission during the 65<sup>th</sup> Advisory Committee meeting duly furnishing the tentative timelines for rectification of identified hazardous locations.

The extract of the proceedings of the 65<sup>th</sup> Advisory Committee meeting is reproduced as follows;

*“The Commission directed MDs of KPTCL and all the ESCOMs to conduct meetings and to come up with an action plan on rectification of the remaining hazardous locations in a time bound manner. The Commission also directed them to put up danger sign boards and to take up fencing of the hazardous locations and a campaign towards educating the public regarding the danger associated with it. The Commission also directed them to conduct routine inspections of such locations and review of such inspection reports should be done by Senior Officers of KPTCL / ESCOMs. KPTCL submitted that by next quarter, they will submit the action plan (along with DPR if required to be prepared for undertaking work of any hazardous location) indicating the capital expenditure required for rectification. The Commission directed the MDs of KPTCL / ESCOMs to analyse the reasons for accidents. The ESCOMs are also directed to submit a quarterly report on accidents along with details of compensation provided to the affected family to the Commission”.*

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**Annexure-1**

<b>Station Capacity</b>	<b>400KV</b>	<b>220kV</b>	<b>110kV</b>	<b>66kV</b>
<b>Total no. of Stations completed during FY-21</b>	<b>02</b>	<b>06</b>	<b>12</b>	<b>16</b>
Number of substations having 2 <sup>nd</sup> or 3 <sup>rd</sup> source of power input:				
Number of substations having only one source of power input:				
Number of substations which are loaded above 70% of installed capacity:				
Number of substation which are loaded above 50% up to 70%				
Number of substation which are loaded above 20% up to 50%				
Number of substation which are loaded below 20%				
Number of substations having only one power transformer:				
Number of substations in which simultaneous peak load cannot be met and remedies considered:				
Number of substations having under voltage problem and remedies considered.				

<b>Line Capacity</b>	<b>440kV</b>	<b>220kV</b>	<b>110kV</b>	<b>66kV</b>
The no. of works corresponding to above Ckt. Kms				
The no. of works, having line loading of above 70%				
The no. of works, having line loading of above 50% & upto 70%				
The no. of works, having line loading of above 20% & upto 50%				
The no. of works, having line loading below 20%				

**Annexure-2**

**Breakup of Capital expenditure for FY21**

SL NO	Name of the Work	Opening balance of Works in progress/Spillover works as on 01.04.2020.		New Works taken up during FY21.		Total Number of Works Completed during FY21.		Closing balance of Works in progress. As on 31.03.2021		Actual Capex incurred during the year		Remarks
		No of works	Amount in Rs Crores	No of works	Amount in Rs Crores	No of works	Amount in Rs Crores	No of works	Amount in Rs Crores	No of works	Amount in Rs Crores	
<b>1</b>	<b>Stations(Nos)</b>											
	400KV											
	220KV											
	110Kv											
	66KV											
<b>2</b>	<b>Lines(Ckms)</b>											
	400KV											
	220KV											
	110Kv											
	66KV											
<b>3</b>	<b>Augmentation(No)</b>											
	400KV											
	220KV											
	110Kv											
	66KV											
<b>4</b>	<b>Any other works</b>											
	Total											