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No.227 Dir(P&C)/UPPTCL/2024

Date: 03, May, 2024

Director (Operation), UPPTCL  
Shakti Bhawan Ext.  
Lucknow

**Sub: Regarding uploading the copy of petition and order dated 27.03.2024 in the matter of 05 Years STU Transmission Plan for period of FY 2024-25 to FY 2028-29.**

It is to apprise that Hon'ble Commission has issued order in the matter of 05 Years STU Transmission Plan for period of FY 2024-25 to FY 2028-29 (Petition No. 2037/2023) on 27.03.2024.

With regard to above, kindly arrange to upload the copy of Petition and order on the UPPTCL website (<https://upptcl.org/upptcl>), so that the same can be made available in public domain. The copies of the petition and order has been sent to your kind office vide email.

(Susanta Kumar Das)  
Director (Planning & Commercial)



**THE UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION  
LUCKNOW**

**Petition No. 2037/2023**

**QUORUM**

Hon'ble Shri Arvind Kumar, Chairman

Hon'ble Shri Vinod Kumar Srivastava, Member (Law)

Hon'ble Shri Sanjay Kumar Singh, Member

**IN THE MATTER OF**

Approval for Five-Year STU Transmission Plan for period of FY 2024-25 to FY 2028-29 before Uttar Pradesh Electricity Regulatory Commission in terms of Regulation 5.2 of Uttar Pradesh Electricity Regulatory Commission (Modalities of Tariff Determination) Regulations, 2023.

**AND**

**IN THE MATTER OF**

**Uttar Pradesh Power Transmission Corporation Ltd. in the capacity of  
State Transmission Utility**

Managing Director, 7th Floor Shakti Bhawan, 14-Ashok Marg, Lucknow, Uttar Pradesh, Pin-226001

..... **Petitioner**

**THE FOLLOWING WERE PRESENT**

1. Sh. P. Guruprasad, Managing Director, UPPTCL
2. Sh. S.K. Das, Director (Planning & Commercial), UPPTCL
3. Sh. A.K. Shukla, SE (Commercial), UPPTCL
4. Sh. Satyendra Kumar, SE (Planning), UPPTCL

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## ORDER

(DATE OF HEARING: 11.01.2024)

1. The instant Petition is filed by Uttar Pradesh Power Transmission Corporation Ltd. (UPPTCL) in the capacity of State Transmission Utility (STU) for approval of Five-Year STU Transmission Plan for period of FY 2024-25 to FY 2028-29 in terms of Regulation 5.2 of UPERC (Modalities of Tariff Determination) Regulations, 2023. The prayers of the Petitioner are as following:
  - (a) Approve the Five-Year STU Transmission Plan for the period FY 2024-25 to 2028-29.
  - (b) Allow the Petitioner to add/change/alter/modify this application at a future date.
  - (c) Issue any other relief, order or direction which the Commission may deem fit.

### **Brief of Petition**

2. As per Regulation 5.2 of UPERC (Modalities of Tariff Determination) Regulations 2023, STU has to prepare Five-Year STU Transmission Plan of the State for approval of the Commission by 28th February on the rolling basis every year. Further, the Commission vide letter dated 19.07.2023 had directed STU to submit the Five-Year STU Transmission Plan.

### **Transmission Plan Background**

3. The overall installed generating capacity in the State as on 31<sup>st</sup> August 2023 is 31,618.83 MW out of which thermal consist of 76.83 % and renewable energy source (RES) consists of 15.46 %.
4. Further, total of 12,100 MW of thermal capacities are expected to be commissioned within the State from FY 2023-24 to FY 2028-29. Some TPS projects, such as Obra D (2x880 MW), Anpara E (2x880 MW) and Meja Ext. (3x660 MW) have expected CODs in FY 2028-29. Therefore, the transmission network for power evacuation from these TPS projects are yet to be finalized in consultation with CEA. However, tentative locations for the substations for

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the evacuation from these TPS have been mentioned in the Transmission Plan for the year 2028-29.

5. RES, bulk solar parks of 3200 MW, which are approved by MNRE, and distributed solar generating plants of 1400 MW are to be established in Bundelkhand region. In order to facilitate power transfer from 4000 MW RE Projects coming up in the State, in revised Green Energy Corridor (GEC)-II Plan total of 21 number of substations and their associated lines are planned in two phases.
6. The key performance parameters of STU for FY 2023-24 such as
  - (a) Projected energy through transmission network is estimated to be at 1,43,581.90 MUs.
  - (b) Transmission loss has narrowed down to 3.33%.
  - (c) Transmission System Availability has reached 99.51% (Normative 98%).
  - (d) STU has met the continuously growing peak demand of electricity in the State (in FY 2016-17, peak demand of 16,110 MW was met and in FY 2023-24 peak demand of 28,284 MW has been supplied).

#### **Transmission Planning Methodology**

7. The transmission system is in general planned to cater to the long term requirements of eligible injecting and drawee entities/users including generators and distribution licensees. The transmission system is planned in a manner so that system parameters and loading of transmission elements shall remain within permissible limits under normal as well as under contingency.
8. STU Transmission Plan has been prepared by assessing the long, medium and short-term demand forecast of different regions, based on nature and growth of load. Also, any new addition of conventional and RES generation capacity in the State is taken into consideration.
9. Transmission Network is prepared taking into various factors such as area /location for capacity addition, load growth in the region, upcoming industrial

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and commercial loads, increase in domestic demand, improving of the voltage profile, up-gradation etc.

10. Further, effort is made to explore possibility of planning a new substation instead of adding transformer capacity at an existing substation when the capacity of the existing sub-station reaches maximum permissible capacity as per Manual on Transmission Planning Criteria, and also taking N-1 contingency condition such that, all the system parameters like voltages, loadings, frequency remain within permissible limits.
11. Augmentation of system is planned by considering the factors such as rate of load growth, availability of space, operational constraints and feedback from injecting/drawing entities etc.
12. Transmission Network System Study is envisaged for operation of system under existing conditions as well as looking at its improvement and future expansion. System study also reveals and indicates low voltage pockets and requirement of compensating reactive power. It also shows voltage profile and transmission losses. Through system study, one can determine the EHV network required for evacuation of power from generating station and strengthening of lines required for grid stability. Study is carried out by way of load flow study, short circuit study etc. in PSSE, MI power software system.
  - (a) Load Flow Study: The steady state of power system network is analysed through load flow study. It helps in determining the operating state of the system for a given load generation balance in the system. It helps in determination of loading on transmission elements and helps in planning and operation of power systems from steady state point of view.
  - (b) Short Circuit Study: This study is carried out for designing of circuit breaker ratings and providing adequate protective scheme of electrical power system based on fault levels.

### **Peak Power Demand Projections**

13. For estimation of peak demand for FY 2024-29, past five years peak demand projections are studied. For FY 2018-19 to FY 2023-24, the peak demand

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projections by CEA as per 19th EPS Report, data from Business Plan for control period FY 2020-21 to 2024-25 as approved by the Commission and actual peak demand over the period has been tabulated below:

FY	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Actual Peak Demand (MW)	20,062	21,632	23,867	24,795	26,589	28,284
Projected Peak Demand as per CEA 19th EPS Report (MW)	18,635	19,870	21,223	22,663	24,197	25,779
Projected Peak Demand by the Commission vide Order dated 15.10.2020 (MW)	-	-	23,867 (Actual)	25,486	27,212	28,991

From above it can be clearly inferred that the projections as per 19th EPS Report have been on the lower side from the actual peak over the past five years, whereas, projections of the Commission approved demand in Business Plan for control period FY 2020-21 to 2024-25 are more in line with the actual peak demands.

14. For the period for FY 2024-29, CEA has given its projection of peak demand in its 20th EPS Report. Further, the Commission in its Order dated 23.06.2023 in case of "Suo-moto order for long-term procurement plan of UPDISCOMs for FY 2028 to FY 2040" has also projected the peak demand for the period for FY 2024-29. The same is as tabulated below:

FY	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Peak Demand as per CEA 20th EPS Report (MW)	27,531	29,235	31,061	33,017	35,082	37,270
Peak Demand as per Commission's Order vide Order dated 23.06.2023 (MW)	28,982	31,590	34,434	37,533	40,535	43,778

As per the past year projection trend, the projection of the Commission may be considered to be capturing actual peak demands more realistically. Hence,

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for preparation of STU Transmission Plan, the peak demand projection made by the Commission have been taken into consideration.

### Network Summary

- To handle the upcoming power demand and generation in the State the STU has planned an addition of 102 new substations with 66,490 MVA transformation capacity and laying of 7,529 Ckt. Km of transmission lines during FY 2024-29 to FY 2028-29.
- Summary of Year on Year and cumulative Planned Transmission Network for FY 2024-25 to FY 2028-29 is tabulated below:

FY	Particulars	132 kV	220 kV	400 kV	765 kV	Total	Cumulative Network
2023-24	No. of S/s	14	17	4	1	36	695
	Capacity (MVA)	5,007	6,463	4,640	3,000	19,110	1,92,322
	Line Length (Ckt. Km)	1,010	1,414	86	0	2,510	57,089
2024-25	No. of S/s	18	8	1	0	27	722
	Capacity (MVA)	5,882	3,400	2,630	0	11,912	2,04,234
	Line Length (Ckt. Km)	793	366	164	0	1,323	58,412
2025-26	No. of S/s	9	21	8	1	39	761
	Capacity (MVA)	4,573	6,920	10,370	1,500	23,363	2,27,597
	Line Length (Ckt. Km)	706	1,429	1,417	37	3,589	62,001
2026-27	No. of S/s	7	8	0	0	15	776
	Capacity (MVA)	2,609	3,600	815	0	7,024	2,34,621
	Line Length (Ckt. Km)	469	480	0	0	949	62,950

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FY	Particulars	132 kV	220 kV	400 kV	765 kV	Total	Cumulative Network
2027-28	No. of S/s	3	9	1	0	13	789
	Capacity (MVA)	1,463	3,220	1,000	0	5,683	2,40,304
	Line Length (Ckt. Km)	374	285	60	0	719	63,669
2028-29	No. of S/s	0	0	4	4	8	797
	Capacity (MVA)	358	520	5,630	12,000	18,508	2,58,812
	Line Length (Ckt. Km)	0	30	320	600	950	64,619

17. Glossary of Planned Transmission Network between FY 2024-25 till FY 2028-29 is tabulated below:

Network Plan	Substation (No.)	Capacity (MVA)	Line Length (Ckt. Km)
Network up-to March, 2024	695	1,92,322	57,090
Network up-to March, 2029	797	2,58,812	64,619
Net Addition during the plan	102	66,490	7,529

18. Glossary of Transmission Network planned FY 2024-25 till FY 2028-29 is tabulated below:

	132 kV	220 kV	400 kV	765 kV	Total
No. of S/s	37	46	14	5	102
Capacity (MVA)	14,885	17,660	20,445	13,500	66,490
Line Length (Ckt. Km)	2,343	2,589	1,961	637	7,529

19. Planned capacity at 33 kV level by FY 2028-29 will reach at 87,709 MVA whereas, peak load is projected to reach at 43,788 MVA. Therefore,

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Transmission Network at 33 kV level is 2 times the projected peak demand. Hence, the planned capacity at 33 kV level can be considered to be broadly in compliance with (N-1) Transmission Planning Criterion.

20. Materialization of planned new substation and capacity augmentation will be based on actual load growth in the coming future. Hence, Transmission Plan is subject to variation according to the prevailing load demand of the region, land availability for new substation, technical feasibility/space availability for augmentation at the substation, load flow study, RoW etc. modification/changes, if any, due to above constraints, shall be incorporated in the subsequent plans which shall be submitted on rolling basis.
21. Further, the Commission may allow to undertake any scheme which are immediately necessary in case of (a) to fulfil the specific requirement of open access customer/deposit works (b) specific category of projects of strategic importance, technical up-gradation etc. or (c) works required to cater an urgent situation with prior intimation to the Commission subject to its final approval.

#### **TBCB Schemes**

22. As per UPERC (Modalities of Tariff Determination) Regulations 2023, all new green field substation of 220 kV and above voltage level are to be implemented under TBCB mode. Regarding exemption of any scheme from TBCB the same shall be submitted before the Commission for approval on case-to-case basis. Total of 41 nos. of projects (220 kV 26 nos., 400 kV 10 nos., 765 kV 05 nos.) are planned in TBCB from FY 2023-24 to FY 2028-29.
23. Further, as per Regulation no. 7.2 of UPERC (Modalities of Tariff Determination) Regulations 2023, implementation of augmentation/strengthening works (excluding O&M works) at the intra-State transmission substation and/or line shall be carried out by the respective developer for which the STU will have to obtain prior approval of the Commission on case to case basis.

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In this matter, it is to mention that for some of the planned schemes the transmission lines are to be connected with substation constructed or planned to be constructed under TBCB schemes. Hence, there will be requirement of construction of bays, augmentation/strengthening in the premises of substation constructed under TBCB schemes. Therefore, the Commission may like to clarify the procedure/modality/SOPs for construction of bays, calculation of O&M, determination of tariff etc. on these types of construction.

### **Deposit Schemes**

24. Regarding deposit schemes, UPPTCL in its Petition No. 1995/2023 had requested the Commission to exempt the condition to take prior approval of the schemes related to deposit work as UPPTCL does not make any investment in deposit works and all the works are carried out at the expense of users/consumers.

The Commission in its Order dated 30.08.2023 has relaxed the requirement of prior approval of the Commission for deposit work schemes. The relevant extract is reproduced below:

#### **"Commission's view**

*The Commission has considered the submission of the Petitioner seeking relaxation for prior approval of deposit schemes. In this regard, the relevant extract of the UPERC (Modalities of Tariff Determination) Regulations, 2023 is reproduced below:*

*".....Provided that following new Greenfield intra-State transmission projects, being part of the STU Transmission Plan, shall be covered under RTM framework (under Section 62 of the Act) subject to prior approval of the Commission:*

.....

*(d) Deposit works, whose funds are accounted for under consumer contribution;*

....."

*From above, it is observed that Regulation 6.1 of UPERC (Modalities of Tariff Determination) Regulations, 2023 requires UPPTCL to seek prior approval of the Commission for deposit schemes. However, the Commission is of view that since deposit work schemes are to be implemented as and when required by the consumer/user for which there is no prior information to UPPTCL and that the cost of such schemes are not passed on in ARR/ tariff as all the works*

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are carried out at the expenses of particular users/consumers therefore the Commission in exercise of its powers conferred under Regulations 9 of UPERC (Modalities of Tariff Determination) Regulations, 2023 has relaxed the requirement of prior approval of the Commission for deposit work schemes. However, UPPTCL is directed to continue to intimate about the deposit works schemes on a quarterly basis."

### Miscellaneous Schemes

25. For faster accounting and settlement of electricity transactions, the process of collection of data is planned to be automated through installation of 4,007 ABT meters at T-D interface points.
26. Work on replacement of 6,636 km earthwire with OPGW is planned for enhanced communication facility, and also for better protection of transmission lines.
27. The Commission had scrutinized the Petition and had observed various queries, which were sent to UPPTCL vide letter dated 20.12.2023. UPPTCL vide its submission dated 30.12.2023 submitted its response to the said queries. The queries asked by the Commission and its response submitted by the Petitioner are listed as below:

**Query No.1:** STU/UPPTCL is directed to submit the list of those transformers and lines having reached 75% and more loading on 24.07.2023 at 21:43 Hrs. when peak demand of the State reached 28,284 MW FY 2023-24 (till 18.12.2023) and STU/s work plan/timelines for relieving the overloading of these transmission elements.

**Response submitted by Petitioner:** The Petitioner has submitted the list of 28 ICTs/transformers of 11 substations (400/220 kV- 21 ICTs of 8 substations and 220/132, 220/33 kV- 7 ICTs of 3 substations) and 13 lines (400 kV- 1 and 220 kV- 12) having reached nearly 75% and more loading on 24.07.2023 at 21:43 Hrs alongwith workplan/timelines for relieving the overloading of these transmission elements.

**Query No.2:** As per UPEGC, STU has to carry out planning studies for reactive power compensation of intra-State transmission system including reactive power requirement at the SSGS's switchyard, therefore, STU/UPPTCL is

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required to submit demand estimation of requirement of reactive power for period from FY 2024-25 to FY 2028-29 and STU's work plan/timelines for meeting the same.

**Response submitted by Petitioner:** as per CEA Planning Criteria 2023, the Steady-State Voltage limits are as given below:

Nominal	Normal rating		Emergency Rating	
	Maximum	Minimum	Maximum	Minimum
765 (1 pu)	800 (1.05 pu)	728 (0.95 pu)	800 (1.05 pu)	713 (0.93 pu)
400 (1 pu)	420 (1.05 pu)	380 (0.95 pu)	420 (1.05 pu)	372 (0.93 pu)
220 (1 pu)	245 (1.11 pu)	198 (0.90 pu)	245 (1.11 pu)	194 (0.88 pu)

In FY 2023-24, the maximum load demand of 28,284 MW (on 24.07.2023) and minimum load demand of 15,873 MW (on 12.11.2023) has been registered. At this load demand, total existing installed reactor capacity (bus & lines) at 765 kV & 400 kV is 11,481 MVAR. Further, as per SLDC report, voltage drops at 765 kV & 400 kV bus switchyard is under prescribed limits.

The load demand projection till FY 2028-29 is projected to reach a maximum demand of 43,778 MW and expected minimum load demand will be around 24,300 MW. Therefore, total additional 4,831 MVAR reactors (bus and line) is planned to be installed at 765 kV & 400 kV levels for the said projected load demand. The summary of the same is tabulated as below:

Particulars	Voltage Level (kV)	Existing (MVAR)	Planned (MVAR)	Total MVAR
Bus Reactor	765	2667	1179	3846
	400	3634	1626	5260
Line Reactor	765	4128	1800	5928
	400	1052	226	1278
<b>Total MVAR</b>		<b>11,481</b>	<b>4,831</b>	<b>16,312</b>





**Query No.3:** To provide details in tabular form w.r.t. details of Users i.e. generating companies including captive generating plants, distribution licensees, transmission licensees (other than STU), captive users, open access consumers:

- (i) Complete list of Users of intra-State transmission system
- (ii) User-wise details of connection agreements (bi-partite or tri-partite):
  - (a) Date of execution of connection agreement,
  - (b) Quantum of connectivity,
  - (c) Point of connectivity (with voltage level)

**Response submitted by Petitioner:** The Petitioner has submitted 415 User wise details of connection agreement i.e. generating companies including captive generating plants, distribution licensees, transmission licensees (other than STU), captive users, open access consumers.

**Query No.4:** To provide following details in tabular form w.r.t. details of LTOA Customers i.e. generating companies including captive generating plants, distribution licensees, trading licensees, captive users, open access consumers-

- (i) Complete list of LTOA Customers of intra-State transmission system.
- (ii) LTOA Customers-wise details of BPTAs/TSA,
  - (a) Date of execution of BPTA/TSA,
  - (b) Quantum of long-term open access,
  - (c) Period/duration of long-term open access.

**Response submitted by Petitioner:** The Petitioner has submitted details of 106 LTOA customer wise details of BPTA (executed with STU/UPPTCL) with date of execution, quantum and period of open access.

28. Subsequently, the Commission heard matter on 11.01.2024 and during the hearing Sh. A.K. Shukla appearing on behalf of STU/UPPTCL submitted that instant Petition is filed in compliance of Regulation 5.2 of UPERC (Modalities

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of Tariff Determination) Regulations, 2023, for approval of Five-Year STU Transmission Plan of the State for period of FY 2024-25 to FY 2028-29.

29. The Commission during the hearing asked following queries from Petitioner:
- Whether it has consulted the stakeholders like distribution licensees, generators, UPNEDA etc. as per State Grid Code while preparing the Transmission Plan?
  - How demand projections have been carried out?
  - Whether any structured study has been conducted to prepare Transmission Plan considering growing investment/demand in the State?
  - Why 220 kV green field substations planned in FY 2023-24 (07 Nos.) and FY 2024-45 (04 Nos.) are kept under RTM mode instead of TBCB mode?
  - Whether BPTAs and connectivity agreements are signed by state owned distribution licensees?
30. The Petitioner's reply on the above issues along with Commission's observations are provided below:

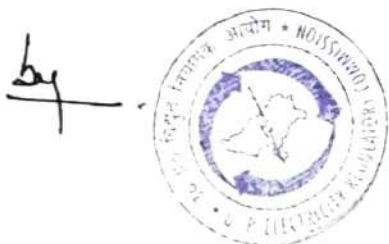
**Query No. 1:** Whether it has consulted the stakeholders like distribution licensees, generators, UPNEDA etc. as per State Grid Code while preparing the Transmission Plan?

**Petitioner's Submission**

31. Sh. P. Guruprasad, MD, UPPTCL informed the Commission that Petitioner wrote letters to various stakeholders like State owned distribution licensees, NPCL, generators, UPNEDA etc. and took their inputs for preparation of STU Transmission Plan. Further, information of 4000 MW demand for RE evacuation received from UPNEDA has been captured in the transmission plan and 8000 MW capacity is available at existing substations for RE evacuation.

**Commission's View**

The Commission notes the submission made by Petitioner and observes that System Planning Code under State Grid Code (UPGEC) provides the procedures to be adopted in the planning and development of bulk power





transfer and associated intra-State transmission system. The Planning Code lays down the detailed information exchange required between the STU, SLDC, Users and various participants of the power system for load forecasting, generation availability, and overall power system planning etc. The Planning Code also stipulates various criteria to be adopted during the planning process. Therefore, STU, among others, needs to conduct structured meetings of the stakeholders and issue minutes of those meeting. Thus, the Commission directs the Petitioner to abide by the Commission's observations and the provisions of the State Grid Code, while preparing the roll over transmission plan now onwards.

**Query No. 2:** How demand projections have been carried out?

**And**

**Query No. 3:** Whether any structured study has been conducted to prepare Transmission Plan considering growing investment/demand in the State?

**Petitioner's Submission**

32. Sh. P. Guruprasad informed that for the period from FY 2024 to 2029, CEA has provided its projection of peak demand in its 20<sup>th</sup> EPS Report. Further, the Commission in its Order dated 23.06.2023 has also projected the peak demand for the period of FY 2024-29. However, as per perusal of the past year's projection trend, the projection approved by the Commission is found to be more in line with the actual peak demands. For instance, for FY 2023-24, demand projections by CEA (20<sup>th</sup> EPS Report) and Commission are 27,531 MW and 28,982 MW respectively while actual peak demand met is 28,284 MW. Hence, for preparation of STU Transmission Plan, the peak demand projections made by the Commission have been taken into consideration.

Further on query of the Commission, he informed that no specific study was conducted by the Petitioner for demand projections. However, majority of load is coming in Noida/GNIDA/YEIDA/Expressway areas and that have been considered as per latest information submitted by respective distribution licensee(s).

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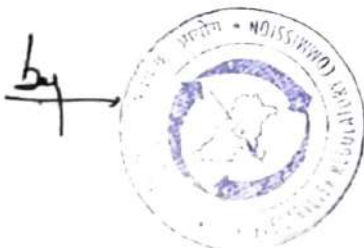
### **Commission's View**

The Commission notes the submission made by Petitioner and observes that although Petitioner has considered the past trend and Commission's projections for projecting demand growth, which can be taken into consideration at present however, on the basis of CAGR, it is observed that actual demand of the State is increasing at a much more rapid rate/pace than what was projected even by the Commission. Therefore, it would be prudent to conduct a structured study for analysing electricity demand growth/estimation in the State as per the State Grid Code considering thrust of Government of Uttar Pradesh towards promoting and facilitating industrial investment in the State due to which there may be rapid growth in electricity demand and for that the transmission network of the State should be in a position to handle it. Accordingly, the Commission directs the Petitioner to conduct structured study for demand projections/estimations, in different time horizons namely long term, medium term and short term, for the entire State as per provisions of the State Grid Code considering demand estimation submitted by distribution licensees, for requirement of transmission network in the State in next year's updated STU Transmission Plan which is to be submitted on rolling basis every year.

**Query No. 4:** Why 220 kV green field substations planned in FY 2023-24 (07 Nos.) and FY 2024-25 (04 Nos.) are kept under RTM mode instead of TBCB mode?

### **Petitioner's Submission**

33. Sh. P. Guruprasad submitted that the Commission introduced implementation of 220 kV projects under TBCB mode vide Order dated 26.10.2021. However, certain projects (06 Nos.) were already approved by the ETF under RTM mode prior to the said order of the Commission and two projects are Upgradation schemes & were approved by the Commission under RTM mode. Further two projects (Upgradation schemes) were approved by the Commission vide its Order dated 23.09.2022 in Petition No. 1866/2022 and other one was approved vide its Order dated 30.08.2023 in Petition No. 1995/2023 under







RTM mode. He also informed that there are few ongoing projects of FY 2020-21, for which the Commission has disallowed the capital investment as prior capital investment approval of schemes was not obtained by the Petitioner. The Petitioner has also filed an appeal on this issue.

### **Commission's View**

The Commission during the hearing had directed the Petitioner to submit the list of those 220 kV & above schemes that are considered under RTM in the Transmission Plan along with detailed reasons. The Commission observes that the Petitioner vide submission dated 16.01.2024 has submitted the list of those 220 kV & above schemes that are being considered under RTM in the Transmission Plan along with detailed reasons. The Commission has examined the submission, which has been found to be satisfactory.

Moreover, it is pertinent to mention that the capital investment schemes which were disallowed in Tariff Orders will continue to be disallowed unless otherwise specified by the Commission in the Tariff Orders or any specific Order issued by the Commission. Such schemes, if approved, in STU Transmission Plan shall not have any affect in the status of approval under capital expenditure of the schemes as approval of capital investment schemes of UPPTCL has to be governed by MYT Regulations. However, the Petitioner is directed to submit the list of those schemes, which have been disallowed by the Commission in past Orders separately within one month from the date of issue of this Order.

**Query No. 4:** Whether BPTAs and connectivity agreements are signed by state owned distribution licensees?

### **Petitioner's Submission**

34. In regard to query at above, Sh. A.K. Shukla submitted that connectivity agreements and Bulk Power Transmission Agreements are not signed by the state-owned distribution licensees however, Petitioner is continuously pursuing the matter with them.

### **Commission's View**





The Commission notes the submission made by Petitioner and directs the Petitioner to execute the connection agreements with individual distribution licensee(s). Further, the Petitioner shall pursue with State-owned distribution licensees/UPPCL (holding company of State-owned distribution licensees) for signing of BPTAs. Furthermore, Petitioner shall also pursue matter with generating companies and other users who have till now not signed the connection agreements and get the agreements executed. The directions of the Commission shall be conveyed to State-owned distribution licensees/UPPCL/generating companies/other users also and compliance of the same is to be submitted before the Commission within two months failing which the Commission may initiate suo-moto proceeding(s) on STU along with defaulting entities under Section 142 of the Electricity Act 2003.

35. Apart from above, the Petitioner has requested the Commission to clarify the procedure/modality for construction of bays, calculation of O&M, determination of tariff for augmentation/strengthening in the premises of substation constructed under TBCB schemes.

In this regard, Regulation 7.2 of UPERC (Modalities of Tariff Determination) Regulations, 2023 provides as below:

*"Implementation of augmentation/ strengthening works (excluding O&M works) at the intra-State transmission substation and/or line, being part of the STU Transmission Plan, shall be carried out by the respective developer in accordance with the provisions under Section 62 of the Act read with UPERC (Multi Year Tariff for Distribution and Transmission) Regulations 2019, as amended from time to time, for which the STU shall obtain prior approval of the Commission on case-to-case basis."*

From above, it is amply clear that implementation of augmentation/ strengthening works at substation already constructed under TBCB scheme shall be carried out by the respective developer who has constructed the substation under TBCB scheme. However, STU shall obtain prior approval of the Commission for implementation of such augmentation/strengthening works (excluding O&M works) under RTM framework on case-to-case basis.



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Further, principles and methodologies for determination of tariff will be governed under MYT Regulations.

36. Further, in regard to issue related with prior approval of the Commission for schemes related to deposit work, the Commission vide its Order dated 30.08.2023 in Petition No. 1995/2023 has observed that since deposit work schemes are to be implemented as and when required by the consumer/entity for which there may not be prior information available with STU and that the cost of such schemes are not passed on in ARR/tariff as all the works are carried out at the expenses of particular consumers/entities therefore, the Commission in exercise of its powers conferred under Regulations 9 of UPERC (Modalities of Tariff Determination) Regulations, 2023 has relaxed the requirement of prior approval of the Commission for deposit work schemes. However, STU is directed to continue to intimate about the deposit works schemes on a quarterly basis.

Above mentioned decision of the Commission requires further clarity for its applicability to all upcoming deposit schemes related with new greenfield intra-State transmission projects. Therefore, in exercise of powers conferred under Regulation 9 read with Regulation 10 of UPERC (Modalities of Tariff Determination) Regulations, 2023 and all other provisions enabling in this behalf, the Commission in order to remove difficulty relaxes the requirement of prior approval of the Commission for implementation of deposit work schemes of new greenfield projects under RTM framework. Therefore, there shall not be any requirement to take prior approval of the Commission for implementation of such deposit work schemes under RTM framework. However, STU shall continue to intimate the Commission on a quarterly basis about such deposit works schemes before implementation under RTM framework.

37. Besides above, the Commission has considered the oral as well as written submission/replies submitted by the Petitioner. In this regard, following directions are issued to the Petitioner for compliance:

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- (i) The Petitioner shall ensure the compliance of work plan/timelines submitted for relieving the overloading of transmission elements 220 kV & above by 31st May 2024.
- (ii) The Petitioner shall submit the list of 132 kV transformers and lines having reached 75% and more loading on 24.07.2023 at 21:43 Hrs within fifteen days from the date of issue this Order along with work plan/timelines for relieving the same.
- (iii) The Petitioner shall within a month submit the discom wise list of 33 kV bays which are not yet connected with the distribution system.
- (iv) The total additional 4,831 MVar reactors (bus and line) planned to be installed at 765 kV and 400 kV voltage levels from FY 2024-25 to FY 2028-29 as submitted by the Petitioner vide letter dated 30.12.2023 shall be integral part of STU Transmission Plan.

Further, STU is mandated to carry out planning studies for reactive power compensation of intra-State transmission system including reactive power requirement at the SSGS's switchyard, therefore, the Commission directs the Petitioner to conduct structured study for demand estimation of requirement of reactive power with respect to transmission network in the State and submit the same before the Commission within three months. Accordingly, the Petitioner shall in future include in STU Transmission Plan the demand estimation for requirement of reactive power for Five-Year period along with STU's work plan/timelines for meeting the same.

- (v) It is observed that there are projects/schemes under STU Transmission Plan, which are not yet approved by STU-Transmission Works Committee (STU-TWC). Therefore, the Petitioner in future shall ensure that the projects/schemes shall be at least approved under STU-TWC prior to its inclusion in STU Transmission Plan.
- (vi) The Petitioner shall ensure that schemes should have provision of sufficient land space at proposed substation/switchyard for its future

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extension, if any, for installation of transformers for capacity enhancement along with transformer bays, and additional feeder bays for upcoming upstream/downstream network to meet the future load requirement.

(vii) The projects planned to cater an urgent situation after approval of the STU Transmission Plan but before filing the next rolling Five-Year STU Transmission Plan, shall be submitted by the Petitioner along with justification/reasons that why these were not included in the earlier STU Transmission Plan. The Commission may consider to include the same in STU Transmission Plan as considered deemed fit.

38. With above directions, the Commission approves the Five-Year STU Transmission Plan for FY 2024-25 to FY 2028-29 subject to all applicable approvals (like STU-TWC, Borad of Directors, Appraisal & Evaluation Committee, Energy Task Force and Central Electricity Authority) being obtained by the Petitioner before their implementation.

39. Accordingly, the Petition is disposed of.

  
(Sanjay Kumar Singh)  
Member

  
(Vinod Kumar Srivastava)  
Member (Law)

  
(Arvind Kumar)  
Chairman

Place: Lucknow  
Dated: 27. 03. 2024

