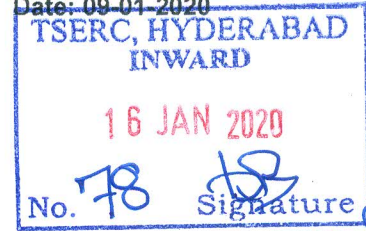


Ref: EPTA/MYT/2020/01/29

Date: 09-01-2020

To  
The Secretary  
Telangana State Electricity Regulatory Commission  
#11-4-660, 5th Floor, Singareni Bhavan,  
Red Hills, Hyderabad – 500 004



Ref.: Public Notice placed on TSERC website, regarding TSTransco's petition for Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff under Multi Year Tariff (MYT) Framework for 4th Control Period (FY 2019-20 to FY 2023-24) and True up for 3rd Control Period for Transmission Business

Sub: EPTA's Comments on TSTransco's MYT Petition, as referred above

Dear Sir,

We write with reference to the Public Notice issued on Telangana State Electricity Regulatory Commission's (TSERC) website regarding the above captioned MYT Petition filed by TSTransco, via which stakeholders' comments and suggestions have been invited.

Our detailed submissions on TSTransco's Petition filed for Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff under Multi Year Tariff (MYT) Framework for 4th Control Period (FY 2019-20 to FY 2023-24) and True up for 3rd Control Period for Transmission Business of TSTransco are enclosed with this letter for consideration by the Hon'ble Commission.

We also request for the opportunity to be heard in person at the Public Hearing scheduled for 7-Feb-2020.

Thanking you.

Yours Sincerely,  
For, Electric Power Transmission Association (EPTA)

  
T.A.N. Reddy  
Secretary

Enclosed: EPTA's detailed comments on TSTransco's MYT Petition

Office: F-1, The Mira Corporate Suites, 1&2 Ishwar Nagar, Mathura Road,  
Okhla Crossing, New Delhi – 110065 (011-49962200)

**BEFORE THE HON'BLE TELANGANA ELECTRICITY  
REGULATORY COMMISSION, HYDERABAD, TELANGANA**

**IN THE MATTER OF:**

**TSTRANSCO's petition for Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff under Multi Year Tariff (MYT) Framework for 4th Control Period (FY 2019-20 to FY 2023-24) and True up for 3rd Control Period for Transmission Business**

**AFFIDAVIT**

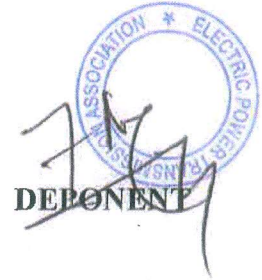
I, **T.A.N. REDDY**, S/o Late Shri. T.S. Reddy, R/o New Delhi do hereby solemnly affirm and state on oath as follows:

1. That I am the Authorized Signatory of the Electric Power Transmission Association in the above-mentioned matter, am well acquainted with the facts of the issue and as such I am fully competent to swear this affidavit.
2. I say that I have read and understood the contents of the accompanying Representation and the same have been drafted under my instructions. I say that contents therein are true and correct to the best of my knowledge and belief.
3. That the annexures filed along with the Representation are the true copies of their respective originals.

  
**DEPONENT**

**VERIFICATION**

I, **T.A.N. Reddy**, the deponent mentioned above do hereby most solemnly affirm and verify that what is stated in the above Affidavit is true to my knowledge and I believe the same to be true.

  
**DEPONENT**

Verified at **Delhi** on this the **9th** day of **January 2020**.

**EPTA's Comments on TSTRANSCO's Petition for  
Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff under  
Multi Year Tariff (MYT) Framework for 4th Control Period (FY 2019-20 to FY  
2023-24) and True up for 3rd Control Period for Transmission Business**

**Section-I: General Comments**

Transmission Corporation of Telangana Ltd. (TSTRANSCO) has filed the Petition for determination of Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff under Multi Year Tariff (MYT) Framework for 4th Control Period (FY 2019-20 to FY 2023-24) for Transmission Business of TSTRANSCO and Annual Fee, Operating Charges for the State Load Dispatch Centre (SLDC) activity and True up for 3rd Control Period for Transmission Business and SLDC Activity with Hon'ble TSERC.

The State of Telangana has achieved 100% electrification under SAUBHAGYA scheme, and 5.15 Lakh previously unconnected households now have access to electricity. Considering factors like new consumers being added to the grid, and the natural/ projected growth in demand, taken together with the fact that consumers expect benefit from the cheap RE power being installed across the country, it becomes apparent that the Hon'ble Commission needs to ensure that reliable transmission systems are put in place in a time- and cost-efficient manner.

As you would be aware, competitively discovered tariffs have proven cheaper than cost-plus tariffs in the Inter-State (ISTS) and Intra-State (InSTS) transmission projects awarded by the Central Government, as well as by States such as Uttar Pradesh, Madhya Pradesh, and Maharashtra, among others. Because of widespread participation, the competitive tariff for these projects has witnessed an average tariff reduction of ~40% vis-a-vis cost-plus tariffs, achieving a maximum reduction of ~57%. (*Annexure 1*)

The per unit power transmission cost that has been achieved through implementation of the Phase-1 of GEC corridors under TBCB route is ~25 paise lower when compared to CEA's estimate of 67 paise per unit. This has translated into savings of several thousand crores over the life-cycle of these projects and set a healthy benchmark for future. *Annexure-2* to this letter provides an illustration of the potential magnitude of transmission tariff reduction in your state/ region if TBCB route is adopted vis-à-vis the cost-plus route for all new ISTS projects being built upto FY 2027.

It is therefore imperative for the State Governments/ Regulators/ DISCOMs to proactively support competitive bidding for ISTS/Intra-state transmission through TBCB so that resulting gains of competition benefit the State by ensuring energy delivery to their end-consumers in the most affordable and efficient manner.

Further to the above, it is submitted that the Electricity Act 2003 seeks to encourage competition in the Power sector with appropriate regulatory intervention. Competition is expected to yield efficiency gains and result in improved quality of electricity supply to consumers at competitive rates. Clause 5.3 of Tariff Policy, 2016 envisages the

development of all Intra-State Transmission projects, costing above a threshold limit under tariff based competitive bidding –

*"5.3 ... Further, intra-state transmission projects shall be developed by State Government through competitive bidding process for projects costing above a threshold limit which shall be decided by the SERCs."*

In this context, we are pleased to share with you that the Hon'ble Punjab State Electricity Regulatory Commission (PSERC) notified a Threshold Limit of Rs 50 Cr through the Gazette Notification No. PSERC/Secy/132 dated 05.11.2018 (Attached as Appendix-I). The notification states:

***In accordance with para 5.3 of National Tariff Policy, the Punjab State Electricity Regulatory Commission hereby decides that intra-state transmission projects costing more than Rs. 50 Crore shall be developed by State Govt./STU through tariff based competitive bidding.***

The Hon'ble Bihar Electricity Regulatory Commission (BERC), in the matter of SMP-04/2019 "Suo-motu proceeding for determination of Threshold limit for development of intra-state transmission projects through tariff based competitive bidding (TBCB)", has issued its Order on 23.12.2019 (the Gazette Notification and Order are enclosed as Appendix-II & III). Through this Order, BERC has notified a Threshold Limit value of Rs 100 Cr for the State of Bihar. The Order states:

***Based on the above analysis, the Commission hereby specifies the 'Threshold Limit' at Rs. 100 Crore above which all new and augmentation schemes for transmission shall be developed under TBCB route.***

BERC had initiated proceedings via a consultative paper titled "Determination of 'Threshold Limit' for development of intra-state transmission projects through tariff based competitive bidding (TBCB)" in Mar-2019, and the Order has been issued after detailed stakeholder consultations and deliberations.

Other than Punjab and Bihar, it is understood that Rajasthan and Assam are also working on notifying a Threshold Limit value.

**Submission:** It is submitted that the Hon'ble Commission may decide a 'threshold limit', above which all new projects and augmentation schemes for transmission shall be developed under TBCB route, as envisaged by the Electricity Act and the Tariff Policy.

The "threshold limit" be determined in such a way that:

- a) the "threshold limit" permits planning and development of end-to-end transmission schemes with upstream and downstream elements, and once commissioned the transmission system can be put to use without any dependencies on other elements and with minimal interface and coordination issues. This has also been noted by the Hon'ble Central Electricity Regulatory Commission (CERC) in their Advisory to the Ministry of Power via D.O. No. 10/5/2013-Statutory Advice/CERC dated 14.10.2016, where in Hon'ble CERC has advised –

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Okhla Crossing, New Delhi – 110065 (011-49962200)**

"in case of new transmission network, splitting the network into components and award of the project through TBCB complicates the execution of project. Therefore, it is **advisable to identify the entire network for development through TBCB, instead of comparatively smaller elements**, commissioning of which depends upon commissioning of all upstream/ downstream elements." (emphasis added)

- b) the "threshold limit" should help achieve efficient procurement of equipment and provide economies of scale in development, along with the reduction of O&M expenses – which is directly dependent on project size.

**Suggested language** that may be considered for inclusion in the MYT Order to be issued, is submitted as follows:

*"All new Intra-State Transmission projects, costing above a threshold limit value to be notified separately, shall be developed through Tariff Based Competitive Bidding (TBCB), as per provisions of the Electricity Act and the Tariff Policy. The Commission is in the process of notifying of the threshold limit and after the notification the projects costing above the threshold limit shall be implemented through TBCB process."*

#### Section-II: Clause-wise detailed Comments

#### 1) Section 3.2. – Capital Investment Plan during the balance period of Fourth Control Period (FY 2019-20 to 2023-24)

The following capital investments are proposed for execution of 400 KV Schemes including evacuation schemes, schemes consisting of 220 & 132 Sub Stations and Lines, Lift Irrigation Schemes and Renovation and modernization schemes during the 4th Control Period.

Table 15: Capital Investment Plan during the balance period of Fourth Control Period: for FY 2019-20 to FY 2023-24 (Rs Crore)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>CWIP Opening Balance</b>	<b>3709.74</b>	<b>4405.15</b>	<b>6405.06</b>	<b>3423.12</b>	<b>4322.21</b>
<b>Capital Investment During the Year</b>					
400kv Schemes	1201.5	1334.6	1015	390.42	218
220kv Schemes	681.37	766.13	701.97	612.61	600.8
Renovation, Modernization & Improvement Schemes	53.11	56	59.7	63.29	67.9
Lift Irrigation Schemes	1010.19	1285.22	976.57	300	200.84
<b>Total Base Capital Investment</b>	<b>3226.15</b>	<b>3031.52</b>	<b>3557.29</b>	<b>2754.39</b>	<b>1366.99</b>
Add: Interest During Construction	369.27	277.94	220.27	141.69	133.34
Add: Expenses Capitalised	120.88	132.97	146.26	160.89	176.98
<b>Total Capital Investment during the year</b>	<b>3521.67</b>	<b>3968.2</b>	<b>3120.93</b>	<b>1669.57</b>	<b>1397.91</b>
Assets Capitalised during the year	<b>2826.26</b>	<b>1968.29</b>	<b>6102.86</b>	<b>770.38</b>	<b>5376.12</b>
<b>CWIP Closing Balance</b>	<b>4405.15</b>	<b>6405.06</b>	<b>3423.12</b>	<b>4322.31</b>	<b>344.09</b>
<b>CWIP Closing Balance</b>	<b>4405.15</b>	<b>6405.06</b>	<b>3423.12</b>	<b>4322.31</b>	<b>344.09</b>

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**Comment:**

In this petition, TSTransco has submitted its Capital Investment Plan of Rs. 13,936 Cr to be invested in a span of 5 years from FY 2019-20 to FY 2023-24, with 70% of this investment to be made in FY 2019-20 to FY 2021-22).

With Debt-Equity ratio of 75:25, the required Equity contribution to achieve the planned Capex till FY 2021-22 (first three years) itself is Rs 2,653 Cr, along with requirement of raising Debt of 7,958 Cr. With cost of Debt as 11% (according to projections for regulated rate base), and considering the importance of the planned schemes, it becomes imperative that in order to cater to system requirements and transmission capacity addition plans, the TBCB route be adopted via which the other developers can come in and execute the required projects in a time- and cost-efficient manner. This will free up the equity for the TSTransco to take up emergent projects in a timely manner, as well as reduce the Debt burden on the State.

**2) Format 1.1(d) – Abstract of Investment Plan**
**Comment:**

The initial sections of the petition give details on capital investment plan and also the equity and debt to be utilised for executing the same. However, the information provided in the Regulatory Formats of the petition seem to show a discrepancy.

While the source of funds for taking up the proposed schemes are given as debt as well as equity, the Regulatory Formats note that the source of financing of the schemes would be only Loan – totalling to Rs 7356.45 Cr across FY 2019-20 to 2022-23. This apparent discrepancy needs to be clarified.

**3) Summary Section 12 and 13 – Performance Analysis and Resource Plan**

*a) Loss Reduction:* The licensee has improved performance in terms of Transmission loss reduction from 3.37% in FY 2016-17, 3.25% in FY 2017-18 & 2.85% in FY 2018-19. The licensee has undertaken a number of loss reduction measures such as system improvement, reactive power compensation etc., and would continue to do so with an aim to further reduce the transmission losses.

*b) Loss Projection:* As per the MYT framework, the licensee's forecast of loss reduction trajectory over the five-year Control Period of 4th Control Period is as shown below.

<b>Particulars</b>	<b>2017-18 (Actuals)</b>	<b>2018-19 (Actuals)</b>	<b>2019-20 (Proj)</b>	<b>2020-21 (Proj)</b>	<b>2021-22 (Proj)</b>	<b>2022-23 (Proj)</b>	<b>2023-24 (Proj)</b>
Target			3.25	3.24	3.23	3.22	3.21
Transmission Loss Range	3.25	2.85	+/- 0.2	+/- 0.2	+/- 0.2	+/- 0.2	+/- 0.2

**Comment:**

The past period performance of TSTransco indicates that Transmission loss has improved over the years, and in 2018-19, the actual loss achieved for 2.85%. TSTransco should be looking to take this performance forward, and target loss range in 2.85% and less levels, rather than sticking to initial projections of 3.25%.

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## Annexure 1:

### Recently Concluded GEC, ISTS and InSTS Bids - Summary

Project Name	Winning Bidder	Revised Cost (Rs Cr)	Winning Tariff (Rs Cr)	Cost-Plus Tariff (Rs Cr)	Reduction from cost plus tariff
<b>ISTS GEC Bids (Average Reduction of 44% achieved)</b>					
P1 - WRSS 21 - Part A	Adani	1090	95	153	38%
P2 - WRSS 21 - Part B	Sterlite	2003	179	280	36%
P3 - Bhuj Dwarka Lakadiya	Adani	1053	83	147	43%
P4 - Bhuj II	PGCIL	1409	124	197	37%
P5 - Jam Khambaliya	Adani	394	34	55	39%
P6 - Ajmer Phagi	PGCIL	872	61	122	50%
P7 - Raj SEZ Part B (Fth-Bhadla)	PGCIL	1186	72	166	57%
P8 - Rajasthan SEZ Part C	PGCIL	1448	122	203	40%
P9 - Rajasthan SEZ Part D	Adani	1631	100	228	56%
<b>ISTS Bids – Other than GEC (Average Reduction of 20% achieved)</b>					
WR-NER	Sterlite	1223	Bid Process yet to conclude		
Udupi-Kasargode	Sterlite	755	85	106	20%
<b>InSTS Bids (Average Reduction of 35% achieved)</b>					
MH - Vikhroli	Adani	1230	Bid Process yet to conclude		
MP - Guna and Bhind	PGCIL	900	69	126	45%
UP - Rampur-Sambhal	PGCIL	910	103	127	19%
UP - Meerut-Simbhavli	PGCIL	1130	116	158	27%
UP - Jawaharpur	PGCIL	600	54	84	36%
UP - Obra	Adani	1100	84	154	45%
UP - Ghatampur	Adani	2200	196	308	36%

Levelized Cost Plus Tariff: 14%





# The Bihar Gazette

EXTRA ORDINARY

PUBLISHED BY AUTHORITY

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**3 PAUSH 1941(S)**  
**(NO.PATNA 1349) PATNA, Tuesday, 24 DECEMBER 2019**

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**BIHAR ELECTRICITY REGULATORY COMMISSION, PATNA**

**NOTIFICATION**

***The 23<sup>th</sup> December 2019***

No.-BERC-SMP-04/2019-07—In exercise of powers conferred under sections 181 read with sections 61, 66 & 86 of the Electricity Act, 2003 (36 of 2003) and in pursuance to clause 5.3 of the Tariff Policy, 2016 and under sub-regulation 5.2 & 5.3(a) of BERC (Multi Year Transmission Tariff & SLDC Charges) Regulations, 2018 and all other powers enabling it in this behalf, the Bihar Electricity Regulatory Commission hereby determines threshold limit Rs. 100 (Hundred) crores above which all new and augmentation of intra-state transmission projects shall be developed through Tariff Based Competitive Bidding (TBCB) in accordance with the guidelines issued by the State Transmission Utility.

2. State Transmission Utility shall frame the said guidelines within three months from the issue of this notification and issue the same after approval of the Bihar Electricity Regulatory Commission.

By order of the Commission,  
Rameshwar Prasad Das,  
Secretary.

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PUBLISHED AND PRINTED BY THE SUPERINTENDENT,  
BIHAR SECRETARIAT PRESS, PATNA.  
Bihar Gazette (Extra) 1349—571+400—Egazette  
Website: <http://egazette.bih.nic.in>

# BIHAR ELECTRICITY REGULATORY COMMISSION

Vidyut Bhawan-II, Bailey Road, Patna – 800 021

## Suo-Motu Proceeding No. SMP-04/2019

### In the matter of:

**Suo-motu proceeding for determination of Threshold limit for development of intra-state transmission projects through tariff based competitive bidding (TBCB).**

### Quorum:

- |                    |   |          |
|--------------------|---|----------|
| 1. S. K. Negi      | - | Chairman |
| 2. Rajeev Amit     | - | Member   |
| 3. R. K. Choudhary | - | Member   |

### Appearance:

1.	Sh. Bhaskar Sharma, Advisor (Tech.)	On behalf of BSPTCL
2.	Sh. Dileep Kumar, C.E./P&E	
3.	Sh. Deepak Kumar Jha, E.S.E. (P&E)	
4.	Smt. Sudhanshu, E.E.E./Comm. & Regulatory Affairs Cell	
5.	Sh. Mukesh Kumar, E.E.E. (STU)	
6.	Ms. Babli Kumari, A.E.E.	
7.	Ms. Rinki Rani, A.E.E./PMC	
8.	Ms. Khusbu Kumari, A.E.E.	
9.	Sh. Nikheel Kumar Gupta, A.E.E.	
10.	Sh. Pankaj Kumar Pandey, PM (E&R)	On behalf of BREDA
11.	Ms. Namrata Mukherjee, Head-Policy Advocacy	On behalf of Sterlite Power
12.	Sh. Farrukh Aamir, Lead-Policy Advocacy	
13.	Sh. Naveen Kr. Singh, Lead-Business Development	
14.	Sh. Girish Deveshwar, Manager-Policy Advocacy	
15.	Sh. Anupam Sawhney, DGM	On behalf of Adani Transmission Ltd.
16.	Sh. Rohit Lal, Dy. Director	On behalf of CII

**Date of hearings:** 30.04.2019, 11.06.2019, 30.07.2019, 04.10.2019, 15.11.2019.

## ORDER

Dated: 09-12-2019

### **1. Background:**

- 1.1. In exercise of the power conferred under Section 181, read with Section 61, 66 and 86 of the Electricity Act, 2003 (36 of 2003) and provisions of the National Electricity Policy, 2005 and the Tariff Policy, 2016, the Commission initiated this Suo-Moto Proceeding for Determination of 'Threshold Limit' for development of intra-state transmission projects through tariff based competitive bidding.
- 1.2. Promoting competition is one of the key principles enshrined in the preamble of the Electricity Act, 2003 ("Act"), with a view to rationalise electricity tariff, as well as for taking steps contributing to the development of electricity industry. The preamble of the Electricity Act, 2003 states:

*An Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto.*
- 1.3. Under Section 38 (2) and Section 39 (2), the Electricity Act, 2003 has entrusted the planning and coordination of the inter-state and intra-state Transmission Systems to the Central Transmission Utility ("CTU") and the State Transmission Utility ("STU") respectively. The overarching mandate with the CTU and STU is to ensure the development of efficient, coordinated, and economical inter-state and intra-state transmission systems respectively. The said mandate may be achieved by adopting a fair and transparent system of planning which takes into account views of all the stakeholders.
- 1.4. Electricity Regulatory Commissions have been bestowed the responsibility to facilitate and promote competition, efficiency, and economy in activities of the electricity industry.

1.5. Further, the State Electricity Regulatory Commissions, while discharging their functions as mentioned in the Act, shall be guided by the National Electricity Policy, National Electricity Plan and Tariff Policy.

1.6. **Tariff Policy, 2016:** The revised Tariff Policy notified on 28.01.2016 has emphasized the importance of competition in the electricity sector as under:

*“5.1 Introducing competition in different segments of the electricity industry is one of the key features of the Electricity Act, 2003. Competition will lead to significant benefits to consumers through reduction in capital costs and also efficiency of operations. It will also facilitate the price to be determined competitively. The Central Government has already issued detailed guidelines for tariff based bidding process for procurement of electricity by distribution licensees.”*

1.7. Specifically, for the transmission sector, the Tariff Policy envisages development of intra-state transmission projects costing above a threshold limit through tariff based competitive bidding as under:

*5.3 The tariff of all new generation and transmission projects of company owned or controlled by the Central Government shall continue to be determined on the basis of competitive bidding as per the Tariff Policy notified on 6th January, 2006 unless otherwise specified by the Central Government on case to case basis.*

*Further, intra-state transmission projects shall be developed by State Government through competitive bidding process for projects costing above a threshold limit which shall be decided by the SERCs.*

.....

#### *7.1 Transmission Pricing*

*(6) Investment by transmission developer including CTU/STUs would be invited through competitive bids in accordance with the guidelines issued by the Central Government from time to time.*

1.8. In its 61st Meeting held on 22.09.2017, the Forum of Regulators again deliberated the issue at length for determination of threshold limit by State Electricity Regulatory Commission. It was discussed that though in some States, development of State-level transmission projects was carried out through tariff based competitive bidding (TBCB) mode and in some States, the conventional mode of EPC based contracting is reportedly being followed, however, none of the SERCs has determined the threshold limit of the projects to be considered under TBCB mode, in accordance with Clause 5.3 of the Tariff Policy. The Forum also observed that in order to encourage transparency and efficiency in project costs,

threshold limit for intra-State transmission projects is required to be determined by the SERCs as provided for in the Tariff Policy. Therefore, the Forum urged the Members to determine the threshold limit for their respective State-level transmission projects, while taking all relevant parameters of their State into consideration.

1.9. In view of the aforesaid statutory obligation and the spirit of law as well as resolution of FOR on the issue, Bihar Electricity Regulatory Commission, in discharging its duty casted upon it by the Tariff Policy 2016 to determine the Threshold limit for Transmission Projects to be executed through TBCB mode, took following steps:-

(a) **BERC Transmission MYT Regulations, 2018:** The commission has notified BERC (Multi Year Transmission Tariff & SLDC Charges) Regulations, 2018, wherein it has taken an initiative and has included in the said Regulations that the Business Plan of Transmission Licensees for determination of tariff under cost plus basis (u/s 62) shall include '*schemes costing below the threshold limit*'. Further, in the same Regulations, it has been included that all the new intra-state transmission projects *costing above a threshold limit*, to be notified separately, shall be developed through Tariff Based Competitive Bidding (TBCB) mode. The relevant paras of the regulations are reproduced below:

5. Business Plan

.....

5.2 *Such Business Plan shall comprise but not be limited to infrastructure requirement commensurate with load growth forecast and demand projections, capital investment plan, financing plan and physical targets.*

*Provided the Business Plan shall take into account schemes costing below the threshold limit to be notified separately that are to be developed by the State Transmission Utility on cost plus basis in accordance with the Tariff Policy notified by Govt. of India.*

.....

5.3 (a) *The Transmission Licensee or SLDC, as the case may be, shall make assessment of infrastructure requirement and prepare capital investment plan in accordance with BERC (Procedure for Filing Capital Investment and Capitalization Plan) Regulations, 2018 that will spill into the year(s) under review and new projects that will commence and may be completed within or beyond the tariff period.*

*Provided that all the new intra-state transmission projects costing above a threshold limit to be notified separately, shall be developed through Tariff Based Competitive Bidding.*

**(b) BSPTCL Tariff Order for FY 2019-20:**

- (i) BSPTCL's Tariff Order for FY 2019-20 has been notified by the commission on 15.02.2019, approving the Capital expenditure, Capitalisation and source of funding for MYT period for FY 2019-20 to FY 2021-22 with the direction that capital investment plan approved in the Business Plan shall only be considered in the tariff petition(s) filed/to be filed for the control period.
- (ii) The Commission has also stated in BSPTCL's Tariff Order for FY 2019-20 that projects costing above the threshold limit shall be implemented under TBCB process. The relevant para is provided below.

*Regulation 5.2 of BERC (Multi Year Transmission Tariff and SLDC Charges) Regulations 2018 specify that the Business plan shall take in to account schemes costing below the threshold limit to be notified separately that are to be developed by the STU on cost plus basis in accordance with the Tariff policy notified by the Government of India.*

*Further the Regulation 5.3(a) states that all new intra state transmission projects costing above a threshold limit to be notified separately shall be developed through Tariff Based Competitive Bidding (TBCB). The Commission is in the process of notifying of the threshold limit and after the notification the projects costing above the threshold limit shall be implemented through TBCB process.*

- 1.10. The Commission drafted a Consultation Paper for "Determination of Threshold Limit for development of intra-state transmission projects through Tariff Based Competitive Bidding" and initiated a Suo Motu Proceeding bearing case no. SMP-04/2019. A public notice along with the Consultation Paper were uploaded on the website of the Commission inviting comments/ suggestions/ objections from general public and stakeholders by 24.04.2019. It was also published in a newspaper having wide circulation in the state namely; Dainik Jagran inviting comments/objections/suggestions from general public and stakeholders by 24.04.2019. The date of hearing was fixed on 30.04.2019.

**2. Written objections/comments/suggestions:-**

Commission received the comments/suggestions/objections from following stakeholders:-

- (i) Sterlite Power Transmission Ltd.;
- (ii) Adani Transmission Ltd.;

- (iii) Indian Energy Exchange (IEX); and
- (iv) Confederation of Indian Industry (CII)

### **3. Summary of Hearings:**

- 3.1. The Public hearing of Suo Motu proceedings were taken up on 30.04.2019, 11.06.2019, 30.07.2019, 04.10.2019, and 15.11.2019. These proceedings saw participation from BSPTCL, BREDA, CII, Sterlite Power, and Adani Transmission. There was no representation from BGCL, which is the second transmission licensee in the State of Bihar, even though they were directed to do so and were informed by Secretary of the Commission vide letter no. 550 dated 02.05.2019.
- 3.2. **Submission of BSPTCL:** In the public hearing held on 30.04.2019, BSPTCL sought time of three weeks to submit comments on the consultative paper, citing that they are in the process of gathering experience about TBCB from other States.
- 3.3. On the next public hearing held on 11.06.2019, BSPTCL admitted that there was no dispute on the issue of setting threshold limit for Intra-State transmission projects to be developed through TBCB mode in the light of Tariff Policy of 2016. However, expressing their reservation on the efficacy of execution of such projects through TBCB method in the light of certain project experiences in the past, the representatives of BSPTCL submitted that modalities for implementation of transmission projects above threshold limits should be worked out and the State Government should also be taken on-board on this issue. The modus operandi adopted by Central Government in allotting the Inter-State transmission projects under TBCB mode was explained by them. Examples of states like Maharashtra and Rajasthan with respect to the procedure adopted in development of the transmission project through TBCB mode were also cited by the representatives of BSPTCL.
- 3.4. BSPTCL insisted on taking State Government on-board before taking any decision in the instant proceeding and sought time to take up this issue before the competent authority and come up with the reply on next hearing.
- 3.5. On next hearing held on 15.11.2019 BSPTCL submitted resolution of the Board of Directors of BSPTCL passed in its 79th meeting which held on 27.09.2019. The resolution states that fixing of threshold limit is not appropriate as of now, on the grounds that BSPTCL projects are funded by Government through 80:20 debt-

equity ratio – which makes the current mode of execution of projects more economical. No separate views of the state government were produced by BSPTCL and instead it was submitted by them that the Principle Secretary to govt. Energy department is the Chairman of the Board of BSPTCL which has taken this decision in the Board.

- 3.6 **Submissions of Sterlite Power:** Sterlite Power Transmission Ltd. had submitted its comments/suggestions/objections on the consultative paper vide email dated 23.04.2019 and also submitted their comments and suggestions during subsequent Public Hearings on 30.04.2019, 11.06.2019, 04.10.2019 and 15.11.2019. Sterlite Power representatives cited relevant statutory provisions of the Electricity Act, 2003 and the Tariff Policy, 2016 and submitted that a threshold limit must be specified by the Commission in the interest of transparency and a competitive mode of tariff discovery.
- 3.7 In its submission, Sterlite power quoted judgements of Hon'ble APTEL and Hon'ble High court of Delhi and Supreme Court in which statutory provisions of the Act and guidelines/directions issued under the Act were highlighted. Based upon judgements and provision of Tariff Policy, Sterlite power has stated that at Inter-State transmission, all transmission projects are developed following tariff based competitive bidding except for certain projects which are either emergent or security sensitive to be decided on case to case basis. However, for Intra-State transmission project phrase 'case to case basis' has consciously been excluded. This means that for Intra-State transmission once the threshold limit is decided by the commission, there cannot be any exemption to bidding process, either on case to case basis, or otherwise and all such transmission projects above threshold limit have to be executed through TBCB mode as per section 63 of the Electricity Act.
- 3.8 It was further submitted that at Inter-State level the size of individual transmission project has not been the criteria for identifying projects under TBCB mode. Sterlite Power submitted with example about several Inter-State transmission projects awarded under TBCB mode of value less than Rs. 100 crore. The criteria for awarding was not size/scheme of the projects rather completeness of the projects comprising end-to-end elements (including downstream and upstream). Sterlite Power recommended similar approach of clubbing of elements/projects for end-to-end scheme (including downstream and upstream) to be developed under TBCB mode at Intra-State transmission level so



that once project is completed it would not depend upon upstream or downstream network and put to use immediately.

It was also submitted that threshold limit of 100 crore is sufficiently large and commission may consider to reduce it gradually based upon experience as 75% of the past projects of BSPTCL were of 100 crore or less.

- 3.9 Based upon guidelines issued by Ministry of Power, Government of India on 13.04.2006 for Tariff Based Competitive bidding for Transmission service for Inter-State transmission projects, Sterlite Power suggested procedures which may be adopted at Intra-State Level.
- 3.10 Sterlite Power shared information of setting Rs. 50.0 crore as threshold limit of Transmission Projects to be executed through TBCB route by Hon'ble Punjab State Electricity Regulatory Commission's vide its Gazette Notification No. PSERC/Secy/132 dated 05.11.2018. The notifications states that:

*In accordance with para 5.3 of National Tariff Policy, the Punjab State Electricity Regulatory Commission hereby decides that intra-state transmission projects costing more than Rs. 50 Crore shall be developed by State Govt./STU through tariff based competitive bidding.*

Sterlite Power further submitted that the clarity in direction ensures successful implementation of the competitive bidding mode in Punjab and gives positive signal to other States towards evaluating the same. Benefits of competitive bidding in transmission and Threshold limit notification have been discussed during respective SERC public hearings in Madhya Pradesh, Maharashtra, Uttar Pradesh and Haryana.

- 3.11 **Submissions of Adani Transmission:** Adani Transmission Ltd. submitted its comments vide letter no. ATL/BERC/29042019 dated 29.04.2019. It submitted that all inter-state and intra-state transmission projects should be developed on competitive bidding mode, so that the end customers can enjoy the benefit of lower tariff. To kick-start the process, the threshold limit value can be set at Rs 50 Cr, and this limit should also be reduced and removed in a time bound manner.
- 3.12 In another submission vide its letter no. ATL/BERC/10052019 dated 10.05.2019, Adani Transmission shared a note on procedure that can be adopted for awarding intra-state transmission projects on TBCB route. They also stated that many Inter-State and Intra-State transmission projects have been

successfully awarded/ commissioned through TBCB process, and Bihar would get overwhelming participation from incumbents as well as new players from the Private sector.

- 3.13 **Submissions of CII:** CII has submitted that the initiative for setting threshold limit for transmission projects is in true spirit of the Electricity Act and in accordance with mandate of Tariff Policy mandate. The threshold limit of Rs 100 Cr is large enough to design end-to-end intra-state transmission projects in Bihar, thus offering sufficient scope of work and elicit response from private sector. This threshold limit value also offers sufficient scale to bring in cost efficiencies which ultimately lead to tariff reduction for end consumers in Bihar.
- 3.14 **Submissions of IEX:** Shri Rajesh K Mediratta, Director (Business Development), IEX as a member of Bihar State Advisory Committee, IEX welcomed the move and stated that they strongly believe that this step would nurture competition in transmission business.
- 3.15 The Commission, after hearing arguments of all the stakeholders and comments/suggestions /objections received, concluded the hearing on 15.11.2019 and reserved the order.

#### **4. Commission's Analysis and Observations:**

- 4.1 Based upon written submission of stakeholders viz. Sterlite Power, Adanai Transmission, CII, IEX, and arguments and submission put forth by BSPTCL during hearing, Commission opined that the States which have been referred by the BSPTCL have not set a threshold limit for development of transmission projects through TBCB. At the level of Central Government for Inter-State transmission projects, there is no requirement of threshold limit. Committees set up with the technical assistance of CEA are responsible for formulating and deciding projects to be developed under TBCB route. The projects exempted from TBCB mode and modalities for execution are laid down by the Government of India through these committees.

The scenario in the case of Intra-State transmission projects to be executed through TBCB mode is different in the sense that the states are required to set a State-specific threshold limit for Intra-State transmission projects to be developed through TBCB mode. Precisely with this objective, the instant proceedings have been initiated to set such a threshold limit in Bihar. It is, therefore, observed that the procedure adopted in the Central Government, and State Governments of

Maharashtra and Rajasthan may not be suitable to Bihar as argued by BSPTCL. Once the Commission sets the threshold limit, the Intra-State transmission projects above that value shall be implemented under TBCB mode of development.

If BSPTCL believes, as argued in hearing that its current mode of execution of projects is cheaper in comparison to TBCB mode, then it should also be able to compete and win projects in a fair and transparent competitive bidding process under TBCB mode. Commission opine that for promoting competition, and in the interest of the people of the State, BSPTCL should appreciate the move of the Commission and welcome TBCB route of development of Intra-State transmission projects above proposed threshold limit to ensure savings in transmission tariff for consumers of the State.

To substantiate, further analysis is as follow:

- 4.2 **Existing Intra-State Transmission System of BSPTCL:** The existing transmission system of BSPTCL as on 27th November 2018, as mentioned in the Tariff Order for FY 2019-20 is as follows:

Particulars	132 kV	220 kV	400 kV
Transmission Lines in ckm	10063.62	4074.144	--

Particulars	132 / 25 kV	132 / 33 kV	220 / 132 kV
No of GSS	16	119	2
Transformation Capacity in MVA	--	12150	6750

- 4.3 **Increasing Per Capita Consumption and electricity demand growth:** Bihar's per capita consumption has almost doubled over the last 5 years from just 134 units per capita in the year 2011-12 to 272 units per capita by 2016-17 at a CAGR of 15.21%. During the same period, the All India average per capita electricity consumption has increased from 884 units to 1122 units, indicating a CAGR of just 4.88%. The per capita electricity consumption in Bihar needs to grow more than four times, to meet the 2016-17 national average also because of implementation of Saubhagya and Har Ghar Bijli schemes of the government.

The State has also seen an unprecedented peak demand growth of 250% in the last seven years. The peak demand has increased from 2057 MW in 2011-12 to a robust 5115 MW for 2018-19, which demonstrates the increasing penetration of electricity in the state and sets a new baseline for future electricity demand

4.4 **Transmission Losses:** Commission in its tariff orders has specified a transmission loss level of 3.92% for years 2015-16, 2016-17 and 2017-18. However, the actual transmission loss experienced by the STU has been 4.89% in 2015-16, 4.74% for 2016-17 and 4.49% for 2017-18, which are 0.97%, 0.82% and 0.57% higher than the target losses set. This increased loss level resulted in a power loss of Rs 89 Cr (219 MU), Rs 79 Cr (197 MU) and Rs 67 Cr (152 MU) for 2015-16, 2016-17 and 2017-18 respectively, considering the approved cost of power purchase. Thus, STU should prepare a road map to achieve transmission loss in the range 3-3.5% as has been achieved by many States in the country.

Even peer states such as Odisha and Chhattisgarh operate at a much lower transmission loss levels of 3.88% and 3.22% respectively, while having similar peak and energy demands. On the parameter of transmission ckt km per 1000 persons, Odisha stands at 0.308 and Chhattisgarh stands at 0.426 while the same for Bihar is just 0.101 ckm which is 3 to 4 times less than Odisha & Chattisgarh. Similarly, on the parameter of transformation capacity per 1000 persons, Odisha stands at 0.402 MVA and Chhattisgarh stands at 0.546 MVA while the same for Bihar is just 0.152 MVA. In fact, Odisha and Chhattisgarh figures are much lower than the states like Gujarat/Andhra Pradesh or Telangana.

4.5 **Expected Growth in the Transmission System:** The state's electricity consumption trends, Electric Power Survey projections and the transmission system analysis seem to reflect a need of significant transmission system augmentation need.

As per Report on 19<sup>th</sup> Electric Power Survey of India by Central Electricity Authority in January 2017, the Annual Peak Demand for the State of Bihar would be as under:

<b>Bihar (Utilities only)</b>	<b>FY 2016-17</b>	<b>FY2021-22</b>	<b>FY2026-27</b>	<b>FY2031-32</b>	<b>FY2036-37</b>
Peak Electricity Demand at Power Station Bus Bars (inMW)	3,607	6,576	9,308	11,944	14,495
Requirement at Power Station Bus Bars (in Million Units)	21,599	38,416	54,363	68,374	82,978

4.6 A demand growth with a CAGR of approx. 7.60% is envisaged between FY 2016-17 to FY 2036-37, which would require substantial investment in the intra-state transmission system. Needless to say, the concept of threshold limit would

necessitate the majority of these capital investments to be brought into the ambit of TBCB mode. Commission believes that this would, in turn, is likely to reduce the future transmission costs and thereby reduced tariff to consumers due to lower Intra-State transmission charges.

- 4.7 From the above, it may be concluded that high transmission loss levels and low transmission/transformation capacity are indicative of over-load on the system and inadequacy of transmission infrastructure. Given the situation of low per capita consumption with aspiration to reach the national average in the next 4-5 years, the target of the Government of Bihar to provide 24x7 electricity to all households and to address the integration of renewable energy sources with Bihar Grid, the Commission believes that the transmission systems would need to be sufficiently strengthened/augmented entailing significant investment in the transmission network.
- 4.8 **Need for Coordinated Planning and packaging of schemes:** The Commission looked at the details of the transmission schemes/works submitted by BSPTCL during tariff approval process and realized that BSPTCL tenders out work pertaining to Construction, Augmentation and R&M of Sub-Stations, line bays, transformer bays, transmission line, reconductoring etc. This entails various small tenders of very low values, large number of which could be pooled together as schemes/projects comprising of end-to- end elements so as to explore the economies of scale. These packaged schemes/projects could be developed efficiently under TBCB mode.
- 4.9 If such transmission schemes/projects are awarded/planned as a composite scheme comprising of complete scope at both the interconnection points including upstream/downstream elements and their associated bays, there is significant scope for gaining efficiencies in procurement and construction resulting in lower tariffs to the end consumers.
- 4.10 The Central Electricity Regulatory Commission (CERC) in its Advisory dated 14.10.2016 to the Ministry of Power (MoP) has advised that *“in case of new transmission network, splitting the network into components and award of the project through TBCB complicates the execution of project. Therefore, it is advisable to identify the entire network for development through TBCB, instead of comparatively smaller elements, commissioning of which depends upon commissioning of all upstream/ downstream elements.”*

4.11 Hence, it is imperative that for efficient and economical development of transmission capacity in the State under TBCB, the transmission schemes, new and augmentation, be planned/ designed and bid out with corresponding upstream and downstream elements. This would also obviate coordination and interface issues.

4.12 In order to achieve the above, Commission is of view that defining a threshold limit is the first step towards enabling competition in the intra-state transmission sector in the State of Bihar and is also in accordance with the provisions of Tariff Policy, 2016. The threshold limit should be decided in such a way that it should not only encourage serious and genuine competition to bring in efficiencies in capital investment in the intra-state transmission system, but also ensure that small and urgent capital works are not hindered for need of the bidding process every time and can be undertaken by the BSPTCL directly.

4.13 The broad principles that need to be borne in mind for specifying the threshold limit, while implementing the provisions of the Tariff policy are:

- (a) Consider planning and development of end-to-end transmission schemes with upstream and downstream elements which can be put to use without depending upon other elements;
- (b) Achieving efficient and economic procurement of equipment and economies of scale in development;
- (c) O&M expenses over the life cycle of projects to be directly dependent on the size of the Scheme;
- (d) Conducive to incite interest of bidders participating in competitive bidding; and
- (e) Interface and coordination issues to be minimised.

4.14 For determining the threshold limit for transmission projects in Bihar, the Commission has come across the details of the transmission schemes/works submitted by BSPTCL during tariff approval process and approved in Tariff Order of BSPTCL for FY 2019-20.

A broad categorization of schemes demonstrates that out of the 139 schemes shared by BSPTCL, 67 schemes are below the value of Rs 50 Crore, 61 schemes are between value of Rs 50 to 100 Crore and 11 schemes (i.e. only about 8%) are above the value of Rs 100 Crore. The same is also summarised in table below:

Scheme Type	No. of	Capex	No. of Schemes	Value of Schemes
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	Schemes	(Rs Cr)	<50 Cr	50 to 100 Cr	100 to 200 Cr	<50 Cr	50 to 100 Cr	100 to 200 Cr
400 kV S/s & Lines	2	434.19	0	0	2	0.00	0.00	434.19
220 kV S/s & Lines	47	4224.98	14	31	2	331.42	774.38	3119.18
132 kV S/s & Lines	79	3181.31	47	26	6	1077.30	1370.14	733.87
33 kV S/s & Lines	6	231.29	4	2	0	105.41	125.88	0.00
Others	5	338.22	2	2	1	42.63	135.19	160.40
<b>Total</b>	<b>139</b>	<b>8409.99</b>	<b>67</b>	<b>61</b>	<b>11</b>	<b>1556.76</b>	<b>2405.59</b>	<b>4447.64</b>

Source: BSPTCL Tariff Order 2019-20, Table 6.3, and Table 6.4

As seen from the above table that more than 92% of the projects are less than the value of Rs 100 Crore. A threshold limit of Rs. 100 crore would provide adequate leeway to BSPTCL to bundle/ package projects into schemes to TBCB while also retaining the flexibility of undertaking critical and immediate schemes on its own under cost plus basis.

Based on the above the Commission has proposed in the consultation paper a threshold limit of Rs. 100 Crore for execution of project under TBCB route.

- 4.15 Through the above detailed process and analysis, the Commission has arrived at a threshold limit value of Rs. 100 Crore for development of Intra-State Transmission Projects under TBCB mode. However, for planning and creation of future transmission infrastructure optimum packaging of projects is required.

At the central level, competitive mode of development of transmission infrastructure is implemented in association with CTU/CEA/Committees, however such a mechanism does not exist at the State level. Therefore, clarity with respect to execution of projects under TBCB mode needs to be brought in the form of Guidelines.

- 4.16 In view of above commission analysis that there are two important issues emerges namely:
- i) Specifying a threshold limit and
  - ii) Execution of those schemes identified for future creation of transmission infrastructure for TBCB

- 4.17 Regarding issue of specifying threshold limit, Commission has proposed Rs. 100 Crore on which comments/objections/ suggestions were received from the stakeholders. However, regarding second issue, i.e. responsibility of creation of new transmission infrastructure on competitive mode, there were significant

discussions during the hearing and as such no state has specified threshold limit except Punjab SERC. In view of this, for implementing transmission projects on TBCB mode, the Commission specifies the following broad guidelines:

- (a) The Commission has notified Bihar Electricity Regulatory Commission (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 which lays down the procedure to be followed by State Transmission Utility (STU) for assessment of transmission infrastructure requirements, which comprises, but is not limited to, infrastructure requirement commensurate with load growth forecast and demand projections, capital investment plan, financing plan and physical targets, preparation of capital investment plan for next 10 years and submission of capital investment plan every year for approval of the Commission.
- (b) The capital investment plan so prepared will be applicable for the state of Bihar. Such Capital Investment Plan shall contain the intra-state transmission schemes identified to meet the forecasted demand and supply and system strengthening requirements.
- (c) STU, in coordination with the stakeholders viz the transmission licensee (s), shall adhere to the Central Electricity Regulatory Commission's advisory dated 14th October 2016 to Ministry of Power, para 12(a), which advises that *"splitting the network into components and award of the project through TBCB complicates the execution of project. Therefore, it is advisable to identify the entire network for development through TBCB, instead of comparatively smaller elements, commissioning of which depends upon commissioning of all upstream/ downstream elements."*
- (d) Accordingly, the STU shall submit to the Commission's approval, complete intra-state transmission schemes and shall not split intra-state transmission schemes into components and individual elements of sub-stations, lines, bay extension etc. Each of these "complete intra-state transmission schemes" would need to identify the specific purpose for which they are being conceived, list of elements comprising such scheme, timeline for its completion and the expected cost of executing the same.
- (e) The Capital Investment Plan shall identify the intra-state transmission scheme that are above the threshold limit and need to be developed under TBCB route in accordance to the Tariff Policy and BERG MYT Regulations, 2018.



4.19 The Commission believes that the threshold limit shall not only trigger efficiencies of competition in the transmission sector by right sizing of projects for competitive bidding but also would leave sufficient scope for the STU to carry out any emergent & critical projects.

4.20 (a) **Based on the above analysis, the Commission hereby specifies the ‘Threshold Limit’ at Rs. 100 Crore above which all new and augmentation schemes for transmission shall be developed under TBCB route.**

(b) As mandated in Act/Regulations, commission direct STU (BSPTCL) to frame the detailed guidelines for of implementation of schemes under TBCB and send to the commission for approval by **15.03.2020**.

With above observations & direction the instant Suo-Motu proceeding stands disposed of.

Sd/-  
**(R. K. Choudhary)**  
**Member**

Sd/-  
**(Rajeev Amit)**  
**Member**

Sd/-  
**(S. K. Negi)**  
**Chairman**



# Punjab Government Gazette

## EXTRAORDINARY

*Published by Authority*

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CHANDIGARH, MONDAY, NOVEMBER 5, 2018 (KARTIKA 14, 1940 SAKA)

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PUNJAB STATE ELECTRICITY REGULATORY COMMISSION

### NOTIFICATION

The 5th November, 2018

**No. PSERC/Secy/132.**-In accordance with para 5.3 of National Tariff Policy, the Punjab State Electricity Regulatory Commission hereby decides that intra-state transmission projects costing more than Rs. 50 Crore shall be developed by State Govt./STU through tariff based competitive bidding.

By order of the Commission

Sd/-

SECRETARY

1634/11-2018/Pb. Govt. Press, S.A.S. Nagar