JOINT ELECTRICITY REGULATORY COMMISSION
(For the State of Goa and Union Territories)
3rd & 4th Floor, Plot No. 55- 56,
Udyog Vihar Phase- IV, Sector 18, Gurugram, Haryana 122015
Website: www.jercuts.gov.in

No. _____ Dated: 25.02.2023

In exercise of the powers conferred under Section 63 & 86 of the Electricity Act, 2003 (36 of 2003), National Electricity policy, 2005, Tariff Policy, 2016, and for the compliance of the directives issued by the Hon'ble Supreme Court in the matter of Civil Appeal No. 1933 of 2022, and all other powers enabling it in this behalf, the Joint Electricity Regulatory Commission (for the State of Goa & Union Territories) hereby makes the draft Consultation Paper on Determination of 'Threshold Limit' for the development of Intra-State transmission projects through tariff-based competitive bidding (TBCB). The draft consultation paper on the cited matter is available on the website of the Commission i.e., www.jercuts.gov.in and is also enclosed herewith.

The Commission invites comments / suggestions on the Consultation Paper from general public and stakeholders on or before 31.03.2023 addressed to the Secretary, Joint Electricity Regulatory Commission (for the State of Goa & Union Territories), 3rd & 4th Floor, Plot No. 55- 56, Udyog Vihar, Phase- IV, Sector 18, Gurugram, Haryana 122015 (email: secy.jercuts@gov.in).

Sd/-
(S.D. Sharma)
Secretary, (I/c), JERC

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Draft Consultation Paper

on

Determination of 'Threshold Limit' for the development of Intra-State transmission projects through tariff-based competitive bidding (TBCB)

February, 2023

List of Acronyms

Acronym	Full Form
AERC	Assam Electricity Regulatory Commission
BERC	Bihar Electricity Regulatory Commission
BPC	Bid Process Coordinator
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CTU	Central Transmission Unit
Cr.	Crore
CAGR	Compound Annual Growth Rate
EPS	Electric Power Survey
GoI	Government of India
HERC	Haryana Electricity Regulatory Commission
JERC	Joint Electricity Regulatory Commission (for the State of Goa & UTs)
LTTC	Long-term tariff Contracts
MoP	Ministry of Power
MERC	Maharashtra Electricity Regulatory Commission
NEP	National Electricity Policy
NTP	National Tariff Policy
PSERC	Punjab State Electricity Regulatory Commission
RERC	Rajasthan Electricity Regulatory Commission
SERCs	State Electricity Regulatory Commissions
TSA	Transmission Service Agreement
TBCB	Tariff Based Competitive Bidding
U.T.	Union Territories
UPERC	Uttar Pradesh Electricity Regulatory Commission

1. **Electricity Act, 2003**

a. 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 is as follows:

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.

b. The State Commission has been vested with the responsibility to determine the Tariff for Generation, Supply, Transmission under Section 86 of the Electricity Act, as follows:

"Section 86. (Functions of State Commission)

(1) The State Commission shall discharge the following functions, namely: -

(a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State..."

c. As regards to Determination of Tariff by bidding process, Section 63 of the Act provides regulatory provisions for adoption of the Tariff determined through transparent process of bidding, as follows:

*"**Section 63. (Determination of tariff by bidding process):***
Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government."

2. **National Electricity Policy, 2005**

The National Electricity Policy, 2005 also acknowledged the need of promoting private section participation in the electricity sector, including transmission segment.

5.3.1 The Transmission System requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country.

3. Tariff Policy, 2016

The revised Tariff Policy notified on 28.01.2016 emphasised the importance of competition in the electricity sector.

> *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.*

Specifically, for the transmission sector, the Tariff Policy, 2016 envisages development of Intra-State transmission projects costing above a threshold limit through the tariff based competitive bidding.

> *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 6thJanuary, 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.*

4. Forum of Regulators

Forum of Regulators in their 52nd Meeting held in February 2016, while discussing the revised Tariff Policy notified on 28thJanuary 2016, identified specifying threshold limit for intra-state transmission projects through competitive bidding process, as one of the action points by SERCs.

Further, in its 61st Meeting held in September 2017 the Forum of Regulators again deliberated on the issue at length. It was discussed that though in some States,

development of State-level transmission projects was carried out through tariff based competitive bidding (TBCB) route and in some States, the conventional route of EPC based contracting is reportedly followed, however, none of the SERCs has determined the threshold limit of the projects to be considered under TBCB route, 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.

5. Ministry of Power Guidelines

MoP, GoI in its Guidelines dated 15/03/2021 recommended adoption of TBCB for Intra State Transmission projects in the larger interest of consumers. This reduces the burden on Government finances and scarce Government fund can be spared for other priority sectors. Also, it encourages use of advanced technology for improving cost and efficiency. Relevant Clause of MoP, GoI guidelines are as follows:

"6. In line with provisions of the Tariff Policy 2016, generally inter-state transmission systems are developed through competitive bidding only, except for certain categories of transmission system as specified in the Tariff Policy 2016. With adoption of Tariff Based Competitive Bidding for development of transmission system, following key benefits have been observed:

i) Lower Tariff compared to Cost Plus: With large number of bidders participating in development of a transmission project, discovered tariff for a transmission project can be lower than cost-plus tariff by about 30-40%.

ii) Less burden on government finances: It will attract private investments for development of projects and scarce government fund can be spared for other priority sectors.

iii) Risk sharing: It encourage risk sharing with private sector. Innovative Technology: It encourages use of advanced technology for improving cost and efficiency."

MoP, GoI in its Guidelines dated 10/08/2021 by which it has encouraged competition in Development of Intra STS Projects by introducing Tariff based through e-reverse bidding for Transmission Services. The projects shall be awarded on Build, Own, Operate and Transfer (BOOT) mode, as follows:

"17. The selection of developer for identified projects would be through tariff based competitive bidding through e-reverse bidding for transmission services according

to the guidelines issued by the Ministry of Power under section 63 of the Electricity Act, 2003. The projects shall be awarded on Build, Own, Operate and Transfer mode.

...

21. As far as intra State projects are concerned the State Governments may adopt these guidelines and may constitute similar committees for facilitation of transmission projects within the State. The States also have the option to use Viability Gap Funding (VGF) based Model Transmission Agreement (MTA) document of erstwhile Planning Commission for development of transmission system in their States under Public Private Partnership (PPP) mode."

6. Directives issued by the Hon'ble Supreme Court

The Hon'ble Supreme Court in the matter of Civil Appeal No. 1933 of 2022 passed an order dated 23rd November, 2022 with various directives to the State Electricity Regulatory Commissions (SERCs), which are provided below:

"We direct all State Regulatory Commissions are directed to frame Regulations under Section 181 of the Act on the terms and conditions for determination of tariff within three months from the date of this judgment. While framing these guidelines on the determination of tariff, the Appropriate Commission shall be guided by the principles prescribed in Section 61, which also includes the NEP and NTP. Where the Appropriate Commission(s) has already framed regulations, they shall be amended to include provisions on the criteria for choosing the modalities to determine the tariff, in case they have not been already included. The Commissions while being guided by the principles contained in Section 61 shall effectuate a balance that would create a sustainable model of electricity regulation in the States. The Regulatory Commission shall curate to the specific needs of the State while framing these regulations. Further, the regulations framed must be in consonance with the objective of the Electricity Act 2003, which is to enhance the investment of private stakeholders in the electricity regulatory sector so as to create a sustainable and effective system of tariff determination that is cost efficient so that such benefits percolate to the end consumers."

In view of the above, the Commission is required to notify a threshold limit in terms of project cost, above which the intra-state transmission projects shall necessarily be developed through TBCB mode only. The Commission, only under exceptional circumstances shall consider approving some of the projects under the regulatory cost-plus mode. Commission also needs to provide guidelines for designing a package/scheme/project for the purpose of checking its eligibility for inclusion in the Business Plan of the transmission licensee for regulatory approval

or for it to be implemented through TBCB mode. This is necessitated to provide clarity to the transmission licensees for preparing the Business Plan for the Control Period as well as Capital Investment Plan to be submitted by the transmission licensees as a part of their ARR filings, in accordance with Clause 8.3 of JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021.

7. Intra-State Transmission System across the State & UTs under the jurisdiction of the Commission & need for Coordinated Planning

7.1 Expected Growth in the Transmission System:

The electricity consumption trends, Electric Power Survey (EPS) projects and the transmission system analysis of all UTs and State under the jurisdiction of the Commission seems to reflect a significant system augmentation need.

20th Electric Power Survey

As per the 20th Electric Power Survey Report of India by Central Electric Authority (CEA) in November, 2022, the Annual Peak Demand for the State/UTs under the jurisdiction of the Commission would be as under:

State/UT-wise Peak Electricity Demand at Power Station Bus Bars (in MW):

State/UTs	2021-22	2026-27	2031-32	2036-37	2041-42	CAGR (%)
Chandigarh	428	492	563	641	726	2.82%
Dadar & Nagar Haveli	892	1,273	1,617	2,030	2,521	5.62%
Daman & Diu	373	493	631	793	979	5.21%
Goa	703	901	1,128	1,401	1,725	4.84%
A&N	60	67	75	83	92	2.28%
Puducherry	473	567	652	746	849	3.13%
Lakshadweep	11	13	15	17	19	2.92%

State/UT-wise Electrical Energy Requirement at Power Station Bus Bars (in MUs):

State/UTs	2021-22	2026-27	2031-32	2036-37	2041-42	CAGR (%)
Chandigarh	1,606	1,911	2,157	2,419	2,699	2.77%
Dadar & Nagar Haveli	6,848	9,559	11,919	14,773	18,205	5.28%
Daman & Diu	2,615	3,437	4,355	5,410	6,600	4.99%
Goa	4,456	5,512	6,847	8,438	10,319	4.52%
A&N	338	368	394	420	447	1.48%
Puducherry	2,907	3,436	3,947	4,507	5,117	3.02%
Lakshadweep	56	66	77	88	99	3.04%

A demand growth with a CAGR of 2.82%, 5.62% 5.21%, 4.84%, 2.28%, 3.13% & 2.92% is envisaged between FY 2021-22 to FY 2041-42 for Chandigarh, Dadar & Nagar Haveli, Daman & Diu, Goa, A&N, Puducherry, and Lakshadweep respectively which would require substantial investment in the intra-state transmission system. Needless to say, the concept of threshold limit would necessitate majority of these capital investments to be brought into the ambit of TBCB mode. This would in turn reduce the future transmission costs, which will finally percolate in the form of reduced burden on retail consumer tariff in the long run.

Increasing Load across the State/UTs

State/UT-wise Connected Load (in kW/kVA) as per the tariff order issued for the respective financial years:

State/UTs	2020-21	2021-22	2022-23	CAGR (%)
Chandigarh	1666462	1624868	1686035	0.59%
Dadar & Nagar Haveli	1505663	1505663	1502738	-0.10%
Daman & Diu	915468	949128	803084	-6.34%
Goa	2865665	2978033	3263959	6.72%
A&N	298781	330059	383154	13.24%
Puducherry	1502467	1568497	1331738	-5.85%
Lakshadweep	121450	120545	125247	1.55%

Connected load (kW/kVA) across the State/UTs under the jurisdiction of the Commission for FY 2020-21 to FY 2022-23 have been increased with a CAGR of 0.59%, 6.72%, 13.24%, and 1.55% for Chandigarh, Goa, A&N and Lakshadweep respectively.

Per Capita Electricity Consumption

State/UT-wise Per Capita Electricity Consumption (in kWh) for FY 2021-22:

State/UTs	Per Capita Consumption (kWh)	Per Capita of State/UTs as a percentage of (All India Annual Per Capita Consumption of Electricity)*
Chandigarh	1528.57	121.80%
Dadar & Nagar Haveli	12249.98	976.09%
Daman & Diu	5913.66	471.21%
Goa	3735.51	297.65%
A&N	877.53	69.92%
Puducherry	2138.42	170.39%
Lakshadweep	818.71	65.24%

*All India Annual Per Capita Consumption of Electricity for FY 2021-22 is 1255 kWh

As per the CEA's Executive Summary on Power Sector for December, 2022 the Per Capita Consumption of Electricity across the above-mentioned State/UTs are higher than the All India Annual Per Capita Consumption of Electricity for FY 2021-22 (except for A&N and Lakshadweep) which demonstrates