Date: 31.07.2023

To,

Shri Harpreet Singh Pruthi,
Secretary, Central Electricity Regulatory Commission,
3rd and 4th Floor, Chanderlok Building,
36, Janpath, New Delhi-110001

Sub: Comments on "Approach Paper on Terms and Conditions of Tariff Regulations for Tariff Period 1.4.2024 to 31.3.2029"

Dear Sir,

The Hon'ble Commission, vide public notice dated 26.05.2023 has invited comments/ suggestions/ on the subject Approach Paper. Our comments on the same has been annexed as **Annexure-1**.

We request the Hon'ble Commission to take our views on record.

Thanking You
Yours Sincerely,

Sterlite Power Transmission Limited

Balaji Sivan,
Director- Policy, Regulatory & BD
Sterlite Power, Gurugram, 122008, Haryana

Annexure-1.

1. **Return on Equity: Para 4.16 of Approach Paper and Regulation 30 (2) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.**

Comment:

Considering present market expectations, development risk, trend of RBI Repo Rate, Interbank Rate & SBI Base Rate/MCLR etc, we request Hon'ble commission to relook at the guaranteed 15.5% return under section 62 projects.

In recent times, State regulators ie. Rajasthan, Maharashtra, and Delhi have dealt with the matter of Return on Equity basis above stated factor and have downwardly revised the RoE for the Section 62 projects. Furthermore, the market is gravitating towards competitive regime (TBCB) where the discovered tariffs are significantly lower (30-40%) than the section 62 project (RTM). The developers in the competitive regime have settled for lower ROE than 15.5% which resulted up to 40% reduction in tariffs discovered via TBCB in Inter State Transmission projects (ISTS) and Intra State Transmission Projects (InSTS) (Reference Table 1).

Further we suggest Hon'ble Commission to adopt concept of graded return on equity (reducing return on equity for subsequent periods).

Table 1: Tariff reduction achieved from Competition in ISTS projects

Project Name	Winning Bidder	Project Type	Revised Cost *(Rs Cr)*	Winning Tariff *(Rs Cr)*	Cost-Plus Tariff* *(Rs Cr)*	Reduction from cost plus tariff
ISTS GEC Bids (Average Reduction of 40% achieved)						
P1 - WRSS 21 - Part A	Adani	ISTS	1090	95	174	**45%**
P2 - WRSS 21 - Part B	Sterlite	ISTS	2003	179	281.8	**36%**
P3 - Bhuj Dwarka Lakadiya	Adani	ISTS	1053	83	141.2	**41%**
P4 - Bhuj II	PGCIL	ISTS	1409	124	207.6	**40%**
P5 - Jam Khambaliya	Adani	ISTS	394	34	66.5	**49%**
P6 - Ajmer Phagi	PGCIL	ISTS	872	61	117.5	**48%**
P9 - Rajasthan SEZ Part D	Adani	ISTS	1631	100	229.5	**56%**
KUDGI	L&T	ISTS	1240	180	232.7	**23%**
HEPs of Bhutan	KPTL	ISTS	1272	129	184.9	**30%**
GEC - II (Part F)	PGCIL	ISTS	2098	140	203.15	**31%**

** Cost-plus levelised Tariff Calculated @17% Cost*

Below is the compilation of various reports and relevant section of tariff regulation in support of the stated request:

FOR Report (April 2021)	FOR in its report of "ANALYSIS OF FACTORS IMPACTING RETAIL TARIFF AND MEASURES TO ADDRESS THEM" (Published in April 2022) has put emphasis on review of ROE for transmission companies on immediate basis as transmission business has the lowest risk in the entire value chain. Relevant Para of FOR Report is quoted below: ***"3.2.3. Return on equity allowed to Generation / Transmission and distribution companies needs to be made more realistic and at par with interest rates.*** *In the entire value chain, transmission business has the lowest risk. The RoE for transmission companies should therefore, be reviewed immediately. RoE for generation and transmission should be linked to the 10 year G Sec rate (average rate for last 5 years) plus risk premium subject to a cap as may be decided by Appropriate Commission. For a discom, the RoE could be fixed based on the risk premium assessed by the State Commission. Income tax reimbursement should be limited to the RoE component only."*
DERC Business Plan Report	DERC in its BPR 2023 has reduced ROE for Transmission/Generation to 13% (Post Tax) and for Distribution Licensee to 14% which was earlier 14% (Post Tax) in case of transmission/ generation Licensee and 16% (Post Tax) in case of Distribution Licensee. DERC has adopted CAPM method to determine ROE.
RERC Tariff Reg 2019	RERC in its Tariff Regulations 2019 has computed and notified Return on equity at the rate of 14% for Transmission Licensees and SLDC, 15% for Generating Companies and 16% for Distribution Licensees.
MERC Tariff Regulations 2019	MERC in its Tariff Regulations 2019 has notified that, **Base Return on Equity** for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, **at the rate of 14 per cent per annum** in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 % per annum in Indian Rupee terms. MERC in its Tariff Regulations 2019 has further notified that ROE for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 % per annum in Indian Rupee terms, and for the Retail Supply Business, ROE shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 % per annum in Indian Rupee terms. Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual performance and Additional ROE shall be allowed at time of truing up for respective year based on actual performance, after prudence check of the Commission. Further, In case of a new project, the rate of Return on Equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation

	without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the SLDC. MERC has linked the ROE with the performance which is a good initiative. Regulation of 29.7 of MERC Tariff Regulation 2019, allows additional ROE over base ROE. Regulation 29.7 is quoted below: *"29.7 In case of Transmission, an additional rate of Return on Equity shall be allowed on Transmission Availability, at time of truing up as per the following schedule:* *a) For every 0.50% over-achievement in Transmission Availability up to Transmission Availability of 99.50% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.75%;* *b) For every 0.25% over-achievement in Transmission Availability above 99.50% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.75%, subject to ceiling of additional rate of Return on Equity of 1.50%;* *Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental Availability higher than Target Availability:* *Provided further that Target Availability for additional rate of Return on Equity shall be as per Regulation 60."* **Reason for downward revision in ROE (Source: EM of draft MERC Tariff Reg):** Major States like Gujarat, Tamil Nadu, Haryana, and Kerala, the rate of RoE is allowed at **14% for Generating Companies, Transmission Licensees, and Distribution Licensees**. Considering the cost of equity, which works out to 12-15%, the **lower rate of RoE prevalent in quite a few States**, and the **need to strike a balance between the viability of the Utility and interest of the consumers**, it is **proposed to reduce the Base Rate of RoE to 14% for Generating Companies, Transmission Licensees**, SLDC, and Distribution Wires business. The Base rate of RoE for the Retail Supply Business is proposed at 15.5%, in view of the higher risks involved in the Business, as compared to the other Businesses.
FOR Multi Year Distribution Tariff (Feb 2023)	FOR in its Multi Year Distribution Tariff Published in Feb 2023 has specified, Distribution Licensee shall be allowed 14% post-tax return on equity.
Less Risk in Section 62 Project	Seeing the past data, most of the Section 62 projects have the liberty from Hon'ble Commission to condone the delay (time over run) and cost over run (subject to prudence check), thereby the tariff getting adjusted. This warrants the ROE to be much lower as most of the risk gets addressed through appropriate tariff revision.

With regard to above explanation, we request Hon'ble Commission to downward revision in ROE and also adoption of concept of graded ROE (reducing return on equity for subsequent periods). This would also balance the interest of end consumers by reduction in retail tariff of electricity.

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2: Operation & Maintenance (O&M): Para 4.12 of Approach Paper Regulation 35 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

Comment: We suggest that Hon'ble CERC may consider the actual O&M expenses in section 62 projects for the last few years for substation where bays extension/ICT addition has come. By analysing the actual O&M data statistically, Hon'ble CERC may come up with O&M expenses incurred with and without bay extension/ ICT addition. This will allow for the derivation of incremental cost for per bay or per MVA transformation capacity. Hon'ble CERC may derive norms for O&M cost of bays & ICTs for greenfield Substation and brownfield Substation, separately.

Further, Proviso (v) of Regulation 35(3)(a) mentions O&M expenses of STATCOM (SSC/SVC) as 1.5% of original project cost as on commercial operation with annual escalation @ 3.51%. Regarding O&M expenses of STATCOM there is no explanation provided in Explanatory Memorandum. We Request Hon'ble Commission to please relook and revise it on the basis of actual expenses occurred. Relevant Para is quoted below:

> *"the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years."*

Comparison for Specific Case (Actual Expense in Sterlite Project) vs CERC cost: Per bay cost is derived from actual cost and following CERC methodology.

Key Considerations:

1. Cost of Mandatory Spares and Testing has been considered on actuals for Bays and ICTs. (Hon'ble CERC apportions 50:50 for Bays and ICTs).

2. Breakdown cost: Breakdown for transformer and reactors during 35 years of operation is considered that is not covered under insurance.

Head and subhead of Actual expenses is given below:

Manpower Cost: Internal manpower, External Manpower (Security Substation, AMC contract SS, Cook)
Repair & Maintenance: General maintenance -Others, General maintenance (Oil Testing), Spares and RM, Machine Repair and Maintenance, Store Management, Testing, Electricity SS (Aux Consumption), OEM service, PLCC Maintenance, Energy Accounting Device Maintenance, Lease line charge, Insurance, Breakdown cost, Mandatory Spares, Contingency budget.
Fees & Charges: CERC License fees, Property tax: Land Revenue tax, Statutory Overheads (Liaisoning), Audits & Professional Fees, Vendor Compliance services.
Admin: Vehicle, Conveyance Domestic, Rent (Guest House), Electricity (Guest House), Office Expenses, Internet Charges.

Number of bays and transformer:

	Bays			Transformer		
Bays	**No.**	**Wt. factor**	**Equivalent 400kV bays**	**Transformation capacity**	**Wt. Factor**	**Equivalent MVA 765 kV**
765kV bays	9	1.4	13	3500 (765 kV)	1	3500
400kV bays	5	1	5	3500 (400 kV)	0.73	
		Total	18			

Per bay and Per MVA O&M Cost for 400kV and 765 kV level:

Description	Per bay cost- 400 kV	Per bay cost- 765 kV
Project (Inclusive of all cost)	23,17,533	32,44,546
Hon'ble CERC Norms	36,91,000	51,68,000

Description	Per MVA cost-400 kV	Per MVA cost-765 kV
Project (Inclusive of all cost)	6,034	8,266
Hon'ble CERC Norms	41,100	56,400

From above data, it is deduced that *per bay O&M* cost as per Hon'ble CERC norms is higher than actual cost incurred, and O&M cost of ICT is exorbitantly high as per Hon'ble CERC Norms as compared to actual cost.

While one may argue that the above example is broad generalization of results demonstrated through the example, it is a fact that the major cost i.e. Manpower cost is being or planned to be optimized by way of outsourcing, changes in wage structure etc both by the private and PSU.

Besides, in the recently released guideline by CEA i.e. *Guidelines for Operation and Maintenance of Bay Extensions/New Voltage Expansion awarded under TBCB (22.06.2023)* a comprehensive and exhaustive list of maintenance activities is provided. A careful perusal of the guidelines reveals that most of the maintenance activities are either SOS or annual/bi-annual activities. A few activities are on daily basis frequency involving only reading of the equipment. It is requested to the hon'ble commission to look into such aspects while determining normative cost and avoid the fallacy of averages.

The Hon'ble CERC philosophy for tariff regulation (as per Tariff Regulation 2019-24) involves deriving the per bay or per MVA cost by dividing the actual normalized costs (after apportioning the 50-50 cost for bay and ICT) by the number of bays/MVA capacity assumes linear relationship between O&M cost vs number of bays/ICTs. However, it may be noted that increasing the number of bays/transformation capacity (ICT) in the same substation only impacts the cost by incremental changes not linearly. Relevant Para from Explanatory Memorandum of CERC Tariff Regulation 2019-24 is reproduced below:

“15.5.2 For normalisation of the actual O&M expenses, the Commission has factored the following expenses heads as under.

a) Electricity charges have been apportioned in the ratio of electricity consumption in the sub-station and that in the colony. Only the former have been considered for the process of normalization;

b) Security Expenses (Normal and Special) and Self Insurance reserves are not considered for arriving at norms of operation and maintenance expenses, since the same shall be allowed separately, post prudence check taking into account actual expenditure;

c) Rebate to customers, donations, ex-gratia, productivity linked incentives, performance related pay have not been considered;

d) Expenditures on Corporate Social Responsibility (CSR) has not been considered;

e) Filing fees has not been considered, since the same are being allowed separately;

f) Prior period adjustments have been excluded, as these pertain to past periods and includes expenses of the nature other than O&M expenses also.

15.5.14 The arrived normative expenses have been apportioned between sub-stations and transmission lines (AC lines) in 75:25 ratio as followed in the 2014 Tariff Regulations. Further, O&M expenses allocated for substation is proposed to be divided in ratio of 50:50 for Bays and Transformers (MVA), in absence of adequate information in this regard.”

With regard to above explanation, we request Hon’ble Commission to provide norms for O&M cost of bays & ICTs for greenfield Substation and brownfield Substation, separately and further relook and revise O&M cost of STATCOM (SSC/SVC) on the basis of actual expenses incurred.