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KARNATAKA POWER TRANSMISSION CORPORATION LIMITED

Corporate Identity Number (CIN):U40109KA1999SGC025521

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No. KPTCL/B36/33982/2022-23/656
Encl:

Date : 12.07.2023

**The Secretary,
Central Electricity Regulatory Commission (CERC),
3rd and 4th Floor, Chanderlok Building,
36, Janpath,
New Delhi - 110001**

Sir,

Sub: Draft Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2023 –Suggestions/ Comments- Regarding

Ref: CERC Public Notice No: L-1/250/2019/CERC Dated: 12.06.2023.

Central Electricity Regulatory Commission (CERC) vide Public Notice Dated :12.06.2023 cited under reference has sought comments /suggestions /objections on the draft Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2023.

In this regard, I am directed to enclose herewith the comments/suggestions of KPTCL on Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2023 with a request to kindly place the same before the Hon'ble Commission for incorporating the suggestions made by KPTCL in the Draft Amendment Regulations.

*"This issues with approval of
The Director (Transmission), KPTCL."*

Yours faithfully,

**Financial Advisor
Regulatory Affairs**

Comments / Suggestions of KPTCL on the "The Draft Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2023".

Preamble:

Transmission asset will serve multiple purpose of evacuating RE from the Southern Region States to the rest of the Country. HVDC link plays an important role in integrating the entire Indian electrical Grid & would also strengthen its inter-connection from one region with rest of all India Grid. Since the transmission asset is of strategic and national importance, the benefits will be derived by the entire Country.

The ± 500 kV HVDC Mundra-Mohindergarh HVDC transmission system along with associated transmission system was initially built as a dedicated transmission system. It is observed from the Statement of Reasons to the third amendment to 2010 Sharing Regulations that Mundra-Mohindergarh HVDC was treated as National Asset for the capacity of 1005 MW, even though the transmission lines were dedicated in nature and the intended purpose was to evacuate power from Mundra Power Station (uni-directional). None of the other regional beneficiaries were availing power using that corridor other than NR. The Raigarh-Pugalur-Trissur HVDC system very well qualify at par with Biswanath-Chariali-Agra HVDC System as well as Mundra-Mohindergarh HVDC system for declaration as an asset of Strategic and National importance. The energy transferred through Biswanath Chariali-Agra HVDC corridor is very low as compared to the design capacity of the corridor. Whereas, in the case of Mundra-Mohindergarh HVDC corridor, power is being transferred uni-direction from Mundra to Mohindergarh from WR to NR. The Southern Regional beneficiaries are in no way benefitted out of the above two corridors as of now.

The Commission notified the 2020 Sharing Regulations, based on which it is submitted that since Raigarh-Pugalur-Trissur HVDC was not executed at the time of notification of the 2020 Sharing Regulations, the Commission would consider sharing based on bi-directional flow of power as and when the assets are brought to beneficial use. In view of the above, the Raigarh-Pugalur-Trissur HVDC system is providing all the benefits and the same are as follows:

- a. The HVDC lines will relieve the load in the intervening AC network.
- b. HVDC lines will help in voltage control, as power flow through parallel AC line can be increased/decreased as per the requirement.
- c. HVDC lines will enhance the power transfer capability of the transmission systems.
- d. HVDC lines will accommodate renewable-variation and intermittency can be taken care of.

The Hon'ble commission has introduced the following provision to be inserted under sub-clause (a) of Clause (1) of Regulation 6 of the Principal regulations:

Quote

"Provided that where an inter-regional HVDC transmission system planned to supply power to a particular region is operated to carry power in reverse direction due to system requirements, the percentage Yearly Transmission Charges of such transmission system to be considered in the regional component and the National component shall be calculated as follows:

HVDCr (in %) =

$$\frac{\sum_{k=1}^n \text{Maximum power flow in reverse direction (in MW) in any timeblock on } k\text{th day} \times 100}{\text{Capacity of HVDC transmission system in forward direction (MW)} \times \text{number of days in a month}}$$

Where k, is a day of a month with total 'n' days

where HVDCr >30%, the Yearly Transmission charges corresponding to HVDCr shall be considered in the National component and the balance in the regional component.

where HVDCr is ≤ 30%, 30% of Yearly Transmission Charges shall be considered in the National component and 70% in the Regional component."

Unquote

Comments/ Suggestions:

As per the transmission philosophy, LTOA, MTOA & STOA grant has been awarded for peak capacity of usage, irrespective of the usage (1% or 99%) of the time period in a year.

The Hon'ble CERC subsequently, introduced the draft Connectivity and GNA Regulation 2021 wherein constant GNA is introduced, for which many State / entities are requested to consider the monthly/seasonally/quarterly GNA allocation, instead of one constant GNA throughout the Year. The Commission did not consider the States/Entity (ies) request and introduced the Connectivity and GNA Regulation 2022 with constant GNA quantum.

In contrast, the Hon'ble Commission introduced this amendment on Sharing regulations 2022, when all the southern states have been fervently appealing to consider the HVDC Pugulur- Raigarh line as National Component(NC) through Tariff petition (Petition No. 685/TT/2020) and subsequent petition in APTEL (DFR No. 87 of 2023)

It may be noted, any transmission assets are created to cater the power (MW) flow irrespective of peak/off peak in the element. With the introduction of this amendment, dual stand of Hon'ble Commission is being observed for declaring charges of transmission assets. On one side, transmission charges are collected based on declared assets on its standard capacity, while on the other hand, as quoted in the above draft amendment, transmission charges is being collected on

the basis of usage of capacity. This is unfair and formula introduced in the amendment is unjust with respect to Southern states in particular.

The National component enables the YTC to be borne by all the entities thereby socializing the network in the interest of all entities in the Nation. (Illustration below)

Illustration: Power flow of HVDC Raigarh to Pugalur is mentioned below indicating that bi-directional power flow throughout the year, except for one or two months. It indicates that HVDC transmission assets are utilized by both Western Region as well as Southern Region States. This is as per the planning philosophy, that system is utilized by the **utilities**, once created irrespective of the loading(min/max) and same principle has been adopted on present transmission system assets.

The power flow of Raigarh-Pugalur HVDC for last two years is tabled below for kind reference;

Power flow of Raigarh to Pugalur

| Data obtained from SRLDC | Quantum of Power Flow in Fwd. direction (WR to SR) | HVDCr (in %) = | Quantum of Power Flow in Rvr. direction (SR to WR) | HVDCr (in %) = | | |
|--------------------------|--|----------------|--|----------------|-------|-------|
| | Month | | in MW | | Month | in MW |
| | | | Max. | | | Max. |
| Sep-20 | 1648 | 11.84 | 1461 | 3.94 | | |
| Oct-20 | 3013 | 12.27 | 1456 | 1.20 | | |
| Nov-20 | 2000 | 14.65 | 1463 | 1.34 | | |
| Dec-20 | 3287 | 24.35 | 0 | 0.00 | | |
| Jan-21 | 1505 | 17.47 | 963 | 9.85 | | |
| Feb-21 | 3018 | 24.92 | 962 | 2.84 | | |
| Mar-21 | 3312 | 47.79 | 0 | 0.00 | | |
| Apr-21 | 3025 | 44.16 | 0 | 0.00 | | |
| May-21 | 3021 | 23.93 | 978 | 2.25 | | |
| Jun-21 | 4340 | 15.68 | 1665 | 7.54 | | |
| Jul-21 | 2007 | 4.17 | 2163 | 21.24 | | |
| Aug-21 | 509 | 1.09 | 2165 | 22.89 | | |
| Sep-21 | 1010 | 3.93 | 2166 | 23.89 | | |
| Oct-21 | 1014 | 3.30 | 2166 | 19.23 | | |
| Nov-21 | 1513 | 7.00 | 1947 | 12.86 | | |
| Dec-21 | 3517 | 18.24 | 2419 | 14.67 | | |
| Jan-22 | 4019 | 29.85 | 1946 | 6.75 | | |
| Feb-22 | 3016 | 30.18 | 588 | 0.35 | | |
| Mar-22 | 6039 | 79.68 | 0 | 0.00 | | |
| Apr-22 | 6031 | 50.96 | 973 | 0.86 | | |

| | | | | |
|--------|------|-------|------|--------------|
| May-22 | 3517 | 9.34 | 2892 | 22.40 |
| Jun-22 | 2513 | 6.61 | 2889 | 31.95 |
| Jul-22 | 3013 | 13.34 | 2892 | 33.83 |
| Aug-22 | 3012 | 13.80 | 2892 | 34.11 |
| Sep-22 | 3521 | 15.78 | 2892 | 25.23 |
| Oct-22 | 2013 | 14.89 | 2420 | 3.19 |
| Nov-22 | 4510 | 27.51 | 0 | 0.00 |
| Dec-22 | 4501 | 36.46 | 2892 | 16.43 |
| Jan-23 | 5521 | 56.12 | 2417 | 7.04 |
| Feb-23 | 5021 | 61.02 | 589 | 0.33 |
| Mar-23 | 6163 | 89.49 | 1459 | 1.14 |
| Apr-23 | 6631 | 97.25 | 0 | 0.00 |
| May-23 | 6632 | 58.28 | 585 | 0.31 |

As seen from above, the flow in reverse direction from SR-WR is predominantly high in the RE season and it is marginally more than 30%. The draft amendment indicates that the National Component(NC) will be considered for the incremental increase above 30% and the balance under RC. This doesn't provide equitable justice to the southern states, while the Commission has adopted different yardsticks for similar HVDC project and consider it as National Component.

In view of the above, based on the bi-directional flow of power, Hon'ble Commission may declare the HVDC elements as Regional or National component and not on the methodology introduced in this draft amendment.

Further, since the Southern States have filed a petition before APTEL to consider the HVDC Pugulur- Raigarh line as National Component (NC) and is in adjudication, it is felt that, finalisation of the Draft CERC (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2023 could be considered after the outcome of the said Appeal.


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