

**Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan, R K Puram, New Delhi - 110066**

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To

The Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chanderlok Building,
36, Janpath,
New Delhi – 110001

Subject: **CERC Draft Regulation on Sharing of Inter State Transmission Charges
and Losses**

Our comments on CERC's Draft Regulation on Sharing of Inter State Transmission Charges and Losses are given at Annex-I.

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Encl: As above

**Central Electricity Authority
Comments on CERC's Draft Regulation on Sharing of
Inter State Transmission Charges and Losses**

1. Zoning of Injection Nodes:

For the transmission charges and losses to be shared by generators, individual plants have been grouped in zones and the transmission charges/losses to be paid/shared by the generators have been specified as per zonal generation charges. Earlier historic cost of the individual transmission elements was considered which was resulting in wide variation of transmission charges. Even for nearby and interconnected generators the Point of Connection (PoC) injection tariff was varying widely on account of different cost being attributed to each transmission line depending on its vintage. In order to remove inconsistency in results it is now proposed to attribute average transmission cost instead of historical cost for individual elements. This is a step in the right direction and it has brought consistency to the results. In the view of above, grouping of generators in zones is not needed for the sake of averaging the spikes caused by historic cost of transmission system.

As far as ISTS Demand Customers are concerned, they are States as a whole drawing power from multiple nodes and thus, there is technical necessity of creating zones for demand customers.

It would be pertinent to point out that the transmission System for many of the future generators, especially in the States like Orissa, Jharkhand, Chhattisgarh, Eastern Andhra Pradesh, Sikkim, NER etc are being planned in layered manner by pooling some of the generators together at a pooling point and the pooled power is transmitted over HVDC/ 765 kV/ high capacity transmission system which is not being directly connected with the existing 400 kV transmission system of the nearby generators. This is being done to a) limit short circuit level, b) to optimize investment in transmission and c) to minimize transmission losses. The power flow from new set of generators would not intermix with those from nearby existing State/ISGS generators and thus would have their own locational transmission charges/loss indicators. By grouping the new generator with existing ones into a common geographical zone, for the purpose of transmission charges/losses, would unnecessarily impact the transmission charges of existing generators and their beneficiaries. It is recognized that under the 'Marginal Participation' method, any new generation addition would impact the transmission charges/losses of the existing generators to the extent of results of marginal participation method, but the impact due to averaging within a zone is not desirable and can be avoided if transmission charges/losses are specified for individual generators. For example, if geographical zoning is done for generations in NER, the addition of Subansiri and Kameng HEPs in Arunachal Pradesh would have significant impact on the injection tariff of existing generators in NER and their customers. As far as generation plants are concerned, it would be desirable that its PoC injection tariff and loss sharing index correctly reflect its location in the grid. Incidentally, this aspect is clearly evident in the case of 'HP_Chamera zone, 'HP_Dehear zone and 'HP_Natpha Jhakri zone' generators within Himachal Pradesh.

Under this background it is suggested that transmission charges/losses for generators must be specified individually and plant-wise instead of grouping generators in geographical zones.

2. Zoning of Demand Customers:

Regarding the Demand customers it is seen that, other than the States of NER, each State has been marked as a separate demand zone. The NER has seven States and each State needs to be specified as separate zone for the purpose of demand zones. Otherwise, other States for example, Tamil Nadu may demand clubbing them with Kerala and Punjab/Haryana may also demand clubbing them Rajasthan/UP, etc. The principle of taking one State as a separate demand zone should be adopted all over India including North-Eastern Region. In this regard it would be pertinent to mention that earlier practice of special treatment of NER(under UCPTT) is no longer in vogue and there is no reason for giving separate treatment to NER in the new methodology.

3. Treatment of Dedicated Transmission line:

Many generators mainly IPPs have their own transmission line (called ‘Dedicated Transmission line’) for immediate connectivity with the ISTS grid. For such generators, the point of termination of the Dedicated Transmission Line should be considered as their injection point for the purpose for PoC injection charges as well as for sharing of transmission losses.

4. Treatment of 765kV line operated at 400kV level:

It has been observed that demand charges for Punjab are comparatively very high which, among other reasons is also be due to the transmission cost of the Kishenpur-Moga 765kV line, which is operated at 400kV level. As 765kV line operated at 400kV behaves as a 400kV quad line for the purpose of load flow and marginal participation calculations, cost of such line should be taken as that of an average cost of a 400 kV Quad line instead of the average cost of a 765 kV line for the purpose of computation of sharing of transmission charges.

5. Separate Average Cost for Line with Different Bundled Conductors:

Presently, same average per km transmission charges /cost has been attributed to all 400kV lines irrespective of number of conductors per phase therein. This is not desirable because it would distort the results. Therefore, it is recommended that instead of considering same average cost for all types of 400kV lines, separate average costs should be considered for twin, triple and quad 400kV lines.

6. Weightage for Peak and off-Peak hours:

It is seen that the final transmission charges/ losses have been computed after taking weighted average duration of peak and off-peak hours for the three seasons of winter, monsoon and summer. Reason for assuming weights of 8 hours for peak hours and 16 hours for off peak hours needs to be explained.

7. Due Diligence of Methodology:

Results of the transmission pricing methodology hinge very much on the base data considered for the studies. It is, therefore, suggested that the state-wise load/generation data, provided by NLDC which had formed basis of these computations, might be made available to public so that all the stakeholders could comprehend and appreciate the results. To avoid any error/subjectivity during actual implementation of the proposed methodology of sharing of transmission charges and losses, the data, methods and calculations carried out by the designated Implementing Agency need to be audited and verified by an independent body/committee having domain knowledge. A provision in this regard should be made in the present Regulations.

8. Certain Assets to be Excluded from the Tariff Matrix:

- (i) The transmission elements which are specifically built as system strengthening to serve a single State or for evacuation from a State specific generator and for which the tariff is determined by CERC should be excluded from computation of transmission charges under this method. The transmission charges for such elements, as determined by CERC, should be paid by the State beneficiary. For example, LILO of the Modipuram-Muzaffarnagar at Meerut, LILO of the Modipuram-Nara at Meerut and Modipuram-Shatabdinagar lines in UP, Hathida river crossing in Bihar (5 nos. of towers) and transmission system for Kayamkulam Stage-I would fall under this category.
- (ii) For the transmission system for evacuation of power from such inter-State generating stations which are embedded in 220 kV or below voltage level network of State Grid and is owned by CTU, the transmission tariff as determined by CERC would be recovered by CTU from the beneficiaries of the ISGS in proportion to their allocation/ share from the project.
- (iii) For the transmission system for evacuation of power from such inter-State generating stations which are embedded in 220 kV or below network of State Grid and is owned by that STU, the transmission tariff as determined by respective SERCs would be recovered by that STU from the beneficiaries of the ISGS in proportion to their allocation/ share from the project.

9. Review of existing Regulations and Procedures:

Since in the new methodology, there would be a common PoC injection tariff for long term, medium term and short term open access, it would be necessary to review the existing tariff regulations as well as regulations for long term, medium term and short term open access.