



GOVERNMENT OF INDIA  
MINISTRY OF POWER  
CENTRAL ELECTRICITY AUTHORITY  
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No. CEA/ NRC/RA -2014

Dated 26.05.2014

**Subject: Minutes of the First Meeting of the Sub Group of National Reliability Council for Electricity (NRCE)**

The Minutes of the First meeting of the Sub Group of National Reliability Council for Electricity (NRCE) held on 23.05.2014, in the NRPC, New Delhi is enclosed for kind information and necessary action please.

Encl: as above

*P. Batra*  
26/5/2014  
(Pankaj Batra)

CE (I/C) RA Division, CEA and  
Chairman Sub Group of NRCE

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## **Minutes of the 1<sup>st</sup> Meeting of the Sub Group of National Reliability Council for Electricity (NRCE)**

The 1<sup>st</sup> Meeting of the Sub Group of National Reliability Council, to carry out examination of the System Studies for the purpose of calculation of Total Transfer Capability (TTC), Available Transfer Capability (ATC) and Transmission Reliability Margin (TRM) on a monthly basis, was held in the 2<sup>nd</sup> Floor, Conference Hall, NRPC, New Delhi, at 11.00 hrs on 23.05.2014. The list of participants is at Annexure.

2. POSOCO had been asked to give a presentation to the Sub-Group on the System Studies done for the purpose of calculation of TTC, ATC and TRM and for briefing them on the modalities used for the same. Since the calculation for determination of TTC, ATC and TRM of the last corridor/flow gate could be carried out and mailed only by 22.05.2014, the RPCs did not have sufficient time to verify the data or the System Studies and therefore, they could not certify the same. The original schedule given by NRCE to POSOCO was to complete the studies by 20.05.2014 and mail the same by 20.05.2014, so that the sub-group could examine the same from 21.05.2014 to 25.05.2014 and recommend the same to the NRCE, so that NRCE could vet the TTC, ATC and TRM and give the same to POSOCO for putting on their web site. However, POSOCO stated that they are in the process of adjusting their internal processes so that the time lines are met.

3. POSOCO presented the methodology of calculation of TTC, ATC and TRM of the transmission corridors/flow gates. A number of clarifications were sought from POSOCO and detailed discussions took place on the same. The points covered were:-

- a. The methodology of getting the base case for the study, and whether the peak and the off-peak scenarios were considered.
- b. The methodology of calculating TTC, ATC and TRM.
- c. Whether any other scenarios, other than peak and off-peak, need to be considered.
- d. What were the constraints considered?
- e. Loop flows in determination of TTC, ATC and TRM.

- f. TTC, ATC and TRM between WR and NR, ER and SR.
- g. System Protection Scheme (SPS) setting on 765 KV Agra-Gwalior line.

4. POSOCO stated that for determination of the TTC, ATC and TRM of a corridor, the generation is increased in the exporting side and corresponding load is increased on the importing side on a pro-rata basis on all the load nodes. This procedure is done in steps, to determine the TTC of the corridor and this is as per the detailed procedure approved by CERC. On the rationale, why load was increased on a pro-rata basis, POSOCO stated that in case the States give the node-wise data, then that data can be taken. POSOCO stated that presently line loading is limited by following factors.

- a) Thermal Limit of the line (as per CEA planning criteria)
- b) Voltage violation limit
- c) Angular separation
- d) SPS setting.

It was suggested by CTU that instead of increasing the load on the importing side, the generation should be decreased on the importing side, as that is more realistic. Since generation is lumped, the issue is to decrease the **relevant** generation as per realistic terms, since the location of generation would make a difference on the results of the studies. POSOCO was requested to carry out this study to see if this results in a more realistic determination of TTC, ATC and TRM.

5. It was seen that the setting of System Protection Scheme on the 765 KV Agra-Gwalior line is one of the factors considered to determine the TTC, ATC and TRM from Western to Northern Region. The rationale of the setting of the SPS on this line was queried by the sub-group. Even though the same was got approved by POSOCO in the NRPC and WRPC meetings, it was stated by the WRPC that since this is an inter-regional scheme, it needs to be approved by a national body like the NRCE. It was decided to put this issue of approval of SPS settings of the entire national grid before the NRCE.

6. After prolonged discussions, the following decisions were taken:-
- i. The time being too short, the values of TTC, ATC and TRM could not be examined this time, since the System Studies and data could not be examined in detail. Therefore the TTC, ATC and TRM could not be certified by the Sub-Group for June, 2014. Moreover, the methodology of calculation of TTC, ATC and TRM by POSOCO had to be examined before certifying the same.
  - ii. It was suggested, that in the Note under the TTC, ATC and TRM between Western and Northern Regions given in the web-site, a line may be added after the line on "Loop Flows", in order to clarify the same and also justify the System Protection Scheme (SPS) setting on 765 KV Agra-Gwalior 765 kV line.
  - iii. The Sub-Group would have to meet again a few times to give their recommendations to NRCE on methodology and modalities of calculation of TTC, ATC and TRM, within the frame work of the CERC Regulations, for approval.
  - iv. POSOCO was requested to carry out the study of decreasing the **relevant** generation in the importing Region/Control Area as per realistic terms, rather than increase of demand, to see if this results in a more realistic determination of TTC, ATC and TRM.
  - v. It was decided to put the issue of approval of SPS settings of the entire national grid before the NRCE.

**ATTENDANCE SHEET**  
**1<sup>ST</sup> MEETING OF SUB GROUP OF NATIONAL RELIABILITY COUNCIL ON 23.05.2014**

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