Annexure-XVIII

Extracts from the detailed procedure framed under CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009

16. GRANT OF MTOA

16.1. The CTU shall notify the following on 31st day of March of each year:

- Total Transfer Capability (TTC) for 4 (four) years i.e. on 31st March, 2010, TTC shall be declared for period 1st April, 2011 to 31st Mar 2015. This may be revised by CTU due to change in anticipated network topology or change of anticipated generation or load at any of the nodes, giving reasons for such change.
- Transmission Reliability Margin considered along with basis.
- Available Transfer Capability (ATC) for MTOA will be worked out after allowing the already approved applications for Long-term access, Medium Term Open Access and Transmission reliability margin.
- The grant of MTOA shall be subject to ATC.

Calculation of Total Transfer Capability (TTC), Available Transfer Capability (ATC) and Transmission Reliability Margin (TRM)
Definitions

"Total Transfer Capability (TTC)" means the amount of electric power that can be transferred reliably over the inter-control area transmission system under a given set of operating conditions considering the effect of occurrence of the worst credible contingency.

"Transmission Reliability Margin (TRM)" means the amount of margin kept in the total transfer capability necessary to ensure that the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions

"Available Transfer Capability (ATC)" means the transfer capability of the inter-control area transmission system available for scheduling commercial transactions (through long term access, medium term open access and short term open access) in a specific direction, taking into account the network security. Mathematically ATC is the Total Transfer Capability less Transmission Reliability Margin.

The CTU shall asses the Total Transfer Capability (TTC), Available Transfer Capability (ATC) and Transmission Reliability Margin (TRM) of inter-regional links / Corridors. TTC, ATC, and TRM along with the details of basis of calculations, including assumptions if any, shall be put up on the website of CTU.
The TTC and TRM are the primary quantities which are to be arrived at from System Studies. The ATC would be derived as the difference between the two. The procedure for the calculation would be as follows:

1. A base case with the likely scenario during the time frame for which transfer capability is sought would be used in the System Studies for calculation of TTC of the required transmission corridors or ‘flowgates’.

2. The Load Generation scenario inputs would be taken from the planning data of CEA, the Load Generation Balance Report of CEA for the next year, and maintenance schedule agreed in RPCs. All operation conditions would be mentioned along with assumptions made.

3. The worst n-1 contingency for the flowgate under study, based on operating experience would be decided for which limiting cases are to be studied.

4. The degree of impact (Sensitivity analysis) of planned /unplanned outage of transmission lines in important corridors would be indicated.

5. While carrying out system studies for different conditions, it would be seen that the limiting condition on some portions of the transmission corridor or flow gates can shift among thermal, voltage and stability limits as the network operating conditions change over time. TTC would be the minimum of the transmission capability arrived at taking into consideration the Stability Limit, Voltage Limit and Thermal limit.

6. The limiting factors would be mentioned, for example, specific buses facing problem of low voltage, transmission line facing congestion or crossing stability /thermal limit, etc..

7. The TRM would be arrived at by considering the worst credible contingency, i.e. one which would affect the transmission capability of the flowgate to the maximum possible extent.

8. The difference between the TTC and the TRM would be the ATC. The latest ATC would be the one which is still left over after taking into account the usage of the transmission capability by existing contracts.

9. The CTU may revise the TTC, ATC and TRM due to change in system conditions, which includes change in network topology or change in anticipated active or reactive generation or load, at any of the nodes in the study. Such revision should clearly state the reasons thereof.