

Dated 9th May, 2017

**Hon'ble Bakshi Sahib
Member
CERC**

My heartiest congratulations to you and your engineering team for coming out with much awaited draft regulations for ISTS planning. It's a path breaking achievement and a fresh milestone for CERC in the realm of bringing order to the development of ISTS.

Based on my experience, I am glad to share my comments and suggestions with a view to assist you in achieving perfection in this historic task.

COMMENTS ON DRAFT ISTS PLANNING REGULATIONS OF CERC

Scope of Regulations:

2.1. To govern planning and development of an efficient, reliable and economical system of ISTS and associated intra-State Systems.

Comments:

May be reworded as:

“To regulate planning and development of an efficient, reliable and economical Inter State Transmission System (ISTS) in coordination with inter state generating stations and State Transmission Utilities (STUs).”

2.2. These Regulations shall be applicable to CEA, CTU, Inter State Transmission Licensees, SEBs/STUs, SLDC, RLDCs, NLDC, RPCs, NPC, DICs and other utilities involved in the transmission planning process.

May reworded as:

“These Regulations shall be applicable to CEA, CTU, RLDC, NLDC, RPC, NPC, and to other utilities and entities insofar as they are involved in the ISTS planning process, including SEB/STU, SLDC, DIC and other ISTS licensees.”

7.2. In the context of implementation of these regulations, CTU shall perform the following functions:

- (a) To conduct regular meetings based on the transmission access applications.
- (b) To seek status of generation projects from the project developers and CEA on quarterly basis.
- (c) To provide information to the Central Study Committee on the basis of transmission access applications and associated studies.

(d) To carry out studies for evolving transmission system by the Central Study Committee and share the base case file with Regional Study Committee.

May be modified as follows:

“In the context of implementation of these regulations, CTU shall perform the following functions:

- (a) To conduct regular meetings with STUs for coordinating planning, getting their feedback and inputs for ISTS planning, share updated ISTS system study files with STUs for their perusal for integrated intra state planning, to obtain updated intrastate files for present status of intra state system and future base cases of intra state network prepared by STUs.
- (b) To conduct regular meetings based on the transmission access applications.
- (c) To seek status of generation projects from the project developers and CEA on quarterly basis.
- (d) To conduct regular quarterly meetings with NLDC on the issues and constraints pointed out by NLDC in its operational feedback reports and undertake reoptimization studies and system strengthening studies as required with a view to expeditiously resolving ISTS constraints and bottlenecks and enhancing power transfer capability across various seams, particularly inter- regional and inter- state.
- (e) To undertake detailed reoptimization studies for ISTS in an integrated approach every year with the aim of removing congestion, enhancing power transfer capability of ISTS across various seams with existing network so that investment and Right of Way requirement is optimised, system security is improved, losses are optimised, loop flows are avoided, voltage and angular profiles and dynamic stability are improved. The findings and results of the reoptimization study shall be submitted to the commission in the month of June every year along with specific proposals submitted to the Central Study Committee.
- (f) To provide information to the Central Study Committee on the basis of reoptimization studies, transmission access applications and associated studies, requirement of additional import/ export capacity of states coordinated through STUs.
- (g) By the end of March every year, the CTU shall submit to the commission for approval its targets for improving the performance of the ISTS under various heads such removing congestion, enhancing power transfer capability of existing network, improving dynamic stability, reducing the requirement of opening transmission lines to control overvoltage and improved voltages during peak load at far ends.
- (h) By the end of June every year the CTU shall submit to the commission a Grid Incident Analysis Report for all major grid incidents reported by the NLDC bringing out to what extent simulation studies correspond with the actual system parameters at the time of occurrence of grid incident and immediately thereafter.
- (i) To carry out studies for evolving transmission system by the Central Study Committee and share the base case file with Regional Study Committee.
- (j) To publish CTU forecast of ATC across regions and across states on the beginning of each year up to five years ahead and periodically update the same.

8.2. In the context of implementation of these regulations, STU shall perform the following functions:

- (a) Preparation of base case of the state for Transmission Plan;
- (b) To bring operational issues in the State, in consultation with SLDC based on the operational feedback given by the SLDC, to the Regional Study Committee;
- (c) Coordinated planning of intra state network matching with inter-state network;
- (d) To furnish drawal GNA to CTU from time to time.

COMMENTS

May add the following also:

1. To share the intra state updated files for the current network and future with the CTU for proper ISTS planning and analysis.
2. To ascertain the ISTS needs of the state Discoms, open access consumers and intra state generation developers including RES developers on regular basis for coordinating with the CTU.
3. To regularly consult and brief the state discoms before attending every regional standing committee meeting on the agenda items to be discussed. Similarly, brief the Discoms about the decisions taken in their regional standing committee meeting.
4. Should the STU fail to convince its discoms about the investment decisions taken in its regional standing committee, the STU shall obtain the objection / Suggestions of the discom in writing and forward to CEA for consideration.

14. Role of the Standing Committee(s) for Power System Planning (SCPSP):

The SCPSP constituted by CEA firms up and reviews the transmission plans based on the proposals received from CTU, STUs, constraints in the system and growth in power system.

COMMENTS and SUGGESTIONS: There is a need to deal with SCPSP in adequate details to bring order in the ISTS planning process. CERC should also specify the basic structure and conduct procedure of SCPSP. Please consider the following suggestions:

1. Inter-regional and other common schemes meant to benefit the national grid shall be approved by all the regional SCPSPs.
2. **Constitution and conduct of SCPSP:**
 - To be chaired by Member PS , CEA
 - Member Secretary from CTU
 - Each STU to be member
 - At least one member from hydro generators, thermal generators, wind generators, solar generators, open access consumers, electricity traders and IPPs.
 - Each member to have one vote.
 - List of members by designation and organisation to be notified by CEA and informed to the commission.
 - Permanent Invitees: NLDC, CERC, Member Secretary RPC.
 - Agenda items to be normally uploaded 20 days before the meeting date accompanied by detailed studies, analysis of options and cost benefit analysis etc.
 - Decisions to be taken by at least two third majority of the listed members. CEA to cast its vote only if required. Record of voting to be kept for each decision.

- In case of indecision or dispute on decision, and if in the opinion of CEA and CTU the scheme is necessary, the matter to be referred by the CTU to CERC for regulatory approval.
- Agenda Minutes of the SCPSP meeting to be uploaded on the websites of CEA as well as CTU with a link on the home page.
- Discoms who foot the bill of ISTS should be free to attend the SCPSP meeting as observers.
- SCPSP meeting to be held in Delhi or a state capital.
- SCPSP to decide annual membership fee to be charged from each member. CTU to keep accounts.
- Quorum of SCPSP shall be 70%.
- CEA to publish the membership, membership fee and conduct rules for SCPSP within three months.
- The open access meetings of the CTU shall be conducted **separately** from SCPSP with CEA and NLDC as permanent invitees. The recommendation of the CTU based on open access meetings shall be included as agenda items for SCPSP along with requisite system studies.

21. Role of SLDCs:

(1) State Load Despatch Centres shall be responsible for providing operational statistics and feedback to STU for factoring in the planning of intra-State Transmission System.

(2) To refer the operational issues to the Regional Study Committee and also to share operational study files with the Regional Study Committee.

COMMENTS:

1. Item (1) above may be deleted since it's the domain of SERC.

21. Standing Committee for Transmission Planning

21.1. National Standing Committee on Transmission Planning under the CEA shall be responsible for taking all decisions with regard to the planning of ISTS after considering the inputs received from Central Study Committee and Regional Study Committee in accordance with the timelines specified in Regulations 26 of these Regulations.

21.2. The National Standing Committee on Transmission Planning shall be guided by the Rules of Procedure as may be decided by CEA with regard to the manner of conducting the proceedings, quorum, consultation with stakeholders and basis for decisions.

COMMENTS

1. Basic rules such as quorum, voting rights and votes required for a decision may be specified by CERC in line with the comments given for SCPSP.
2. CEA to publish the membership, membership fee and conduct rules for NPC within three months.

3. Meetings to be held in Delhi or a state capital. (not on remote tourist locations)

22. Classification of Transmission Plans:

The transmission plans shall be classified under following categories:

(a) Reliability Upgrade: These are the transmission plans which shall make the system compliant to transmission planning criteria. This shall be done for older systems. New systems shall be planned as per Transmission planning criterion.

(b) Economic Upgrade: These are the transmission plans which shall relieve congestion to avoid market splitting in power exchanges or decrease transmission losses.....

(e) Public policy Upgrade: These are the transmission plans which are planned as public policy assets.

COMMENTS

Please add one more type of upgrade:

“(f) **ATC Upgrade:** System strengthening or reconfiguration or connecting HVAC devices or reconductoring with modern transmission conductors etc. with a view to bridging the gap between CEA declared capacity of inter-regional links and ATC assessment of NLDC across various seams in the ISTS.”

27. Manpower Deployment in Transmission Planning

Proper and adequate manpower for conducting transmission planning exercise shall be ensured by CTU and STUs. CTU in consultation with STUs shall prepare a scheme for certification of personnel involved in planning at CTU and STU level similar to the system in place for System Operators.

COMMENTS

1. Please add the word '**integrated**' after 'conducting' in order to legally rope in STU.
2. The planning manpower of the CTU shall be exclusive and published on the CTU website from time to time.
3. The CTU website shall have independent web address and contain all important information, data and procedures. The reasons for divergence in the CEA planned perspective IR capacity, CTU ATC forecast and NLDC assessment shall be indicated on the CTU website so that stakeholders appreciate the underlying issues and as to why there is congestion in the ISTS.
4. Summary of analysis of major grid incidents shall be published on the CTU website along with action taken report.
5. Old data shall be archived on the CTU website.

6. The skill of planning manpower shall be continuously honed by international exposure, participation in CIGRE and sending talented young officers for higher studies/ M Tech/ PhD related to power system topics. Officers completing higher studies with very good performance shall be financially incentivised.

Thanks and regards

Ravinder

Ex- Chairperson and Member (Power Systems)

CEA

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