

भारत सरकार  
Government of India  
**उत्तर क्षेत्रीय विद्युत समिति**  
Northern Regional Power Committee  
-18ए शहीद जीत सिंह मार्ग, कटवारिया सराय, नई दिल्ली 110016 -  
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016

No. NRPC/OPR/117/01/2012/

Dated 03.05.2013

To,

- |                                    |                                  |
|------------------------------------|----------------------------------|
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Sub: Meeting of the group to resolve the issue of GSES

A meeting was held on 02<sup>nd</sup> May, 2013 at NRPC, New Delhi to consider various viewpoints so as to amend the proposed GSES. The gist of discussion held is available on NRPC website ([www.nrpc.gov.in](http://www.nrpc.gov.in))

Sd/-  
P.K.Pahwa  
Member Secretary, NRPC

## **Gist of discussions held/ decisions taken in the meeting held to sort out the issues related to GSES**

List of participants is enclosed as Annexure-I

1. The gist of discussions on each of the ten templates is as under:

- a. **Overdrawals:** Representative of POSCO explained need for this template even if Automatic Demand Management System (ADMS) mandated under IEGC has been implemented by DISCOMs. Members were of the opinion that control action may not be required just because a control area is overdrawing. Automatic control action to shed the load is desirable only when such overdrawal is creating distress conditions in the grid. It was agreed that POSOCO would envisage distress conditions and modify this template such that automatic load shedding will take place only when overdrawals are causing pre-identified distress conditions in the grid. It was also suggested that instead of state specific overdrawal, if region as a whole is overdrawing then control action could be initiated. Representative of POSOCO agreed to look into this aspect also.
- b. **Over-injection/Under-drawal:** Members agreed that automatic generation reduction action is not desirable for the generators. Only an annunciation could be sent in the control room for operator to take appropriate action. A suggestion was made that even if such annunciation is provided, a formal instruction in the form of FAX message or through telephone will have to be issued to meet requirements under the Electricity Act, 2003. In view of this annunciation may not serve much purpose. Further, clarity is also required regarding algorithm on selection of the generating stations for initiating annunciation for power reduction. POSCO agreed to revise the template by considering these suggestions.
- c. **Under-voltage:** It was clarified by representative of POSOCO that Under Voltage Load Shedding relays would be tripping the feeders from local substation and no control action would be taken from SLDC or RLDC level. Only monitoring at SLDC/RLDC has been envisaged in this template. It was agreed that state would review the list of buses given in the relevant Annexure of POSOCO's report and submit list of critical intra-state sub-stations. In so far as inter-state sub-stations are concerned, NRLDC would furnish their list. Further, members were of the view that setting of Under Voltage Load Shedding relays cannot be uniform for the region as a whole. Under Voltage setting at a particular bus has to be decided based on past experience and system studies.
- d. **Scenarios iv (Line loading crossing set limits), v (power flows exceeding TTC), vi (Loss of generation exceeding 1000 MW or loss of high capacity transmission corridor)** are pertaining to monitoring of the





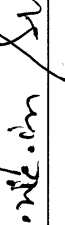
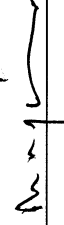






System protection schemes (SPS). It was agreed that in accordance with regulatory provisions, only SPS approved by respective RPCs can be implemented. It was further agreed that SPS implemented on inter-state system should be monitored by RLDCs. However, SPS operating on intra-state system may also be monitored if the concerned state so desires. Members also suggested that feasibility of mapping load relief pursuant to operation of SPS into the ULDC scheme should be looked into so that cost of the scheme could be optimized.

- e. **Angular separation:** Representative of POSCO agreed that this will also be a SPS which may be proposed after requisite number of PMUs are in place. He clarified that load disconnection would be based on system studies with data obtained from PMUs. Further, since this scheme will essentially fall in the category of SPS, they would be implemented after approval of respective RPCs. It was agreed that SPS for angular separation should be implemented separately as is the case with other SPS and only monitoring part should be implemented in the template.
  
- f. **Scenarios viii (Flat Frequency UFRs) and ix ( df/dt relays)** are related to Under Frequency Load Shedding Scheme and rate of change of frequency based load shedding scheme. POSOCO informed that the scheme envisages monitoring of the healthiness of UF relays and df/dt relays and flows in feeders concerned. It was informed that to implement the scheme all UFR and df/dt relays should be capable of communicating on a common protocol. Representative of POWERGRID clarified that scheme also envisages procurement of relays. Members were of the opinion that substantial number of relays in the region are of Numerical type and may be having facility to communicate. The decision to procure relays by the state itself or through POWERGRID should be left to each state. It was agreed that POWERGRID would frame minimum technical specification of UFR and df/dt relays for the scheme. NRPC Secretariat could take up with each STU as to whether they wish to procure relays on their own or through POWERGRID. Representative of UPPTCL informed that they were in the process of commissioning and installing about 80 new UFRs of numerical type. He agreed to share their specifications with POWERGRID. One issue that needs to be addressed is that in case of change in location of UFR or df/dt relay, monitoring would be hampered in the absence of communication network at new location. Representative of POWERGRID also agreed to consider suggestion of members about exploring possibility of mapping flows and relief through ULDC scheme so that cost of scheme can be optimized.

- g. **Islanding schemes:** It emerged that this template also envisages monitoring of islanding schemes operating in the Region at SLDC/RLDC level.
2. It was decided that all templates which envisage only monitoring, may be merged into one under the heading “Monitoring of defense Mechanism”.
  3. POSCO would incorporate the above mentioned suggestions/decision and revise the schemes accordingly prior to next meeting.
  4. Next meeting of the group would be held on 09<sup>th</sup> May, 2012 at 11:30 hrs at NRPC, New Delhi.

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**List of Participants for Meeting of the group to resolve the issue of GSES on 02.05.2013 at NRPC, New Delhi**

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