Annexure-XXX

Issues with SPS as submitted by POSOCO

1. SPS Statistics for West-South corridor from 1st Jan 2014 to 30th Nov 2014

Sl. No.	Name	Classification of operation			
		Operated		Not Operated (Failure)	Mal Operation or unnecessary operation
		Correctly or successful	Inadequately or unsuccessful operation		
1	765kV Sholapur-Raichur	21	41	4	1
2	400 kV Wardha-Parli Flow	5	65	1	0
3	dP/dt of Sholapur-Raichur	3	20	0	0
4	400kV Raipur-Wardha Flow	0	11	0	0
5	400kV Parli-Sholapur D/C	1	6	0	0
	Total	30	143	5	1

Source: Generating stations and state utilities

Inadequately= Performance (Relief) less than 70%
Correctly=Performance (Relief) More than 70%

2. SPS Statistics for West-North corridor from 1st Jan 2014 to 30th Nov 2014

Sl. No.	Name	Classification of operation				
		Operated		Not Operated (Failure)	Mal Operation or unnecessary operation	Data Not Available
		Correctly or successful	Inadequately or unsuccessful operation			
1	765 kV Agra-Gwalior D/C	2	21	------	------	156

Source: SCADA data at NRLDC

Inadequately= Performance (Relief) less than 70%

Correctly=Performance (Relief) More than 70%

3. POSOCO has further detailed out 111 schemes in seventeen (17) countries spread across 49 utilities surveyed vide 1996 IEEE-CIGRE survey whereby following has been quantified:

- Operations between 1986-1992 analyzed
- n1= number of successful operations= 1093
- n2= number of failures = 36
- n3 = unsuccessful operations = 20
- n4 = unnecessary operations = 306
- Effectiveness index = n1/(n1+n2+n3)
- Dependability index = n1/(n1+n2)

It can be seen from the above that there is a good number of failures or unsuccessful operation of SPS schemes and would add up to at least 5% of the time (56 out of 1149). In addition there would be some unnecessary operations also and might add up to 20% of the time (306 out of 1455).

4. The issues with implementation of current SPS schemes are as follows:

1) SPS proposal has to be agreed at the Regional Power Committee (RPC) level; generally it involves protracted negotiations as the parties affected would either be DISCOMs feeding load or a generator. Both parties are reluctant to be covered under SPS action.
2) Who would implement what portion of the SPS? Typically it is the CTU involved in logic and communication channels and the STU/DISCOMs responsible for connecting loads and the generator for backing down generation? Implementation takes ages.
3) Standards for planning, design, implementation and monitoring yet to be in place; so there is a big question mark on SPS reliability as also evident from the above statistics.
4) Facilities to monitor SPS action in real time at RLDCs/NLDC virtually non-existent.

5) Trouble shooting in case of any problem gets delayed due to low priority assigned.