

26/10
Central Electricity Authority
System Planning & Appraisal Division
Sewa Bhawan: R.K. Puram
New Delhi - 110066. 93

No. 26/10/2000-SPA/846-54

dated the 28th April 2000

To

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The Executive Director (Elect.),
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The Executive Director (Engg.),
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Subject: Summary record of the 12th Standing Committee meeting on Power System Planning in Western Region held on 20th April 2000.

Sir,

45/200
Please find enclosed summary record of 12th Standing Committee meeting on Power System Planning in Western Region held on 20th April 2000 at WREB office MIDC Area, Marol, Andheri East, Mumbai for your information and further necessary action.

Encl.: As above

28/4
V. Ramakrishna
Chief Engineer (SP&A)

B. Transmission system associated with Sipat STPP Project (3x660 MW)

Chief Engineer (SP&A), CEA stated that in the last Standing Committee Meeting it was decided that next Standing Committee Meeting will be called in the first week of April after carrying out revised system planning studies based upon the decision taken in the previous meeting. When the revised system planning studies were in progress, MPEB and GEB submitted revised sub-station wise anticipated load projections for X & XI Plan. MPEB also requested for exclusion of certain IPP projects and their associated transmission system in the revised studies. These modifications suggested by MPEB and GEB had been incorporated in the studies. These studies had been carried out:

- i) Without considering benefits from Sipat STPP.
- ii) With benefits from Sipat STPP Stage-I only.
- iii) With benefits from both the stages of Sipat STPP project.

To meet the 15th EPS load demand of Western Region, despatches from the projects located in the western part of Western Region had been increased as compared to previous studies. As the flow on Seoni - Chhegaon 765 kV S/C line was of the order of 1000 MW only, this line had been changed to 400 kV D/C on Quad bundled conductor to improve reliability and better operating flexibility. Each of the above alternative was further studied considering (a) Import of 500 from Eastern Region at Raipur 400 kV S/S (b) Export of 1000 MW to Southern Region (c) Export of 2000 MW to Southern Region. Further to strain the network planned to maximum, no export to Northern Region was considered. It was observed that in certain cases Korba (STPS)-Korba (West) 400 kV S/C line was getting overloaded. It was also seen that Chhegaon-Rajgarh 400 kV D/C line was not carrying much power and had not been considered in further studies.

ACE (LD), GEB stated that various IPP projects such as Chara, Sarkadi etc. may not be coming in X Plan period. CE (SP&A) stated there were indications that Gandhar CCGT stage-III and Kawas CCGT Stage-III projects, which were not considered in these studies, may be yielding benefits by the end of X Plan and accordingly there would not be much change in load generation scenario. CDE (Engg), NTPC endorsed this and added NIT's for Kawas-II and

**Minutes of the 12th Meeting of the Standing Committee on Power System Planning in
Western Region held on April 20, 2000 at WREB, Mumbai**

List of participants is enclosed at Annex – I.

Chief Engineer (SP&A), CEA welcomed all the participants to the meeting and stated that this meeting was in continuation to the previous meeting wherein evacuation system associated with Sipat STPP (3x660 MW) Stage-I of NTPC and TAPP Extn. Unit 3 & 4 (2x500 MW) generating projects were discussed in detail and certain decisions regarding evacuation system from these projects were taken and based on which revised system planning studies for Sipat STPP project has been carried out which will be discussed in the meeting. He also stated that in the absence of representation from MPEB evacuation system from Sipat STPP could not be finalised. He further added that MPEB would be requested to depute its engineer for discussing evacuation system from Sipat STPP Project and decision taken, if any would be intimated to all the participants.

CE (SP&A), CEA added that subsequent to the issue of minutes of 11th Standing Committee meeting, MPEB and NPC had requested for some modifications in the minutes of the meeting which were listed at item A of the agenda for this meeting. Chief Engineer requested for the confirmation of the minutes of previous meeting with proposed modifications. DGM (Engg), PGCIL stated that 220 kV lines required for start up power from TAPP Extn were not part of evacuation system and also the implementation schedule for the construction of start up power arrangement and evacuation system would be different. Chief Engineer (SP&A), CEA also explained that power from TAPP 3 & 4 will not be evacuated over these 220 kV lines, as these will be inter-connected at TAPP 3 & 4 switchyard at 6.6 kV level and do not form part of evacuation system. He further said that this issue had been debated extensively in previous meeting also and general consensus was that these start up power lines should form part of generation facility requirement and not evacuation system and if NPC desires these works can be implemented by PGCIL as deposit work. However, Head Electrical system (Engg), NPC was of the view that this issue should be discussed separately as per MOU between PGCIL and NPC. Thereafter next item of agenda for the meeting was taken up.

Gandhar-II may be issued by year end and as per construction schedule first unit may come up by the end of 2004 and Stage-III of these projects may come up by the end of X Plan. CE (SP&A), CEA further stated that if there were any change in generation scenario, it would be considered while evolving transmission system for Sipat STPP Stage-II. Desirability of Chhegaon-Rajgarh 400 kV D/C line would also be studied. DCM (Engg), POWERGRID stated that Chegaon-Rajgarh 400kV D/C line may be considered with HIRMA Project.

DGM (Engg), POWERGRID stated as Korba (Daewoo) generating project was not coming and Korba (W)-Katni-Bina 400 kV D/C line associated with above project was considered in the study, MPEB should confirm, whether they were planning to construct the above line without the generation project and also indicate the time frame in which it was expected. He also pointed out as Korba-Korba (STPS) 400 kV line was getting over loaded the possibility of LILO of Korba (W)-Korba (STPS) 400 kV S/C at Sipat STPP should be studied, instead LILO of Korba-Raipur at Sipat. CE (SP&A), CEA said that this would be taken up with MPEB engineer during discussion with them. He further said the Sipat project was located at a place near to, where Korba (STPS)-Raipur 400 kV lines were passing. Also the above LILO was considered in perspective plan studies and was found that Sipat-Korba (W) section of above line was getting overloaded under certain conditions. However, if constituents desire, this could be studied again. As regard over loading of Korba (W)-Korba (STPS) 400 kV line, the possibility of laying another 400 kV S/C line had to be examined from the point of view of availability of space in the switchyards of MPEB & NTPC. Alternatively, as the length of this line being short, the line can either be reconducted with higher thermal rating conductor or a bunched 400 kV D/C line may be constructed. After further discussion, it was decided that power from Sipat STPP State-I (3x660 MW) would be stepped up to 765 kV level and would be evacuated over following transmission lines subject to confirmation by MPEB.

- i) 765 kV Sipat-Seoni 2xS/C (Quad Bersimis)
- ii) 400 kV Seoni-Chhegaon D/C (Quad AAAC)
- iii) 400 kV Seoni-Bhandara D/C (Twin Moose)
- iv) 400 kV Raipur-Chandrapur D/C (Twin Moose)
- v) LILO of both ckts of 400 kV Itarsi-Dhule D/C line at Chhegaon 2xD/C (Twin Moose)
- vi) 400 kV Chhegaon-Aurangabad D/C (Twin Moose)
- vii) Nagda-Dehgam 400 kV D/C (Twin Moose)

- viii) LILO of 400 kV Raipur-Koradi S/C line at Bhandara D/C (Twin Moose)
- ix) LILO of both ckts of 400 kV S. Sarovar-Nagda D/C line at Rajgarh 2xD/C (Twin Moose)

DGM (Engg), PGCIL, was of the view that conductor configuration should be decided during detailed designing. CE (SP&A), CEA said all the lines stated above are of standard conductor configuration except Seoni-Chhegaon 400 kV D/C line which was on Quad AAAC.

C. Transmission System associated with TAPP 3 & 4.

CE (SP&A) stated that transmission system associated with TAPP 3&4 was discussed in detail in last meeting and NPC had not yet indicated tentative beneficiaries and their allocation from the project. He requested NPC to take up this issue at board meeting of Regional Electricity Board. Head Electrical System (Engg.), NPC said that NPC had written to Power Ministry regarding finalization of beneficiaries from the project. SE (System), MSEB stated that this issue would be dealt by their commercial department.

CE (SPA), CEA requested MSEB for their concurrence for the alternative-6 discussed in previous meeting. SE (System), MSEB stated that at Padghe there was space constraint and, at best, Padghe substation can accommodate only two additional bays. Alternative 6 required accommodation of three line bays. CE (SP&A), CEA stated that MSEB should examine possibility of bypassing of one of the 400 kV Bableshtar-Kalwa line terminated at Padghe, so as to make available additional bay at Padghe.

D. Synchronous inter-connections between Western and Southern Region Grids.

CE (SP&A), CEA stated that in the presentation made during the Regional Consultation meeting on Long term Planning held in Mumbai on 21.2.2000, the plan to develop inter connection between Western Region and Southern Region by the end of X Plan was indicated. He stated that Western and Southern Regions being two large systems, flow of synchronous power over one 400 kV D/C line may create problem for synchronous operation of two Regions.

Therefore, another 400 kV D/C link between Kolhapur and Dharwad has been thought off which could also be used, if required, for getting/supplying power from/to Karnataka in radial mode. He also stated that MSEB should examine the availability of bays at Kolhapur 400 kV S/S. He further added that another 400 kV inter-connection between two Regions might be between Parli and Raichur 400 kV S/S for bi-directional exchange of power between the two Regions.

ACE (CD), GEB said that operation of Kolhapur-Dharwad D/C line in radial mode may not be desirable. He also wanted that stability studies be carried out with inter connection between the two Regions. CE (SP&A), CEA stated that at present Maharashtra was already selling power to Karnataka in radial mode at 220 kV level.

SE (System), MSEB said that at present power flow on back to back was not substantial. He further said that as these inter-Regional lines were not associated with any generation project, transmission charges should be taken from all the constituents of both the Regions and matter should be discussed at Inter-Regional forum. CE (SP&A), CEA stated due to low voltage profile in Southern Region, Southern Region was not able to absorb much power from Western Region. However additional shunt capacitors are being installed in Southern Region to improve voltage profile. He further said that time had come for us to think beyond regional concept. He explained that about five year back, no one thought of Eastern Region being surplus to the tune of about 2000 MW and because of non-availability of adequate, intra and inter-Regional links, this surplus power could not be fully utilized, leading to non-utilization of National investment everyday. Any Region may be surplus because of (i) higher availability of Generating projects using new improved technology (ii) diversity in occurring of Regional peak (iii) lack of load growth. These inter-Regional links are basic building blocks for formation of National Grid, via which surplus power of one Region may be, transferred to/absorbed by another deficit Region. Further these inter-regional links can be taken up for construction in a phased manner.

Though all the participants agreed to the concept but wanted their commercial department to examine the proposal.


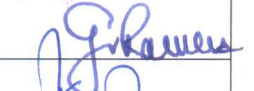

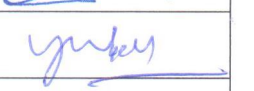
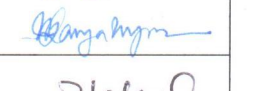
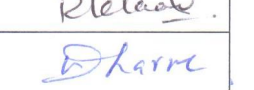

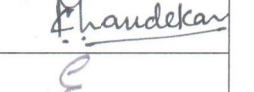

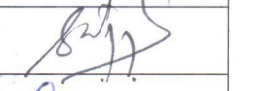


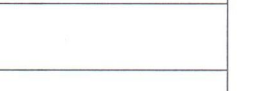

List of Participants

The following officers participated in the 12th Standing Committee Meeting on power system planning held on 20-04-2000 in the Conference Hall of WREB.

S. No.	Name	Designation	Organization
1	V. Ramakrishna	CE	CEA
2	Ravinder Gupta	Dy. Director	CEA
3	L.K. Wasnik	SE(O)	WREB
4	M.R. Singh	EE	WREB
5	S. Satyanarayan	AD	WREB
6	B.M. Patel	ACE (LD)	GEB
7	G. Venkatraman	CDE (Elec)	NTPC
8	A.K. Gupta	CDE (Elec)	NTPC
9	I.S. Jha	DGM (Engg.)	POWERGRID
10	Y.K. Sehgal	CDE (Engg)	POWERGRID
11	W.A. Dharme	Head Elect. System (Engg)	NPC
12	N. Sankaranarayan	SF (E)	NPC
13	Rajesh Laad	SO/ F	NPC
14	S.M. Mujumdar	SE (System)	MSEB
15	C.M. Khandekar	EE (Tr. Plg.)	MSEB

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The following officers participated in the 12th Standing Committee Meeting on power system planning held on 20-04-2000 in the Conference Hall of WREB.

S. No.	Name	Designation	Organization	Signature
1	B.M. PATEL	ACE (LD)	G.E.B.	
2	G. VENKATRAMAN	CDE (ELEC)	NTPC,	
3	A. K. GUPTA	CDE (ELEC)	NTPC	
4	J.S. Jha.	JCM (Engg)	POWERGRID	
5	Y.K. Sengupta	CDE (Engg)	PowerGRID	
6	N. Sankaranarayanan	SFCE	NPC	
7	Rajesh Ladd	SOLF	NPC	
8	W.A. Dharma	Head, Electrical system (Engg)	NPC	
9	S.M. Mujumdar	S.E. (System)	M.S.E.B.	
10	C.M. Khandekar	E.E. (Tr. Pl.)	M.S.E.B.	
11	L.K. WATSON	SCCO	WRIK	
12	H.R. Saha	EE	WREB	
13	S. Satyanarayan	AD	WREB	
14	R. Guha	D.D.	CEA	
15	V. Ramkrishna.	E.E.	CEA.	
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