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भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
प्रणाली योजना एवं परियोजना मूल्यांकन प्रभाग
सेवा भवन, रामकृष्ण पुरम्,
नई दिल्ली 110 066

क्र०सं०: 26/10/2002/प्रयोपमू/134-43

दिनांक: 27.03.2002

विषय : पश्चिमी क्षेत्र विद्युत प्रणाली योजना की 15वीं स्थाई समिति की दिनांक
20.03.2002 को स्कोप कोम्प्लेक्स, लोदी रोड, नई दिल्ली में हुई
बैठक के कार्यवृत्त.

उपरोक्त विषय पर हुई बैठक के कार्यवृत्त आपकी जानकारी एवं अग्रिम कार्यवाही हेतु
संलग्न है.

संलग्नक: यथोपरि.

कार्यालय डाँटे

शिवनकुमार
27/3

पी.के. पाहवा
27/3/2002

(पी के पाहवा)

निदेशक (प्रयोपमू)

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सेवामें

(संलग्न सूची अनुसार)

27.03.02

**Government of India
Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan: R.K.Puram
New Delhi-110066**

No.26/10/2002-SP&PA/

Dated 27th March 2002

To

The Chief Engineer (Tr.Plg.),
MSEB, 'Prakashgad', Plot No.G-9,
Bandra (East), Mumbai-400051.
Fax 022 6452868

The Member Secretary,
Western Regl. Electricity Board,
MIDC Area, Marol,
Andheri East, Mumbai.
Fax 022 8370193

The Chief Engineer(Tr.),
GEB, Sardar Patel Vidyut Bhawan,
Rase Course, Baroda-390007.
Fax 0265 337918

Chief Engineer (POSD),
Nuclear Power Corp. of India Ltd.,
11-S-17, VS Bhavan, Anushakti Nagar,
Mumbai-400094
Fax 022 5563350

The Executive Director (T&P),
MPEB, Shakti Bhawan,
Vidyut Nagar, Jabalpur-482008.
Fax 0761 661696

Chief Engineer (Tr.),
Chhatisgarh State Electricity Board,
Qrt. No. B-1, Gudhiyari, Raipur-492009
Fax 0771 242955

The Chief Engineer,
Electricity Department,
Government of Goa, Panaji.
Fax 0832 222354

The Member (Power),
Narmada Control Authority,
113,BG, Scheme No.74-C,
Vijay Nagar, Indore-452010.
Fax 0731 559888

The Executive Director (Engg.),
PowerGrid Corp. of India Ltd.,
B-9, Kutub Institutional Area,
Katwaria Sarai, New Delhi-16.
Fax 011 6560039

The Executive Director (Engg.),
NTPC Ltd., Engg. Office Complex,
A-8, Sector-24, NOIDA 201301.
Fax 91 4410201

Subject: Minutes of the 15th Standing Committee meeting on Power System Planning in Western region.

Sir,

Minutes of the 15th Standing Committee meeting on Power System Planning in Western region held on 20th March 2002 at 11:00 AM at Scope Convention Centre, Core-8, Scope Complex, Lodhi Road, New Delhi are enclosed.

Encl: As above

PK Pahwa
(P. K. Pahwa)
Director (SP&PA)

o/c
S.K. Singh
27/3

Minutes of the 15th Meeting of Standing Committee on Power System Planning for Western Region held on 20th March at Scope Complex, Lodhi Road, New Delhi

1. The 15th meeting of the Standing Committee on Power System Planning for Western Region was held on Wednesday the, 20th March 2002 at Scope Complex, Lodhi Road, New Delhi. The list of participants is enclosed at Annex-I.
 - 1.1 CE (SP&PA) welcomed all the participants to the meeting and thanked NTPC for organizing the meeting. The agenda items were thereafter taken up for discussions.
2. **Confirmation of the minutes of the 14th meeting of the Standing Committee on Power System Planning for Western Region**
 - 2.1 The minutes of the 14th meeting of Standing Committee on Power System Planning for Western Region circulated vide CEA letter no 26/10/2002-SP&PA/89-98 dated 7th March, 2002 were confirmed.
3. **Transmission System associated with Sipat Stage-I**
 - 3.1 Giving a brief background, Chief Engineer (SP&PA) stated that subsequent to decision of MSEB not to opt for allocation from Sipat project, the transmission system associated with Sipat Stage-I was reviewed and discussed during the last Standing Committee meeting held at Goa. Certain modifications to the approved transmission system were agreed but in absence of representation of MPSEB in that meeting it was decided that CEA would discuss the proposed modifications with MPSEB and obtain their concurrence. The matter was subsequently taken up by CEA with MPSEB and discussions were held with Dr R.P.Bhatele, SE (PSP), MPSEB during his visit to Delhi. MPSEB had expressed reservations to the modifications proposed during the last meeting especially to non-deletion of 400 kV Seoni-Bhandara D/C line and 400 kV Bhandara S/S under Sipat Stage-I. MPSEB had also written a letter proposing CEA to carry out additional load flow cases for study under Sipat Stage-I&II before finalizing ATS for the project. Accordingly additional studies had been carried out. Based on the latest study two options had emerged for consideration. The first option was the same as agreed during last Standing Committee meeting viz. establishment of 400 kV Bhandara S/S and 400 kV Seoni-Bhandara D/C line. However due to reservations expressed by MPSEB, this option was possible only in case MSEB agreed to share the cost of this line as a Regional strengthening project. The second option which had emerged was LILO of 400 kV Bhilai-Satpura S/C line at Seoni. He requested Director (SP&PA) to take up the agenda for discussion.
 - 3.2 Director (SP&PA) stated that subsequent to the last meeting additional studies had been carried out by CEA as per the dispatch conditions specified by MPSEB in their letter addressed to CEA. MPSEB had indicated that certain IPP projects in Madhya Pradesh such as Bina TPS and Guna CCGT were uncertain as financial closure for these projects was yet to be achieved hence were not likely to materialise during the 10th Plan period. These projects were considered during the previous study, which was discussed during the last Standing Committee Meeting held at Goa. The generation addition programme considered for the present study was the same as considered for

earlier study except for dispatch from the above IPP projects in MP had not been considered. Also the transmission system associated with these IPP projects had been deleted. The shares and loads of MP and Chhatisgarh had been bifurcated. With generation availability of 74 %, a deficit of about 3500 MW was observed in Western Region. Except Chhatisgarh all other constituent states of Western Region were in deficit. This deficit was adjusted against unallocated share from Central Sector projects and import of 500 MW from Northern Region over Vindhyachal HVDC B/B link. Loads of all the constituents except MSEB were fully met. The load of MSEB was reduced to the extent of about 3000 MW to that projected in 16th EPS. Giving a brief on the various cases studied, he stated that five cases had been studied including those desired by MPSEB. Each case was further studied for various contingency conditions. Case I was without considering Sipat STPS Stage-I&II and deletion of associated transmission system. In this case 2000 MW shortfall due to deletion of Sipat Stage-I was met by import of 1000 MW from ER at Raipur and reduction of loads of MPSEB and GEB to the tune of 500 MW each. All line flows in this case were observed to be within limits. Case-II was considering dispatch from Sipat Stage-I and no dispatch from Sipat Stage-II. The agreed transmission system with deletion of 400 kV Khandwa-Aurangabad D/C, 400 kV Seoni-Bhandara D/C, LILO of Bhilai-Koradi 400 kV line at Bhandara and Bhandara 400 kV S/S was considered. The flow on Sipat-Raipur 400 kV S/C was observed to be loaded to 570 MW, which increased to 665 MW under outage of 400 kV Korba-Raipur line. Case-III considered dispatch from both Sipat STPS Stage-I&II. The network considered for this case was the same as considered for Case-II except 400 kV Khandwa-Rajgarh D/C line was added under this case. The flow on Sipat-Raipur S/C was observed to be critically loaded to 665 MW, which increased to 850 MW under outage of 400 kV Korba-Raipur S/C line. This case established that addition of Khandwa-Rajgarh does not help in reduction of flow on Sipat-Raipur line. To reduce overloading Case-IV was studied which was same as Case-III except for LILO of 400 kV Bhilai-Satpura S/C line at Seoni was also considered. The flows were observed to be within limits and network was observed to withstand single 400 kV line contingency. Case-V network was the same as agreed during the last meeting at Goa. In this case instead of LILO of 400 kV Bhilai-Satpura line at Seoni, 400 kV Seoni-Bhandara D/C and LILO of Bhilai-Koradi at Bhandara was considered. Line flows were observed to be within limits. and network was observed to withstand single 400 kV line contingency. However in this case with deletion of Bhandara 400/220 kV interlinking transformer it was observed that 400 kV Bhandara- Koradi line would be overloaded hence establishment of Bhandara S/S as a switching station would not serve the purpose.

- 3.3 CE (SP&PA) stated that both cases-IV & V were feasible options. Case-V was a better option compared to Case-IV due to lower network losses by about 15 MW but was not acceptable to MPSEB. He suggested that Case-IV might be considered in lieu of case-V approved in the last meeting and invited comments of the participants.
- 3.4 Chief Engineer (GEB) stated that GEB had no objection if Case-IV was adopted against Case-V approved earlier. To an query from CE (GEB) about the difference in cost of the two alternatives Chief Engineer (SP&PA) informed that alternative under Case-IV was a cheaper option to the extent of cost of 400 kV Seoni-Bhandara D/C line and transformation and bays cost involved at Bhandara.

- 3.5 SE (MPSEB) stated that under Case-I loads of MP and Gujarat had been reduced by 500 MW each and an import of 1000 MW from Eastern Region had been considered while in other Cases no import from Eastern Region had been considered and desired that other cases with import from ER should also had been studied. He also requested for consideration of 400 kV Khandwa-Rajgarh line under Sipat Stage-I transmission system.
- 3.6 CE (SP&PA) clarified that cases considering import from ER were studied in the earlier studies discussed during the 14th Standing Committee meeting and no problem on account of transfer of 1000 MW from ER to WR was observed. Also 400 kV Khandwa-Rajgarh D/C line proposed by MPSEB would be considered at the time of finalization of Sipat Stage-II transmission system. A case considering 1000 MW import from ER as desired by MPSEB was carried out by DD (SP&PA) during the meeting and it was noted that all line flows were in order.
- 3.7 AGM (POWERGRID) stated that as per his information Hirma STPS was behind schedule and requested the members to take a decision regarding that 400 kV Bina-Nagda D/C line which not only formed a part of Hirma transmission but also required for evacuation of Sipat.
- 3.8 CE (SP&PA) clarified that this issue had already been discussed and addressed during previous Standing Committee meetings and reiterated that a clause in the TEC letter for Hirma ATS would be incorporated stating that 400 kV Bina-Nagda D/C line would be constructed to match with commissioning of Hirma or Sipat generation project, whichever was commissioned earlier. The status of construction of Bina-Nagda line could be reviewed at PIB stage by which time the status of Hirma generation project would be clearer.
- 3.9 To a query from AGM (NTPC) whether associated transmission system with Sipat Stage-II would require any additional 400/765 kV line bays at generating switchyard, CE (SP&PA) clarified that associated transmission system with Sipat Stage-II would consider transmission lines for delivery of power to the beneficiary states and hence would not require any additional line bay at Sipat generating switchyard.
- 3.10 After discussions, SE (MPSEB) agreed to Case IV proposed.
- 3.11 CE (SP&PA) stated that in addition to the proposed modifications covered under Case-IV, it was decided during the last meeting that 400 kV D/C Raipur-Chandrapur line which was inter-regional line but was covered under Sipat Stage-I be deleted and taken up as an independent scheme by POWERGRID and requested MPSEB who were not present during the last meeting to concur with the same.
- 3.12 SE (MPSEB) stated that in their opinion transmission lines that were not part of associated transmission system linked with generating projects should be covered separately and hence they agreed with the decision taken during the last Standing Committee meeting.

3.13 The modifications proposed as per Case-IV were agreed during the meeting and it was decided that associated transmission system under Sipat Stage-I would cover the following scope of works:

- i) 765 kV Sipat-Seoni 2xS/C (Quad Bersimis)
- ii) 400 kV Seoni-Khandwa D/C (Quad AAAC)
- iii) 400 kV Nagda-Dehgam D/C (Twin Moose)
- iv) LILO of one ckt of Korba (STPS)-Raipur at Sipat STPP 400 kV D/C (T.M.)
- v) LILO of 400 kV Bhilai-Satpura S/C line at Seoni D/C (Twin Moose)
- vi) LILO of both ckts of 400 kV S.Saravor-Nagda D/C line at Rajgarh 2xD/C (T.M.)
- vii) Seoni 765/400 kV S/S 2000 MVA
- viii) Seoni 400/220 kV 630 MVA
- ix) Rajgarh 400/220 kV S/S 630 MVA

4. SE MPSEB requested CEA to carry out additional studies as desired by them before arriving at a configuration for associated transmission system for Vindhyachal Stage-III.

4.1 Chief Engineer (SP&PA) agreed to the request of MPSEB and stated that cases as desired by MPEB would be carried out by CEA before arriving at network configuration under Vindhyachal Stage-III. He requested GEB to send their views on Series compensation of 30 % on Vindhyachal-Jabalpur 400 kV D/C 1st and 2nd circuits and 40 % on Vindhyachal-Jabalpur 400 kV D/C 3rd and 4th circuits which was discussed during the 14th Standing Committee meeting as a part of evacuation system from Vindhyachal stage-III (2x500 MW). To a query from Chief Engineer (GEB) regarding the cost difference between option proposing series compensation and other alternative of a another 400 kV D/C line between Vindhyachal and Satna, Chief Engineer (SP&PA) clarified that cost of series compensation would be of the order of Rs 100 crores against Rs 500 crores for a 400 kV D/C line between Vindhyachal and Satna.

4.1 Chief Engineer (SP&PA) thanked the participants for attending the meeting and arriving at a decision. He requested POWERGRID to prepare FR based on decision taken and submit the same to CEA for TEC consideration. He again thanked NTPC for hosting the meeting.

185

Annex-I

List of participants during the 15th Standing Committee Meeting on power system planning held on 20.03.2002 at Scope Complex, Lodhi Road, New Delhi

<u>S.No.</u>	<u>Name</u>	<u>Designation</u>	<u>Organisation</u>
1.	V. Ramakrishna	CE	CEA
2.	P.K. Pahwa	Director	CEA
3.	Ravinder Gupta	Dy. Director	CEA
4.	Sharvan Kumar	Asstt. Director	CEA
5.	J. T. Baxi	CE (Tr.)	GEB
6.	Dr. R. P. Bhatele	SE (PSP)	MPSEB
7.	Anand Mohan	ED (Engg.)	POWERGRID
8.	I. S. Jha	AGM	POWERGRID
9.	Y.K. Sehgal	DGM	POWERGRID
10.	N.N. Misra	AGM (PE-E)	NTPC
11.	A.K. Gupta	DGM (PE-E)	NTPC
12.	Luci Francis	DCDE (PE-E)	NTPC
13.	R. K. Gupta	ACDE (PE-E)	NTPC

List of Participants

186

The following officers participated in the 15th Standing Committee Meeting on power system planning held on 20-03-2002 at Scope Convention Center, Scope Complex, Lodhi Road, New Delhi.

S.No.	Name	Designation	Organization	Signature
1	N N MISRA	AGM(PRE)	NTPC	
2	A K GUPTA	DGM(PRE)	NTPC	
3	ANAND MOHAN	ED(ENGR)	POWERGRID	31/03/02
4	J. S. JHA	AGM(Buy)	- do -	
5	Y. K. SENGAL	DGM(Buy)	- do -	
6	Sharvam kumar	AD,	CEA	
7	Ravinder Gupta	Dy. Dir	CEA	
8	P. K. Pahuja	Dir.	CEA	
9	V. Ramakrishna	CE	CEA	
10	J. P. Bhatt	CE(CT)	G. E. B.	
11	Dr R. P. Bhatnagar	SE(PSP)	MPSEB	
12	Lucy FRANCIS	DCDE(PE/EE)	NTPC	
13	R. K. GUPTA	ACDE(PEE)	NTPC	
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