भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
प्रणाली योजना एवं परियोजना मूल्यांकन प्रभाग
सेवा भवन, रामकृष्णपुरम्, नई दिल्ली 110066

क्र॰ सं॰: 26/10/2002/प्रयोपमू/548-511 दिनांक: 08.11.2005

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विषय : पश्चिमी क्षेत्र विद्युत प्रणाली योजना की स्थाई समिति की 24वीं बैठक ।

पश्चिमी क्षेत्र विद्युत प्रणाली योजना की स्थाई समिति की 24वीं बैठक के कार्यवृत्त संलग्न है। पूर्वाहन में "प्रारूप राष्ट्रीय विद्युत योजना - पारेषण" पर हुई चर्चा के कार्यवृत्त की एक प्रति भी संलग्न है।

संलग्न - उपरोक्त

(ए॰ के॰ अस्थाना)
मुख्य अभियंता (प्रभारी)

Government of India
Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan: R.K.Puram
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No.26/10/2002-SP&PA/ **Dated 8th Nov. 2005**

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Subject: 24th meeting of Standing Committee on Power System Planning in Western region

Sir,

Minutes of the 24th meeting of Standing Committee on Power System Planning in Western region held on 26th Sep. 2005 at WREB, Mumbai are enclosed.

A copy of summary record of discussions on draft National Electricity Plan – Transmission document held in the first session of the meeting is also enclosed.

Encl. As above

8/11/05

o/c **(A. K. Asthana)**
Copy **Chief Engineer (I/C)**

Minutes of the 24th meeting of the Standing Committee on Power System Planning for Western Region held on 26th Sep. 2005 at WREB, Mumbai.

1.0 The 24th meeting of the Standing Committee on Power System Planning for Western Region was held on Tuesday, the 26th September 2005 at Mumbai. The list of participants is enclosed at Annex-I.

1.1 Member (PS), CEA welcomed the participants to the meeting and thanked WREB for organizing the meeting. Thereafter the agenda items were taken up for discussion.

2.0 Confirmation of the minutes of the 23rd meeting of the Standing Committee on Power System Planning for Western Region.

2.1 Member (PS), CEA stated that the minutes of the 23rd meeting of the Standing Committee on Power System Planning for Western Region held on 23rd November, 2004 at WREB, Mumbai were circulated vide CEA letter no. 26/10/2002-SP&PA/967-980 dated 08.12.2004. Subsequently NTPC vide their letter dated 30-12-2004 had requested for corrigendum to clarify / appropriately reflect their views. No comments from any other utility were received. He requested for confirmation of minutes with following amendments.

i) The following be added at the end of clause 3.3. "NTPC stated that they would like to get associated with the study for reconfiguration of 220 kV network of GEB."

ii) Para 3.7 is redrafted as: "NTPC had stated to retain 400/220 kV interlinking transformer at Kawas and decide operating philosophy at a later date based on the 220 kV system reconfiguration and future demand / supply position in the state / area. CEA stated that in case NTPC decides to retain these transformers, then to avoid increase in fault levels and overloading on 220 kV side, these transformers might be required to be operated in radial mode. "

2.2 The minutes were confirmed with above amendments.

3.0 Transmission System for Evacuation of Power from Subansiri HEP (2000 MW), North Karanpura (1980 MW)

3.1 Member (PS), CEA stated that as per the All India generation capacity addition programme during XI plan, Western and Northern Region would need to import substantial amount of power to meet their increasing load demand. He said that a number of Hydro projects were envisaged in North Eastern region, Bhutan and Nepal. The load growth of Eastern and North Eastern Region indicate that power had to be transferred to deficit Western and Northern Regions. He informed that power from Subansiri and other HEPs would be brought to a pooling station in NER over 400 kV lines. In order to optimally utilize the ROW in the chicken neck area, the power from the pooling station had been planned to be evacuated over +/- 600 kV 4000 MW HVDC with provision for upgradation to 6000 MW, +/- 800 kV to Agra in Northern Region. From Agra power would be delivered to Western Region over two number Agra-Gwalior 765 kV S/C lines. In order to utilize the hydro potential of NER and Bhutan similar 5-6 high capacity corridors would need to be planned. He said that power allocation from Subansiri HEP was yet to be firmed up. However the benefits from the project would accrue to Western and Northern Region, therefore cost of above HVDC line had to be shared by Western and

Northern Region beneficiaries. He than requested CE (SP&PA), CEA to make a presentation.

3.2 CE (SP&PA), CEA stated that system studies carried out for evacuation of power from Subansiri and North Karanpura were a sub-set of the studies carried out for National Electricity plan. The quantum of power from the projects envisaged during XI plan in North Eastern Region was more than 4000 MW and had to be absorbed at a distance of more than 2000 km in Western & Northern Regions, the optimal option for evacuation was HVDC. He added that in HVDC option could be 600 kV or 800 kV and at present 600 kV HVDC was under operation and 800 kV was under developmental stage. Keeping in view that chicken-neck area does not become a bottleneck in development of hydro potential in NER, transmission capacity of 6000 for the final stage of the HVDC link was proposed. It was better to plan for 800 kV system because the losses for 6000 MW capacity 600 kV HVDC would be about 15 % and that at 800 kV would be about 7-8 %. The HVDC line with Subansiri could be constructed for 800 kV specifications and the terminal stations that is converter and inverter stations could be developed in stages – in first stage for 600 kV upgradeable to 800 kV and in second stage upgraded to 800 kV. This staged development was found to be optimum process of development by the HVDC experts. He informed that earlier 4000 MW in 1st stage and additional 2000 MW in 2nd stage was proposed, but after discussion with HVDC experts 4500 MW with 600 kV in stage-I and additional 1500 MW with 200 kV series module to be added in stage-II was found to be optimum staging. The power over this HVDC would be brought to Agra and from Agra power would be brought to Western Region over two no. 765 kV S/C lines to Gwalior. He said that power flow on these lines would depend on despatch scenario and seasonal diversity. He informed that per unit cost of generation from these hydro projects in 2011-12 time frame would be of the order of Rs. 1.50-1.80. The Northern Region constituents in its 18th Standing Committee Meeting had given consent to bear 50 % transmission charges. He requested the members to deliberate the proposal.

3.3 On the query about the estimated landed price of power from NER, CE (SP&PA), CEA informed that total cost including generation and transmission could be expected be of the order of Rs. 3/- per kWh.

3.4 Chief Engineer (MPPTCL) informed that MP had its generation addition plan which includes projects in Amarkantak and Malwa. He stated that in order to convince the management about benefits from the project, additional studies would be required to be carried out and also cost to be shared by each constituent.

3.5 CE (SP&PA), CEA stated that load growth pattern in the Western Region was the highest and required advance planning to meet that load. Import of power of about 6500 MW would be required by the end of XI plan and for reliably meeting this demand inter-regional transmission capacity of more than 8000 MW would be required which was proposed to be provided by the following lines.

a)	Rourkela-Raipur (existing) 400 kV D/C	- 1400 MW
b)	Ranchi-Rourkela-Raipur 400 kV D/C	- 1400 MW
c)	Ranchi-Sipat (under Kahalgaon scheme) 400 kV D/C	- 1000 MW
d)	Northkaranpura-Sipat-Seoni 765 kV S/C	- 2300 MW
e)	NER-NR/WR HVDC (Capacity for WR)	- 2250 MW
	Total	8350 MW

The power from Subansiri and other NER surplus would be evacuated by a direct HVDC link from a pooling point in NER. As initial capacity of this HVDC would be

about 4500 MW and 2250 MW would be utilized for Western Region. Hence 50:50 cost sharing between WR and NR was proposed for this HVDC link. He said that at this point of time it was difficult to say how the cost would be shared as states like Chhatisgarh in WR and Uttaranchal in NR, being exporters within their region might have lesser utility for this line.

3.6 After further discussion, members present were technically in agreement with the proposal. However, they expressed that, in the absence of firm allocation from the project, it would be difficult to convince the management for sharing the cost. Further, the sharing of cost between NR and WR should be in the ratio of benefits to NR and WR.

3.7 It was decided that the CEA would take up the issue of allocation of firm power to NR/WR States from hydro projects in NER based on which the States of NR and WR would consider to share the transmission charges for the proposed Baidyanath Charyali – Agra HVDC link.

4.0 Transmission System associated with Talegaon CCGT 1400 MW

4.1 C.E. (SP&PA), CEA stated that MSEB had proposed that the power generated from the project would be directly hooked to Pune 400 kV sub-station of Powergrid. He added that system studies carried out in CEA indicated the requirement of LILO of second line of Lonikhand-Padghe / Kalwa 400 kV D/C at Pune (PG) and 3rd 315 MVA 400/220 kV transformer at Pune (PG). As above evacuation system would be utilizing regional grid network of PGCIL, MSEB would need to seek long term open access.

4.2 CE (Tr. Plg.), MSETCL stated that in order to have flexibility in operation & control, MSEB had decided to have its own generating switchyard, which would be connected with 400 kV S/S of Pune (PG).

4.3 ED (Engg.), PGCIL stated that MSEB had to submit an application for open access, indicating the time frame, point of injection of power and point of drawal of power. The details of procedure and application form for open access could be obtained from the Powergrid web site. Once the application is received, Powergrid would identify the system-strengthening requirement, if any, after carrying out studies, and further process the case as per procedure in which the case would also be discussed in the Standing Committee at the appropriate stage.

4.4 CE (Tr. Plg.), MSETCL stated that MSEB would be approaching Powergrid in this regard.

5.0 Construction of Korba-Damoh-Bhopal 400 kV D/C line and establishment of Damoh 400/220 kV S/S by Powergrid

5.1 CE (SP&PA), CEA stated that MPSEB had requested that Construction of Korba-Damoh-Bhopal 400 kV D/C line and establishment of 400 kV s/s at Damoh by Powergrid be preponed to improve reliability of power supply in Eastern part of Madhya Pradesh. MPSEB had requested preponing of the Damoh s/s the match with the commissioning of Sanjay Gandhi TPS (1x500 MW), which was expected to be commissioned by 2006-07.

5.2 CE (SP&PA), CEA stated that preponing of regional transmission system would require commitment of MPTRANSCO to bear the transmission charges for the period from date of commissioning till it becomes a part of regional grid. He further said that

Sanjay Gandhi TPS would be injecting power into a regional line of PGCIL and there by utilizing the regional network for improving of state sector generation, it would have implication on the sharing of transmission charges of the regional network. He added that the generation company would also need to seek long-term open access.

5.3 CE (Plg.), MPPTCL stated that Sanjay Gandhi TPS (1x500 MW) was expected by the end of X plan and MPSEB had been requesting PGCIL repeatedly for early completion of Damoh 400 kV S/S. He added that Birsinghpur-Katni-Damoh 400 kV D/C line presently operated at 220 kV would be charged at 400 kV with the commissioning of above unit. He again requested for expediting the completion of Damoh 400 kV S/S by PGCIL.

5.4 ED (Engg.) PGCIL stated that above 400 kV sub-station was a part of Western Region System Strengthening Scheme-II and the progress on the scheme had become constrained due to application of RETL for transmission licensing of the scheme and subsequent development on this on account of CERC order. Member (PS), CEA suggested that establishment of 400 kV S/S at Damoh could be taken out from WRSSS-II and could be implemented independently after taking PGCIL Board's approval. He added that Korba-Damoh-Bhopal 400 kV D/C line should also be implemented on priority.

5.5 After further discussion, it was decided that PGCIL would implement 400 kV S/S at Damoh as independent scheme and would take measures for its expeditious implementation. PGCIL would also implement the construction of Korba-Damoh-Bhopal 400 kV D/C line on priority. MSEB would approach PGCIL for open access for utilisation of PGCIL regional network for evacuation of power from Sanjay Gandhi TPS (1x500 MW).

6.0 The meeting ended with a vote of thanks to the Chair.

List of Participants

The following officers participated in the **24th meeting of Standing Committee on Power System Planning in Western Region** held on 26th September 2005 at WREB, Mumbai.

S. No	Name	Designation	Tel. / Mobile / Fax No.
CEA			
1.	Sh. V. Ramakrishna	Member (PS)	
2.	Sh. A. K. Asthana	Chief Engineer (I/C)	
3.	Sh. Ravinder Gupta	Dy. Director	
WREB			
4.	Sh. Manjit Singh	Member Secretary (I/C)	022-28209506 / 28321386
5.	Sh. S. G. Tenpe	S.E. (C)	
6.	Sh. S. D. Taksande	S.E. (P)	
7.	Sh. S. S. Kalsi	E.E. (O)	
8.	Sh. S. Satyanarayan	E.E. (OS)	
Maharashtra			
9.	Sh. M. Ahfaz	C.E. (Tr. Pl.)(MSETCL)	
Gujarat			
10.	Sh. S. Mohanram	V.P. (PRO) GETCO	
Madhya Pradesh			
11.	Sh. S. K. Bajpai	C.E. (Plg.)	
12.	Dr. R.P. Bhatele	A.C.E. (PSP)	0761-2702148 / 9425152817
13.	Smt. Deshraju Rekhi	E.E. (MPSEB)	
Chhattisgarh			
14.	Sh. V. K. Awasthi	C. E. (Tr.)	
GOA			
15.	Sh. Nirmal Braganza	C.E. (Electrical) (GED)	
16.	Sh. S. A. Mandrekar	SE (Com./EHV)	
Daman Elect.			
17.	Sh. Vishwambhar Singh	A.E.	
D.N.H. Elec. Deptt.			
18.	Sh. H. M. Patel	J.E.	
NTPC			
19.	Sh. Kaushik Bhowmik	Sr. Manager (C.P.)	
20.	Sh. A. Basu Roy	Sr. Manager (Comm.)	
21.	Sh. Ajit Kumar	HOD (Elec.)	
POWERGRID			
22.	Sh. R.N. Nayak	E.D. (Engg.)	0124-2571801, 9811422111
23.	Sh. A. K. Datta	E.D. (WR)	
24.	Sh. D.K. Valecha	AGM (WR)	0712-2641472
25.	Sh. Y. K. Sehgal	DGM (ENGG)	0124-2571815, 9811227885
26.	Sh. B. B. Bhattachary	DGM	
PTC			
27.	Sh. S.K. Dube	Director (O)	011-51659503
28.	Sh. S. S. Sharma	Sr. V.P.	