

**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 19th March 2007

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|--|--|
| 1 The Member (PS),
Central Electricity Authority,
Sewa Bhawan, R. K. Puram, N. Delhi-110066 | 9 Member (Transmission & Distribution),
Chhatisgarh State Electricity Board,
Dangania, Raipur (CG)-492013
<i>Fax 0771 4066566</i> |
| 2 The Member Secretary,
Western Regl. Electricity Board,
MIDC Area, Marol, Andheri East, Mumbai
<i>Fax 022 28370193</i> | 10 Member (Transmission),
MAHATRANSCO, 'Prakashgad', Plot No.G-9,
Bandra-East, Mumbai-400051
<i>Fax 022 26452868</i> |
| 3 The Executive Director (Engg.),
Powergrid Corp. of India Ltd., "Saudamini",
Plot No. 2, Sector-29, Gurgaon-122001
<i>Fax 95124-2571760</i> | 11 The Chief Engineer,
Electricity Department,
The Government of Goa, Panaji
<i>Fax 0832 222354</i> |
| 4 The Executive Director (Engg.),
NTPC Ltd., Engg. Office Complex,
A-8, Sector-24, NOIDA 201301
<i>Fax 95120-2410201</i> | 12 The Director (O)
PTC Ltd., 2 nd Floor, 15 NBCC Tower,
Bhikaji Cama Place, New Delhi-66
<i>Fax 011 28659502</i> |
| 5 Shri N.S.M. Rao,
Chief Engineer (ED/TAPS),
Nuclear Power Corp. of India Ltd.,
12 th Floor, North Wing, VS Bhavan,
Anushakti Nagar, Mumbai-400094
<i>Fax 022 25556513</i> | 13 Shri R. N. Sharma,
Officer on Special Duty,
UT of Dadra & Nagar Haveli,
Silvasa Pin-396235 Fax 0260-2642787 |
| 6 Member (Power),
Narmada Control Authority, 113-BG, Scheme
No.74-C, Vijay Nagar, Indore-452010
<i>Fax 0731 2559888</i> | 14 Executive Engineer (Projects)
Electricity Department, 220/66 kV Kharadpada
S/S, UT of Dadra & Nagar Haveli, Post Naroli-
396235
<i>Ph. 0260-2650857</i> |
| 7 The Managing Director,
GETCO, Sardar Patel Vidyut Bhawan,
Race Course, Baroda-390007
Fax 0265 2337918 / 2338164 | 15 Executive Engineer
Electricity Department, UT of Daman & Diu Moti
Daman-396220
Ph. 0260-2250889, 2254745 |
| 8 Member (Transmission),
MPPTCL, Block No.3,
Shakti Bhawan, Rampur, Jabalpur-482008
Fax 0761 2665593 | |

Subject: 26th meeting of Standing Committee on Power System Planning in Western region

Sir,

Minutes of the 26th meeting of Standing Committee on Power System Planning in Western region held on 23rd Feb. 2007 at WRPC, Mumbai are enclosed.

Encl. As above

**(P. K. Pahwa)
Director**

Copy to PPS, Member (PS), CEA

Minutes of the 26th meeting of the Standing Committee on Power System Planning of Western Region held on 23rd February, 2007 at WRPC, Mumbai.

The 26th meeting of Standing Committee on Power System Planning of Western Region was held on Friday the 23rd February, 2007 at WRPC, Mumbai.

The list of participants is at Annex-I.

Shri V. Ramakrishna, Member (Power System), CEA welcomed the participants to the meeting and stated that subsequent to the circulation of the first set of agenda, Ultra mega project of 4000 MW capacity at Krishnapatnam in Andhra Pradesh had been proposed and was on fast track. The constituents of Southern Region, and Maharashtra in Western Region were the beneficiaries of this project. The transmission system associated with this project had already been discussed in the Standing Committee meeting of Southern Region and SRPC meeting. Transmission System associated with Krishnapatnam TPS along with the studies carried out had also been circulated as supplementary agenda item for today's meeting. He hoped that fruitful discussions would take place on the various agenda items and members would be able to arrive at a decision.

Shri Manjit Singh Member Secretary (I/C), welcomed the various participants to the meeting.

Thereafter, the agenda items were taken up for discussions.

1. Confirmation of the minutes of 25th meeting of Standing Committee

Member (PS), CEA stated that minutes of the 25th meeting of the Standing Committee on Power System Planning of Western Region held on 30.9.2006 at New Delhi were circulated vide CEA letter no.26/10/2002-SP&PA/693-706 dated 31.10.2006. Subsequently, certain observations/comments had been received from NTPC, MPPTCL, NPC and PGCIL. The comments/observations were thereafter taken up one by one.

NTPC vide their letter no. dated 27-11-2006 had stated that 2 nos. 400 kV line bays at Korba switchyard were confirmed by NTPC during the last meeting whereas in the minutes availability of space for 3 no bays (2 line bays+1 reactor bay) had been stated. Member (PS) CEA stated that reactor bay could also be required at Korba switchyard and as far his recollection of the deliberations availability of space for reactor bay was also confirmed. AGM, NTPC stated that there were space constraints at Korba switchyard and they would confirm availability of space for reactor bay after visit to site by NTPC engineers.

Regarding apprehension expressed by NTPC that LILO of 400 kV Torrent-Pirana line into one of the sections of Gandhar-Dehgam agreed during the last meeting under ATS for Torrent might result in overloading of lines emanating from Gandhar under certain contingency conditions, Member (PS), CEA clarified that based on the studies carried out in CEA the transmission system was adequate for evacuation of Gandhar and Torrent power under normal conditions. This arrangement was only an interim arrangement for evacuation of Torrent power till completion of Gandhar-Pirana section of Torrent-Pirana line and in case of any overloading under contingency conditions Torrent would have to back down its generation. Further TPGL had to complete Gandhar-Pirana section of Sugan-Pirana 400 kV D/C as early as possible. The other point raised by NTPC regarding revisiting of transmission system for Gandhar-II it was clarified that revisiting of transmission system implicitly implied carrying out revised load flow study in Gandhar-II time frame for all possible contingencies.

MPPTCL vide their letter dated 30-11-2006 had stated that MPPTCL had not agreed to share the transmission charges for establishment of Navi Mumbai S/S along with associated line and Navi Mumbai should be considered as regional scheme only after commissioning of Kawas-II generation project . MPPTCL had also proposed that transmission charges for Damoh substation along with associated line be pooled. Member (PS) stated that while arrangement for Damoh S/S had already been agreed and establishment of Navi Mumbai and Shujalpur substation were on similar footing and hence the points raised by MPPTCL would again be discussed in subsequent agenda item "Establishment of Shujalpur S/S"

Regarding points raised by NPCIL vide their letter dated 22nd November 2006 regarding flow on RAPP-Nagda line, Member (PS) stated that issue highlighted by

NPCIL in their letter was not discussed in the SCM of WR and might have been discussed in SCM of NR where views of NPCIL would be appropriately reflected.

PGCIL vide their letter dated 6th December 2006 had requested for amendments to the minutes with regard to ATS for Torrent evacuation system so as to state more clearly that the Dehgam-Pirana 400 kV D/C line along with Pirana 400 kV S/S was to be taken up by PGCIL as a System strengthening scheme. Regarding Raipur-Wardha line agreed with Quad conductor during the last meeting in place of twin moose conductor Member (PS), CEA agreed with PGCIL that increase in cost due to higher conductor specification would be taken care through Revised Cost Estimate had not been reflected in the minutes and this would be appropriately added in the minutes. Regarding other points raised by PGCIL with regard to Mundra and Sasan transmission this would be discussed again along with Mundra and Sasan transmission in the subsequent items.

After discussions the following amendments to the minutes of the 25th meeting of SCM of WR were agreed:

Page 6 of the minutes, under Para 2.5 Torrent Evacuation System would be reworded as following

2.5 Torrent Evacuation System:

- i) LILO of Gandhar-Vapi 400 kV S/C line at Torrent
- ii) Torrent-Pirana 400 kV D/C line (As an interim arrangement, till completion of Gandhar-Pirana section of the line, the line from Torrent would be completed up to a point ahead of Gandhar and LILoed in to one of the circuits of Gandhar-Dehgam 400 kV D/C line. On completion of Gandhar-Pirana section, the LILO would be removed and both circuits of Gandhar-Dehgam 400 kV D/C would be restored as per existing and the line from Torrent would go directly to Pirana to have Torrent-Pirana 400 kV D/C line)

System Strengthening Scheme

- i) Dehgam-Pirana 400 kV D/C with 400 kV Pirana S/S (2x315MVA) to be constructed by PGCIL at the earliest as System Strengthening Scheme.

M/S TPGL to bear the cost of 2 no. line bays at Pirana (PG) S/S for its drawal of power.

On Page 15, Item 9 under switchyard provisions for Korba –III (1x500MW) the line “NTPC confirmed availability for 3 no 400 kV bays (2 no line bays + bus reactor bay) was available at Korba switchyard be replaced as under

“NTPC confirmed availability of space for 2 no 400 kV line bays at Korba switchyard. The availability of space for bus reactor bay would be confirmed after visit of NTPC engineers to Korba switchyard.”

The following be added on Page 15, Item-8 Review of the Conductor provisions on Raipur- Wardha 400 kV D/C line at the end of last para.

The increase in cost on account of change in specification would be taken care at the time of approval of Revised Cost Estimates.”

Thereafter, the minutes of the 25th meeting were confirmed with above changes.

2.0 Establishment of 400/220 kV S/S at Shujalpur.

Director (SP&PA) informed that establishment of 2x315 MVA 400/220 kV S/S at Navi Mumbai was agreed during the last meeting but subsequently MPPTCL vide their letter dated 30-11-2006 had communicated that they were not agreeable to share the transmission charges for this substation and associated line and Maharashtra should bear full transmission charges for this substation till commissioning of Gandhar-II generation project. Member (PS), CEA stated that establishment of Sujalpur substation and Navi Mumbai were on similar analogy and in case MPPTCL did not agree for sharing of transmission charges for Navi Mumbai then similar logic would also apply for Sujalpur. Regarding establishment of Damoh substation Member (PS), CEA stated that decision had already been taken that after commissioning of Korba-Damoh-Bhopal line the transmission charges would form part of the regional pool. The Korba-Damoh section of the line was preponed at the request of MPPTCL and MPPTCL had agreed to bear transmission charges. The issue subsequently came for discussions in the WREB/WRPC meeting wherein the various points raised by MPPTCL were clarified and the same was also agreed to by MPPTCL in the WREB/ WRPC

meeting. Based on decisions taken certain agreements had already been signed and it would not be prudent to reopen this issue at this stage.

Executive Director (Engg), (PGCIL) stated that pre-ponement of Korba-Damoh line could not be categorized in the same category as Navi Mumbai /Sujalpur as it would be radial line and would solely be for MPPTCL.

To a query from MD (GETCO) regarding justification for establishment of Sujalpur substation, Members (PS) informed that establishment of Shujalpur S/S was agreed in 2004 to meet increasing load demand in that area and was earlier covered under Gandhar-II project. Due to uncertainty in time frame of Gandhar-II it was now proposed to take it up as regional system strengthening scheme.

After discussions the establishment of 400/220 kV at Shujalpur was agreed as regional system strengthening scheme. The proposal for establishment of 400/220 kV substation at Navi Mumbai and Shujalpur to be covered under Regional Strengthening Scheme would be taken up with WRPC.

It was also decided MPPTCL could approach WRPC for sharing of transmission charges for Damoh substation as Regional Project from the date of commissioning.

3.0 Requirement of reactors in WR Grid

AGM (Engg), PGCIL made a presentation of the studies carried out by them to assess the requirement of reactors in Western Grid and stated that over-voltage conditions were being experienced under light load conditions at some of the substations viz Khandwa, Dhule, Indore, Karamsad, Dehgam Nardipur, Kolhapur and Mapusa substations in Western Grid. Opening of the lines, putting bus reactor and adjustment of taps of transformer were some of the options studied by them to contain over voltages in the grid during light load conditions. AGM, PGCIL added that requirement of bus reactors in the grid had been optimized considering combination of above measures. To a query from Member (PS), CEA whether the reactors being installed by MSEB (50 MVAR at Dhule, 80 MVAR at Khargar and Padge substations had been considered in the study. AGM (Engg.) PGCIL clarified that the reactors being installed by MSEB were taken in the study. To another query from Member (PS), CEA whether 125 MVAR reactors being proposed were standard rating Executive Director (Engg), PGCIL clarified that

they had discussed with the manufactures prior to proposing 125 MVAR reactors. After further discussion, installation of reactors based on PGCIL study was agreed. It was also decided that reactors would be installed by the utility owning the substation. The name of the substation where installation of reactors was agreed, MVAR rating, and agency responsible for installation was as under:

S.no	Substation	Size (MVAR)	Implementing agency
1.	Khandwa 400 kV	1x125	POWERGRID
2.	Dhule 400 kV	1x125	MSETCL
3.	Indore 400 kV	1x125	MPPTCL
4.	Dehgam 400 kV	1x125	PGCIL
5.	Kasor 400 kV	1x125	GETCO
6.	Karad 400 kV	1x80	MSETCL
7.	Nardipur 400 kV	1x80	GETCO

MD (GETCO) highlighted the problem of low voltage being faced in Jetpur area. Member (PS) suggested that GETCO should provide more switchable capacitors at low voltage buses in that area.

4.0 Inter-regional Transmission system for power export from NER to NR/WR and power evacuation system in NER for Subansiri Lower HEP (2000MW) and Kameng HEP (600MW).

4.1 Member (PS) stated that inter-regional transmission system for export of power from NER to NR/WR and power evacuation system in NER for Subansiri Lower HEP (2000 MW) and Kameng HEP (600 MW) was discussed in 24th meeting of Standing Committee on Power System Planning of WR and the constituents of WR had concurred to the proposal subject to allocation of firm power from hydro projects in NER. Earlier +/- 600 kV, 4000 MW HVDC system upgradable to +/- 800 kV 5330 MW was proposed. Taking in to account development in +/- 800 kV HVDC technology and discussion with experts the proposal had now been

modified to +/- 800 kV HVDC with 3000 MW rectifier/inverter module at Biswanath Chareli / Agra and 3000 MW rectifier/inverter module at Siliguri/Agra. To provide better security of transmission line in the chicken-neck area, the two poles of the bi-pole line could be on separate towers in the chicken-neck area. Both the line should be of bi-pole specification and the second bi-pole could be strung at a later date when next 6000 MW corridors would be developed. The tentative estimated cost of Phase-1 of this scheme is about Rs 7440 crores (Rs 2400 crores for the HVDC terminals and Rs 5040 crores for the transmission line) In Phase-2, when 3000MW modules would be added, the additional cost would be towards the HVDC modules only. In view of the programme of Teesta-III and other HEPs in Sikkim, it would be desirable to go for multi-terminal HVDC scheme from beginning in a single phase implementation.

4.2 He informed that CEA had proposed to Ministry of Power that 70 % of power allocation from Subanshri Lower and Kameng HEP be made to constituents of Western and Northern Regions on 50:50 basis and similar allocations from Sikkim and Bhutan projects should also be considered. It was anticipated that more than 50 % of allocation of power from these projects would be made to these region. He opined that irrespective of the quantum of allocation, power from these projects would be exported substantially to NR/WR especially during five months of monsoon season. With regards to the generation projects in Sikkim, he requested PTC to tie up with WR and NR constituents to facilitate early development of transmission system. He stated that in order to increase short circuit level at Bishwanath Chariyali Powergrid has suggested Balipara-Bishwanath Chariyali 400 kV D/C Quad line also to be included.

4.3 Thus the modified transmission system proposal was as under:

PART-A: North East – Northern/Western Interconnector-I

Phase-I

- Bishwanath Chariyali HVDC/power pooling station.
- Extension of Agra s/s to have HVDC terminal and associated facilities.
- Bishwanath Chariyali – Siliguri – Agra ± 800 kV, 6000 MW HVDC bi-pole line
- HVDC rectifier/inverter modules of 3000MW at Bishwanath Chariyali/Agra

Phase-2

- Siliguri HVDC/power pooling station towards north-west of Siliguri town.
- HVDC rectifier/inverter modules of 3000MW at Siliguri/Agra
- LILO of Teesta-V – Siliguri 400kV D/C line at Siliguri HVDC station.

PART-B: Transmission system for evacuation of power from Kameng HEP

- Kameng-Balipara 400kV D/C line
- Balipara-Bongaigaon 400 kV D/C Quad line with 30 % fixed series compensation
- 2nd 315 MVA 400/220 kV ICT at Misa.
- Additional transmission strengthening in NER to provide 1 no 400 kV and 1 no 220 kV s/s

PART-C: Transmission system for evacuation from Lower Subansiri HEP up to Biswanath Chariyali pooling station

- Subansiri Lower – Biswanath Chariyali 400kV 2xD/C lines with twin lapwing conductor.
- LILO of Ranganadi-Balipara 400kV D/C at Bishwanath Chariyali
- LILO of Depota-Gohpur 132kV S/C at Bishwanath Chariyali
- 2x200MVA 400/132 s/s at Bishwanath Chariyali
- Balipara-Bishwanath Chariyali 400 kV D/C line
- Addl system strengthening in NER to provide 2 nos of 400 kV or 220 kV s/s

Regarding sharing of transmission charges he intimated that the proposal was that, as NR and WR would be beneficiaries of the NER-NR/WR inter-connector system, it is proposed that transmission charges for Part-A may be shared by NR and WR in 50:50 ratio, and recovered as pooled transmission charges of the respective region.

The transmission charges for Part-B were proposed to be shared in proportion to their allocation from Kameng HEP and the transmission charges for Part-C in proportion to their allocation from Lower Subansiri HEP.

After discussions members agreed to the above proposal

5.0 Transmission system for power evacuation from Sasan and Mundra Ultra Mega Projects

Member (PS), CEA stated that subsequent to the decision taken during the last meeting PGCIL had suggested certain modifications in the transmission proposal for Sasan and Mundra. PGCIL had informed that new 765 kV substation proposed at Satna would be contiguous to the existing 400 kV Satna and hence the 400 kV interconnection proposed between Satna 765 kV and 400 kV would not be required. PGCIL had also suggested that instead of Indore (PG)-Indore (MPTRANSCO) 400 kV D/C Quad interconnecting lines, LILO of Indore-Nagda 400 kV D/C line at Indore (PG) could be done. PGCIL had further proposed that, in view of the uncertainty in time frame of Kawas-II and Gandhar-II, instead of Kawas-Navsari 400 kV D/C line, Gandhar-Navsari 400 kV D/C line may be taken up.

Chief Engineer, MPTRANSCO stated that there were space constraints regarding availability of line bays at their Indore substation hence LILO of Indore-Nagda 400 kV D/C line at Indore was a better option.

Executive Director (PGCIL) stated that during the last meeting 2 no 765/400 kV, 1500 MVA transformers at Wardha were covered under Mundra transmission system and 1 no 765/400 kV 1500 MVA transformer was covered as part of Western Region System Strengthening Scheme. He suggested that to facilitate implementation, the 3rd 765/400 kV transformer at Wardha might be covered as part of Mundra transmission.

MD, GETCO suggested establishment of 400 kV substation at Shivilakha through LILO of 400 kV Mundra-Ranchodpura 400 kV D/C line to meet the increased load demand in and around Shivilakha area in Upper Western part of Gujarat. Member (PS) CEA stated that the proposal would need further study.

After discussions the modifications proposed by PGCIL were agreed. The revised transmission system for Sasan and Mundra as agreed was as under:

Sasan Transmission System In WR: (Estimated Cost Rs. 3900 Crores)

- (i) Sasan-Satna 765 kV 2xS/C
- (ii) Satna 765/400 kV, 2x1000 MVA S/S
- (iii) Satna-Bina (PG) 765 kV 2xS/C
- (iv) Bina (PG)-Bina (MP) 400 kV D/C (2nd line)
- (v) LILO of both circuits of one of the Vindhyachal-Satna 400 kV D/C line at Sasan 400 kV 2xD/C
- (vi) Fixed Series Comp 30% on 400kV Sasan-Satna D/C
- (vii) Fixed Series Comp. 30% on both of Satna-Bina 2xD/C
- (viii) Bina (PG)-Indore 765 kV S/C
- (ix) New 765kV substation at Indore, 2x1500 MVA 765/400kV
- (x) LILO of both circuits of Indore-Nagda 400 kV D/C line at Indore (PG) (765)
- (xi) 765 kV operation of Agra-Gwalior-Bina-Seoni 765 kV lines and Upgrading Bina and Gwalior s/s to 765kV: 2x1000MVA 765/400kV at Bina and 2x1500MVA 765/400kV at Gwalior

Mundra Transmission System In WR: (Estimated Cost Rs. 4100 Crores)

- i) Mundra-Limbdi 400 kV D/C (Triple Moose)
- ii) Mundra-Ranchhodpura 400 kV D/C (Triple Moose)
- iii) Mundra-Jetpur 400 kV D/C (Triple Moose)
- iv) Gandhar-Navsari 400 kV D/C
- v) Navsari 400 kV substation 2x315 MVA 400/220 kV
- vi) LILO of both ckts of Kawas-Navsari 220kV D/C line at Navsari 400kV s/s
- vii) Navsari-Mumbai New Location (PG) 400kV D/C and connecting to HVDC side of MSEB at this new s/s
- viii) Wardha 765kV s/s with 3x1500 MVA, 765/400kV
- ix) 765kV operation of Seoni-Wardha 2xS/C lines
- x) Wardha-Aurangabad 400kV D/C quad with 40% Fixed Series Capacitor

Western Region System Strengthening Scheme

Due to the deletion of 3rd 1500 MVA transformer at Wardha from Western Region Strengthening Scheme and inclusion of the same under Mundra

transmission the Western Region Strengthening Scheme agreed during the 25th meeting gets modified as under:

- Additional 1x315 MVA 400/220 kV transformer each at Wardha, Pune, Gwalior, Bina and Raipur substation of PGCIL

Member (PS) stated that the sharing of transmission charges for transmission system associated with Sasan (4000 MW and Mundra (4000 MW) was discussed during the last meeting and any one of the following two options of sharing of transmission charges were acceptable by WR constituents.

Option-1: Transmission charges for Sasan and Mundra transmission system in WR be pooled in to WR regional pooled transmission charges and NR beneficiaries sharing the same based on their total allocation from WR pool including Sasan and Mundra power. And transmission charges for Sasan and Mundra transmission system in NR shared by NR beneficiaries.

Option-2: Total transmission charges for Sasan and Mundra transmission system in WR as well as in NR be divided in to NR and WR in ratio of their allocation from Sasan and Mundra and pooled in to regional pooled transmission charges of the respective regions.

In both the above options, transmission charges for system strengthening to be part of respective regions only.

He informed that sharing of transmission charges along with strengthening of transmission system required in NR to absorb power allocation from these projects was discussed in 21st meeting of Standing Committee in Northern Region on 3-11-06 and NR constituents had agreed to option-2 for sharing of transmission charges. Member (PS), CEA stated that constituents of WR had already given their consent during the last meeting and therefore option-2 agreeable to NR could be adopted. Members concurred with the Option-2 for

sharing of transmission charges for Sasan and Mundra Ultra Mega Projects in WR and NR.

Member (PS), CEA informed that based on Northern Region focused studies, transmission system for Sasan and Mundra required in the Northern Region had been finalized in the NR Standing Committee. The informed that transmission system approved for Northern Region was as under.

Sasan and Mundra Transmission System in Northern Region (Estimated cost Rs. 2000 Crores)

- (i) Sasaram-Fatehpur 765kV S/C (second line)
- (ii) Fatehpur-Agra 765kV S/C (second line)
- (iii) LILO of both circuits of Kanpur-Auraiya 400kV D/C to Fatehpur
- (iv) Agra-Reengus(or Alwar or Sikar) 400kV D/C quad
- (v) New 400/200kV 2x315MVA s/s at Reengus (or Alwar or Sikar) with 220kV D/C line interconnecting to 220kV s/s
- (vi) Reengus (or Alwar or Sikar) - Jaipur PG 400kV D/C
- (vii) Reengus (or Alwar) – Ratangarh 400kV D/C
- (viii) LILO of both circuits of Nathpajahkri-Abdullapur 400kV D/C at Panchkula with 2x315MVA 400/220kV s/s at Panchkula
- (ix) Bahadurgarh – Sonipat 400kV D/C with 2x315MVA 400/220kV s/s at Sonipat

6.0 Transmission System for evacuation of power from Krishnapattnam UMPP (4000 MW) and corresponding requirements for additional transmission capacity between SR-WR

Member (PS), CEA stated that Krishnapattnam UMPP (4000 MW) in Andhra Pradesh had been proposed. The first unit was expected during the end of 11th Plan or early 12th Plan. Besides SR constituents, Maharashtra in WR was having tentative allocation of 800 MW from this project. Based on supply demand scenario of 2013-14 during summer peak WR would be importing about 11500 MW out of which 600 MW would be from SR. During winter peak import of WR would be of the order of 9000 MW out of which 4000 MW would be from SR. He stated that studies had been carried out in CEA for evolving transmission system

for this project and also for meeting the increased inter-regional transmission requirements between SR-WR for transferring the surplus power which would be available in SR during certain periods of the year and which could be utilized in WR to bridge the deficit. He stated that studies have been carried out in CEA for 2013-14 time frame for evolving transmission requirements for Krishnapattnam UMPP and for transfer of surplus power from SR to WR. He stated that we have also to keep in view, implementation of Tamil Nadu UMPP (4000 MW) which was also being planned and was expected during similar time frame. He stated that for evolving transmission requirements focus was to maximize SR-WR transmission hence winter peak conditions had been considered when SR export would be of the order of 6000 MW. Two alternatives had been studied. Basic power evacuation system within SR was same under both the alternatives. In respect of SR-WR system in alternative- 2 an asynchronous HVDC back to back at Narendra of 1000 MW capacity had been considered while in alternative -1 WR and SR are synchronously connected at Narendra through Narendra-Kolhapur 400 kV D/C. He informed that alternative-2 at Narendra had better reliability as under outage of one of the 765 kV ckts between Raichur and Sholapur total power of both the circuits gets transferred to the other healthy 765 kV circuits while in alternative-1 this is shared by Narendra-Kolhapur 400 kV D/C line causing overloading of this line. As alternative-2 had better reliability, the same had been recommended. The transmission requirements arrived based on alternative 2 was as under;

1. Krishnapattnam UMPP-Nellore 400 kV, Quad D/C line
2. Krishnapattnam UMPP-Kurnool 400 kV, Quad D/C line
3. Krishnapattnam UMPP-Gooty 400 kV, Quad D/C line
4. Kurnool- Raichur 400 kV, Quad D/C line.
5. Narendra (SR)- Kholapur (WR) 400 kV D/C line
6. 1000 MW HVDC back to back at Narendra
7. Raichur(SR) – Sholapur(WR) 765 kV S/C line-1
8. Raichur(SR) – Sholapur(WR) 765 kV S/C line-2
9. Sholapur (WR)-Pune (WR) 765 kV S/C line
10. 765/400 kV S/S at Raichur 3000 MVA
11. 765/400 kV S/S at Sholapur 3000 MVA

12. 765/400 kV S/S at Pune , 3000 MVA
13. Pune-Navi Mumbai 400 kV D/C

Member (PS), CEA stated that the above system included evacuation system for Krishnapattnam UMPP as well as the SR-WR interconnecting system and WR strengthening for import of power from SR.

Transmission charges for the works at S. no. 1, 2, 3, 4, 5, 6 & 7 and 50 % at S. no 10 & 11 which would meet the requirement of Maharashtra were proposed to be borne by the beneficiaries of Krishnapattnam UMPP.

Works at S. no 8, 9, 12 & 13 and 50 % of works at S. no 10 & 11 were proposed as inter-regional system between SR and WR and accordingly transmission charges to be shared by SR and WR on 50: 50 basis and recovered as pooled transmission charges of Western Region.

Member (PS) stated that Maharashtra was the proposed beneficiary of Krishnapattnam UMPP and hence representatives of Maharashtra should discuss the matter with their management and convey their concurrence. Similarly for inter-regional SR-WR system the constituents should discuss with their management and convey their concurrence within 15 days.

7.0 Interconnectivity of 400 kV Ranchi substation.

Member (PS), CEA informed that Maithon-Ranchi-Sipat 400 kV DC line as part of transmission system associated with Kahalgaon-II was under implementation. The scheme includes a 400/220 kV S/S at Ranchi alongwith LILO of 220 kV bays . Connectivity to 220 kV network of Jharkhand was taken up with JSEB and it had emerged that JSEBs programme of providing 220 kV interconnectivity may not materialize in the required time frame as their own requirement of Ranchi area was being met satisfactorily from their 220 kV Hatia S/S . Due to long length of 600 km between Maithon and Sipat anchoring at Ranchi with Jharkhand grid was necessary. The matter was discussed with Jharkhand and PGCIL and LILO of Patratu –Hatia- Chandil 220 kV D/C line at Ranchi 220 kV (2xD/C LILO) has been agreed. And these LILO works covering about 10 kms of 220 kV D/C line could be covered under Kahalgaon-II transmission system.

In the end Member (PS) listed out the various decisions taken in this meeting, thanked WRPC for hosting the meeting and the participants for the fruitful discussions.

The meeting ended with a vote of thanks to the chair.

List of Participants

The following officers participated in the 26th Standing Committee Meeting on Power System Planning held on 23rd February, 2007 at WRPC, Mumbai.

S. No.	Name	Designation	Organisation	Mobile / Tel. No.	E-mail Address
	S/Shri				
1.	V. Ramakrishna	Member (PS)	CEA		
2.	A. K. Asthana	Chief Engineer	CEA		
3.	P. K. Pahwa	Director	CEA		
4.	Ravinder Gupta	Dy. Director	CEA		
5.	Manjit Singh	MS (IC) and SE (opn.)	WRPC	022-28209506 9819064946	hora2512@rediffmail.com
6.	S. D. Taksande	S.E.	WRPC	9833550968	
7.	S. G. Tenpe	SE (C)	WRPC		
8.	R. N. Nayak	E.D (Engg.)	PGCIL	9811422111	
9.	Y. K. Sehgal	AGM (Engg.)	PGCIL	9910378079	yksehg@powergridindia.com
10.	Anjan Roy	GM (WRLDC)	PGCIL	9869453456	gmwrlcdc@rediffmail.com
11.	P. Pentayya	DGM(OS) WRLDC	PGCIL	9869450206	ppentayya@gmail.com
12.	D. K. Valecha	GM (WRTS)	PGCIL		
13.	Subir Sen	CDE (Engg.)	PGCIL	9910378109	subir@powergridindia.com
14.	A. Basu Roy	DGM (Comml.)	NTPC	91-11-24364383	abasuroy@ntpc.co.in
15.	Abhijit Sen	DGM (PE-E)	NTPC	9868390601	aksen@ntpceoc.co.in
16.	Pramod Kumar	AGM (PE-E)	NTPC	9868390543	parmodurja@ntpceoc.co.in
17.	C. S. Dubey	CE	NPCIL	9820895963	csdubey@npcil.co.in
18.	Sandeep Sarwate	So/F	NPCIL	9969472226	ssarwate@npcil.co.in
19.	S. K. Dube	Director (O)	PTC	09811444234	dube@ptcindia.com
20.	S. K. Negi	MD	GETCO		md.getco@gebmail.com
21.	M. H. Kshatriya	ACE (R&C)	GETCO	9925210257	acerc.getco@gebmail.com
22.	M. R. Khadgi	CE	MSETCL	9322218169	cestu@mahatransco.in
23.	N. R. Sonkavday	EE	MSETCL	022-26595145	cestu@mahatransco.in
24.	V. K. Awasthi	CE (Trans)	CSEB	09425203829	vk.awasthi@cseb.gov.in
25.	Dr. R. P. Bhatele	ACE (PSP)	MPPTCL	9425152817	mpseb-adb@sancharnet.in
26.	A. K. Garg	Add. GM (Coml.)	MPPTC Jabalpur	2702422	Cecomml-mpseb@yahoo.com
27.	Jose E. D. Mel	Asstt. Engineer (EHV)	Goa Elect. Dept.	2234155	elizeeu@yahoo.com
28.	B. R. Tamboli	EE (P)	D & NH	9824322002	
29.	Vishwambhar Singh	AE (T)	D & D	0260-2255103	