

**Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan, R.K. Puram, New Delhi – 110066.**

No. 51/4/SP&PA-2007/

Date: June 15, 2007

To

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Sub: 24th meeting of the Standing Committee on Power System Planning of Southern Region
- Additional Agenda

Sir,

Agenda for the 24th meeting of the Standing Committee on Power System Planning of Southern Region, which is to be held at 10:00 Hrs on June 18, 2007 (Monday) in conference hall of SRPC, Bangalore, was sent vide our letter dated June 04, 2007.

Additional agenda items for this meeting are enclosed.

Yours faithfully,

Encl: Additional Agenda Items

(Pardeep Jindal)
Director (I/C) (SP&PA-III)
(Telephone No. 011 26732325)

Standing Committee on Power System Planning in Southern Region

Additional Agenda Items for 24th Meeting

5.0 Transmission addition requirements of State Transmission Utilities

5.1 Transmission Addition requirements of APTRANSCO

APTRANSCO has proposed following transmission system for evacuation of power from the Kakatiya (Bhoopalapally) TPS (1x500 MW) of APGENCO:

- (i) Bhoopalapally – Warrangal (PGCIL S/S), 400kV D/C line
- (ii) Bhoopalapally – Gazwel, 400kV D/C line

The transmission system is to be built by APTRANSCO at their cost. In this regard, discussion was held in CEA, with APTRANSCO officials in May 2007 and it was observed that their proposal could be optimized by taking up Warangal – Siddipet 220kV D/C line instead of Bhoopalapally- Gazwel 400kV D/C line. However, APTRANSCO should also evolve their proposal covering transmission systems for evacuation of power from Kothagudam Stage-IV TPS (500MW), Lower Jurala HEP (240MW), Vijayawada-VI TPS (500 MW) and Krishnapatnam (1600 MW) generation projects, which have been programmed for implementation during 11th Plan. Members may discuss and decide.

5.2 Transmission Addition requirements of KPTCL

KPTCL has proposed following transmission systems:

- (i) LILO of Nelamangla – Somanahalli 400kV D/C line at Bidadi.
- (ii) Establishment of a new 400kV S/S at Bidadi with 2x500MVA 400/220kV transformer.
- (iii) Bidadi-Ramnagar-Tubinkere and Bidadi-Magadi 220kV D/C lines
- (iv) Bellary TPS – Hiriyur (PGCIL S/S), 400kV D/C line

The transmission system is to be built by KPTCL at their cost. In this context it may be noted that Bidadi 1400 MW project is also proposed in XI plan which KPTCL have not considered in the above proposal. Also, the choice between LILO of Nelamangla –

Somanahalli vis-à-vis Neelamangla – Mysore would depend on right of way feasibility for the LILO.

Members may discuss and decide.

5.3 Transmission Addition requirements of TNEB

(i) Tirunelveli (TNEB) (near Marandai) 400/230 kV S/S of 3x315 MVA capacity was agreed in the 23rd meeting held in January 2007, for meeting evacuation requirements of wind projects. TNEB has proposed following additional transmission systems to strengthen the transmission network for evacuation of wind power:

- (a) Kayathar 400kV S/S with 400/220kV transformers of 2x315 MVA and 400/110kV transformers of 2x200 MVA,
- (b) Karaikudi – Kayathar 400kV D/C line
- (c) Kanaparthy – Kayathar 400kV D/C line
- (d) 220kV and 110kV interconnections

The above transmission system would inject additional power at Kayathar and strengthening of regional transmission system from Kayathar would be needed.

Members may discuss and decide.

In this context, it is also to flag that Pugalur – Chennai 400kV D/C line to be taken up by TNEB as agreed in the last meeting, is with quad conductor and the LILO circuits to which it is to be connected are with twin conductors. It may be useful that TNEB and PGCIL provide the one circuit of the LILOs of Kolar – Sriperumbudur line to their SV Chatram and Melakottiyur substations, to which the line from Pugalur is to be connected, with high specification conductor. Alternatively, the line from Pugalur could be with quad conductor only upto Singarapet where a new 400kV substation is to be created by TNEB and beyond Singarapet, the line could be with twin conductors.

Members may discuss and decide.

5.4 TNEB has also proposed transmission systems for evacuation of power from North Chennai TPS Stage-II (1x500 MW), Mettur TPS Stage-III (1x500 MW), Ennore

(TNEB) TPS (1x500MW) and Tuticorin TPS Stage-IV (2x500 MW). The proposed transmission systems are at 400kV and 220kV levels.

It is proposed to study their proposal and discuss in next meeting.

6.0 Agenda Items for discussion in the 24th meeting of the SC on PSP in SR, that emerged from the discussions held in the 4th meeting of SRPC held on 07-06-2007

6.1 KSEB's request for share from Krishnapatnam UMPP

MS, SRPC has informed that Kerala had requested for share in the power from Krishnapatnam UMPP, for enabling them to share cost of associated transmission system. KSEB needs to take up the issue with MoP.

6.2 Finalization of the Agency for implementation of Reactors as decided in the 23rd meeting of SC on PSP in SR.

In the 23rd meeting of this committee, provision of 25 nos. of 63 MVAR reactors were decided to be implemented in Southern Region. Out of these, 11 reactors are to be implemented by PGCIL at their S/Ss and the rest 14 to be implemented by respective utilities/generating companies at their S/Ss. However, in the 4th meeting of SRPC, it was decided implementation agency for the 14 reactors should again be discussed and finalized in the 24th meeting of the SC on PSP in SR.

Members may discuss.

6.3 Shifting of one 315 MVA 400/220kV transformer from Trivandrum to Madakathara

KSEB has informed that the load of Trivandrum district, upto year 2011-12, is expected to be 480 MVA only, therefore the existing 2x315 MVA transformers at Trivandrum 400 kV S/S would be sufficient, the Madakathara 400/220kV S/S with 2x315 MVA is getting overloaded and is not sufficient to meet the load in Trissur district. They also opined that the new 400kV S/S proposed at Areakode, near Trissur would also not be able to mitigate the overloading problem.

Therefore, they had suggested to shift the third transformer proposed for Trivandrum, to Madakathara S/S.

Members may discuss.

6.4 Termination of Tirunelveli – Edamon 400kV circuit under Kudankulam evacuation system at Edamon

Transmission system for evacuating power from Kudankulam APP (2x1000 MW) was finalized in the 17th and 18th meetings of the Standing Committee on Power System Planning of Southern region. As per the scheme, out of the four circuits coming from Thirunalveli, Thirunalveli- Cochin -Trissur 400 kV quad D/C line will go directly to Cochin without entering Edamon substation, and the other two circuits i.e. Thirunalveli - Edamon 400 kV Twin Moose D/C line (to be operated initially at 220 kV) would terminate at Edamon for establishing connectivity of Tirunelveli to Trivandrum. Accordingly, both the circuits of the line are being connected to existing Edamon-Trivandram 220kV D/C line.

KSEB has expressed that as Trivandrum load requirements are being met by Madurai - Trivandram 400kV D/C line, there may be no need of inter-connecting the Thirunalveli - Edamon line with the existing Edamon-Trivandram 220kV D/C line and instead, the line may be bussed at Edamon itself. PGCIL has informed that with the arrangement being suggested by KSEB, the power from Kudankulam/Thirunalveli would flow towards Kayamkulam, restricting proper evacuation of power from the Kayamkulam CCPP.

Members may discuss.

7.0 Termination of one circuit of Neyveli(TSII) - Pulgalur 400 kV D/C at Neyveli (TSII Expansion) switchyard by utilizing one circuit of Neyveli(TSII) – Neyveli(TSII Expansion) 400 kV 2xS/C tie-lines

The transmission system for N (TSII Exp) consists of Neyveli(TSII) – Neyveli(TSII Expansion) 400kV 2xS/C lines for interconnection and Neyveli(TSII) - Pulgalur 400 kV D/C line for power evacuation. The interconnection system was evolved as per proposal of NLC. NLC has now proposed to connect one of the circuits of Neyveli(TSII) - Pulgalur 400 kV D/C line at Neyveli(TSII Expansion) switchyard directly

utilizing one circuit of Neyveli (TSII) – Neyveli(TSII Expansion) interconnection. The proposal could be agreed as this would provide evacuation reliability for Neyveli (TSII Exp) independent of Neyveli (TS II). In this the interconnecting section (one S/C line) would also become part of regional transmission system for power evacuation from Neyveli (TS II Exp).

Members may discuss and decide.

8.0 Transmission System for Evacuation of Power from Nagarjuna TPS (1015 MW) in Karnataka, of M/s Nagarjuna Power Corporation Ltd

POWERGRID has informed that M/s Nagarjuna Power Corp. Ltd. had applied to the CTU, for Long Term Open Access for evacuation of power from their 1015 MW project near Mangalore, Karnataka. Identified beneficiaries of the project are :- Karnataka-845 MW and Punjab-94 MW. POWERGRID may present their studies carried out for evolving transmission system for evacuation of power from this project and its transmission to the beneficiaries. Members may discuss.

9.0 Transmission System for Evacuation of Power from Simhadri-II TPS (2x500 MW) of NTPC

Simhadri Stage-II TPS (1000 MW) of NTPC is targeted for 2010-11. As informed by NTPC, tentative allocation of power from this project is – Andhra Pradesh (398 MW), Karnataka (175 MW), Kerala (77 MW), Tamilnadu (190 MW), Pondicherry (10 MW) and Unallocated (150 MW). Powergrid have carried out studies to evolve evacuation system from Simhadri II which show that providing an interconnection for Simhadri II to nearest grid point would suffice and no further transmission would be required. As the Simhadri II TPS is now proposed to be a regional station with benefit to all constituents, it is proposed to provide grid station to Gazuwaka substation of PGCIL.

It may also be noted that in the above proposal, part of the transmission capacity of Vizag – Vemagiri – Tandikonda 400kV D/C line of APTRANSCO would also be utilized for power evacuation from Simhadri-II. APTRANSCO have provided this line keeping in view 2x525 MW Vizag TPS which is yet to come. As such, till AP's generation is firmed up, part of the transmission capacity of their line could be utilized for power evacuation of Simhadri-II and when AP's generation is firmed up, their line could be

spared and if need be, another line could be taken up as a regional system strengthening scheme.

Members may discuss and decide.