

**Central Electricity Authority**  
**System Planning & Project Appraisal Division**  
**Sewa Bhawan, R.K. Puram, New Delhi – 100 66.**

No. 51/4/SP&PA-2001/  
To

Date : 10th December, 2002.

1.The Member Secretary, Southern Regional Electricity Board, 29, Race Course Cross Road, Bangalore 560 009. <b>FAX : 080-2259343</b>	2.The Executive Director (Engineering), Power Grid Corp. of India Ltd. B-9, Institutional Area, Katwaria Sarai, New Delhi 110 016. <b>FAX : 011-6466823, 6564751</b>
3.The Director (Transmission), Transmission Corp. of Andhra Pradesh Ltd., Vidyut Soudha, Hyderabad – 500 082. <b>FAX : 040-3317652, 3320565</b>	4.The Director (Transmission), Karnataka State Power Transmission Corp. Ltd., Cauvery Bhawan, Bangalore 560 009. <b>FAX : 080 -2228367, 221352</b>
5.The Member (Transmission), Kerala State Electricity Board, Vidyuthi Bhawanam, Pattom, P.B. No. 1028, Thiruvananthapuram - 695 004. <b>FAX : 0471-446774</b>	6.The Executive Director/ Planning, Tamil Nadu Electricity Board, 6 <sup>th</sup> Floor, Eastern Wing, 800 Anna Salai, Chennai – 600 002. <b>FAX : 044-8521210, 8544528</b>
7.The Director (Power), Corporate Office, Block – I, Neyveli Lignite Corp. Ltd., Neyveli, Tamil Nadu – 607 801. <b>FAX : 04142-52646</b>	8.The Superintending Engineer –I, First Floor, Electricity Department, Gingy Salai, Pondicherry – 605 001. <b>FAX : 0413-334277</b>
9.The Executive Director (Engineering), NTPC Ltd., Engg. Office Complex, A-8, Sector 24, Noida – 201 301. <b>FAX : 91-539462, 91-4410136, 91-4410137</b>	10.The Director (Transmission), Nuclear Power Corp. of India Ltd., 12 <sup>th</sup> Floor, North Wing, Vikram Sarabhai Bhawan, Anushakti Nagar, Mumbai – 400 085. <b>FAX : 022- 5556513</b>

**Sub: Sixteenth meeting of the Standing Committee on Power System Planning in Southern Region.**

Sir,

The agenda for the next meeting of the Standing Committee on Power System Planning in Southern Region is enclosed.

The meeting is proposed to be held in December, 2002. The date and venue of the meeting would be intimated shortly.

Yours faithfully,

Encl: As above.

(A.K. Asthana)  
Director (SP & PA)

Copy to : **The Director (Tech), Power Trading Corp. of India Ltd.,** 10<sup>th</sup> Floor, Hemkunt Chambers, 89 Nehru Place, New Delhi 110019. FAX-011-6473586 requesting to kindly attend the Standing Committee Meeting for Power System planning in Southern Region.

## **Agenda for 16th Standing Committee meeting for Power System Planning in Southern Region.**

### **1. Confirmation of Summary record of discussions of the 15<sup>th</sup> Standing Committee Meeting.**

The summary record of the 15<sup>th</sup> meeting held on 18-4-02 at Bangalore were circulated vide No.51/4/SP&PA –2002/184-97 dt. 24-4-2002. No observations or objections have been received from any participant.

The record may therefore be confirmed.

### **2. Review of progress on the decisions taken in the 15<sup>th</sup> meeting.**

#### **2.1 Provision of new 400kV sub-stations and additional transformers at existing s/stn.**

In order to facilitate agreement on provision of additional transformers as well as new 400kV substations under regional scheme, it was decided that the constituents would furnish their requirements for all the places where it may be needed in the next 10 years. In this context, apart from the proposal of APTRANSCO for 2<sup>nd</sup> 400/220kV, 315MVA transformer at Vijaywada, proposal for 400kV new substations at Haveri, Mysore, Kozhikode, Pugalur, Villupuram and Pondichery are being proposed under Kaiga extension/ Neyveli TS-II Expansion transmission system covered under item 5 of this agenda. Accordingly, decision on 2<sup>nd</sup> transformer at Vijaywada could be taken along with agenda item 5.

#### **2.2 Kaiga Stage-I Transmission System – Upgrading Kaiga-Sirsi-Davanagere line for 400kV operation**

NPCIL and KPTCL had informed that they had taken up the necessary up gradation work at their respective Kaiga and Davanagere switchyards and the works were targeted for completion by August 2003. NPCIL and KPTCL may inform the status.

#### **2.3 LILoing of second circuit between Kadra and Kodasalli at Kaiga.**

NPCIL and KPTCL have separately furnished their respective views on the issue of LILoing of second circuit of the existing Kadra - Kodasalli 220kV ckt at Kaiga and these have been examined and it is observed that the issue is basically operational. The matter may therefore be discussed and decided in the OCC/TCC meeting of SREB.

#### **2.4 Kaiga-Narendra 400kV D/C Line and Narendra 400kV Substation**

POWERGRID may intimate the status of

- Forest clearance of Kaiga-Narendra 400kV Line
- Progress of construction of Kaiga-Narendra Line
- Approval of FR for Narendra 400kV S/S and progress of works

**3. Standing Committee Member from Power Trading Corporation.**

Presently, power/energy transfer across the regional boundaries is taking place on regular basis based on surplus/deficit power supply position of individual region. Nevertheless, for optimal utilization of resources the formation of National Grid is on the horizon. In this context role of the Power Trading Corporation (PTC) is significant.

It is therefore proposed to co-opt the Director (Tech), PTC as a member of the Standing Committee for Power System Planning.

**4. Review of the proposal for LILO of 400kV Gazuwaka – Vijaywada D/C line at Vemagiri**

The proposal for LILO of 400kV Gazuwaka – Vijaywada 400kV D/C line at Vemagiri was agreed in the last meeting of the Standing committee. However, subsequently some of the constituents of SR have not agreed to sign BPTA for sharing the cost of Rourkela-Raipur-Chandrapur 400kV line, the program of which was agreed in the 12<sup>th</sup> meeting of standing committee. Subsequently, CEA had taken a meeting on 2<sup>nd</sup> Sept,2002 but the issue has not been resolved. As such ,the implementation of fallback system for Talcher-II has been held up. Under this scenario, it is important to conserve the total regional capacity and even a marginal bleeding on account of the proposed LILO at Vemagiri may not be desirable.

The issue may be discussed and decided.

**5. Additional Transmission system for Kaiga APP (2X220MWe + 2X235MWe)**

**and**

**ATS for Neyveli TS.II Expansion Project (2x250 MW).**

Kaiga Extn Transmission system:

Kaiga -Sirsi- Davangere 400 kV D/C and Kaiga-Narendra 400kV D/C are the approved outlets for evacuation. The existing Kaiga-Sirsi-Davanagere line presently being operated at 220 kV is targeted to be operated at 400kV by August,2003. Construction of the second 400kV outlet pending forest clearance is yet to take off. System studies conducted by CEA as well as POWEGRID have established that in case of outage of 400kV Kaiga-Sirsi-Davangere D/C line, existing Hubli -Haveri 220kV D/C line gets overloaded beyond thermal loading unit. It is necessary to strengthen this corridor .The alternatives, either by adding a 400kV Narendra –Haveri - Davanagere S/C line ( Exhibit-III & III- A,B,C) or a 400kV Narendra- Munirabad S/C line (Exhibit-IV), have been studied. It is observed that 400kV Narendra –Haveri - Davanagere S/C line would provide a better solution. Studies have also established need for strengthening up to Kozhikode through 400kV Bangalore/Neelamangala-Mysore-Kozhikode D/C line along with 400/220kV substations at Mysore and Kozhikode.

### Neyveli TS-St.II Expansion Transmission system:

Neyveli TS-St.II Expansion Project cleared by CEA in June,2002 has been envisaged to be commissioned during the 10<sup>th</sup> plan period. Except the State of AP, all other constituents of Southern Region would be the beneficiaries. The 2X250MW plant capacity is proposed to be fed into the existing NLC TS-II 400kV station for further dispersal into the Southern grid.NLC have informed that presently,two 400kV line bay provisions are available in the existing 400kV TS II for outgoing feeders.

The evacuation system envisaged by POWERGRID at an approximate cost of Rs.660 crores for the Neyveli Expansion Project covers the following transmission works and the same would be presented by POWERGRID in the meeting.

- a) Neyveli TS-II Expansion-Neyveli TS-II 400kV 2xS/C
- b) Neyveli TS-II Expn.-Pugalur-Udumalpet400 kV D/C
- c) Bangalore/Nelemangala - Mysore-Kohikode 400 kV D/C line
- d) Establishment of new 400/220 kV substation at Pugalur, Mysore and Kozhikode with 2x315 MVA transformer each.

POWERGRID may present their proposal.

Studies have also been carried out in CEA and it is observed that transmission expansion programme corresponding to Neyveli expansion could be optimized by constructing Neyveli-Pugalur-Trichy S/C line instead of Neyveli.-Pugalur-Udumalpet D/C line. In this context, various Power flow studies on different alternatives along with contingency cases have been conducted in CEA and the results are given in Exhibits I – II.

**Alt-I** : Neyveli TS II (existing) - Pugalur - Udumalpet 400kV S/C (Base-I) - Exhibit I

Coninegency cases : (i) NLC TS-II – Trichy 400kV S/C outage - Exhibit- IA  
(ii) NLC IMC - Trichy 400kV S/C outage - Exhibit- IB

**Alt-II**: Neyveli TS-II (existing).-Pugalur-Trichy 400 kV S/C (Base-II) - Exhibit-II

Coninegency cases : (i) NLC TS-II – Pugalur 400kV S/C outage - Exhibit-IIA  
(ii) NLC IMC - Trichy 400kV S/C outage - Exhibit- IIB  
(iii)NLC TS-II – Trichy 400kV S/C outage - Exhibit- IIC

Prima facie, it would be seen that both the alternative are workable. But, the Alternative-II covering establishment of Pugalur S/S along with 400 kV S/C NLC TS-II- Pugalur - Trichy S/S would facilitate strengthening of Neyveli – Trichy corridor.

Also, establishment of 400kV substation at Villupuram by LILO of Neyveli-S.P.Budur line and 400kV substation at Pondichery with infeed from Villupuram needs to be considered to cater to demand growth in these areas. As this demand growth would be physically met mostly from Neyveli power station, these transmission works should also be included under the regional scheme for Neyveli expansion.

In view of the above, the following is proposed:

Kaiga Extn Transmission system:

1. 400kV Narendra –Haveri - Davanagere S/C
2. 400kV Bangalore/Neelamangala-Mysore-Kozhikode D/C line
3. New 400/220kV, 2x315MVA substations at Haveri, Mysore and Kozhikode
4. S/s extn for line bays at Narendra, Davanagere and Neelamangala
5. Second 400/220kV, 315MVA transformer at Vijaywada

Neyveli TS-St.II Expansion Transmission system:

1. Neyveli TS-II Expansion-Neyveli TS-II 400kV 2xS/C
2. Neyveli TS-II Expn.-Pugalur 400kV S/C
3. Pugalur—Trichy 400kV S/C
4. LILO (1xD/C) of Neyveli-S.P.Budur 400kV S/C at Villupuram
5. Villupuram-Pondichery 400kV D/C
6. New 400/220kV, 2x315MVA substations at Pugalur
7. New 400/220kV, 1x315 MVA substations at Villupuram and Pondichery
8. S/s extn for line bays at Trichy

KPTCL proposal for early scheduling of works relating to Mysore 400kV S/s:

KPTCL have proposed that the Neelamangala-Mysore 400kV D/C line and Mysore 400kV substation could be constructed ahead of the generation projects so as to facilitate supply to Mysore area. They are agreeable to bear full transmission charge for this till commissioning of the first unit under Kaiga extension, after which this would be pooled under regional transmission and transmission charges shared accordingly.

The members may deliberate and decide.

**6. Construction of Raichur-Gooty 400kV D/C line instead of earlier agreed proposal for LILO of Hyderabad- Kurnool 400kV S/C line (part of Ramagundam –III transmission system) at Raichur.**

LILO of Hyderabad-Kurnool 400 kV S/C line at Raichur was agreed in the 12<sup>th</sup> meeting of the Standing Committee. POWERGRID have informed that site survey indicates that the LILO distance would be quite large – about 90 to 95 kms and in view of this, instead of the proposed LILO, it would be better to construct a direct line from Raichur to Kurnool or Gooty. Based on their studies, KPTCL had proposed Raichur-Gooty line and their proposal was found to be fitting into the perspective development plan for the Southern region transmission system. Accordingly, it is proposed to construct a 400 kV D/C line to from Raichur to Gooty instead of the LILO.

Members may discuss and decide.

**7. LILO of Nellore-Sriperumbudur line at Alamathi S/S of TNEB.**

LILO of both circuits of Nellore-Sriperubudur 400kV D/C line at Alamathi was agreed in the 12<sup>th</sup> meeting of the Standing Committee. Based on route survey, POWERGRID have intimated that LILOing of Nellore-Sriperumbudur 400kV D/C lines at Alamathi S/S would require construction of about 85-90 km (route length) D/C 400kV line. In view of large route length, POWERGRID have suggested that instead of LILO of both circuits, only one circuit of Nellore-Sriperumbudur may be LILOed at Alamathis as this would suffice to meet system requirement.

TNEB may present their view and the matter may be discussed/decided.

**8. Execution of LILO/bay extension works at Mehboobnagar S/S of APTRANSCO for LILO of Nagarjunasagar-Raichur 400kV S/C line and LILO/bay extension works at Alamathi S/S of TNEB for LILO of Nellore-Sriperumbudur 400kV line.**

As part of regional system strengthening work, the execution of the above works were decided to be undertaken by POWERGRID in the 12<sup>th</sup> Std. Committee meeting. POWERGRID vide their letter No. C\ENG\SEF\S\00\PLG\Sys Strengthening dt.29-7-2002 have informed that .APTRANSCO vide their letter dated 20-7-02 (copies of both letters enclosed) intends to execute this work by themselves. POWERGRID have also stated that while interacting with TNEB, they have been given to understand that bays for LILO at Alamathi substation would be executed by TNEB. Accordingly, POWERGRID is going ahead with the scheme without bay extension at Mehboobnagar and Alamathi substations. As these works were decided as part of regional schemes, APTRANSCO and TNEB would be executing these works at the cost of POWERGRID who would pay the cost and recover transmission charges as part of regional transmission system.

APTRANSCO, TNEB and POWERGRID may confirm the position and the members may take note of this development.

**9. Inter-regional transmission system for import of additional power by the Southern Region from operational surpluses in Eastern and other regions and providing all India connectivity for the National Power Transmission Grid.**

Detailed proposal on the above is enclosed at Annex. For the Southern Region, the following transmission works and sharing of transmission charges is proposed:

Region	Works	
	OPTION – A (Least cost) All India synchronous integration	OPTION –B (HVDC) SR remains a-synchronous
WR=50% SR=50%	1. Sipat-Seoni 765kV S/C line-3 2. Seoni-Wardha 765kV 2xS/C line-2 and line 3 3. Wardha-Parli 765 kV 2xS/C line-2 and line-3	NIL
WR=100%		1. Seoni-Wardha 765kV S/C line-2 2. Wardha-Parli 765 kV S/C line-2
SR=100%	1. Parli-Raichur 765kV 3xS/C 2. Raichur-Hiriyur 400kV D/C Quad MOOSE 3. Hiriyur-Mysore 400kV D/C Quad MOOSE 4. Mysore-Salem 400kV D/C Twin MOOSE	1. ERPP-Gooty 2000 MW HVDC bi-pole 2. ERPP-Salem 2000MW HVDC bi-pole

The members may deliberate and decide.

**10. A summary of decisions taken in the earlier Standing Committee meetings is given in Appendix. This is for reference of the members.**

**Central Electricity Authority**  
**System Planning & Project Appraisal Division**  
**Sewa Bhawan, R.K. Puram, New Delhi – 100 66.**

No. 51/4/SP&PA-2001/

Date : 24<sup>th</sup> December, 2002.

To

1.The Member Secretary, Southern Regional Electricity Board, 29, Race Course Cross Road, Bangalore 560 009. <b>FAX : 080-2259343</b>	2.The Executive Director (Engineering), Power Grid Corp. of India Ltd. B-9, Institutional Area, Katwaria Sarai, New Delhi 110 016. <b>FAX : 011-6466823, 6564751</b>
3.The Director (Transmission), Transmission Corp. of Andhra Pradesh Ltd., Vidyut Soudha, Hyderabad – 500 082. <b>FAX : 040-3317652, 3320565</b>	4.The Director (Transmission), Karnataka State Power Transmission Corp. Ltd., Cauvery Bhawan, Bangalore 560 009. <b>FAX : 080 -2228367, 221352</b>
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7.The Director (Power), Corporate Office, Block – I, Neyveli Lignite Corp. Ltd., Neyveli, Tamil Nadu – 607 801. <b>FAX : 04142-52646</b>	8.The Superintending Engineer –I, First Floor, Electricity Department, Gingy Salai, Pondicherry – 605 001. <b>FAX : 0413-334277</b>
9.The Executive Director (Engineering), NTPC Ltd., Engg. Office Complex, A-8, Sector 24, Noida – 201 301. <b>FAX : 91-539462, 91-4410136, 91-4410137</b>	10.The Director (Transmission), Nuclear Power Corp. of India Ltd., 12 <sup>th</sup> Floor, North Wing, Vikram Sarabhai Bhawan, Anushakti Nagar, Mumbai – 400 085. <b>FAX : 022- 5556513</b>

**Sub: Sixteenth meeting of the Standing Committee on Power System Planning in Southern Region.**

Sir,

Further to our letter dated 10-12-2002 forwarding therewith the agenda for the proposed meeting, it is informed that the **16<sup>th</sup> meeting** of the Standing Committee on Power System Planning in Southern Region is scheduled to be held on **20<sup>th</sup> January, 2003 at 11.00 AM at the Kaiga Nuclear Power Station, NPC.**

You are requested to kindly make it convenient to attend the meeting. The nodal contact persons at Kaiga and Mumbai in regard to the arrangements for the meeting are given below:

Shri V.V. Sanatkumar, TSS  
Kaiga Generating Station, P.O. Kaiga,  
Via-Karwar, Uttar Kannada,  
Dist. Karnataka, Pin-581400  
Tel # 08382-284090 (Off.) 08382-254090 (Res.)  
Fax-0832-284034/284025

Shri Rajesh Laad,  
DGM (Transmission),  
V. S. Bhavan, Anushaktinagar, Mumbai-400 094  
Tel # 022-2555 6513, 022-2556 0222/ Ext. 2207  
Fax-2555 513/2556 3350

Yours faithfully,

(V. Ramakrishna)  
Chief Engineer (SP & PA)

Copy to : **The Director (Oper.), Power Trading Corpn. of India Ltd.,** 2nd Floor, NBCC Tower, 15 Bhikaji Cama Place, New Delhi 110066. FAX-91-11-8659504 requesting to kindly make it convenient to attend the Meeting.