

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

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

Date : 27-5-2004.

**To**

1.The Member Secretary, Southern Regional Electricity Board, 29, Race Course Cross Road, Bangalore 560 009. FAX : 080-2259343	2.The Executive Director (Engineering), Power Grid Corp. of India Ltd. “Saudamini”, Plot No.2, Sector-29, Gurgaon 122 001,Haryana.. FAX : 95124-2571802
3.The Director (Transmission), Transmission Corp. of Andhra Pradesh Ltd., Vidyut Soudha,Hyderabad – 500 082.  FAX : 040-3317652, 3320565	4.The Director (Transmission), Karnataka State Power Transmission Corp. Ltd.,Cauvery Bhawan, Bangalore 560 009. FAX : 080 -2228367, 221352
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.Shri K. Prakasa Rao, General Manager I/C Engineering Division, NTPC Ltd., Engg. Office Complex, A-8, Sector 24, Noida – 201 301. <b>FAX: 91-539462, 91-4410136, 91-4410137</b>	10. Shri N. S. M. Rao The General Manager (Transmission), Nuclear Power Corp. of India Ltd., 12 <sup>th</sup> Floor,Vikram Sarabhai Bhawan, Anushakti Nagar, Mumbai – 400 094. <b>FAX : 022-25556513/25563350</b>
11. The Director (Tech), Power Trading Corpn. of India Limited, 2 <sup>nd</sup> Floor, NBCC Tower, 15 Bhikaji Cama Place, NewDelhi 110066. <b>FAX-011-51659504</b>	

**Sub:** 19<sup>th</sup> meeting of the Standing Committee on Power System Planning of Southern Region

Sir,

Please find enclosed the agenda note for 19<sup>th</sup> meeting of the Standing committee on Power System Planning of Southern Region. The venue, date & time of the meeting shall be intimated separately.

Encl: As above.

Yours faithfully,

(B. M. Sethi)  
Dy. Director (SP & PA)

**Agenda for 19<sup>th</sup> Meeting of the Standing Committee on Transmission System Planning in Southern Region**

**1. Confirmation of the minutes of the minutes of 18<sup>th</sup> standing committee meeting held on 5<sup>th</sup> March, 2004 at Chennai.**

The minutes of 18<sup>h</sup> meeting of the Standing Committee on Power system planning of Southern Region held on 5<sup>th</sup> March, 2004 at Chennai were circulated to the constituents of Southern Region vide CEA letter No. 51/4/SP&PA-2001/104-114 dated 10-3-2004.

In accordance with the decision taken in this meeting, a 400kV S/S at Hassan in Karnataka was agreed to be established under regional system strengthening scheme in view of enhanced allocation of power from Kudankulam APP for Karnataka. The inter-connecting line with the 400kV Hassan sub-station was decided to be determined based on the system studies to be carried out jointly by CEA and KPTCL. Subsequently, the proposed studies were conducted in CEA with participation of engineers from KPTCL on 11-3-04. Out of the various alternatives considered in the studies, LILO of one circuit of Talaguppa-Neelamangala 400kV D/C line at Hassan S/S was emerged as the optimal system and the same was finalized. Accordingly, the summary record of discussion held in CEA on 11-3-2004 with KPTCL was circulated to MS,SREB vide our lr. no. 51/4/SP&PA-2001/115-116 dt.11-3-04 with a copy to the Executive Director (Engg.), POWERGRID. The additional regional system strengthening scheme as agreed in the meeting of the 18<sup>th</sup> Standing Committee to meet part of evacuation requirements of Kudankulam evacuation would comprise of the following:

- (i) LILO of one circuit of the 400Kv Madurai-Trichy line at Karaikudi alongwith 2x315MVA, 400/220kV S/S at Karaikudi .
- (ii) LILO of one circuit of the 400Kv Talaguppa-Neelamangala 400kV D/C line at Hassan S/S alongwith 2x315MVA, 400/220kV S/S at Hassan.

Subsequently, TNEB vide their letter No. SE/SS/EEI/F Stg Comm/D-123/2004 dt. 20-4-04 had requested to consider an additional corridor from Kudankulam or Tirunelveli to Karaikudi as part of Kudankulam APP in anticipation of delay in constructing the agreed transmission lines falling in the State of Kerala due to RoW problems etc. As all the possible contingency conditions were taken into account at the time of finalization of Kudankulam transmission system, the need for additional corridor proposed by TNEB was not necessary. No other comments on the minutes of the meeting have since been received from the constituents. As such the minutes of the 18<sup>th</sup> standing committee may please be confirmed.

2. **Review of the proposal for LILO of 400kV Gazuwaka-Vijaywada D/C line of POWERGRID at Vemagiri s/s of APTRANSCO**

The LILO of Gazuwaka-Vijaywada 400kV D/C line at Vemagiri was agreed to in the 15<sup>th</sup> meeting of the standing committee subject to completion of Vemagiri- Tadikonda 400 kV D/C lines by APTRANSCO. The need for review of the LILO proposal came up for discussion in the 16<sup>th</sup> meeting of the Standing Committee held on 20-1-03 at Kaiga in view of APTRANSCO and TNEB not agreeing for sharing for the Rourkela-Raipur-Chandrapur 400kV line as a fall-back system for Talcher-II and no decision was arrived at.

APTRANSCO vide their Fax message dt 11-3-2004 (copy enclosed) intimated that the construction work for their Vemagiri- Tadikonda (changed to Narasaraopeta) 400 kV D/C line has been taken up and accordingly, need for LILOing of the Gazuwaka-Vijaywada 400kV D/C line at Vemagiri s/s by POWERGRID is called for.

**Members may concur on the LILO of the 400kV line at Vemagiri S/S.**

3. **Evacuation System for 500MWe Proptotype Fast Breeder Reactor (PFBR) Project at Kalpakkam**

3.1 Kalpakkam PFBR power plant is a single unit with a capacity of 1x500 MWe and is situated in the vicinity of Madras Atomic Power Station(MAPS), Tamil Nadu. The project is being taken up by Bharatiya Nabhikiya Viduyt Nigam Limited (BHAVINI), an undertaking of Govt. of India under the Deptt. Of Atomic Energy with its CMD being the CMD of NPCIL. The unit is being programmed for commissioning in 2010.

3.2 For evacuation of power from the PFBR station, the following 220kV transmission system was earlier suggested by TNEB.

- (i) 220kV D/C from PFBR to Tharamani 220kV S/S
- (ii) 220kV S/C line from PFBR to Kancheepuram 220kV S/S
- (iii) 220kV S/C from PFBR to Arni 220kV S/S
- (iv) LILO of existing MAPS-Villupuram 220kV D/C line at PFBR
- (v) Tie line (cable) between MAPS and PFBR.

3.3. NPCIL vide their D.O. Ir no.NPCIL/51000/Tr/225 dt. 18-5-04 have proposed to determine the evacuation arrangement for the power plant on the basis of the following tentative allocation made by MoP with their letter no. 8/2/2003-DVC dt 09-6-03 (copy enclosed).

Andhra Pradesh	-132MW
Karnataka	-72MW
Kerala	-43MW
Tamil Nadu	-167MW
Pondicherry	-11MW
<u>Unallocated</u>	<u>-75MW</u>
<b>Total</b>	<b>500MW</b>

In view of the above share allocation to the SR beneficiaries (para-3.2), it is suggested that the power to be generated at the Station could be stepped up to 400kV and evacuated by displacement by LILO of the existing 400kV Neyveli-S P Budur S/C line at the PFBR station. In addition, 400/220kV transformation facility could be created at the PFBR Station for inter-connecting 230kV TNEB grid to meet load requirements of TN. The following system for evacuation of power from the PFBR station is being proposed :

**400kV System:**

- (i) LILO of 400kV Neyveli-S P Budur S/C line at the PFBR station
- (ii) 1x315MVA, 400/220kV s/s at PFBR station
- (iii) Augmentation of transformer capacity at S P Budur 400kV s/s

**220kV System:**

- (ii) KPFBR - Tharamani 220kV D/C line
- (iii) KPFBR - Kancheepuram 220kV S/C line
- (iv) KPFBR - Arni 220kV S/C

**Members may discuss the evacuation system.**

**3. Additional spare Converter Transformers at Talcher and Kolar HVDC terminal stations.**

Presently, evacuation of power from Talcher Stage-II is being done through 2000MW HVDC bi-pole line from Talcher to Kolar. In meeting of the 18<sup>th</sup> Standing Committee, it was agreed to enhance the capacity of each pole of Talcher-Kolar HVDC Bi-pole link from 1000MW per pole to 1250MW per pole by POWERGRID as part of regional scheme. In order to improve the reliability of HVDC system, POWERGRID vide their letter no. C/ENG/SEF/S/00/Talcher-II dated 13<sup>th</sup> May 2004 (copy enclosed), have proposed for a provision of additional one unit converter transformers at Talcher and Kolar stations. The estimated cost is proposed to be about Rs.75-80 crores each. POWERGRID have indicated that this cost would not cause additional financial burden to the SR constituents as its cost would be

less than the saving made by POWERGRID as compared to the approved cost of the Talcher-II transmission system.

**Members may discuss the requirement.**

**6. 400/220kV Kaiga sub-station and Upgradation and Operation of Kaiga-Davanagere 220kV D/C line at 400kV.**

In the 16<sup>th</sup> meeting of the Standing Committee, a decision was taken that Sirsi-Davanagere section of KPTCL would be an integral part of the Kaiga-Davanagere 400kV D/C line and qualify as a part of regional system. Nevertheless, it was decided that KPTCL would go ahead with the works for provision of 400kV bays at Davanagere in respect of upgrading/operation of Kaiga-Davanagere D/C line (being operated at 220kV) at 400kV. The construction work being executed by NPCIL for 400/220kV Sub-station at Kaiga APP and 400kV bay extension work at Davanagere sub-station by KPTCL for 400kV operation were scheduled to be completed by December, 2003. NPCIL and KPTCL may inform the status.

**7. Construction of Nellore 2x315MVA, 400/220kV S/S by APTRANSCO and anchoring of Vijayawada –Nellore-Sriperumbudur 400kV D/C line at the Nellore S/S.**

While Krishnapatnam-B evacuation system in AP was approved, it was conceived that Krishnapatnam (Nellore) 400kV S/S with 2x315 MVA, 400/220kV transformer capacity would be established as part of the system by APTRANSCO. It would be contiguous to Nellore substation of POWERGRID and share the same bus with Nellore by bus sectionalizing. In turn, it would provide the anchoring for the 400 kV D/C line without any requirement of reactor at Nellore. Anchoring of the existing 400kV Vijayawada –Nellore-Sriperumbudur D/C line is held up for want of Nellore 400/220kV S/s facility to be created by APTRANSCO. The SR-grid is experiencing operational problem of over-voltage etc. on account of the 400kV line being too long. As a short term measure, a 80MVAR switchable reactor at Nellore Switching Station is agreed to be implemented by POWERGRID in the last Standing Committee meeting. APTRANSCO may inform the status of the sub-station erection work at Nellore and its target for completion.

**8. 10th and 11th Plan transmission program of State Utilities in SR and schedule for completion of various transmission works**

In the 10th & 11th plan periods, many generation capacity addition targets are being planned under State/Private/Central sectors to meet future load growth of the State Utilities in SR. As per the Electricity Act,2003 the responsibility for development of adequate intra State

transmission is vested with the State Transmission Utility and accordingly, the details of the program for transmission works at 220kV,132kV and 66kV would require to be worked out by State Utility and the same needs to be furnished to CEA. The issue has already been addressed vide our Ir no. 236/4/04-SP&PA/250-265 dt. 19-5-04 to the concerned Member(Trans./Plg.)/Chief Engineer(Trans./Plg.) of the State Utilities forwarding therewith a proforma for furnishing the requisite information by the Utilities.

**Members may discuss the progress of the works.**

**9. Any other issue with permission of Chair.**