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

No. 51/4/SP&PA-2011/ 883 - 893 **Date: 07th June 2011**

To

1.The Member Secretary, Southern Regional Power Committee, 29, Race Course Cross Road, **Bangalore 560 009**. **FAX : 080-22259343**	2.The Director (Projects), Power Grid Corp. of India Ltd. "Saudamini", Plot No.2, Sector-29, **Gurgaon 122 001, Haryana**. **FAX : 95124-2571932**
3.The Director (Transmission), Transmission Corp. of Andhra Pradesh Ltd., Vidyut Soudha, **Hyderabad – 500 082.** **FAX : 040-66665137**	4.The Director (Transmission), Karnataka State Power Transmission Corp.Ltd., Cauvery Bhawan, **Bangalore 560 009**. **FAX : 080 -22228367**
5.The Member (Transmission), Kerala State Electricity Board, Vidyuthi Bhawanam, Pattom, P.B. No. 1028, **Thiruvananthapuram - 695 004.** **FAX : 0471-2444738**	6. Member (Distribution), Tamil Nadu electricity Board (TNEB), 6th Floor, Eastern Wing, 800 Anna Salai, **Chennai - 600002.** **FAX : 044-28516362**
7.The Director (Power), Corporate Office, Block – I, Neyveli Lignite Corp. Ltd., **Neyveli , Tamil Nadu – 607 801.** **FAX : 04142-252650**	8.The Superintending Engineer –I, First Floor, Electricity Department, Gingy Salai, **Puducherry – 605 001**. **FAX : 0413-2334277/2331556**
9. Director (Projects), National Thermal Power Corp. Ltd. (NTPC), NTPC Bhawan, Core-7, Scope Complex, Lodhi Road, **New Delhi-110003.** **FAX-011-24360912**	10. Director (Operations), NPCIL, 12th Floor,Vikram Sarabhai Bhawan, Anushakti Nagar, **Mumbai – 400 094.** **FAX : 022- 25991258**

Sub: 32nd meeting of the Standing Committee on Power System Planning of Southern Region - **Additional agenda.**

Sir,

The **32nd meeting** of the Standing Committee on Power System Planning of Southern Region is scheduled to be held **on 08th June 2011 (Wednesday) at 10:30 AM at Conference Hall of Northern Region Power Committee, Katwaria Sarai, New Delhi.**

Additional agenda for the meeting is enclosed. It is also available at CEA's website (www.cea.nic.in) .

Please make it convenient to attend the meeting.

Yours faithfully,

(Pardeep Jindal)
Director (SP&PA)
(Telephone: 011 26198092, Fax No. 011 26102045)

Copy to : Sh. SK Soonee, CEO, POSOCO,
B-9, Qutub Institutional Area,
Katwaria Sarai, New Delhi-110016

Additional agenda Note for 32nd Meeting of
Standing Committee on Power System Planning in Southern Region (SCPSPSR)

A.1.0 Transmission System for evacuation of power from Simhadri-II TPS (2x500MW) of NTPC

A.1.1 SRPC has raised certain issues with respect to constraints in evacuation of power from Simhadri-II TPS as discussed in the 16th SRPC Meeting held at Goa on 30-04-2011. The issues and the agenda in this regard is given at Annex-I.

A.1.2 Members may discuss

A.2.0 Evacuation of power from additional 3400 MW Wind Generation projects in Tamilnadu and interlinking of Proposed substations with Salem 765/400kV substation of PGCIL.

A.2.1 TNEB has given following proposal for additional Wind generation of about 3400 MW:

i) Establishment of new 400/110 KV SS at Thapagundu with 5x200 MVA , 400/110 KV ICTs
ii) Establishment of new 400/230-110 KV SS at Anikadavu with 2x315 MVA, 400/230 KV ICTs & 2x200 MVA , 400/110 KV ICTs
iii) Establishment of new 400/230-110 KV SS at Rasipalayam with 2x315 MVA, 400/230 KV ICTs & 2x200 MVA , 400/110 KV ICTs
iv) Erection of separate corridor of 400 KV DC line with quad moose conductor from Thapagundu 400 KV SS in Theni area, to 400 KV Anikadavu SS & 400/230-110 KV SS at Rasipalayam in Udumalpet area and then linking with the upcoming 765/400 KV PGCIL pooling station at Salem.

A.2.2 TNEB has also proposed to modify already planned connectivity of Kanarpatty 400/230 KV SS and Kayathar 400/230-110 KV SS in Tirunelveli area. TNEB proposal is given below:

Kanarpatty 400/230-110 KV SS

- Establishment of new 400/230-110 KV SS at Kanarpatty with 2x315 MVA, 400/230 KV ICTs & 2x200 MVA , 400/110 KV ICTs
- Linking the above SS directly with the proposed 765 KV pooling station at TTN Koilpatty by 400 KV DC quad moose line, as this Kanarpatty SS will have only Wind generators connected to it.

Kayathar 400/230-110 KV SS:

- Establishment of Kayathar 400 KV SS with 2x315 MVA, 400/230 KV ICTs and 1x200 MVA , 400/110 KV ICTs
- Linking the above SS directly with Abhishekapatty 400 KV SS by 400 KV SC line and with Karaikudi 400 KV SS by 400 KV DC quad moose line .

A.2.3 The detailed TNEB proposal is given at Annex-II. Members may discuss.

Annex-I

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Email:mssrpc@ yahoo.com	Phone: 080-22287205	Fax: 080-2259343

□□/No.	SRPC/SE-I/2011	□□□□□□ / Date	24.05.2011

Chief Engineer (SP & PA)

CEA
NEW DELHI

Sir,

Kind reference is invited to CEA letter dated 23rd May 2011 regarding 32nd Meeting of Standing Committee on Power System Planning on 8th June 2011. In this regard, kind reference is invited to our letter dated 19th May 2011 (copy enclosed for ready reference) regarding possible constraints in evacuation of power from Simhadri St II. In view of emergent nature it is requested that the issues raised in our letter may also be considered for inclusion in the Agenda Item for the 32nd Meeting.

Yours faithfully,

Encl: as above

(S.D. TAKSANDE)
□□□□□□□ □□□□□ □□□□ / Member Secretary I/c

Extract from 16th SRPC meeting held at Goa on 30-04-2011:

15. **TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM SIMHADRI-II TPS (2x 500 MW) OF NTPC**

15.1 Till 15th SRPC meeting, the Committee had noted the following:

- APTRANSCO had accorded concurrence for Open Access through APTRANSCO network initially for a period of 5 (Five) years for evacuation of power from Simhadri Stage-II TPS (2x500 MW) of NTPC.
- Further extension of Open Access would be reviewed with reference to transmission availability etc. Sufficient advance notice would be issued to the beneficiaries for planning and execution of alternate proposals.
- Member (PS), CEA had pointed out that the charges should not be based on the ARR of the complete AP system, but only in respect of the identified APTRANSCO elements used for evacuation of Simhadri power. Beyond Vijayawada, the IST system was capable to transfer the share to the beneficiaries. This was necessary for the tariff to be reasonable and needed to be taken up suitably with APERC.
- APTRANSCO had informed that the charges had been worked out based on ARR. The other constituents may like to take up the matter with APERC.
- NTPC had informed that Hon'ble CERC had come out with a Draft Regulation for use of intervening transmission system of the State Grid for transmission of Inter-State power and NTPC may not be required to take up the issue with APERC. As per the PPA signed by the SR beneficiaries with NTPC, the sale of power shall be at the bus bars of the power station.
- In the 13th & 14th SRPC meetings, it was noted that since the Regulations on the use of intervening system were likely to be notified by the CERC, there may be no necessity for approaching APERC in the present scenario.
- In the 14th SRPC meeting, NTPC had pointed out that allocations had been finalized by MoP, the concerned beneficiaries should sign the Transmission Agreement with APTRANSCO. AP had stated that they would initiate action in this regard.
- Subsequently, Hon'ble CERC had notified the Regulations on usage of Intervening Facilities vide Notification dated 23.09.2010.
- NTPC had informed that since the unit was coming up in January 2011, the commercial issues, if any, amongst the beneficiaries needed to be settled at the earliest. There should be no evacuation constraints for Simhadri Stage-II on this account.
- The Committee had observed that Simhadri-II power was being evacuated through CTU and APTRANSCO system. APTRANSCO had already agreed for the open access for evacuation of Simhadri-II power. As such, no evacuation issues of Simhadri-II power were foreseen. Commercial issues however needed to be settled at the earliest.
- APTRANSCO had informed that there were no evacuation constraints in respect of APTRANSCO system and the issues could be settled amicably.
- The Committee decided that the issues may be discussed and settled in the Special TCC meeting to be convened in first fortnight of December 2010.

15.2 The issue was deliberated in a special meeting of TCC of SRPC held on 3rd January 2011 at Bangalore (extract from record notes of the special meeting at Annexure-XXI) wherein after deliberations, the following was noted:

- Unit-1 is likely to be synchronized in February 2011 and put on CoD before March 2011.
- All the issues needed to be settled at the earliest, so that Simhadri-II power is not bottled up.
- In the absence of contract path with a single quantum, 100% of the approved injection may have to be considered for usage of AP system till the LILO is commissioned.
- 40% of approved injection had been suggested for open access of AP system after the LILO was commissioned (balance 60% through ISTS).
- In view of certain observations of KSEB, the matter would be referred for further decision to SRPC.

15.3 The matter was again taken up with the constituents vide SRPC letter dated 25th January 2011 (Annexure-XXII).

15.4 KSEB vide letter dated 18th April 2011 (Annexure-XXIII) had furnished remarks regarding evacuation scheme for Simhadri Stage-II power.

15.5 In the meeting, MS I/c, SRPC informed that in the TCC Meeting held on previous day, the following was noted:

- APTRANSCO had pointed out that transmission charges for 100% of Simhadri Stage-II power were to be paid to APTRANSCO as per APERC rates even with LILO. No backing down of Vemagiri generation would be resorted to.
- TANTRANSCO had pointed out that LILO at Vemagiri was for back up connectivity in time of contingency and separate evacuation system was to be implemented by APTRANSCO for generation at Vemagiri Complex.
- SRLDC had pointed out that as per IEGC and relevant regulations, LTOA transactions would be having higher priority over STOA transactions in the scheduling process.
- Unit I had achieved full load on 29th March 2011 and Commercial operation was expected in July 2011. LILO of Vemagiri-Gazuwaka at Simhadri Stage-II was expected in May 2011.

15.6 Director (GO), APTRANSCO said that the transmission connectivity had been implemented as per the Standing Committee discussions. Alternate outlets had been planned and works were under progress. Weekly meetings were being held by CMD, APTRANSCO on this issue. He added that Open Access for Simhadri Stage-II power was granted by APTRANSCO three years back and the grid scenario had changed considerably. There could not be any backing down of Vemagiri generation. He said issues regarding augmentation of transmission system beyond Vijayawada also needed to be finalized quickly in the Standing Committee forum.

15.7 GM, SRLDC pointed out that two substations were to be commissioned by APTRANSCO for evacuation of power from Vemagiri Complex in line with Standing Committee deliberations.

15.8 ED, SRTS-II, PGCIL also observed that few evacuation elements to be implemented by APTRANSCO had not come up as per the matching time schedule which was leading to evacuation constraints.

15.9 TANTRANSCO pointed out that as per the 19th Standing Committee meeting, the LILO at Vemagiri was approved only as a back up and not for evacuation of power.

15.10 CMD, APTRANSCO informed that the 400 kV Narasaraopet S/S was expected to be commissioned in 2012. 400 kV Vijayawada-Hyderabad line was also scheduled to be commissioned by December 2011. These schemes which were also under progress would assist in evacuation of power from this Complex. Other merchant plants like Reliance & GMR were coming up in that area and hence PGCIL should plan comprehensive evacuation schemes on an urgent basis.

15.11 Chairperson, SRPC said that any generation should come with associated evacuation schemes. PGCIL & APTRANSCO may assess the system capacity and corrective measures to ease the congestion could be identified. Short term measures to be implemented by APTRANSCO & PGCIL may also be identified for implementation. The issue regarding transmission system needed for evacuation of the power of all the generators in that region needed to be assessed and put up to Standing Committee. Backing down of any generator was not desirable.

15.12 Director (GO), APTRANSCO said that since 2x800 MW Krishnapattanam units were also coming up, the evacuation elements needed to be expedited.

15.13 PGCIL informed that the BPTA in respect of the generators in Vemagiri area had been concluded only in November/December 2010.

15.14 It was agreed that APTRANSCO & Power Grid would meet to sort out various issues in this regard.

Annex-II

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION
(Subsidiary of TNEB Ltd.)

From

Er.T.Jeyaseelan B.E.,
Director (Distribution)
TANGEDCO
144, Anna salai
Chennai-2.

To

The Member (Power System)
Central Electricity Authority,
Sewa Bhavan, R.K. Puram,
New Delhi 110 066.

Lr.No.CE/Plg&RC/SE/SS/EE1/AEE2/F - 400KV Wind SS/D.142/2011 dt.18-05-11

Dear Sir,

Sub: Establishment of 400 KV Substations at Anikadavu and Thappagundu in Tamilnadu - Concurrence requested – Reg.

*****

In continuation to the discussion in the 31st Standing Committee meeting held on 16.11.10 at New Delhi regarding the huge wind generation proposed to be added in Tamil Nadu, it is to be stated that 3350 MW capacity of Wind Generators from which Load flow study conducted fro March 2012 in Tamil Nadu are proposed to be added in the TNEB network in addition to the existing 5450 MW as on 31.01.11.

Apart from the already sanctioned/approved schemes of establishment of 400KV SSs at Kanarpatty and Kayathar, as per the guidelines minuted in item no: 11.2 of the minutes of 31st Standing Committee meeting to have separate corridor for wind power evacuation with connectivity to 765/400KV pooling station, the following transmission schemes are suggested for evacuation of huge wind energy proposed to be coming up in the ensuing years in Tamil Nadu:

v) Establishment of new 400/110 KV SS at Thapagundu with 5x200 MVA , 400/110 KV ICTs
vi) Establishment of new 400/230-110 KV SS at Anikadavu with 2x315 MVA, 400/230 KV ICTs & 2x200 MVA , 400/110 KV ICTs
vii) Establishment of new 400/230-110 KV SS at Rasipalayam with 2x315 MVA, 400/230 KV ICTs & 2x200 MVA , 400/110 KV ICTs
viii) Erection of separate corridor of 400 KV DC line with quad moose conductor from Thapagundu 400 KV SS in Theni area, to 400 KV Anikadavu SS & 400/230-110 KV SS at Rasipalayam in Udumalpet area and then linking with the upcoming 765/400 KV PGCIL pooling station at Salem.

2.1. The already approved Kanarpatty 400/230 KV SS and Kayathar 400/230-110 KV SS in Tirunelveli area with the associated schemes are proposed to be slightly modified as follows to satisfy the requirement of CEA as recorded in the minutes.

Kanarpatty 400/230-110 KV SS

- Establishment of new 400/230-110 KV SS at Kanarpatty with 2x315 MVA, 400/230 KV ICTs & 2x200 MVA , 400/110 KV ICTs
- Linking the above SS directly with the proposed 765 KV pooling station at TTN Koilpatty by 400 KV DC quad moose line, as this Kanarpatty SS will have only Wind generators connected to it.

Kayathar 400/230-110 KV SS:

- Establishment of Kayathar 400 KV SS with 2x315 MVA, 400/230 KV ICTs and 1x200 MVA , 400/110 KV ICTs
- Linking the above SS directly with Abhishekapatty 400 KV SS by 400 KV SC line and with Karaikudi 400 KV SS by 400 KV DC quad moose line .

2.2. In addition, further proposals of addition of wind generation to the tune of around 7500MW is under study.

3. It is requested that concurrence may be accorded for establishment of the above 400 KV substations at Thapagundu , Anikadavu & Rasipalayam and linking with Salem PGCIL 765 KV Pooling station by a separate 400 KV corridor in addition to the now proposed revised connectivity of Kanarpatty 400 KV SS with Koilpatty PGCIL 765 KV Pooling station and for the Kayathar 400/230-110 KV SS.

4. A joint study may be conducted by CEA if necessary with TNEB and PGCIL to finalise the above proposals of wind power evacuation transmission schemes as mentioned in para (2&2.1). The convenient dates for the joint study may be informed so that Engineers from TNEB will be deputed.

-sd-
(V.G.Manoharan)
Chief Engineer/Planning&R.C.
For Director (Distribution)

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

No. 51/4/SP&PA-2011/ 538 - 548 **Date: 27th May 2011**

To

1.The Member Secretary, Southern Regional Power Committee, 29, Race Course Cross Road, **Bangalore 560 009**. **FAX : 080-22259343**	2.The Director (Projects), Power Grid Corp. of India Ltd. "Saudamini", Plot No.2, Sector-29, **Gurgaon 122 001, Haryana**. **FAX : 95124-2571932**
3.The Director (Transmission), Transmission Corp. of Andhra Pradesh Ltd., Vidyut Soudha, **Hyderabad – 500 082.** **FAX : 040-66665137**	4.The Director (Transmission), Karnataka State Power Transmission Corp.Ltd., Cauvery Bhawan, **Bangalore 560 009**. **FAX : 080 -22228367**
5.The Member (Transmission), Kerala State Electricity Board, Vidyuthi Bhawanam, Pattom, P.B. No. 1028, **Thiruvananthapuram - 695 004.** **FAX : 0471-2444738**	6. Member (Distribution), Tamil Nadu electricity Board (TNEB), 6th Floor, Eastern Wing, 800 Anna Salai, **Chennai - 600002.** **FAX : 044-28516362**
7.The Director (Power), Corporate Office, Block – I, Neyveli Lignite Corp. Ltd., **Neyveli , Tamil Nadu – 607 801.** **FAX : 04142-252650**	8.The Superintending Engineer –I, First Floor, Electricity Department, Gingy Salai, **Puducherry – 605 001**. **FAX : 0413-2334277/2331556**
9. Director (Projects), National Thermal Power Corp. Ltd. (NTPC), NTPC Bhawan, Core-7, Scope Complex, Lodhi Road, **New Delhi-110003.** **FAX-011-24360912**	10. Director (Operations), NPCIL, 12th Floor,Vikram Sarabhai Bhawan, Anushakti Nagar, **Mumbai – 400 094.** **FAX : 022- 25991258**

Sub: 32nd meeting of the Standing Committee on Power System Planning of Southern Region - **Venue of the meeting.**

Sir,

The **32nd meeting** of the Standing Committee on Power System Planning of Southern Region is scheduled to be held **on 08th June 2011 (Wednesday) at 10:30 AM at Conference Hall of Northern Region Power Committee, Katwaria Sarai, New Delhi.**

Agenda for the meeting has already been sent and is also available at CEA's website(www.cea.nic.in) . Please make it convenient to attend the meeting.

Yours faithfully,

(Pardeep Jindal)
Director (SP&PA)
(Telephone: 011 26198092, Fax No. 011 26102045)

Copy to : Sh. SK Soonee, CEO, POSOCO,
B-9, Qutub Institutional Area,

Katwaria Sarai, New Delhi-110016

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

No. 51/4/SP&PA-2011/ 497 - 507 **Date: 23 May 2011**

To

1.The Member Secretary, Southern Regional Power Committee, 29, Race Course Cross Road, **Bangalore 560 009**. **FAX : 080-22259343**	2.The Director (Projects), Power Grid Corp. of India Ltd. "Saudamini", Plot No.2, Sector-29, **Gurgaon 122 001, Haryana**. **FAX : 95124-2571932**
3.The Director (Transmission), Transmission Corp. of Andhra Pradesh Ltd., Vidyut Soudha, **Hyderabad – 500 082.** **FAX : 040-66665137**	4.The Director (Transmission), Karnataka State Power Transmission Corp.Ltd., Cauvery Bhawan, **Bangalore 560 009**. **FAX : 080 -22228367**
5.The Member (Transmission), Kerala State Electricity Board, Vidyuthi Bhawanam, Pattom, P.B. No. 1028, **Thiruvananthapuram - 695 004.** **FAX : 0471-2444738**	6. Member (Distribution), Tamil Nadu electricity Board (TNEB), 6th Floor, Eastern Wing, 800 Anna Salai, **Chennai - 600002.** **FAX : 044-28516362**
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9. Director (Projects), National Thermal Power Corp. Ltd. (NTPC), NTPC Bhawan, Core-7, Scope Complex, Lodhi Road, **New Delhi-110003.** **FAX-011-24360912**	10. Director (Operations), NPCIL, 12th Floor,Vikram Sarabhai Bhawan, Anushakti Nagar, **Mumbai – 400 094.** **FAX : 022- 25991258**

Sub: 32nd meeting of the Standing Committee on Power System Planning of Southern Region - **Agenda for the meeting.**

Sir,

The **32nd meeting** of the Standing Committee on Power System Planning of Southern Region is scheduled to be held on 08th June 2011 (Wednesday) at New Delhi. Venue of the meeting would be conveyed separately.

Agenda for the meeting is enclosed. It is also available at CEA's website(www.cea.nic.in) .

Please make it convenient to attend the meeting.

Yours faithfully,

(Pardeep Jindal)
Director (SP&PA)
(Telephone: 011 26198092, Fax No. 011 26102045)

Copy to : Sh. SK Soonee, CEO, POSOCO,
B-9, Qutub Institutional Area,
Katwaria Sarai, New Delhi-110016

AGENDA NOTE

Agenda Note for 32nd Meeting of
Standing Committee on Power System Planning in Southern Region (SCPSPSR)

Time: 10 30 AM **Date: 08th June 2011 (Wednesday)**
Venue: New Delhi (exact venue would be informed separately)

1.0 Confirmation of the minutes of 31st meeting of the Standing Committee:

1.1 Minutes of 31st meeting of the Standing Committee on Power System Planning of Southern Region, held on 16th November 2010 at New Delhi, were issued vide CEA's letter number 51/4/SP&PA-2010/ 1295 – 1305 dated 10 December, 2010.

1.2 KPTCL vide their letter no. CEE (P&C)/KCO-97199/37199/2011-12 dated 6 April 2011 had given their observations on the Madhugiri – Narendra – Kolhapur 765 kV D/c line and suggested that instead the 765kV (op 400kV) line may be routed as Madhugiri – BB Wadi - Kolhapur.

1.4 KPTCL's suggestion has been considered while planning transmission system for Kudgi TPS of NTPC. As such, the minutes as circulated may be confirmed.

2.0 System studies for strengthening of Southern Region grid, transmission System for evacuation of power from Rayalseema St-IV (Andhra Pradesh), connectivity for Nirmal 400kV S/S of APTRANSCO, power evacuation from Yermarus TPS/Edlapur TPS (Karnataka) and new wind projects in Tamilnadu.

2.1 During 31st meeting of the Standing Committee on Power System Planning of Southern Region held on 16th November 2010 at New Delhi, it was decided that joint system studies would be carried out by CEA, POWERGRID, APTRANSCO, KPTCL, KSEB, TNEB and POSOCO/SRLDC for following transmission system requirements:

i) Strengthening of Southern Region grid to address issue of congestion in the S1-S2 bid areas

ii) Transmission System for evacuation of power from Rayalseema St-IV (1x600 MW) of APGENCO in Andhra Pradesh

iii) Transmission System for evacuation of power from Yermarus TPS(2x800 MW)/Edlapur TPS(1x800 MW) of KPCL in Karnataka

iv) Transmission System for evacuation of power from new wind projects in Udumalpet, Theni and Tirunelveli areas of Tamilnadu

v) Connectivity for Nirmal 400kV S/S of APTRANSCO

2.2 Accordingly, system studies were carried out jointly with engineers from POWERGRID, KPTCL, KSEB, APTRANSCO, TNEB and SRLDC during 02-03

December 2010 at POWERGRID's Gurgaon office. The copy of Study Report is enclosed at **Annexure-I**.

2.3 Based on the studies, following system strengthening was proposed:

i) Strengthening of Southern Region grid to address issue of congestion in the S1-S2 bid areas as a regional strengthening scheme

a. Vijayawada – Nellore (AP) 400 kV D/C line

b. Nellore (AP) - Tiruvalem 400 kV D/C Quad

c. Tiruvalam – Sholinganallur 400 kV D/C line

d. LILO of existing Bangalore – Salem 400 kV S/C line at Hosur

Members may discuss and finalise

ii) Transmission System for evacuation of power from Rayalseema St-IV (1x600 MW) of APGENCO in Andhra Pradesh

Either

a. Rayalseema(Muddanur) - Hindupur 400kV D/C line and a 400/220 kV S/S at Hindupur

or

b. Rayalseema(Muddanur) - Chitoor 400kV D/C line

Members may discuss and finalise

iii) Connectivity for Nirmal 400kV S/S of APTRANSCO

a. One of the circuit's of Ramagundam – Hyderabad 400kVlines may be LILOed at Nirmal. This LILO may be drawn from towers just outside the Ramagundam STPS switchyard to minimize the length of lines.

b. Possibility of a spare bay/ space at NTPC's Ramagundam STPS switchyard may be re-explored to connect Nirmal with Ramagundam.

Members may discuss and finalise

iv) Transmission System for evacuation of power from Yermarus TPS(2x800 MW)/Edlapur TPS(1x800 MW) of KPCL in Karnataka

Transmission alternatives studied during the joint studies are given in the study report.

KPTCL has accepted following transmission system (load flow results are given Exhibit-Yermarus):

Transmission system for Yermarus and Edlapur TPS:

a) Edlapur TPS - Yermarus TPS S/S 400 kV D/C line

b) The existing Raichur TPS – Davangere 400kV S/C line to be replaced with a new 400kV D/C line with QUAD conductors alongwith shifting of Raichur termination point to Yeramaras TPS switchyard.
c) BTPS switchyard – Hiriryur (under construction) 400 kV D/c Twin line
d) Yermarus TPS – Raichur (New) 400kV Quad D/C line
e) BTPS – Madhugiri – 400 kV Quad D/c line
f) Yeramaras – Basavanabagewadi (BB Wadi) 400 kV D/c Twin line
g) Establishment of BB Wadi 400/220 kV substation.

Members may discuss and finalise.

3.0 Strengthening of SR Grid to Facilitate Import of Power

The transmission system of SR for past years has been planned basically considering SR as surplus in power due to overwhelming response from IPP projects for establishment of large sized coastal based generation projects. Further, this premise has been supported due to proposal for establishment of UMPP in AP and Tamil Nadu.

Now looking into the progress of the generation projects vis-à-vis the likely load projections considered in the above carried out joint studies there is likelihood that SR may need import of power from other regions. In this regard, it is prudent to mention that while planning the synchronous interconnection of SR with WR the basic premise has been export of power. This link is planned associated with Krishnapatnam UMPP in which 4000 MW power of the project is evacuated upto Raichur/Gooty from where the power is exported over Raichur-Sholapur 765 kV lines. In this arrangement if SR avails import of power over this line then it is seen that power is bottled up overloading the transmission lines beyond Gooty.

The studies have been carried out for import scenario for 2016-17 timeframe considering import of the order of 3500-4000 MW. For importing and absorbing this power further in SR, it is seen that Kurnool – Tiruvalam 765 kV D/C line presents the most optimal solution, in the base case this line carries about 2750 MW. Accordingly, following transmission system is proposed as system strengthening for SR to facilitate import of power.

Proposed system

1. Kurnool – Tiruvalam 765 kV D/c line
2. Provision of 2x1500 MVA, 765/400 transformers at Tiruvalam
3. LILO of Kolar – Sriperumbudur 400 kV S/c line at Tiruvalam.

POWERGRID to make presentation, members may discuss and finalize.

4.0 Transmission System for Evacuation of Wind Power from Tamil Nadu

4.1 The transmission system for wind generation projects in Tamil Nadu was first discussed and evolved in the 23rd Meeting of Standing Committee held on Jan 22, 2007 .The evolved

transmission system involved establishment of 400kV substation in the Tirunelveli area, where wind power concentration is there, and a 400 kV corridor up to Chennai. These transmission systems were to be built by TNEB. Detailed transmission system to be built by TNEB is given below:

i) Tirunelveli (TNEB) (TN wind/Kanarapatty) 400/230 kV S/S, 3x315 MVA
ii) Tirunelveli (TNEB) - Tirunelveli (PG), 400 kV Quad D/C line.
iii) Five numbers of 230/33 kV wind energy substations at Marandai, Sayamalai, Vagaikulam, Kumarapuram, Sankaralingapuram and one 230/110 kV Samugarangapuram substation with associated 230 kV lines connecting with the Kanarapatty 400 kV S/S.
iv) Kanaraptty (TN Wind) - Kayathar 400 KV, 400 kV D/C line.
v) Kayathar - Karaikudi , 400 kV D/C Quad line
vi) Karaikudi - Pugalur 400 kV D/C Quad line
vii) Establishment of 400/230-110 kV S/S with 2x315 MVA 400/230 kV ICT, and 2x200 MVA 400/110 kV ICT at Kayathar.
viii) Pugalur – Sholinganallur (Ottiampakkam), 400 kV D/C Quad line.

4.2 The wind power in Tamil Nadu at the time of planning of above transmission system was about 2878 MW. At present wind power in Tamil Nadu has enhanced to about 5468 MW i.e. addition of about 2600 MW

4.3 It has been observed that TNEB have not completed the above transmission system even after 4 years it was planned. The status update for the planned transmission provided by TNEB in the 31st meeting of Standing Committee held on Nov'2010 is given at Annex-I. It is seen that some part of the above system is still under survey stage and for majority portion, the work is either not taken up or has been deferred.

4.4 This would not only block transmission of existing wind electricity but would also hamper the connectivity of additional wind capacity (proposed about 8000MW addition up to 2016-17).

4.5 During the joint study with CEA, KPTCL, KSEB, TNEB, SRLDC, POSOCO and APTRANSCO at POWERGRID's Gurgaon office on 02-03 December 2010, TNEB informed that existing wind generation capacity exists in Tamilnadu is of the order of 5500 MW (3500 MW in Tirunelveli/Kayathar area and 2000 MW in Udumalpet/Theni area). Addition wind generation capacity of about 3300 MW (Tirunelveli area – 2000 MW, Udumalpet area – 800 MW and Theni area 500 MW) was proposed to be added by end of 11th Plan. Further, during 12th Plan, more than 5000 MW may also be added in Tamilnadu.

4.6 In the 31st meeting of SCPSPSR, Chief Engineer, CEA had expressed that huge wind generation capacity addition, in Tamil Nadu or any other State for that matter, should be factored in transmission planning so that wind generation does not have to back down when local demand is not sufficient. The requisite inter-State transmission system should be put in place for absorbing surplus wind generation in the rest of the country. The requisite system strengthening for this purpose should be done as a matter of transmission planning philosophy without requiring any application for LTA. The intra- State transmission system up to the ISTS points near boundary of the State or up to ISTS pooling point directly feeding to 765kV/ HVDC trunk transmission system should be developed by STU.

4.7 TNEB was suggested to work out wind power likely to be added in Tirunelveli, Kayathar, Theni and Udumalpet areas for the periods 2012-2015. TNEB would indicate quantum of power to be injected at these locations for three seasons of winter, monsoon and summer for period 2012-2015.

4.8 TNEB is required to present relevant analysis and studies.

5.0 Status of Under Construction / Approved Schemes:

5.1 Powergrid may inform the progress of the transmission works that are being implemented by them as part of regional schemes.

5.2 State Utilities may inform the progress on their transmission works that are necessary to match with the regional schemes by Power grid for effective utilization of the system:

i) APTRANSCO may inform status of the transmission system for Kothagudam TPS Stage-VI, Bhoopalapally Stage-I and Stage –II projects.
ii) KPTCL may inform status the Nagarjuna TPS(UPCL)-Hassan 400kV D/C line and transmission system for in the Yeramas and Edlapur generating station.

iii) TNEB may inform about status of transmission system for NCTPS Stage-II, Mettur TPS-III, Udangudi TPS and the transmission system for evacuation of wind power in Tirunelveli/Kayathar area i.e. Kanarpathy - Kayathar- Karaikudi -Pugalur- Singarapet - Sholinganallur 400kV system.

6.0. The committee may take up the Agenda point regarding Connectivity and LTA applications circulated by PGCIL.

7.0 Any other issue with the permission of Chairman.
