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सं/No.	SRPC/SE(O)/126 <sup>th</sup> OCC/2016-17	दिनांक/ Date	06.12.2016		

सेवा में / To: संलग्न सूचि के अनुसार / As per enclosed list

प्रचालन समन्वय समिति की 126 वी बैठक की कार्यसूची ।

AGENDA FOR THE 126<sup>th</sup> MEETING OF THE OPERATION COORDINATION COMMITTEE

महोदय / Sir,

दक्षिण क्षेत्रीय विद्युत समिति की प्रचालन समन्वय समिति की 126 वी बैठक दिनांक 15 दिसंबर 2016 (गुरुवार) बेंगलुरु में आयोजित होगी। बैठक की कार्यसूची आपके अवलोकनार्थ हमारा वेबसाइट [www.srpc.kar.nic.in](http://www.srpc.kar.nic.in) में अपलोड किया गया है ।

समीक्षा तैयार करने हेतु आपकी प्रणाली से संबंधित आंकड़े को कृपया दिनांक 08 दिसंबर 2016 (गुरुवार) तक भेजने की कृपा करें।

The agenda for the 126<sup>th</sup> Meeting of the Operation Coordination Committee to be held on 15<sup>th</sup> December 2016 (Thursday) at 1000 hrs at बेंगलुरु is uploaded in our office website [www.srpc.kar.nic.in](http://www.srpc.kar.nic.in) for your perusal.

Kindly arrange to send the data in respect of your system latest by 8<sup>th</sup> December 2016 (Thursday) to enable this office to prepare review sheet etc.

भवदीय / Yours faithfully

  
 असित सिंह / ASIT SINGH)

अधीक्षक अभियंता

SUPERINTENDING ENGINEER

**Southern Regional Power Committee Bengaluru**  
**Agenda for the 126<sup>th</sup> Meeting of Operation Coordination Committee**  
**to be held at SRPC, Bengaluru on 15<sup>th</sup> December 2016**

1 Confirmation of the Minutes of the 125<sup>th</sup> Meeting of OCC of SRPC held on 11<sup>th</sup> November 2016 at Kochi.

2 **Monthly Outage Plan/ Annual Outage Plan**

2.1 **ISGS/CGS: Generating Units**

- a) Shut Down Proposals for December 2016/January 2017
- b) Shut Down carried out during November 2016 along with reason for deviation, if any.

2.2 **Rescheduling/ Planned outages of Generating Stations**

2.2.1 **Central Generating stations – Outage plan for the year 2017-18.**

APTRANSCO vide letter dated 28.11.2016(**Annexure-2A**) submitted the following regarding the “Outage Plan” for the 2017-18.

- Requested to kindly take up with all Central Generating Stations of SR to complete the Overhauls of their units during July 2017 to September 2017, when the wind potential is expected to be higher during July to September.
- Kindly ensure full availability during the months January 2017 to June 2017.
- Requested to arrange to reschedule the overhaul program of all CGS units during July 2017 to Sept.2017 and bring back the units on bar as per schedule.

2.2.2 **SEMBCORP: Thermal Powertech Corporation India Ltd., (2x660MW) Unit No.1, Annual Shut down plan:**

**SEMBCORP** vide letter dated 22.11.2016(**Annexure-2B**) had informed that the tentative schedule of TPCIL Unit No.1, Annual Shut Down is from 24.12.2016 to 11.1.2017. It was also informed that all works requiring TPCIL transmission lines will also be carried out during this opportunity.

2.2.3 **KKNPP Unit I Outage:**

In the Special Meeting held on 25.11.2016 KKNPP had informed that KKNPP Unit I Outage was planned from Mid Jan 2017 for 75 days. TANTRANSCO had observed that after Unit 1 outage, there should not be any major test planned on Unit II and Unit II generation should stabilize. TANTRANSCO had also requested KKNPP for reducing the shutdown period from 75 days to 60 days as it would help them to meet March Loads.

2.2.4 **KGS-2 Biennial shutdown – reg.**

2.2.4.1 KGS vide letter dated 01.12.2016(**Annexure-2C**) has informed that the biennial shut down would be taken up in the month of February 2017. It has been informed that the contract for all major works was already awarded or near the awarding stage.

In this regard SRPC vide letter dated 05.12.2016(**Annexure-2D**) brought the following to the notice of NPCIL:

- ✓ The shut down for unit-2 was planned in December 2016 and it was communicated by KGS as early as December 2015. There was no request from any beneficiary, SRLDC or SRPC for the deferment of the shut down.

- ✓ The shut down needed to be taken in December 2016 as the SRPC constituents are fully aware that the peak demand falls in the period January to April each year. None of the unit shut downs are planned and approved during this period.
- ✓ With BSD of 40 days, the shutdown would spill into March which is the exam period and maximum demand period of Southern Region.
- ✓ With the poor monsoon, the hydro storage position in SR is also not good. Hydro generation in Karnataka has been restricted to 10 MU/day.
- ✓ It has been time and again reiterated in the OCC/TCC forum that the preparatory was for the maintenance needs to be carried out in advance diligently to avoid any deferment due to contractual issue.
- ✓ There was no official communication from Kaiga GS that the unit BSD was being rescheduled to February 2017. In the 125<sup>th</sup> OCC meeting held on 11.11.2016, KGS representatives had informed that the BSD would be taken up in February 2017. The OCC had not concurred the above shutdown and had suggested Kaiga GS to take the shutdown before December 2016 or after May 2017.

It is suggested to NPCIL that as the shutdown cannot be extended beyond February 2017, the **BSD of the unit could be expedited and taken up at the earliest in December 2016 itself**. The non-preparedness on behalf of Kaiga GS should not affect the load generation balance of the beneficiaries in the high demand period.

#### 2.2.5 **MAPS Unit - I, BSD:**

2.2.5.1 In the Special Meeting held on 25.11.2016 MAPS informed that Unit - I, BSD which was planned for 29.11.2016 - 12.11.2017 has been rescheduled for March 2017.

2.2.5.2 TANTRANSCO had expressed serious concern and stated that MAPS Unit I shutdown should be completed by January 2017. In extreme contingency it could be planned in April 2017, but in no case shutdown could be concurred during March 2017.

- ✓ It was suggested that shutdown could be completed by January 2017 else it could be taken up in May 2017.
- ✓ MAPS representative was requested to appraise their Management of the requirement and revert back within a week enabling the beneficiaries to plan their purchases/LGB.
- ✓ It was concluded that NPCIL should also plan their units during May to December each year.
- ✓ Availability of both KKNPP units should be ensured during February & March.

2.2.5.3 It is noted that MAPS had informed that Shut Downs are taken for carrying out the surveillances on nuclear systems which is a stipulation from the regulator as part of Technical Specifications. However it will be reviewed.

#### 2.2.6 **Request for permission to take Simhadri Unit IV for Annual Over Haul from 17.12.2016**

2.2.6.1 In the 125<sup>th</sup> OCC Meeting the Shut Down of Simhadri TPS Unit IV had been approved from 20.12.2016 to 23.01.2017 with the suggestion to propose and take the shut down of Unit IV after stabilization of Unit I. NTPC, Simhadri vide their letter dated 30.11.2016 (**Annexure-2E**) had informed that they are planning to take the Unit-IV out of bar w.e.f. 00:00 hours of 17.12.2016 for a period of 35 days.

2.2.6.2 It is noted that the shut down had been concurred with the condition that Unit I of Simhadri would be stabilized by 17.12.2016.

2.2.7 In the 125<sup>th</sup> OCC Meeting planned maintenance of NLC TS I Expansion Unit II was approved from 15.11.2016 to 14.12.2016(30 days). Subsequently NLC vide letter dated 24.11.2016(**Annexure-2F**) had informed that the Unit will be taken out from 01.12.2016 to 24.12.2016. Vide letter dated 01.12.2016 NLC further informed that the Unit will not be taken out on 01.12.2016(**Annexure-2G**) due to some administrative issues and the exact date of outage will be intimated later.

### **2.3 ISTS/State Sector Transmission Lines and Elements**

a) As per the NLDC outage procedure constituents to furnish the outage proposals for subsequent month by 3<sup>rd</sup> of current month which would be posted on SRPC website by 5<sup>th</sup> of current month. The outage proposals shall be furnished in the specified format in Excel through E-mail to the following address.

[seoprnsrpc-ka@nic.in](mailto:seoprnsrpc-ka@nic.in)

#### **b) Non-availing the OCC approved shut downs**

SRLDC had furnished the approved Vs availed percentage of shut down approved for November 2016. (**Annexure-2H**)

- In the 124<sup>th</sup> OCCM in respect of SRLDC's Web Based Outage Coordination System (WBOCS) OCC forum had suggested that a provision may be incorporated to enter non availing till 0600 hours of the day of shutdown.

(Item No. 2 of enclosed SRLDC letter dated 29.11.2016).

2.3.1 It had been observed that few constituents/utilities were not furnishing outage requests as per specified time schedule and current month proposals for AMP works were also being furnished. All the utilities were requested to follow the procedure and the time lines.

2.3.2 All the utilities to furnish the details/deviations with respect to the Annual Outage plan schedule vs maintenance carried out on a monthly basis as this information is required for the Annual Outage Plan Deviation Report being submitted to CERC.

## **3 LGBR for upcoming five months**

### **3.1 The following details to be furnished for discussion:**

- Schedule of Hydro, Thermal Generation, RES, Purchases, Anticipated Consumption etc.
- Shortfall/Surplus, if any and how the same is proposed to be met.
- Arrangements to meet the Demand and Energy shortage for December 2016 to April 2017
- Status review of Development of State of the Art load forecasting tools as per clause 5.4.2 of IEGC.
- Loss of Generation due to fuel shortage- Action plan for meeting their demand and short fall by constituents.
- The coal shortage issue and sharing of coal availability as per the CERC order dated 23.07.2013.
- Load Generation Balance in real time.

(Item No. 3 of enclosed SRLDC letter dated 29.11.2016).

### **3.2 LGBR for upcoming five months & TTC/ATC computations**

- All states were requested to furnish PSSE base case for April 2017.
- All SLDCs were requested to submit converged PSSE base case to SRLDC.
  - As per the NPC decision/Congestion Procedure all the states were requested to publish TTC/ATC in their respective websites.
  - All the SLDCs need to have a dedicated Study Group. Manpower issues need to be addressed suitably by the Management.

- Nominations from AP & TS for dedicated Study Group were awaited long back, though both AP & TS had assured of nominations.
- The following details are to be updated:

	5 months LGB	Converged PSSE Base case	ATC/TTC Computation furnished to SRLDC	ATC/TTC Computation posted on SLDC website	Nodal Officer Status	ATC/TTC Work shop
AP						27 <sup>th</sup> & 28 <sup>th</sup> September 2016
TS						26 <sup>th</sup> and 27 <sup>th</sup> July 2016
KAR						31 <sup>st</sup> March 2016/1 <sup>st</sup> April 2016
TN						12 <sup>th</sup> /13 <sup>th</sup> May 2016
KER						12 <sup>th</sup> /13 <sup>th</sup> May 2016
Pudu						

In the 125<sup>th</sup> OCC Meeting TSTRANSCO had informed that study group had been formed this month and within two months they would start furnishing the requisite information. The group had undergone training at New Delhi and training at SRLDC on a mutually agreed date would be taken up.

➤ **States to update**

(Item No. 3 of enclosed SRLDC letter dated 29.11.2016).

#### **4 Review of Power Supply Position /Inflows**

Constituents/ Generators to furnish the reasons for deviation:

- a) Actual with respect to anticipated (MW & MU) for availability and requirement.
- b) Generation variation category wise with respect to MoP targets/LGBR figures.
- c) Inflows (MU) to major reservoirs: Actual w.r.t. 10 year moving average and w.r.t. same month last year.
- d) ***Reasons for demand -supply gap and its variation***

- The load shedding details in different heads along with the reasons needed to be furnished. MoP/CEA specifically needed the reasons for load shedding like transmission constraints, distribution constraints, regulatory constraints viz the power purchase not allowed beyond an agreed cost or quantum, natural calamities, tripping of some of major transmission lines etc.

#### **5 MAJOR ISSUES**

##### **5.1 *Presentation by States on Operational Issues***

- 5.1.1 All the States to present the operational issues/highlights. All entities to come up with their own presentation on operational/technical issues which need attention of OCC forum.



- SRLDC requested that states may kindly upload their presentation by 5<sup>th</sup> of every month so that SRLDC can compare with their information/data which will help in better discussion/analysis of the issues.

## **5.2 Enhancement in TTC of Southern Region by increasing loading limit on Raichur – Sholapur 765 kV 2xS/c & Sholapur-Aurangabad 765 kV D/c lines from 2500 MW to 2750 MW (under N-1 condition).**

- 5.2.1 SRPC vide letter dated 24.11.2016(**Annexure-5A**) invited attention of NLDC, POSCO, New Delhi to CEA letter dated 22.11.2016 and deliberations in the 40<sup>th</sup> Standing Committee Meeting of SR held on 19.11.2016, wherein, it was agreed that the loading limit of Raichur-Sholapur 765 kV 2xS/c can be enhanced from 2500 MW to 2750 MW (under N-1 condition). The studies indicate that the TTC to SR could be enhanced by 400 MW ie from 6650 MW to 7050 MW. It had been requested that RPCs may study the proposal of enhancing the limit and accordingly the associated SPS designed for contingency of Raichur-Sholapur and Aurangabad – Sholapur may be reviewed.
- 5.2.2 SRPC had requested NLDC to kindly review the SPS settings and changes, if any, may be communicated for enabling implementation at the earliest which would facilitate higher power transfer to SR.

## **5.3 LTA operationalization in respect of M/s.MEPL.**

- 5.3.1 SRPC vide letter dated 24.11.2016(**Annexure-5B**) sought some clarifications regarding LTOA/LTA granted by CTU wherein LTA of 491 MW was granted to M/s.SEPL.

The following were observed:

- LTA of 411 MW to Target Region SR was operationalised from 16.6.2016.
- LTA had been granted for SR 356 MW and WR 135 MW with transmission system requirement of HCPTC-VI+Rachur-Sholapur 765 kv line + Narendra+Kolhapur 765 kV line.
- It is not clear how LTA of 411 MW in SR was operationalised against grant of 356 MW.
- It is also not understood whether any assessment has been carried out for operationalised LTA towards target region, WR since this would be counter flow.
- M/s.SEPL was granted LTOA/LTA of 546 MW (SR 186, WR 177 & NR 183) with the same transmission system requirement as for M/s.SEPL.
- It is not understood why the LTOA/LTA for M/s.MEPL has not been operationalised for at least for the quantum corresponding to SR & WR.

In this regard Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations, 2015.6. Amendment to Regulation 8 of the Principal Regulations, cited under:

“(2) Clause (5) of Regulation 8 of the Principal Regulations shall be substituted as under..... Provided further that where the operationalisation of LTA is contingent upon commissioning of several transmission lines or elements and only some of the transmission lines or elements have been declared commercial, the generator shall pay the transmission charges for LTA operationalised corresponding to the transmission system commissioned”.

- 5.3.2 SRPC had requested CTU, Powergrid that this issue may kindly be examined and assessment of part LTA be carried out.

## **5.4 Revision of TTC between S1-S2 from 7382 MW to 5426 MW for the month of December 2016:**

- 5.4.1 The TTC between S1-S2 got revised from 7,382 MW to 5,426 MW for the month of December 2016 vide revision No.1 issued on 29<sup>th</sup> November 2016. The reason for revision was mentioned as limiting constraints getting shifted from (n-1) contingency for 400 kV Hiriyur-Nelamangala D/C to (n-1)

contingency of 400 kV Udumalpet-Palakkad D/C. In this regard SRPC vide letter dated 05.12.2016(**Annexure-5C**) brought the following to NLDC's kind attention.

- Market split was observed in IEX platform for collective transaction on 2<sup>nd</sup> and 3<sup>rd</sup> of December 2016.
- The limiting constraint is 400 kV Udumalpet-Palakkad D/C which is downstream of Tamil Nadu.
- It is not understood how the upstream utility can get affected commercially for constraint in the downstream network.
- SRPC had already requested for setting of S3 control area for Kerala for the limiting constraint of (n-1) contingency of 400 kV Udumalpet-Palakkad D/C way back in December 2014 as per Revised Relieving real time congestion management Procedure of NLDC.
- In view of the steep downward revision of S1-S2 TTC (of the order of 1,900 MW) it is requested that relevant (.sav) file may please be made available to this office.
- On preliminary scrutiny of the Load Generation Data of S2 constituents i.e., TN and Kerala, it is seen that there is no much difference either in the peak demand or in the internal generation based on which such huge difference of 1,900 MW TTC can be justified. The availability of ISTS connected generators in S2 also found to be nearly the same.
- It is also understood that on account of ambient temperature changes, there would not be any TTC revision since the period considered is same (original and revised TTC-revision 0 and 1).

It is requested that the above matter may please be examined urgently.

#### **5.5 Right of Way issue of 400 kV Nelamangala-Hoody Line/ commissioning of 400 kV Yelahanka substation/220 kV evacuation system of KPTCL at Yelahanka substation**

5.5.1 Power Grid Corporation Limited vide letter dated 24.11.2016(**Annexure-5D**) to KPTCL had informed that with the administrative support of Karnataka State Govt., the Right of Way issue of 400 kV Nelamangala-Hoody line has been resolved. The revenue survey work for the said line has already commenced and the balance works will be completed by December 2016. On successful completion of 400kV Nelamangala-Hoody LILO Line, 400 kV Yelahanka substation along with the above LILO Line will be commissioned. It was pointed out that the corresponding 220 kV evacuation system to be executed by KPTCL is not yet ready. It is requested that the 220 kV evacuation system of KPTCL at Yelahanka substation may kindly be expedited so as to facilitate the evacuation of power through the 220 kV downstream system.

#### **5.6 Request for increased dispatch of coal against FSA for NTECL-Vallur to meet summer load demand in Southern grid.**

5.6.1 NTECL vide letter dated 10.11.2016 to CMD, M/s.Mahanandi Coal Fields Ltd., Odisha(**Annexure-5E**) submitted the following :

- NTECL-Vallur has FSA with M/s.MCL for supply of 65.5 LMT coal p.a.
- The realization of ACQ till date is only 69.8% of the prorated ACQ resulting in drop in ground stock and dependence on import coal. The present domestic coal stock is only 86,920 MT which is sufficient to meet 3.5 days requirement.
- Power demand in Southern region has been steadily rising and beneficiaries expect full generation from NTECL-Vallur for the peak summer season upto May 2017.
- Average daily coal dispatch from MCL mines (Talcher & 1b Valley) for the month of November 2016 is only 10450 MT/day against the requirement of 25000 MT/day for full generation. Average rake realization is only 2.77 rakes/day against sanctioned programme of 4.4 rakes/per day for November 2016. The average receipt is sufficient to generate only 627 MW at 41.8% PLF. Import coal is being blended regularly at 30% to sustain the generation.
- The plant has been proactively taking many actions to overcome the railway logistic bottlenecks in supply of coal, some of which are brought out as below:
  - a) Both Paradip & Dhamra Ports have been engaged for coal receipt through Indian Railways and dispatch through sea route.
  - b) Panamax class vessels have been engaged to improve the coal offtake.

- c) Manual unloading and intra Port transport facility maintained at Paradip to facilitate receipt of BoxN type wagons from Talcher and Ib Valley.

- In spite of all these, the Ships are waiting for cargo at the Ports for 5-6 days.
- MCL has reduced endorsement of rakes requested for November 2016 as follows:

Sl.No.	Sector	Rakes Applied	Endorsed
1	Talcher - Paradip	132	100
	Ib Valley.- Dharma	45	32
	Ib Valley.- Paradip	15	Nil
	<b>Total</b>	<b>192</b>	<b>132</b>

This has further reduced the scope for improvement of deliveries against FSA.

NTECL requested kind intervention of MCL to enhance the coal delivery for NTECL-Vallur to the tune of 25000 MT/Day (7 rakes per day) with immediate effect to meet the peak demand season and avoid dependency on import coal.

- 5.6.2 Subsequently SRPC vide letter dated 16.11.2016(**Annexure-5F**) has taken up the issue with MCL and had requested for increased dispatch of coal against FSA for NTECL-Vallur to meet summer load demand in Southern Grid. It was pointed out that NTECL, Vallur (3\*500MW) is a vital power station catering to the beneficiary states in southern region. This station has been plagued by coal shortage which has resulted in low PLF in the past. The matter regarding coal supply is also being discussed in the SRPC meetings for which MCL is also being invited as a Special Invitee. SRPC expressed concern that the present coal stock position is adequate to meet only 3.5 days requirement. In the ensuing high demand period, it is very essential to maintain high availability from the generating stations.

#### 5.7 **Delay in revision of DC and Schedule of MAPS consequent to generator tripping**

- 5.7.1 It has been observed that DC Schedule of MAPS were not revised for about 80 consecutive blocks, i.e., from 16:00 hours of 29<sup>th</sup> September 2016 to 11:45 hours of 30<sup>th</sup> September 2016, after one of the units at MAPS had tripped. In the 125<sup>th</sup> OCC Meeting after deliberation on the same issue it was noted that the issue needs to be further deliberated in NPCIL meeting scheduled for 25.11.2016. The following were agreed in the Special Meeting held on 25.11.2016 held at SRPC Bangalore:

- NPCIL units would immediately inform SRLDC about tripping / synchronization in line with IEGC provisions and also revise the DC/GS immediately. Changes in DC/GS would be communicated to SRLDC within stipulated time frames. Necessary system / procedure would be put in place to ensure full compliance.
- **A workshop** on grid aspects for NPCIL stations i.e. **MAPS, KGS and KKNPP would be conducted at MAPS during December 2016.**

- 5.7.2 MAPS had informed that updating of revised DC/GS will be done. Procedure was modified.

#### 5.8 **Discrepancy in Schedule files, vis-à-vis station schedules and Station DCs**

- 5.8.1 SRPC vide letter dated 26.10.2016 had informed SRLDC regarding many instances when station schedules exceed the respective Station DC. It appears that the power exchange schedules get added up with the beneficiaries' schedules, which is considered for accounting. The Operating procedure also stipulates that station schedule shall not exceed the Declared Capacity of Station. SRPC had requested SRLDC that the matter may please be clarified and appropriate software interlock could be devised to ensure that the schedule does not exceed DC. SRPC vide letter dated 02.11.2016 had taken up this issue with NTPC and NLC and requested that the issue may kindly be examined and necessary system/procedure put in place to restrict schedule to DC for ISG Stations and also enabling correct accounting for rescheduling of URS Power.

- 5.8.2 In the 125<sup>th</sup> OCC Meeting after deliberation it was noted that **ISG stations/beneficiaries need to have a system in place to enter the NOC information** in the SRLDC scheduling program so that SG does not exceed DC of the station. The ISG Stations may go for STOA in addition to PX transactions, surrendered power in real time could be utilized by other beneficiaries, ramp rates, technical minimum and the



programme needs to take care of this. The URS power which is traded in STOA/PX could not be recalled.

➤ **NTPC was to revert back**

## 5.9 Procedure for Contingency Plan within the ambit of IEGC/CERC Regulations etc

- 5.9.1 In the 124<sup>th</sup> OCC Meeting SRPC Secretariat had presented the relevant clauses from IEGC Regulations and Operating Procedures in the context of Grid Operation. After detailed deliberations it was felt that SRLDC could formulate a Procedure for meeting contingencies both in the long run and in the short run for daily scheduling in line with Regulation 6.5.22 of IEGC. It was decided that a Meeting could be called by SRLDC to formulate the Procedure for Contingency Plan within the ambit of IEGC/CERC Regulations etc.
- 5.9.2 In the 125<sup>th</sup> Meeting, SRLDC had informed that a Meeting was convened by CERC on 27<sup>th</sup> Oct 2016 with all RPCs and NLDC to discuss the RSD procedure and Compensation procedure. Based on the discussions in the meeting, Revised draft Procedure was already submitted by NLDC vide letter dated 04.11.16 to CERC. Considering that the RSD Procedure is expected at the earliest, the same will be used for scheduling. In addition contingencies during real time grid operation shall be managed as detailed in Operating Procedure of Southern Region.
- 5.9.3 SRPC had stated that all the contingencies like sustained U/D may need further elaboration, while RSD/TM was only for ISG Stations. The situation may require participation from other generators of SR grid also. **SRLDC is requested to review the provisions in line with Regulation 6.5.22 of IEGC.**

## 5.10 Scheduling of infirm injection of KKNPP Unit 2

- 5.10.1 It was noted that Kudankulam Unit II infirm power injection scheduling had commenced from 14.10.2016.
- 5.10.2 **The following were noted regarding generation schedule in the Special Meeting held on 25.11.2016:**

Month	Unit 2 Generation		Anticipated Net Injection	Remarks
	Anticipated	Aux Con		
1st Week of December 2016	700 MW	70 MW	630 MW	200 MWe Power Reduction Test, one Reactor Coolant Pump Trip Test
3rd Week of December 2016	1,000 MW	70 MW	930 MW	2 out of 4 Reactor Coolant Pump Trip Test, Gross Load Rejection Test, EP Test
Jan 2017	One month run before COD			
1st Week of February 2017	1,000 MW	70 MW	930 MW	COD

## 5.11 TS SLDC- The Open Access transaction of PXIL schedules on 24.10.2016

- 5.11.1 TSTRANSCO vide their communication had submitted the following:
- In the 23<sup>rd</sup> revision on 24.10.2016 96.15 MW was scheduled vide approval No. S22190 for time block 21 to time block 44 and time block 49 to time block 60.
  - 74.56 MW was scheduled vide approval No. S22191 for time block 21 to time block 68.
  - In the Revision 30 the schedule for both the above contracts was made zero for all time blocks due to corridor constraints.

- In the Revision No. 65 power was scheduled vide Approval No. S22190 and S22191 for the Time Block 35 ie. for which operation has already been carried out even without intimation to TSSLDC.
- This will result in deviation in commercial settlement since the power has already been availed based on scheduled power in the previous drawal schedule.

5.11.2 In the 125<sup>th</sup> OCC Meeting the issue had been deliberated and it was noted that beneficiaries schedule need not be post facto revised just because generator has generated. As per IEGC schedules become effective from designated time block irrespective of communication issues. SRLDC was requested to review the case and revert back. The procedure on post facto revision could also be elaborated to avoid such issues.

5.11.3 Subsequently SRPC vide letter dated 29.11.2016(**Annexure-5G**) had requested SRLDC to furnish the schedule data incorporating the necessary corrections/revisions to carry out further necessary action in this regard. The reminder communication sent to SRLDC dated 06.12.2016 is at **Annexure-5H**

#### **5.12 Daily Load Forecasting by SLDCs/RLDCS/NLDC**

5.12.1 The mean absolute error (forecast Vs actual demand) during the month of November 2016(Till 27<sup>th</sup>) as furnished by SRLDC is at **Annexure-5I**.

5.12.2 In the 125<sup>th</sup> OCC Meeting SRLDC had informed that the Pilot Project for RE forecasting has started and Pilot Project for load forecasting was yet to be commenced and the concerned would be intimated.

#### **5.13 Frequent tripping of Vallur-NCTPS lines**

5.13.1 In the 125<sup>th</sup> OCC Meeting, it was informed by SR-I- PGCIL that they had replaced insulators of one line out of four at NTECL. Rest of the insulators could be collected by NTECL from Sriperumbudur TLM Office, Powergrid. NTECL had agreed that they would coordinate with PGCIL.

#### **5.14 Replacement of Porcelain Insulators with CLR Polymer Insulators in 400kV VJA-VMG D/C**

In the 125<sup>th</sup> OCC Meeting SR I PGCIL had informed that it was decided to replace all the 210 kV Porcelain Insulators (Tension) in 400 kV Vijayawada – Vemagiri – 3 & 4 D/C with CLR Polymer insulators in phased manner. It is proposed to replace tension insulators in December 2016 by availing SD of lines one by one from 21<sup>st</sup> -28<sup>th</sup> December 2016. Generally one line will be kept out for voltage regulation.

#### **5.15 Progress of NLC TS II – TS I Expansion re- conducting works- end span work and isolator replacement**

5.15.1 In the 125<sup>th</sup> OCC Meeting, it was informed that SR-II – would take up the works during unit S/D at NLY TS-Exp (25 days from 15.11.2016). NLC requested SR-II to communicate the requirement formally through letter.

5.15.2 It is observed that the Unit shut down was not availed.

#### **5.16 Preparation for meeting the revised environment norms as per Environment (Protection) Amendment Rules,2015**

5.16.1 The information in this regard is to be furnished through e-mail & letter to [edmcea@yahoo.co.in](mailto:edmcea@yahoo.co.in) & Chief Engineer (TPE & CC),CEA, Room No.902 (S), Sewa Bhawan, R.K.Puram, New Delhi – 110066 with a copy to [seopnsrc-ka@nic.in](mailto:seopnsrc-ka@nic.in) & [src.operation@gmail.com](mailto:src.operation@gmail.com)

5.16.2 In the Meeting MS, SRPC informed that the issue was deliberated in detail in 29<sup>th</sup> TCC/30<sup>th</sup> SRPC meetings and requested the concerned that details in this regard should be furnished to CEA at the earliest.

#### **5.17 Scheduling of NTPC Ramagundam Solar Power Plant(10 MW)**

5.17.1 In the 125<sup>th</sup> OCC Meeting NTPC had informed that a Meeting had been held with APTRANSCO and the Meeting with TSTRANSCO was to be conducted. After the Meeting, OCC would be informed of the status. SRLDC had requested NTPC to complete the pending works irrespective of taking with AP/TS for single state allocation. **NTPC was requested to communicate the date for commencing schedule by SRLDC as per current Regulation after complying all the requirements.**

**5.18 Discussion on Scheduling on LVRT & other protection requirements & scheduling of Solar Parks at Kaumuthi Solar Park**

5.18.1 A Meeting had been convened on 03.11.2016 at SRPC, Bangalore to discuss the issues on Scheduling and Dispatching of Adani Power Project at Kamuthi, Tamil Nadu. The minutes of the Meeting are available at SRPC website.

5.18.2 M/S AGEL had been requested to furnish the complete details of five different companies, one holding company and PPA to TANTRANSCO/TANGEDCO, SRLDC and SRPC Secretariat. AGEL has submitted the details as agreed in the Special Meeting. TANTRANSCO requested TANGEDCO to kindly examine the documents and furnish the remarks by 25<sup>th</sup> November to TANTRANSCO. TANTRANSCO had informed that SLDC would further examine the scheduling responsibility aspect keeping in view the above issues and revert back to SRPC by 30.11.2016,

➤ **TANTRANSCO and SRLDC are requested to revert back on scheduling responsibility after studying the documents submitted by AGEL.**

**5.19 Patrolling / Maintenance of critical lines and substations**

5.19.1 In recent times insulator tracking has been observed in the Transmission lines and Substations located in the coastal and polluted areas. The format for furnishing the details of schedule / Patrolling and Maintenance carried out of the critical Transmission lines and Substations had been circulated.

**5.20 Preparation for fog weather – Insulator tracking**

5.20.1 SRLDC had requested all the entities to furnish the preparatory action taken/action planned for fog weather.

5.20.2 SRLDC/SRPC stated that before fog season sets in, patrolling of all the critical elements identified needs to be carried out. All the coastal switchyards like NTPL, Hinduja, TTPS and II & FS etc were requested to take note of the same.

**5.21 PSS Tuning of generators**

5.21.1 3<sup>rd</sup> Meeting to review the status of PSS tuning of the generators was convened on 28<sup>th</sup> June 2016 and minutes of the Meeting are available at SRPC website. All the generators to follow the action plan finalized in the 3<sup>rd</sup> PSS meeting. PSS study group had analyzed the SRT reports furnished and recommendations had been finalized. The Step Response Test Reports in the specified formats to be submitted in soft form to SRLDC (spkumar@srlc.org)/SRPC / CTU (vthiagarajan@powergridindia.com) / SRPC (seoprnsrpc- ka@nic.in; srpc.operation@gmail.com).

5.21.2 The following were noted regarding the PSS Tuning in the last OCC Meeting:

Agency	Status	Schedule of test	Remark
<b>APGENCO</b>			
	All Thermal Units except Unit 5 & 6 of VTPS carried out. APGENCO was requested to go through the recommendations of 3 <sup>rd</sup> Meeting of PSS Meeting		

	and furnish the action taken/status report with respect to those recommendations.		
VTPS Unit 5 & 6	To be carried out	December 2016	
Srisailam RB	Carried out during last week of September 2016		Test reports are awaited from M/s BHEL
<b>TSGENCO</b>			
TSGENCO was requested to go through the recommendations of 3 <sup>rd</sup> Meeting of PSS Meeting and furnish the action taken/status report with respect to those recommendations.			
Kakatiya TPP Unit II	Carried out		Reports submitted vide letters dated 21.06.2016 and 04.08.2016.
Kothagudam TPS Unit 5 to 8,	TSGENCO is pursuing with OEM M/s. BHEL to conduct Step Response Test for units 7 & 8.  The Generators of Unit 5 & 6 have been provided with M/s. SIEMENS make Static Excitation System which does not have PSS function. Further these units are being phased out by 2019.		
Nagarjunasagar HEP Unit I	Material was procured and now water is available to run the Units. Intimated to OEM M/S ABB for tuning of PSS.		
Srisailam LB HEP Unit I 1 to 6	Intimated to OEM M/S BHEL for tuning of PSS.		
<b>TANGEDCO</b>			
TANTRANSCO to take up the issue with TANGEDCO. Many recommendations/actionable points had been finalized in the 3 <sup>rd</sup> Meeting of PSS for which TANGEDCO was to initiate the actions. The action taken/test reports are to be submitted to SRPC/SRLDC subsequently.			
MTPS Stage I	Step Response Test in unit 1 & 3 – completed	Unit 2 & 4 will be carried out on arrival of OEM	
NCTPS-II: Unit I & 2		Programmed during November '16	
NCTPS-I:	Unit-I completed	Unit 2 & 3 programmed during November '16.	
TTPS	Unit 4 & 5 completed	Unit 1 to 3 – programmed during November '16.	
MTPS-Stage II		Tender is under process	
<b>KPCL</b>			

<b>KPCL(As updated in the Special Meeting held on 27.10.2016/125<sup>th</sup> OCC Meeting</b>			
Nagjheri Units-I, II, IV & V,	To be carried out		M/s Andritz Hydro Pvt Ltd.,has been awarded the work order on 03-12-2016 for conducting PSS tuning and SRT in Units #1,2,4 &5.Accordingly the reports of PSS tuning and SRT will be submitted as and when conducted. E-mail in this regard is at <b>Annexure-5J</b>
Nagjheri Unit-III & VI	Carried out		Reports submitted.
Varahi Units I, II & IV	PSS tuning has been completed		Reports submitted
Varahi Unit-III,		Would be completed shortly	Software uploaded and logistics checked.
Sharavathi Units	Not carried out		M/s BHEL has been approached.
Bellari Unit I , II & III	Carried out.		Reports submitted
Raichur Units Except Unit IV	Carried out		Reports submitted
Raichur Unit IV	To be carried out		Offer for PSS tuning & step response of Unit-4 had been obtained from M/s Sumitomo. Amount quoted was very high and matter of PSS tuning had been taken up with IISc, Bengaluru.
<b>KSEBL</b>			
Idukki Unit-I, II & III	Requested that these units may be permitted to operate without PSS till the completion of R&M works. As per the present schedule R&M works of these units will be completed by December 2020.		
Idukki Unit IV,V and VI	Requested that these units may be permitted to operate without PSS as per Central Electricity Authority (Technical standards for connectivity to the grid) (Amendment) Regulation 2013 till the completion of the R&M works. It may be noted that R&M works of Units 4,5 & 6 will be carried out only after successful completion of R&M of Units 1,2 &3.		
Sabarigiri (2 x 60 MW, 4 x 55 MW) Lower Periyar (3 x 60 MW)	Exempt from providing PSS as those are having output less than 100MW.		
<b>CGS</b>			
NTPC, Ramagundam STPS U1 to U7, NTPC Talcher STPS St-II U 4 to U5, NTPC Kudgi, NTPC- RGCCP, Kayamkulam 2 GTs & 1 ST, , Neyveli TPS I U7 to U9, Neyveli TPS I Exp U1 & U2, Neyveli TPS II U1 to U7, Neyveli TPS II Exp U1 & U2, (NLC & TN JV)NTPL U1 &	To be carried out		



U2,	
<b>NPCIL Units as updated in Special Meeting held on 25.11.2016</b>	
KGS Unit I	Will be carried out along with BSD in 2017-18.
KGS Unit II	Will be carried out along with BSD planned in February 2017. It was suggested to complete along with BSD.
KGS Unit III	During next opportunity. Could not be completed during the outage due to exigent work.
KGS Unit IV	September 2017 along with BSD.
MAPS Unit I	To be tied during the BSD planned in March 2017. MAPS was suggested to PSS/SRT during this BSD(on the concurred dates)
MAPS Unit II	2017 along with BSD
Subsequently MAPS had confirmed that SRTs will be carried out during respective BSD of the Units.	
KKNPP Unit I	Would be again taken up during the S/D planned in January /February 2017.
NTECL- Vallur TPS U1 – U3	Unit I-III : carried out on 09.11.2016, 08.11.2016 and 07.11.2016 respectively and reports submitted.
<b>ISTS connected IPPs</b>	
Simhapuri Energy Ltd (SEL) U 1 to U4, MEPL U1 & U2, , Coastal Energen U1 & U2, IL& FS U2, Lanco Stage II & III, SGPL, Nellore	To be carried out.

5.21.3 All the generators to follow the action plan and recommendations (on SRT) finalized in the 3<sup>rd</sup> PSS meeting.

## 5.22 Implementation of URTDSM (PMU) project in Southern Region

5.22.1 It was noted that the revised schedule for completion of the project was January 2017. A follow up Meeting to discuss the URTDSM (PMU) issues was convened on 21.10.2016. Minutes of the Meeting are available at SRPC website. The following were noted:

- Remaining 28 PMUs as per the revised BOQ (out of 240) would be supplied after the amendment received by M/s Alstom from LD&C, PGCIL. SR-I confirmed that they would take up with LD&C for the revised BOQ and the amendment may be received in a fortnight time.
- PGCIL/ Alstom to share the project execution progress and furnish the monthly schedule of the project (installation and integration to Control Centre) so that all 212 PMUs could be integrated to SRLDC PDC by December 2016. M/s Alstom informed that they would be able to complete the project by March 2017. PGCIL / Alstom agreed to furnish the project execution progress within a week.

- Approved drawings of UPS would be forwarded to APTRANSCO, TSTRANSCO and TANTRANSCO. APTRANSCO, TSTRANSCO and TANTRANSCO were requested to revert back within a week. SRLDC agreed to confirm on the UPS requirement after studying the drawings provided and taking into consideration the space availability at site within a week.
- The draft SAT procedure would be circulated. Training would be provided to all constituents & SRLDC on PMUs & Control Centre HW / SW training on SAT procedure before commencement of SAT. SAT in SR was planned for January 2017.
- Regarding CT/PT points extension at NTPC Kayamkulam, KSEBL informed that the details had been discussed with NTPC, Kayamkulam Officials and the matter was being followed up with at higher level. The issue would be resolved by October 2016 end and integration would be possible.
- Constraints in AP System

5.22.2 In the 125<sup>th</sup> OCC Meeting SRLDC had informed regarding the UPS requirement that they had received clarification from vendor on 04.11.2016 based on the query raised by SRLDC and will revert back in a weeks' time on the requirement of UPS.

5.22.3 SR-I, PGCIL letter dated 21.11.2016 addressed to APTRANSCO had requested for confirmation of readiness at their end for deputation of M/s GE for completion of pending works in APTRANSCO sites.

- APTRANSCO to coordinate for completion of pending works.

### 5.23 Video Conferencing facility at SLDCs

5.23.1 Status as furnished in 125<sup>th</sup> OCC Meeting:

AP	TN	PUDU
Will provide the facility in new SLDC at Vijayawada by December 2016. Installation of SCADA at Vijayawada was under progress.	Technical bid had been reopened on 29.10.2016. Will be ready by December end.	<b>Puducherry informed that Budget for 2016-17 had been approved but funds for VC were not allocated due to paucity of funds. They would take up VC in the next financial year 2017-18.</b>

### 5.24 Reference from MNRE regarding compilation of data for meeting renewable energy Targets of 175 GW by 2020

5.24.1 MNRE/ MoP /CEA vide letters dated 02.03.2016, 22.03.2016 and 29.03.2016 respectively had communicated regarding compilation of data for meeting renewable energy targets of 175 GW by 2020. The concerned State Utilities/Generating companies are requested to furnish the data suggested by MNRE. SLDCs are also requested to coordinate and furnish the data for the generators in their control area.

5.24.2 It was noted that only APTRANSCO, TSTRANSCO, KSEBL and JSWEL had furnished the information in this regard.

5.24.3 All the other utilities to furnish the information in this regard.

### 5.25 Major trippings and load loss events during November 2016

1. Tripping of lines and UPCL Unit
2. Tripping of generators at VTS in Andhra Pradesh
3. Tripping of lines and generators observed at Neyveli TS II, TS I Expansion and Trichy.  
(Item No.8 (e) of enclosed SRLDC letter dated 29.11. 2016).

## 6 GRID FREQUENCY

### 6.1 **High Frequency**

- a) High frequency at Load Change Over.
- b) Status review of implementation of staggered load change over within the constituents as per the decision of 23<sup>rd</sup> SRPC meeting, moderating own generation, surrendering of ISGS power in advance and other actions by Regional Entities to avert high frequency excursion.
- c) Pump Mode Operation of Nagarjunasagar/Srisaillam LB/Kadamparai HEP units.

The following were noted in the 125<sup>th</sup> OCC Meeting:

- TANTRANSCO had informed that Kadamparai units were being put under pump mode operation for 3-4 hours daily.
- HPC & HP, TSGENCO had communicated that after building up of water in tail pond project, TSGENCO will inform to OEM M/S Hitachi for testing and commissioning of Units in Pump mode for Nagarjunasagar.

(Item No.5 (d) of enclosed SRLDC letter dated 29.11.2016).

### 6.2 **Low Frequency**

- a) Summary statement of different violation messages issued by SRLDC to each constituent as per new IEGC Amendment.
- b) In the 124<sup>th</sup> OCC Meeting it was suggested that SRLDC may identify incidents of UD/OD for Analysis by States. SRLDC had submitted the incidence for analysis. **(Annexure-6A)**
- c) In the 125<sup>th</sup> OCC Meeting SRLDC had suggested that ADMS settings may be changed to 49.9 Hz. and contingency plan w.r.t Tamil Nadu needs to be reviewed considering generation loss at pooling station level. TANTRANSCO was suggested to revert back.

(Item No. 5 (b) of enclosed SRLDC letter dated 29.11.2016)

#### 6.2.1 **Messages for violation of Deviation Limits**

The observations by SRPC on the violation messages being issued to beneficiaries had been communicated to SRLDC vide letter dated 05.10.2016. It was noticed while going through the deviations of the SR beneficiaries for the period from 1<sup>st</sup> July 2016 to 25<sup>th</sup> September 2016 that there were sustained O/D and U/D instances but it appears that corresponding emergency/noncompliance messages were not issued to beneficiaries. Regulation 5.4.2(g) of IEGC stipulates:

These messages had been standardized and form part of Operating Procedure. It was requested by SRPC that the issue may be arranged to be examined and informed to SRPC accordingly.

It was recalled that it had been informed earlier by SRLDC in OCC Meeting that the messages were generated automatically from SCADA. In the 124<sup>th</sup> OCC Meeting SRLDC had informed that they would analyze the instances and revert back shortly.

Subsequently SRPC vide letter dated 18.11.2016 had sought attention of SRLDC to the issue of violation of deviation limits. The deviations for the month of September and October 2016 had been tabulated. It was observed that corresponding emergency/non compliance messages were not issued to beneficiary's w.r.t deviations. It was kindly requested that the issue may be kindly examined to ensure compliance of Regulations 5.4.2(g) of IEGC

## 7 VOLTAGE PROFILE

### 7.1 Low voltage

- a) Low voltage at Somanahalli, Trichur, Kochi etc.
- b) Action to avert low voltage profile. Messages and letters issued by SRLDC. Details of Capacitors installed in September 2016. Details of the healthy/faulty capacitors to be furnished.
- c) KPTCL to furnish the updated status of the following:
  - Issues with BESCO
  - Retrofitting/Commissioning of 30 MVAR Capacitor banks at Hoody/Somanahalli.
  - Any other action taken to improve the voltage profile in and around Bangalore.

(Item No. 6 (a) of enclosed SRLDC letter dated 29.11.2016).

#### 7.1.1 UV Relay

7.1.1.1 The following were noted in the 125<sup>th</sup> OCC Meeting:

<b>State</b>	<b>Locations identified for implementation</b>	<b>Status of Implementation</b>	<b>Remark</b>
<b>KSEBL</b>	<b>Trichur, Palakkad &amp; Kochi</b>	Implemented	
<b>KPTCL</b>	<b>Nelamangala, Somanahalli, Hoody and Bidadi</b>	BESCO approval was not received for UVR implementation at Somanahalli. SLDC had communicated feeder identification to the concerned wing and the BESCO Management had been apprised. If BESCO are not coming forward with identified feeders, SLDC would move ahead with their proposal.	In the last TCC/SRPC Meeting MD, KPTCL had committed that UV Relays at the recommended locations would be made operational within three months <b>(before November 2016)</b> . KPTCL had been requested to initiate the action at the earliest to avoid any further delay.
<b>TANTRANSCO</b>	<b>Udumalpet, Salem &amp; Hosur</b>	TANTRANSCO had informed that feeders have been identified for UV Relay implementation at Hosur & Salem and were furnished to P & C wing of TANTRANSCO. <b>UV Relay for Udumalpet Stage II implemented on 07.11.2016.</b>	SRLDC/SRPC has suggested that for the interim period immediate action may be taken to implement UV relays at Salem and Hosur even with overlapping even though the Regulatory requirement was without overlapping. Subsequently additional feeders may be identified. If voltages improve on

			sustained basis UVR would be deactivated.
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### 7.1.2 Installation of Shunt Capacitors

7.1.2.1 The information regarding installation/healthy capacitors in the required format needed to be regularly furnished every month. SRLDC requested that installation & ensuring healthiness of capacitor banks at distribution level should be ensured by all the constituents.

7.1.2.2 In the Special Meeting held on 26.04.2016, that SRLDC had conducted a Study to ascertain requirement of capacitive compensation in low voltage areas of SR viz. Bengaluru area, Udumalpet-Arasur-Hosur-Salem areas and Trichur-Palakkad areas. From the studies, Capacitor requirement had been arrived as below:

Sub-station	Capacitor – Requirement in MVAR	Constituent wise requirement	Comments
Nelamangala	160	Karnataka-505 MVAR	Awaiting for DEI approval By end of November 2016. CB and Isolator installation is going on.
Hoody	185		
Somanahalli	160		
Mywadi	275	Tamil Nadu- 1025 MVAR	Administrative Approval has been accorded for Coimbatore region for a capacity of 206.4 MVAR vide B P No. 291 dated 27.06.2016. Study for balance was to be carried out in October 2016. By November end report will be submitted by System Studies Group and further action to implement the same will be initiated.
Arasur	330		
Salem	210		
Hosur	210		
Palakkad	12	Kerala – 102 MVAR	Have done reactive compensation study 360 MVAR is planned. Works will be started shortly.
Trichur	90		

All states had been requested to install the capacitors as suggested before December 2016 i.e. before next high demand period for SR. Since time was limited, immediate action was required to be taken.



**7.1.2.3** In the 30<sup>th</sup> SRPC Meeting it was agreed in the SRPC Meeting that a regional proposal for SR for capacitors installation would be put up for PSDF funding. This Study would be conducted by CPRI. SRPC vide letter dated 20.10.2016 had requested CPRI to kindly inform SRPC regarding the modalities for carrying out the studies by CPRI at an early date. Techno Economical Offer had been received from CPRI Vide letter dated 08.11.2016. A Special Meeting of System Study Group was convened to finalize the Capacitor requirement for the five States of Southern Region on 29.11.2016 at SRPC Bengaluru. Minutes of the Meeting at **Annexure-7A**

***The following were concluded:***

- It was noted that there was limited SCADA availability at DISCOM level and even at lower voltage level at STU network. The data needed to be collected from the log books(hourly) and it may take around three months to collect the data which may be required to be further validated.
- CPRI informed that NRPC proposal was being undertaken at 132 kV level. The availability of validated data was the major drawback in building the base case.
- In view of the limitations of the data availability and CPRI observation, **it was agreed that the studies would be conducted at 132 kV and 66 kV level as applicable.**
- Each state would furnish the converged PSSE base case for the Low Voltage/High Demand scenario for its control area. LGB, Tap positions and assumptions for the base case would also be furnished. STU would prepare the base case in consultation with the DISCOMs. **These details would be furnished to SRPC/SRLDC by 15<sup>th</sup> December 2016.** After validation by SRLDC/SRPC the details would be communicated to CPRI.
- The date and time for which the base case would be prepared would be communicated to SRLDC at the earliest for enabling SRLDC to retrieve, compile and prepare the base case for the other control areas for the same snap shot. This would be communicated to CPRI along with the state's data.
- STU/DISCOMs would furnish the downstream substations at 132 kV and 66 kV level as applicable along with their loadings.
- CPRI would come out with Capacitor requirement at 132 kV and 66 kV level (STU) as applicable.
- CPRI would also suggest heuristic approach which could be utilized by STU/DISCOM to identify the capacitor requirement in downstream STU and DISCOM network.
- KPTCL stated that compensation at load end would be more useful in addressing the low voltage problems. It was noted that CPRI may cover this aspect in its recommendations.

**All the STUs / DISCOMs are requested to furnish the details to SRLDC / SRPC positively by 15.12.2016**

## 7.2 High Voltage

7.2.1 High voltage at Vijayawada, VTPS, Hyderabad, Nagarjuna Sagar, Gooty, Kurnool, Malkaram, Hassan, Srisailem, Sattenapalli, Narendra, Almatty, Raichur, Mahaboobnagar, and 765 kV stations namely NPS, Thiruvalam and Kurnool stations.

### 7.2.2 Condenser mode of operation of Nagarjuna Sagar and Srisailem LB

7.2.2.1 In the 125<sup>th</sup> OCC Meeting the following were noted:

- Nagarjunasagar Unit-4 was drawing more power (12 MW) due to uneven shutter gap of guide vanes & water leakages through guide vanes. It will be rectified during next capital overhaul works. For unit-6, air depression need to be done frequently (once for 30 minutes). It will be rectified during next Annual overhaul works. In case of emergencies these two units also will put into service as condenser mode.
- As the repair works of Nagarjunasagar Unit- 4 was planned during next Capital Over-haul TSTRANSCO was requested to intimate the tentative plan for Capital Over-haul.
- With respect to Condenser mode of operation TSTRANSCO had informed that to put all the units of Srisailem LB in condenser mode it would take 3 to 4 hours Units can be added with a gap of 45 minutes. TSTRANSCO was requested to revert back on technical feasibility to reduce the time.

### 7.2.3 Status review of GT Tap positions

#### 7.2.3.1 GT tap Positions - GT taps yet to change as per recommendation:

Station	Unit	Present Tap And Corresponding Voltage(In kV)	Recommended Tap And Corresponding Voltage(In kV)	Remarks
<b>ISTS connected Generators:</b>				
Kaiga I	1 & 2	6 & 229.125	7 & 223.25	In the Special Meeting held on 25.11.2016 KGS had informed that Tap Position for GT cannot be provided and requested for exemption.
Kaiga II	3 & 4	3 & 409.5	4 & 399	
<b>APGENCO/APSLDC</b>				
IPPs of AP	It is recommended that all IPPS under APSLDC could be advised to change their Tap position corresponding to voltage level of 400 kV / 220 kV.			
<b>KPCL/KAR SLDC</b>				
Sharavathi	9 & 10	2 & 231	4 & 220	KPCL informed that at Sharavathi new GTs(Thoshiba Make)were procured for Units 9 & 10 which were expected within one years. Tap change would be carried out after receiving the ICTs.
UPCL	1 & 2	4 & 409.5	5 & 400	Observed rotor teeth temperature issues. 2 x 125 MVAR reactors agreed in 39 <sup>th</sup> SCSPSR. It was suggested that their MVAR

				absorption should be around 50-60 MVAR in case they are not able to change Tap.
<b>TANGEDCO/TN SLDC</b>				
Tuticorin TPS	1,2,3,4 5	8 & 243	230	➤ Unit 5 Tap position will be changed to 10 during next opportunity.
MTPS St.III	1	6 & 409.5	7 & 399	GT is provided with Off Load Tap Changer. Tap will be changed to 7 after provision of bus reactor at MTPS II in order to cope up with voltage rise. The commissioning works of reactor is under progress.

7.2.3.2 SRLDC reiterated that the GT taps of all new units getting synchronized to grid should be kept at the nominal grid voltage level of 400 kV or 220/230 kV. SRLDC would ensure the requirement for ISTS connected generators while SLDCs should ensure it for their embedded generators. It was of great concern that SRLDC had taken up this issue as violation of IEGC whereas no SLDC had responded in this regard.

7.2.3.2.1 The issue had been discussed in the Special Meeting held on 25.11.2016 and the following were noted:

- ✓ KGS informed that after unit-III generator core failure, generation was being maintained at around 190 MW (to restrict the temperature to around 120<sup>0</sup>C). Core heating was being observed in unit-IV also and therefore, they were restricting the MVAR absorption.
- ✓ As a long term measure, they were planning to replace the generator itself.
- ✓ **Report of OEM about Unit III & IV Generator, clearly elaborating technical issues, precautions etc needs to be furnished to SRPC/SRLDC.**
- ✓ SRPC/SRLDC/KPTCL expressed concern and stated that KPCL/KPTCL had completed the identified steps in the adjoining areas of KGS. KGS needs to be proactive and commissioning of the 2 x 125 MVAR reactors needs to be expedited. Other units should support the grid with MVAR absorption to possible capability.

### 7.2.3.3 **MVAR Interchange/MVAR capability testing**

- Nodal Officers may kindly ensure that the data reaches SRLDC/SRPC in time (by fourth of every month) so that SRLDC can correlate it with SCADA data and analysis could be done facilitating actions for further improvement.
- If any data visibility problems were being faced it needed to be addressed accordingly.
- All the SLDCs/generators to furnish the details in a precise way like which units have responded, partially responded and not responded.
- Recommendations finalized in the Special Meetings were required to be implemented.
- All the SLDCs to kindly monitor VAR absorption/injection of generating units in their respective control areas in real-time.
- Hon'ble CERC Order dated 23.12.2009 merited attention in this regard. It had been stated in the Order that all agencies needed to provide required reactive compensation thus avoiding the need for exchange of reactive power to/from ISTS and maintain ISTS voltage within specific range.

7.2.3.4 The recommendations finalized in the Special Meetings were required to be implemented.

7.2.3.5 In the 125<sup>th</sup> OCC Meeting the following were noted:

- HNPCL MVAR absorption is observed to be decreasing as voltage is increasing. **Data may be checked by HNPCL /APTRANSCO.**
- Kaiga Unit III & IV are injecting around 60-70 MVAR, 10-15 MVAR respectively. **Kaiga is requested to ensure that there is no injection of MVAR when voltage is above 400 kV.**

### 7.2.3.6 Tap optimization of ICTs in SR/submission of real time data

7.2.3.6.1 SRLDC had taken up ICT Tap optimizations studies for sub transmission system. In the 124<sup>th</sup> OCC Meeting SRLDC had informed that all constituents had submitted the information except APTRANSCO. Based on the data submitted, the analysis was done and tap changes were proposed.

7.2.3.6.2 SRPC had suggested that along with tap change recommendations, Capacitor requirement also could be suggested (as evident from the analysis) which could be a part of the Report. SRLDC had agreed that they would include the same and the report will be submitted.

- APTRANSCO also had submitted the data at 110 kV level voltage.

### 7.2.3.7 Status review of Bus/Line Reactors, Line Reactors and STATCOM

7.2.3.7.1 Status of implementation of Bus / Line Reactors approved in the Standing Committee / SRPC pending for commissioning by the SR constituents is furnished below:

Entity	Bus Name	Status	REMARKS
KPTCL	Hoody	Reactor erected on platform.	November 2016
	Nelamangala	Reactor and bay equipment installed. Contractual issues with BHEL wrt Reactor panel.	December 2016

Entity	Bus Name	Capacity in MVAR	Approved in	Type	Remarks
PGCIL	Vijayawada	2x125	20 <sup>th</sup> SRPC/ 34 <sup>th</sup> SC	Bus	1 <sup>st</sup> : commissioned in June 2016 2 <sup>nd</sup> : March 2017
	Nagarjuna Sagar	125	21 <sup>st</sup> SRPC/ 34 <sup>th</sup> SC	Bus	Feb 2017
	Narendra	125	21 <sup>st</sup> SRPC/ 34 <sup>th</sup> SC	Bus	By 15.12.2016. Reactor arrived at site.
	Hyderabad	125	21 <sup>st</sup> SRPC		Reactor at Hyderabad after SC Approval
	Gooty	125	22 <sup>nd</sup> SRPC / 36 <sup>th</sup> SC	Bus	Dec 2016. Reached site
	Hassan	125	36 <sup>th</sup> SC	Bus	By 30.11.2016 2016. Reactor arrived at site
	Khammam	125		Bus	March 2017
	Kudgi PG	125		Bus	By 15.12.2016. Oil filling under progress.
	Trivandrum	125		Bus	By 15.12.2016. Main tank erected.
	Nellore	125		Bus	Dec. 2016

	(Existing)				
	Yelahanka	2x63		Bus	
	Nellore PS on NPS-Gooty Line	2 x 63 (37 <sup>th</sup> SC)		Line	Jan 2017
	Kudgi PG-Tumkur D/C at each end	4 x 63		Line	Reactors commissioned with line.
	Cuddapah	50 to 125	39 <sup>th</sup> SC		Yet to be awarded
	Thiruvalam 765 kV	2 x 240	39 <sup>th</sup> SC		Commissioned with Kurnool lines.
<b>APTRANSCO</b>	Vemagiri	125	36 <sup>th</sup> SC	Bus	PO has been placed on 18.06.2016. Kurnool and Kalpakka expected to be commissioned by June 2017. Vemagiri and Chittoor expected by December 2016.
	Kurnool	125		Bus	
	Kalpakka	125		Bus	
	Chittoor	125	39 <sup>th</sup> SC		
	Vijayawada	125	39 <sup>th</sup> SC		
<b>APTRANSCO / APGENCO</b>	VTPS Stage IV	125	39 <sup>th</sup> SC		Expected by 2019. Sent a letter to APGENCO and pursuing it.
<b>KPTCL</b>	Davangere	125	39 <sup>th</sup> SC		KPTCL was requested to initiate the action.
	Talguppa	125	39 <sup>th</sup> SC		
<b>TANTRANSCO</b>	Almathy	125	39 <sup>th</sup> SC		Diversion order has been issued from Kanarpetty 400 kV S/s.
	Kayathar	125	39 <sup>th</sup> SC		Administrative Approval will be taken.
<b>TANTRANSCO / TANGEDCO</b>	Mettur	125	39 <sup>th</sup> SC		Commissioning of Palawadi 400 KV S/s is expected recent future and the MTPS –Thiruvalam line will be LILOed at Parawadi. System Study is further being done regarding Mettur Reactor.
<b>TSTRANSCO</b>	Mamidipalli	125	36 <sup>th</sup> SC	Bus	Sanction of funding from PSDF is received for 5 Nos of 125 MVAR reactors from MoP on 05.09.2016. PO is placed for procurement. Expected by March 2017.
	Gajwel	125		Bus	
	Sankarapalli	125		Bus	
	Mehboob Nagar	125		Bus	
	Malkaram	125		Bus	
<b>TSTRANSCO/ TSGENCO</b>	Srisailam LB	125	39 <sup>th</sup> SC		Erection of GIS Bus reactor is not suggestible due to financial implications and space constraint in 400 kV GIS of SLBHES. Hence, the erection of Bus reactors shall be examined at other end.



<b>NPCIL</b>	Kaiga	2 x 125		Bus	KGS / NPCIL would interact with SR-II PGCIL at the earliest and come out with a detailed action plan by 10.12.2016.
<b>UPCL</b>	Udupi	2 x 125	39th SC		Awaiting PCKL clearance to go for Petition. UPCL had submitted the details for approval of PCKL. It was noted that it's a five year package which included proposal for reactor, spares for turbines, generators etc.

- With respect to 125 MVAR reactor at Vijayawada Stage IV (800 MW) it was requested by SRLDC that APGENCO may be asked to accelerate the works.

7.2.3.7.2 In the Special Meeting held on 25.11.2016 with NPCIL the following were noted w.r.t 2 x 125 MVAR reactors at Kaiga GS:

- NPCIL vide letter dated 26.09.2016 had informed that Kaiga -3&4 had already sent a request to designers for detailed engineering and preparation of tender document for additional 125 MVAR bus reactors. This work is expected to be completed by December 2016.
- NPCIL is willing to consider getting this work done on cost plus basis through POWERGRID.
- In the 124<sup>th</sup> OCCM (06.10.2016), SRPC had stated that this issue could be taken up mutually between PGCIL and NPCIL and SRPC concurrence may not be required. PGCIL had agreed to examine and revert back after discussing with Management.
- KGS had informed that they had taken up the issue with SR-II, PGCIL and the reply was awaited. It may take around two years for the reactor commissioning while they were hopeful if PGCIL takes up the work it may be completed within 18 months. Keeping in view the experience of the earlier reactor (commissioned by PGCIL), they were willing to render full assistance to PGCIL for expediting the commissioning.
- ✓ SRPC&SRLDC pointed out that the requirement was to be taken up by KGS with PGCIL and it was required to be followed up. The onus of providing the reactors rested with KGS only.
- ✓ After deliberations, it was **noted that KGS / NPCIL would interact with SR-II PGCIL at the earliest and come out with a detailed action plan by 10.12.2016.**
- ✓ There was urgent need of reactor at KGS, and PGCIL could be requested by KGS for diversion or providing spare reactor for KGS. KGS needs to ensure that PGCIL have reasonable access to switchyard to complete the works at the earliest.

7.2.3.7.3 It was noted that number of reactors in the region were to be commissioned by various entities in 2016, however it was observed that the progress was not in good pace. In view of very high voltage at some nodes, it was emphasized that urgent action needed to be taken to commission reactors as committed. All the constituents were requested to update the status of implementation of reactors on a monthly basis in the OCC Template .(State wise/ location wise / status of implementation like tender called, PO placed etc)

7.2.3.7.4 In the special meeting with NPCIL/BHAVINI held on 25.11.2016, the following were deliberated with respect to KKNPP reactors:

- NPCIL had informed that they had taken up the issue with CTU (through email) and the reply was awaited.
- SRPC&SRLDC had stated that the limitation of no absorption by Stage-2 units needs to be taken up formally with CTU and the details to be communicated to SRPC/SRLDC.

### 7.2.3.8 NGR bypass of Reactors

7.2.3.8.1 In the 125<sup>th</sup> OCC Meeting the following were noted:

- SR I : Commissioning of NGR bypass breaker/isolator for all reactors in SRTS I had been completed except the following :
  - ✓ 765 kV Raichur-Sholapur I & II Line Reactors: Line II completed. Ready for conversion. Line I S/D is planned on 13.11.2016 and would be ready by this month end.
  - ✓ 400 kV Nellore-Thiruvallam line I & II Line Reactors: Target is by December 2017-18.
- SR II : NGR bypass scheme had been completed in SR II except the following six nos of Line Reactors which are under tendering process:
  - ✓ Thiruvallam-Nellore I & II, Thiruvallam-Kurnool I & II, Kozhikode-Mysore I & II
- PGCIL had assured that the line reactors could be convertible as bus reactors by passing NGR with conductor within two hours during office hours on SOS.

### 7.2.3.9 Commissioning of CSD in Tie CBs of ICTs and Bus Reactor at NP Kunta & Raichur Substations

7.2.3.9.1 In the 125<sup>th</sup> OCC Meeting SR I, PGCIL informed that CSDs were already commissioned for Main CBs of ICT- 1, 2 & 3 and Bus Reactor at NP Kunta Substation. It is proposed to install / commission CSDs in Tie CBs at NP Kunta. At 765kV Raichur Substation, CSD commissioning is planned on ICT- 1 (400kV Tie CB) and ICT-2 (765kV Tie CB). SR I, PGCIL had requested for deemed outage for above Shut Downs.

### 7.2.3.10 Reactive Power Planning

7.2.3.10.1 Status update on capacitor installation is given below:

Utility	Reactive Power Planning	Voltage level	Remarks
APTRANSCO	Kadapa: 108 MVAR Vijayawada: 108 MVAR Visakhapatnam: 43 MVAR	On 33 kV side	27 MVAR commissioned 89 MVAR commissioned
APSPDCL	72 MVAR		16 MVAR commissioned
APEPDCL	218 MVAR		
TSNPDCL	123 x 2 MVAR 118 x 1 MVAR		95 x 2 MVAR and 83 x 1 MVAR capacitors had been commissioned. Balance will be commissioned within 2-3 months.
TSSPDCL	221 x 2 MVAR	11 kV level	221 x 2 MVAR commissioned.
KPTCL	Bengaluru Tr. Zone:708.8 MVAR	12.1 kV	Technical bid is opened.
	Bagalkot Tr. Zone :258.1	12.1 kV	In the 123 <sup>rd</sup> OCC Meeting KPTCL

	MVAR		had informed that Pre-commissioning works are under progress. Will be commissioned before next OCC Meeting.
	Hassan Tr. Zone :136.3 MVAR	12.1 kV	
	Mysore Tr. Zone :60.9 MVAR	12.1 kV	
	Gulbarga Tr. Zone :98.60 MVAR	12.1 kV	
	Tumkur Tr. Zone :281.3 MVAR	12.1 kV	
KSEBL	360 MVAR	66 kV 11kV	Have done reactive compensation study 360 MVAR is planned. Works will be started shortly.
TANGEDCO	34 x 2.4 MVAR	11 kV	8x2.4 MVAR installed. Balance would be commissioned by December 2016.
	35 x 2.4 MVAR	11 kV	Additional – Administrative approval accorded. Tender to be plotted.
	16 x 2.4 MVAR	22 kV	8 numbers commissioned. Remaining 8 numbers to be commissioned during 2 <sup>nd</sup> week of October 2016
	51 x 2.4 MVAR	22 kV	Additional – Administrative approval accorded. Tender to be plotted.
	13 x 24 MAVR	110 kV	BOQ approved by Board. Tender to be plotted.
	822 MVAR capacitors at Distribution level had been commissioned out of 931 MVAR capacitors planned.		Balance 109 MVAR to be commissioned.

7.2.3.10.2 SRPC/SRLDC requested all the states to come up with the updated information like till date commissioned, plan for new commissioning, quantum in working condition, action taken to rectify/replace faulty capacitors, etc.

## 8 Network Protection/Security issues

### 8.1 U/F & df/dt Relays Schemes

#### 8.1.1 Implementation of SRPC recommended quantum

8.1.1.1 It was noted that all the States had implemented and df/dt schemes fully. All the Constituents were requested to furnish the details of the feeders implemented in AUFR & df/dt schemes along with the status of SCADA mapping as per the specified Formats.

8.1.1.2 In accordance with clause 9 (2) of CEA (Grid Standards) Regulations, 2010, all constituents shall submit a detailed report of operation of AUFR at different frequencies to SRLDC and SRPC on daily basis. It was noted that only KSEBL and PED were submitting the daily report regarding operation of relays.

#### 8.1.2 SCADA mapping of feeders of AUFR & df/dt schemes

8.1.2.1 As per CERC vide Order dated 27.11.2015 on Petition No. 60/MP/2014, SRPC vide letter dated 29.01.2016 had submitted the status report duly certified by SRLDC and SRPC w.r.t implementation of SCADA mapping of all the constituents to Hon'ble CERC. SCADA mapping confirmation report of KSEBL had also been submitted to Hon'ble CERC.

The status as updated in 125<sup>th</sup> OCC Meeting is as follows:

State	SCADA mapped %	Status
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AP	47	Order has been placed for 25 RTUs. With the commissioning of these RTUs 74 % SCADA mapping would be achieved by June 2017. For balance quantum, Higher Management was apprised.
TS	75	TSTRANSCO informed that 24 RTUs were to be procured for 100% SCADA mapping. Proposal has been approved by the Board. Would come within 6 months.
TN	92	Additional RTUs needed to be procured for 100% SCADA mapping. TN was requested to initiate action to reach 100 % availability and revert back regarding the action taken.
SRPC/SRLDC requested that a monthly report on the action taken to reach 100 % availability may be furnished to SRPC/SRLDC.		

- APTRANSCO and TANTRANSCO to initiate the action to achieve the 100 % SCADA visibility.

### 8.1.3 **Special Protection Systems**

#### 8.1.3.1 **Implementation of additional loads for KKNPP SPS/Finalized SPS logic for KKNPP Unit II SPS and measures/actions to be taken by States and PGCIL/NPCIL**

8.1.3.1.1 It was noted that mock test has been carried out on 09.09.2016. Except at Somanahalli Station of KPTCL all the identified stations had received the signal.

8.1.3.1.2 In the 125<sup>th</sup> OCC Meeting, **KPTCL had been requested** to revert back on the rectification status with respect to non receipt of signal at Somanahalli.

#### 8.1.4 **System Protection using Optimization Technique (SPOT)- SRLDC proposal**

8.1.4.1 System Protection using Optimization Technique (SPOT) Engine was discussed in earlier OCC Meetings.

8.1.4.2 SRPC had suggested that a Committee can be formed with representation of one officer from each utility under the Chairmanship of Shri Mohd Mahamood, DGM, SR II, PGCIL. M/s Alstom/ABB/Siemens may also be involved for their perspective. The views of all the stake holders for this proposed scheme were invited. It was felt that a separate Meeting can be convened to discuss the issue in depth. In the 124<sup>th</sup> Meeting, SRLDC informed that they had discussed it with M/s Kalkitec. Shri Mohd Mahamood, had been informed of this and he was also in touch with M/s ABB. The issue was further discussed in the SCADA/URTDMS Meeting on 21.10.2016 and it was felt that further specific deliberations are required between PGCIL, SRLDC, SRPC and the supplier.

- **SR II yet to call a Meeting. SR II was requested to expedite the same at the earliest.**

#### 8.1.5 **SPS operations**

The SPS Operations during the month of November 2016 if any to be furnished by SRLDC.

#### 8.1.6 **Automatic Demand Side Management Scheme (Petition No. 250/MP/2012) & GSES (Petition No. 265/MP/2012)**

8.1.6.1 It was noted that the issue of changing the frequency setting to 49.9 Hz was discussed in the 29<sup>th</sup> TCC/30<sup>th</sup> SRPC Meetings held on 26<sup>th</sup> /27<sup>th</sup> August 2016 and it was agreed to retain the settings at 49.8 Hz till the next TCC/SRPC meetings.

8.1.6.2 SRLDC had pointed out that similar to existing ADMS logic (O/D), backing down of generation during the sustained U/Ds during high grid frequency may be required.

#### 8.1.7 **Grouping of loads (IEGC clause 5.4.2 (e))**

- 8.1.7.1 As per IEGC, to maintain the frequency within stipulated band and also to ensure network security, the interruptible loads were to be arranged in four groups of loads, This was for the purpose of scheduled power cuts/load shedding, loads for unscheduled load shedding, loads to be shed through UF relays, df/dt relays and loads to be shed under any SPS scheme. These loads are to be grouped in such a manner that there is no overlapping between different groups of loads.
- 8.1.7.2 The issue was noted for compliance by the concerned utilities. SRLDC requested all the states to kindly furnish the updated details in this regard.

#### 8.1.8 **Tripping Details/Reports**

In various forums SRLDC had raised concern that it was not getting tripping information/data within 24 hrs as per IEGC/CEA regulations and sometimes the information from both the ends was not being received. Also at times, tripping details only were being received without DR& EL details. SRLDC was unable to analyze events on account of non-receipt of details of tripping in a timely manner. SRLDC had stated that all tripping details should be uploaded on the SRLDC web portal. Para 29 of Hon'ble CERC Order dated 20.02.2014 in respect of Petition No.146/MP/2013 was brought to attention of the OCC. Non furnishing of timely tripping details would be treated as non-compliance. Procedure for timely furnishing information was needed to be streamlined by the utilities. It was noted that tripping information details were to be uploaded within the stipulated time frames.

#### 8.1.9 **Declaration of availability and healthiness of various protection / defense mechanism**

- 8.1.9.1 SRLDC stated that the healthiness certification was not being received in timely manner from all the constituents.
- 8.1.9.2 MS, SRPC stated that healthiness certificates and other reports were being sought as per directives of higher bodies. Validated certificates needed to be communicated in a timely manner.

### 9 **LVRT Implementation**

- 9.1 Hon'ble CERC has passed Order in respect of Petition No. 420/MP/2014 on 05.01.2016. The Order directs a number of actionable points by various utilities for compliance of LVRT, CEA & CERC Regulations etc. Three Special Meeting were conducted at SRPC Bangalore on 05.02.2016, 18.04.2016 & 05.07.2016 (Meeting minutes are available at SRPC website). This issue was further discussed in the Special TCC Meeting held on 02.08.2016.
- 9.2 The quarterly reports for the period January-March 2016 and April-June 2016 of the SR constituents jointly validated by SRLDC/SRPC Secretariat had been communicated to Hon'ble CERC in regard to monitoring of the installation and performance of LVRT installed on existing WTGs as per the directives of Hon'ble CERC in respect of Petition No.420/MP/2014
- 9.3 The following were noted in the 125<sup>th</sup> OCC Meeting:
- SRLDC had pointed out that PMU at Pooling station was required to assess LVRT performance.
  - SRPC had suggested that Draft Connectivity Regulations had been put on CEA website and requested all constituents to furnish their comments on PMU requirement at pooling station and for data logging of WTGs to assess the performance.
  - TANTRANSCO had informed that P&C SCADA scheme was nearly complete and would in place by December 2016. TANGEDCO scheme at WTG level would be in place before next wind season (May 2017).
- 9.4 SRPC/SRLDC expressed serious concern that Hon'ble CERC had issued Order in the month of January 2016 but there was no tangible progress observed in this regard even after three review meetings.



9.5 SRLDC/SRPC requested all the constituents to ensure provision and enabling of LVRT feature in all the upcoming wind/solar generators before declaring COD. SLDCs were requested to approve connectivity to new generators only on confirmation of availability of LVRT feature and other CEA/CERC requirements. Monthly report of compliance needs to be furnished for new wind/solar generators added to the grid.

**10 Formulation of plan for procurement and Placement of Emergency Restoration System (ERS) in the country**

10.1 As per ERS requirement outlined in MoP letter dated 05.12.2014 status update on ERS is given below:

TRANSMISSION UTILITY	REQUIREMENT AS PER MOP	EXISTING	STATUS/REMARKS
APTRANSCO	3 Nos.		ERS I – Placed at Nellore. ERS II – received on 25.04.2016 and kept at Vizag. It was noted that in 29 <sup>th</sup> TCC meeting held on 26.08.2016, APTRANSCO had informed that they were planning to drop ERS-III. However, it was clarified that the requirement had been given by MoP, and APTRANSCO should go for the third ERS.
TSTRANSCO	1 No.		Tenders opened.
KPTCL	2 No.	2 Nos.	
KSEBL	1 No.		KSEBL had taken up with Board. .
TANTRANSCO	2 Nos		Received approval. Tendering process to be started.
PED	Nil		
PGCIL	4 Nos. ( 2 Nos. additional)	2 Nos (SR I & SR II was having 1 No. each)	Order had been placed. Would be kept at Vizag and Chennai. Expected by June 2017. 765 kV ERS (one each for SR-I and SR-II) under tendering process.

**11 SCADA & COMMUNICATION ISSUES**

11.1 It was noted that SCADA & Communications issues were being discussed in OCC Meeting on monthly basis and also in Special Meetings.

A Special Meeting was held on 21.10.2016 to deliberate on pending SCADA/Communication issues.

Minutes of the Meeting is uploaded on SRPC website. The status of pending Items as deliberated in the Special Meeting as updated 125<sup>th</sup> OCC Meetings are as follows:

	Issue	Action Plan
1	Meeting with M/s ALSTOM regarding AMC issues, punch points	PRM meeting with participation from Alstom, SRLDC, PGCIL and constituents scheduled for 16.11.2016 to discuss on punch points
2	ICCP link between RTAMC and SRLDC	Meeting held on 04.11.16 between SRLDC, POWERGRID SR-2 and SCADA vendors. To start with, the vendor has been asked to furnish the action plan for configuring one station first for getting data from RTAMC to SRLDC control centre. There was no application at RTAMC to take SRLDC data.

		Technical feasibility was being studied by PGCIL's OEM. 1.1
3	Data discrepancies in ISGS/IPP/PGCIL/STUs	Sufficient number of Transducer spares needs to be maintained as per usage/ replenishment. SRLDC would update the status every fortnight and the improvement in resolution of data discrepancies. With regard to the large number of OLTC points, not updating the SCADA, SR-14 proposed to test one OLTC point as status point. SRLDC agreed for testing of the same. It was also agreed that SRLDC would review the feasibility of the long pending OLTC points at Kaiga, MAPS, ISGS stations etc and drop the requirement. SRLDC had mailed the latest data discrepancy list on 3 <sup>rd</sup> Nov 2016. Status of RTU spares to be confirmed from POWERGRID SR-1 & SR-2
4	Replacement of Transducer at NTPC Ramagundam	NTPC had confirmed that that the technical scrutiny is over. Accordingly the RTU replacement work will be completed latest by January 2017
5	Providing additional RTU at NTPC Talcher	PO had been placed with M/s Alstom and the same will be completed by November 2016.
6	Protection coupler replacement for Kayamkulam Transmission system	It was agreed that PGCIL (M/s Alstom) would carry out the works in presence of KSEBL, NTPC & PGCIL officials on 15.11.2016.
7	Training on RTU Maintenance	Training is proposed to be held on 18.11.2016 at Yelahanka/Hosur for all CGS and Regional entities of SR
8	Sparing of fibers in TANTRANSCO links by TANTRANSCO	TANTRANSCO informed that they would expedite and approval could be expected by end of November 2016. 11.2
9	NTECL fiber channel connectivity	Joint testing had been carried out on 07.11.2016. NTECL and SR II to resolve the issue by 30.11.2016
10	OPGW stringing on balance portion of KPTCL lines	SR-II informed that they had received permission for carrying out the OPGW stringing on balance portion of KPTCL lines and the works had commenced on Hebbal-Peenya line. Work started and will be completed in another two months. S/D availed on Hebbal-Peenya line on 13.11.2016.
11	Reporting of Status point of Gazuwaka	SRLDC had analyzed the logs and parameters updated in DCPC Gazuwaka isolators reporting was attended by ALSTOM Engineer in consultation with POWERGRID site Engineer. However, presently the status points are updating on exception and not periodically.
12	Establishing E1 Link between Backup SRLDC to Backup NLDC	Provision of link with correct (E1) interface yet to be provided. SRLDC letter dated 27.10.16

SRLDC had invited attention of the forum that CE RC had brought out Order on

Suo moto Petition 007/SM/2014 dated 29.01.2016 regarding SCADA. It was directed by Hon'ble CERC that NLDC and respective RLDC are directed to update the status of telemetry every month at their website and persistent non availability of data from the generating stations/substations be taken up in RPC meeting for appropriate direction and action. Also NLDC is directed to submit user wise latest telemetry by 31.08.2016. SRLDC informed that they have started posting this information from February 2016 on their website.

### 11.3 Alternate Auxiliary Supply arrangement for Bhadravathi B2B HVDC

11.3.1 SRLDC had informed that as per Hon'ble CERC Order, 315 MVA ICT could not be used to meet the Aux Supply of HVDC B2B station. PGCIL was requested to revert back on the issue as reliable Aux Supply was necessary for Bhadravathi B2B HVDC.

11.3.2 In the 125<sup>th</sup> OCC Meeting, PGCIL had informed that they had taken up the issue with WRTS I. Reply was awaited.

11.3.3 SRLDC/SRPC had observed that as per CERC Order at any point of time the 315 MVA ICT would be taken out since it is not worth keeping a 315 MVA ICT for a Aux requirement and requested SR I to kindly follow up the matter. Dedicated line also won't give the desired purpose since further voltage issues may arise resulting in tripping of auxiliaries/lines as earlier it was happening.

#### **11.4 Compiled Telemetry status – Utility wise- as directed by Hon'ble Commission**

- Hon'ble Commission vide order dated 19.12.2013 on Suo-moto petition No. 56/SM/2013 had directed all the utilities to provide the required telemetry within six months of this order.
- It was requested that MAPS, KGS & KKNPP may please furnish the compliance status of pending SCADA inputs the earliest. Details in this regard were available on SRLDC web site.
- For KKNPP only 2 points are pending w.r.t GT tap position. Re -tendering was going on and it will take 5 more months to complete the works.

11.5 In the special meeting held on 19.05.2016 with NPCIL/BHAVINI, the following were noted wrt OLTC telemetry points:

- MAPS informed that HV side MW & MVAR analog points cannot be extended for both the units as the HV side the bushing was wall mounted (which only had protection CT). LV side information was available at SRLDC. OLTC for GT-1&2 and Station Transformer 1&2 could not be extended since it was off load tap changer. MAPS requested for exemption as discussed in earlier meeting.
- SRLDC was requested to consider exemption as it appeared not technically feasible.
- MAPS informed that CB status point for GT1 would be ensured.
- KKNPP informed that OLTC status points for GT-I & II would be extended within two months.
- SRLDC had presented the data discrepancy points in respect of KGS, MAPS & KKNPP. NPCIL units had agreed to address the issue and ensure rectification by 10.12.2016.

## **12 PHYSICAL AND CYBER SECURITY/CRISIS MANAGEMENT PLAN/BLACK START PROCEDURE**

### **12.1 Physical and Cyber Security**

Status update on Crisis Management Plan(C&DMP) of Power Sector is to be furnished every quarter. Information regarding Cyber Security was to be furnished to Chief Engineer, DPD, CEA, Sewa Bhavan, and New Delhi-110066. Report on Physical Security, other Mock Drills for CMP, Mock Drill for Black Start Restoration was to be furnished Chief Engineer, DMLF, CEA, Sewa Bhavan, and New Delhi-110066. A copy of the reports was to be sent to SRPC Secretariat ([mssrpc-ka@nic.in](mailto:mssrpc-ka@nic.in) and [seoprnsrpc-ka@nic.in](mailto:seoprnsrpc-ka@nic.in)). Information required by CEA (vide letter dated 26.11.2013) regarding Security of power installations was to be furnished to CEA.

### **12.2 Black Start Procedure**

12.2.1 In earlier OCC Meetings, SRPC/SRLDC had expressed concern that black start mock test procedure is not being followed properly, mock exercise by point to point method is not carried out by all and schedules are also not being furnished. All the concerned entities were requested to furnish the details of BSRP Mock test completed during 2<sup>nd</sup> half i.e July 2016 to December 2016 and schedule for first half ie January 2017 to June 2017 to be submitted at the earliest.

12.2.2 In the 125<sup>th</sup> OCC Meeting SRLDC had furnished the latest status of Black start mock drill exercise conducted/schedule/report submission status. States are requested to furnish the pending information.

12.2.3 In case of postponement or non-conducting of mock drill exercise then it must be intimated to SRLDC along with the reason.

12.2.4 Status needs to be furnished in the following format :

State	BSRP reports for July-December 2016	BSRP schedule for Jan 2017 – June 2017	Point to point mock exercise report being furnished	Updated list of Nodal Officer	Workshop Schedule

### 12.3 **Conducting of Mock Exercise at NTPC, Simhadri Thermal Generating Station Unit-I**

12.3.1 SRLDC vide letter dated 06.12.2016 submitted the following regarding conducting of Mock Exercise at NTPC, Simhadri Thermal Generating Station Unit-I

- Extending of start up power to major Generating Stations like NTPC is a critical requirement during Black out conditions.
- It has been emphasized in the Indian Electricity Grid Code (Clause 5.8(b) that all major generating stations need to conduct mock exercise once in every six months such that extending of startup power during contingency could be established within a short duration. Particularly in case of NTPC Simhadri which is located near to cyclone prone area the preparedness and alertness for meeting any contingency situation is all the most important.
- Though NTPC Simhadri could be facilitated for startup power extending through AC bypass at HVDC Gazuwaka as well as running hydro unit at Upper Sileru, so far mock exercise was carried out only for bye-pass operation of HVDC Gazuwaka. In case of any difficulty in availing the startup power through AC bypass of HVDC, it shall not hamper NTPC Simhadri's startup activities and for that the alternate option of availing startup power from Upper Sileru required to be mock exercised.
- During the Black Start Restoration Procedure workshop held at Simhadri on 8<sup>th</sup> Nov.16, it was noticed that Black Start mock exercise by availing power from Upper Sileru could not be carried out due to coordination requirements with APGENCO Hydro Stations and multiple Sub stations of APTRANSCO. During the same meeting, it was mentioned by SRLDC that it would arrange for necessary coordination among all the entities involved. Accordingly, NTPC, Simhadri was requested to fix a firm schedule for the proposed mock exercise with due consideration of the plant outage of Unit #1.

SRLDC requested NTPC, Simhadri and APSLDC to kindly coordinate with APTRANSCO and APGENCO and conduct Mock exercise on 7<sup>th</sup> or 8<sup>th</sup> December 16 as per mutual suitability of all concerned.

### 12.4 **Planning of Black Start Mock drill of Nuclear Power Plants**

12.4.1 In the special meeting held on 19.05.2016, it was agreed that the Black Start Restoration Procedure Mock Exercise for Nuclear Power Plants would be co-ordinated on the days of Bus Shutdown /

maintenance program. The station will take care of necessary resources required for such Mock Exercise and co-ordinate effectively. In this regard, it was agreed to have a plant level meeting with SRLDC and develop an internal procedure for detailing sequence of operations required at plant level in a similar manner as done for NTPC, Ramagundam etc.

The following were noted in the Special Meeting held on 25.11.2016 :

- KGS and MAPS had informed that during contingency the units would go on house load. They would be able to sustain for about 6-7 hours and if evacuation is not ensured within 6-7 hours, the reactor would poison out. Thereafter, it would take 36-38 hours for revival.
- SRLDC stated the **details could be furnished and it would be suitably incorporated in the BSRP document.**
- KKNPP had informed that stations don't have such limitations of reactor poisoning and units could be brought back in short duration. During complete Black Out around 50-70 MW may be required per unit to meet the Aux Consumption.
- SRLDC informed that procedure for extending supply to KKNPP during Black Out was in place.
- **It was agreed that KKNPP would work out the internal procedure to avail the start power. Subsequently mock drill would be planned and carried out in coordination with SRLDC & TNSLDC.**

12.5 Conducting Mock Exercise from RTPS to Jurala, Nagjheri to BTPS and Kaiga NPP

12.6 Feedback on BSRP mock exercise conducted during November /December 2016

12.7 Status Review of submission/development of KKNPP internal procedure to avail the start up power and mock planning and carry out in coordination with SRLDC & TNSLDC

## 12.8 *Priority for Railways/Metros in the matter of Restoration of Supply*

12.8.1 The following were noted earlier:

- KPTCL: to expedite on the actionable points of KPTCL/BMRCL which were finalized in the Special Meeting.
- KSEBL: Vide letter dated 06.06.2016 had furnished the Operating Procedure for extending supply of power to Kochi Metro.
- TANTRANSCO/Southern Railway: The follow up of actionable points finalized in the special meeting in respect of Chennai Metro may be expedited by like redundancy at 220 KV level and commissioning of one more substation etc.
- TSTRANSCO: was requested to take proactive action in respect of Hyderabad Metro.

## 13 RGMO

13.1 RGMO response had been deliberated in various Special/OCC/TCC/SRPC meetings. Inadequate response was an area of serious concern and there was no noticeable improvement.

13.2 The recommendations finalized in the special RGMO/MVAR interchange meeting should be complied by all the utilities.

13.3 In earlier OCC Meetings, the following had been noted:

- SLDCs were requested to analyze the RGMO instances posted by SRLDC for the generators in their control area and take up action as per 84/MP/2015. Inadequate Response to be taken up with SERC (Petition No.302/MP/2013). Action on recommendations finalized in the Special Meetings needed to be taken by generators/states. All generators were kindly requested to take all steps to ensure intended RGMO/FGMO response.
- As per the order in RGMO Petition No. 302/MP/2013, the units (including state embedded) shall not be scheduled beyond their ex-bus generation corresponding to 100% of their installed capacity.

### 13.4 RGMO implementation/ Extension of RGMO status point to SLDC

13.4.1 In the 125<sup>th</sup> OCC Meeting SRLDC had furnished the position of RGMO status extension to SLDC given as below (after comparing with SLDC SCADA team):

- AP: VTPS 1 & 2 : Empty, Upper Sileru Pending
- TS : Hydro status points manually updated at TSSLDC
- KPCL : RTPS & all Hydro Pending
- KSEBL: Idukki, Idamalyar, Kakkad, Kuttiadi 1 to 3, Neriamangalam, NES, Panniar, Poringalkuthu 1to 4, Sengulum, Sholayar Pending
- TN : MTPS Stage unit 1 to 4, TTPS U 1,2,3 , All eligible hydro pending

13.4.2 A Special Meeting had been convened with KPCL on 27.10.2016 to deliberate on the issues pertaining to KPCL.

*After deliberations, KPCL had assured the following:*

- ✓ Status points for Raichur unit-II, Kadra, Kodashalli, Varahi and Gerusoppa would be extended to SLDC and they would coordinate with SLDC in this regard before next OCC.
- ✓ The wiring works for other balance Raichur units and Bellary Units I & II would be completed and the status would be extended within a month.
- ✓ The schedule of status extension to SLDC for other hydro units would be furnished in the 125<sup>th</sup> OCC.

13.4.3 In the 125<sup>th</sup> Meeting, KPCL informed the following:

- Intimated KPTCL SCADA team that following power houses could be connected to SLDC SCADA to show the condition on 05.11.2016.  
Varahi UGPH, Kadra PH, Kodashalli PH & Gerusoppa PH
- It is confirmed by SLDC that status indication of BTPS (all three Units) was appearing in their SCADA.
- Program for all other stations would be furnished separately.

13.4.4 KPCL vide letter dated 26.11.2016(**Annexure-13A**) had informed that implementation of RGMO for all units of NPH had been completed. Arrangements to extend the RGMO status to SLDC is to be carried out.

13.4.5 SRPC/SRLDC requested the concerned entities to take appropriate action to extend the status points to SLDC/SRLDC.

### 13.5 Restricting Schedules of ISGS stations for RGMO performance:

13.5.1 In the 124<sup>th</sup> OCC Meeting it was noted that SRLDC has been restricting schedule of ISGS units to normative value (ex-bus generation) corresponding to 100 % of Installed Capacity. It was informed by SRLDC that this measure was in order to ensure RGMO performance in accordance with CERC Order in respect of Petition No. 302/MP/2013.

13.5.2 SRPC vide letter dated 07.09.2016 had taken up this issue of scheduling the units higher than presumed restricted value during RRAS up with NLDC and had requested that this matter may kindly be arranged to be examined. It was also not understood whether all other RLDCs are adopting the same scheduling practice for ISGS units for ensuring adequate RGMO response.

## 14 TRANSMISSION NETWORK ISSUES AND SYSTEM OPERATION ISSUES

**14.1 Load ability of ICTs and revisit of the associated protection settings to prevent cascaded tripping of ICTs./high loading of transmission lines**



- 14.1.1 Insufficient action in controlling the loading of ICTs leads to N-1 criteria violation in compliance of Regulation 3.1 f(8) of CEA(Grid Standards) Regulations 2010 and Regulation 3.5 a(i) of CERC Indian Electricity Grid Code Regulations 2010.
- 14.1.2 N-1 violation of Neelamangala, Vemagiri, Hoody, Somanahalli, Madurai, Trichy, Narendra, Nunna, Kalivanthpattu. It was noted that continuous overloading of Trichy ICTs still persists.
- 14.1.3 SRLDC requested all the constituents that whenever real time messages were issued to control over ICT loadings, constituents should be committed to take necessary steps/load shedding to curtail the overloading. SRLDC requested for urgent action to alleviate the loading of 400/220 kV ICTs. A long term solution of augmentation/load reconfiguration needed to be considered / implemented in view of grid security. Action Plan of constituents to restrict the loading to permissible limit may kindly be furnished to SRLDC and immediate action needs to be initiated.

## 15 Prolonged Outages

- 15.1 Status review of prolonged outage of grid elements in SR & Realistic Action plan for revival of the prolonged outage was awaited from some of the constituents. Monthly reports are required to be submitted to CERC.
- 15.2 The following was noted in the Meeting:
- ❖ Ramagundam STPS ICT- II: TSTRANSCO informed that ICT would be commissioned by the end of November 2016.
- 15.3 All constituents were requested to convey the schedule of revival for the elements under prolonged outage to SRPC, which was to be reported to Hon'ble CERC on monthly basis. (CERC Order on petition no 146/MP/2013).

## 16 Closing of 220 kV Upper Sileru- Balimela line

Upper Sileru - Balimela line had been idle charged from 8<sup>th</sup> January 2015 from Upper Sileru end.

## 17 Upcoming Generating Stations

### 17.1 Central Sector

STATION	UNIT	IC IN MW	SCHEDULE	REMARKS
<b>NTPC</b>				
Kudgi TPS Stage-I	I, I, III	3 x 800= 2400	Unit-I :Syn. by Jul'16 & CoD by Mar'17 Unit-II : Syn. by Mar'17 & CoD by Sep'17 Unit-III : Syn. by Jun'17 & CoD by Dec'17	
<b>NPCIL</b>				
KKNPP Stage-I	II	1000	Unit-II: First Synchronized to Grid 29.08.2016 at 11:16 hours. Scheduling started from 14.10.2016. COD by February 2017	
<b>BHAVINI</b>				
Kalpakkam (PFBR)	I	500	In the Special Meeting held on 25.11.2016 BHAVINI had informed that unit was planned to be declared on COD in last quarter of 2017 (Oct-Dec 2017). The synchronization would be 1-2 months prior to COD.	

### 17.2 State Sector/IPPs

Station	Location	Owner	IC in MW	SCH/Remarks
Rayalaseema	AP	State	600	CoD by 31.03.2017

TPS ST-IV				
Meenakshi PH-II	AP	IPP	700	2016-17 Untied : 640 MW
SGPL(NCC)	AP	IPP	1320	Unit I: COD on 17.11.2016 Unit II: Synchronization 2016-17 TS: 300 MW (STOA for 1 year)
Yeramarus TPS	KAR	State	1600	Unit-I: FL achieved on 29.03.2016. Unit II: COD activities were started and expected to be commissioned by December 2016.
Singareni	TS	IPP	1200	Unit I: CoD : 25.09.2016 at 17:00 hours. Unit II: CoD by December 2016.

17.3 SRPC stated that declaration of COD letter from SLDC was required to be submitted to CEA, Fuel Management Division for coal linkage etc.

17.4 SRLDC pointed out those new ISTS connected units should come out with detailed metering scheme for various units commissioning schedule at least one year prior to synchronization. The scheme needed to be discussed and finalized in the Meeting of Commercial Sub Committee.

## 18 Auto Reclosure of Transmission lines

SI No	Element	Status
1	Ambewadi – Ponda	A/R had been commissioned but was to be put in service. Enabling pending due to non approval from Goa end.
2	Ambewadi-Xeldam	To be commissioned
3	Kaiga - Guttur,	In the Special Meeting held on 25.11.2016 KPTCL had informed that whatever configuration problems they had with A/R, were being attended by their OEM, and they were actually waiting for LC to test the scheme, which should hopefully get completed in a couple of days, after which the scheme would be made functional on both the lines. KGS had informed that on 400 kV Kaiga – Guttur line-1, A/R was ready at Kaiga end. On 400 kV Kaiga – Guttur line-2, A/R would be enabled after rectifying issues relating to Main-II relay. SRPC/ SRLDC had replied that since A/R would be made functional on both the lines by KPTCL in a couple of days, KGS should expedite resolving issues relating to Main-II relay of lines-2, and take steps to enable A/R on the second line also at the earliest. <b>Finally, it was decided that A/R would be put into service from both ends on 400 kV Kaiga- Guttur line-1 by 30.11.2016. A/R for 400 kV Kaiga- Guttur line-2 would be put into service from both ends by 10.12.2016.</b>
4	Nagjheri lines	KPTCL would enable the A/R once KPCL is ready. KPCL informed that CVT erection work almost over. C & S firm asked to arrange for A/R Scheme. Carrier protection scheme is to be taken up.
5	MAPS lines	In the Special Meeting held on 25.11.2016 MAPS had informed that since line CVT's are a pre-requisite for A/R, and replacement of 15 line CVT's were being taken up for commissioning, A/R would be commissioned/ enabled alongside Y-ph line CVT's

		<p>replacement , and assured that A/R would be put into service in six (6) months time (i.e., by May, 2017). They were in touch with TANTRANSCO, and had been assured that 15 CVTs would be made available to them (as per mutually agreed terms and conditions)</p> <p><b>MAPS would furnish detailed schedule of commissioning of 15 CVTs and other protection/A/R works by 02.12.2016 after approval from Station Director.</b></p> <p><b>Subsequently MAPS had informed that it is planned to get CVTs from M/s TANTRANSCO by the end of February 2017 and implement the A/R for all the lines emanating from MAPS by July 2017 as agreed in the Meeting.</b></p>
6	BHAVINI Lines	In the Special Meeting held on 25.11.2016, BHAVINI had informed that A/R would be enabled by January 2017.

#### 18.1 Status of A/R for 220 kV Lines:

18.1.1 In the Meeting SR I, PGCIL furnished the status of implementation of A/R schemes for 220 kV lines as follows:

Station	Lines	Status
Munirabad Substation	220kV Lingapur 1 & 2	A/R not available
	220kV Kalyani	Protection system belongs to KPCL
Warangal Substation	220kV Nagaram – 1 & 2	A/R not available at TSTRANSCO end
	220kV Durshed	Hence, Disabled at WGL end
	220kV Bommakal	Hence, Disabled at WGL end

#### 19 Status review of actions taken by SEPL/MEPL in respect of Hon'ble CERC Order in IA Nos 34/2015 & 5/2016 in Petition No. 205/MP/2011

It was noted that since SEL/MEPL are not members of OCC, the issue could be taken up with them separately. If required, a special meeting would be called.

#### 20 LGBR & OUTAGE PLANNING

##### 20.1 Status Review on development of load forecasting tools by SLDCs as per IEGC Clause 5.4.2

20.1.1 The issue was noted for compliance by the states/SLDCs.

20.1.2 The following was noted from the Order dated 19.12.2013 on Petition No. 249/250/251/MP/2012

*"We direct all STUs/SLDCs of the Northern Region, Southern Region and Eastern Region to forecast their demand and make adequate arrangements to avoid dependence on Unscheduled Interchange for meeting their demand or for injecting short term surplus power, irrespective of the frequency"*

20.1.3 There was need for further involvement of DISCOMs for their 96 block load forecast and by state generators of their 96 block generation forecast. SLDCs needed to play more proactive role in this regard.

**21 Outage deviation report for the period April 2016 –November 2016 in respect of Generating Units/Transmission Elements of Southern Region**

Outage deviation report for the period April 2016-October 2016 in respect of Generating Units/Transmission Elements of Southern Region need to be submitted by all the constituents which is to be communicated to Hon'ble CERC.

**22 Constituents/Generators are also requested to furnish the following Data/Information:**

- a. Minimum/Maximum Demand Ratio of Constituent States. Information and measures adopted may please be shared.
- b. Forced/Planned outages of thermal units.
- c. Status of Srisaïlam/Kadamparai pumps mode operation.
- d. Installed Capacity in MW as on 30.11.2016 and additions to Installed Capacity in November 2016.
- e. Submission of details of new elements to be provided on monthly basis in the agreed format by all the Regional Entities.  
(Item No. 12 of enclosed SRLDC letter dated 26.10.2016).
- f. Load Shedding in MW & MU carried out during November 2016 on daily/hourly basis.
- g. Capacity in MW of Wind Mills/Renewable (Category wise) added in November 2016 by State Sector and Private Sector - to be furnished separately.
- h. Generation in MU of Wind Mills/Renewable (Category wise) October 2016 by State Sector and Private Sector - to be furnished separately.
- i. PLF & PAF of Thermal & Nuclear Power Stations.
- j. Details of Energy Exchanges by the states (including embedded IPPs/CPPs) through Power Exchanges.
- k. Constituents may apprise the OCC of surplus power available, if any.
- l. Progress of works of generating units to be commissioned in 2016-17 and also coming up in future.
- m. Details of Power Cuts on Industries, Load Shedding and Power supply to Agriculture Sector may please be furnished in the Proforma prescribed by CEA vide their letter No. 1/AI/COR/GM-2004/3405 dated 23.11.2004.
- n. Coal Stock Position to be submitted on monthly basis by Generators (States/ISGS).
- o. Uploading of hourly Load Shedding details (both scheduled and unscheduled) effected in previous day by all the constituents in SR.
- p. Loss of generation due to coal shortage/technical problem needs to be furnished for onward transmission to NLDC by 1000 hrs on daily basis.

**q. Collection of data regarding Power Supply to Rural Areas**

In the Meeting held at MoP on 09.04.2014 it had been decided to collect the data invariably from DISCOMs. It is requested that the data in this regard in the required format may please be arranged to be communicated to SRPC Secretariat at the following E-mail addresses: [msssrpc-kar@nic.in](mailto:msssrpc-kar@nic.in)/[seoprnsrpc@kar.nic.in](mailto:seoprnsrpc@kar.nic.in)

Data to be communicated by first week of the month for previous month.

**r. Reporting the Status of implementation of the recommendations of the Enquiry Committee**

Status as on last day of the month to be forwarded by 3<sup>rd</sup> day of the following month, and that as on 15<sup>th</sup> of the month to be forwarded by 17<sup>th</sup> of the month All the constituents were requested to furnish timely status updates

**s. Energy Generation data Management from Renewable Energy Sources**

Monthly generation data in respect of Renewable Energy Sources was to be submitted to CEA with a copy to SRPC.

**t. Preparation for meeting the revised environment norms as per Environment (Protection) Amendment Rules, 2015**

CEA vide letter dated 18.01.2016 had requested to furnish the details of preparedness and action plan in order to comply the revised water consumption and emission norms by the existing and new thermal units (to be installed from 01.01.2017 onwards) as per Environment (Protection) Amendment Rules, 2015 notified by Ministry of Environment, Forest & Climate

Change (MOEF & CC) (Gazette Notification dated 07.12.2015). Vide letter dated 20.01.2016 SRPC had communicated to all concerned in this regard. The information may be furnished through e-mail & letter at [edmcea@yahoo.co.in](mailto:edmcea@yahoo.co.in) & Chief Engineer (TPE & CC), CEA, Room No.902 (S), Sewa Bhawan, R.R.Puram, New Delhi – 110066 and a copy of the same may also be forwarded to [seoprnsrpc-ka@nic.in](mailto:seoprnsrpc-ka@nic.in)/ [srpc.operation@gmail.com](mailto:srpc.operation@gmail.com).

**23 Any other point with the permission of the Chair.**

**24 Date and Venue of the next Meeting.**