Agenda

For

130th OCC Meeting

Date: 17.02.2017
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700 033

Eastern Regional Power Committee

Agenda for 130th OCC Meeting to be held on 17th February, 2017 at ERPC, Kolkata

PART A

Item no. 1: Confirmation of minutes of 129th OCC meeting of ERPC held on 17.01.2017

The minutes of 129th OCC meeting were uploaded in ERPC website and circulated vide letter dated 02.02.2017 to all the constituents.

Members may confirm the minutes.

PART B: ITEMS FOR DISCUSSION

Item No. B.1: Commissioning of new transmission elements in Eastern Region

In 118th OCC, it was informed that the network diagram of eastern region needs to be updated on regular basis on account of commissioning of new elements in the CTU as well as STU networks.

OCC advised all the constituents to update the list of newly commissioned power system elements to OCC on monthly basis so that ERLDC/ERPC can update the network diagram on regular basis.

The list of new Transmission Elements commissioned/charged during **January, 2017** as informed by ERLDC and BSPTCL is given below:

1) 50MVAr LR of 400kV RTPS-Ranchi-II charged for the first time at 20:01Hrs 03/01/17.
2) 400kV Main bay of Nabinagar-Sasaram-II at Nabinagar charged for the first time at 18:44Hrs of 06/01/17.
3) 400kV New Ranchi – New PPSP-I (charged as 400kV New Ranchi - PPSP) charged for the first time at 17:38Hrs of 06/01/17 and 400kV New Ranchi - New PPSP-II (charged as 400kV New Ranchi - Arambagh) charged for the first time on 18:21Hrs of 06/01/17.
4) 132kV Purnea (PG)- Purnea (BSPTCL)-II was charged for the first time after re-conductoring with HTLS ACCC (Casablanca) conductor at 15:28Hrs of 07/01/17.
5) 400kV Teesta-III- Rangpo charged for the first time at 18:14Hrs of 13/01/17.
6) Teesta-III has charged its GTs along with units for the first time as follows
    I) GT 1 & Unit 1 : 22:00Hrs of 14/01/17
    II) GT 3 & Unit 3: 18:55Hrs of 15/01/17
    III) GT 5 & Unit 5: 22:26Hrs of 24/01/17
    IV) GT 2 & Unit 2: 20:23Hrs of 27/01/17
    V) GT 6 & Unit 6: 16:44Hrs of 28/01/17
7) LILO of 220 KV KBUNL-Darbhanga (D/C) line at 220/132/33 KV Musahari S/s along with 2X160 MVA, 220/132 kV transformer charged on 17/01/17.
8) LILO of 132 KV Purnea-Saharsa (S/C) line at 132/33 KV Banmankhi S/s along with 2X20 MVA, 132/33 kV transformer charged on 25/01/17.
9) LILO of 132 KV 132 KV Sultanganj-Jamalpur (S/C) line at 132/33 KV Tarapur S/s along with 2X20 MVA, 132/33 kV transformer charged on 26/01/17.
10) 220 KV (MTPS-Darbhanga)- Mushahri LILO was charged on 11/01/17.
11) 132 kV Arah(PG)-Jagdishpur ckt-2 was charged on 05/01/17.
12) 132 kV D/C Kishangank(new)- Kishanganj line was charged on 04/01/17.

Other constituents may update.

Item No. B.2: Status of projects funded under PSDF schemes

In the PSDF review meeting, it was advised to RPCs to monitor the status of all the projects funded by PSDF. Therefore, constituents are requested to update the status of projects which are being funded by PSDF in the desired format. The latest status as updated in 129th OCC is as given below:

SN	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	Amount approved (in Rs.)	Amount drawn till date (in Rs.)	Status as updated in 129th OCC
1	WBSETCL	Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal	31-12-14		120.67 Cr	11.04 Cr.	95 % Supply Completed
2	WBSETCL	Transmission System improvement of WBSETCL					
3	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	10.05.15	10.05.17	162.5 Cr.	***19.53 Cr***	*Total contract awarded for Rs. 67.73 Cr* *Erection work for received equipment is in progress.*
4	ERPC	Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid	17.03.16		20 Cr.	***4.94 Cr. + 9.88 Cr.***	***1) Hardware supplied and installed.*** ***2) SAT completed for pilot state*** ***3) Protection database management software (PDMS) delivered.*** ***4) Training on PDMS organised at Odisha.***
5	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharsharif,Bodhgaya, Fatuha, Khagaul Dehri-on-sone & 132/33 Kv GSS Kataiya	11/5/2015	Feb'2017	64.33 crore	*23.68 crore*	*Project is on going. Order for supply of equipment placed for Rs.13.51 Cr.*
6		Installation of capacitor bank at different 35 nos. of GSS under BSPTCL	5/9/2016		18.88 crore		Approved (triparty agreement among NLDC, Govt. of Bihar & BSPTCL is in under process)
7		Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL.					Recommendation of appraisal committee is awaited. Estimated cost 54.69 crore.
8	DVC	Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation			25.96		Approved by Ministry of Power
9		Renovation and upgradation of control & protection system including replacement of substation equipment at Parulia, Durgapur, Kalyaneshwari, Jamshedpur, Giridih, Barjora, Burnpur, Dhanbad and Burdwan Substation of DVC			140		Appraisal committee has recommended. It will be placed in next monitoring Committee meeting.
10	WBPDCL	Implementation of Islanding scheme at Bandel Thermal Power Station					Appraisal committee has recommended. It will be placed in next monitoring Committee
		Upgradation of Protection and SAS			26.09		Approved by Ministry of Power
11	OHPC	Renovation and up-gradation of protection and control system of 4 nos OHPC substations.					*OHPC will submit the detailed proposal soon as per the requirement of Appraisal committee.*

34th TCC/ERPC accorded post facto approval to the following three schemes of ERPC for submission to PSDF Appraisal Committee:

1) Training for Power System Engineers
2) Training on Integration of Renewable Energy resources
3) *Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents*

The proposal was examined by the Techno Economic sub group of PSDF and advised to submit revised DPR with consideration of views of the group for 1) one domestic training proposal and 2) one foreign training proposal (Training on Power market at NORD POOL Academy).

Other constituents may update.

Item No. B.3: MONITORING OF SCHEMES FUNDED FROM PSDF—NPC Agenda

In the 6th meeting of NPC held on 19th December,2016 it was decided that all the RPCs in the monthly OCC meetings may follow up with entities to expedite completion of the scheme by giving due priority. The implementation of most of these schemes are based on the recommendation of the Enquiry Committee on Grid Disturbance of July 2012 headed by Chairperson, CEA. Therefore, timely implementation of these schemes would enhance the grid security and reliability. Accordingly, the grant sanctioned from PSDF for the schemes of Eastern Region is enclosed at **Annexure-B.3(I)** for deliberation in the OCC meeting.

The status of implementation of the above schemes (physical as well as financial progress) may please be reviewed and the entities are requested to expedite implementation of the schemes. The entities may also be advised to furnish information in the format enclosed at **Annexure-B.3 (II)** by first week of every month on regular basis to Member Convener, PSDF Project Monitoring Group (AGM, NLDC,POSOCO) with a copy to NPC Division.

*129th OCC, all the respective constituents are advised to furnish the status to NLDC & NPC as per the desired format as attached at **Annexure- B.3 (II)**.*

Constituents may update.

Item No. B.4: OPERATIONAL LOAD FLOW STUDY FOR OFF-PEAK PERIOD (WINTER LEAN PERIOD)

In 128th OCC< for lean off-peak load flow study, OCC finalized the date and time as follows

- *13.00 Hrs of 28th December,2016.*
- *02:00 Hrs of 29th December,2016*

OCC advised to submit the data as per the format available in ERPC website.

Further, 129th OCC advised PRDC to interact with ERLDC and resolve the issue of mismatch between SCADA snapshot and Study result of peak scenario for few pockets of ER grid as per the earlier decision.

PRDC may update.

Item No. B.5: Status of UFRs healthiness installed in Eastern Region

UFR Healthiness Certification for the month of January, 2017 has been received from JUSNL, BSPTCL, WBSETCL, CESC and OPTCL.

DVC may update.

Item No. B.6: Healthiness of SPS existing in Eastern Region

NTPC, GMR, JITPL, Vedanta, Powergrid-Odisha & CESC have submitted the healthiness certificate for the month of January, 2017.

Chuzachen & Powergrid ER-II may submit the healthiness certificate for January, 2017.

In 129th OCC, on query about SPS at 400kV level at Rangpo S/s for reliable power evacuation through 400kV Rangpo – Siliguri D/c, Powergrid informed that the SPS at Rangpo substation has been completed and the extension of signal to respective generation stations have been tested.

However, ERLDC informed that the SPS scheme for unit trip/ generation reduction has been received from Teesta-III & Chuzachen. The scheme details are yet to be received form Jorethang, Dikchu and Tashiding HEPs.

OCC advised all generators to share the details with ERLDC & to comply other requirements as per decision of the special meeting of 14.10.16 & 30.11.16 so that there should not be any delay in doing commercial transactions by concerned generators

Respective members may update.

Item No. B.7: Status of Islanding Schemes of Eastern Region

B.7.1. Status of commissioned Islanding Schemes in Eastern Region

At present, the following islanding schemes are in service:

1. CESC as a whole Islanding Scheme, CESC
2. BkTPS Islanding Scheme, WBPDCL
3. Tata Power Islanding Scheme, Haldia
4. Chandrapura TPS Islanding Scheme, DVC

In 108th OCC meeting, respective constituents agreed to certify that the islanding schemes under their control area are in service on monthly basis.

The healthiness certificate for Islanding Scheme for January, 2017 has been received from CTPS, DVC, BkTPS, Tata Power and CESC.

Members may note.

B.7.2. FSTPS Islanding Scheme, NTPC

In 123rd OCC, NTPC informed that cable laying completed and interfacing is pending. Interfacing will be done after completion of the PLCC installation work by PGCIL at JUSNL sub-stations.

In 127th OCC, Powergrid informed that the work under the scope of JUSNL has been completed.

NTPC informed that the integration of cables at their end is going on and it may take another one month to complete it.

In 128th OCC meeting it was informed that progress of the islanding scheme is being monitored at Ministry level and ERPC Secretariat has already communicated the completion schedule as December, 2016.

OCC took serious note of extending the completion schedule of the islanding scheme in the last moment.

OCC advised NTPC to explore final hooking up with C& I system at an opportune S/D time of the unit.

In 129th OCC, NTPC explained that after final hooking up with C&I of units they have to conduct dry simulation for checking the successful operation of the scheme which can only be carried out during overhauling.

Further, they informed that the maintenance programme of U#1 is scheduled from 10th March, 2017. so the hooking up with unit-I will be completed by March,2017 and the Islanding scheme will be operational. Unit#2 and Unit #3 will be hooked in April, 2017 and June/July, 2017 respectively during their overhauling.

OCC advised NTPC to strictly maintain the schedule so that the FSTPS islanding scheme can be put into service w.e.f. March, 2017.

NTPC may update.

B.7.3. Bandel Islanding Scheme, WBPDCL

In 33rd TCC, WBPDCL informed that DPR has been submitted to NLDC on 22-06-2016 for funding from PSDF.

Subsequently, PSDF Secretariat vide mail dated 07.10.2016 informed that the Scheme was examined on 28.09.2016 and has sought some clarification from WBPDCL.

In 127th OCC, WBPDCL informed that clarification has been submitted.

It was informed that the Appraisal committee has recommended. It will be placed in next Monitoring Committee

In 128th & 129th OCC, it was informed that the PSDF Appraisal committee has accepted the proposal and forwarded to CERC.

WBPDCL may update the latest status.

Item No. B.8: Agenda related to All Power plants of Eastern Region – CEA

As informed by OPM division, CEA vide letter dated 02.02.17 the following points are placed for discussion:

1. Change in the status of three units of Vedanta Ltd into Captive Power plant and furnishing of data thereof.
2. Online submission of data (Daily and monthly) by the power plants
3. Retiring of thermal units.

Members may update.

Item No. B.9: Request of Indian Army for water rafting in Teesta river -- NHPC

Teesta-V Power Station has received a letter No. C/7320/ECANT Picnic-17/Fin dated 28th Jan'2017 from Administrative Officer, 17 Mtn Div Ord. Unit requesting therein for water rafting in Teesta river from 10:00 Hrs to 16:00 Hrs on 05th February,2017. In this context, it is to mention here that due to acute shortage of inflow in Teesta River, Power Station could manage to run all three Generating units during normal peaking hours only and achieving PAF of 102.21% now-a – days.

In order to facilitate and honor the request of Indian Army, Power Station have to run one unit during the above period which shall be resulted into depleted water level of reservoir and unit(s) shall be run as per availability of water during the normal peaking hours on 05th Feb'2017.

In view of the above circumstances, PAF of 102.21% may please be considered on 05th Feb,2017 in case of shortfall of generation during the normal peaking hours.

Members may discuss.

Item No. B.10: Provision for one no dedicated bay for proposed 33kV substation at Bhagalpur Railway Station from 132/33 kV Sabour GSS -- Railways

Eastern Railway, Malda vide letter dated 2nd February, 2017 intimated that the work for 33 kV sub-station at Bhagalpur have been sanctioned vide pink book of 2008-09. In this connection Rs.1,13,31,492/- have already been deposited to the Accounts Officers /R.E/BSEB/Patna vide demand draft no.528111 dt.16.01.10 against estimate no- BESA/Tech/03 BGP/Deposit Head/09-10 dated 08.07.09 as a 33kV service connection charges.

During this execution of work BSPTCL Ltd. Transmission wings has submitted additional estimated amount of Rs.56,79/146/- vide estimate no-28 dated 15.05.2013 for provision of one no dedicated bay for proposed 33 kV substation at Bhagalpur Railway Station from 132/33 kV Sabour Grid Sub-station.

Accordingly, the estimate has been processed for revision from railway side to incorporate the additional amount of R. 56,79,146/-, but due to different correspondence with HQ & local accounts the estimate has been sanctioned on date 21.04.2016 vide revised estt no-DF/450/BGP/MLT of (2nd Revised)2014-15 and the same has been communicated to SE/DGM/SBPDCL Bhagalpur vide letter no. DF/450/BGP/MLT of 2015-16 dated 24.06.2016 & 10.08.2016 and to GM cum CE/BSPTCL vide even letter no. dated-26.10.2016 but the GM cum CE/BSPTCL Muzaffarpur has denied to take the payment saying as it is more than three years old & also informed vide letter ref above-1 that fresh estimate should be taken and get sanctioned and submit new revised amount under deposit head of BSPTCL Patna.

In this connection the undersigned visited on date 17th November, 2016 in Muzafarpur BSPTCL office and met with GM cum CE for discussing in this regard and made an approach to GM to agree with the earlier estt. Amount as this is a govt. to govt. matter and it is also added, if BSPTCL authority will go for fresh estimate then it will again cause further delay in execution of project.

In this regard GM cum CE has advised to approach BSPTCL/HQ Patna for accepting the previous estimated amount. Accordingly, the undersigned has visited BSPTCL, Vidyut Bhawan, Patna office on date 23.12.2016 and met CE/Project-II(Mr. S.N.Sinha) in this regard, but CE/Project-II also did not agree with the old estimate.(3 years old) and advised for taking fresh estimate from BSPTCL Muzaffarpur and revised amount should be deposited.

Therefore, Railway has requested to include this in the agenda of OCC meeting for final discussion with BSPTCL/HQ Patna to arrive at a fruitful solution.

BSPTCL/ Railway may update.

Item No. B.11: Injection of infirm power from India Power Corporation (Haldia) Ltd.(3x150 MW)

As informed, India Power is planning for commissioning of the 1st Unit of 150 MW very soon. It is required to inject infirm power as and when power is generated from the above mentioned unit upto 135 MW for smooth commissioning before we commence their commercial operation.

The required clearance for injecting infirm power to the tune of upto 135 MW may kindly be given in terms of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 dated 19th January,2009 and amendments made thereafter.

Further, it was known that they will be connected at 220kV Haldia S/Stn. of WBSETCL, in STU system which is around 2.8 km away from their Power Plant.

India Power/WBSETCL may update.

Item No. B.12: Status of 2X48 MW Dikchu HEP

As intimated in 34th CCM,

- Dikchu HEP is a run-of –river hydropower project currently under advanced stages of construction with a licensed capacity of 96.0 MW (2x 48 MW) and is located on the Dikchu River, North District of Sikkim. Dikchu Hydro Power Project is being developed as a Build, Own, Operate and Transfer(BOOT) basis by **Greenko Group**. It envisages utilization of the flows of the river Dikchu a tributary of river Teesta for power generation on a run of river type development, harnessing a head of about 350m. Dikchu river drains a catchment area of about 240 sq km at the proposed diversion dam site with statutory clearances as follows:

S.No.	Approval	Regulatory Authority	Status
1.	DPR	State Government	DPR for 96 MW approved on 31.07.2008
2.	MOU/Implementation Agreement	State Government	Agreement signed with Government of Sikkim on 1/03/2006
3.	Techno Economic/ DPR Clearance from the State Technical Committee	State Government	Obtained on 28/11/2008
4.	Consent for Establishment (CFE)	State Pollution Control Board	CFE under both Air and Water Act is valid upto 31/03/2014
5.	Environmental Clearance	MOEF,GOI/State Govt.	Received on 01/04/02008

- Wet commissioning activities for 2x48 MW GE made Francis turbines and generators have started as on 26th January,2017. No LOAD Testing are under process for both units together.
- PGCIL specification complaint / ABT compliant 9 nos. Special Energy Meters(SEM) have been procured directly from L & T which are installed in both 132kV & 400KV GIS switchyard. Technical specification and raw data (npc file) have been vetted by ERLDC /PGCIL before installation in locations.
- Application for Electrical Inspection has been made & visit of the Inspector is proposed in 3rd week of February,2017.
- LILO connectivity with one circuit of 400kV Teesta III –Rangpo(Teesta III_Kishenganj in future) is proposed by 3rd week of February,2017 subsequent to the inspection clearance.
- With physical link of PLCC established after LILO connectivity, data telemetry and protection settings with support from PGCIL are planned to be established simultaneously.
- Rangpo SPS is planned to be complied with as soon as the PLCC link is complete.
- Application has been submitted to ERLDC for new entity registration as well as opening of DSM/ UI accounts.
- Infirm generation is expected to start by 4th week of February,2017.
- COD of both units of Dikchu HEP is envisaged within March,2017

Dikchu may update. Members may note.

Item No. B.13: Future planning of trial run operation for commercial operation of Teesta – III units

Tessta –III unit 1, 3, 5, 2 & 6 (except unit – 4) were first time synchronised on date 14-01-17, 15-01-17, 24-01-17, 27-01-17 & 28-01-17 respectively. Since 14th January 2017, Teesta - III is injecting infirm power to the tune of 200 to 230 MW round the hours and some times more than 300 MW as per testing requirement. In this respect, Tessta – III is advised to intimate its future panning of testing activities and first time synchronisation schedule of unit – 4 and planning for trial operation for the commercial operation of its units. Before start of their trial operation for the commercial operation activities, Teesta – III has to confirm availability of stable data and voice communication to ERLDC. Moreover, Teesta – III, TPTL and Powergrid ER-II are also requested to give the commissioning details of 400 kV Teesta – III – Dikchu – Rangpo line for reliable evacuation of Teesta – III power.

Teesta – III, TPTL, POWERGRID ER - II may update.

Item No. B.14: Tripping Details(EL & DR) for ENICL and PKTCL -- Sterlite Power

Sterlite Power vide letter dated 04.02.2017 informed that they were not getting the tripping details (EL&DR) for ENICL and PKTCL lines on regular basis from their respective sub-stations control room.

TRIPPING DETAILS(EL & DR) FOR ENICL AND PKTCL

ENICL Lines:

LINE NAME	RESPECTIVE SUB-STATION
Purnea –Biharshariff 400 KV D/C Line	Purnea S/S & Biharsharif S/S
Alipurduar-Siliguri 400 KV D/C Line	Alipurduar S/S & Siliguri S/S
Alipurduar-Bongaigaon 400 KV D/C Line	Alipurduar S/S & Bongaigaon S/S

PKTCL lines:

LINE NAME	RESPECTIVE SUB-STATION
Kharagpur-Chaibasa 400 kV D/C line	Kharagpur S/S & Chaibasa S/S
Purulia –Ranchi 400 kV D/C line	Purulia S/S & Ranchi S/S

Therefore, Sterlite Power has requested for providing the Event Logger and Disturbance Report time to time for their lines so that they can analyse the tripping pattern on time.

Sterlite/Powergrid/WBSETCL may update.

Item No. B.15: Charging of 132KV Patratu(DVC) - Patratu(JSEB) tie line and Kolaghat(DVC) - Kolaghat(WBSETCL) tie line--DVC

It has been observed that 132KV, Patratu(DVC) - Patratu(JSEB) tie line and Kolaghat(DVC) - Kolaghat(WBSETCL) tie line are out since long. These lines are made on request to facilitate any shut-down/ maintenance purpose.

But, inter-state tie lines are meant for stability of any state network irrespective any power flow through it as per sec 40(a) of Elec Act 2003. It is learnt that at Kolaghat S/s of WBSETCL, all three ATRs have already been replaced and are all in service. DVC is supplying around 138MVA load to WBSEDCL between Burdwan S/s to Kharagpur S/s of DVC and it has been felt necessary that Kolaghat - Kolaghat tie be kept in service for reliability of power supply to WBSEDCL and stability of the grid. Similarly, Patratu(DVC) - Patratu(JSEB) tie line be also kept in service to obviate the low voltage problem at Patratu and North-karanpura S/s of DVC and stability of grid as well.

128th OCC felt that inter-state lines should be utilized to improve the reliability of the system and advised WBSETCL and JUSNL to charge 132KV Kolaghat(DVC) - Kolaghat(WBSETCL) and 132kV Patratu(DVC) - Patratu(JSEB) lines on continuous basis.

WBSETCL informed that 132kV Kolaghat(DVC) - Kolaghat(WBSETCL) line is being utilized during contingencies in radial mode and informed that ICT at Kolaghat may overload if the line charged in synchronous mode.

OCC advised to conduct a simulation study to verify the constraint before charging the line in synchronous mode. WBSETCL agreed.

DVC vide mail dated 10.01.17 informed that West Bengal SLDC has not agreed with synchronisation of DVC system with WBSETCL via 132kV network due to non availability of 132kv circuit breaker at WBSETCL end and high loading of 132kv KTPP - Kolaghat(WBSETCL) D/C with present peak load of Kolaghat S/S (above 130MW with traction)

In 129th OCC, JUSNL informed that charging attempt for Patratu(DVC) - Patratu(JSEB) tie line will be taken by end of January, 2017.

Regarding Kolaghat(DVC)- Kolaghat(WBSETCL) line, OCC preferred to carry out a simulation study to know the cause of constraints.

DVC and WBSETCL may update.

Item No. B.16: HIGH AMOUNT OF DEVIATION CHARGES PAYABLE BY BSEB ON ACCOUNT OF M/s. TALA HEP

SBPDCL vide letter dated 07.01.17 informed that the deviation charges incurred by M/s TALA HEP are to be borne by its beneficiaries, and BSEB being a major beneficiary, having a share of 25.5% has to bear a major portion of these deviation charges.

For the last 8 weeks, it has been observed, to their great concern that the deviation charges incurred by M/s TALA HEP have been continually high, amounting to as high as few crores per week. A summary report of the amount incurred by M/s TALA HEP as deviation charges, and consequently the amount to be borne by BSP(H)CL erstwhile BSEB, is attached as a table at **Annexure- B.16**.

From the statistics in this table; & discussion with ERLDC, it was concluded that a major percentage of bill for UI & Deviation payable by BSP(H)CL erstwhile BSEB, is on account of huge deviation charges incurred by M/s TALA HEP.

As such, ERLDC should keep scheduled generation near to actual generation or devise a mechanism to make deviation zero or minimum. Beneficiaries should not be charged for the high declared capacity (DC) given by TALA or CHUKHA HEP, as they are not responsible for the high mismatch between scheduled generation and actual generation of Bhutan generating station.

So, it is requested that the future scheduling for power purchase on behalf of M/s TALA HEP and M/s CHUKHA HEP should be done keeping in mind the concerns of its beneficiaries.

MS, ERPC assured that the matter is under consideration and will be resolved at the earliest.

The matter is being reviewed by ERPC and ERLDC.

ERPC/ERLDC may update.

Item No. B.17: HIGH VOLTAGE PROBLEM IN 400KV MERAMUNDALI GRID S/S

GRIDCO vide letter dated 07.01.17 intimated that presently Odisha is going through very high voltages at 400kV bus of Meramundali, Duburi and Mendhashal grid S/S. The situation is further worsened due to high reactive power flow from Meramundali to Angul pooling sub-station, from Duburi to Meramundali sub-station and from Kuchei to Duburi sub-station. It may be noted that, PGCIL has installed two nos. of 330 MVAr Bus reactors at Angul 765kV substation and two nos. of 125 MVAR Bus reactors at Ancul 400kV substation, thus resulting high reactive power flow from Meramundali to Angul & Duburi to Meramundali grid S/S. In view of the above OPTCL suggests the following as short term and long term measures to mitigate the high voltage issue as well as to improve the high reactive power flow situation.

Short term measure

- OPTCL will install 80 MVAr reactor at Meramundali 400kV S/S.
- The Angul-Meramundali Double circuit tie to be opened at both ends.

Long term measure

- The Meramundali-Angul Double circuit will be terminated at Meramundali (B). A letter regarding the above change has already been forwarded to CEA and will be placed in the next Standing Committee meeting of CEA. Meremundali(B) will be a new 400kV substation of OPTCL,approved by CEA and the work order to be issued shortly.

In view of the above and as the high voltage situation is menacing, it is requested to grant permission for the short term measures, mentioned above, to get relief from the high voltage issue and high reactive power flow. The system in the above condition will remain stable.

In 129th OCC, OPTCL informed that they are incurring substantial financial loss on account of reactive charges due to this overvoltage problem at 400 KV Meramundali substation and requested to explore the high voltage scenario by opening of 400 kV Angul-Meramundali D/C tie on trial basis.

ERLDC informed that the same may be granted as per real time grid conditions.

Further, OPTCL requested OCC to take up the issue of opening of LILOs of 400 kV Talcher-Meramundali & Bolangir –Meramundali lines at 765/400 kV Angul S/s which was already decided in 17th SCM meeting.

OCC viewed that as it is the matter related to Standing Committee of ER the same may be taken up with CEA/CTU.

MS assured to interact on this issue with CTU.

Subsequently, MS took up the issue with CTU and it was agreed that ERLDC will carry out study for Reactive power flow in OPTCL system.

ERLDC vide mail dated 06.02.17 has sought some data from OPTCL for carrying out the study.

ERLDC may present the load flow study.

Item No. B.18: Restoration of PLCC system of important JUSNL ties

In 119th OCC, JUSNL informed that the following:

a) In 220 KV Chandil –Santaldih line auto-reclosure has been enabled and termination done in PLCC panels at Chandil end but due to non-availability of PLCC panels at Santaldih(WBPDCL) end the A/R and PLCC scheme could not be activated.

b) In 220 KV Ramchandrapur-Joda line auto-reclosure has been enabled and termination done in PLCC panels at Ramchandrapur end but due to non-availability of PLCC panels at Joda (OPTCL) end the A/R and PLCC scheme could not be implemented.

Further, it was informed that JUSNL is ready to share their standby PLCC panels (BPL make) with WBPDCL (for Snataldih end) and OPTCL (for Joda end) to complete the PLCC schemes of both the above lines.

In 128th OCC, OPTCL informed that PLCC panels will be installed by 2nd week of January 2017.

In 129th OCC, OPTCL informed that PLCC panel will be commissioned by January,2017.

WBPDCL informed that PLCC system at santaldih end has been commissioned on 31.12.16 but the same could not be put into service due to some problem at Chandil (JUSNL) end LMUs and CVT points.

Subsequently, JUSNL vide letter dated 27.01.2017 intimated that PLCC for 220 kV Chandil-Santaldih line has been tested and commissioned successfully on 25.01.17.

JUSNL/OPTCL may update.

Item No. B.19: Concerned members may update the latest status.

B.19.1: Commissioning of 400 kV Ind-Bharath to Jharsuguda D/C (dedicated line)

In 126th OCC, Ind-Bharath informed that the CEA inspection for the line has been completed on 17.10.16 and PLCC work is In progress. They are expected to complete the line in all respect by first week of November, 2016.

OCC advised IBEUL to submit all the clearances (CEA clearance etc.) along with completion of line and communication system so that a special meeting could be convened before starting the commercial power transaction from IBEUL for final consideration of all aspects.

In 34th TCC, it was informed that construction of line has been completed but CEA clearance is still awaited.

In 128th OCC, IBEUL informed that the line will be commissioned by January 2017.

In 129th OCC, IBEUL informed that the commissioning is delayed due to severe ROW problems however, it is expected to be commissioned by February 2017.

IBEUL may update.

B.19.2: Status of construction of 400 kV Sterlite-Jharsuguda D/C sections

In 34th TCC, Vedanta explained the status of construction with a presentation. Updated status along with the target date is given below:

Activities	Nos	Status as on 15-Nov-16	Target completion	Remarks
Tower Foundation	64	60	30-Dec-16	4 DD+30 tower foundation concrete: volume increased from 742 m3 to 1118 m3
Tower Erection	64	***51***	10-Feb-17	757 MT balance tower material to be erected.(DD+30 is 7)
Stringing /OPGW Cabling & Testing	20.5 Km	***2.3 Km completed***.	28-Feb-17	Stringing can be started only after harvesting. i.e. Dec-16.

Sub station Bay	2	Equipment Erection, Cable Trench, Earthing Completed	Jan, 17	CR Panel errection, cabling & termination to be done, Testing to be carried out. CEA inspection to be done post completion
Statutory clearances	-	-	15-Mar-17	CEA inspection of line to be done Report generation to be done.
Line & Bay Charging	-	-	25-Mar-17	ERLDC clearance for line charging after attending CEA report punch points

Vedanta informed that significant progress has been made in last 5 months and the line will be commissioned by March, 2016. Vedanta requested to extend the removal of the LILO till March, 2017 as final commitment.

OPTCL added that since Vedanta has made substantial progress during last 5 months and the dead line for removal of the LILO may be extended till February, 2017.

TCC agreed and advised Vedanta to submit a fresh undertaking in affidavit form to CTU and ERPC stating that the dedicated line will be completed by 28.02.2017 with no further extension. Failing which, CTU/ERLDC is authorized to open the LILO with effect from 01.03.2017.

In 127th OCC, Vedanta updated that 43 towers erection have been completed.

OCC advised Vedanta to submit the affidavit as per the decision of 34th TCC latest by 30.11.2016.

OCC also advised Vedanta to complete the line by February,2017 as decided by ERPC. Vedanta assured.

Vedanta vide mail dated 06.02.17 updated the latest status. The latest status is enclosed at **Annexure-B.19.2**.

Vedanta may update.

B.19.3: Status of Bus Splitting schemes in Eastern Region

A. Bus Splitting of Powergrid Sub-stations

As per decision of Standing Committee of ER CTU was entrusted to do Bus splitting at 400 kV Maithon, Durgapur & Biharsariff S/Ss or ER. The latest status on the same are:

- 400 kV Maithon ---Completed
- 400 kV Durgapur--Completed
- 400 kV Biharshariff—Foundation work has been completed but shutdown are yet to be received to complete the work.

In 127th OCC, Powergrid informed that they are availing shutdown from 28.11.16.

In 128th OCC, Powergrid informed that bus splitting scheme has been implemented for Bus-II of 400kV Biharsharff S/s and Bus-I will be completed by 2nd week of January 2017.

In 129th OCC, Powergrid informed that bus splitting scheme for Bus-I will be completed by February, 2017.

Powergrid/BSPTCL may update.

B. Bus Splitting of Kahalgaon STPS Stage I&II, NTPC

In 24th ERPC meeting held on 27.04.2013, ERPC advised NTPC to go ahead with the bus-splitting scheme as it is a technical requirement for safe, secure operation of the grid.

In 32nd TCC, NTPC informed that they are going ahead with the implementation of Bus Splitting of Kahalgaon STPS Stage I&II and the implementation is expected to be completed by December, 2018.

In 126th OCC, NTPC has given the present status as follows:

- 400/132kV Switchyard package - bid opened on 14.03.16. Awarded on 04.05.2016.
- Site levelling – Site levelling package awarded, expected to be completed by November, 2016.
- Transformer package and Shunt reactor– have been awarded.

In 127th OCC, NTPC informed that the bus splitting will be completed by December, 2018.

In 128th OCC, NTPC informed that site levelling of 400kV side has been completed and 132kV side would complete by 31st March, 2017.

In 129th OCC, NTPC informed that site levelling has been completed and the target date for final completion will be maintained.

NTPC may update.

B.19.4: 11KV Auxiliary power supply of 400KV Berhampore Powergrid Substation.

In 34th TCC, WBSEDCL informed that the construction of dedicated line has been delayed due to ROW issues. The same has been resolved now and the construction of dedicated line will be completed by December, 2016.

WBSEDCL added that cable needs to be laid out for highway crossing for which cost estimate will be given to Powergrid within a week.

Powergrid agreed to do the payment after receiving the estimate.

WBSEDCL assured that on receipt of deposit from Powergrid all efforts will be made to resolve the issue on reasonable time.

In 128th OCC, WBSEDCL informed that work is in progress. PGCIL informed that requisite amount will be deposited shortly.

In 129th OCC, PGCIL informed that requisite amount will be deposited by tomorrow (i.e. 18.01.2017). WBSEDCL informed that work is in progress and expected to be completed by another 10 days.

WBSEDCL/Powergrid may update.

B.19.5: Run-back scheme of Sasaram 500MW HVDC B-t-B converter -- ERLDC

It is understood that the following run–back schemes are functional for the 500 MW B-t-B HVDC converter at Sasaram:

1. Tripping of any circuit of 400kV Biharshariff-Sasaram D/C line – reduction of HVDC power order to 250 MW
2. Tripping of both circuits of 400kV Biharshariff-Sasaram D/C line – complete blocking of the HVDC converter.

In this connection it is stated that the above run-back conditions were relevant when 400kV Biharshariff-Sasaram D/C line was the only AC source on the East side bus. However, at present due to existence of 765kV Sasaram-Fatehpur 765kV line along with 765/400kV Sasaram ICT, there would be no loss of AC voltage of the 400kV East bus, even if both circuits of Biharshariff-Sasaram 400kV D/C line trip.

It is to mention that on 19-12-16, the HVDC Sasaram power order had to be reduced to 250MW when 400kV Biharshariff-Sasaram-I was taken under planned shutdown. Thereafter, at 12:43 Hrs, the other 400kV circuit Biharshariff-Sasaram-II tripped due to transmission of DT signal from Biharshariff to Sasaram leading to complete blocking of the converter. However, such blocking was unwarranted as the 765kV Sasaram-Fatehpur line together with the 765/400kV ICT at Sasaram was still in service.

It is therefore suggested that the existing run-back scheme may be activated only when Sasaram 765/400kV ICT or Sasaram-Fatehpur 765kV line is under outage and bypassed under normal conditions. The scheme may be further reviewed when at least two units of Nabinagar TPS commence firm generation.

ERLDC explained the scheme in 128th OCC.

OCC decided to implement the revised scheme and advised Powergid to modify the scheme in coordination with CTU.

In 129th OCC, Powergrid informed that for implementing the scheme there is a requirement of modification in CCU which will be done by the OEM (Alstom). The same will be implemented by March,2017.

Powergrid/ERLDC may update.

B.19.6: 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

PGCIL has already commissioned the 2x315MVA 400/220kV Bolangir S/s by LILOing of 400kV Meramandali-Jeypore S/C line and 400/220 kV Keonjhar S/s with an objective of supplying power from ER grid to its adjoining areas in Odisha.

In 126th OCC, OPTCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x315MVA 400/220kV Bolangir S/s**	
a.	LILO of one circuit of Sadeipalli-Kesinga220 kV D/C line at Bolangir S/S	Only 7 towers left (Severe ROW problem). By Mar, 2017.
b.	LILO of one circuit of Katapalli-Sadeipalli220 kV D/C line at Bolangir S/S	Charged on 04.05.16
2.	**400/220 kV Keonjhar S/S**	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	By 2017.
b.	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By 2019.
3.	**400/220kV Pandiabil Grid S/s: Expected by June'16**	
a.	Pratapsasan(OPTCL)-Pandiabil (PG) 220 kV D/C line	Dec, 2017.
b.	LILO of one circuit of Atri-Puri (Samangara) 220 kV D/C line at Pandiabil (PG)	***March, 2017***

OPTCL may update.

B.19.7: 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV sub-stations at Chaibasa, Daltonganj & Dhanbad

In 125th OCC, JUSNL updated the latest status as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**Chaibasa 400/220kV S/s**	
a.	Chaibasa (POWERGRID) – Chaibasa (JUSNL) 220kV D/c	Completed.
b.	Chaibasa (POWERGRID) – Ramchandrapur (JUSNL) 220kV D/c	***March, 2017***
2.	**Daltonganj 400/220/132kV S/s: Expected by Mar'17**	
a.	Daltonganj (POWERGRID) – Latehar 220kV D/c	***By Dec, 2017.***
b.	Daltonganj (POWERGRID) – Garhwa 220kV D/c	Matching with S/s
C	Daltonganj (POWERGRID) – Daltonganj (JUSNL) 132kV D/c	Matching with S/s
d	Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c	Matching with S/s
3.	**Dhanbad 400/220 kV S/s: Awarded under TBCB**	
a.	Dhanbad – Dhanbad (Govindpur) (JUSNL) 220kV D/c	Matching with S/s

JUSNL may update.

B.19.8: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Alipurduar & 2x500 MVA Rajarhat sub-stations

In 126th OCC, *WBSETCL updated the latest status as follows:*

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x315MVA, 400/220kV Alipurduar sub-station**	
a.	Alipurduar (POWERGRID) – Alipurduar (WBSETCL) 220kV D/c (***Twin moose***)	April, 2017
2.	**2x500MVA, 400/220kV Rajarhat --- *by Feb, 2017***	
a.	Rajarhat-N. Town-3 (WBSETCL) 220 kV D/C line	Matching
b.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	*June, 2018*
c.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	*June, 2018*

WBSETCL may update.

Item No. B.20: Third Party Protection Audit

1. Status of 1st Third Party Protection Audit:

The compliance status of 1st Third Party Protection Audit observations is as follows:

Name of Constituents	Total Observations	Complied	% of Compliance
Powergrid	54	37	68.52
NTPC	16	14	87.50
NHPC	1	1	100.00
DVC	40	26	65.00
WB	68	27	39.71
Odisha	59	38	64.41
JUSNL	34	16	47.06
BSPTCL	16	5	31.25
IPP (GMR, Sterlite and MPL)	5	5	100.00

The substation wise status of compliance are available at ERPC website (Observations include PLCC rectification/activation which needs a comprehensive plan).

In 118th OCC, all the constituents were advised to comply the pending observations at the earliest. All the STUs informed that most of the observations are related to funding from PSDF. DPRs have been submitted to PSDF committee.

OCC advised all specially JUSNL and BSPTCL to send the revised DPRs at the earliest after clarifying the queries if any.

Members may comply.

2. Schedule for 2nd Third Party Protection Audit:

The latest status of 2nd Third Party Protection audit is as follows:

1)	Jeerat (PG)	Completed on 15th July 2015
2)	Subashgram (PG)	Completed on 16th July 2015
3)	Kolaghat TPS (WBPDCL)-	Completed on 7th August 2015
4)	Kharagpur (WBSETCL) 400/220kV -	Completed on 7th August 2015
5)	Bidhannagar (WBSETCL) 400 &220kV	Completed on 8th September, 2015
6)	Durgapur (PG) 400kV S/s	Completed on 10th September, 2015
7)	DSTPS(DVC) 400/220kV	Completed on 9th September, 2015
8)	Mejia (DVC) TPS 400/220kV	Completed on 11th September, 2015
9)	400/220/132kV Mendhasal (OPTCL)	Completed on 2nd November, 2015
10)	400/220kV Talcher STPS (NTPC)	Completed on 3rd November, 2015
11)	765/400kV Angul (PG)	Completed on 4th November, 2015
12)	400kV JITPL	Completed on 5th November, 2015
13)	400kV GMR	Completed on 5th November, 2015
14)	400kV Malda (PG)	Completed on 23rd February, 2016
15)	400kV Farakka (NTPC)	Completed on 24th February, 2016
16)	400kV Behrampur(PG)	Completed on 25th February, 2016
17)	400kV Sagardighi (WBPDCL)	Completed on 25th February, 2016
18)	400kV Bakreswar (WBPDCL)	Completed on 26th February, 2016
19)	765kV Gaya(PG)	Completed on 1st November, 2016
20)	400kV Biharshariff(PG)	Completed on 3rd November, 2016
21)	220kV Biharshariff(BSPTCL)	Completed on 3rd November, 2016

The list of observations for the above sub-stations is already available at ERPC website (www.erpc.gov.in). Respective constituents are requested to comply and submit the report to ERPC for regular update.

Members may note.

Item No. B.21: Inspection of Under Frequency Relays (UFR)

In 124th OCC, DVC informed that the UFR relays will be delivered by August, 2016 and the UFRs at 220/132/33 KV Ramgarh S/s will be replaced by next month.

In 125th OCC, DVC informed that the UFR relays are in transit and the UFRs at 220/132/33 KV Ramgarh S/s will be replaced by next month.

In 127th OCC, *DVC informed that the UFR relays at 220/132/33 KV Ramgarh S/s will be replaced by December, 2016.*

In 128th & 129th OCC, DVC informed that the UFR relays at 220/132/33 KV Ramgarh S/s will be replaced by January, 2017.

DVC may update the status.

The proposed UFR audit schedule for Third quarter of 2016-17 is placed below:

Sl No	Proposed Date	Substation/feeder inspected by the sub-group
1	Feb, 2017	220/132/33 KV Sampatchak of BSPTCL
2		132/33 KV Purnea of BSPTCL
4	Mar , 2017	220/132/33 KV Kalyaneswari of DVC
5		220/132/33 KV New Bishnupur of WBSETCL
6		132/33 KV Old Bishnupur of WBSETCL
7	Mar 2017	BRS (Liluah S/Stn.) of CESC

Members may decide.

Item No. B.22: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

The activity of the preparation of Crisis Management Plan for countering the cyber attacks and its implementation including the Mock Drills, audits etc. is being monitored by CEA regularly in line with crisis management plant of Ministry of Power. Power Utilities (including generation, transmission & distribution utilities) of eastern region are to furnish regularly the updated status to on the same to Chief Engineer, Distribution Planning & Development Division, CEA.

NTPC communicated their activity of the preparation of Crisis Management Plan for countering the cyber attacks vide letter dated 2nd August, 2013.

In 113th OCC, Member Secretary informed that during interaction with consultants of Grid Study Committee, NLDC agreed that they will plan for conducting workshops on crisis management plan for Cyber Security and few workshops will also be held in Eastern Region.

CESC vide letter dated 22.08.15 had furnished their status of the preparation of Crisis Management Plan (CMP) for Cyber attacks in their system.

Members may note and comply.

Item No. B.23: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.

In 84th OCC meeting all constituents were requested to interact with BIS with intimation to ERPC and get certified as per CEA direction.

In 85th OCC NTPC informed that, NTPC-Farakka has been certified with IS 18001. Other constituents including OHPC requested to interact with BIS with intimation to ERPC and get certified as per CEA direction. The matter is getting reviewed by highest authorities with top priority.

In 88th OCC NTPC informed that, all NTPC stations in Eastern Region are certified with IS 18001. NHPC informed that, Teesta is also certified with IS 18001. After that, OHPC and CESC informed that their stations are certified with IS18001.

In 104th OCC, WBPDCL informed that Bandel TPS is certified with IS 18001.

OPTCL vide letter No. TB-SO-MISC-9/2010/1914 dated 20.12.2014 had proposed to go for IS 18001:2007 certification as per direction of CEA.

In 113th OCC, CESC informed that Budge-Budge Generating station (3x250 MW) has renewed their certification of BS 18001:2007.

In 121st OCC, it was informed that Kolaghat Generating station of WBPDCL has also received certification of IS 18001:2007 from BIS on 29.04.2016.

In 124th OCC, WBPDCL informed that Bakreswar Generating station is also received certification of IS 18001:2007 from BIS.

Members may note and update the status.

Item No. B.24: FORMULATION OF A SKILL PLAN FOR POWER SECTOR BASED ON THE ASSESSED SKILL GAP IN THE SECTOR

CEA vide letter dated 04.07.16 intimated that a meeting on the above subject was held in the Ministry of Power, New Delhi on 1st July,2016. The meeting was Chaired by the Additional Secretary Shri B.P.Pandey. Power Sector Skill Council (PSSC) made a presentation on the subject. The meeting was attended by the representatives of BEE, PSUs, CEA, PGCIL, NPTI, PFC etc.

The main emphasis made by the Additional Secretary are as follows:

- The Report has to be submitted by PSSC by 10th of July, 2016 clearly indicating the needs of training and sill gaps in power sector.
- All the data captured, analysis made and other facts in the draft skill plan have to be validated by CEA before finalization of the Report.

In this regard officials from PSSC may visit various formations of CEA and / or circulate the Draft Report for obtaining the relevant inputs and validation of the data gathered by them. Chairperson CEA has been appraised of the same.

Further to this, MoP vide their letter No.7/5/2015-T&R dated 01.07.2016 have sought information in the matter. Based on the letter of MoP a proforma has been prepared. It is requested that the relevant information pertaining to the sector/sub-sector as per the attached proforma (Attached at **Annexure-B.24**) may please be sent to CEA (by mail: ceahrd@gmail.com).

124th *OCC advised all the constituents to send the relevant information as per the proforma.*

Constituents may note and comply.

Item No. B.25: Energy Generation data management from Renewable Energy Sources

RES development Division, CEA has been receiving monthly generation details and installed capacity of Renewable Energy Sources from respective SLDCs and other authorized agencies. Some discrepancies has been found in the data as received by CEA and MNRE.

Constituents are requested to reconcile/confirmed the correct information at the earliest.

In 120th OCC, all the SLDCs were advised to submit the data to CEA as per the format given in **Annexure- B.25** with a copy to ERPC Secretariat.

In 121st OCC, SLDC West Bengal and SLDC Odisha informed that they have submitted the relevant data to CEA.

SLDCs may update.

Item No. B.26: Compilation of data for meeting Renewable Energy targets of 175 GW by 2020 -- Reference from MNRE

CEA vide letter dated 29.03.16 has referred Ministry of Power letter no. 23/2/2005-R &R(Vol-XI), dated 22.03.2016 & MNRE letter dated 02.03.2016 regarding compilation of data for meeting Renewable Energy targets of 175 GW by 2020.

Concerned State Utilities /Generating companies are requested to submit data of their respective control areas.

Members may update.

Item No. B.27: Reporting of Energy generated from renewable resources on daily basis--- ERLDC

Government of India has set an ambitious target to achieve 175 GW of renewable generation by year 2022. Renewable energy sources(RES) development division of CEA alongwith MNRE is continuously monitoring the progress in installation of renewable resources and also collecting actual generation data on monthly basis. However the energy injected from the renewable generating plants into the grid also needs to be monitored on daily basis and incorporated in the reports by NLDC, to determine the correct percentage of energy mix for whole country on any particular day. Thus the renewable generators/ concerned SLDC may furnish following data on daily basis:

a) Grid connected RES whose scheduling and metering is done as regional entity : Maximum/Time and energy injected(MWh) for the previous day (from the SEM meters on a daily basis till the AMR is commissioned/working)

b) Grid connected RES which is under state purview: Maximum/Time and energy injected(MWh) for the previous day. Concerned SLDCs to compile station wise / connection point wise energy injected into the state grid and send it RLDC on a daily basis.

The above data may be sent by mail to erldc.cal@gmail.com positively by 01:00hrs of the day i.ro data for the previous day. This is essential as the power supply report has to be sent by early morning hours for the previous day.

In 126th OCC, ERLDC informed that the data for renewable generation on daily basis is required from the constituents.

SLDC Odisha informed that generation data for renewable energy sources connected at 132 kV is possible but at lower voltage level connected to the distribution network is difficult to get. Moreover, the data on monthly basis is possible instead of daily basis.

WBSEDCL informed they will look into the matter and submit the renewable generation data to ERLDC.

OCC advised all the respective constituents to submit the data along with their comments, if any.

In 127th OCC, ERLDC informed that though they have received some data, but generation data on daily-basis is yet to be furnished by the respective generators.

OCC advised all the respective constituents to look into the matter and make possible to submit the data on daily-basis.

In 128th OCC, ERLDC informed that they are receiving the requisite data from Odisha and NTPC Talcher stations.

OCC advised all the other SLDCs to submit the data to ERLDC.

In 129th OCC, West Bengal informed that they will submit the information soon.

OCC advised all the other SLDCs to submit the data to ERLDC.

All SLDCs may kindly update.

Item No. B.28: Data of Peak Demand – Submission of hourly power cut data

The peak demand met figure calculated by CEA is a part of the monthly Power Supply Postion Report prepared by CEA, based on the data provided by five Regional Power committee (RPCs), who in turn collect the data from State / UTs and RLDCs. As per the present methodology being adopted for calculation of States /Regional peak demand met, the figure of peak demand met at any time in the month is taken as peak demand met for the month. For all India monthly peak demand met, the sum of five regional peaks met, which may occur at different points of time is taken.

The above methodology has been reviewed and it has been decided with the approval of Chairperson, CEA that Peak demand Met and Peak Demand in the country should be based on hourly all India demand data. The matter was taken up with POSOCO for getting the hourly data of peak demand met for each month in respect of all the regions in the country in the first week of following month and they have assured to furnish the same. To calculate the demand, data of hourly scheduled and unscheduled power-cuts / load shedding is also required, which is not available with POSOCO.

It is, therefore, requested that hourly figures of scheduled/ unscheduled power cuts/load shedding data may be collected from States / UTs and the same may be sent to CEA every month as per above schedule in the enclosed format, in spread sheet, so that hourly figures of peak demand can be calculated and incorporated in Power Supply Position report.

This data for a month may kindly be sent in the first week of each month, along with PSP data, starting from the data for the month of February, 2015. The format for sending the data of hourly scheduled and unscheduled power-cuts / load shedding has already been circulated.

In 110th OCC meeting, OCC advised all the concerned utilities (BSPTCL, JUSNL, OPTCL, WBSETCL & Sikkim) to send the data of hourly scheduled and unscheduled power-cuts / load shedding by mail to mserpc-power@nic.in latest by first week of each month.

In 129th OCC, JUSNL and BSPTCL agreed to furnish the data.

For the month of January, 2017 data has been received from OPTCL, CESC.

JUSNL BSPTCL, DVC &WBSETCL may update.

Item No. B.29: Reasons for demand –supply gap and its variation -- Agenda by NPC

It was deliberated in the 4th NPC meeting that monthly power supply position prepared & published by CEA based on the data furnished by the states reflected shortages in almost all the states. However, a number of those states intimated adequate availability of power. This meant that the deficit / shortage in such states was actually not the deficit in true sense but demand - supply gap due to reasons other than shortage of power. The other reasons for the demand - supply gap could be inadequate availability of power, transmission constraint, distribution constraint, financial constraint etc. The reason for demand –supply gap needed to be clearly mentioned to reflect true picture of power supply position in different states and also to invite attention of various agencies including policy makers to the specific problem areas in the power sector for suitable solution.

It was agreed by all the RPCs to advise the states in their respective regions to intimate broad break-up of demand –supply gap due to various reasons, or at least, the main reason(s) for demand supply in each month.

In 129th OCC, all the constituents are advised to comply.

Members may update.

Item No. B.30: Transfer capability determination by the states -- Agenda by NPC

In order to ensure, safe and secure operation of the grid, the states should carry out the power system study for operational planning and power transfer capability through their respective transmission links with the rest of the grid.

It was decided in the NPC meeting that to begin with, power system study for assessment of operational limits / power transfer capability for each state will be done by the concerned RLDC in association with concerned SLDC. Monthly TTC /ATC will be uploaded by the SLDCs at their respective websites and also communicated to concerned RLDC & NLDC subsequently.

33rd TCC felt that grid operator should have the information on how much power they can export and import and they should restrict to that figures in order to avoid major grid disturbances.

Accordingly, TCC advised all the constituents to place the details in monthly OCC meetings till they upload the information in their respective websites.

In 126th OCC, OCC *advised all the SLDCs to mention the constraints along with ATC/TCC figures.*

WBSETCL is uploading the ATC/TCC figures in their website.

OCC advised DVC, JUSNL and Odisha to upload ATC/TTC figures along with the constraint details in their website.

OCC advised Bihar to compute ATC/TTC figures and submit to ERPC and ERLDC at the earliest.

In 129th OCC, BSPTCL informed that they will compute their ATC/TTC and furnished to ERPC/ERLDC.

Import TTC for Feb 2017

State	TTC (MW)	Reliability Margin	ATC (MW)	RemarkS
WBSETCL	3960	300	3660	Not mentioned
OPTCL	1447	80	1367	Outage of one 220kV Meramundali-BhanjanagarCkt.
DVC	Not received			Received for month of Jan 17
BSPHCL	Not received			
JUSNL	713	100	613	**1)** 220 kV D/C Ranchi- Hatia-II **2)** 132 kV Jamtara- Maithon **3)** 132 kV Ramchandrapur- Adityapur line
SIKKIM	Not received			

Members may update.

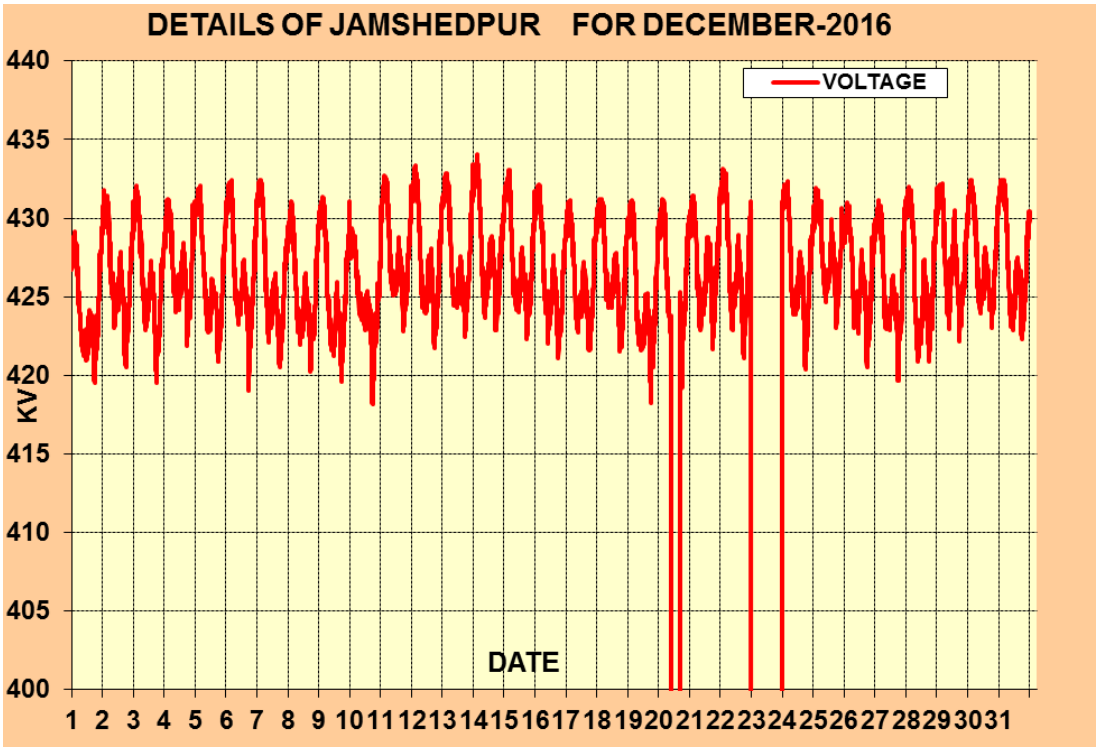
Item No. B.31: Ratification of projected Demand and generation for POC transmission charges and loss calculations for Q1(2017-18)

As The projected Demand and Generation of ER constituents to be considered in the base case for POC transmission charge and loss calculations for Q1(April,17-June,17) are attached at **Annexure-B.31** for ratification by the constituents.

Members may kindly go through and confirm the data.

Item No. B.32: Commissioning of 125MVAR bus reactor at 400KV Jamshedpur s/s

Voltage at 400KV Jamshedpur substation was observed more than 420KV in the month of Dec.16 and Jan 17. Voltage is also expected to improve if Jharkhand enhances its import from Chaibasa (by expediting its planned intra-state transmission system). At present JUSNL draws only 12-16 MW at Chaibasa. Therefore, the commissioning of 125MVAR bus reactor at 400KV Jamshedpur needs to be expedited.



Powergrid/ERLDC may update.

Item No. B.33: Implementation of New Web Based Scheduling at ERLDC

Presently, development of web-based scheduling software at ERLDC by PWC is completed and the testing of the software is at final stage. Now ERLDC is doing the parallel operation of the new WBES software along with the older one. The same software was already being installed at WRLDC and made operationalize with effective from 01st July, 2016. A detailed workshop cum interactive Session with all Stakeholders/beneficiaries shall be arranged during 20-21 February, 2017, wherein the detailed presentation of the software features and new scheduling procedures, associated issues and concerns will be deliberated. Some new procedure like surrender philosophy, LTA/MTOA requisition and ramping up/down rate consideration of ISGS had already been deliberated and approved in 123rd OCC, ERPC meeting. The beta version of the software will be available for testing after training to the stake holders. In this regards all users – regional constituents, generators (RLDC control Area) and regional entities are requested to nominate 1-2 officers involved in scheduling activity at your end in the proposed training cum joint exercise on WBES at ERLDC Kolkata during 20 – 21 February 2017.

ERLDC may update.

Item No. B.34: Persistent over drawl by Jharkhand

It has been observed since last few month, Jharkhand is over drawing continuously to the tune of 1.5 to 2mu per day. Jharkhand overdraw for the month November, December and January 2017 were around 40 mu, 63 mu and 52 mu respectively. Several times Jharkhand also advised to take un-requisition surplus power of NTPC plant on real time basis. However the quantum requisitioned by Jharkhand for URS power of NTPC plants was very less compare to its overdraw quantum. Numbers of instructions were also issued from ERLDC Control Room during real time operation to Jharkhand regarding the same issue. However the response of Jharkhand was not commensurate with criticality of the situation. Details of above violations would be presented by ERLDC for discussions/suggestions.

ERLDC may explain. Jharkhand may respond.

Item No. B.35: Long outage of important transmission elements

a) Non availability of Line Reactor of 400KV Malda-Purnea-I

In 123rd OCC, Powergrid informed that order has been placed for Reactor-1 and it will be commissioned by September, 2016.

In 129th OCC, Powergrid informed that the reactor will be dispatched by 25th January, 2017 and the same will be commissioned by February,2017.

Powergrid may update.

b) 400kV Meramundali-Mendhasal S/C

Tower collapsed near Mendhasal at 3 Locs, viz.Locs.180,181 & 182.

In 123rd OCC, OPTCL informed that tower 181 and 182 were restored. Restoration of tower 180 will take time due to water logging and the tower would be restored by September, 2016.

In 124th OCC, OPTCL informed that restoration of tower 180 will take time due to water logging and the tower would be restored by December, 2016.

In 128th & 129th OCC, OPTCL informed that the line is expected to be restored by January, 2017.

OPTCL may update.

c) 400kV Patna-Kishengunj D/C

Tower collapsed at Loc.51.

Powergrid informed that due to water logging problem the work is getting delayed however work is expected to be completed by 15th October, 2016.

In 127h OCC, Powergrid informed that line will be restored by July, 2017.

In 129th OCC,Powergrid informed that the work has been awarded.

Powergrid may update.

d) 400kV Purnea-Biharshariff D/C(under outage wef 23/08/16)

Three Nos.Tower(mid river) collapsed.

In 126th OCC, ENICL informed that the final assessment is under progress. The same will be submitted to ERPC and ERLDC.

In 129th OCC, ENICL informed that line will be restored by June, 2017.

ENICL may update.

e) Main bay of 315MVA ICT at Farakka(Tie element-400kV FSTPP-Malda-I)

The main bay is under s/d for upgradation wef 06/05/16.Powergrid may update stating status of the upgradation.

In 125th OCC, Powergrid informed that Bus-I end is ready and will be charged, Bus-II end is bypassed and will be ready for charge after getting shutdown.

In 128th OCC, NTPC informed that the bay will be in service by 2nd week of January, 2017.

In 129th OCC, NTPC informed that the tie transformer-III has been charged and the shutdown will be allowed by next week. Powergrid informed that the work will be completed by January, 2017.

Powergrid/NTPC may update.

f) 50MVAR Bus Reactor-I at Farakka (alongwith main and tie bays)

Under shutdown wef 31/05/16 for dismantling from old bay and re-installation in new bay in the dia of FSTPP GT#3.

In 125th OCC, Powergrid informed that reactor will be charged by end of October, 2016.

In 126th OCC, Powergrid informed that reactor will be charged by November, 2016.

In 128th OCC, Powergrid informed that the reactor will be charged by 2nd week of January, 2017.

In 129th OCC, NTPC informed that the shutdown will be allowed by next week.

Powergrid may update.

g) Tie bay of 125MVAR Bus reactor and 400kV Indravati-Indravati and Indravati(PG):

Under outage wef 18/03/16 due to R-Ph pole bursting of Tie CB. Due to non-availability of the tie bay, the Buses are coupled only via the tie bay of 400kV Rengali-Indravati and 400kVIndravati-Jeypore at Indravati and any outage of the lines would result in decoupling of the Buses.

In 125th OCC, Powergrid informed that main CB has some problem which will be taken care by OHPC/OPTCL.

In 129th OCC,OPTCL informed that the CB has reached at the site. The installation work will be completed by February,2017.

Powergrid/OHPC may update.

h) 220 kV Waria – Bidhannagar-II

The line is under outage wef 20.08.16 due to collapse of one no of tower collapse.

In 129th OCC, DVC informed that the line will be restored by July, 2017.

DVC may update.

i) 315MVA ICT-I at Meramundali

The ICT is under outage wef 12/11/16 due to damage after B-ph LA blasting.

In 129th OCC, OPTCL informed that the ICT reached the site and it will be in service by February 2017.

OPTCL may update.

j) 220kV Meramundali-Bhanjanagar-I

The line is under outage w.e.f 25/11/16 for conductor replacement work. OPTCL may furnish the details of conductor replacement being done and the expected date of restoration.
In 128th OCC, OPTCL informed that the conductor replacement work will be completed by January 2017. OPTCL added that type of conductor is ACSR Zebra.

In 129th OCC, OPTCL informed that the conductor replacement work will be completed by February 2017.

OPTCL may update.

Item No. B.36: Update on status of telemetry

CERC vide order dated 28.02.2016 on Petition No. 007/SN/2014 directed NLDC and respective RLDCs to update the status of telemetry every month at their respective websites and take up the issue of persistent non-availability of data from Generating Stations/substations at RPC meetings for appropriate action.

In 120th OCC, ERLDC informed that every month they were updating the status and posting at ERLDC website.

*In 129th OCC, all the respective constituents were advised to ensure the availability of telemetry data to ERLDC. The updated status is enclosed at **Annexure- B.36**.*

GM, ERLDC informed that some IPPs are not providing the telemetry data to ERLDC on continuous basis.

OCC endorsed the proposal of ERLDC to discontinue the scheduling for IPPs who were not ensuring the telemetry data to ERLDC on continuous basis as per the IEGC provisions.

Members may update.

Item No. B.37: Installation of PMUs in Eastern Region under URTDSM project

LOA for installation of PMUs in Eastern Region under URTDSM project was awarded to M/s Alstom on 15th January 2014. The contract has to be completed in all respect within 24 months from the award. The status of implementation may be informed since PMU data is very much important to real time shift operator for analyzing the security of the grid.

In 124th OCC, it was informed that out of 247 PMUs 46 have been installed.

OCC advised Powergrid to submit a report on latest status of implementation and advised to update the status on every OCC.

*In 126th OCC, Powergrid submitted the latest status which is given at **Annexure- B.37**.*

OCC advised POWERGRID to share the future installation and substation visit schedule with the members.

POWERGRID may update the status.

Item No. B.38: Status of Disturbance Recorder, Stand alone Event Logger and Time Synchronization equipment.

The status of DR/EL and GPS as updated in previous OCCs is enclosed at **Annexure-B.38**.

Constituents are also requested to furnish their list of new DR/EL which are not included in the list.

Members may update.

Item No. B.39: Status of Emergency Restoration System (ERS Towers) for Eastern Region constituents

The latest status of Emergency Restoration System (ERS towers) as well as the future plan of procurement was given at **Annexure- B.39**.

Members may update the latest status.

Item No. B.40: Non-commissioning of PLCC / OPGW and non-implementation of carrier aided tripping in 220kV and above lines.

According to CEA technical standard for construction of electric plants and electric lines -Clause 43(4) (c), transmission line of 220 KV and above should have single-phase auto-reclosing facility for improving the availability of the lines. However, from the tripping details attached June-August, 2016 it is evident that the some of 220kV above Inter & Intra-Regional lines do not having auto-reclose facility either at one end or at both ends. Out of these for some of the lines even PLCC/OPGW is not yet installed and carrier aided protection including Autorecloser facility is not yet implemented. Based on the trippings of June- August, 2016 and PMU analysis a list of such lines has been prepared and as given below:

List of line where auto reclose facility is not available(Information based on PMU data analysis)							
S. No	**Transmission Lines name**	**Date of Tripping**	**Reason of Tripping**	**Owner Detail**		**Present Status**	
				End-1	**End-2**	**OPGW/ PLCC Link available**	**AR facility functional**
1	400 KV ANGUL -TALCHER	02.06.16	B-N FAULT	PGCIL	NTPC		
2	400 KV BIHARSARIFF-VARNASI-I	07.06.16	B-N FAULT	PGCIL	PGCIL		
3	400KV BIHARSARIFF - BANKA-II	12.06.16	Y - N FAULT	PGCIL	PGCIL		
4	220KV SASARAM-SAHUPURI	12.06.16	B - N FAULT	PGCIL	UPTCL		
5	400 KV TALA -BINAGURI -IV	13.06.16	B - N FAULT	Durk Green	PGCIL		Binaguri end AR is healthy. Tala end AR is disabled.
6	400 KV KODERMA-BOKARO-I	14.06.16	B-N FAULT	DVC	DVC		

7	400 KV FARAKKA-KAHALGAON-IV	15.06.16	R-N FAULT	NTPC	NTPC	Yes	Yes and operated last on dated 28.09.2016.
8	400 KV MUZAFFARPUR-BIHARSARIFF-II	17.06.16	Y-N FAULT	PGCIL	PGCIL		
9	400 KV MERAMUNDALI-NEWDUBRI - I	20.06.16	B-N FAULT	OPTCL	OPTCL	PLCC available	Yes
10	400KV PATNA-BALIA-II	21.06.16	B-N FAULT	PGCIL	PGCIL		
11	400KV PATNA-KISHANGANJ-II	21.06.16	Y-N FAULT	PGCIL	PGCIL		
12	400KV PATNA-BALIA-I	21.06.16	R-N FAULT	PGCIL	PGCIL		
13	220KV BUDIPADAR-KORBA-II	23.06.16	Y-N FAULT	OPTCL	CSEB	PLCC available	will be activated in consultation with Korba
14	400 KV ARAMBAGH - BIDHANNAGAR	02.07.16	Y-N FAULT	WBSETCL	WBSETCL		
15	400 KV FARAKKA-DURGAPUR-I	06.07.16	Y-N FAULT	NTPC	PGCIL	Yes	Yes and operated last on 19.07.2016 & 06.11.2016
16	400 KV NEW RANCHI - CHANDWA - I	13.07.16	B-N FAULT	PGCIL	PGCIL		
17	220 KV TSTPP-RENGALI	17.07.16	EARTH FAULT	NTPC	OPTCL		
18	220KV BUDIPADAR-RAIGARH	21.07.16	EARTH FAULT	OPTCL	PGCIL	PLCC defective	
19	400 KV KOLAGHAT-KHARAGPUR	03.08.16	Y-N FAULT	WBPDCL	WBSETCL		
20	220 KV FARAKKA-LALMATIA	03.08.16	B-N FAULT .	NTPC	JUNSL	Yes	Old Relay and not functional. 7-8 months required for auto re-close relay procurement
21	400 KV PURNEA-MUZAFARPUR-I	03.08.16	R-N FAULT	PGCIL	PGCIL		
22	400 KV GAYA - CHANDWA -II	04.08.16	B-N FAULT .	PGCIL	PGCIL		
23	220 KV MUZAFFARPUR - HAZIPUR - II	10.08.16	B-N FAULT	PGCIL	BSPTCL		
24	220 KV ROURKELA - TARKERA-II	11.08.16	B-N FAULT	PGCIL	OPTCL	OPGW available	Expected to install protection coupler by Jan 17
25	220 KV CHANDIL-SANTALDIH	25.08.16	R-N FAULT	JUSNL	WBPDCL		
26	400 KV MPL-RANCHI-II	02.09.16	R-N FAULT	MPL	PGCIL		
27	220 KV BIHARSARIF-TENUGHAT	07.09.16	B-N FAULT	BSPTCL	TVNL		
28	400KV MERAMANDALI-STERLITE-II	10.09.16	Y-N FAULT	OPTCL	SEL	OPGW not commissioned	

29	220 KV RAMCHANDRAPUR - CHANDIL	22.09.16	B-N FAULT	JUSNL	JUNSL		
30	400KV SEL - MERAMUNDALI-I	22.09.16	B-N FAULT	SEL	OPTCL	OPGW not commissioned	
31	400 KV KOLAGHAT - CHAIBASA	28.09.16	B-N FAULT	WBPDCL	PGCIL		

34th TCC advised all the respective members to update the above list along with the last tripping status in next PCC meeting.

TCC further advised all the constituents to give the latest status of PLCC of other 220kV and above lines under respective control area.

TCC advised to review the status of above in lower forums report back in next TCC.

In 128th OCC, Powergrid and OPTCL updated the status as mentioned in above table.

OCC advised all the respective members to update the above list along with the last tripping status.

Respective members may update the status.

Item No. B.41: Non-commissioning / non-functional status of bus-bar protection at important 220 kV Sub-stations

It has been observed that at many 220 kV substations particularly that of STU, bus-bar protection is either not commissioned or non-functional. The non-availability / non-functionality of bus bar protection, results in delayed, multiple and uncoordinated tripping, in the event of a bus fault.This in turn not only results in partial local black out but also jeopardises the security of interconnected national grid as a whole. The matter was also pointed out during the third party protection audit which is being carried out regularly. Constituents are required to meet the audit compliance and commission or made bus –bar protection functional where ever it is not available. A list of such important 220 kV sub-stations as per the first third party audit is placed in the meeting.

In 51st PCC, members updated the status as follows:

Bus Bar Protection not availble (reccord as per third party protection audit)

Bihar				
Sl No	**Name of Substation**	**Bus Bar protection status**	**Date of audit**	**Present Status**
1	220 kV Bodhgaya	Not available	28-Dec-12	*Single bus and there is no space available for busbar protection*
Jharkhand				
1	220 kV Chandil	Not available	29-Jan-13	*LBB available*
2	220 kV Ramchandrapur	Not available	29-Jan-13	*Functional from October 2013*
3	220 kV Tenughat	Not available	12-Apr-13	
DVC				
1	220 kV Jamsedpur	Not available	10-Apr-13	*Single bus. Bus bar will be commissioned under PSDF.*
Odisha				
1	220 kV Mermandali	Not functional	30-Dec-12	*Commissioned in Mar 2015*

West Bengal				
1	220 kV Arambah	Not available	24-Jan-13	*Available in alarm mode. Planning to replace with numerical relay*
2	220 kV Jeerat	Not available	20-Dec-12	*Relays have been received at site.Installation is in progress*
3	220 kV Kolaghat	Not available	19-Dec-12	*Commissioned in May 2014*
4	220 kV Howrah	Not available	26-Mar-13	*Available*
Powergrid				
1	220 kV Silliguri	Not available	30-Mar-13	*Commissioned in Mar 2016*
2	220 kV Bolangir	Not available	31-Mar-13	*Commissioned in April 2013*

TCC further advised all the constituents to give the latest status of Bus Bar protection of other 220KV S/S under respective control area.

TCC advised to review the status of above in lower forums report back in next TCC.

129th OCC advised all the respective members to update the latest status.

Members may update.

Item No. B.42: Pollution mapping for Eastern Region

The Pollution Mapping work in ER was started with on-site measurement of ESDD and NSDD.

OCC advised all the respective constituents to coordinate with Powergrid for online filling of measurement data.

The updated status as updated by constituents & as intimated by Powergrid vide mail dated 19.10.16 is as given below:

	Scope (no. of locations)	Installed Locations	Number of locations where the results for 1st set of Measurements submitted	No. of locations where the results for 2nd set of Measurements submitted	Number of locations where the results for 3rd set of Measurements submitted	Number of locations where the results for 4th set of Measurements submitted
JUSNL	67	27	21	19	13	3
BSPTCL	59	52	52	40	4	0
WBSETCL	73	68	43	3	2	0
OPTCL	164	102	102	90	79	0
SIKKIM POWER	12	9	6	6	0	0
POWERGRID ER1	99	99	99	47	0	0
POWERGRID ER2	40	40	40	40	17	0
POWERGRID ODISHA	42	42	42	42	40	0

It is requested to submit the fourth and balance third set measurement result at the earliest.

Further, the schedule for measurement as informed vide letter dated 20.01.2016 & mail dated 21.01.2016 are as follows:

Measurement Schedule		
4th set	*5th set*	*6th set*
21st -30th Sep 2016	*21st -31st Jan 2017*	*21st -31st May 2017*

OCC advised all the constituents to complete the measurements as per the schedule.

Powergrid updated the latest status as follows:

	Scope (no. of locations)	Installed Locations	Number of locations where the results for 1st set of Measurements submitted	No. of locations where the results for 2nd set of Measurements submitted	Number of locations where the results for 3rd set of Measurements submitted	Number of locations where the results for 4th set of Measurements submitted
JUSNL	67	27	17	17	13	11
BSPTCL	59	52	40	29	4	3
WBSETCL	73	68	43	4	3	1
OPTCL	164	102	100	90	79	1
SIKKIM POWER	12	9	6	6	0	0
POWERGRID ER1	99	99	99	47	0	0
POWERGRID ER2	40	40	40	40	17	0
POWERGRID ODISHA	42	42	42	42	40	0

Powergrid informed that most of scheduled measurements till fourth set has not been completed yet, it is requested to complete the measurements and submit the results at the earliest.

Powergrid added that they prepared an online format to submit the details of measurements. Powergrid requested to fill the Google form(https://goo.gl/6375HJ) for onward submission of measurements for better analysis of results.

OCC advised all the constituents to complete the measurements as per the schedule.

Members may update.

Item No. B.43: Mock Black start exercises in Eastern Region – ERLDC

i) <u>The status of black start exercises</u>

The schedule of the proposed black-start exercises for F.Y 2016-17 is as follows:

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2016	*Completed on 16th July 2016*	Last Week of January 2017	***Scheduled on 25.01.17***
2	Maithon (To be tested in islanded mode)	1st week of June 2016	*Completed on 02.12.2016*	1st Week of February 2017	
3	Rengali	2nd week of June 2016	*Completed on 23rd Sept, 2016*	Last week of November 2016	***Scheduled on 25.01.17***
4	U. Indarvati	3rd week of June 2016	*Completed on 16th July 2016*	2nd week of February 2017	
5	Subarnarekha	1st week of October 2016	*Completed on 19.10.16*	1st week of January 2017	
6	Balimela	3rd week of October 2016	*Completed on* 29.11.16	1st week of March 2017	

7	Teesta-V	2nd week of Nov 2016		Last week of February 2017	February 2017
8	Chuzachen	Last Week of May 2016	***17th Jan, 2017 (Scheduled)***	January 2017	
9	Burla	Last Week of June 2016	*Completed on 28.07. 2016*	Last week of February 2017	
10	TLDP-III	1st Week of June 2016		2nd Week of January 2017	
11	TLDP-IV	Last Week of June 2016	*Completed on 17.*11.16	1st Week of February 2017	

127th OCC advised OHPC and WB SLDC to submit a report on blackstart exercise of Balimela and TLDP-IV respectively.

In 129th OCC, Chuzachen informed that blackstart exercise is scheduled to be done today at 2:00 PM.

The Mock black start exercise of Chuzachen unit was attempted on 17-01-17, as scheduled, but could not be concluded successfully due to unexpected tripping of unit and large mismatch between load and generation. Therefore to CHEP to plan another mock black start exercise in consultation with Sikkim electrical department before 31th March 2017

Members may update.

ii) Black start facility at Purulia Pump Storage Project (PPSP) of WBSEDCL

The Black-start operation of Purulia Pump Storage Project (PPSP), WBESDCL was deliberated in several OCC meetings. Subsequently, WBSEDCL has applied to CERC for exemption from Black Start mode and RGMO operation

CERC vide order dated 04.07.13 on Petition No. 149/MP/2012 directed that WBSEDCL to provide black –start facility after finalizing a suitable scheme in consultation with ERLDC through WBSEDCL

Subsequently, APTEL vide order dated 21.11.2015 on the Appeal No. 60 (filed by WBSEDCL) directed CEA to submit a report on the feasibility of black start of PPSP units.

Further, APTEL vide order dated 31.05.16, based on CEA report dated 18.04.16, directed CERC to ensure implementation of the recommendations of CEA within 6 months of the date of order.

In 34th TCC, WBSETCL informed that black start exercise can be conducted after commissioning of new 400kV PPSP S/s with 80 MVAR reactor.

WBSEDCL informed that they have contacted OEM Toshiba for feasibility of black start and OEM required to conduct a simulation with CEA recommendations.

TCC advised WBSEDCL/WBSETCL to submit the status to CERC.

In 128th OCC, WBSEDCL informed that they have filed a petition before CERC on 30th September, 2016 for extension of six months.

WBSEDCL may update the latest status.

iii) Testing of DG sets meant for Black start

Test run report of DG sets for blackstart has been received only from Odisha hydro units. The test run reports of other machines may be sent to erldc.cal@gmail.com and erldcoutage@gmail.com.

Constituents may kindly ensure compliance.

Item No. B.44: Restricted Governor /Free Governor Mode Operation of generators in ER

The latest status of units of ER under RGMO is available at ERPC website (http://www.erpc.gov.in/) under Operation>Important data.

*In 126th OCC requested all the generators to share their governor response with ERLDC in the group (**https://in.groups.yahoo.com/neo/groups/ er_gov_respons/info**). Members may also send their request for joining the group to **erldcprotection@gmail.com**.*

ERLDC had uploaded the unit wise responses in the group "er_gov_respons@yahoogroups.co.in." i.r.o the following events for monitoring of RGMO response of generator:

a) *On 19.01.2017, at 00:17hrs, Due to break down of 220 kV Akal-Jeerat Y-Phase jumper, all lines emanating from 220 kV Akal s/s got tripped. There was total 900 MW of wind generation loss in Rajasthan.*

WBSEDCL vide letter dated 18.01.2017 intimated that as per the direction of CERC and recommendations of CEA the FGMO mode of operation with manual intervention has been made operational for all the units of PPSP.

ERLDC may update.

Item No. B.45: Reactive Power performance of Generators

Generating stations have been monitored for certain sample dates in the month of January,17.

Power Plant	Max and Min Voltage observed for Jan 17 (KV)	Date for monitoring (Jan 17)
Farakka STPS	423,406	8,30
Khalgaon STPS	418,409	8,30
Talcher STPS	412,401	22,28
Teesta	423,399	9,15
Bakreshwar TPS	418,400	3,21
Kolaghat TPS	421,401	12,26
Sagardighi TPS	--	--
MPL	422,413	9,20
Mejia-B	--	--
DSTPS	424,412	14,12
Adhunik TPS	425,414	14,12

Sterlite	424,408	9,16
Barh	--	--
JITPL	--	--
GMR	417,402	16,27
HEL	--	
Kodarma	424,409	9,16

ERLDC may present the reactive performance.

a) Schedule for reactive capability tests

The following was status of regarding reactive capability testing:

a. Adhunik TPS(both units) –Yet to be confirmed by Adhunik
b. DSTPS (Unit#2 only pending) – done
c. Koderma TPS Unit#1 -- done on 08.08.2016
d. JITPL(both units) – Procedure given. Not yet done
e. Barh TPS – In June 2016
f. Raghunatpur (both units)
g. GMR (Three units)
h. *Haldia TPS (Unit #4)*

Members may update.

PART C:: OPERATIONAL PLANNING

Item no. C.1: Anticipated power supply position during March'17

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of March'17 were prepared by ERPC Secretariat on the basis of Provisional LGBR for 2015-16 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is at **Annexure-C.1**.

Members may confirm.

Item no. C.2: Shutdown proposal of transmission lines and generating units for the month of March'17

Members may finalize the Shutdown proposals of the generating stations for the month of March'17 as placed at **Annexure-C.2**.

ERLDC may place the list of line shutdown. Members may confirm.

Item no. C.3: Prolonged outage of Power System elements in Eastern Region

(i) Generating units:

Generating Station	UNIT NO	CAP(MW)	REASONS FOR OUTAGE	OUTAGE DATE
HALDIA	1	300	OVER HAULING	25-Dec-16
KAHALGAON	7	500	COAL SHORTAGE	03-Jan-17
RAGHUNATHPUR	1	600	PLANNED MAINTENENCE	7-Dec-16
BAKRESWAR	4	210	MAINT. WORK	27-Nov-16

JITPL	2	600	DUE TO LOW SCHEDULE	30-Nov-16
GMR	2	350	COAL SHORTAGE	09-Jan-17
MEJIA	1	210	BOILER TUBE LEAKAGE	03-Jan-17
MEJIA	2	210	BOILER TUBE LEAKAGE	30-Dec-16
BOKARO B	3	210	DESYNCHRONIZED DUE	10-Aug-16
BOKARO B	1	210	BOILER TUBE LEAKAGE	8-Nov-16
RAGHUNATHPUR	2	600	BOILER TUBE LEAKAGE	6-Nov-16
KODERMA	2	500	DESYNCHRONIZED DUE	31-Dec-16
BUDGE-BUDGE	1	250	HIGH TURBINE VIBRATION	27-Sep-16
KOLAGHAT	1	210	DESYNCHRONIZED DUE	7-Nov-16
KOLAGHAT	4	210	DESYNCHRONIZED DUE	27-Nov-16
BAKRESWAR	3	210	OVER HAULING	1-Nov-16
TENUGHAT	2	210	MAINT. WORK	7-Nov-16

(ii) Transmission elements

Name of the Line/Element	Outage	Reason
400 KV MEERAMANDALI- MENDHASAL S/C	23/05/16	TOWER COLLAPSED NEAR MENDHASAL,LOC NO 180,181,182.
400 KV PATNA-KISHANGANJ D/C	26/07/16	TOWER COLLAPSED AT LOC NO 51
400 KV BIHARSARIFF-PURNEA- I & II	23/08/16	Three numbers of tower badly damaged at location
220KV WARIA - BIDHANNAGAR-II	10/09/16	LINE UNDER B/D, TOWER COLLAPSED AT LOC NO 28
220 KV MERAMUNDALI – BHANJNAGAR-I	25/11/16	CONDUCTOR REPLACEMENT WORK
315 MVA ICT-I AT MEERAMUNDALI	12/11/16	UNDER B/D AS ICT GOT BURNT DUE TO B

Members may update.

Item no. C.4: Status of commissioning of generating station and transmission elements

New generating units:

S.No.	Power Plant	Plant Size	Expected date

New transmission elements:

Sl No.	Name of Element	Expected date
1	400kV Rajarhat-Purnea D/C (with LILO of one circuit each at Farakka and Gokarno)	
2	Augmentation of 400kV Farakka-Malda D/C with HTLS conductor	
3	400kV Ind-Bharath-Jharsuguda D/C	
4	400kV Talcher-Bramhapur-Gazuwaka D/C	
5	400kv Talcher-Rourkella(2nd D/C-Quad)	
6	400kV Sterlite-Jharsuguda D/C	
7	765kv Anugul-Srikakulum D/C	
8	400kV Sasaram-Daltonganj D/C &Daltonganj S/Stn	
9	400 kV Ranchi-Raghunathpur D/C	
10	220 kV TLDP-IV – NJP ckt-2	
11	220 kV Bidhansai-Cuttack D/C	
12	220kV Gola- Ranchi	

Members may update.

PART D:: OTHER ISSUES

Item no. D.1: UFR operation during the month of January'17

System frequency touched a maximum of 50.33Hz at 18:03Hrs of 14/01/17 and at 23:59Hrs of 26/01/17and a minimum of 49.71Hz at 18:20Hrs of 26/01/17. Accordingly, no report of operation of UFR has been received from any of the constituents.

Members may note.

Item no. D.2: Non-compliance of directions issued by SLDC

Vide clause no 5.5.1.(c)(h) of IEGC, non-compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal are to be reported to ERLDC for incorporating the same in weekly report to be prepared and published by ERLDC.

All SLDCs are to inform ERLDC the instances of non–compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal, within two days after the day of operation.

No report from any constituent has yet received. Hence, ERLDC would be considering 'Nil' report for all constituents for January'17.

Members may note.

Item no. D.3: Grid incidences during the month of January, 2017

Sl no	Disturbance Place	Date	Time	Generation loss (MW)	Load loss (MW)	Remark	Category
1	Kalyaneswari	10/01/17	22:05	0	150	At 22:00 hrs, SF6 gas / Air pressure L/O occurred in Mejia - I (L#239) bay at Kalyaneswari s/stn. Both the trip coil of Mejia - I (L#239) bay became in-operative to safe guard the breaker from any further trip/close operation after SF6 gas / Air pressure L/O. After 5 min, distance protection relay of Mejia - I (L#239) bay operated (as per data recorded by installed PMUs in Kalyaneswari) resulting tripping of all 220 kV lines except Burnpur (L#229) and ATRs through operation of 96 (bus bar trip lockout relay).	GD - I
2	NJP	19/01/17	0:12	50	120	At 00:12 hrs, 132 kV NJP(WB) – NJP(PG) S/C tripped from both end due to R phase CVT burst at WB end. At the same time, 132 kV NJP (WB) – Chalsa S/C tripped from both end on B-N fault and 220 kV bus-extension breaker at Binaguri S/S tripped on RXMVB4 protection. During this incident under frequency relay operated at NJP (WB) S/S. and 33 kV Dabgram, Radhabari and Raninagar feeders and 33/11 kV ATR – I & II at NJP (WB) tripped resulting power failure in 33 kV network	GD - I
3	Hatia	25/01/17	8:45	56	291	At 08:45hrs, total power failure occurred at Hatia-Ranchi-Namkom-PTPS complex of JUSNL. Following elements tripped during the incident. 220/132 kv ICT – I, II, III at Hatia (II), 132 kV Hatia (II) – Hatia (I) – II, 220 kV bus bar coupler at Hatia (II), 132 kV Hatia (I) – PTPS 9C, 132 kV Hatia(I) – HEC 8C, 132/33 kV 50 MVAR	GD - I

						ATR – I & II at Hatia (I), 132 kV Kamdara – Gumla S/C, 132 kV Kamdara – Hatia (I) S/C, 132/33 kV 50 MVAR ATR I & II at Kanke, 132/33 kV 100 MVAR ATR at Namkom III, 132 kV Namkom – Hatia (I) S/C, 220/132 kV ATR I & II at PTPS	
4	Kahalgaon	11/01/17	12:28	0	0	At 12:28 hrs, both main & tie breaker of Lakhisrai – I feeder tripped from KhSTPP end on DT receipt from remote end. R & B phase pole of main breaker opened instantaneously. But Y phase pole did not open resulting pole discrepancy followed by opening of all breakers connected to bus – I. After 2.5 sec, Y phase pole of Lakhisarai – I feeder also tripped.	-
5	Gaya	13/01/17	12:49	0	0	At 12:49 hrs, all the feeders connected to 220 kV bus bar I at Gaya i.e. 220 kV Gaya – Dehri – I, 220 kV Gaya – Bodhgaya – I and 220 kV Gaya – Sonenagar – II tripped in bus bar operation. In PMU data, no fault has been observed. In the DR data bus bar operation of bay 212 i.e. Sonenagar – II feeder fault current has been observed. Mal-operation of bus bar relay/CT core used by bus bar relay is suspected as the reason of the disturbance.	-
6	Kahalgaon	24/01/17	17:12	0	0	At 17:12 hrs, all the breakers connected to 400 kV bus – II at Kahalgaon tripped on operation of low impedance TEED #2 relay along with BFR (breaker failure relay) operation in 400 kV Kahalgaon – Maithon – I.	-

Members may note.

Item no. D.4: Any other issue

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ANNEXURES

Annexure-B.3 (I)

Schemes of Eastern Region funded under PSDF

State / UT	Sr. No.	Details of the Scheme	Nos. of Schemes	Grant Sanctioned (in Rs Crores)	Date of Sanction	Funds released (in Rs Crores) as on 30.11.2016	% age of fund Disbursed against Grant sanctioned
West Bengal	1.	Renovation and Upgradation of protection system of substations	2	108.60	31/12/2014	11.04	10.16%
	2.	The Renovation and Modernization of 220/132 kV STPS switch yard and implementation of Substaion Automation System.		23.48	5/9/2016	0	0%
Bihar	3.	Renovation and Upgradation of protection system of substations	2	64.22	11/05/2015	18.68	29.09%
	4.	Installation of capacitor bank for Improvement of Voltage profile in BSPTCL, Bihar.		18.88		0	0%
Odisha	5.	Renovation and Upgradation of protection system of substations	1	162.50	11/05/2015	19.52	12.01%
Eastern Regional Power Committee (ERPC)	6.	Creation and Maintanance of Web based Protection Database Management System and Desktop based Protection Setting Calculation Tool for Eastern Regional Grid.	1	20.00	17/03/2016	4.94	24.7%
POWERGRID	7.	Installation of STATCOMs in ER at Ranchi-New,Rourkela, Kishanganj and Jeypore substation of POWERGRID.	1	630.28	5/1/2016	0	0%
		TOTAL	**7**	**1027.96**			

Annexure-~~B~~.3 (II)

Reporting Format to the PSDF Project Monitoring Group

1. Name of the Scheme	
1.1 Name of the substation and its Location	
1.2 Executing Agency	
1.3 State/Region	
2. Date of Sanction order	
2.1 Date of Agreement of Entity with State Govt./NLDC	
2.2 Total Approved Cost of the Scheme	
2.3 Approved Grant by Monitoring Committee (Rs. In Lakhs)	
2.4 Date of Requisition by the Entity	
2.4.a) date and Reference of LOA	
2.4.b) Amount of LOA	
2.5 Date of Disbursement and amount	
2.5.1 : Ist Installment	
2.5.2: IInd installment	
2.5.3: IIIrd installment	
2.6 Date of Scheduled completion of Work	
2.7 Date of handing over of Site to entity (in case of turnkey projects)	

Report for the Month of MM / YY

No.	Supply Description	Qty. AS PER LOA	Quantity Received during Month	CUMMULATIVE PROGRESS Till date		BALANCE	Remarks
				Sch.	Act.		
1	item Details						
1.1							
1.2							
....							

	Erection Description	works as per LOA	Progress During Month	CUMMULATIVE PROGRESS Till date		Balance	
2	work details						
2.1							
2.2							
....							
3	Others						

Signature with seal of the Nodal Officer

Annexure- B.16

(+) means receivable, (-) means payable

DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION
FROM THE PERIOD 14.11.2016 TO 20.11.2016			**FROM THE PERIOD 14.11.2016 TO 20.11.2016**			**FROM THE PERIOD 14.11.2016 TO 20.11.2016**		
	BIHAR			TALA			CHUKHA	
14.11	4735521.55	286250.3	14.11	-6282246	0	14.11	3198728	0
15.11	1619476.13	446427.5	15.11	-6538307.84	0	15.11	3502562	0
16.11	1688070.84	172775.2	16.11	-5945495.93	0	16.11	3047359	0
17.11	1742629.03	151121.4	17.11	-7410927.48	0	17.11	4584929	0
18.11	-822636.5	156318.6	18.11	-5324392.72	0	18.11	3430551	0
19.11	1828384.23	25675.52	19.11	-524940.88	0	19.11	4262087	0
20.11	-1009805.99	136234.2	20.11	-5533393.49	0	20.11	4312400	0
TOTAL	**9781639.29**	**1374803**		**-37559704.34**	**0**		**26338615**	**0**
AMOUNT CLAIMED FROM BSEB	**7005483.61**	**-1374803**		-9577724.607			7806766	
ADJUSTMENT CHARGES	**2776155.68**	**0**						

DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION
FROM THE PERIOD 07.11.2016 TO 13.11.2016			**FROM THE PERIOD 07.11.2016 TO 13.11.2016**			**FROM THE PERIOD 07.11.2016 TO 13.11.2016**		
	BIHAR			TALA			CHUKHA	
7.11	2548035.3	-43812.8	7.11	-8644641.76	0	7.11	5358086	0
8.11	-2798237.5	-389993	8.11	-7007811.89	0	8.11	5076075	0
9.11	-1169907.73	-481567	9.11	-4446199.57	0	9.11	3812120	0
10.11	1854689.92	-141483	10.11	-5550834.64	0	10.11	3848966	0
11.11	569281.1	-113574	11.11	-7143622.08	0	11.11	3973494	0
12.11	995190.98	-59692.1	12.11	-6924014.78	0	12.11	3874722	0
13.11	-310669.75	-90358.3	13.11	-5788365.62	0	13.11	3552514	0
TOTAL	**1688382.32**	**-1320480**		**-45505490.34**	**0**		**29495978**	**0**
AMOUNT CLAIMED FROM BSEB	**-953933**	**-1320480**		-11603900.04			8742608	
ADJUSTMENT CHARGES	**-2642315.32**	**0**						

(-) MEANS PAYABLE, (+) MEANS RECIEVABLE

DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION
FROM THE PERIOD 31.10.2016 TO 06.11.2016			**FROM THE PERIOD 31.10.2016 TO 06.11.2016**			**FROM THE PERIOD 31.10.2016 TO 06.11.2016**		
	BIHAR			TALA			CHUKHA	
31.10	2432859.37	126806.6	31.10	-7205937.02	0	31.10	5503201	0
1.11	-3391101.46	949067.2	1.11	-10252843.59	0	1.11	7111770	0
2.11	-148517.6	351615.8	2.11	-9124072.94	0	2.11	5918657	0
3.11	-2202276.62	469652.8	3.11	-9590760.87	0	3.11	5769728	0
4.11	3953495.32	3679.74	4.11	-11621103.65	0	4.11	4880253	0
5.11	-3278612.59	239996.9	5.11	-7286740.93	0	5.11	4933344	0
6.11	2097717.55	369681.8	6.11	-7403412.03	0	6.11	4387459	0
TOTAL	**-536436.03**	**2510501**		**-62484871.03**	**0**		**38504412**	**0**
AMOUNT CLAIMED FROM BSEB	**-3817514.47**	**-2510501**		-15933642.11			11412708	
ADJUSTMENT CHARGES	**-3281078.44**	**-0.08**						

DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION	DATE	DEVIATION	ADDITIONAL DEVIATION
FROM THE PERIOD 24.10.2016 TO 30.10.2016			**FROM THE PERIOD 24.10.2016 TO 30.10.2016**			**FROM THE PERIOD 24.10.2016 TO 30.10.2016**		
	BIHAR			TALA			CHUKHA	
24.10	2354632.86	-115310	24.10	-12473194.27	0	24.10	9050850	0
25.10	171315.9	-228921	25.10	-10392714.22	0	25.10	7347471	0
26.10	-2956295.7	-146698	26.10	-10242509.34	0	26.10	6524947	0
27.10	-4498087.28	-674798	27.10	-10960256.81	0	27.10	6090168	0
28.10	-1334074.28	-118959	28.10	-10671237.24	0	28.10	4679040	0
29.10	823913.46	-53995.1	29.10	-10992903.75	0	29.10	4932213	0
30.10	2906453.25	-45205.2	30.10	-10983995.88	0	30.10	6218480	0
TOTAL	**-2532141.79**	**-1383886**		**-76716811.51**	**0**		**44843169**	**0**
AMOUNT CLAIMED FROM BSEB	**-6878070**	**-1383886**		-19562786.94			13291515	

ADJUSTMENT CHARGES	**-4345928.21**	**0**

FROM THE PERIOD 17.10.2016 TO 23.10.2016			**FROM THE PERIOD 17.10.2016 TO 23.10.2016**			**FROM THE PERIOD 17.10.2016 TO 23.10.2016**		
	BIHAR			TALA			CHUKHA	
17.10	-255353.27	-84950.6	17.10	-12388409.04	0	17.10	12711256	0
18.10	-3787656.24	-45126.5	18.10	-11961607.89	0	18.10	12795554	0
19.10	-4067265.09	-338556	19.10	-11672736.02	0	19.10	13174330	0
20.10	-7822438.3	-715435	20.10	-14926676.79	0	20.10	9995305	0
21.10	2681188.94	-21485.3	21.10	-10902747.51	0	21.10	9765672	0
22.10	1247125.66	-2553.63	22.10	-15565051.61	0	22.10	11927224	0
23.10	-3542795.51	-1674954	23.10	-13001818.17	0	23.10	9252210	0
TOTAL	**-15547193.81**	**-2883061**		**-90419047.03**	**0**		**79621552**	**0**
AMOUNT CLAIMED FROM BSEB	**-15845522**	**-2883061**		-23056856.99			23599828	
ADJUSTMENT CHARGES	-298328.19	-0.01						

FROM THE PERIOD 10.10.2016 TO 16.10.2016			**FROM THE PERIOD 10.10.2016 TO 16.10.2016**			**FROM THE PERIOD 10.10.2016 TO 16.10.2016**		
	BIHAR			TALA			CHUKHA	
10.10	1000433.42	-47270.1	10.10	-6723675.1	0	10.10	13914299	0
11.10	3691425.75	0	11.10	-10108688.28	0	11.10	13338147	0
12.10	4186567.91	-99827.6	12.10	-12084003.32	0	12.10	12284387	0
13.10	4302738.04	0	13.10	-11315121.9	0	13.10	13247566	0
14.10	2857098.62	-517016	14.10	-10475312.88	0	14.10	15056385	0
15.10	4875234.82	-65316.7	15.10	-7443478.96	0	15.10	14471407	0
16.10	1781327.06	-36639.7	16.10	-12081303.09	0	16.10	12934349	0
TOTAL	**22694825.62**	**-766070**		**-70231583.53**	**0**		**95246540**	**0**
AMOUNT CLAIMED FROM BSEB	**32532731**	**-766070**		-17909053.8			28231074	
ADJUSTMENT CHARGES	9837905.38	0						

FROM THE PERIOD 03.10.2016 TO 09.10.2016			**FROM THE PERIOD 03.10.2016 TO 09.10.2016**			**FROM THE PERIOD 03.10.2016 TO 09.10.2016**		
	BIHAR			TALA			CHUKHA	
03.10	-1382519.18	-145555	03.10	-13388309.49	0	03.10	11930054	0
04.10	-1442753.1	-80554.2	04.10	-12889226.23	0	04.10	11518219	0
05.10	-2437953.01	-71850	05.10	-11183640.39	0	05.10	9377425	0
06.10	1445031.33	-70289	06.10	-13203217.5	0	06.10	10282373	0
07.10	1980762.9	-3554.59	07.10	-11211405.9	0	07.10	10316683	0
08.10	4425489.53	-76871.6	08.10	-13115306.34	0	08.10	9766795	0
09.10	4307406.61	-428176	09.10	-12918741.47	0	09.10	8616651	0
TOTAL	**6895465.08**	**-876850**		**-87909847.32**	**0**		**71808201**	**0**
AMOUNT CLAIMED FROM BSEB	**7272885**	**-876850**		-22417011.07			21283951	
ADJUSTMENT CHARGES	377419.92	-0.01						

FROM THE PERIOD 26.09.2016 TO 02.10.2016			**FROM THE PERIOD 03.10.2016 TO 09.10.2016**			**FROM THE PERIOD 03.10.2016 TO 09.10.2016**		
	BIHAR			TALA			CHUKHA	
26.09	-2474853.71	-1352505	26.09	-8239263.27	0	26.09	6849355	0
27.09	-3516933.73	-1063716	27.09	-8491704.93	0	27.09	6152982	0
28.09	-8509099.04	-2119274	28.09	-8258789.48	0	28.09	6313465	0
29.09	2292585.66	-305057	29.09	-8395872.38	0	29.09	5645608	0
30.09	3902814.07	-151549	30.09	-9082339.28	0	30.09	4720578	0
01.10	-6844252.56	-663667	01.10	-13435126.96	0	01.10	11930205	0
02.10	-3998469.32	-261149	02.10	-13180881.52	0	02.10	12080737	0
TOTAL	**-19148208.63**	**-5916917**		**-69083977.82**	**0**		**53692930**	**0**
AMOUNT CLAIMED FROM BSEB	**-17852910**	**-5916917**		-17616414.34			15914584	
ADJUSTMENT CHARGES	1295298.63	0						

Annexure- B.19.2

Weekly Progress report on Construction of Dedicated Transmission Line:

As on dt. 6th February, 2017

Name of Applicant: Vedanta Ltd

1.	Dedicated Connectivity Line	Vedanta Switchyard to PGCIL Pooling station Sundargarh. 400KV D/c Line
2.	Length of Dedicated Connectivity Line	20.345 KM
3.	Type of Conductor	AL 59
4.	Conductor configuration	Twin Conductor
5.	Total Nos. of Transmission line towers	64 Nos.
6.	Tower Foundations Completed	61 Nos.(One no tower foundation is in progress ,36/0)
7.	Tower Erection Completed	54Nos.(Three nos tower erection is in progress,24/0,25/0,42/0)
8.	Stringing Completed	Stringing completed 4.839Km. (Stringing in progress in between 26/0 -28/0, 2.047Km)
9.	Completion Schedule of Dedicted transmission line along with the associated bay at Both ends.	28th Feb, 2017

Annexure-B.24

Manpower Engaged in Power Sector (Separately for Central, State and Private sector)

As on 31st March	Regular						Non-Regular				Grand Total (Regular+ Non Regular)
	Managerial and higher executive	Technical/ scientific officers	Technical Supervisory Staff	Technicians & operating Staff	Non-Technical	Total (Regular) {col 2 to 6}	Technical Trainees and apprentices	Work charged staff	Casual/ Temporary/ Out sourced	Total (Non-Regular) {col 8 to 10}	
1	2	3	4	5	6	7	8	9	10	11	
Actual											
2012											
2013											
2014											
2015											
2016											
Projected/ Estimated											
2017											
2018											
2019											
2020											
2021											
2022											
2023											
2024											
2025											
2026											
2027											

Details Regarding No. of Consumers and Connected Load etc.

(A) Utilities

As On 31st March of Financial year end	No. of Consumers	Connected Load (kW)	Consumption (MU)	Energy Available for Supply	T&D losses(%)	Per Capita Electricity Consumption(kWh)
1	2	3	4	5	6	7
2011-12						
2012-13						
2013-14						
2014-15						
2015-16						
2016-17						
2017-18						
2018-19						
2019-20						
2020-21						
2021-22						
2022-23						
2023-24						
2024-25						
2025-26						
2026-27						

(B) Non Utilities

As On 31st March of Financial year end	No. of Consumers	Connected Load (kW)	Consumption (MU)	Energy Available for Supply	T&D losses(%)	Per Capita Electricity Consumption(kWh)
1	2	3	4	5	6	7
2011-12						
2012-13						
2013-14						
2014-15						
2015-16						
2016-17						
2017-18						
2018-19						
2019-20						
2020-21						
2021-22						
2022-23						
2023-24						
2024-25						
2025-26						
2026-27						

(C) Utilities + Non Utilities

As On 31st March of Financial year end	No. of Consumers	Connected Load (kW)	Consumption (MU)	Energy Available for Supply	T&D losses(%)	Per Capita Electricity Consumption(kWh)
1	2	3	4	5	6	7
2011-12						
2012-13						
2013-14						
2014-15						
2015-16						
2016-17						
2017-18						
2018-19						
2019-20						
2020-21						
2021-22						
2022-23						
2023-24						
2024-25						
2025-26						
2026-27						

Details Regarding Installed Capacity, No. of Consumers and Connected Load etc.

(A) Installed Capacity (MW) - Utilities

As On 31st March	Hydro	Thermal				Nuclear	Renewable					Grand Total
		Steam	Gas	Diesel	Total (Thermal)		Wind	Solar	Biomass etc	Mini/Micro Hydel	Total (Renewable)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2012												
2013												
2014												
2015												
2016												
2017												
2018												
2019												
2020												
2021												
2022												
2023												
2024												
2025												
2026												
2027												

(B) Installed Capacity (MW) - Non Utilities

As On 31st March	Hydro	Thermal				Nuclear	Renewable					Grand Total
		Steam	Gas	Diesel	Total (Thermal)		Wind	Solar	Biomass etc	Mini/Micro Hydel	Total (Renewable)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2012												
2013												
2014												
2015												
2016												
2017												
2018												
2019												
2020												
2021												
2022												
2023												
2024												
2025												
2026												
2027												

(C) Installed Capacity (MW) - (Utilities + Non Utilities)

As On 31st March	Hydro	Thermal				Nuclear	Renewable					Grand Total
		Steam	Gas	Diesel	Total (Thermal)		Wind	Solar	Biomass etc	Mini/Micro Hydel	Total (Renewable)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2012												
2013												
2014												
2015												
2016												
2017												
2018												
2019												
2020												
2021												
2022												
2023												
2024												
2025												
2026												
2027												

Annexure-B.25

Installed Capacity (MW) and Generation (MU) from renewable Resources (Injected into the Grid)

1. State/Centre :
2. Month :
3. Year :

Renewable Resources/Organizations	Installed Capacity (MW) as on last date of the month			Generation (MU) during the month : ~~January~~			Cumulative Generation (MU) during the 1st April ~~2015~~ to end of month		
Renewable Energy Resources	Central Sector	State Sector	Private Sector	Central Sector	State Sector	Private Sector	Central Sector	State Sector	Private Sector
1. Wind									
2 a. Solar (1 MW & above)									
2 b. Solar (Less than 1 MW)									
3. Biomass									
4. Bagasse									
5. Small Hydro (1 MW to 25 MW)									
6. Any Other (Please Specify the resources)									
Total									

Annexure- B.31

Generation Projection (Apr 2017 - June 2017)

				Generation declared Commercial from 1st July '16 to 31st Dec'16					Generation declared/expected to be declared Commercial from 1st Jan'17 to 31st Mar'17								
Sl. No.	Entities	Region	Projections based on 3 Years Data	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	TOTAL	Comments From DICs /Others (if any)	Figure as per Comments/ PoC Data	Projected Generation before normalization w.r.t projected All India Peak Demand
			(MW)			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)	(MW)			(MW)
1	West Bengal	ER	5425											5425			5425
2	Odisha	ER	3723											3723	As per GRIDCO	3350	3350
3	Bihar	ER	203											203			203
4	Jharkhand	ER	419											419			419
5	Sikkim	ER	0											0			0
6	Chujachan	ER	112											112			112
7	DVC	ER	4440											4440	As per data given by DVC	3843	3843
8	Durgapur Steel	ER															
9	Koderma TPP	ER															
10	Bokaro TPS	ER															
11	Raghunathpur	ER															
12	MPL	ER	1007											1007			1007
13	Teesta	ER	535											535	As per NHPC	510	510
14	Kahalgaon	ER	2197											2197			2197
15	Farakka	ER	1893											1893			1893
16	Talcher	ER	971											971			971
17	Rangeet	ER	70											70	As per NHPC	60	60
18	Corporate Power	ER												0			0
19	Adhunik Power	ER	359											359			359
20	Barh	ER	1225											1225			1225

Generation Projection (Apr 2017 - June 2017)

				Generation declared Commercial from 1st July '16 to 31st Dec'16					Generation declared/expected to be declared Commercial from 1st Jan'17 to 31st Mar'17								
Sl. No.	Entities	Region	Projections based on 3 Years Data	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	TOTAL	Comments From DICs /Others (if any)	Figure as per Comments/ PoC Data	Projected Generation before normalization w.r.t projected All India Peak Demand
			(MW)			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)	(MW)			(MW)
21	Kamalanga TPP (GMR)	ER	613											613			613
22	JITPL	ER	1147											1147			1147
23	Jorethang	ER	95											95			95
24	Bhutan	ER	1153											1153			1153
	TOTAL		25585					0					0	25585			25585

Note:

1. Projections are based on monthly maximum injection in the last 3 years from actual metered data.
2. Generation forecast has been done based on the following criteria
(i) If there is an increasing trend then last year average generation has been considered
(ii) Otherwise average of past three year average generation has been considered
3. In case of new generators where past data was not available following has been assumed
(i) 1.0 plf for hydro generators
(ii) 0.7 plf for thermal generators.
(iii) 0.3 plf for gas stations
4. In case of the re-organized states of Andhra Pradesh and Telangana Generation is divided in the ratio 53.89% for Telangana and 46.11% for Andhra Pradesh for FY 2012-13 and 2013-14.
This is as per letter No.CE/COMML./APPCC/DE-COMML/POC-DATA-15-16/D.No/15 dtd. 09.10.15 as received from APTRANSCO.

DEMAND FORECAST USING PAST 3 YEARS DATA (Apr 2017 - June 2017)

	2014-15			2015-16			2016-17			1	2	3	4	Data given by DICs	Comments
	Apr-14	May-14	Jun-14	Apr-15	May-15	Jun-15	Apr-16	May-16	Jun-16	2014-15 Average	2015-16 Average	2016-17 Average	Projected Demand for (Apr 2017 - June 2017) before normalization		
Bihar	2,410	2,230	2,289	2,945	2,630	2,892	3,521	3,638	3,441	2,310	2,822	3,533	4,112		
DVC	2,452	2,590	2,520	2,547	2,610	2,719	2,562	2,478	2,686	2,521	2,625	2,575	2,628	2770	As per data given by DVC
Jharkhand	1,037	961	1,001	1,043	1,067	1,083	1,177	1,498	1,119	1,000	1,064	1,265	1,375		
Odisha	3,764	3,744	3,723	3,850	3,880	3,824	4,012	3,898	3,970	3,744	3,851	3,960	4,068	4323	As per data given by GRIDCO
West Bengal	7,300	7,524	7,159	7,517	7,629	7,853	7,602	7,641	7,542	7,328	7,666	7,595	7,797		
Sikkim	80	78	78	77	77	83	112	93	93	79	79	99	106		
Bhutan															
Eastern Region	**16,309**	**16,342**	**16,094**	**17,304**	**17,221**	**17,710**	**18,345**	**18,596**	**18,213**						

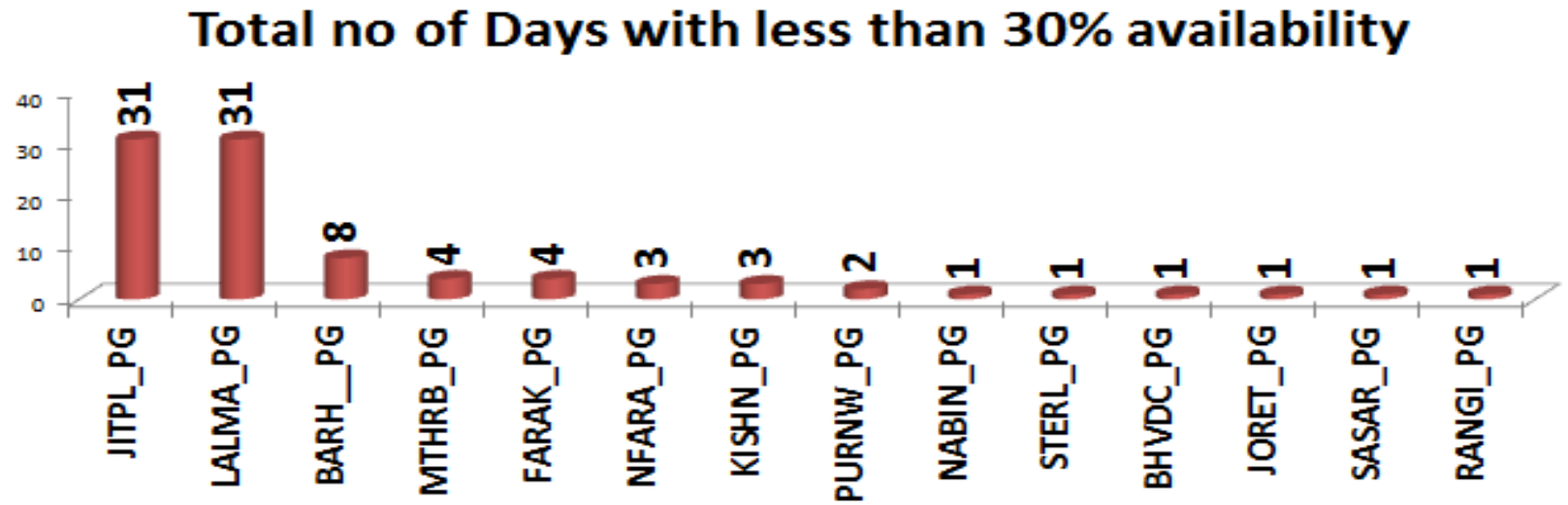
Notes

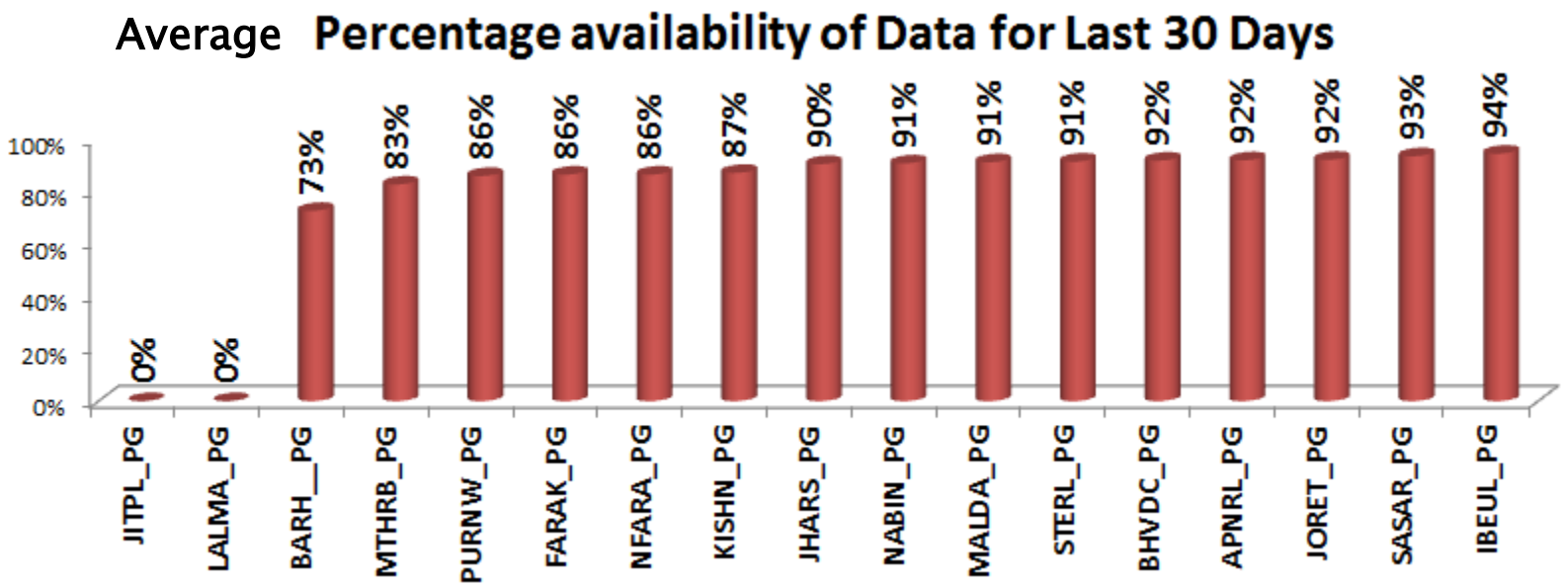
1. Projections are based on the past 3 years' monthly Peak Demand Met data available on the website of CEA
2. The above projections are being done for financial year 2017-2018 (Q1) i.e Apr 2017 to June 2017
3. Projections are being done based on the forecast function available in MS Office Excel
4. In case of the re-organized states of Andhra Pradesh and Telangana Maximum Demand is divided in the ratio 53.89% for Telangana and 46.11% for Andhra Pradesh for FY 2012-13 and 2013-14. This is as per letter No.CE/COMML./APPCC/DE-COMML/POC-DATA-15-16/D.No/15 dtd. 09.10.15 as received from APTRANSCO.
4. CEA Reports can be accessed from the following links:

http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-06.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-05.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-04.pdf
http://cea.nic.in/reports/monthly/powersupply/2014/psp_peak-05.pdf
http://cea.nic.in/reports/monthly/powersupply/2014/psp_peak-06.pdf
http://cea.nic.in/reports/monthly/powersupply/2015/psp_peak-04.pdf
http://cea.nic.in/reports/monthly/powersupply/2015/psp_peak-05.pdf
http://cea.nic.in/reports/monthly/powersupply/2015/psp_peak-06.pdf

Data availability status for last 31 Days.

Annexure- B.36





Data availability status for last 30 Days.

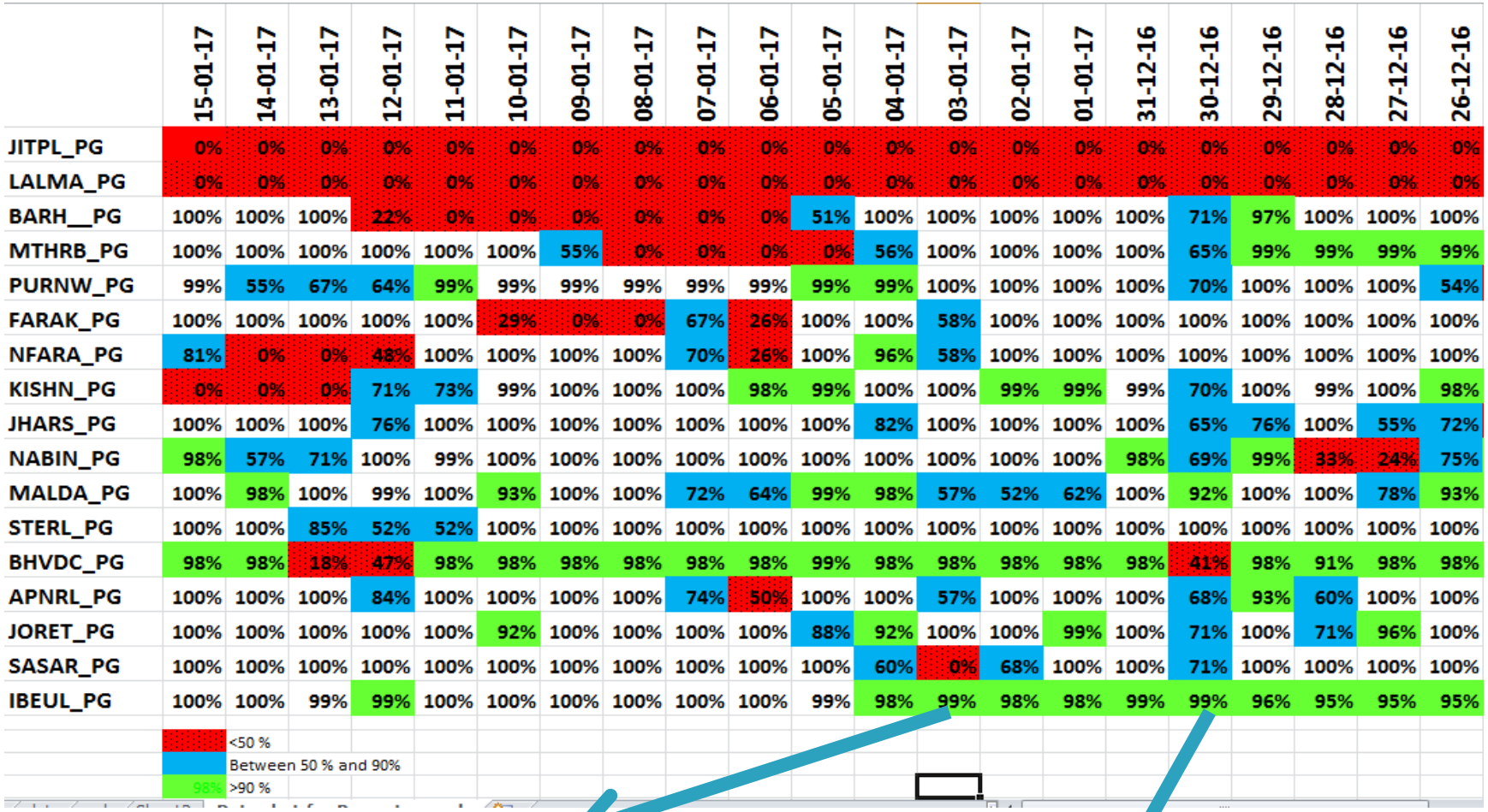
	15-01-17	14-01-17	13-01-17	12-01-17	11-01-17	10-01-17	09-01-17	08-01-17	07-01-17	06-01-17	05-01-17	04-01-17	03-01-17	02-01-17	01-01-17	31-12-16	30-12-16	29-12-16	28-12-16	27-12-16	26-12-16
JITPL_PG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
LALMA_PG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BARH__PG	100%	100%	100%	22%	0%	0%	0%	0%	0%	0%	51%	100%	100%	100%	100%	100%	71%	97%	100%	100%	100%
MTHRB_PG	100%	100%	100%	100%	100%	100%	55%	0%	0%	0%	0%	56%	100%	100%	100%	100%	65%	99%	99%	99%	99%
PURNW_PG	99%	55%	67%	64%	99%	99%	99%	99%	99%	99%	99%	99%	100%	100%	100%	100%	70%	100%	100%	100%	54%
FARAK_PG	100%	100%	100%	100%	100%	29%	0%	0%	67%	26%	100%	100%	58%	100%	100%	100%	100%	100%	100%	100%	100%
NFARA_PG	81%	0%	0%	48%	100%	100%	100%	100%	70%	26%	100%	96%	58%	100%	100%	100%	100%	100%	100%	100%	100%
KISHN_PG	0%	0%	0%	71%	73%	99%	100%	100%	100%	98%	99%	100%	100%	99%	99%	99%	70%	100%	99%	100%	98%
JHARS_PG	100%	100%	100%	76%	100%	100%	100%	100%	100%	100%	100%	82%	100%	100%	100%	100%	65%	76%	100%	55%	72%
NABIN_PG	98%	57%	71%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	98%	69%	99%	33%	24%	75%
MALDA_PG	100%	98%	100%	99%	100%	93%	100%	100%	72%	64%	99%	98%	57%	52%	62%	100%	92%	100%	100%	78%	93%
STERL_PG	100%	100%	85%	52%	52%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
BHVDC_PG	98%	98%	18%	47%	98%	98%	98%	98%	98%	98%	99%	98%	98%	98%	98%	98%	41%	98%	91%	98%	98%
APNRL_PG	100%	100%	100%	84%	100%	100%	100%	100%	74%	50%	100%	100%	57%	100%	100%	100%	68%	93%	60%	100%	100%
JORET_PG	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	88%	92%	100%	100%	99%	100%	71%	100%	71%	96%	100%
SASAR_PG	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	60%	0%	68%	100%	100%	71%	100%	100%	100%	100%
IBEUL_PG	100%	100%	99%	99%	100%	100%	100%	100%	100%	100%	99%	98%	99%	98%	98%	99%	99%	96%	95%	95%	95%

<50 %

Between 50 % and 90%

98% >90 %

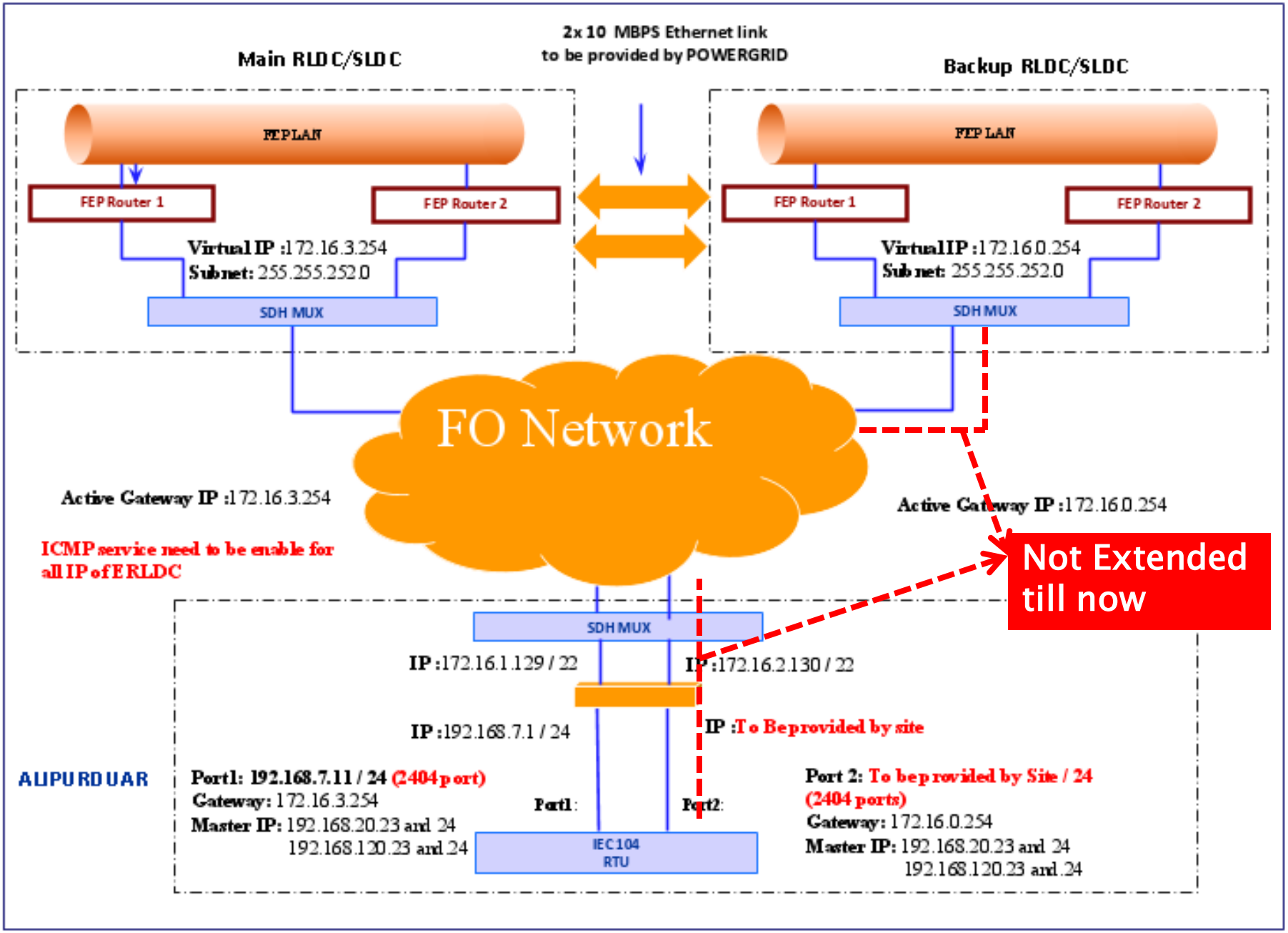
Data availability status for last 30 Days.



	15-01-17	14-01-17	13-01-17	12-01-17	11-01-17	10-01-17	09-01-17	08-01-17	07-01-17	06-01-17	05-01-17	04-01-17	03-01-17	02-01-17	01-01-17	31-12-16	30-12-16	29-12-16	28-12-16	27-12-16	26-12-16
JITPL_PG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
LALMA_PG	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BARH__PG	100%	100%	100%	22%	0%	0%	0%	0%	0%	0%	51%	100%	100%	100%	100%	100%	71%	97%	100%	100%	100%
MTHRB_PG	100%	100%	100%	100%	100%	100%	55%	0%	0%	0%	0%	56%	100%	100%	100%	100%	65%	99%	99%	99%	99%
PURNW_PG	99%	55%	67%	64%	99%	99%	99%	99%	99%	99%	99%	99%	100%	100%	100%	100%	70%	100%	100%	100%	54%
FARAK_PG	100%	100%	100%	100%	100%	29%	0%	0%	67%	26%	100%	100%	58%	100%	100%	100%	100%	100%	100%	100%	100%
NFARA_PG	81%	0%	0%	48%	100%	100%	100%	100%	70%	26%	100%	96%	58%	100%	100%	100%	100%	100%	100%	100%	100%
KISHN_PG	0%	0%	0%	71%	73%	99%	100%	100%	100%	98%	99%	100%	100%	99%	99%	99%	70%	100%	99%	100%	98%
JHARS_PG	100%	100%	100%	76%	100%	100%	100%	100%	100%	100%	100%	82%	100%	100%	100%	100%	65%	76%	100%	55%	72%
NABIN_PG	98%	57%	71%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	98%	69%	99%	33%	24%	75%
MALDA_PG	100%	98%	100%	99%	100%	93%	100%	100%	72%	64%	99%	98%	57%	52%	62%	100%	92%	100%	100%	78%	93%
STERL_PG	100%	100%	85%	52%	52%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
BHVDC_PG	98%	98%	18%	47%	98%	98%	98%	98%	98%	98%	99%	98%	98%	98%	98%	98%	41%	98%	91%	98%	98%
APNRL_PG	100%	100%	100%	84%	100%	100%	100%	100%	74%	50%	100%	100%	57%	100%	100%	100%	68%	93%	60%	100%	100%
JORET_PG	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	88%	92%	100%	100%	99%	100%	71%	100%	71%	96%	100%
SASAR_PG	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	60%	0%	68%	100%	100%	71%	100%	100%	100%	100%
IBEUL_PG	100%	100%	99%	99%	100%	100%	100%	100%	100%	100%	99%	98%	99%	98%	98%	99%	99%	96%	95%	95%	95%

On 03rd Jan 2017 at 00:21 Hrs, data from 7 nos of stations (Farakka, Kahalgaon, APNRL imp Gen Stn.) failed.
Data restored after 10 Hrs.

On 30th Dec 2016 at 04:36 Hrs, all ICCP links except WBSETCL failed. 29 Nos PGCIL/NTPC/NHPC/IPP Stations also failed. Restored at 11:30 Hrs after around 7 Hrs.


2x 10 MBPS Ethernet link
to be provided by POWERGRID
Main RLDC/SLDC
Backup RLDC/SLDC
FEP LAN
FEP Router 1
FEP Router 2
Virtual IP : 172.16.3.254
Subnet: 255.255.252.0
SDH MUX
FEP LAN
FEP Router 1
FEP Router 2
Virtual IP : 172.16.0.254
Subnet: 255.255.252.0
SDH MUX
FO Network
Active Gateway IP : 172.16.3.254
ICMP service need to be enable for all IP of ERLDC
Active Gateway IP : 172.16.0.254
Not Extended till now
SDH MUX
IP : 172.16.1.129 / 22
IP : 172.16.2.130 / 22
IP : 192.168.7.1 / 24
IP : To Be provided by site
ALIPURDUAR
Port1: 192.168.7.11 / 24 (2404 port)
Gateway: 172.16.3.254
Master IP: 192.168.20.23 and 24
192.168.120.23 and 24
Port1:
Port2:
IEC 104
RTU
Port 2: To be provided by Site / 24
(2404 ports)
Gateway: 172.16.0.254
Master IP: 192.168.20.23 and 24
192.168.120.23 and 24

IPP

- **JITPL (2 x 600MW)** –
  - Stopped reporting since 13-Dec-2016.
  - Express voice and **VOIP** yet to be provided. Stand By channel not yet made available.
  - Matter has been taken up to the highest level but …..
- GMR (3 x 350 MW):-
  - Express voice and **VOIP integration** with ERLDC not yet provided. Stand By channel not yet made available.

    KBUNL:-
  - Stand By channel not yet made available.
- IBEUL (2 x 350 MW):-
  - Unit Side data not available. **VOIP/Express** Voice Alternate Data channel yet to be provided.
- MPL:-
  - Alternate Data channel yet to be provided.

OLTC

1. NEW SASARAM @ 1500 MVA 765/400 kV ICT 1
2. ANGUL @ 1500 MVA 765/400 kV ICT 1
3. ANGUL @ 1500 MVA 765/400 kV ICT 3
4. ANGUL @ 1500 MVA 765/400 kV ICT 4
5. JHARSUGUDA @ 1500 MVA 765/400 kV ICT 1
6. JHARSUGUDA @ 1500 MVA 765/400 kV ICT 2
7. BOLANGIR @ 315 MVA 400/220 kV ICT 1
8. BIHARSHARIF @ 315 MVA 400/220 kV ICT 1
9. BIHARSHARIF @ 315 MVA 400/220 kV ICT 3
10. INDRAVATI (2ND ICT) @ 315 MVA 400/220 kV ICT 1
11. INDRAVATI (2ND ICT) @ 315 MVA 400/220 kV ICT 2
12. JEYPORE @ 315 MVA 400/220 kV ICT 1
13. KEONJHAR @ 315 MVA 400/220 kV ICT 1
14. KEONJHAR @ 315 MVA 400/220 kV ICT 2
15. MALDA @ 315 MVA 400/220 kV ICT 1
16. MUZAFFARPUR @ 315 MVA 400/220 kV ICT 3
17. DURGAPUR @ 315 MVA 400/220 kV ICT 1
18. DURGAPUR @ 315 MVA 400/220 kV ICT 2
19. RANCHI @ 315 MVA 400/220 kV ICT 1

OLTC

1. RANCHI @ 315 MVA 400/220 kV ICT 2
2. RENGALI @ 315 MVA 400/220 kV ICT 2
3. ROURKELA @ 315 MVA 400/220 kV ICT 2
4. ROURKELA @ 315 MVA 400/220 kV ICT 3
5. CHAIBASA @ 315 MVA 400/220 kV ICT 1
6. CHAIBASA @ 315 MVA 400/220 kV ICT 2
7. CHAIBASA @ 315 MVA 400/220 kV ICT 3
8. SUBHASGRAM (ICT I, II & V) @ 315 MVA 400/220 kV ICT 3
9. KISHANGUNJ @ 500 MVA 400/220 kV ICT 1
10. KISHANGUNJ @ 500 MVA 400/220 kV ICT 2
11. KISHANGUNJ @ 500 MVA 400/220 kV ICT 3
12. BARH @ 200 MVA 400/132 kV ICT 1
13. BARH @ 200 MVA 400/132 kV ICT 2
14. LAKHISARAI @ 200 MVA 400/132 kV ICT 3
15. ARRAH @ 100 MVA 220/132 kV ICT 1
16. ARRAH @ 100 MVA 220/132 kV ICT 2
17. MALDA @ 160 MVA 220/132 kV ICT 3
18. PURNEA @ 160 MVA 220/132 kV ICT 1
19. PURNEA @ 160 MVA 220/132 kV ICT 2

NTPC

- Lalmatia: (No data since Jan 2016).
  - 12 month passed but no improvements.
  - NTPC May update.
- Farakka NTPC:
  - Unit #5 MW and MVAr data not matching with site data, Unit # 6 LV side not available.
- Nabinagar NTPC :
  - Alternet Data channel not provided.
  - Unit HV side data.
  - No VOIP.

POWERGRID

- 2MBPS PDT link for Patna PMU has been terminated since 01-Jan-2017 without informing ULDC / ERLDC.

  No information when the link to be restored.

- **Data Intermittent /not available:**
  - Purnea 400kV (Frequent Failure of RTU)
  - Ranchi 400kV, Baripada, Gaya, Angul, Chaibasa
- **VOIP for following station not yet provided:**
  - Bolangir , Indravati , Jeypore , Keonjhar

WBSETCL

- Following station data not available:
  - TLDP 4.
  - Gokarna 400kV (400/220 kV ICT was first charged on 15th Sept'16),
  - Dharampur 220,
  - Krishnanagar 220,
  - Hura 220,
  - Foundry Park 220.
  - Dalkhola
  - Bantala
  - Lakshmikantapur
  - New Town
- Haldia (2 x 300MW) :
  - LV side data not yet provided.
- Sagardighi :
  - Unit 3 LV side (Unit) data not available.
- **Kolaghat TPS :** Kharagpur #1 MW/MVAR flow not available.

BSPHCL

- Data Not provided:
  - Darbhanga,
  - Valmikinagar and koshi (Connected with Nepal).
- Data Intermittent /not available:
  - Dumraon,Sonenagar,Khagaul ,Darbhanga,Dehri ,sultangaunj , Lakhisarai,Karmanasa,Kahalgaon,Jamaui ,Banka,Gopalganj,Kisanganj,Arrah ,Rajgir,Sipara ,Hajipur(New),Pusauli

JSUNL

- **Data Intermittent /not available:**
  - Hatia New 220,
  - Dumka 220.
  - Patratu(Intermittent)
  - DEOGHAR
  - DUMKA
  - GARHW
  - GOELKERA
  - JAMTARA
  - JAPLA
  - KENDOPOSI

DVC

- Data Not provided:
  - Giridhi 220,
- Durgapur TPS (DSTPS): Highly intermittent.

Annexure- B.37

PMU Installation and commissioning status of ER as on 19.10.2016

S.No	Region	State	Sub-Station	Owner/ Utility	S/S type	PMU	TOTAL PANEL QTY	PMU Delivery status	Cable Delivery status	Erection	Cable laying	CT/PT/DI termination	Commissioning	Integration	SAT	Remarks
			83			229	152	26	23	20	20	20	20	11	20	
1	ER-II	West Bengal	Arambagh	WBSETCL	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
2	ER-II	West Bengal	BAKRESHWAR TPS	WBSETCL	CR	4	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
3	ER-II	West Bengal	Bidhannagar	WBSETCL	CR	3	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
4	ER-II	West Bengal	JEERAT	WBSETCL	CR	2	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
5	ER-II	West Bengal	Kolaghat TPS	WBSETCL	CR	4	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	**PMU panel couldn't be delivered due to permission issue.**
6	ER-II	West Bengal	KASBA	WBSETCL	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
7	ER-II	DVC	DSTPS	DVC	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	**Communication Link not available.**
8	ER-II	DVC	Kodarma TPS	DVC	CR	3	1	Yes	Yes	done	done	done	done	Pending	done	**Communication panel does not exist.**
9	ER-II	DVC	MEJIA-B	DVC	CR	2	1	Yes	Yes	No	No	No	No	No	No	Work not started yet.
10	ER-II	DVC	Maithon RB TPS	DVC	CR	2	1	Yes	Yes	pending	pending	pending	pending	Pending	pending	**Work started on 04.07.2016. Panel shifted. Team demobilised due to access issue and panel location issue.**
11	ER-II	DVC	Raghunathpur TPS	DVC	CR	3	1	Yes	Yes	done	done	done	done	Pending	done	**Communication link not available.**
12	ER-II	DVC	MEJIA	DVC	CR	5	2	Yes	Yes	No	No	No	No	No	No	Work not started yet.
13	ER-II	DVC	Bokaro	DVC	CR	2	1	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 24.06.2016**
14	ER-II	DVC	CTPS(Chanderpura)	DVC	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	**S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mtrs. Amendment for FO cable is awaiting.**
15	Odisha	Orissa	Budhipadar	OPTCL	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
16	Odisha	Orissa	MENDHASAL	OPTCL	CR	2	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
17	Odisha	Orissa	MERAMANDALI	OPTCL	CR	6	2	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
18	Odisha	Orissa	RENGALI	OPTCL	CR	2	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
19	Odisha	Orissa	U.KOLAB	OPTCL	CR	2	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
20	Odisha	Orissa	BALIMELA(H)	OPTCL	CR	3	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
21	ER-II	West Bengal	Durgapur	Powergrid	CR	5	2	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 30.05.2016.**
22	ER-II	West Bengal	FARRAKA	NTPC	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
23	Odisha	Orissa	Indrawati	Powergrid	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	**Communication Link not available.**
24	Odisha	Orissa	Indrawati HPS	OPTCL	CR	1	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
25	Odisha	Orissa	JEYPORE	Powergrid	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	**Communication Link not available.**
26	ER-II	West Bengal	MAITHON	Powergrid	CR	7	2	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 21.06.2016.**
27	ER-II	West Bengal	MALDA	Powergrid	CR	2	1	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 24.06.2016**
28	Odisha	Orissa	Rengali	Powergrid	Kiosk	2	1	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 04.05.2016**
29	Odisha	Orissa	ROURKELA	Powergrid	Kiosk	5	2	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 21.04.2016**
30	ER-II	West Bengal	Binaguri	Powergrid	CR	7	2	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 28.07.2016**
31	ER-II	West Bengal	SUBHASHGRAM	Powergrid	Kiosk	2	1	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 22.06.2016**
32	Odisha	Orissa	Baripada	Powergrid	CR	3	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	
33	Odisha	Orissa	Bolangir	Powergrid	CR+Kiosk	2	3	Yes	Yes	done	done	done	done	Pending	done	**Communication Link not available.**
34	Odisha	Orissa	ANGUL	Powergrid	Kiosk	10	11	No	No	N/A	N/A	N/A	N/A	N/A	N/A	Road Permit not available.
35	Odisha	Orissa	Keonjhar	Powergrid	CR	2	3	Yes	Yes	done	done	done	done	Pending	done	**Comminication link not available.**
36	Odisha	Orissa	Jharsuguda	Powergrid	Kiosk	8	9	Yes	Yes	done	done	done	done	done	done	**PMU integrated on 29.07.2016**

PMU Installation and commissioning status of ER as on 19.10.2016

37	Odisha	Orissa	GMR	GMR	CR	3	4	No	No	N/A	N/A	N/A	N/A	N/A	N/A	Road Permit not available.
38	ER-II	Sikkim	RANGPO	Powergrid	CR	4	1	**Yes**	**Yes**	**done**	**done**	**done**	**done**	**Pending**	**done**	**S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mtrs. Amendment for FO cable is awaiting.**
39	ER-II	West Bengal	Baharampur	Powergrid	CR	2	3	**Yes**	**Yes**	**done**	**done**	**done**	**done**	**done**	**done**	**PMU integrated on 10.05.2016**
40	ER-II	West Bengal	Birpara	Powergrid	CR	4	1	**Yes**	**Yes**	**done**	**done**	**done**	**done**	**done**	**done**	**PMU integrated on 15.07.2016.**
41	ER-II	DVC	CTPS B	DVC	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
42	ER-II	DVC	KALYANESWARI	DVC	CR	4	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
43	ER-II	DVC	PARULIA	DVC	CR	5	2	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
44	ER-II	West Bengal	Bidhannagar 220	WBSETCL		0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
45	ER-II	West Bengal	Purulia PSP	WBSETCL	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
46	ER-II	Jharkhand	Bokaro TPS	DVC	CR	1	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
47	ER-II	West Bengal	Durgapur TPS	DVC	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
48	Odisha	Orissa	TTPS(Talcher)	OPTCL	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
49	Odisha	Orissa	TALCHER	NTPC	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
50	ER-II	Sikkim	TEESTA	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
51	Odisha	Orissa	Uttara	Powergrid	CR	2	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	
52	Odisha	Orissa	Jindal	JITPL	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
53	Odisha	Orissa	Monnet	Monnet	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
54	Odisha	Orissa	Lanco	Lanco	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
55	Odisha	Orissa	Navbharat	Navbharat	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
56	Odisha	Orissa	Strelite	Strelite	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
57	Odisha	Orissa	Ind barath	Ind barath	Kiosk	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
58	ER-II	Sikkim	New Melli	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
59	ER-II	Sikkim	Mangan	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
60	ER-II	Sikkim	TT Pool	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
61	ER-II	West Bengal	Alipurduar	Powergrid	CR	6	7	No	No	N/A	N/A	N/A	N/A	N/A	N/A	
62	ER-II	West Bengal	Rajarhat	Powergrid	CR	2	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
63	ER-I	Jharkhand	JAMSHEDPUR	Powergrid	CR	6	2	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
64	ER-I	BIHAR	Kahalgaon(KHSTPP)	NTPC	CR	6	2	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
65	ER-I	BIHAR	Purnea	Powergrid	CR	6	2	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
66	ER-I	BIHAR	PATNA	Powergrid	Kiosk	6	7	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
67	ER-I	Jharkhand	RANCHI	Powergrid	Kiosk	12	13	No	No	N/A	N/A	N/A	N/A	N/A	N/A	
68	ER-I	BIHAR	SASARAM(Pusauli)	Powergrid	CR+Kiosk	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
69	ER-I	BIHAR	BARH	NTPC	CR	4	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
70	ER-I	BIHAR	LakhiSarai	Powergrid	Kiosk	4	5	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
71	ER-I	BIHAR	BANKA	Powergrid	Kiosk	4	5	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
72	ER-I	Jharkhand	Chaibasa	Powergrid	Kiosk	4	5	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
73	ER-I	BIHAR	765kv Gaya	Powergrid	Kiosk	11	12	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
74	ER-I	Jharkhand	765/400kV Ranchi (N)	Powergrid	Kiosk	8	9	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
75	ER-I	Bihar	Biharshariff	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
76	ER-I	Bihar	MUZAFFAPUR	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
77	ER-I	Jharkhand	Daltonganj	Powergrid	Kiosk	2	3	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
78	ER-I	Bihar	Kishanganj (karandeghi)	Powergrid	CR	4	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
79	ER-I	Jharkhand	Jharkhand Pool (Chandwa)	Powergrid	Kiosk	4	1	No	No	N/A	N/A	N/A	N/A	N/A	N/A	PMU panel dispatched.
80	ER-I	Jharkhand	Patratu	Jharkhand	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
81	ER-I	Jharkhand	Tenughat	Jharkhand	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
82	ER-I	Bihar	Muzaffarpur	Bihar	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
83	ER-I	Bihar	Barauni PP	Bihar	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.

PMU Installation and commissioning status of ER as on 19.10.2016

ER PMU site activity Summary:

Sl. No.	Region	Utility	As per approved BOQ		Dispatched		Installed		Commissioned		Integrated to ERLDC/ SLDC		Integrated to NTAMC	
			No. of Substations	No. of PMU	S/S	PMU	S/S	PMU	S/S	PMU	S/S	PMU	S/S	PMU
1	ER-I	Powergrid	15	71	11	59	0	0	0	0	0	0	0	0
2	ER-I	NTPC	2	10	2	10	0	0	0	0	0	0	N/A	N/A
3	ER-I	Jharkhand	2	0	0	0	0	0	0	0	0	0	N/A	N/A
4	ER-I	Bihar	2	0	0	0	0	0	0	0	0	0	N/A	N/A
	ER-I	**Total**	**21**	**81**	**13**	**69**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1	ER-II	Powergrid	14	41	9	35	8	33	8	33	7	29	0	0
2	ER-II	NTPC	1	0	0	0	0	0	0	0	0	0	N/A	N/A
3	ER-II	DVC	13	31	11	31	5	12	5	12	1	2	N/A	N/A
4	ER-II	WBSETCL	8	19	6	19	0	0	0	0	0	0	N/A	N/A
	ER-II	**Total**	**36**	**91**	**26**	**85**	**13**	**45**	**13**	**45**	**8**	**31**	**0**	**0**
1	Odisha	Powergrid	10	38	9	28	7	23	7	23	3	15	0	0
2	Odisha	OPTCL	8	16	6	16	0	0	0	0	0	0	N/A	N/A
3	Odisha	NTPC	1	0	0	0	0	0	0	0	0	0	N/A	N/A
4	Odisha	IPP	7	3	0	0	0	0	0	0	0	0	N/A	N/A
	Odisha	**Total**	**26**	**57**	**15**	**44**	**7**	**23**	**7**	**23**	**3**	**15**	**0**	**0**
	ER	**Total**	**83**	**229**	**54**	**198**	**20**	**68**	**20**	**68**	**11**	**46**	**0**	**0**

Status of PDS system Installation and commissioning at ER as on 19.10.2016

Sl. No.	Site Name	Work Progress
1	ERLDC	Installed, powered up, functioning and integrated with DVC and OPTCL PDS system.
2	Backup-NLDC	POSOCO did not provide space for PDS system installation.
3	SLDC, Maithon	Installed, powered up, functioning and integrated with ERLDC PDS system.
4	SLDC, Bhubaneswar	Installed, powered up, functioning and integrated with ERLDC PDS system.
5	SLDC, Howrah (WBSETCL)	Installed, Powered up and functioning. Communication links for Control centre integration (SLDC Howrah to ERLDC) and for PMU integration are not available.

Annexure – B.38

AVAILABILITY STATUS OF EVENT LOGGER, DISTURBANCE RECORDER & GPS

Sl. NO	Substation	Protection & Control System						Remarks
		Availability			Time Synchronization			
		EL	DR	GPS	Relay	DR	EL	
1	Subhasgram	Yes	Yes	Yes	Yes	Yes	Yes	
2	Maithon	Yes	Yes	Yes	Yes	Yes	Yes	
3	Durgapur	Yes	Yes	Yes	Yes	Yes	Yes	
4	Malda	Yes	Yes	Yes	Yes	Yes	Yes	
5	Dalkhola	Yes	Yes	Yes	Yes	Yes	Yes	
6	Siliguri	Yes	Yes	Yes	Yes	Yes	Yes	
7	Binaguri	Yes	Yes	Yes	Yes	Yes	Yes	
8	Birpara	Yes	Yes	Yes	Yes	Yes	Yes	
9	Gangtok	Yes	Yes	Yes	Yes	Yes	Yes	
10	Baripada	Yes	Yes	Yes	Yes	Yes	Yes	
11	Rengali	Yes	Yes	Yes	Yes	Yes	No	New EL would be implemented in BCU under NTAMC project by March'2015
12	Indravati (PGCIL)	Yes	Yes	Yes	Yes	Yes	No	EL is old one(model-PERM 200), provision for time synchronisation is not available. New EL would be implemented in BCU under NTAMC project by March'2015
13	Jeypore	Yes	Yes	Yes	Yes	Yes	Yes	EL is old and not working satisfactorily. New EL would be implemented in BCU under NTAMC project by March, 2015
14	Talcher	Yes	Yes	Yes	Yes	Yes	Yes	
15	Rourkela	Yes	Yes	Yes	Yes	Yes	Yes	
16	Bolangir	Yes	Yes	Yes	Yes	Yes	Yes	
17	Patna	Yes	Yes	Yes	Yes	Yes	Yes	
18	Ranchi	Yes	Yes	Yes	Yes	Yes	Yes	
19	Muzaffarpur	Yes	Yes	Yes	Yes	Yes	Yes	
20	Jamshedpur	Yes	Yes	Yes	Yes	Yes	Yes	
21	New Purnea	Yes	Yes	Yes	Yes	Yes	Yes	
22	Gaya	Yes	Yes	Yes	Yes	Yes	Yes	
23	Banka	Yes	Yes	Yes	Yes	Yes	Yes	
24	Biharsariif	Yes	Yes	Yes	Yes	Yes	Yes	
25	Barh	Yes	Yes	Yes	Yes	Yes	Yes	
26	Sagardighi	No	Yes	Yes	Yes	Yes	No	EL is under process of restoration with help from OEM, China
27	Kahalgaon	Yes	Yes	Yes	Yes	Yes	Yes	
28	Farakka	Yes	Yes	No	No	No	No	Time synchronization available for Farakka-Kahalgaon line-III & IV. The same will be implemented in rest of the lines by December, 2014.
29	Meramundali	Defunct	Yes	Yes	Yes	Yes	Yes	
30	Tisco	Yes	Yes	Yes	Yes	Yes	Yes	
31	Bidhannagar	No	Yes	Yes	No	No	No	Using DR & EL available in Numerical

								relays. GPS will be put in service by January, 2015.
32	Indravati (OHPC)	Yes	Faulty	No	No	No	No	Time synchronization will be done by Feb, 2015. ICT-I feeders using DR & EL available in Numerical relays. 400 kV ICT-II feeder is being maintained by PGCIL, Mukhiguda.Status may confirm from PGCIL
33	Kharagpur	No	Yes	Yes	No	No	No	Using DR & EL available in Numerical relays.
34	DSTPS	Yes	Yes	Yes	Yes	Yes	Yes	
35	Sterlite	Yes	Yes	Yes	Yes	Yes	Yes	
36	Mejia 'B'	Yes	Yes	Yes	Yes	Yes	Yes	
37	Mendhasal	Defunct	Yes	Yes	Yes	Yes	No	EL will be restored by March, 2015.
38	Arambagh	No	Yes	Yes	No	No	No	Using DR & EL available in Numerical relays
39	Jeerat	No	Yes	No	No	No	No	Using DR & EL available in Numerical relays. Procurement of new GPS is in progress.
40	Bakreswar	Yes	Yes	Yes	Yes	Yes	Yes	
41	GMR	Yes	Yes	Yes	Yes	Yes	Yes	
42	Maithon RB	Yes	Yes	Yes	Yes	Yes	Yes	
43	Raghunathpur	Yes	Yes	Yes	Yes	Yes	Yes	
44	Kolaghat	Yes	Yes	Yes	Yes	Yes	Yes	
45	Teesta V	Yes	Yes	Yes	Yes	Yes	Yes	
46	Koderma	Yes	Yes	Yes	Yes	Yes	Yes	
47	Sasaram	Yes	Yes	Yes	Yes	Yes	Yes	
48	Rangpo	Yes	Yes	Yes	Yes	Yes	Yes	
49	Adhunik	Yes	Yes	Yes	Yes	Yes	Yes	
50	JITPL	***Yes***	***Yes***	***Yes***	***Yes***	***Yes***	***Yes***	
51	765kV Angul	Yes	Yes	Yes	Yes	Yes	Yes	
52	Chuzachen	Yes	Yes	Yes	No	Yes	Yes	
53	New Ranchi 765kV	Yes	Yes	Yes	Yes	Yes	Yes	
54	Lakhisarai	Yes	Yes	Yes	Yes	Yes	Yes	
55	Chaibasa							
56	765kV Jharsuguda	Yes	Yes	Yes	Yes	Yes	Yes	All are in working condition. However a dedicated DR for 765KV Lines; make TESLA is not working. M/s Siemens has assured to commission the same by 31.01.15
57	Beharampur	Yes	Yes	Yes	Yes	Yes	Yes	
58	Keonjhar	Yes	Yes	Yes	Yes	Yes	Yes	

Eastern Regional Power Committee

The status of ERS towers in Eastern Region as submitted during ERS meeting held on 10.11.14 taken by Member (Power System), CEA is given below:

1) As per 100th OCC meeting held on 22.08.2014, the status of ERS towers as available in Powergrid is as given below:

Sl. No.	Name of S/S	No. of ERS towers available	ERS towers in use
1	Durgapur, ER-II	1 Set (8 towers)	
2	Rourkela, ER-II	3 towers incomplete shape	
3	ER-I (located at Jamshedpur)	15 towers (10 nos Tension tower and 5 nos suspension tower)	

2) As informed by OPTCL, the present status of ERS towers in OPTCL system is as follows:

- 220 kV ERS towers: 42 nos located at Mancheswar, Chatrapur & Budhipadar
- 400 kV ERS towers: 2 nos located at Mancheswar.
- 12 nos. of new 400 kV ERS towers have been approved by Board of Director for procurement in the current financial year. Purchase order has been placed.
- Another, 16 nos of 400 kV towers accompanied with 6 sets of T&P are required.

3) WBSETCL informed that they have placed order for 2 sets of ERS towers on 31.10.2014 and expected by June, 2015.

4) The 25th ERPC meeting held on 21.09.2014, the board concurred to the proposal of procurement of four sets of ERS and it was also informed that, the proposed four sets of ERS will be kept at Sikkim, Siliguri, Ranchi and Gaya and will be used by all constituents of ER during emergencies.

   Powergrid informed that four sets of ERS for Eastern Region will be procured.

5) Bihar informed that they have 10 sets of 220 kV ERS towers and 2 sets are under process of procurements.

6) DVC informed that they are in process of procuring two (2) sets of 400 kV ERS towers.

Annexure-C.1

Anticipated Power Supply Position for the month of Mar-17

SL.NO		PARTICULARS	PEAK DEMAND MW	ENERGY MU
1		**BIHAR**		
	i)	NET MAX DEMAND	3900	2396
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	446	359
		- Central Sector	2366	1599
	iii)	SURPLUS(+)/DEFICIT(-)	-1088	-437
2		**JHARKHAND**		
	i)	NET MAX DEMAND	1200	800
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	476	384
		- Central Sector	511	306
	iii)	SURPLUS(+)/DEFICIT(-)	-213	-110
3		**DVC**		
	i)	NET MAX DEMAND (OWN)	2855	1770
	ii)	NET POWER AVAILABILITY- Own Source	4672	2604
		- Central Sector	448	292
		Long term Bi-lateral (Export)	1300	967
	iii)	SURPLUS(+)/DEFICIT(-)	965	159
4		**ORISSA**		
	i)	NET MAX DEMAND	4200	2492
	ii)	NET POWER AVAILABILITY- Own Source	3234	1822
		- Central Sector	1073	700
	iii)	SURPLUS(+)/DEFICIT(-)	107	30
5		**WEST BENGAL**		
5.1		**WBSEDCL**		
	i)	NET MAX DEMAND (OWN)	6339	3665
	ii)	CESC's DRAWAL	0	0
	iii)	TOTAL WBSEDCL's DEMAND	6339	3665
	iv)	NET POWER AVAILABILITY- Own Source	4053	2410
		- Import from DPL	196	23
		- Central Sector	1734	965
	v)	SURPLUS(+)/DEFICIT(-)	-356	-267
	vi)	EXPORT (TO B'DESH & SIKKIM)	5	4
5.2		**DPL**		
	i)	NET MAX DEMAND	315	219
	ii)	NET POWER AVAILABILITY	511	242
	iii)	SURPLUS(+)/DEFICIT(-)	196	23
5.3		**CESC**		
	i)	NET MAX DEMAND	1785	835
	ii)	NET POWER AVAILABILITY - OWN SOURCE	780	490
		FROM HEL	546	305
		FROM CPL/PCBL	0	0
		Import Requirement	459	40
	iii)	TOTAL AVAILABILITY	1785	835
	iv)	SURPLUS(+)/DEFICIT(-)	0	0
6		**WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)**		
	i)	NET MAX DEMAND	8439	4719
	ii)	NET POWER AVAILABILITY- Own Source	5344	3142
		- Central Sector+Others	2739	1270
	iii)	SURPLUS(+)/DEFICIT(-)	-356	-307
7		**SIKKIM**		
	i)	NET MAX DEMAND	90	38
	ii)	NET POWER AVAILABILITY- Own Source	5	3
		- Central Sector+Others	111	62
	iii)	SURPLUS(+)/DEFICIT(-)	26	27
8		**EASTERN REGION At 1.03 AS DIVERSITY FACTOR**		
	i)	**NET MAX DEMAND**	20082	12215
		Long term Bi-lateral by DVC	1300	967
		EXPORT BY WBSEDCL	5	4
	ii)	**NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)**	21426	12542
	iii)	**PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)**	39	-644

Annexure- C.2

Maintenance Schedule of Thermal Generating Units of ER for March-2017

System	Station	Unit	Size (MW)	period		No. of Days	Reason
				From	To		
ODISHA	TTPS	6	110	17.03.17	23.03.17	7	ESP-I normalisation