Agenda

for

41st TCC Meeting

of

EASTERN REGIONAL POWER COMMITTEE

Date: 26th August, 2019

Venue: Kochi

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EASTERN REGIONAL POWER COMMITTEE, KOLKATA

AGENDA FOR 41ST TCC MEETING

Date: 26th August, 2019 (Monday) **Place: Kochi**

ITEM NO.A1:	**CONFIRMATION OF THE MINUTES OF 40TH TCC MEETING**

The minutes of the 40th TCC meeting held on 15th March 2019 at Jodhpur were circulated vide letter no. ERPC/TCC&Committee/14/2019/88-154 dated 1st April, 2019.

No comments have been received from constituent members on the minutes of the meeting.

Members may confirm the minutes of 40th TCC meeting.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B1:	**Persistent Low Voltage at 400/220 kV Nodes in West Bengal System**

In 157th OCC, ERLDC informed that chronic low voltage issues had been observed in few pockets of West Bengal System. These pockets include

1. 400 kV Rajarhat, 400 kV Shubhasgram, 400 kV Jeerat and their downstream area,
2. 132 kV Malda and downstream areas

In 158th OCC, ERLDC elaborated that due to significant increase in demand at Subashgram, Jeerat and Malda areas, the voltage had been coming down below 370 kV during peak hours.

OCC observed that low voltage had been persisting in West Bengal system due to significant demand at Malda, Subashgram and Jeerat area and insufficient reactive power support by WBPDCL generating units (i.e. from Sagardhigi, Bakreswar and Kolaghat TPS units). OCC opined that this might be leading to voltage instability problem, if necessary preventive actions are not taken in advance.

OCC advised WBPDCL to provide MVAR generation during low voltage condition as per the capability curve. OCC advised SLDC, WB to implement Under-Voltage Load Shedding (UVLS) in WBSETCL system to avoid voltage stability problem.

OCC decided to discuss the issue of low voltage in West Bengal system in a separate meeting with the concerned members from WBSETCL, WBPDCL, SLDC-WB, WBSEDCL, CESC, Powergrid ER-II, ERLDC and ERPC.

Accordingly, the meeting was conducted at ERPC, Kolkata on 8th July 2019. Minutes of the meeting are enclosed at **Annexure-B1**.

In 159th OCC, WBPDCL informed that they were generating reactive power during low voltage by maintaining the generator terminal voltage at 1 p.u. and also submitting the data on daily basis.

ERLDC informed that WBPDCL generators are providing the VAR during low voltage but still there wss a scope for improvement. ERLDC added that reactive power performance of Farakka unit 2 and 4 were not satisfactory and not generating sufficient VAR during low voltage.

OCC advised NTPC Farakka to take appropriate action to generate VAR during low voltage.

OCC advised SLDC, West Bengal to monitor the voltage and take appropriate action to control the voltage.

OCC also advised ERLDC and SLDC, WB to analyze the improvement in voltage profile due to reactive power support from WBPDCL.

In 160th OCC, ERLDC informed that voltage at 400 kV Shubhasgram and 400 kV Jeerat S/s was less than 380 kV during 16th to 20th July 2019.

SLDC, West Bengal informed that reactive power provided by WBPDCL generating stations during low voltage condition had improved in July 2019.

OCC opined that the low voltage would be predominant during Durga puja. Therefore OCC advised SLDC, West Bengal to implement Under-Voltage Load Shedding (UVLS) scheme in WBSETCL system to avoid voltage stability problem.

OCC referred the issue to TCC for further guidance.

TCC may guide.

ITEM NO. B2:	**Operationalization of 400 kV Durgapur Bus Splitting Scheme**

In 158th OCC, OCC decided to put the Bus Splitting Scheme at 400 kV Durgapur S/s in operation in 1st week of July 2019.

DVC vide letter dated 10th July 2019 informed that after commissioning of 3rd ICT, any unit tripping of MTPS may lead to imposing restriction on loading of the tie lines.

DVC requested to adjudge the viability of keeping the 3rd ICT in service before commissioning of the bus-split at Durgapur(PG).

In 159th OCC, ERLDC informed that the bus splitting scheme was charged for 15 minutes at 15:00 hrs on 18th July 2019 on trail basis. ERLDC had placed the observations in the meeting.

It was observed that the loading on 220kV Durgapur(PG)-Parulia(DVC) D/C line and 220kV Waria-Bidhanagar had increased with bus splitting scheme. The loading on both the lines was found to be further increasing with 3rd ICT at Durgapur (PG) in service.

OCC advised SLDC, WB to shift the loads to minimize the loading on 220kV Waria-Bidhanagar D/C line.

SLDC, WB informed that there is no scope for shifting the loads.

OCC opined that in view of increasing fault level at 400kV Durgapur, it is necessary to put the Bus spitting scheme in service.

OCC decided to put the Bus Spitting scheme in service for one day on trail basis without 3rd ICT at Durgapur (PG). Based on the real time observations, the further course of action would be decided.

In 160th OCC, ERLDC informed that in line with decision taken during 159th OCC meeting, the 400 kV Durgapur bus was operated in bus split condition form 31st July 12:41 Hrs to 1st August 19:35 Hrs. The Bus Splitting Scheme has been kept in service.

It was observed that the loading on 220kV Durgapur(PG)-Parulia(DVC) D/C line and 220kV Waria-Bidhanagar were increasing with bus splitting scheme. The real time flows were almost matching with the study report submitted in the OCC.

OCC advised WBSETCL and DVC to place the action plan to resolve the overloading issues in their network along with target date of implementation.

WBSETCL and DVC may place their action plan.

ITEM NO. B3:	**WIDE DEVIATION OF REAL TIME GENERATION/SCHEDULE GENARATION OF TALA AND CHUKHA HEP WITH RESPECT TO DECLARED CAPACITY**

Due to wide deviation between Declared capacity & real time generation of Tala HEP & Chukha HEP, the day ahead & intraday planning of the beneficiaries are getting dislocated on regular basis specially during the monsoon season.

In practice distribution utilities like WBSEDCL tunes the day ahead LGBR by trading through Exchange platform, based on the day ahead availability received from different power stations under long/Medium term PPA within 12.00hrs of every day. But in real time it is observed that the Schedule Generation (SG) of Tala HEP & CHEP differs widely w.r.t that of day ahead DC. So, for such unrealistic day ahead DC prediction from Bhutan side the beneficiaries are failing to plan their power purchase portfolio on economic principle.

Moreover, it is also observed that Bhutan S.O. is not prompt in revising the DC of Tala HEP & CHEP in accordance with the real time ongoing generation trend. So, due to uncertainty of SG for such approach, beneficiaries are facing severe problem to take proper decision for load generation balancing under prevailing stringent DSM regime.

In 159th OCC, DGPC informed that the hydro flow is changing rapidly. Accordingly they are revising the DC. DGPC added that they had been furnishing the revised DC to NLDC, Bhutan.

OCC advised NLDC, Bhutan to adhere to the schedule. Any deviation schedule due to change in hydro inflow should be taken care by revising the schedule. The day ahead schedule should be accurate so that the beneficiaries can plan their availability as per the demand. Otherwise, the beneficiaries incur huge penalty under DSM due to deviation in the schedule of Bhutan power.

NLDC, Bhutan informed that accessing the ERLDC site required high speed internet which is not available at NLDC, Bhutan. Therefore, they could not punch the revised schedule. However NLDC, Bhutan agreed to pass the information to ERLDC in time.

In 160th OCC, ERLDC informed that NLDC, Bhutan is punching the day ahead schedule in ERLDC site on daily basis and revised the schedule in few occasions.

OCC advised NLDC, Bhutan to revise the schedule in ERLDC website as per the hydro availability on real time basis.

It was informed that the issue would be discussed in a separate meeting with NLDC, Bhutan at NLDC, Delhi.

Station wise deviation figures are given below:

MONTHWISE DATA FOR MPR -April'19		
Constituents	**SCH(MWH)**	**ACT(MWH)**
CHPC	29031	156126
KHPC	7317	6252
THPC	188153	75701
TPTCL	17276	14768

MONTHWISE DATA FOR MPR -May'19		
Constituents	**SCH(MWH)**	**ACT(MWH)**
CHPC	78275	137939
KHPC	11670	24151
THPC	264265	182694
TPTCL	22258	15979

MONTHWISE DATA FOR MPR -June'19		
Constituents	**SCH(MWH)**	**ACT(MWH)**
CHPC	66232	112395
KHPC	10108	36861
THPC	241037	183324
TPTCL	34804	19525

ERLDC and Bhutan may update.

ITEM NO. B4:	Scheduling of Power to DISCOMs based on Payment Security Mechanism (Opening of LC).

Ministry of Power vide order dated 28th June, 2019 has given directions for implementation of scheduling of power to distribution companies throughout the country based on Payment Security Mechanism. Further, MoP vide communication dated 17th July, 2019 has given the detailed procedure of scheduling of power to DISCOMs in the event of non maintenance of Letter of Credit/Payment Security. Copy of MoP orders dated 28.06.19 & 17.07.19 enclosed at **Annexure-B4.1**

In this regard a meeting was convened by ERPC Secretariat on 30.07.2019 through video conferencing to discuss the implementation preparedness by all the stakeholders. The minutes of the meeting is enclosed at **Annexure-B4.2**.

From 01.08.2019, the scheduling based on payment security mechanism has been implemented in Eastern Region.

In 160th OCC, ERLDC informed that a web portal (Payment Security Administration portal link: **https://psa.posoco.in**) had been introduced by POSOCO on 31st July 2019. Using this portal beneficiaries and generators can update their payment security status for ISGS/LTA/MTOA transactions for the day ahead by 08:00 Hrs of the 'D-1' day using their user credential. As per the declaration in this portal, entitlement of the beneficiaries is being calculated at 09:00 Hrs of 'D-1' day for the day 'D' and uploaded in scheduling portal of ERLDC**.**

ERLDC may explain.

TCC may note.

ITEM NO. B5:	Implementation of SPS for disconnection of Bhutan interconnection at Alipurduar Substation

NLDC, POSOCO vide letter dated 23rd July 2019 to POWERGRID proposed to design and implement a suitable SPS scheme at 400 kV Alipurdwar substation to trip both 400 kV Alipurdwar-Jigmedling D/C in the event of tripping of both the HVDC poles at Alipudwar. Considering the grid security during high hydro condition with depleted outgoing 400 kV lines from New Purnea and Kishanganj, this SPS needs to be implemented urgently. The details received from NLDC are enclosed at **Annexure-B5**.

The issue was discussed in 160th OCC, OCC opined that Bhutan consent is required for implementing the SPS.

OCC referred the issue to TCC.

NLDC/ERLDC may explain. TCC may discuss.

ITEM NO. B6:	Intimation regarding closure of Regional OS Control Centre, Patna

NTPC vide letter dated 8th July 2019 informed that NTPC ER-I Regional OS Control Centre, Patna, will discontinue its operation w.e.f. 16.07.2019. ERLDC is requested to coordinate/communicate directly with all NTPC Stations.

Besides this, VoIP based communication system is under development at NTPC Operation Monitoring Center at NTPC Bhawan, Scope Complex, New Delhi.

In 159th OCC, ER beneficiaries opined that Regional Control Centre acts as a single window for coordinating with all the power stations of NTPC in the Eastern Region in maintaining the overall generation of NTPC stations in ER and also for scheduling of URS power and as such, plays a pivotal role for grid management.

ERLDC informed that they had faced the difficulty in contacting the generators located at remote location and they had taken help from Regional Control Centre during emergencies on several occasions. Regional Control Centre is also helpful in collection of consolidated data of NTPC generators in ER.

It was observed that a member from Regional Control Centre is required for Disaster Management Group at Regional level.

OCC referred the issue to TCC Meeting for further guidance.

NTPC vide letter dated 26th July 2019 submitted details of operation monitoring centre (OMC) at New Delhi. Letter is enclosed at **Annexure-B6.**

TCC may discuss.

ITEM NO. B7:	Disaster Management Group at Regional level and Plant level

CEA vide letter dated 9th July 2019 informed that as per section 37 of the Disaster Management Act 2005, each Ministry is required prepare a Disaster Management plan related to their sector. Accordingly, MoP in association with CEA has prepared a plan for power sector and it is available at CEA website (http://164.100.60.14/reports/others/planning/pslf/cmp_powersector.pdf).

In the plan, a four –tier institutional structure has been envisaged i.e. at central level, regional level, state level, and local unit level to effectively deal with disaster situations in power sector. The group at regional level has to be constituted under the chair of Member Secretary. Similarly, a group at plant level is to be formed. Details are given at **Annexure-B7**.

CEA requested to confirm the constitution of the group at regional level for disaster management.

In 159th OCC, OCC advised all the generating stations and SLDCs to form a Disaster Management Group and send the details to ERPC.

Regarding formation of Disaster Management Group at regional level, OCC referred the subject matter to TCC.

TCC may form a Disaster Management Group at regional level

ITEM NO. B8:	**Strengthening of CRITL team in JUSNL system**

In the PCC meetings, it has been observed that in most of the grid disturbances/incidents related to JUSNL control area remained unexplained due to non availability of detailed report, Disturbance Recorder and Event Logger data. PCC forum in several times had advised JUSNL to submit the details related to disturbances such as Disturbance Recorders, Event Loggers etc. JUSNL failed to submit the same in several occasions. As a result, PCC could not analyse & conclude the disturbances/incidents.

In 81st PCC Meeting, JUSNL informed that their CRITL department did not have sufficient manpower, necessary equipments to collect the DR & EL and other details from the substation. They added that they were not able to analyze the disturbances at their end due to limited resources.

PCC decided to refer the issue to TCC for further guidance.

JUSNL may explain. TCC may guide.

ITEM NO. B9:	**Outage of important transmission lines**

1) **Outage of 400kV D/C Purnia-Biharsharif line of ENICL.**

400kV Purnia-Biharsharif D/C line was out of service from 10/08/18 due to the change of course of the river Ganges and heavy velocity of flow of water which leads to tower collapse. The lines have not yet been restored. In different meetings of ERPC, ENICL has highlighted the challenges being faced by them in normalising the lines. They have requested that the above outages be considered under category of acts of god and forced majeure event beyond the control of transmission licensee for the purpose of certification of Transmission Availability.

To deal with the issue, Member Secretary, ERPC constituted a "Committee for analysing the major outages of ISTS elements of ER" vide no. ERPC/MS/TA/2018-19/8480-84 dated 25.01.2019. The Committee had made extensive deliberation on this issue in its meeting held on 13.02.2019 and, on the advice of Member Secretary, ERPC, the Committee also visited the affected location of tower collapse to assess the actual site condition and volume of work involved etc.

Based on the recommendation of the Committee and taking into consideration the findings of the Committee in its site visit, the followings have been decided:

i) The zero date for commencement of the restoration work would be considered w.e.f. 14.01.2019 and the outages period the outages period from 10.08.2018 to 13.01.2019 would be considered under the category of acts of God and force majeure category.

ii) The reasonable restoration time allowable shall be considered six months from the zero date of the restoration work. So, the period from 14.01.2019 to 13.07.2019 may be considered under the category of acts of god and force majeure category.

iii) Transmission Availability certificate shall be revised / issued by ERPC Secretariat accordingly.

Subsequently, ENCIL informed that they are planning for the permanent restoration of the line using special high-performance conductor (HPC with ACCC conductor) between tower AP46/9A and AP47/1. 400 kV Purnea-Biharshariff D/c would be restored by end of November 2019.

ENICL may update.

2) **Outage of 400kV D/C Patna – Kishanganj line of PGCIL**

400 kV D/C Patna – Kishanganj line has been out since 02.09.2018 due to tower collapse which occurred as a result of change of course of Ganga river. The circuit – 2 has been restored on 16.01.2019 on ERS but the final restoration of D/C line has not yet been done. In different meetings of ERPC, PGCIL has highlighted the challenges being faced by them in normalising the lines. They have requested that the above outages be considered under category of acts of god and forced majeure event beyond the control of transmission licensee for the purpose of certification of Transmission Availability.

To deal with the issue, Member Secretary, ERPC constituted a "Committee for analysing the major outages of ISTS elements of ER" vide no. ERPC/MS/TA/2018-19/8480-84 dated 25.01.2019. The Committee had made extensive deliberation on this issue in its meeting held on 13.02.2019 and, on the advice of Member Secretary, ERPC, the Committee also visited the affected location of tower collapse to assess the actual site condition and volume of work involved etc.

Based on the recommendation of the Committee and taking into consideration the findings of the Committee in its site visit, the followings have been decided:

i) The zero date for commencement of the restoration work would be considered w.e.f. 15.02.2019 and the outages period for Circuit – 1 from 02.09.2018 to 14.02.2019 would be considered under the category of acts of god and force majeure category. For Circuit – 2, outage from 02.09.2018 to 16.01.2019 would be considered under the category of acts of god and force majeure category as it was restored on ERS.

ii) The reasonable restoration time allowable shall be considered six months from the zero date of the restoration work. So, the period from 15.02.2019 to 14.08.2019 may be considered under the category of acts of god and force majeure category.

iii) Transmission Availability certificate shall be revised / issued by ERPC Secretariat accordingly.

Subsequently, in 160th OCC, Powergrid informed that 400 kV Kishenganj-Patna D/C lines would be restored by end of December 2019.

PGCIL may update.

ITEM NO. B10:	NTPC-BRBCL station, 1000 MW (4*250MW unit) Power evacuation plan

NTPC-BRBCL station, 1000 MW (4*250MW unit) Power evacuation is via 400 kV Nabinagar-Sasaram (Pusauli) Double Circuit link (Single tower configuration). In this arrangement of connectivity outage/failure of Tower/circuit might lead to complete loss of power to station. Recently a critical situation arose, as reported by PGCIL due to a bulge in existing line tower. Thich was managed by PGCIL by taking contingency measures. However, the structure complete repairing work is to be taken up by PGCIL.

The issue was discussed in a special meeting on 2nd August 2019 wherein BRBCL to plan for alternate path for reliable power evacuation. Minutes of the meeting are enclosed at **Annexure-B10**.

Thereafter, BRBCL submitted that the following alternate/additional Power evacuation arrangement may be explored for the NTPC-BRBCL station:

i. 400kV Daltonganj-BRBCL link and 400kV BRBCL-Sasaram (Pusauli) link
ii. 400kV BRBCL-Gaya link
iii. 400kV BRBCL -Gaya link via NPGCL.

BRBCL requested to take up the proposal with TCC for the technical approval and execution of the work through PGCIL.

TCC may discuss.

ITEM NO. B11:	Installation of Earth Switches at old stations of NTPC

Powergrid informed that 400KV D/C Talcher-Rourkela and 400KV D/C Talcher-Rengali lines belong to POWERGRID and it is being maintained by POWERGRID. The 400KV bays for both the lines at NTPC end belong to NTPC. There is no line side earth switch available for these lines at NTPC end for earthing any of these lines during shutdown maintenance activities. Only one circuit is allowed for shutdown for maintenance of these lines which leads to severe induction due to other circuit in service. Though localized earthing is being done during maintenance by POWERGRID, it is not sufficient for the safety of the working person against induction. In view of this NTPC is requested to install the earth switch for these lines at the earliest.

In 160th OCC, it was informed that earth switches are not available for the transmission lines at old NTPC substations (Talcher, Farakka and Kahalgaon).

OCC opined that earth switches are mandatory for the safety of the working persons doing the maintenance. OCC advised NTPC to install the earth switches at the earliest.

Talcher, NTPC informed that they are in process of installing earth switches at Talcher.

OCC referred the issue to TCC for further guidance.

NTPC may update.

ITEM NO. B12:	Renewal of Maintenance and Support Contract for PSS/E User licenses

It has been decided in the 30th FOLD meeting held on 19.07.2019 that RLDCs shall coordinate with SLDCs of respective regions and confirm their approval for renewal of AMC of PSS/E. On receipt of the confirmation from RLDCs, NLDC will intimate the negotiation price details to SLDCs so that SLDCs can place award accordingly. The award needs to be placed by 30th September, 2019 to avoid any further rise in price.

In view of the above ERLDC had written a letter to all SLDCs of Eastern Region with request to communicate their approval for renewal of AMC along with the no. of licenses required by 9th August, 2019.

In 160th OCC, Bihar had given their consent.

OCC referred the issue to TCC.

TCC may decide.

ITEM NO. B13:	Implementation of DSM (5th amendment) Regulations'2019

DSM (5th Amendment) Regulations, 2019 was notified by Hon'ble CERC on 28.05.2019. The said amendment has been implemented w.e.f 03.06.2019. Accordingly, weekly DSM account is being prepared and issued by ERPC Secretariat as per 5th Amendment Regulations.

ERPC Secretariat will explain the performance and behaviour of various constituents of Eastern Region since implementation of 5th Amendment regulations.

TCC may discuss.

ITEM NO. B14:	Security Constrained Economic Despatch (SCED) of Inter-State Generating Stations (ISGS) Pan India

CERC vide Suo-Moto order dated 31.01.2019 in petition no. 02/SM/2019 has directed implementation of SCED for the Inter-State Generating Stations on pilot basis w.e.f 01.04.2019. The same has been implemented Pan India w.e.f. 01.04.2019 by POSOCO and weekly accounts are being accordingly prepared and issued by RPCs.

Summary of SCED account for the period from 01.04.2019 to 28.07.2019 (first 4 months after the implementation of SCED) is enclosed at **Annexure – B14.**

After implementation of SCED, pit head stations of ISGS in ER are getting more up schedule.

TCC may discuss.

ITEM NO. B15:	Levy of transmission charges for overload capacity scheduled to long-term beneficiaries

1. The agenda is with reference to CERC Order dated 12.02.2019 in Petition No. 205/MP/2018 under which LTA customers are not required to avail additional LTA for scheduling of overload up to 10%. CERC under its Order dated 12.02.2019 has *inter-alia* held as below:

*"23. ……**hydro generating stations irrespective of ownership (private or government) are not required to obtain LTA corresponding to overload capacity (upto 10%) and the injection of the same should be allowed by concerned RLDC.** In our view, even in case of a hydro generating station in the private sector, the RLDCs cannot compel them to obtain LTA/ MTOA/ STOA for overload capacity up to 10% of existing LTA during high inflow period. Accordingly, RLDCs are directed to allow injection of power corresponding to overload capacity upto 10% of LTA without obtaining additional LTA/ MTOA/ STOA for the overload capacity. Needless to mention, the RLDCs shall allow the Declared Capacity declared by the generator for the purpose of PAF calculation of the generating station. In order to ensure that the CTU and RLDCs receive their respective charges, we also think it appropriate to clarify that **in case of scheduling of overload capacity up to 10% beyond granted LTA, the hydro generating station or the beneficiary, as the case may be, shall be required to pay additional LTA charges and additional RLDC fees & charges for the overload capacity.** These additional charges shall be in proportion to the existing LTA charges and RLDC fees & charges respectively. CTU and respective RLDCs shall raise bills accordingly.*

2. Few of our long-term customers have raised concern over the computation of LTA charges for such overload capacity. As per Regulation 11(4) of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulation 2010, LTA charges are computed as under:

"POC transmission rate for demand zone in Rs/ MW/ month x Approved Withdrawal"(MW)
(i.e. Approved Withdrawal being LTA quantum in MW)

3. Few customers are interested in availing the 10% overload capacity for few days in a month instead of continuously for the whole month. They are concerned that by availing overload for few days (say 3-4 days in a month), they will be liable to pay additional LTA charges for the whole month which will result into very high charges per unit of electricity actually scheduled. They are of the view that the same should be charged proportionately for the number of days for which overload capacity is availed.
4. Therefore, clarification is required regarding levy of transmission charges for scheduling the overload capacity to long-term beneficiaries under LTA. The billing for the same should be calculated on the basis of Rs/ MW/ time-block as is being done in case of Central Generating Stations and be levied on concerned LTA customers. A similar formula has been given under Regulation 11(7) of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulation 2010 which is to be used for somewhat different conditions. The similar methodology for determining transmission charges for overload scheduling can be adopted as given below:

POC Transmission rates for the generation zone in Rs / MW/ time block x Average MW injected during time blocks.

In 159th OCC, TUL informed that few of their long-term customers have raised concern over the computation of LTA charges for such overload capacity.

In 160th OCC, members referred the issue to TCC for further guidance.

TCC may guide.

ITEM NO. B16:	**Cost recovery from different constituents involving AMR implementation in different phases.**

For implementation of AMR in different constituents area in principle approval accorded in 18th& 19th ERPC meetings & afterwards POWERGRID in through different LOA has implemented AMR in three phases till now and also some new S/S or elements are under integration in 4th phases.

For data transmitting to ERLDC server generally SIM are used and for that also POWERGRID has to enter with the contract with Telecom service providers namely Airtel, BSNL & Vodafone. However, lately (Since last one year) most of the POWERGRID/NTPC S/S are transmitting data through available OPGW network instead of SIM.

Total cost for implementation and AMC comes to ₹ 3,87,31,776/- including implementation cost for TCS and cost for telecom service provider, but excluding consultancy charges. As per minutes of 19th ERPC the recovery mode of AMR will be like mechanism followed for SEM procurement. As such, considering the same methodology, including consultancy charges (@ 15%), total cost comes to ₹ 4,45,41,543/-. (Rs. Four crore forty five lacs forty one thousand five hundred forty three only).

All necessary payments are getting verified by the statute auditor and certified for acceptance. Now it is proposed to recover the cost incurred for the implementation of AMR from available constituents as per earlier minutes. However, for recovery purpose, complete installation base against constituents wise are given below for reference:

SL NO	Utility	Total No.of Substations	Number of SEM Installed
1	PG (ER-I)	13	218
2	PG (ER-II)	13	176
3	PG (Odisha)	11	112
4	NTPC	7	155
5	NHPC	2	21
6	BSEB	28	81
7	JSEB	15	30
8	WB	13	29
9	SIKKIM	4	20
10	DMTCL	2	29
11	CESC	2	4
12	DVC	13	43
13	OPTCL	16	30
14	GMR	1	7
15	JINDAL	1	1
16	IPPR	11	57
	Total	**152**	**1013**

It is proposed, to recover the incurred cost, mentioned above, by the ratio of allocation of LTA among the DIC's of Eastern Region.

In 158th OCC Meeting held on 27.06.19, Powergrid informed that all works of three phases of AMR implementation have been completed. OCC referred the issue to Commercial Sub-Committee for concurrence.

In 40thCCM, POWERGRID informed that AMR implementation work (till 3rd Phase) has been fully completed and AMC portion also entirely completed for 1st phase. As such till now, for execution of entire project (till 3rd Phase), total expenditure of ₹ 4,45,41,543/- (Rs. Four crore forty five lacs forty one thousand five hundred forty three only) has been incurred. Again, the cost includes implementation and maintenance cost of TCS & different mobile network providers.

Commercial Sub-Committee, in principle, approved the cost. Further, as proposed by POWERGRID in the meeting, members of Commercial Sub-Committee decided that the cost incurred would be apportioned among the beneficiaries and the IPPs on the basis of LTA and ex-bus capacity respectively.

Members referred the issue to forthcoming TCC meeting further approval.

TCC may approve.

ITEM NO. B17:	**Procurement of WEB-NET-USE software for ER constituents**

The PoC Inter-State Transmission Charges and losses are published by CERC on Quarterly basis A better understanding of the PoC Charges can be developed using "WEB-NET-USE" software which is developed by IIT Mumbai. GRIDCO, Odisha has contacted IIT Mumbai for procurement of the software. It is learnt that this software could be procured from I.I.T. Mumbai at the rate of Rs 32.2Lakhs plus applicable Taxes, per year, up to 10 logins. Thus 10 DICs can use the software simultaneously.

CTU is presently raising PoC Bills to all beneficiaries every month. Since the said software is highly essential for developing the understanding of the Transmission charges Bills raised to DICs PoC regime, GRIDCO has suggested that the same should be procured at ERPC level for distribution among the beneficiaries of Eastern Region.

The matter was discussed in 38th TCC meeting dated 29.06.2018 & as decided in the said meeting, the two process has been completed i.e., a workshop on PoC has been convened by ERPC & One presentation by NLDC officials has been conducted at ERPC. Hence now it is proposed to procure the WEBNET-USE Software at ERPC level for better understanding of PoC at DIC level.

In 40th CCM , GRIDCO representative requested for procurement of WEB-NET-USE software from IIT Mumbai at the annual cost of Rs 32Lacs and proposed that ERPC Secretariat centrally procure the software for the willing constituents of Eastern Region and centrally administer the contract. GRIDCO requested ERPC Secretariat to explore the possibility.

The modus operandi of procuring the software including contribution from the constituents is required to be finalized.

TCC may decide.

ITEM NO. B18:	**COD of Mangdechhu HEP (4X180 MW) in Bhutan**

It has been informed by PTC that, vide protocol dated 23rd April, 2019 to the agreement between Government of the Republic of India and Royal Government of Bhutan regarding the Mangdechhu HEP, PTC has been designated as the nodal agency for sale of surplus power from Mangdechhu HEP in Bhutan. Ministry of Power, Government of India has allocated vide its allocation order no. 5-11/7/2017-BBMB (MoP) dated 7th March 2019 the power as available from the MHEP to the states of NER and ER as under:

Sl. No.	State	% Share	Maximum Allocation (MW)
1	Assam	17.01	122.50
2	Bihar	31.34	225.64
3	Odisha	9.33	67.15
4	West Bengal	27.32	196.71
	TOTAL	85.00	612

Three units namely, Unit-I, II and IV of Mangdechhu Project have been commissioned. The PPA between PTC and DGPC is being signed on 15th August, 2019.

PTC vide letter dated 9th August 2019 has circulated a copy of the Power Sale Agreement (PSA) proposed to be entered into between Eastern Region and North Eastern Region constituents and PTC for sale of power from Mangdechhu HEP to the respective beneficiaries i.e West Bengal, Bihar, Odisha and Assam. It is pertinent to mention here that the draft PSA has been structured on the same pattern as that of Tala agreement signed earlier between PTC and ER constituents.

Since three units of the projects have already been commissioned, all the beneficiaries of Eastern region West Bengal, Bihar and Odisha are requested to execute the PSA by 31st August 2019. PTC has informed that it is separately taking up the matter with NER beneficiary i.e. Assam.

In 40th CCM, Member Secretary, ERPC opined that the metering issue for Mangdechhu shall be deliberate only after finalization of energy accounting methodology based on the PPA between PTC and Bhutan and also on further direction received from Ministry of Power, Govt. of India.

TCC may deliberate.

ITEM NO. B19:	**Preponement of commissioning of 765/400 KV 1500MVA ICT IV at Gaya S/s under Nabinagar-II TPS (3X660MW)**

765/400 kV, 3x500 MVA ICT IV along-with associated bays at Gaya substation under Associated Transmission System for Nabinagar-II TPS (3x660 MW) has been put under trial operation on 03/01/19 and trial operation has been successfully completed on 04/01/19. The schedule completion for this element was **1st May 2019** as per Implementation Agreement & **2nd June 2019** as per Investment Approval.

The Scope of the Associated Transmission System for Nabinagar-II TPS (3x660 MW) is given hereunder:

Sl No	Name of Asset	Commissioning	DOCO
01	400 kV D/C (Quad) Nabinagar II – Gaya Transmission line along with 2 nos associated bays at Gaya substation	09/03/18	12/05/18
02	400 kV D/C (Quad) Nabinagar II – Patna Transmission line along with 2x80 MVAR Switchable Line & associated bays at Patna substation	19/07/19	20/07/19
03	765/400 kV 3x500 MVA ICT IV along-with associated bays at Gaya substation	04/01/19	05/01/19

As specified under clause 4(3) of CERC (Terms & Condition of Tariff) Regulation, 2014 "*Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hours of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end***"**

Accordingly, Powergrid has proposed that "765/400 kV 3x500 MVA ICT IV along-with associated bays at Gaya substation under Associated Transmission System for Nabinagar-II TPS (3x600MW)'' be put under commercial operation **w.e.f 05.01.19.** Trial run operation certificate issued by ERLDC is enclosed.

Matter regarding preponement of above said asset had been discussed in 151st OCC meeting at ERPC, Kolkata held on 27/11/18.

TCC may deliberate and approve.

ITEM NO. B20:	**Delay in Shutdown for Augmentation of 2nd 315 MVA ICT by 500 MVA ICT at Pusauli.**

Augmentation of two nos. 315 MVA ICT with 500 MVA ICT at Pusauli SS was being implemented under ERSS-XII. 315 MVA ICT-1 of Pusauli has already been already augmented with 500MVA ICT and commissioned on 29.03.2016. For replacement of 2nd 315MVA ICT at Pusauli SS, the 500 MVA ICT has already arrived at site in April 2018.

For augmentation of existing 400/220kV, 315 MVA ICT-2 with 500 MVA ICT at Pusauli SS, S/D of existing 315 MVA ICT-2 is required. Approval of the same has already been accorded in no. of OCC meetings starting from 143rd OCC meeting of ERPC since April 2018. However, the S/D of the mentioned ICT has not been cleared by BSPTCL till date even after rigorous follow-up at different levels. It may also be noted that the AMP of this ICT is not being carried out since May, 2018 due to want of shutdown and hence the condition of existing 315 MVA ICT has significantly deteriorated.

In view of the above, BSPTCL may be requested to agree for the S/D of 2nd315 MVA ICT of Pusauli SS for a period of about 30 days for the augmentation work.

Powergrid may explain. BSPTCL may respond.

ITEM NO. B21:	Preponement of commissioning of 160 MVA ICT-IV of Malda S/S in place of 50 MVA ICT-IV.

Under ERSS-XX package, existing 50 MVA ICT-IV of Malda SS is to be replaced by 160 MVA ICT. As per Investment Approval, the commissioning schedule of the said ICT is **February-2020**, ICT has already reached at Malda S/S and considering the present load flow scenario, it is evident that, if shutdown is provided, entire commissioning activities of the supplied ICT can be finished before festive season.

In 158th OCC, Powergrid informed that replacement work ICT –IV could be completed by August 2019 subjected to shut down clearance. Powergrid requested to consider the ahead of schedule commissioning.

Considering the present demand at Malda, OCC approved ahead of schedule commissioning of ICT-IV and referred to TCC Meeting for further approval.

Thereafter, Powergrid informed that shutdown for carrying out the replacement work of ICT has been provided from 27.07.19 & work is in progress.

Member may approve early upgradation of 50MVA ICT with 160 MVA ICT at Malda substation against the schedule of **February 2020.**

TCC may approve.

ITEM NO. B22:	Long Outage of main Bay of 400KV Indravati (PG)-Indravati (OHPC) at Indravati (PG) Substation

The main Bay of 400KV Indravati (PG)-Indravati (OHPC) line at Indravati (PG) S/s belonging to OPTCL, is out of service since 29th Sept 2018 for replacement of new CB and CT. Although work by OPTCL was started, it is very slow and completely stopped since March'19. Due to non-availability of this bay, ERLDC is not permitting bay maintenance of other POWERGRID circuits i.e. 400KV Indravati-Rengali and 400KV Indravati-Jeypore lines.

OPTCL is requested to expedite the restoration work of the bay and complete the same at the earliest.

OPTCL may update.

ITEM NO. B23:	Replacement of ICT/Reactor in service for more than 25 Years of age

Many of Transformers and Reactors in POWERGRID system, are in service for more than 25 years and have completed their useful lives. The condition assessment of these transformers and reactors was carried out by POWERGRID and 11 nos. in ER were found critical based on evaluation of ICT results.

Test results and other parameters of these 11 nos. transformer/reactors have been forwarded for residual life assessment (RLA) studies which are being conducted by CPRI. In case, CPRI

recommends replacement of these transformers/reactors, POWERGRID shall approach CERC for their replacement under O&M add Cap.

In case of replacement, following has been proposed by Powergrid:

i) As power transfer through ICTs is continuously increasing and at almost all of the substations, 500MVA, 400/220kV transformers are generally being installed presently. It is proposed that wherever replacement of old 315 MVA ICT is required, same shall be replaced by 500MVA ICTs to meet future requirements.

ii) Further, as grid has grown very large, nowadays 125 MVAR Bus Reactors are mostly being installed to control Bus Voltage. It is proposed that wherever replacement of old 50/63/80 MVAR Bus Reactor is required, same shall be replaced by 125 MVAR reactor for better voltage control/reactive power support

TCC may deliberate and decide.

ITEM NO. B24:	**Repeated Uncoordinated Trippings at 220 / 132 kV Lalmatia S/stn vis – a – vis Handing over of O&M Services and Assets of 220 kV Farakka – Lalmatia(FLTS) of ECL from NTPC to JUSNL**

In view of uncoordinated trippings and frequent interruption of Power Supply at 220 / 132 kV Lalmatia S/stn, Protection Audit was carried out by ERPC team on 16.08.2018, which recommended considerable investment for replacement of equipment to dovetail with modern Protection System.

Initially ECL had filed a writ petition in the Hon'ble High Court of Calcutta bearing no. W.P. 17044(W) of 2015. Hon'ble High Court of Calcutta passed a judgement dated 23.09.2016 directing NTPC Ltd. to continue the O&M of 220kV Farakka-Lalmatia Transmission system till the lawful transfer of asset and O&M activity of FLTS to any authority. Aggrieved by this judgement, NTPC Ltd filed an appeal bearing no. C.A.N. No. 11255 of 2016 in Hon'ble High Court of Calcutta requesting for stay of the said judgement.

Pending the above appeal by NTPC Ltd., a series of meetings on the issue were held at ERPC as well as JUSNL headquarters.

During deliberation in the 40th TCC Meeting held at Jodhpur on 15.03.2019, ECL representative proposed to handover the ownership of FLTS to JUSNL at zero cost on as-is-where-basis provided necessary investment for up-gradation as recommended by protection audit of ERPC are made by JUSNL and JUSNL ensures uninterrupted supply of power to ECL coal mines at Lalmatia.

JUSNL agreed to look into this proposal and ensured to convey their acceptance after consulting the higher authorities.

Subsequently, JUSNL vide letter no. 1096 C.E.(T)/JUSNL dated 12.06.2019 (copy enclosed at **Annexure-B24**) in principle agreed to take over the 220kV Farakka – Lalmatia Transmission System of ECL at zero cost on "as is where is " basis and requested ECL for a meeting to discuss the modalities for transfer of assets of FLTS and its O&M.

The appeal bearing no. C.A.N. No. 11255 of 2016 was listed for hearing at the Hon'ble High Court of Calcutta on 10.06.2019. Hon'ble High Court of Calcutta referred the matter to Hon'ble CERC for decision within a period of four months.

Accordingly, Hon'ble CERC listed the matter for hearing on petition with reference to WP No. 17044/2015 on 11.07.2019. CERC directed ECL to file a petition with the Commission covering all issues and serve a copy of the same to the respondents. The matter is yet to be heard again in Hon'ble CERC.

ECL and JUSNL may update.

TCC may discuss.

ITEM NO. B25:	**Issue of Control Room Coordination during Outage and Restoration at Substations having multiple control room and lines with different ownership.**

In 158th OCC Meeting held on 27th June 2019, ERLDC informed that, with the introduction of TBCB, multiple utilities are part of the Indian power system as Transmission Licensee. The entities operating in the Eastern Region are Powergrid, Sterlite (ENICL,PKTCL, OGPTL), Cross Border Power transmission Corp Ltd(CBPTCL), Darbhanga Motihari Transmission Cop Ltd(DMTCL), Powerlinks, Alipurduar Transmission Ltd(ATL) and Teesta Valley Power Transmission Ltd (TVPTL). Other than Powergrid & Sterile, no other licensee has any dedicated operational control room for coordination with ERLDC during tripping/shutdown or any other switching operations. Due to non-availability of dedicated control center, it is very difficult for ERLDC to coordinate with associated transmission licenses during tripping of lines in odd hours, which causes delay in restoration of transmission asset and collection of tripping related information.

In 159th OCC Meeting held on 19th July 2019, OCC decided to discuss the issue with all the transmission licensees in a separate meeting.

Subsequently a special meeting was held at ERPC on 2nd August 2019 for discussing the issue with all the transmission licensee. The following decisions were taken in the meeting:

- All the private transmission licensees (transmission line owner and bay owner) would have to make official O&M agreement with both end substations utility for smooth coordination with ERLDC. The operating procedure, obligation of DR & EL submission to ERLDC, mandatory maintenance of off-line fault locator and all the necessary coordination with ERLDC during line outages etc. should be clearly included in the agreement to avoid disputes.
- ERLDC will interact only with Substations for necessary coordination and collection of information.
- All the private transmission licensees should give two coordinator names along with their contact information to ERLDC for necessary coordination in case of emergency.
- All the private transmission licensees were advised to submit the status of execution of agreement to ERPC Secretariat by end of Aug 2019, before the next TCC/ ERPC meeting.

- It was decided to monitor the coordination issue in monthly OCC and PCC meetings. It was decided to report the issue to CERC for necessary penalty, if no improvement is observed in these meetings.

TCC may note.

ITEM NO. B26:	**Action Plan for Power Supply during Durga Puja, 2019 (4th October to 8th October, 2019)**

The Hon'ble Minister-in- charge,Department of Power & Non-Conventional Energy Sources, Govt. of West Bengal has convened a meeting on 20/8/2019 regarding Action Plan for meeting the power demand during the Durga Puja festival, 2019 i.e. the period from 04/10/19 (Maha Sasthi) to 08/10/19 (Maha Dashami).

ERPC has assessed the expected Availability vis-à-vis projected Demand for West Bengal as well as Eastern Region during the above period. The details are placed in 160th OCC meeting.

The updated power supply position is given in **Annexure-B26**.

TCC may note.

ITEM NO. B27:	**Implementation of Automatic Generation Control (AGC) in India (at Inter-State level)**

CERC in its order dated 13.10.2015 in Petition No. 11/SM/2015 reiterated the need for mandating Primary Reserves as well as enabling Secondary Reserves, through Automatic Generation Control (AGC) as follows:

"(a) All generating stations that are regional entities must plan to operationalise AGC along with reliable telemetry and communication by 1st April, 2017. This would entail a one-time expense for the generators to install requisite software and firmware, which could be compensated for Communication infrastructure must be planned by the CTU and developed in parallel, in a cost-effective manner.
(b) On the other hand, National/Regional/State Load Dispatch Centres (NLDC/RLDCs/SLDCs) would need technical upgrades as well as operational procedures to be able to send automated signals to these generators. NLDC /RLDCs and SLDCs should plan to be ready with requisite software and procedures by the same date.
(c) The Central Commission advises the State Commissions to issue orders for intra-state generators in line with this timeline as AGC is essential for reliable operation of India's large inter-connected grid."

The issue was discussed in 8th NPC Meeting held on 30th November 2018, it was decided that each RPC would submit the status of implementation of AGC to NPC.

In 154th OCC, It was informed that ISGS generators at Barh STPS is in the process of implementation of the AGC as a pilot project.

It was informed by Member Secretary, ERPC that, during the deliberation in the 8th NPC meeting on 30.11.2019, it emerged that states in the other regions had already taken initiative for implementation of AGC. ERPC was advised to sensitize this issue in the ERPC forum.

OCC advised Odisha, West Bengal and DVC to identify one generator in their system for implementation of AGC as a pilot project and place the detailed implementation plan in coming TCC Meeting.

In 40th TCC, the followings are decided in the TCC Meeting

1. *Status of implementation of AGC shall be regularly monitored in OCC meetings.*

2. *An workshop shall be organised in ERPC wherein NLDC and NTPC will be invited to interact with the ER constituents regarding the experience they have gained in implementing the AGC in other regions.*

DVC confirmed that unit#8 of Mejia TPS has been identified for AGC implementation as a pilot project.

In 155th OCC, Odisha informed that unit#3 of OPGC had been selected for implementation of AGC.

WBPDCL informed that unit#5 of Bakreswar had been selected for implementation of AGC.

In line with 40th TCC decision, a workshop on AGC was conducted at ERPC, Kolkata on 31st May 2019 wherein NLDC, NTPC and Siemens were invited to interact with the ER constituents.

AGC pilot project at NTPC Barh stg-II was tested in close loop operation on 01st Aug 2019 for one hour. Continuous operation of AGC pilot project at Barh will start after checking the AGC data with NTPC Barh.

NTPC, Odisha, West Bengal and DVC may update.

ITEM NO. B28:	**STATCOM PROJECT IN EASTERN REGION**

In the 15th meeting of SCM held on 27-08-2013, it was agreed to install STATCOM in combination with mechanically switched Reactors (MSR) and Capacitors (MSC) and co-ordinated control mechanism of MSCs and MSRs at Ranchi, Rourkela, Jeypore and Kishanganj substations in Eastern Region.

The matter was again discussed in the 28th ERPC/TCC meeting held on 12th -13th September, 2014 at Goa, wherein, it was decided that POWERGRID may go ahead with implementation of the STATCOM project in Eastern Region with debt – equity ratio of 70:30 funding. The debt part should be funded through PSDF and Equity Component (30%) to be funded by POWERGRID, which was to be recovered through regulated tariff mechanism.

1. **Status of STATCOMS installed in Eastern Region**

All four STATCOMs at Rourkela, Jeypore, Kishanganj and New Ranchi were commissioned.

Sl No	Location of PGCIL Sub-Station	Dynamic Shunt Controller (MVAr)	Mechanically Switched Compensation (MVAr)		Latest status
			Reactor (MSR)	Capacitor (MSC)	
1	Rourkela	±300	2x125		*In service from March 2018.*
2	Ranchi(New)	±300	2x125		*Commissioned on 12th July 2018*
3	Jeypore	±200	2x125	2x125	*Commissioned on 30th June 2018*
4	Kishanganj	±200	2x125		*Commissioned in March, 2019*

TCC may note.

2. Installation of PMUs for observation of the dynamic performance of STATCOMS

In 39th ERPC Meeting, it was decided that,

i. Power Grid shall immediately place an order on M/s GE for supply and installation of 4 nos. PMUs for 4 STATCOMs in the Eastern Region at an estimated cost of Rs. 40 Lakh.
ii. The cost of the above should be included within the quantity variation clause under the URTDSM Project funded from PSDF.
iii. Powergrid shall approach the PSDF Appraisal Committee for inclusion of the above under the quantity variation clause under the URTDSM Project.
iv. In case PSDF funding for this addition supply and installation is not available, then the cost of PMUs including the installation cost (approx. Rs.40 Lakh) shall be included under the project "Upgradation of SCADA / RTUs / SAS in the Central Sector Stations and strengthening of OPGW network".

In 40th TCC, Powergrid informed that amended order has been placed to M/s GE. The materials are expected to be delivered by May 2019 and commissioning would be completed by July 2019.

Powergrid added that the cost would be booked under the STATCOM project, not against the quantity variation clause under the existing URTDSM project.

TCC agreed.

In 160th OCC, Powergrid informed that the PMUs would be installed by 15th August 2019.

Powergrid may update.

ITEM NO. B29:	REPLACEMENT OF OLD RTUS IN EASTERN REGION FOR REPORTING OF RTU/SAS TO BACKUP CONTROL CENTRES

In 39th ERPC Meeting, it was decided that,

i) ERPC approved the proposal of Power Grid for replacement of the old RTUs in the Eastern Region for reporting of RTU / SAS to backup control centres at an estimated cost of Rs. 88.57 Crore with an implementation time of 36 months.

ii) Power Grid shall place a proposal before PSDF Committee for financing the above project from PSDF.

iii) In case of non- availability of required funding from PSDF, the project shall be implemented by Power Grid and the cost shall be recovered by Power Grid through tariff.

iv) Member Secretary, ERPC shall coordinate with Power Grid for implementation of the above project.

In 40th TCC, Powergrid informed that the DPR for PSDF would be submitted by April, 2019.

ERLDC emphasised that the useful life of old RTUs are going to end in October 2020 and as such calls for urgent action for replacement.

TCC took serious note of the delay in replacement of old RTUs in ER

Powergrid was advised to take expeditious action for speedy replacement of old RTUs in ER.

In 159th OCC, Powergrid informed that the DPR for PSDF would be submitted by 31st July, 2019.

ERLDC informed that

- *The issue was discussed in Special SCADA PRM Meeting held at ERPC, Kolkata on **14th February 2017** wherein it was emphasized to replace/upgrade RTU/SAS in ER so that dual reporting over 104 protocol could be possible for data redundancy to ERLDC.*
- *In 35th TCC/ERPC meeting held on 24th / 25th February 2017, it was decided to form a committee so that necessary assessment & further action for early replacement of old central sector RTUs (before October 2020).*
- *Committee report finalized and approved in 36th TCC/ERPC meeting held on 13th / 14th September 2017.*
- *Approval of final proposal along with its cost implication was extended to POWERGRID in 39th TCC/ERPC meeting held on 16th / 17th November 2018 wherein it was advised to place a proposal for PSDF.*
- *In 23rd SCADA O&M meeting held on 06th March 2019, POWERGRID informed that they would place the proposal before PSDF committee for approval after getting necessary approval from POWERGRID board.*
- *In 40th TCC/ERPC meeting held on 15th / 16th March 2019, ERLDC informed that the purpose of forming committee and getting the report approved in 36th ERPC is lost. Intention was to replace these RTU before expiry of its useful life of 15 years (October 2020) as per CERC norms.*
- *As per Communication regulation, RTU/SAS data reporting through stand-by channel to ERLDC BCC is mandatory. The same could not be extended due to limitation of the existing RTU.*
- *Even with repeated persuasions with Powergrid in different forums, POWERGRID has not yet place the proposal for funding through PSDF.*

OCC referred the issue to 41st TCC Meeting.

Powergrid may update.

ITEM NO. B30:	ALTERNATE PATH FOR MALDA-FARAKKA OPGW LINK

On 6th December 2017 at 17:26Hrs due to OPGW communication link failure between Malda - Farakka, data and voice communication interrupted between ERLDC and 17 nos of stations located in North Bengal and Sikkim area for 16 Hrs 23 minutes. It was envisaged to form protection path using Purnea – Biharshariff OPGW link but due to recent tower collapse, the formation of protection path yet to be completed. As per information received from M/s ENICL in 150th OCC meeting held on 10th October 2018, it would take approximately Six (6) month to restore the line which was out since 10th August 2018 due to tower collapse.

In 22nd SCADA O & M meeting held on 30th October 2018, ERLDC requested POWERGRID to provide another alternate protection path for Malda – Farakka OPGW link till the restoration of 400 kV Purnea – Biharsharif line.

In 153rd OCC, Powergrid was advised to implement alternate OPGW link through 400 kV Kishenganj- Darbhanga-Muzaffarpur lines.

In 160th OCC, Powergrid informed that alternate OPGW link through 400 kV Kishenganj-Darbhanga-Muzaffarpur lines had been implemented on 23rd July 2019.

TCC may note.

ITEM NO. B31:	IMPLEMENTATION OF AUTOMATIC DEMAND MANAGEMENT SCHEME (ADMS)

The latest status along with proposed logic as follows:

Sl No	State/Utility	Logic for ADMS operation	Implementation status/target	Proposed logic (if different from under implementation logic)
1	West Bengal	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 25.11.16	F <49.9 AND deviation > 12 % or 150 MW
2	DVC	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 17.06.2016	
3	Bihar	F <49.7 AND deviation > 12 % or 150 MW	They would place the order to Chemtrol for implementation.	F <49.9 AND deviation > 12 % or 150 MW
4	Jharkhand	1. System Frequency < 49.9 Hz AND deviation > 12 % or 25 MW 2. System Frequency < 49.9 Hz AND deviation > 12 % or 50 MW 3. System Frequency <	9 Months Tendering for RTU installation is in progress. Offer received from Chemtrol for implementation.	Condition 1: Block I feeders will be selected for load shedding Condition 2: Block I & II feeders will be selected for load shedding Condition 3: Block I, II & III feeders will be selected for load shedding

		49.9 Hz AND deviation > 12 % or 75 MW		
5	Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. DISCOM over-drawl > (40 MW)	10 Months Sent for PSDF approval.	Logic 2 and 3 is AND or OR, in case it is AND then ADMS may not operated when discom are in schedule but GRIDCO is overdrawing due to less generation at state embedded generators
6.	Sikkim		Sikkim informed that they have submitted a proposal to PSDF Committee for installation of OPGW cables which is under approval stage. Sikkim added that ADMS scheme would be implemented after installation of OPGW.	

In 142nd OCC, members opined that uniform logic should be implemented for all the states. OCC decided to review the logic of ADMS after implementation of the scheme by all the states.

In 159th OCC, JUSNL informed that testing of ADMS had been completed and the ADMS would be kept in service in 1st week of August 2019.

BSPTCL informed that installation of ADMS had been completed and the testing would be done by 26th July 2019.

BSPTCL, OPTCL, JUSNL and Sikkim may update.

TCC may discuss.

ITEM NO. B32:	**STATUS OF CONSTRUCTION OF CHUZACHEN 132 kV BAYS AT RANGPO S/S OF POWERGRID**

Construction of 132 kV bays at Rangpo S/s meant for evacuation of power from Chuzachen HPS was undertaken by Department of Power, Govt of Sikkim, under consultancy with POWERGRID.

In 35th TCC, Sikkim informed that retendering work was in progress.

Sikkim assured that they would commission the bays within the target date i.e. December, 2017.

In 36th TCC, Sikkim informed that the work has been awarded and commissioning is expected by March, 2018.

In 37th TCC, Sikkim assured that they would resolve the issue in coordination with PGCIL ER-II.

In 38th TCC, Sikkim informed that work is in progress and it will be completed by September 2018.

In 39th TCC, Sikkim informed that the work was delayed due to unavoidable circumstances and assured that the work will be completed by February 2019.

In 40th TCC, Sikkim informed that all the equipments have arrived at site. The work will be completed by April,2019.

Sikkim may update.

ITEM NO. B33:	**REPAIR/RECTIFICATION OF TOWER AT LOCATION 79 OF 132KV RANGPO-MELLI D/C LINE AND CHUZACHEN (RANGPO) -GANGTOK TRANSMISSION LINES**

POWERGRID had informed that their patrolling team had observed bent in part of tower no. 79 of 132kV Rangpo-Melli D/c line and 132 kV Chuzachen(Rangpo)-Gangtok transmission lines which might further degrade the condition of tower.

In 137th OCC, POWERGRID informed that tower no. 79 of 132kV Rangpo-Melli D/c line and Chuzachen(Rangpo)-Gangtok transmission lines falls under the jurisdiction of Energy & Power Department, Govt. of Sikkim.

In 37th TCC, it was decided that Sikkim would give a comprehensive proposal to PGCIL within one week regarding handing over of the relevant segments of the line to PGCIL. Thereafter, PGCIL and Sikkim would sit together and resolve the issues involved therein.

In 145th OCC, Sikkim informed that the proposal had been sent to State Govt. for approval.

In 148th OCC, Sikkim informed that State Govt. for approval is pending.

OCC took serious note of delay in tower rectification and referred to TCC for further guidance.

In 39th TCC, Sikkim informed that the proposal for handing over the line to PGCIL is under consideration with the state Government. They are under the process of preparation of cost estimate of part of the line, which is under Sikkim jurisdiction.

Sikkim may update.

TCC may deliberate.

ITEM NO. B34:	**Trans-national (Bhutan) metering issue**

i) Reverse polarity of SEM at Deothang and Silicon Factory : As per 157th OCC Meeting of ERPC, shutdown was approved to Motanga S/s subject to availability of SEMs at Deothang and Silicon Factory. Accordingly, SEM of Motanga was shifted to Deothang end and new SEM is

installed at Silicon factory. 132kV Deothang-Rangia feeder and 132kV Silicon feeder has been charged successfully through ERS tower at 11.43Hrs on June 02, 2019. SEM data of both ends are available with ERLDC and it is observed that both SEMs are connected with reverse polarity since 02.06.19. Matter is communicated to NLDC, Bhutan and no corrective action is taken.

Bhutan may please update.

ii) Non-receipt of weekly SEM data associated with MHP : ForMangdechhu (4X180MW) energy calculation total 16(sixteen) nos of SEMs are installed at different locations of Bhutan (Mangdechhu, Jigmelling&Yumro). Mangdechhu has injected infirm power on 16/06/19 to India through 400kV Alipurduar-Jigmelingfeeders. SEM data of Mangdechhu, Jigmeling and Yumro is not received by ERLDC till date. Due to non-receipt of data, validation and meter healthiness is not yet been checked at ERLDC.

Bhutan may please update the status.

For Mangdechhu energy calculation, Jigmelingend SEM for 400kV Jigmeling-Alipurduar SEMs are considered.

TCC may note.

ITEM NO. B35:	**OPERATIONALIZING BLACK START FACILITY AT PURULIA PUMP STORAGE PROJECT (PPSP) OF WBSEDCL**

The issue was discussed in last several RPC/OCC meetings. However, till date, no progress has been achievedfor operationalising the black-start capability. However, the orders passed by honorable CERC and APTEL foroperationalization of black start facility at PPSP is still in force.

In 39th TCC Meeting, it was informed by West Bengal that the necessary study results are notyet received from OEM. However, a study group is being constituted by WEST BENGAL forcarrying out the study for operationalisation of Black Start at PPSP. On request from WestBengal in the meeting, ERPC Secretariat and ERLDC agreed to be associated with the study group.

Subsequently the meeting was held on 8th Feb 2019 where after thread bare discussion between the members it was unanimously decided that the reply as received from OEM (Toshiba, Japan) by WBSEDCL shall be submitted to CEA & CERC immediately for their observation & further views/guidance on the issue. Upon receipt of such guidance, committee will further sit together to finalize the committee report. Report is enclosed at **Annexure-B35**.

WBSEDCL may update.

ITEM NO. B36:	**PAYMENT/RECEIPT STATUS FROM VARIOUS POOL ACCOUNTS IN ER**

1) PAYMENT OF DEVIATION CHARGE – PRESENT STATUS

Deviation Pool Account Fund of ER is being maintained & operated by ERLDC, in accordance with the CERC Regulations. As per Regulations 10 (1) of "Deviation Settlement Mechanism and related matters" the payment of charges for Deviation shall have a high priority and the concerned constituents shall pay the indicated amounts within 10 days of issue of statement of Charges for Deviation including Additional Charges for Deviation by the Secretariat of the respective Regional Power Committee in to the "Regional Deviation Pool Account Fund" of the concern region.

The status of Deviation Charge payment as on 02.08.2019 is enclosed at ***Annexure – B36.1***. The current principal outstanding Deviation Charge of BSPHCL & JBVNL is **₹48.28 Cr &₹25.63 Cr** respectively considering bill up to 07.07.2019. ERLDC is regularly giving reminders to BSPHCL & JBVNL to liquidate the outstanding Deviation charges.

Further SIKKIM is not paying DSM charges in Pool since last few years and waiting for adjustment with the receivable amount.

SIKKIM may please pay the Payable amount as per bill within due date instead of waiting for adjustment. Total outstanding as on date of Sikkim is **₹ 5.28 Cr**.

JUVNL, BSPHCL & Sikkim may confirm the program for payment of outstanding dues.

2) INTEREST DUE TO DELAYED PAYMENT OF DEVIATION CHARGES.

Due to delayed payment of deviation charges in DSM Pool in FY 2018-19, interest was computed till 24.06.19 for all the DSM Pool Members. ERLDC vide letter No. ERLDC/MO/U-11 / 1148 dated 24.06.19 have issued the interest statement for FY 2018-19.

Settlement of delayed payment Interest for 2018-19 for the recipient constituents has been done on 31.05.19. IBEUL has yet to clear the outstanding Interest amount of 2017-18. ***Outstanding amount of Interest i.r.o IBEUL is ₹ 2801388/- (computed as on 28.06.2019).***However the statement of interest amount of 2018-19 is enclosed in ***Annexure – B36.2***.

Moreover, an amount of ₹ 13,29,261/- has been accumulated towards delay payment interest of Sikkim for FY 2017-18 and not yet been paid by Sikkim.

Constituents, who are in payable mode, may please confirm the program for payment of Interest.

3) Non-payment of Deviation Charges by IBEUL

IBEUL is not paying Deviation charges in ER DSM Pool since 12.04.2017 (almost 2 years) and present outstanding amount payable by M/s IBEUL towards principal deviation charges is **₹ 112.50429 Lac** considering bill up to 07.07.2019 (However, there is no power flow in the circuits) and **₹ 28.01Lac**against the delayed payment interest of deviation charges till 28.06.19.A petition in CERC had been filed in July 2018 by ERLDC against M/s IBEUL for violation of Regulation 10 of DSM regulations 2014. Hon'ble commission directed in order against petition no. 230/MP/2018 dated 16.04.2019 that the Petitioner is at liberty to approach

NCLT for appropriate directions in accordance with law. Further, ERLDC has filed a claim in NCLT on 31.05.2019 and same has been admitted.

This is for information.

4) REACTIVE ENERGY CHARGES – PRESENT STATUS.

The updated position of Receipt/Payment of Reactive Energy Charges in the pool as on 05.08.2019 (considering bill up to 14.07.2019) is indicated in ***Annexure – B36.4***. The total outstanding receivable on account of Reactive charges from West Bengal is ₹**1.97 Cr.** &from JUVNL is ₹**35.77 Lakh.** Reactive energy charges receivable from SIKKIM is **₹3.76 Lacs** and has not paid the charges since 2017. WBSETCL is paying the reactive charges on regular basis.

SIKKIM & JUVNL may respond.

5) Outstanding reactive energy charge against WBSEDCL

Reactive amount receivable from WBSEDCL prior to 04.01.2016 was **₹ 1.82 Cr** (prior to Suo-moto order dated 21.07.2016 of the Hon'ble WBERC in the matter of case no: SM-14/16-17) which was long pending. WBSEDCL has liquidated the entire outstanding amount by the end of April'2019.

This is for information.

ITEM NO. B37:	**Agenda items by Powergrid**

a) Opening/Enhancement of Letter of Credit by Beneficiaries :

The following beneficiaries have to open/enhance LC as listed below:

(Rs in Crores)

DIC Name	LC Required	LC Available
East Central Railways-BRBCL 900 MW LTA	40.65	0
South Bihar	45.29	14.50
North Bihar	33.97	9.73
DVC	19.71	6.99
Odisha	43.44	38.79
South Eastern Railway_RGPPL_Jhk	2.38	0

The beneficiaries may open/enhance LC for the requisite amount in favour of POWERGRID.

b) Default in payment of outstanding dues by beneficiaries :

The details of outstanding dues for more than 45 days as on 01.08.2019 in respect of defaulting beneficiaries of POWERGRID are as under:

(Rs in Crores)

Name of the DIC	**45-90 days**	**>90 days**
(South Bihar) SBPDCL	84.36	39.10

(North Bihar) NBPDCL	17.71	0.00
Jharkhand	9.88	
IndBarath		219.34
West Bengal (wbsedcl)		4.29
DVC	6.18	178.10
Bangladesh	1.08	0.94
GRIDCO (Odisha)		23.26
GMRKEL (Bihar)	14.26	4.88
Sikkim	1.73	0.00

The concerned utilities may liquidate the outstanding dues on priority and update the status.

TCC may note.

ITEM NO. B38:	**Additional Agenda**

PART C: ITEMS FOR INFORMATION

The following items are placed before TCC for noting and compliance:

ITEM NO. C1 :	Updated operating procedure of Eastern Region

The Operating Procedure of Eastern Regional power system, developed and maintained by ERLDC in accordance with section 5.1(f) of the IEGC, has been updated taking into consideration the developments that have taken place in the regional power system during the last one year including the amendments incorporated in the IEGC so far by Hon'ble CERC. After discussion in 159th OCC meeting Operating procedure of ER is finalized on 20th July 2019 and same is available at ERLDC website www.erldc.in

ITEM NO. C2 :	Governor Response of ISGS and IPP Generating plants in Eastern Region

A meeting to discuss and deliberate on the performance of governor response of ISGS and IPPs generating power plants of Eastern Region, was organised by ERLDC on 12th July 2019. Performance of each ISGS and IPPs Power plant for the six frequency events which happened from March to June 2019, were discussed in the meeting. The summary of the discussions with generators is provided at **Annexure-C2**.

ITEM NO. C3 :	STATUS OF PROJECTS FUNDED UNDER PSDF SCHEMES

Latest status as updated in 160th OCC Meeting is as follows:

A. Projects approved:

SN	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	PSDF grant approved (in Rs.)	Amount drawn till date (inRs.)	Latest status
1	WBSETCL	Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal	31-12-14	April 2018 Extended till March 2019	108.6 Cr	37 Cr.	Project has been completed. Final value of the project is 51.22 Cr.
2		Renovation & modernisation of transmission system for relieving congestion in Intra-State Transmission System.	22-05-17	March 2020	70.13	63.12 Cr	Order has been placed . Work is in progress.
3		Installation of switchable reactor at 400kV & shunt capacitors at 33kV	22-05-17	November 2019	43.37	11.69 Cr	Order had been placed and work is in progress.
4		Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid			71.74 Cr		
5		Project for establishment of reliable communication and data acquisition at different substation at WBSETCL.			31.19 Cr		
6	WBPDCL	Implementation of Islanding	*10.04.17*	*March 2018*	1.39 Cr	1.25 Cr	*The islanding scheme had*

		scheme at Bandel Thermal Power Station					*been implemented and in operation wef**15.11.2018***
7		Upgradation of Protection and SAS		April 2020	23.48	2.348 Cr	Bid opened and order has been placed. Work started.
8	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	11.05.15	31.03.19	162.5 Cr.	37.79 Cr	90% work has been completed. Total expenditure may not exceed 68 Cr.
9		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.17		25.61 Cr.	2.56 Cr	Agreement signed on 03.01.2018. Tender has been floated.
10		Installation of 125 MVAR Bus Reactor along with construction of associated bay each at 400kV Grid S/S of Mendhasal, Meramundali& New Duburi for VAR control &stabilisation of system voltage	27.07.18		27.23 Cr	2.72 Cr	Tender has been floated.
11	OHPC	Renovation and up-gradation of protection and control system of 4 nos.OHPC substations.		*U.Kolab, Balimela, U.Indravati, Burla, Chiplima March 2019*	*22.35 Cr.*	2.235 Cr	Placed the work order.
12	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharshariff, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone& 132/33 kV GSS Kataiya	11/5/15	31.07.2018	64.02 crore	56.04 crore	90% of work has been completed. The work would be completed by Dec 2019.
13		Installation of capacitor bank at different 35 nos. of GSS under BSPTCL	5/9/2016	31st March 2019	18.88 crore	Nil	Work awarded for all GSS. Work had been completed for 35 substations
14		Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL.	02.01.17	31st March 2018	49.22 Cr.		85% work completed for seven no. GSS as part of R & M work. Revised DPR is to be submitted for rest 5 no. GSS.
15	JUSNL	Renovation and up-gradation of protection system	*September 2017*	*15 Months*	*138.13 crores*	*39.02 Cr*	LOA placed to Siemens on 28th Sep 2018.
16	DVC	Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation	02.01.17	01.06.2019	25.96 Cr	2.596 Crore on 01.06.2017	Work awarded for 28.07 Cr. Work would be completed by May 2019.
17		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	27.11.17	24 Months from the date of release of fund.	140.5 Cr.	1st installment of 14.05 Cr. received on 21.12.2017	Work awarded for 77.97 Cr.
18	POWERGRID	Installation of STATCOM in ER		June 2018	*160.28 Cr*	*16.028 Cr*	STATCOMs have been installed in all the four locations in ER. Project completed.
19	ERPC	Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid	17.03.16	Project is alive from 30th October 2017	20 Cr.	4.94 Cr. + 9.88 Cr.	1) Protection Database Project has been declared 'Go live' w.e.f. 31.10.17. 2) Pending training on PDMS at Sikkim and 3rd training on PSCT has been also completed at ERPC Kolkata.

20a	ERPC	Training for Power System Engineers	*27.07.18*		0.61 Cr.	Nil	1st Module on Power System Protection was conducted from 22nd to 26th July 2019.
20b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents	*27.07.18*		5.46 Cr.	Nil	Training for 1st batch has been completed and 2nd Batch is in progress.

ITEM NO. C4 :	**STATUS OF 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	46	85.19
NTPC	16	14	87.50
NHPC	1	1	100.00
DVC	40	26	65.00
WB	68	49	72.06
Odisha	59	42	71.19
JUSNL	34	25	73.53
BSPTCL	16	5	31.25
IPP (GMR, Sterlite and MPL)	5	5	100.00

** Pending observations of POWERGRID are related to PLCC problems at other end.*

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

ITEM NO. C5 :	**PAYMENT/RECEIPT STATUS FROM VARIOUS POOL ACCOUNTS IN ER**

1) RRAS ACCOUNT ----PRESENT STATUS.

The updated position of Payments to the RRAS Provider(s) from the DSM pool and Payments by the RRAS Provider(s) to the DSM pool as on 02.08.2019 (considering bill up to 07.07.2019) is indicated in ***Annexure* – C5.1.** So far ₹ 26.47Cr have been settled under RRAS in ER during FY 2019-20.

2) FRAS Account ----Present Status.

The updated position of Payments to the FRAS Provider (i.e NHPC) from the DSM pool as on 02.08.2019 (considering bill up to 07.07.2019) is indicated in ***Annexure – C5.1.*** So far **₹1.32 Lacs** have been settled under FRAS in ER during FY 2019-20.

3) CONGESTION ACCOUNT - PRESENT STATUS

No Congestion in ER is imposed since 06.12.2012. The status of congestion charge payment after full settlement is enclosed at ***Annexure –C5.3.***

4) STATUS OF PSDF

An amount of **₹3.03 Cr** from Reactive account have been transferred to PSDF after 40th Commercial sub-committee meeting held on 02.07.19. With this, the total amount of **₹967.22 Cr** has been transferred to PSDF so far. No amount from Deviation pool has been transferred to PSDF A/c since 29.06.16 and surplus amount in deviation pool is being utilized for settlement of RRAS & FRAS Bill. The break up details of fund transferred to PSDF (till 02.08.19) is enclosed in ***Annexure-C5.4.***

ITEM NO. C6 :	**RECONCILIATION OF COMMERCIAL ACCOUNTS**

1) RECONCILIATION OF DEVIATION ACCOUNTS.

At the end of 1st quarter of 2019-120, the reconciliation statement (Period: 01.04.19 to 30.06.19) has been issued by ERLDC on 17.07.19 and statements had been sent to the respective constituents and also uploaded the same at ERLDC website at https://erldc.in/market-operation/dsmreconcilation/The constituents were requested to verify /check the same & comments if any to be reported to ERLDC at the earliest. The status of reconciliation is enclosed in ***Annexure-C6.1***.

IBEUL have not reconciled the statement for last 2 year.

DIKCHU has not signed reconciliation statement for last 3 quarters.

BSPHCL, JUVNL, POWERGRID(ER-I) and OPGC has not yet reconciled for last two quarters.

DVC, GRIDCO, WBSETCL, Sikkim, MPL, KBUNL, POWERGRID(ER-II),DIKCHU, NHPC, GATI, NVVN, GMR, TPTCL, JLHEP, BRBCL, TUL, Tashiding&NPGC have not signed reconciliation statement for 1st quarter of 2019-20.

All above constituents are once again requested to submit the signed reconciliation statement at the earliest.

2) RECONCILIATION OF REACTIVE ACCOUNT

At the end of 1stquarter of 2019-20, the reconciliation statement (Period: 01.04.19 to 30.06.19) has been issued by ERLDC on 17.07.19and statements had been sent to the respective constituents and also uploaded the same at ERLDC website at link https://erldc.in/market-operation/reactivereconcilation/.Constituents were requested to verify /check the same & comments if any to be reported to ERLDC.The status of reconciliation is enclosed in ***Annexure-C6.2***.

BSPHCL, JUVNL have not reconciled the account for last two quarters. DVC, GRIDCO, WBSETCL& SIKKIM have not reconciled the account of last quarter.

Constituents may please reconcile the Reactive account.

3) RECONCILIATION OF RRAS & FRAS ACCOUNT

At the end of 1st quarter of 2019-20, the reconciliation statement (Period: 01.04.19 to 30.06.19) for RRAS and FRAS has been issued by ERLDC on 17.07.19and statements had been sent to the respective constituents (i.e NTPC, KBUNL, BRBCL and NHPC) and also uploaded the same at ERLDC website at link https://erldc.in/market-operation/rrasreconcilation/. BRBCL and NHPC has not reconciled the RRAS & FRAS account respectively for last quarter.

4) Short Term Open Access

a. For STOA payments made to SLDC / STU:

The reconciliation statements of STOA payments for the period of Apr'18 to Jun'19 have been sent to the DVC, OPTCL and WBSETCL for checking at their end and confirmation from their side. WBSETCL is yet to confirm for the period Jul'18 to Sep-18 .

b. **For payments made to STOA applicants:**

The reconciliation statements of STOA payments for the period of Apr'18 to Jun'19 have been sent to the CESC, JITPL, JBVNL and WBSEDCL for checking at their end and confirmation.

CESC have confirmed for the above period. WBSEDCL is yet to confirm for the period Oct-18 to Dec-18 and Apr-19 to Jun-19. JBVNL is yet to confirm for the period Jan-19 to Jun-19.JITPL is yet to confirm for the period Apr-19 to Jun-19.

As per clause 15.1 of CERC approved STOA bilateral procedure since the confirmations have not been received within 2 weeks from the date of issuance of the letters the statement issued by ERLDC have been deemed to be reconciled.

The details are attached in the **Annexure-C6.4.**

Since there is a serious audit objection on non-signing of DSM, Congestion and STOA reconciliation statement it is once again requested that all regional pool members may check and sign the statement sent by ERLDC

5) State Transmission Utility Charges and Losses applicable for STOA for FY 2019-20

Name of STU	**Intra-State Transmission Charges**	**TRANSMISSION LOSS (For Embedded entities)**
WBSETCL	*	3.10%
DVC	Rs. 143.7 / MWh	2.68%
OPTCL	Rs. 62.5 / MWh	3.00%
JUSNL	*	#
BSPTCL	*	#
SIKKIM	*	#

N.B:
* Indicates rates yet to be furnished by concerned State Utilities. Transmission Charges for use of state network shall be Payable @ Rs.80 per MWh as per subsequent Amendment regulation 2009-dated 20.05.2009.
# Not yet intimated by the State Utility.

State Load Despatch Centre Operating Charges for STOA for FY 2018-19

Name of SLDC	SLDC Operating Charge
West Bengal	**
DVC	**
Odisha	Rs. 2000
Jharkhand	**
Bihar	**
SIKKIM	**

N.B:
** Indicates rates yet to be furnished by concerned State Utilities. Operating charges at the rate of Rs 1000/- per day or part of the day for each bilateral transaction for each of the Regional Load Despatch Centre involved and at the rate of Rs 1000/- per day or part of the day for each
State Load Despatch Centre involved shall be payable by the applicant as per subsequent Amendment regulation 2009-dated 20.05.2009.

6. Information of Deviation/Reactive/RRAS payment in ER pool account

Constituents of Eastern region are making payment of Deviation charge, Reactive Charge, RAAS in ER Pool Accounts. However ERLDC is not getting details of payment made in ER pool account from all constituents. In 31st and subsequent CCM, all the ER pool members were requested to send the details of payment in the format to ERLDC in the email account at erldcomml@posoco.in. WBSETCL, NTPC, APNRL, DANS Energy, Shiga Energy, TPTCL and MPL are sending the details. DVC is sending through Hard Copy. Other constituents viz BSPHCL, JUVNL, GRIDCO, SIKKIM, PGCIL(HVDC),may also furnish the details of payment made in ER Pool.

S.No	Name of Utility	Amount	DSM/Reactive Account Week No	Date	Cheque No	Mode of Payment

7. Opening of LC by ER constituents for DSM payments

Clause 10 (4) of CERC Deviation Settlement Mechanism and related matters Regulations, 2014 vide notification No. L-1/132/2013/CERC dated 6th January, 2014 to be implemented from 17.02.2014 is reproduced below:

Quote
All regional entities which had at any time during the previous financial year failed to make payment of Charges for Deviation including Additional Deviation Charges for Deviation within the time specified in this regulations shall be required to open a Letter of Credit (LC) equal to 110% of its average payable weekly liability for Deviations in the previous financial year, in favour of the concerned RLDC within a fortnight from the date these Regulations come into force……..

…….……..Provided further that LC amount shall be increased to 110% of the payable weekly liability in any week during the year, if it exceeds the previous LC amount by more than 50%.

Unquote

The details of LC amount required to be opened in 2019-20 by ER constituents is given in **Annexure – C6.7.** Letters to this effect has been issued by ERLDC to the defaulting entities.

BSPHCL, DVC, GRIDCO, SIKKIM, KBUNL, GATI, NVVN (NEPAL & BD), POWERGRID(ER-I & ER-II), DIKCHU and NPGC has not yet opened/renewed LC.

ITEM NO. C7 :	REPLACEMENT OF GPRS COMMUNICATION WITH OPTICAL FIBER FOR AMR

In ER, approximately 80% meters are connected through Automated Meter Reading (AMR). At present the communication system used for data transfer from each location is GPRS. It has been observed that many locations are not communicating with AMR system due to poor/no GPRS signal. Many substations have their own optical fiber which is also used for the LAN network of respective stations. TCS has successfully connected 02 locations (Subhasgram-PG and Binaguri-PG) in ER-II with PGCIL intranet and these two locations are smoothly reporting to AMR system after connecting with PGCIL LAN. The proposed network will not only provide better communication but also reduce the cost of GSM.

In 40th CCM, POWERGRID requested all the constituents to share the available optical fiber networkconnectivity details for further configuration to Optical connectivity to avoid communicationproblems through GPRS and for much more reliable transmission of SEM data to ERLDCserver.POWERGRID further informed that Phase wise expiry of AMC is commencing from June 2019onward and Comprehensive AMC plan is being prepared and the same shall be placed at theearliest.

In 159th OCC, Powergrid informed that optical fiber for AMR had been implemented at 38 locations and rest of the locations would be completed by July 2019. However M/s TCS has confirmed that total 33 locations out of 40 has been connected with LAN.

ITEM NO. C8 :	ISSUES RELATED TO ASSOCIATED / DOWNSTREAM SYSTEMS

WEST BENGAL

1. **2 nos. 220 KV line bays at Subhashgram (PG) s/s**: Bays are ready and idle charged under ERSS-VIII due to non readiness of 220 KV D/C Subhashgram – Baruipur Tr. line and associated bays at Baruipur.

2. **6 nos. 220 KV bays at Rajarhat GIS substation under ERSS-V -** 02 no. bays of 220 KV will be utilized through LILO of 01ckt of 220 KV Jeerat - New Town Tr. line (WBSETCL) at Rajarhat. Construction activity of 220 kV line bays was completed. Due to public agitation, work was stopped from January' 2017 and during the agitation miscreants have damaged several panels, cables etc. Work for commissioning of the station has commenced from Sept 18 and expected to be completed by Dec 18.

In 160th OCC, WBSETCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x500MVA, 400/220kV Rajarhat---**	
a.	Rajarhat-N. Town-3 (WBSETCL) 220 kV D/C line	The line commissioned on 1st February 2019.
b.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	ROW problem, August 2020
c.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	The line is charged from Rajathat and Jeerat. The line would be charged from Barasat end after completion of rest of the work by September 2020.
2	**Subashgram400/220kVS/s**	
a	Subashgram–Baruipur220kVD/cline	January 2020, 80% of work has been completed. The line up to the cable is charged from Subashgram end on antitheft.

ODISHA

1. **6 nos. 220 KV bays at Pandiabil GIS: 06 nos.** 220 kV bays at Pandiabil (PG) substation are ready for commissioning since July '16. Utilisation of the bay is held up due to non-readiness of 220 KV lines of OPTCL. Readiness of 220 KV Feeders by OPTCL is critical for downstream power flow from Pandiabil (PG) S/S.

In 160th OCC, OPTCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	400/220kV Pandiabil Grid S/s:	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	*By March, 2020.*

JHARKHAND

The following downstream network is being constructed by JUSNL to draw power from 220kV & 132kV level from Daltonganj (PG) :

220 kV Level :
- Daltonganj (POWERGRID) – Latehar 220 kV D/C
- Daltonganj (POWERGRID) – Garhwa 220 kV D/C

132 kV Level :
- Daltonganj (POWERGRID) – Daltonganj (JUSNL) 132 kV D/C
- Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132 kV D/C

In 160th OCC, JUSNL updated the latest status as follows:

Sl. No.	Name of the transmission line	Completion schedule

1.	**Daltonganj 400/220/132kV S/s:**	
a.	Daltonganj(POWERGRID)–Latehar220kVD/c	By Dec, 2019.
b.	Daltonganj (POWERGRID) – Garhwa 220kV D/c	The line expected to be completed by May, 2018 but – Garhwa 220kV is expected to be completed by Sep 2019.
C	Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c	Tendering is in progress. Expected to be completed by October 2019
2	**Chaibasa400/220kVS/s**	
A	Chaibasa(POWERGRID)–Noamundi220kVD/c	Not yet started
3	**Dhanbad400/220kVS/s**	
A	LILO of Govindpur–Jainamore/TTPS 220kVD/c at Dhanbad	ROW issues.Target date April 2020.

ITEM NO. C9 :	**Performance of Eastern Regional grid during FEB-19 to JUN-19**

1) Real time operation:

During the period under review, power supply position in the region was as under:

	FEB-18	MAR-18	APR-18	MAY-18	JUN-18	FEB-19	MAR-19	APR-19	MAY-19	JUN-19
AvgFrq. (Hz)	**49.98**	**49.97**	**49.97**	**49.95**	**49.98**	**50.00**	**49.99**	**50.00**	**49.99**	**49.99**
PkDmd (MW)	**19416**	**21587**	**21361**	**21994**	**22677**	**19917**	**21818**	**23005**	**23476**	**23362**
Energy Consum. (MU/day)	**382**	**416**	**408**	**438**	**456**	**374**	**404**	**452**	**473**	**476**
ISGS Gen (MU)	**3935**	**4236**	**4053**	**4616**	**4753**	**3832**	**4634**	**4611**	**5076**	**4802**
Region Gen (MU)	**13545**	**15767**	**15122**	**15950**	**15538**	**13232**	**15391**	**15965**	**17103**	**16456**
% increase in Reg Gen.						**-2.31**	**-2.38**	**5.57**	**7.23**	**5.91**

2) System Operational Discipline during the period from FEB-19 to JUN-19

i) The month-wise energy drawls of ER constituents were as given hereunder:

	FEB-19		MAR-19		APR-19		MAY-19		JUN-19	
	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT
BSPHCL	**1824**	**1812**	**2171**	**2167**	**2454**	**2440**	**2964**	**2964**	**2957**	**2964**
JUVNL	**470**	**474**	**554**	**557**	**491**	**490**	**561**	**565**	**559**	**563**
DVC	**-1235**	**-1228**	**-1475**	**-1472**	**-1456**	**-1448**	**-1386**	**-1372**	**-1314**	**-1294**
OPTCL	**695**	**713**	**1027**	**1066**	**1004**	**1056**	**881**	**905**	**1006**	**1051**
WBSETCL	**642**	**635**	**1126**	**1123**	**1496**	**1487**	**1794**	**1793**	**1693**	**1736**
SIKKIM	**46**	**45**	**49**	**47**	**44**	**41**	**43**	**40**	**37**	**39**

ii) Frequency & Voltage

Frequency profile for the period during **FEB-19 to JUN-19**is given hereunder. The frequency mostly remained within the allowable range for the entire period

Month	% of time for which frequency			
	<49.9	**49.9-50.05**	**> 50.05**	**IEGC band 49.9-50.05**
FEB-19	7.01	70.73	22.26	70.73
MAR-19	9.52	71.11	19.37	71.11
APR-19	7.32	73.13	19.55	73.13
MAY-19	8.25	72.62	19.13	72.62
JUN-19	9.87	70.34	19.79	70.34

iii) Maximum and minimum voltages recorded at some important 400 kV sub-stations were as follows:

	FEB-19		MAR-19		APR-19		MAY-19		JUN-19	
SUB-STATION/	MAX.	MIN	MAX.	MIN	MAX.	MIN	MAX.	MIN	MAX.	MIN
POWER STN.	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)
(765 KV) NEW RANCHI	791	763	791	770	792	763	798	762	791	765
MUZAFFARPUR	418	386	422	398	421	393	423	386	423	387
BINAGURI	431	399	409	400	411	400	425	400	421	402
JEERAT	429	391	416	393	415	396	423	370	426	373
MAITHON	422	404	417	396	416	395	425	400	426	388
BIHARSHARIFF	422	400	423	390	410	390	420	387	418	393
JAMSHEDPUR	418	401	415	399	414	397	416	394	420	393
ROURKELA	416	405	426	386	428	372	421	401	422	403
JEYPORE	419	390	409	392	425	387	418	394	418	399
MERAMUNDALI	413	393	406	386	410	388	412	386	413	370
SASARAM	413	393	434	396	431	399	418	391	419	387
SUBHASHGRAM	428	388	431	398	422	397	419	370	422	365
RAJARHAT	__	__	427	389	429	371	418	353	421	364

3) Constituent-wise demand met is given below:

		FEB-18	**MAR-18**	**APR-18**	**MAY-18**	**JUN-18**	**FEB-19**	**MAR-19**	**APR-19**	**MAY-19**	**JUN-19**
BSPHCL	AVG MAX DMD(MW)	4221	4188	4326	4537	4627	3938	4133	4656	5047	5121
	MU/DAY	71	76	82	86	91	71	76	87	101	102
JUVNL	AVG MAX DMD(MW)	1129	1121	1104	1150	1119	1166	1168	1191	1236	1209
	MU/DAY	24	24	23	24	24	23	24	25	27	26
DVC	AVG MAX DMD(MW)	2814	2716	2769	2740	2759	2808	2885	2841	2864	2837
	MU/DAY	70	68	70	70	71	70	72	74	73	72

ODISHA	AVG MAX DMD(MW)	3979	4100	3865	4200	4200	3847	4112	4310	3974	4209
	MU/DAY	80	85	80	93	96	76	86	94	86	87
W. BENGAL	AVG MAX DMD(MW)	7060	7876	7690	7911	8270	6318	7100	7955	8656	8603
	MU/DAY	138	162	159	165	175	134	147	173	185	188

4) Inter-regional energy exchange during the review period were as follows: (Figures in MU)

Region	FEB-19		MAR-19		APR-19		MAY-19		JUN-19	
	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT
NER	141	-286	104	-322	70	-351	-278	-117	1	328
SR	1392	1407	1949	1926	1993	1793	1049	1416	250	957
WR	-228	-629	-606	-1293	-930	-1388	-814	-1680	-497	-1876
NR	976	1655	893	1820	727	1617	1758	2001	2015	1993
TOTAL	**2281**	**2147**	**2340**	**2130**	**1860**	**1670**	**1715**	**1621**	**1769**	**1402**

5) Reservoir levels of important hydro stations in ER during FEB-19 to MAY-19 (as on last day of the month) is given below:

STATION	MDDL/ FRL	**FEB-19**	**MAR-19**	**APR-19**	**MAY-19**	**JUN-19**
BURLA	590/630 FT	620.08	616.77	611.71	603.60	598.69
BALIMELA	1440/ 1516 FT	1498.10	1488.20	1478.70	1466.80	1455.60
RENGALI	109.7/ 123.5 MTR	116.38	115.49	114.00	111.60	110.59
U. KOLAB	844/ 858 MTR	853.08	851.43	849.65	847.59	846.16
INDRAVATI	625/ 642 MTR	636.72	634.46	631.52	628.82	628.40
MACHKUND	2685/ 2750 FT	2735.65	2731.25	2725.35	2719.00	2711.90

6) New Element Charging:

FEB-19:

Sl No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	500 MVA, 400/220kV ICT 3 at Gaya	PGCIL	06/02/19	10:44	First time Charged
2	LILO of 220kV EMSS - NCSS Ckt No.2 at Princep street S/S	CESC	09/02/19	11:16	First time Charged
3	400 kV Rangpo-Kishanganj	TPTL	11/02/19	16.22	First time Charged
4	160 MVA, 220/132/33kV ICT-1 at princep street S/S	CESC	11/02/19	11:58	First time Charged
5	500 MVA, 400/220kV ICT-2 at	PGCIL	15/02/19	20:59	First time

	Patna				Charged
6	125 MVAR MSR 1 (STATCOM) at Kishanganj	PGCIL	21/02/19	18:15	First time Charged
7	125 MVAR MSR 2 (STATCOM)at Kishanganj	PGCIL	22/02/19	10:36	First time Charged
8	100 MVAR VSC-2 (STATCOM) at Kishanganj	PGCIL	22/02/19	18:19	First time Charged
9	BRBCL #3(250 MW) at Nabinagar	NTPC+Railway	26/02/19	0:00	First time COD
10	220/33 kV (20 MVA) Power Transformer at Narasinghpur Grid S/S	OPTCL	27/02/19	15:25	First time Charged

MAR-19:

Sl No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	400 KV Darbhanga-Kishanganj-1	PGCIL	12/03/19	03:31	First time Charged
2	125 MVAR Bus Reactor-1 at Rajarhat	PGCIL	15/03/19	21:07	First time Charged
3	NSTPP Unit-1 (660MW)	NPGC	23/03/19	22:31	First time synchronized
4	125 MVAR Bus Reactor-2 at Rajarhat	PGCIL	29/03/19	23:56	First time Charged
5	80 MVAR Line Reactor at Rajarhat for 400KV Rajarhat-Farakka line charged as Bus Reactor	PGCIL	30/03/19	04:10	First time Charged
6	IBTPS, OPGC Unit #3(660MW)	OPGC	30/03/19	08:00	First time synchronized
7	240 MVaR Line Reactor at Sundergarh for 765 KV Sundergarh-Raipur-2 charged as Bus Reactor	PGCIL	31/03/19	00:12	First time Charged

APR-19:

Sl No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	800 MW Darlipali unit 1 (G.T. 1)	NTPC	04/04/19	9:02	First time synchronized
2	765 KV Jharsuguda Raipur I	OGPTL	04/04/19	21:12	
3	765kv Jharsuguda-Rsipur-2	OGPTL	05/04/19	23:32	
4	400/220KV, 315MVA ICT-2 at Bokaro-A	DVC	25/04/19	19:14	First time loading

MAY-19: Nil

JUN-19:

Sl No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	400/220 KV ICT 3 at Durgapur	PGCIL	07-06-2019	10:53	
2	400 KV AlipurduarJigmellingckt 1	PGCIL	13-06-2019	18:51	400kV Alipurduar-Punatsangchu-I-Punatsangchu_II-Jigmelling lines are charged as 400 KV AlipurduarJigmelling
3	400 KV AlipurduarJigmellingckt 2	PGCIL	13-06-2019	20:37	
4	80 MVAR LR of Kishanganj-Darbhanga Line-2 at Kishangnaj SS	PGCIL	14-06-2019	20:46	

****

ANNEXURES

Eastern Regional Power Committee, Kolkata

Minutes of Special Meeting on "Low voltage issue in West Bengal System" held at ERPC, Kolkata on 8th July 2019 at 11:00hrs

List of participants is enclosed at **Annexure-A.**

At the start of the meeting, it was informed that the issue of low voltage at 400kV Rajarhat, 400kV Subhashgram, 400kV Jeerat and 132kV Malda in West Bengal system was already highlighted in 158th OCC Meeting held on 27.06.2019. As the subject requires detailed discussion, it was decided that the issue of low voltage in West Bengal system would be discussed in a separate meeting with the concerned members from WBSETCL, WBPDCL, SLDC-WB, WBSEDCL, CESC, Powergrid ER-II, ERLDC and ERPC. In line with the 158th OCC decision, this special meeting has been called.

ERLDC informed that around 450 MW and 100 MVAR increase in demand was observed at 400kV Subhashgram, Jeerat and Rajarhat compared to last year. But sufficient network connectivity and reactive power resources were not envisaged to cater the enhanced demand. There is margin available within the capability of generating units of WBPDCL (i.e. Sagardhigi, Bakreswar and Kolaghat TPS units) and NTPC Farakka to generate more reactive power during low voltage condition. However the same is not being fully utilized. The above factors together with inadequate reactive compensation at load end within West Bengal system, loading of Subhasgram(PG)-EM 220kV lines far beyond SIL, Subhasgram(WBSETCL)-Lakshmikantapur 220kV D/C lines beyond SIL and time spill over to bring total connectivity at Rajarhat (PG) S/s are causing the voltage at Rajarhat and Subhashgram to decrease below 360 kV during 14:00 hrs to 16:00 hrs. ERLDC added that HEL generating units are generating MVAR as per their capability curve.

HEL informed that they had to reduce the active power generation on a regular basis during afternoon hours to enhance the reactive power generation. As a result they had incurred financial loss on account of DSM in the month of May 2019 and June 2019. HEL suggested that incentive to generating units for providing adequate reactive power support to the grid should be introduced to encourage the generators to participate actively in improving the voltage profile.

WBSETCL informed that the 220kV lines were loaded beyond the SIL limit and contributing to the low voltage in West Bengal system. This needs to be addressed while planning the transmission system.

Powergrid informed that commissioning of 400kV Farakka-Rajarhat-Gokarna lines is getting delayed due to severe ROW issues and they are putting all the efforts to commission the lines within four months.

All the members agreed that increase in demand with insufficient network connectivity and reactive power support is the main reason for low voltage in West Bengal system.

After detailed discussion, it was decided to implement the following short term measures to improve the voltage profile:

- WBPDCL was advised to take necessary action to provide reactive power support by their units as per their capability curve. WBPDCL generating units (i.e. Sagardhigi, Bakreswar and Kolaghat TPS units) were advised to maintain the generator terminal voltage at 1 p.u. so that sufficient reactive power generation can be provided during low voltage.
- SLDC, WB was advised to closely monitor the voltage of South Bengal substations and instruct the concerned generators to enhance reactive power generation up to their respective limits.
- WBPDCL was advised to submit unit wise active and reactive power generated w.r.t generator terminal voltage for the units at Sagardhigi, Bakreswar and Kolaghat TPS at intervals of 15 minutes along with date and time to SLDC, WB and ERLDC.
- It was decided to communicate the issue to Farakka, NTPC for providing MVAR during low voltage condition as per the capability curve.
- It was also decided to monitor the performance of the generators on daily basis and ERLDC was advised to present performance of the generators in 159th OCC Meeting scheduled to be held at ERPC, Kolkata on 19th July 2019.
- As already proposed in 158th OCC, SLDC, WB was advised to expedite implementation of Under-Voltage Load Shedding (UVLS) in WBSETCL system to avoid voltage instability problem and major failure in and around the metro city of Kolkata. ED, ERLDC requested SLDC WB to explore the scope of rotational shedding of non-priority loads supplied from Jeerat, Subhasgram and Rajarhat at least during 14:00 to 16:00 Hrs.

The following medium term/long term measures and action taken plans were discussed in the meeting:

- WBSETCL informed that they are installing 610 MVAR additional capacitor banks in distribution network to improve the voltage. The capacitor banks would be commissioned by December 2019
- WBSETCL added that a number of new sub-stations are coming up in South and North 24 Parganas. They are considering 10 MVAR capacitor bank against each 50 MVA transformer, if voltage is seen below desired level during planning.
- WBSETCL further informed that they have entrusted contract to PRDC for detail study of the perspective plan to identify any gaps in reactive power management.
- CESC informed that they are installing 50 MVAR capacitor at 132kV level at New Kasipur S/s. The capacitor would be commissioned by December 2019. CESC added that the reactive power demand at Subhashgram (PG) S/s is expected to reduce after commissioning of the capacitor.
- It was opined that after commissioning of 400kV Farakka-Rajarhat-Gokarna lines and 765 kV New Ranchi-Midnapur-Jeerat corridor, the voltage would be improved.
- It was informed that LILO of 400kV Subhashgram-HEL D/C line at 400kV New Laxmikantpur S/s of WBSETCL has been approved in 2nd ERSCT Meeting held on 5th July 2019. Minutes of the meeting are awaited.

- It was opined that after commissioning of the above LILO, the loading at Subhashgram(PG) S/s would decrease which in turn would improve the voltage.
- The proposal of installing Static Var Compensator (SVC) at low voltage prone area was discussed in 2nd ERSCT Meeting held on 5th July 2019. A preliminary study has been carried out by CTU considering the SVC at different 400kV buses. Minutes of the meeting are awaited.
- WBSETCL was advised to send all the future plans of reactive power compensation, transmission network, distribution network and load details in around Subhashgram, Rajarhat, Jeerat and Malda areas to CTU and CEA.

In view of significant seasonal variation in West Bengal system demand, there is a need for reviewing of voltage profile, GT and ICT taps and reactive power resources twice in a year (i.e. before Summer and Winter). Accordingly it was decided to conduct such review meetings in March and October in every year till the issues of low/high voltage in West Bengal system resolved.

Meeting ended with vote of thanks to the chair.

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No. 23/22/2019-R&R
Government of India
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, 28th June, 2019

ORDER

Subject: Opening and maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees -Reg

1.0 Under the Electricity Act 2003, Regional Load Despatch Centres (RLDC) and State Load Despatch Centres (SLDC) are cast with the statutory responsibility to ensure that that the supply of electricity is made in accordance with the contracts.

2.0 Section 28 (3) (a) of the Electricity Act 2003 provides that the Regional Load Despatch Centre shall be responsible for optimum scheduling and despatch of electricity within the region, in accordance with the contracts entered into with the licensees or the generating companies operating in the region.

3.0 Similarly as per provisions of Section 32 (2)(a) the State Load Despatch Centre shall be responsible for optimum scheduling and despatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State.

4.0 The Power Purchase Agreements have the provision regarding maintenance of adequate Payment Security Mechanism mainly in the form of Letters of Credit by the Distribution Licensees/ Procurers of Power. A robust Payment Security System requires adequacy and validity of Letter of Credit to cover the payments due on account of drawal of power.

5.0 It has been seen that despite the above provisions, the Letters of Credit are not being given and there is huge outstanding on account of unpaid power bills. This makes it difficult for the Generators to pay for the fuel, which has to be pre-paid, to continue the generation. The Generators are also required to pay to the Railways in advance for the rakes. If this situation persists, the Generators will not be able to pay for fuel/transportation leading to shortfall in generation of electricity. There will thus be wide spread load shedding on account of lack of generation. It is essential therefore that all the provisions mentioned above are implemented strictly. NLDC & RLDC are therefore directed as follows:

i. In accordance with Section 28 (3) (a), the NLDC & RLDC shall despatch power only after it is intimated by the Generating Company and /Distribution Companies that a Letter of Credit for the desired quantum of power has been opened and copies made available to the concerned Generating Company.
ii. The intimation to NLDC and RLDC shall specify the period of supply.

iii. RLDC shall dispatch electricity only up to the quantity equivalent of value of Letter of Credit.
iv. The dispatch shall stop once the quantum of electricity under LC is supplied.
v. The concerned generating company shall be entitled to encash the LC after expiry of grace period, i.e. 45 to 60 days as provided in the PPA.
vi. In the event power is not dispatched for any reason given above, the Distribution licensee shall continue to pay the Fixed Charge to the Generating Company.

6.0 It shall also be ensured by the Load Despatch Centre that the regulated entity, during the period of regulation, has no access to procure power from the Power Exchanges and they shall not be granted Short Term Open Access (STOA).

7.0 In case scheduling and despatch of power produced by any generator is not done due to non-opening of Letter of Credit by the Distribution licensee, then the Distribution licensee would be liable to pay compensation to the generator as per the terms of Power Purchase Agreement or Power Sale Agreement, as the case may be, the distribution licensee has entered in with the generator.

8.0 NLDC/ RLDC/SLDC shall carry out such duty cast under Electricity Act, 2003 from 01.08.2019.

9.0 This issues with the approval of Minister of State (I/C) for Power and NRE.

(Debranjan Chattopadhyay)
Under Secretary to the Government of India
Ph: 011-2373 0265

To,

1. CMD, POSOCO / Heads of NLDC & RLDCs
2. Principal Secretary/Secretary (Power/Energy), State Governments/UTs – For necessary communication to Discoms/ SLDCs
3. All Generating Companies
4. All Distribution Companies

Copy to:

1. Chairperson, CEA, Sewa Bhawan, RK Purarn, New.,Delhi
2. Secretary, CERC/FOR, Chandralok Building, Janpath, New Delhi

Copy also for information to:

1. All Joint Secretaries, Ministry of Power
2. PS to MOS (I/C) for Power and NRE
3. PPS to Secy.(P), PPS to AS(SNS),PPS to CE(RR)

No. 23/22/2019-R&R
Government of India
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, 17th July, 2019

CORRIGENDUM

Subject: Opening and maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees - Reg

Reference this Ministry's Order of even no. dated 28.06.2019 (Copy enclosed).

2. The Ministry of New and Renewable Energy have brought to the notice of this Ministry that many of the Renewable energy generating stations are intra state generators.

3. Some States have requested that in case of delay etc. in the opening of LC, there should also be a provision for advance payment for supply for one day or more.

4. Therefore, it has been decided to partially modify the Order dated 28.06.2019 by adding the following:

I. Wherever the words 'NLDC & RLDC' occurred, the term, 'and State Load Despatch Centre (SLDC)' will be added after that.

II. After Para 5.0 (vi) of the aforesaid Order, the following paras will be added:

vii. The LC may be opened as per the PPA. However, the Distribution Company may open LC for a shorter duration say for supply corresponding to one week or fortnight. The same may be intimated to the respective LDCs and the generating company. In such cases also the LDCs shall schedule the power.

viii. In case of difficulty in opening of LC, Distribution Company may pay in advance through electronic mode the amount equal to the amount corresponding to atleast one day purchases of electricity and inform the same to the respective LDC. In such case also LDC shall schedule the power to the Distribution Company.

5. All other terms and conditions of the Ministry's Order of even No. dated 28.06.2019 will remain unchanged.

Encl: As above

(Debranjan Chattopadhyay)
Under Secretary to the Government of India
Ph: 011-2373 0265

To,

1. CMD, POSOCO /Heads of NLDC/RLDCs/SLDCs
2. Principal Secretary/Secretary (Power/Energy), State Governments/UTs – For necessary communication to Discoms
3. All Generating Companies
4. All Distribution Companies
5. Secretaries of All State Electricity Regulatory Commissions (SERCs)/JERCs.

Copy to:

1. Chairperson, CEA, Sewa Bhawan, RK Puram, New.,Delhi
2. Secretary, CERC/FOR, Chandralok Building, Janpath, New Delhi

Copy also for information to:

1. All Joint Secretaries, Ministry of Power/EA, MoP
2. PS to MOS (I/C) for Power and NRE
3. PPS to Secretary (P), PPS to AS(SNS), PS to CE(RR), PS to Dir (R&R)

No. 23/22/2019-R&R
Government of India
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, 28th June, 2019

ORDER

Subject: Opening and maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees -Reg

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4.0 The Power Purchase Agreements have the provision regarding maintenance of adequate Payment Security Mechanism mainly in the form of Letters of Credit by the Distribution Licensees/ Procurers of Power. A robust Payment Security System requires adequacy and validity of Letter of Credit to cover the payments due on account of drawal of power.

5.0 It has been seen that despite the above provisions, the Letters of Credit are not being given and there is huge outstanding on account of unpaid power bills. This makes it difficult for the Generators to pay for the fuel, which has to be pre-paid, to continue the generation. The Generators are also required to pay to the Railways in advance for the rakes. If this situation persists, the Generators will not be able to pay for fuel/transportation leading to shortfall in generation of electricity. There will thus be wide spread load shedding on account of lack of generation. It is essential therefore that all the provisions mentioned above are implemented strictly. NLDC & RLDC are therefore directed as follows:

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iv. The dispatch shall stop once the quantum of electricity under LC is supplied.
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8.0 NLDC/ RLDC/SLDC shall carry out such duty cast under Electricity Act, 2003 from 01.08.2019.

9.0 This issues with the approval of Minister of State (I/C) for Power and NRE.

(Debranjan Chattopadhyay)
Under Secretary to the Government of India
Ph: 011-2373 0265

To,

1. CMD, POSOCO / Heads of NLDC & RLDCs
2. Principal Secretary/Secretary (Power/Energy), State Governments/UTs – For necessary communication to Discoms/ SLDCs
3. All Generating Companies
4. All Distribution Companies
5. Secretaries of All State Electricity Regulatory Commissions(SERCs)/JERCs.

Copy to:

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2. Secretary, CERC/FOR, Chandralok Building, Janpath, New Delhi

Copy also for information to:

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2. PS to MOS (I/C) for Power and NRE
3. PPS to Secy.(P), PPS to AS(SNS),PPS to CE(RR)

Annexure-B4.2

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति
Eastern Regional Power Committee
14, गोल्फ क्लब रोड, टालीगंज, कोलकाता-700033
14 Golf Club Road, Tollygunj, Kolkata-700033

सत्यमेव जयते

आई एस ओ : 9001-2015
ISO: : 9001-2015

Tel No. :033-24239651, 24239659 FAX No.:033-24239652, 24239653 Web: **www.erpc.gov.in**

No: ERPC/MS/Operation/ 2019/ 4197 – 4212 **Date: 30.07.2019**

FAX MESSAGE NO. – 758

From: Member Secretary, ERPC, Kolkata.

To:

As per list.

Sub: Minutes of the Special Meeting on Procedure for Scheduling of Power to DISCOMs based on LC/Payment Security Mechanism – Reg.

Enclosed please find the Minutes of the Special Meeting on **Procedure for Scheduling of Power to DISCOMs based on LC/Payment Security Mechanism** held on **30.07.2019 at ERLDC, Kolkata** through videoconferencing for your kind information. The same is also available at ERPC website (http://www.erpc.gov.in).

Observations, if any, may please be forwarded to this office at the earliest.

Regards,

30/7/19

(J.Bandyopadhyay)
Member Secretary

Copy for kind information to:

1) Chairperson, CEA, Sewa Bhawan, R.K. Puram , New Delhi-110066.
2) Member (GO&D), CEA, Sewa Bhawan, R.K.Puram, N.Delhi- 110066
3) Chief Engineer (OM-Transmission), Ministry of Power, GOI, Shram Shakti Bhawan, Rafi Marg, Delhi- 110001.

List of Addressee:

1. Executive Director, ERLDC, POSOCO, Kolkata, (Fax No. 033-2423-5809)
2. Chief Engineer (System Operation), BSPTCL, Patna, (Fax No. 0612-2504557/2504937)
3. Chief Engineer (Commercial), BSPHCL, Vidyut Bhavan, Bailey Road, Patna-800021.
4. Chief Engineer, SBPDCL, Vidyut Bhavan, Bailey Road, Patna-800021.
5. Chief Engineer, Transmission (O&M), JUSNL, Ranchi (Fax No.-0651-2490486/2490863)
6. Chief Engineer (C&R), JBVNL, Engineering Building, HEC, Dhurwa, Ranchi-834004.
7. Chief Load Dispatcher, SLDC, OPTCL, Bhubaneswar (Fax No.0674-2748509)
8. Sr. General Manager (PP), GRIDCO, Janpath, Bhubaneswar (0674-2547180)
9. Chief Engineer, CLD, WBSETCL, Howrah, (Fax No. 033-26886232)
10. Chief Engineer (PTR), WBSEDCL, Salt Lake, Kolkata (Fax:033-23345862)
11. GM (Sys Operation), CESC, Chowringhee Square, Kolkata (Fax No.033-22253756/22129871)
12. Chief Engineer, SLDC, DVC, Howrah (Fax No. 033-2688-5094)
13. Addl. Chief. Engineer, SLDC, Power Dept., Govt. Of Sikkim, Gangtok, (Fax No. 03592-228186/201148/202284)

ERPC :: KOLKATA

Minutes of Special Meeting on "Procedure for Scheduling of Power to DISCOMs based on LC/Payment Security Mechanism" held on 30.07.2019 at ERLDC, Kolkata through videoconferencing.

List of participants is enclosed at Annexure-I.

Bihar, Odisha, Jharkhand, DVC, West Bengal, ERLDC & ERPC attended the meeting through videoconferencing.

Member Secretary welcomed the participants. He informed that Ministry of Power vide order dated 28th June, 2019 has given directions for implementation of LC based scheduling for DISCOMs throughout the country. Further, MoP vide communication dated 17th July, 2019 has given the detailed procedure of scheduling of power to DISCOMs in the event of non-maintenance of Letter of Credit/payment security mechanism. Again, MoP vide amendment dated 23.07.2019 has excluded the state owned generating stations from the ambit of order dated 28.06.2019. ERLDC vide communication dated 25.07.2019 has given the detailed scheduling procedure on day ahead basis.

Member Secretary informed that the revised LC/payment security based scheduling procedure shall come into force w.e.f. 01.08.2019. He noted that the meeting has been convened by ERPC to assess the preparedness of RLDC/SLDCs, DISCOMs etc. in implementing the same. He further clarified that the meeting shall not discuss any aspect of merits/demerits of the above procedure. The focus of the discussion shall be centred on smooth implementation of above cited MoP order.

ED, ERLDC in his opening remark brought out the procedure to be followed for implementation of the revised scheduling procedure w.e.f. 01.08.2019. He also requested to all SLDCs to open LC/payment security mechanism to avoid non scheduling of power. Thereafter, ERLDC gave a detailed presentation on the web based scheduling procedure to be followed by all stakeholders for day ahead scheduling. The presentation is enclosed at Annexure-II.

Member Secretary took a review of LC status for each of the states for LTOA, MTOA and central sector allocations. The state wise details are as follows:

Bihar- SBPDCL informed that they are having adequate LCs with NTPC, NHPC, BRBCL, KBUNL, JITPL, GMR. NBPDCL informed that they have recently opened the requisite LCs.

DVC- DVC informed that they are having adequate LCs with NTPC, NHPC, KBUNL, MPL.

Jharkhand- JBVNL informed that they are having adequate LCs with NTPC & NHPC. They informed that they are in the process of opening of LCs in respect of wind power.

Odisha- GRIDCO informed that they have adequate LCs with NTPC & NHPC. Regarding KBUNL, they intimated that GRIDCO has filed a petition before OERC and KBUNL has filed a case before CERC. As the matter is under sub-judice, GRIDCO requested that KBUNL be considered out of purview of the above provisions of LC/payment security mechanism.

Member Secretary advised GRIDCO to write a letter explaining the reason of non-maintaining of LC/payment security mechanism for KBUNL for taking up the issue with MoP for further guidance. Till the clarification by MoP, the scheduling would be done as per the extant procedures/regulations.

Further, GRIDCO was advised to take up the LC/payment security mechanism issue with their solar/wind generators so that they should not regulate renewable energy on account of above LC/payment security provision.

West Bengal- WBSEDCL informed that they are having adequate LCs with NTPC, NHPC, KBUNL, APNRL.

Sikkim-Sikkim informed to ERLDC that Sikkim has adequate LC/ payment security mechanism with NTPC, NHPC & KBUNL.

Member Secretary, ERPC hoped that the new scheduling methodology shall be smoothly implemented in the Eastern Region w.e.f. 01.08.2019.

Meeting ended with vote of thanks to the chair.

Annexure - I

Eastern Regional Power Committee

14, Golf Club Road Tollygunge Kolkata-700033

Payment Security Mechanism (PSA) meeting with DISCOMs

Date: 30-Jul-19

Sl No	Name	Organization	Designation	Contact Information Email/Phone	Signature
1	J. Bandyopadhyay	ERPC	Member Secretary		
2	D. K. Jain	ERLDC	Executive Director		
3	D. K. Bauri	ERPC	Executive Engineer	eecom1.erpc@gov.in 9883617236	
4	P. P. Jena	ERPC	AEE	ppjena.erpc@gov.in 9776196991	
5	A. N Pal	ERLDC	Sr. DGM.	anpal@posoco.in 9831339589	
6	M. DAS	ERLDC	C. Mgr.	manasdas@posoco.in 9007070925	
7	Ranadip Das	ERLDC	Dy. Mgr.	ranadipdas@posoco.in (8584072081)	
8	S MONDAL	"	DGM	[illegible]@posoco.in	
9	RAJDEEP BHATTACHARJEE	BSPHCL	ESE	rekolbsphcl@gmail.com 9830380689	
10	Chandan Mallick	ERLDC	Dy. mgr.	chandan.mallick@posoco.in 9007059660	
11	Tushar Ranjan Mohapatra.	ERLDC	Ch. Mgr.	trmohapatra@posoco.in	
12	Shyamal konar	ERLDC	Sr. DGM (SO)	konar-so@posoco.in	
13	G. Mitra	ERLDC	Sr. GM	gopalmitra@posoco.in	
14	A. SEN GUPTA	CESC	AM(SO)	arunava.gupta@rp-sg.in	
15	D. BHATTACHARYYA	WBSLDC	Addl CE	dib_bhatta@yahoo.com	
16	S. Mukherjee	WBSLDC	A.E.(E)	Sourav.mukherjee91@gmail.com	
17					
18					
19					
20					

VC held on dated 30.07.2019

Sl. No.	Name of Officers	Department	Designation	Contact No.	Signature
1	PRADIP MAJI	F&A, SBPDCL	GM(F&A)	7763815073	
2	KR PRASANT	SLDC	ESE	7763817717	
3.	SWETA	SLDC	ESE	7763817710	
4.	Irshad Ahchlar	SBPDCL	EEE	7763814050	
5.	Deepak Kumar	SBPDCL	AEE(Com)	7033291929	
6.	Chanki Kumar	SBPDCL	A.O (Com)	7091596050	
7.	Akash Kumar	NBPDCL	A.O. (Com)	7763814760	
8.	Gagan Kumar	BSPTCL	E-Ex.E.	7992486100	
9.	PAVAN KUMAR	SLDC (SLDC)	AEE	7050051583	
10.	KOMAL ANAND	SLDC	AEE	7541806032	
11.	PRITI KUMARI	SLDC	AEE	7635092510	
12.	Prachi Gupta	SLDC	AEE	7635092510	
13	N.K. Gupta	SLDC	A.E.E.	7033095872	

Participants from DVC in the Special Meeting on Maintenance of Payment Security, dated 30-07-19

Sl. No	Name	Designation	Contact No	Email ID	Signature
1	Saudip Pal	DCE, SLDC	9332901432	saudip.pal@dvc.gov.in	
2.	Sukanya Mandal	EE, Comml, DVC	9932784735	sukanya.mandal@dvc.gov.in	
3.	D. P. Puitandi	SE, Comml. DVC	9434785905	dalipprasad.puitandi@dvc.gov.in	
4.	Santosh Kumar Panda	EE, SLDC.	9438692927	Santosh.panda@dvc.gov.in	

Attendence Sheet

Venue: VCC meeting with ERLDC at SLDC, Kusai, Doranda
Date: 30.07.2019

SL. No.	Name	Designation	Organization	Phone No.	Email	Sign
1.	Sri K. K. Verma	E.D, C&R.	JBVNL	7004775151	cecr2018@gmail.com	30/7/19
2.	Rishi Nandan	ESE, C&R.	JBVNL	9431708983	cecr2018@gmail.com	
3.	Shailesh Prakash	DGM (OP)	SLDC, Ranchi	9470145226	slderanchi@gmail.com	
4.	Pankaj Ko Bhagat	A.D.	JBVNL	9431382451	tmjbvnl@gmail.com	
5.	AWADHESH KUMAR	EEE/C&R	JBVNL	7739147383	~~Kumar~~ cecr2018@gmail.com	
6.	Rohit Manjhi	AEE/C&R	JBVNL	9771440212	cecr2018@gmail.com	
7.	Tushar Ranjan	Manager/ SLDC	JUSNL	9326374226	ranjtushar@gmail.com	
8.	C.M. Sharma	GM/SLDC	JUSNL	9431175416	slderanchi@gmail.com	

Meeting on "Procedure for Scheduling of power to Distribution Companies on Maintenance of Payment Security/Advance Payment" on 30.07.2019 through SLDC VC

SL NO.	NAME	DESIGNATION	SIGNATURE
1	B. P. Mahapatra	Dir (F)	
2	S.S. Nayak	CGM, PP, GRIDCO	
3	S.K. Sahoo	DGM(F) GRIDCO	
4	S.R. Mohanty	Manager(F) GRIDCO	
5	PRASHANT KUMAR DAS	G.M(El.), GRIDCO	30/07/19
6	Madhusmita Mishra.	AGM (El), GRIDCO	
7	Murchhana Dhar	ACM(El.), GRIDCO	
8	Rajesh Prasad Sahu.	DM(El.), SLDC.	
9	Pradeep Kumar Mohanty	DM(E) SLDC	
10	Subrajit Behera	DM(El), SLDC	
11	Bibhudutta Pandu	AGM(El.), SLDC	
12	Sanjaya Ku Mishra	AGM SLDC	
13	P. K. Satpathy	GM SLDC	
14	M.K. Das.	G.M. SLDC	
15			
16			
17			
18			
19			
20			

Annexure-II

Opening and maintaining of Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Companies

As per Govt order:

1.23/22/2019-R&R dated: 28th June, 2019

2.23/22/2019-R&R dated: 17th July, 2019

3.23/22/2019-R&R dated: 23rd July, 2019

Opening of LC

- The LC to be opened by the distribution company with generating station as per the PPA.
- Distribution Company may open LC for a shorter duration say for supply corresponding to one week or fortnight.
- In case of difficulty in opening of LC, Distribution Company may pay in advance through electronic mode the amount equal to the amount corresponding to at least one day's purchases of electricity.
- The intimation of requisite LC having been opened will be given by the Distribution Company and will be confirmed by the generating company.
- All information regarding LC opening status from DISCOMs through SLDC and confirmation from generator shall be informed to LDCs.

Applicability in Scheduling by the LDCs i.e. NLDC/RLDC/SLDC

- In case of non-maintenance of adequate LC as payment seucirity or advance payment with respect to the generating station by the distribution company, the power supply from the generating station shall not be scheduled by the appropriate LDC i.e. NLDC/RLDC/SLDC to the concerned distribution company.
- Power will be scheduled for dispatch only after a written intimation is given to the appropriate Load Dispatch Center (LDC) i.e. NLDC/RLDC/SLDC that Letter of Credit (LC) for the desired quantum of power wrt the generating stations has been opened.
- This order is applicable to
  - All ISGS generator
  - All LTA/MTOA transactions
  - Not applicable to state owned generating stations.

Scheduling Procedure

For implementation of Regulation to any beneficiary "power supply regulation for non-maintenance of LC" for the scheduling day **'D'**

- **'D-1' day 06:00 AM:-** For implementation of non-scheduling to any beneficiary due to non-maintenance of payment security mechanism
  - ISGS Generator shall mention the quantum of % reduction of allocation to any beneficiary/ies for the day 'D'.
  - Generators having LTA/MTOA transactions – shall enter the % reduction of LTA contract to the buyer for the day 'D'.
- **'D-1' day 08:00 AM:-** By 8 A.M., RLDCs/SLDCs shall publish a list of entities of their respective region along with details of corresponding quantum of non-scheduling of power in their website. RLDCs/SLDCs while scheduling power to the beneficiaries shall restrict the schedules of the concerned distribution company.

During the period of non-scheduling of
power on account of Non opening of LC or advance payment

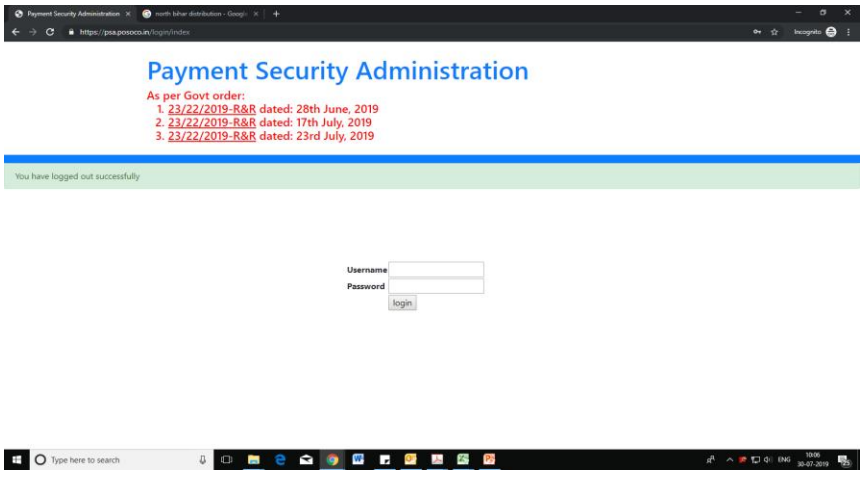
- NLDC shall exclude such generating station from Reserve Regulation Ancillary Services (RRAS).
- Distribution licensee(regulated entity) shall not procure power from the Power Exchange(s).
-
- Distribution licensee(regulated entity) t shall not be granted Short Term Open Access (STOA).
- Distribution licensee shall continue to pay the Fixed Charge to the Generating Company.

Payment Security Mechanism (PSA) Portal

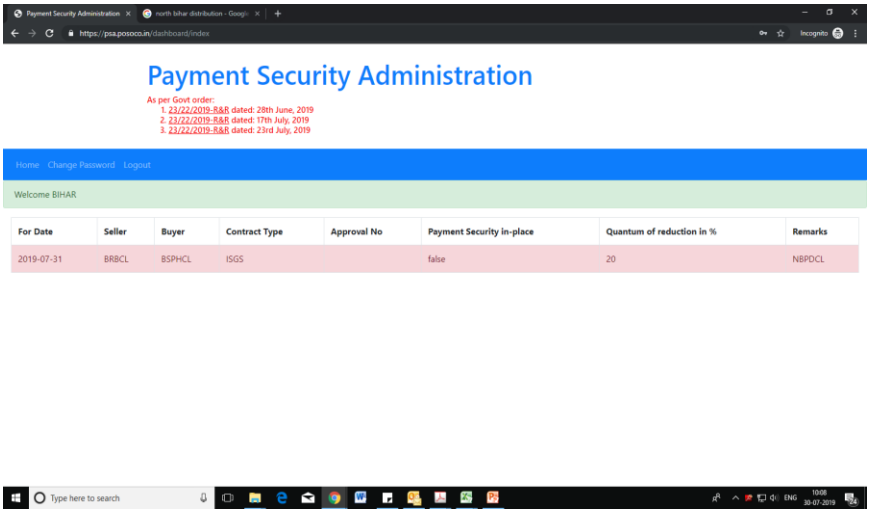
Buyers user manual

Login Page of PSA

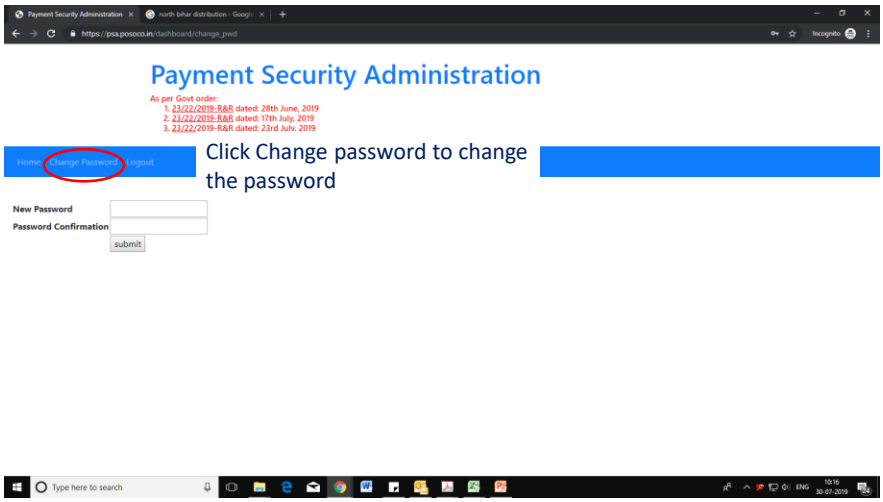
Visit: https://psa.posoco.in



Home Page for SLDCs



Password Change Page



Annexure-B5

Annexe-I

पावर सिस्टम ऑपरेशन कॉर्पोरेशन लिमिटेड

(भारत सरकार का उद्यम)

POWER SYSTEM OPERATION CORPORATION LIMITED

(A Govt. of India Enterprise)

पंजीकृत एवं केन्द्रीय कार्यालय : प्रथम तल, बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016

Registered & Corporate Office : Ist Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016

CIN : U40105DL2009GOI188682, Website : www.posoco.in, E-mail : posococc@posoco.in, Tel.: 011- 41035696, Fax : 011- 26536901

Ref: *POSOCO/NLDC/SO/PGCIL/July19/* **Date: 23rd July 2019**

To,

Executive Director,
Asset Management,
POWERGRID
Gurugram

Executive Director,
Eastern Region Transmission System-II
POWERGRID
Kolkata

Sub: Regarding implementation of System Protection Scheme (SPS) for disconnection of Bhutan interconnection at Alipurduar substation

Sir,

The hydro power generation plants located in Sikkim, North-Eastern region and Bhutan are exhibiting high generation during ongoing monsoon season. The reliability of transmission system via chicken-neck corridor which is meant for evacuation of this hydro-power generation of approx.4000-5000 MW is of utmost importance. However you may be aware that presently 400 kV Purnea-Biharsharif D/C, 400 kV Kishanganj-Patna D/C and 400 kV Kishanganj Darbhanga-D/c are under forced outage on account of either tower collapse or due to GIS substation issue. The reliability of Multi-Terminal HVDC BNC-APD-Agra is very important for evacuation of entire aforesaid hydro generation as well as safety of Sikkim and NER grid as well as Bhutan system. In order to ensure the reliability of system and in case of simultaneous outage of both HVDC poles of Alipurduar, measures are being investigated including backing down of hydro power plants. It is pertinent to mention that after tripping of HVDC Alipurduar bipole, immediate disconnection of generation at local station level (in this case Alipurduar station) may be the best possible remedial measure operating within a short span of time.

NLDC-India has intimated the situation to Bhutan Power Corporation Limited in this regard vide communication dated 18th Jul 2019(enclosed as Annexe-I). Bhutan power system operator has also shared its concern and informed about steps taken at their end vide e-mail dated 19th Jul 2019. At present, Mangdhechu hydro power plant located in Bhutan is injecting infirm power of approx. 350 MW at Alipurduar station. The evacuation of this power is also adding to the congestion of existing transmission corridor. Therefore it is proposed that a suitable system protection scheme (SPS) may be designed to immediately trip the circuit breakers of 400 kV Alipurduar-Jigmeling-D/c at Alipurduar end when both the poles of HVDC Alipurduar trip. The urgent actions may be carried out in consultation with NLDC/ERLDC to implement the scheme for reliability of the system.

A line in confirmation of steps being taken may be intimated to us.

Thanking you,

Yours sincerely,

23/07/19

(Debasis De)
CGM-NLDC

Copy to:

1. Member Secretary, ERPC
2. Executive Director, ERLDC
3. CGM, NERLDC

Annexe - II

Special Protection Scheme to be implemented at Alipurduar Station

S. No.	Event	Desired SPS Action
1.	Simultaneous tripping of both poles at HVDC Alipurduar with pre-contingency HVDC APD – Agra power order greater than or equal to 1700 MW	Immediate tripping of 400 kV Alipurduar – Jigmeling D/C from Alipurduar end
2.	Simultaneous tripping of both poles at HVDC Alipurduar with pre-contingency HVDC APD – Agra power order less than 1700 MW	No action
3.	Tripping of one pole at HVDC Alipurduar when other pole is in service (irrespective of the power order at HVDC APD - Agra)	No action
4.	Tripping of one pole at HVDC Alipurduar when other pole is out of service and pre-contingency HVDC APD – Agra power order was greater than or equal to 1700 MW	Immediate tripping of 400 kV Alipurduar – Jigmeling D/C from Alipurduar end
5.	Tripping of one pole at HVDC Alipurduar when other pole is out of service and pre-contingency HVDC APD – Agra power order was less than 1700 MW	No action

Annexure-B6

एनटीपीसी लिमिटेड
(भारत सरकार का उद्यम)
NTPC Limited
(A Govt. of India Enterprise)
(Formerly National Thermal Power Corporation Ltd.)

Corporate Operation Services (SIIS)

Ref: OS/SIIS/OMC-LDC/19/ *dt. 26-07-2019*

To
NLDC, RLDCs, RPCs, SLDCs as per enclosed list.

Subject: **Centralized Operation Monitoring Centre for all NTPC and its JV stations**

Dear Sir / Madam,

This has reference to earlier letters regarding closure of our Regional Control Centres (RCC) at Patna, Hyderabad, Mumbai, Lucknow and Noida. But in order to remove difficulties in coordinating with individual stations by respective RLDCs / SLDCs on daily (24x7) basis, it has been decided to carry out all the functions of RCCs by centralized Operation Monitoring Centre (OMC) from New Delhi. *However, participation in OCCM (Operation Coordination Committee Meeting), PCCM (Protection Coordination Committee Meeting) and other forums including coordination for compliance of issues related to NTPC generating units will continue to be done by our respective Regional offices.*

The communication, email addresses and voice call numbers of OMC at New Delhi are furnished below:

Operation Monitoring Centre (OMC),
NTPC Bhawan, SCOPE Complex, Core-7, 7th Floor,
7, Institutional Area, Lodhi Road, New Delhi-110003.
Email: ntpcomc1@ntpc.co.in, ntpcomc2@ntpc.co.in, ntpcomc@gmail.com
Land line# 011 24387228, 24367919**, Mob#** 9953557479, 9650990517
Hotline (VoIP) # will be communicated as soon as established.

The above may please be intimated to all concerned.

Looking forward for a better and effective coordination with NTPC group.

Thanking you,

Yours truly,

(**Somes Bandyopadhyay**)
General Manager (OS-SIIS),
NTPC Limited, New Delhi.
Mob # +91 9650992413

Annexure B7

Regional Level Disaster Management Group (RDMG)

Composition of Regional Level Disaster Management Group

a) Member Secretary (RPC) - Chairman
b) Secretary in-charge of Rehabilitation and Relief of the effected State of the Region
c) Representatives of each State Civil Defence
d) Regional HODs CPSUs (NTPC, NHPC, PGCIL etc.)
e) CMDs State TRANSCOs/Power Departments.
f) Chief Engineer, Central Water Commission (CWC), for floods related early warnings.
g) Deputy Director General, Indian Metrological Department (IMD), for Earthquake, and Cyclone related early warnings.
h) Group Head, Ocean Information and Forecast Services Group (ISG), for Tsunami related early warnings.
i) Head of RLDC

Responsibilities:

a) To provide inter-state emergency & start up power supply
b) To coordinate early restoration of regional grid.
c) To participate in damage assessment.
d) To facilitate resource movement to affected state (s) from other regional states

Plant level Emergency Management Group (EMG)

Composition of Plant Level Disaster Management Group

a) In-charge of the installation
b) Plant safety manager
c) Chief Plant Operation Administration
d) Representative of District Administration

Responsibilities:

a) To direct action in the affected area taking into consideration the priorities for safety of plant personnel, minimize damage to plant, property and the environment
b) To direct fire and security personnel for immediate action.
c) To ensure that all non-essential workers/staff in the affected area are evacuated to safer places
d) Set up communication points
e) Report all development and requirements/ assistance needed
f) Preserve all evidences so as to facilitate any inquiry into the cause and circumstances which caused or escalated the emergency
g) To coordinate with District Administration for necessary finance, medical facilities law & order etc.

ERPC :: KOLKATA

Minutes of Special Meeting on "Shutdown of 400 kV D/C Nabinagar-Sasaram Line" held on 02.08.2019 at ERPC, Kolkata

List of participants is enclosed at **Annexure-A**.

Member Secretary, ERPC chaired the meeting. He welcomed participants from Powergrid, BRBCL, NPGC, Eastern Central Railway, ERLDC & ERPC in the meeting. He explained that the issue was discussed in 158th OCC Meeting held on 27th June 2019 wherein, Powergrid informed that during line patrolling of 400kV D/C Nabinagar-Sasaram Line, the main leg-A and connected bracing between Leg-A & Leg-D was found deformed and bend inside, following the summer cyclone in the month of May 2019. Powergrid had requested for shutdown of 400kV D/C Nabinagar-Sasaram Line for ten days to replace the bend bracing by de-stringing of conductor and after that replacement of leg with support of derrick / hydra with proper guying arrangements. To avoid collapse of said tower, POWERGRID had provided stitching with additional tower member to safeguard the tower and kept under regular vigil.

OCC opined that no evacuation path would be available for Nabinagar generation plant during the shutdown period of 400kV D/C Nabinagar-Sasaram Line. OCC advised Powergrid to restore the line using ERS and complete the tower repairing work.

In 159th OCC Meeting held on 19th July 2019, Powergrid informed that restoration of the line using ERS would take more than 10 days as it requires destringing of 3.6 km line. The replacement of deformed / bulged leg & bracing would take 10 days. OCC decided to discuss the issue in separate meeting with the concerned utilities i.e. Eastern Railway, Bihar, BRBCL, Powergrid, ERLDC and ERPC.

In line with the OCC decision this meeting has been convened. The following deliberations were held in the meeting:

- BRBCL informed that 400kV NPGC-BRBCL line (about 10 km) was not yet completed by NPGC. Therefore, survival power to BRBCL plant will not be available during the shutdown of 400 kV D/C Nabinagar-Sasaram Line. Therefore, BRBCL requested Powergrid to carry out the tower repairing work by taking single circuit instead of double circuit shutdown.
- Powergrid informed that carrying out the tower repairing work by taking single circuit shutdown and using ERS is not possible. Powergrid assured to expedite and complete the repairing work within four days provided both line shutdown is granted.
- BRBCL added that since no alternative supply is available, the repairing work on the above line can only be started after complete shutdown of the turbine till stopping of the barring gear and the machines have to be started in cold start mode. Hence the BRBCL units will be under shutdown for one more week in addition to the shutdown period taken for the tower repairing work.
- Railways suggested that in order to have minimum interruption to Railways, the maintenance of BRBCL units may be planned during the shutdown of 400 kV D/C Nabinagar-Sasaram Line.

- ED, ERLDC suggested that if possible, 400 kV D/C Nabinagar-Sasaram Line may be connected to a nearby 400kV transmission line using ERS and jumpering arrangement for evacuation of BRBCL power during the shutdown of 400 kV D/C Nabinagar-Sasaram Line.
- During the discussion, it emerged that 400kV Daltanganj-Sasaram D/C line and 400kV NPGC-Patna D/C line are passing close to 400 kV D/C Nabinagar-Sasaram Line.
- Powergrid was advised to explore temporary connection of BRBCL power station with nearby 400kV transmission lines (i.e. 400kV Daltanganj-Sasaram D/C line or 400kV NPGC-Patna D/C line) using ERS during repair works of the defective tower of 400kV BRBCL-Sasaram D/C line. Powergrid agreed to explore the possibility for the same.
- Powergrid was advised to place the scheme in the upcoming 160th OCC Meeting scheduled to be held on 9th August 2019 at ERPC Kolkata. BRBCL and Railway were also advised to attend the 160th OCC Meeting.
- NPGC informed that 400kV NPGC-BRBCL line was planned only for drawing the start up power for NPGC station and for meeting system contingencies, if any. Contract for this line was awarded long time back and work also started but the line could not be completed due to serious ROW issues.
- It was opined that as a long term plan, the construction of 400kV NPGC-BRBCL line (10 km) is to be expedited for providing power to BRBCL under contingency. Possibility of construction of the line on cost plus basis through Powergrid may be explored for early construction of the line. It was decided to refer the issue to TCC for further guidance.
- BRBCL was also advised to plan for dedicated low voltage supply from state for meeting the emergency supply at the station.
- ERLDC suggested that to avoid situation like this in future, if there are two circuits planned for the evacuation of power from a generating station then separate single circuit towers should be planned instead of one double circuit tower.

Meeting ended with vote of thanks to the chair.

****

Eastern Regional Power Committee, Kolkata

Format SCED2: ERPC "Regional SCED Weekly Statement"

SCED Account for the period 010419-280719

S.N.	SCED Generators	Increment due to SCED scheduled to VSCED [Eastern] (MWHr) (A)	Decrement due to SCED scheduled to VSCED [Eastern] (MWHr) (B)	Charges to be paid to SCED Generators from National Pool(SCED) (in Rs) (C)= (A)xV.C.	Charges to be Refunded by SCED Generators to National Pool(SCED) (in Rs) (D)= (B)xV.C.	Net Charges Payable(+)/Receivable (-) (in Rs) (E)*= (C)-(D)
1	FSTPP I & II	217248	115856	534524208	277934120	256590088
2	FSTPP-III	39835	21948	98088384	53882250	44206134
3	KHSTPP-I	99244	36939	226576345	84472076	142104269
4	KHSTPP-II	174616	27907	380047245	61337591	318709654
5	TSTPP-I	34459	43843	65580970	85430045	-19849075
6	BARH	144362	96479	323092816	217059515	106033301
7	BRBCL	131517	18738	270075817	38927118	231148699
8	MTPS-II	66161	33849	176949297	91900793	85048504
9	MPL	21288	53732	58041575	146298305	-88256730
	TOTAL	928730	449292	2132976657	1057241813	1075734844

***(+) means payable from the 'National Pool Account (SCED)' to SCED Generator**
/(-) means Receivable by 'National Pool Account (SCED)' from SCED Generator

A)SCED settlement account for the week 01-Apr-19 to 28-Jul-19 has been prepared based on the CERC order in petition No. 02/SM/2019/Suo-Motu dated 31.01.2019 & subsequently approval of detailed procedure.

B)Variable Charges(Rs/MWHr) for SCED accounting have been taken from the AS-3 format published by ERPC.

MEMBER SECRETARY

Annexure-B24

JHARKHAND URJA SANCHARAN NIGAM LIMITED

(CIN No. – U40108JH2013SGC001704)
2nd Floor, JUSNL (SLDC) Building, Kusai Colony, Doranda, Ranchi – 02
Fax No. – 0651 – 2400123 (E-mail – cetjusnl@gmail.com)

Letter No 1096 **C.E. (T)/ JUSNL** **Dated** 12-06-19
G.M. (C&M)/ NWBP/1780/2019-20

From,

Amar Nayak,
General Manager, Contract & Materials (non W.B. Project)

To,

The General Manager (E&M)-IIOD,
Eastern Coalfields Limited,
Office of the CMD,
Sanctoria, P.O.-Dishergarh,
Distt.-Paschim Bardhman (WB) eclgmenmhod@gmail.com

Sub.:- **Regarding taking over of 220 kV Farakka-Lalmatia Transmission system of ECL.**

Ref.:
i) Minutes of 40th ERPC & TCC meetings, communicated by Member Secretary, ERPC vide letter ref. no.-ERPC/TCC & Committee/14/2019/ 88-154 dated 01.04.2019
ii) This office letter no.-882 dated 17.05.2019
iii) Your letter ref. no.-ECL/HQ/E&M/HOD/Power-05-120 dated 18.05.2019

Sir,

With reference to your letter dated 18.05.2019 under reference, it would be imperative to mention that condition of 220 kV Farakka-Lalmatia Transmission System of ECL is not upto mark which may result in uncoordinated tripping/frequent interruption of power supply and may also effect Grid security of Eastern Region. The matter has already been identified during protection audit by ERPC. Therefore, considering the status of the system, there is a requirement of up-gradation of the system to dovetail with modern protection system. Admittedly, considerable investment is required and JUSNL will need necessary funding to be tied up with PSDF Scheme. Therefore, without proper up-gradation of existing system, it is very difficult to take-over the system which may have higher probabilities of tripping within the ambit of Grid security.

However, considering the gravity of the situation deliberated in the 40th ERPC and TCC meeting, JUSNL is in principle agree to take over the 220 kV Farakka-Lalmatia Transmission System of ECL at zero cost on "as is where is" basis.

Regarding assurance of uninterrupted power supply to ECL Coalmines at Lalmatia, JUSNL will make its best effort but assurance will only be possible after up-gradation of the system.

Regarding modalities of transfer of assets of Farakka-Lalmatia Transmission System and its O&M part, for completion of necessary formalities, a meeting is required with NTPC and ECL.

It is requested to communicate your consent on the above so that date of meeting may be fixed and communicated accordingly.

Yours faithfully
12/06/2019
(Amar Nayak)
General Manager, C&M (non W.B. Project)

Annexure-B26

EASTERN REGIONAL POWER COMMITTEE

EXECUTIVE SUMMARY

LOAD MANAGEMENT OF WEST BENGAL DURING ALL THE PUJA DAYS
04.10.2019 TO 08.10.2019 (SASTI TO DASHMI)

(All figures in net MW)

SYSTEM	04.10.2019 (SASTI) FRIDAY	05.10.2019 (SAPTAMI) SATURDAY	06.10.2019 (ASTAMI) SUNDAY	07.10.2019 (NAVAMI) MONDAY	08.10.2019 (DASMI) TUESDAY
	PEAK	PEAK	PEAK	PEAK	PEAK
WBSEDCL GEN.	1250	1250	1250	1250	1250
WBPDCL+DPL GEN.	3845	3845	3845	3845	3845
CESC GEN. (Inc. HEL)	1370	1370	1370	1370	1370
C. SECTOR +IPP	1900	1900	1900	1900	1900
Import from CPP	105	105	105	105	105
TOTAL AVAILABILITY	**8470**	**8470**	**8470**	**8470**	**8470**
DEMAND OF WEST BENGAL (Inc. export)	**9465**	**9060**	**8550**	**8640**	**8224**
Sur.(+)/Def.(-)	**-995**	**-589**	**-80**	**-170**	**246**
E.REGIONAL AVAILABILITY	**27859**	**27859**	**27859**	**27859**	**27859**
E.REGIONAL DEMAND	**23770**	**23501**	**22877**	**22525**	**21742**
Probable forced & partial outages @4%	**1114**	**1114**	**1114**	**1114**	**1114**
E.REGIONAL Sur.(+)/Def.(-)	2974	3244	3868	4219	5002

EASTERN REGIONAL POWER COMMITTEE
PUJA LOAD FORECAST '2019

DEMAND IN NET MW AND AT 50.0 HZ

		WEST BENGAL							
PUJA		WBSEDCL	CESC	TOTAL WEST	BSPHCL	JUVNL	DVC	ODISHA	REGION
DAYS				BENGAL*					
	MAX	7350	2115	9465	5550	1400	3000	5250	23770
SASTHI									
04-Oct-19	MIN	4929	1258	6252	3396	842	2446	4594	18325
FRIDAY	AVG	6113	1702	7814	4259	1075	2653	4902	20768
	MAX	7170	2000	9060	5325	1345	2960	5235	23501
SAPTAMI									
05-Oct-19	MIN	4714	1251	6045	3523	972	2391	4513	18280
SATURDAY	AVG	5943	1653	7595	4357	1142	2658	4937	20752
	MAX	6900	1850	8550	5150	1300	2900	5170	22877
ASTAMI									
06-Oct-19	MIN	5102	1253	6447	3360	950	2614	4245	18311
SUNDAY	AVG	5743	1466	7209	4248	1119	2714	4756	20099
	MAX	6800	1840	8640	5045	1250	2850	5120	22525
NAVAMI									
07-Oct-19	MIN	5227	1122	6420	3211	798	2435	4428	17945
MONDAY	AVG	5827	1515	7341	4045	1093	2659	4754	19952
	MAX	6600	1625	8224	5000	1265	2750	4860	21742
DASHMI									
08-Oct-19	MIN	4467	972	5469	3256	895	2363	4296	16921
TUESDAY	AVG	5504	1196	6700	4009	1047	2569	4604	18996

***There would be around 1000 MW shortfall in West Bengal System w.r.t its availability during peak hours on Sasthi day(i,e 04.10.2019 Friday)**
If there would be rain, System demand may drop around 700/800 MW in WEST Bengal and Region as a whole around 2000 MW

EASTERN REGIONAL POWER COMMITTEE

Generation Availability During Puja-2019

Expected Peak Hours Generation

			Gross MW				Net MW			
System	Plants	Unit Considered	Therm.	Hydro+RES	Import Captive	Total	Therm.	Hydro	Captive	Total
BSPHCL	BTPS	1X110	0							
	MTPS	2X110	120							
TOTAL			120	80	0	200	103	80	0	183
JUVNL	TTPS	2x210	380	100	60	540	321	100	60	481
DVC	BTPS-A	1X500	470							
	BTPS-B	1x210	150							
	CTPS	2x250	475							
	DTPS	1X210	160							
	MTPS	4x210+2X250+2X500	2225							
	Durgapur STPS	2X500	950							
	Kodarma TPS	2X500	950							
	RTPS	2X600	855							
	TOTAL		6235	80	0	6315	5674	80	0	5754
ODISHA	IB TPS	2x210+1x660	950							
	TTPS	4x60+1x110	300							
	TOTAL		1250	1450	900	3600	1138	1443	900	3480
WBPDCL	BTPS	2x60+1X215	226							
	STPS	2X250	490							
	KTPP	5x210	786							
	BkTPP	5x210	1050							
	Sag TPS	2X300+2X500	1320							
	DPL	+1*110+1*300+1X250	400							
	TOTAL		4272		105	4377	3845	0	105	3950
WBSEDCL	(JAL.+RAMAM+TISTA)HPS+PPSP+TLDP		0	1250	0	1250	0	1250		1250
CESC	TTPS	4x60	0							
	STPS	2x67.5	130							
	B.BUDGE TPS	3x250	750							
	HEL	2X300	600							
	TOTAL		1480			1480	1370			1370
NTPC	FSTPP	3x200+3x500	1900							
	KhSTPP	4x210+3X500	2100							
	TSTPP	2x500	1000							
	TSTPS Stg-II		*150*							
	Barh STPS	2X660	*1260*							
	MTPS Stg-II	2X195	*350*							
	BRBCL	3X250	*700*							
	NSTPS	1X660	*600*							
	Daripali STPS	1X800	*800*							
	TOTAL		8860			8860	5988	*		5988
NHPC	RHPS	3x20		60		60		60		60
	Teesta HEP	3x170		510		510		510		510
IPP	MPL (U#1&2)	2X525	1000							
	APNRL (U#1,2)	2X270	480							
	GMR (2x350)	2X350	650							
	JITPL (2X600)	1X600	580							
	Total IPP TH		2710			2710	2480	0		2480
	CHUZACHEN (2x55)			100		100		100		100
	JORETHANG (2x48)			90		90		90		90
	TEESTA URJA St III (6x200)			830		830		830		830
	Tashinding (2x48.5)			90		90		90		90
	DICKCHU (2X48)			90		90		90		90
	Total IPP HY			1200		1200	0	1200		1200
Import from BHUTAN	Chu. HPS,BIR. Receipt	4X190		250		250		250		250
	KHPS	4X15		60		60		60		60
	Tala HEP	6X170		850		850		723		723
	Dagachu HPS	2X63		126		126		120		120
	Mangdechhu HEP	2X180		180		180		180		
TOTAL				1466		1286		1153		1153
GRAND TOTAL			25307	6016	1065	32388	20919	5875	1065	27859

*** for Eastern Region only .**

West Bengal SHARE FROM ISGS

NTPC	PEAK	% SHARE
FSTPS	597	34.21%
KhSTPP	57	3.10%
TSTPP	96	10.13%
BarhTPS	0	0.00%
MTPS-Stg-II	26	9.64%
BRBCL	0	0.00%
NSTPS	0	0.00%
Darlipali STPS	120	15.59%
NHPC		
RHPS	17	28.34%
Teest HPS	122	23.98%
Bhutan		
CHPC	80	31.85%
KHEP	30	50.00%
THEP	276	38%
MHEP	58	32.14%
IPP		
MPL+Adh.+Mejia	422	
Gr.Total	1900	

Minutes of Joint Study Committee Meeting for operationalization of Black Start at PPSP :

As per the direction of TCC in its 39th meeting held on 16.11.2018 at Jaipur a joint study committee has been constituted by the Director (operation),WBSETCL on 16.01.2019 with a direction to submit a report by 15th March'2019. Accordingly 1st meeting of the joint committee held on 08.02.2019 & the following deliberation & observation are made.

In compliance with the CEA's recommendation WBSEDCL requested Original Equipment Manufacturer (OEM) to offer views regarding Black Start operation of PPSP considering the newly installed 400 kV switching station near PPSP site with 80MVAR Bus Reactor.

The views of OEM was discussed in the meeting & the committee observed that the study is not sufficient to appreciate the exact risks involved inBlack start Operation of PPSP as various possibilities mentioned in the reply have not been supported by simulation studies or calculations by the OEM. Copy of the study report is enclosed. The submitted study reports do not include any comprehensive study (Dynamic, Transient and EMTP study) and plots in support of the views provided. In the opinion of the Committee, thereportsis of generic nature, and the possibilities mentioned therein is applicable for most of the hydro power plants. ERLDC informed that there are plants in the Southern and Western regions of the country having pump storage capability and are performing black start exercise at regular intervals and WBSEDCL should visit such plants in order to know whether they have faced any challenges in carrying out any exercise or not.

Members also queried WBSEDCL regarding the issue of Ferro resonance as quoted by their OEM in the report in order to ascertain the impact of Ferro resonance and their likelihood under various operating conditions. WBSEDCL informed that they do not have any details on the comprehensive study on Ferro resonance for the generating power plant as mentioned by OEM. Committee also noted that CEA report mentions that the some of the issues raised by OEM are of technical while some contractual. The report also states that the technical issues as mentioned by OEM in their reply, have to be sorted out at the time of implementation by simulation study while the contractual issues needs to be sorted out mutually between WBSEDCL and OEM.

It was also clarified in the meeting that ERLDC, ERPC, WBSETCL, WBSLDC & WBSEDCL have no suitable tools to conduct such study.

8.2.2019 05/02/2019 08/02/19

Committee members also wanted to know from WBSEDCL that subsequent to CEA report and APTEL orderdt.31st May 2016 whether they had contacted any Consultant to carry out such kind of studies. WBSEDCL submitted that they have so far not contacted any consultant for such studies to ascertain the modality of black start after the APTEL order.

WBSEDCL submitted that as far as their knowledge goes, Indian consultant may not be available to conduct such study appropriately considering critical aspects of PPSP because the machine & associated electrical equipment of this plant are designed, manufactured & installed by Toshiba Corporation , Japan (OEM) & WBSEDCL is dependent on them for any technical solution.

WBSEDCL highlighted that there will be substantial financial involvement for the engagement of such foreign consultant if required for the purpose of black start operation which may be arranged from any suitable national pool account.

However, after thread bare discussion between the members it was unanimously decided that the reply as received from OEM (Toshiba , Japan) by WBSEDCL shall be submitted to CEA& CERC immediately for their observation & further views/ guidance on this issue. Upon receipt of such guidance, committee will further sit together to finalize the committee report.

8.2.2019

08/02/2019

08/02/19

Annexure - B36.1

SUMMARY OF DEVIATION CHARGE RECEIPT AND PAYMENT STATUS

BILL from 01.04.19 to 07.07.19 (upto Week -14 of 2019 - 20)
Last Payment Disbursement Date -01.08.19

Figures in Rs. Lakhs

CONSTITUENTS	Openeing Balance(18-19)	Receivable	Received	Payable	Paid	Outstanding
WR	0.00000	166.69863	0.00000	76736.71388	76736.71388	166.69863
SR	0.00000	34246.93002	33196.60645	7464.44539	6620.30190	206.18008
NER	0.00000	21421.05956	21090.29028	13479.64003	13259.23214	110.36139
NR	0.00000	35441.37911	36638.82482	2479.57659	2412.34038	-1264.68192
BSPHCL	1353.18153	3533.52285	0.00000	58.66821	0.00000	4828.03617
JUVNL	0.00000	3182.95703	592.86790	26.27394	0.00000	2563.81519
DVC	0.00000	1880.19432	1829.63768	413.28523	413.28513	50.55654
GRIDCO	0.00000	4291.87377	3889.59391	93.93441	93.93441	402.27986
WBSETCL	0.00000	3852.07684	3473.44803	126.81361	130.08357	381.89877
SIKKIM	478.45747	165.06672	0.00000	115.62125	0.00000	527.90294
NTPC	0.00000	3980.19234	3500.27809	8.33006	0.00000	471.58419
NHPC	0.00000	123.49227	39.91657	549.55177	465.97607	0.00000
MPL	0.00000	32.22363	32.22363	111.67894	111.67894	0.00000
MTPS STG-II	0.00000	368.94640	361.99792	2.45543	0.00000	4.49305
APNRL	0.00000	332.65818	231.46651	0.00000	0.00000	101.19167
CHUZACHEN (GATI)	0.00000	51.25300	51.25300	22.98688	22.98688	0.00000
NVVN (IND-BNG)	0.00000	1846.80963	1821.34329	0.00000	0.00000	25.46634
JITPL	0.00000	276.63727	263.55059	0.00000	0.00000	13.08668
GMR	108.74911	1104.82156	436.34104	0.00000	0.00000	777.22963
IND BARATH	112.50429	0.00000	0.00000	0.00000	0.00000	112.50429
TPTCL(DAGACHU)	0.00000	776.92824	582.51443	0.00000	0.00000	194.41381
JLHEP (DANS ENERGY)	0.00000	268.60910	230.98032	9.65741	9.79538	37.76675
BRBCL(NABINAGAR)	0.00000	459.56934	453.90190	3.87523	3.81544	5.60765
NVVN (IND-NEPAL)	0.00000	352.45439	324.67951	3.54809	4.66278	28.88957
HVDC SASARAM	7.56873	11.79020	0.00000	0.80869	0.00000	18.55024
HVDC-ALIPURDUAR	0.18262	26.19058	0.00000	0.12960	0.00000	26.24360
TEESTA-III(TUL)	0.00000	1279.04614	1279.04614	327.68900	327.68900	0.00000
DIKCHU	0.00000	85.42376	85.42400	168.43829	168.43853	0.00000
Tashiding (THEP)	0.00000	219.90338	204.66631	8.83613	8.83613	15.23707
OPGC	0.00000	360.90737	302.18571	805.12200	805.12200	58.72166
NPGC	0.00000	553.75260	553.75260	1672.05811	1672.05811	0.00000
TOTAL		120693.36823	111466.79063	104690.13817	103266.95067	

% Realization **92.36** **As on** **01.08.19**

Receivable: Receivable by ER POOL Payable Payable by ER POOL

Received Received by ER POOL Paid Paid by ER POOL

"- ve" Payable by ER pool "+ ve" Receivable by ER pool

Annexure-B36.2

Deviation Interest Bill due to delay payment during FY 2018-19

As on 31.05.2019

Sl No.	Name of Constituents	Interest amt payable by party (in ₹)	Amount paid/recovered by party(in ₹)	Interest amt received by party(in ₹)	Amt paid to the party(in ₹)	Outstanding Interest as on 24.06.19
1	BSPHCL	11958502	0	0	0	**11958502**
2	JUVNL	29993506	29939285	0	0	**54221**
3	DVC	170088	0	0	0	**170088**
4	GRIDCO	0	0	520	0	**-520**
5	WBSETCL	0	0	1199	1199	**0**
6	SIKKIM	0	0	590704	0	**-590704**
7	NTPC	35493	0	0	0	**35493**
8	NHPC	0	0	23828	23828	**0**
9	MPL	0	0	8387	7596	**-791**
10	APNRL	270694	270694	0	0	**0**
11	CHUZACHEN	9527	0	0	0	**9527**
12	NVVN(IND-BD)	0	0	1659	1659	**0**
13	JITPL	58	0	0	0	**58**
14	GMR	1021705	0	0	0	**1021705**
15	IND BARATH	2801388	0	0	0	**2801388**
16	TPTCL(DAGACHU)	61182	0	0	0	**61182**
17	JLHEP	12876	0	0	0	**12876**
18	BRBCL	7602	0	0	0	**7602**
19	NVVN(IND-NEP)	8314	0	0	0	**8314**
20	TUL(TEESTA-III)	0	0	17676	17676	**0**
21	DIKCHU	7180	0	0	0	**7180**
22	HVDC-PSL	11696	0	0	0	**11696**
23	HVDC-ALPD	0	0	5659	0	**-5659**
24	TASHIDING	119055	0	0	0	**119055**
25	OPGC	0	0	0	0	**0**
26	NPGC	77385	0	0	0	**77385**
27	KBUNL	24623	21715	0	0	**2908**
	Total	**46590874**	**30231694**	**649632**	**51958**	**15761506**

Annexure - B36.4

STATUS OF REACTIVE CHARGES

RECEIVABLE IN ER POOL AS PER PUBLISHED A/C FROM 01.04.19 TO 14.07.19(2019 -20)

AS ON 05.08.19

CONSTITUENT	AMOUNT RECEIVABLE IN THE POOL (Rs.)	AMOUNT RECEIVED IN THE POOL (Rs.)	OUTSTANDING (Rs.)
WBSETCL	219451677	199715421	19736256
DVC	2135995	2135995	0
BSPHCL	4631550	4631550	0
SIKKIM	376218	0	376218
JUVNL	3796482	219632	3576850
GRIDCO	6629155	6629155	0
TOTAL	237021077	213331753	23689324

Governor Response of ISGS and IPP Generating plants

Generating Power Plants	Response of the Power Plant as observed from ERLDC SCADA data / Power Plant Data	Course of Action decided during Meeting
Farakka NTPC	**Stage 1 (3 X 200 MW):** Old Siemens Make SSI system where finetuning of RGMO is not feasible.	**Stage 1:** Old system would be replaced with new BHEL make MAX DNA DCS system. during the AOH, as per latest LGBR. RGMO tuning would be completed after such upgradation.
	Stage 2 (2 X 500 MW): Performance is being monitored.	**Stage 2 (2 X 500 MW):** Further finetuning will be carried out if the performance is not adequate.
	Stage 3 (500 MW): Software has been upgraded for the better response of Governing system	**Stage 3:** Finetuning of parameters will be done by NTPC for better response.
Kahalgaon NTPC	**Stage 1 (4 X 210 MW):** These are Russian make old units having mechanical governor. The performance of Unit 4 is not good due to the control valve issue.	**Stage 1 (4 X 210 MW):** During the next AOH,issue of Unit 4 will be rectified for better response.
	Stage 2 (3 X 500 MW): The response is unsatisfactory even after tuning.	**Stage 2 (3 X 500 MW):** The matter of poor response has been taken with BHEL. Unit 6 and 7 will be tuned by mid of August 2019, for which no shutdown would be required.
Talcher NTPC	**Stage 1 (2 X 500 MW):** Old GE make Units and poor response is observed.	**Stage 1 (2 X 500 MW):** NTPC informed that the GE make units 1 & 2 are quite old and their performance had been unsatisfactory since beginning. However, the vibration problem of U-2 has been rectified by the OEM. It was further stated byNTPCthat their corporate engineering has taken up the matter with GE and their response is awaited. There are plans to attend to the governor problems during the next overhauling in November 2019. ERLDC requested NTPC to update anydevelopment on this front.
	Stage 2 (4 X 500 MW): Unit 3 is providing an oscillatory response. Other units' performance was also not satisfactory	**Stage 2 (4 X 500 MW):** The oscillatory response observed for unit 3 will be rectified in the AOH. Unit 4,5 and 6 response will be tuned by

		the end of Mid Sept 2019.
Barh NTPC	**Unit 4 and 5:** NTPC Barh units have Siemens make governor whose response was not satisfactory. Barh responded that they have taken the logic from NTPC Mouda whose performance is good and will implement the same.In addition, there are some limitation due to boiler and need modification.	**Unit 4 and 5:** NTPC Barh intimated that new logic (RGMO) will be implemented in Barh Units by end of Aug 2019, together with tuning of AGC software.. The modification in the boiler will be completed during the AOH of the Units as per LGBR schedule.
BRBCL	The response of the units is not satisfactory.Change in frequency is not being correctly detected. Correction in load reference (in response to frequency change) is being generated after 1 minute.	BRBCL intimated that they will implement the new logic for RGMO within 2 weeks and will share the response with high-quality data for analysis.
GMR Orissa	The units are Chinese make. Response is observed, however it is not adequate	GMR will fine-tune and improve the logic for detection of frequency event and Response will be analyzed during the next frequency event to find whether any improvement has taken place.
MPL	Good Response was observed in many cases and fine-tuning is being done as per the event response. U1 was generally operating in VWO mode.	MPL intimated that they have changed the settings for sliding pressure curve which has provided better response and the units are being operated in throttledvalve condition rather than VWO to give the response as per IEGC.
APNRL	Based on data recorded at ERLDC,response of APNRL units has been observed to be delayed and inadequate. APNRL informed that they will send the data for these events where satisfactory response has been obtained as checked by them.	APNRL intimated that frequency influence detection and associated action were intentionally having a delay to check the RGMO logic. The delay has now been removed and better response can be observed from now onwards.
Teesta V	Generation response is slow during frequency response event.	Teesta V intimated that they will check the RGMO software and remove any delay in the governor control to provide an adequate response.
Teesta 3	The response of Teesta 3 Units is fast, adequate and sustaining.	Teesta 3 intimated that they have tuned their RGMO logic due to which they are

		now able to provide good response.
Dikchu	Dikchu intimated that they have not implemented RGMO, so units are run under FGMO.	Dikchu will take help from Teesta 3 to fine-tune their primary response.

In addition to the above, a few other issues were also deliberated during the meeting which are as follows:

1. Generators were advised to improve their RGMO logic and its fine-tuning to detect sudden frequency change beyond 0.03 Hz, maintaining the Frequency Response for at least 10 minutes thereafter, and subsequent withdrawal of response with a rate of 1% per minute.
2. It was strictly advised to all the generating plants not to operate their units in Valve Wide open (VWO) mode as this reduces the margin for primary frequency response from the generators.
3. From the DCS data received from many generating stations it is observed that the the response variables are not updating as expected due to improper setting in the DCS system. It was decided that all generating plants wouldexplore all possibilities for providingDCS data of better resolution and accuracy by changing the logic implemented for the update of data in their DCS system.

For all future frequency events, after receiving intimation from ERLDC, all generating plants will collect their DCS data, analyze their Units' response, calculate the % response and find out the reason for any inadequate response. The analysis will also be submitted to ERLDC.

Annexure - C5.1

SUMMARY OF RRAS CHARGE RECEIPT AND PAYMENT STATUS

BILL from 01.04.19 TO 07.07.19(upto Week -14 of 2019 - 20)

Last Payment Disbursement Date -02.08.19

Figures in Rs. Lakhs

CONSTITUENTS	Receivable	Received	Payable	Paid	Outstanding
NTPC	1223.56783	383.20213	2234.58409	1398.58817	**4.36978**
BRBCL (Nabinagar)	129.85786	19.94597	1181.57458	1071.66269	**0.00000**
KBUNL (MTPS-II)	155.55465	25.30769	739.64399	612.05338	**2.65635**
TOTAL	**1508.98034**	**428.45579**	**4155.80266**	**3082.30424**	**7.02613**

As on **02.08.19**

Receivable: Receivable by ER POOL Payable Payable by ER POOL

Received Received by ER POOL Paid Paid by ER POOL

"- ve" Payable by ER pool "+ ve" Receivable by ER pool

SUMMARY OF FRAS CHARGE RECEIPT AND PAYMENT STATUS

BILL from 01-Apr-19 TO 7-Jul-19 (upto Week -14 of 2019 - 20)

Last Payment Disbursement Date -02.08.19

Figures in Rs. Lakhs

CONSTITUENTS	Receivable	Received	Payable	Paid	Outstanding
NHPC	0.00000	0.00000	1.32191	1.32191	**0.00000**
TOTAL	**0.00000**	**0.00000**	**1.32191**	**1.32191**	**0.00000**

As on **02.08.19**

Receivable: Receivable by ER POOL Payable Payable by ER POOL

Received Received by ER POOL Paid Paid by ER POOL

"- ve" Payable by ER pool "+ ve" Receivable by ER pool

Annexure - C5.3

SUMMARY OF CONGESTION CHARGE RECEIPT AND PAYMENT STATUS

Bill upto 07.01.2013
Last Payment Disbursement Date - 13.05.2013

Figures in Rs. Lakhs

CONSTITUENTS	Receivable	Received	Payable	Paid	Outstanding
BSEB	0.67823	0.67823	0.39118	0.39118	0.00000
JSEB	16.37889	16.37889	2.61323	2.61323	0.00000
DVC	0.00000	0.00000	6.24040	6.24040	0.00000
GRIDCO	5.34488	5.34488	0.00000	0.00000	0.00000
WBSETCL	0.00000	7.42249	4.32834	11.75083	0.00000
SIKKIM	0.65609	6.20909	0.00000	5.55300	0.00000
NTPC	6.93152	6.93152	7.42249	7.42249	0.00000
NHPC	0.70445	0.70445	0.05875	0.05875	0.00000
MPL	4.81694	4.81694	0.85169	0.85169	0.00000
STERLITE	7.70504	7.70504	0.00000	0.00000	0.00000
Pool Balance	0.00000	0.00000	21.30996	21.30996	0.00000
TOTAL	**43.21604**	**56.19153**	**43.21604**	**56.19153**	0.00000

% Realization **As on 31.05.2015**

Receivable:	Receivable by ER POOL	Payable	Payable by ER POOL
Received	Received by ER POOL	Paid	Paid by ER POOL

"- ve" Payable by ER pool "+ ve" Receivable by ER pool

Annexure - C5.4

DETAILS OF DISBURSEMENT TO POWER SYSTEM DEVELOPMENT FUND

Sl No	Nature of Amount	Amount transferred to PSDF (Rs in Lac)	Date of Disbursement	Remarks
1	**Opening Balance (upto 31.03.16)**	**86464.58111**		
2	Addl. Dev	83.33978	01.04.16	Addl Dev Charge 15-16
3	Addl. Dev	43.77416	05.04.16	Addl Dev Charge 15-16
4	Addl. Dev	31.83984	07.04.16	Addl Dev Charge 15-16
5	Addl. Dev	52.08622	11.04.16	Addl Dev Charge 15-16
6	Addl. Dev	107.23773	13.04.16	Addl Dev Charge 15-16
7	Addl. Dev	220.15330	19.04.16	Addl Dev Charge 15-16
8	Addl. Dev	76.84824	21.04.16	Addl Dev Charge 15-16
9	Addl. Dev	20.84026	26.04.16	DSM Interest 2014-15(Paid by APNRL)
10	Addl. Dev	10.01920	26.04.16	Addl Dev Charge 16-17
11	Addl. Dev	432.25696	28.04.16	Addl Dev Charge 16-17
12	Addl. Dev	117.08707	02.05.16	Addl Dev Charge 16-17
13	Addl. Dev	41.65418	04.05.16	Addl Dev Charge 16-17
14	Addl. Dev	9.17422	06.05.16	Addl Dev Charge 16-17
15	Addl. Dev	105.15627	06.05.16	Addl Dev Charge 15-16
16	Deviation Interest	38.50018	06.05.16	Deviation Interest
17	Addl. Dev	35.54178	10.05.16	Addl Dev Charge 16-17
18	Addl. Dev	448.87953	31.05.16	Addl Dev Charge 16-17
19	Addl. Dev	170.51274	29.06.16	Addl Dev Charge 16-17
20	Reactive Energy Charge	530.57497	28.09.16	Reactive Charges_15-16
21	Reactive Energy Charge	1000.00000	26.12.16	Reactive Charges_16-17
27	Reactive Energy Charge	248.26904	31.07.17	Reactive Charges_17-18
28	Reactive Energy Charge	128.44284	29.08.17	Reactive Charges_17-18
29	Reactive Energy Charge	103.22685	26.09.17	Reactive Charges_17-18
30	Reactive Energy Charge	249.14078	31.10.17	Reactive Charges_17-18
31	Reactive Energy Charge	172.20693	30.11.17	Reactive Charges_17-18
32	Reactive Energy Charge	200.00000	15.12.17	Reactive Charges_17-18
33	Reactive Energy Charge	100.00000	05.01.18	Reactive Charges_17-18
34	Reactive Energy Charge	558.45339	06.02.18	Reactive Charges_17-18
35	Reactive Energy Charge	171.95546	06.03.18	Reactive Charges_17-18
36	Reactive Energy Charge	129.35497	04.04.18	Reactive Charges_17-18
37	Reactive Energy Charge	126.21494	07.05.18	Reactive Charges_18-19
38	Reactive Energy Charge	183.31081	06.06.18	Reactive Charges_18-19
39	Reactive Energy Charge	215.58816	05.07.18	Reactive Charges_18-19
40	Reactive Energy Charge	176.54245	03.08.18	Reactive Charges_18-19
41	Reactive Energy Charge	39.54556	06.09.18	Reactive Charges_18-19
42	Reactive Energy Charge	34.03973	01.10.18	Reactive Charges_18-19
43	Reactive Energy Charge	74.57236	05.11.18	Reactive Charges_18-19
44	Reactive Energy Charge	40.66623	04.12.18	Reactive Charges_18-19
45	Reactive Energy Charge	236.89035	02.01.19	Reactive Charges_18-19 & 15-16
46	Reactive Energy Charge	300.04546	05.02.19	Reactive Charges_18-19 & 15-16
47	Reactive Energy Charge	233.27998	05.03.19	Reactive Charges_18-19
48	Reactive Energy Charge	105.79202	04.04.19	Reactive Charges_18-19
49	Reactive Energy Charge	287.48448	03.05.19	Reactive Charges_18-19 & 19-20
50	Reactive Energy Charge	129.69559	03.06.19	Reactive Charges_19-20
51	Reactive Energy Charge	207.83840	04.07.19	Reactive Charges_19-20
52	Reactive Energy Charge	94.91703	02.08.19	Reactive Charges_19-20
	Total	**96721.89432**		

DSM account Reconciliation Status of ER constituents and Inter Regional

Annexure-C6.1

	2018-19				2019-20
Name of The Utility	**Q1(19.07.18)**	**Q2(08.10.18)**	**Q3(09.01.19)**	**Q4(18.04.19)**	**Q1(17.07.19)**
Inter Regional					
WR	NO	NO	NO	NO	NO
SR	YES	YES	YES	NO	NO
NER	YES	NO	NO	NO	NO
NR	NO	NO	NO	NO	NO
Intra Regional					
BSPHCL	YES	YES	YES	NO	NO
JUVNL	YES	YES	YES	NO	NO
DVC	YES	YES	YES	YES	NO
GRIDCO	YES	YES	YES	YES	NO
WBSETCL	YES	YES	YES	YES	NO
SIKKIM	YES	YES	YES	YES	NO
NTPC	YES	YES	YES	YES	YES
NHPC	YES	YES	YES	YES	NO
MPL	YES	YES	YES	YES	NO
KBUNL	YES	YES	YES	YES	YES
APNRL	YES	YES	YES	YES	YES
CHUZACHEN(GATI)	YES	YES	YES	YES	NO
NVVN(Ind-Bng)	YES	YES	YES	YES	NO
NVVN(Ind-Nep)	YES	YES	YES	YES	NO
GMR	YES	YES	YES	YES	NO
JITPL	YES	YES	YES	YES	YES
INBEUL	NO	NO	NO	NO	NO
TPTCL (DAGACHU)	YES	YES	YES	YES	NO
JLHEP(DANS ENERGY)	YES	YES	YES	YES	NO
BRBCL	YES	YES	YES	YES	NO
POWERGRID (ER-I)	YES	YES	YES	NO	NO
POWERGRID (ER-II)	YES	YES	YES	YES	YES
TUL (TEESTA-III)	YES	YES	YES	YES	NO
DIKCHU	YES	YES	NO	NO	NO
SHIGA (TASHIDING)	YES	YES	YES	YES	NO
OPGC	YES	YES	YES	NO	NO
NPGC	YES	YES	YES	YES	NO

Note:
(1)The dates in the bracket indicates the date of sending the Reconciliation statements by ERLDC to utilities.
(2) YES Indicates that signed reconciliation statement received by ERLDC
(3) NO Indicates that signed reconciliation statement is not received by ERLDC

Annexure-C6.2

Reactive Account Reconciliation_Status

	2018-19				2019-20
Name of The Utility	**Q1(19.07.18)**	**Q2(08.10.18)**	**Q3(09.01.19)**	**Q4(18.04.19)**	**Q1(17.07.19)**
Intra Regional					
BSPHCL	N/A	N/A	NO	NO	NO
JUVNL	N/A	YES	YES	NO	NO
DVC	N/A	N/A	NO	YES	NO
GRIDCO	N/A	N/A	YES	YES	NO
WBSETCL	YES	YES	YES	YES	NO
SIKKIM	YES	YES	YES	YES	NO

Note:
(1)The dates in the bracket indicates the date of sending the Reconciliation statements by ERLDC to utilit
(2) YES Indicates that signed reconciliation statement received by ERLDC
(3) NO Indicates that signed reconciliation statement is not received by ERLDC

Annexure-C6.4

Reconciliation Between Open Access department of ERLDC and SLDCs, STUs						
Sl. No.	**STUs / SLDCs Name**	**Quarter-I (2018-19)**	**Quarter-II (2018-19)**	**Quarter-III(2018-19)**	**Quarter-IV(2018-19)**	**Quarter-I (2019-20)**
	Date of Issuance	16-07-2018	15-10-2018	18-01-2019	18-04-2019	15-07-2019
1	West Bengal - SLDC and STU	YES	NO	YES	YES	YES
2	DVC - SLDC	YES	YES	YES	YES	YES
3	OPTCL-SLDC and STU	YES	YES	YES	YES	YES

Reconciliation Between Open Access department of ERLDC and Applicants						
Sl. No.	**Applicants Name**	**Quarter-I (2018-19)**	**Quarter-II (2018-19)**	**Quarter-III(2018-19)**	**Quarter-IV(2018-19)**	**Quarter-I (2019-20)**
	Date of Issuance	25-07-2018	15-10-2018	17-01-2019	12-04-2019	11-07-2019
1	Calcutta Electric Supply Company	YES	NA	NA	NA	NA
2	Jindal India Thermal Power Limited	YES	YES	YES	YES	NO
3	Jharkhand Urja Vitaran Nigam Limited	YES	YES	YES	NO	NO
4	West Bengal State Distribution Company Limited	YES	YES	NO	NA	NO

Annexure - C6.7

Current Status of Letter of Credit (LC) amount against DSM charges for ER constituents

Figures in Lacs of Rupees

Sl No	ER Constituents	No. of weeks in which Deviation Charge payable	No of times payment was delayed during 2017-18	Total Deviation charges payable to pool during 2017-18	Average weekly Deviation Charge liability (C)/52 weeks	LC Amount 110% of (B)	Due date of expiry	Remarks
		(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	JUVNL	51	51	12409.04823	238.63554	262.49910	12.03.2020	Opened for 221.83872 Lac
2	APNRL	32	32	432.08168	8.30926	9.14019	31.12.2019	Opened for 6.51143 Lacs
3	JITPL	20	1	293.68897	5.64786	6.21265	31.03.2020	Opened for 13.19100 Lac
4	GMR	42	15	1494.22674	28.73513	31.60864	06.06.2020	Opened for 31.60864 Lacs
5	TPTCL(DAGACHU)	49	6	4589.54652	88.26051	97.08656	31.03.2020	Opened for 97.08656 Lacs
6	JLHEP (DANS ENERGY)	25	10	247.86542	4.76664	5.24331	30.11.2019	Opened for 13.79780 Lacs
7	Tashiding (THEP)	35	23	329.24531	6.33164	6.96480	27.06.2020	Opened for 2.71519 Lacs
8	BRBCL(NABINAGAR)	21	6	248.44057	4.77770	5.25547	09.07.2020	Opened for 5.25547 Lacs
9	BSPHCL	42	42	7816.20467	150.31163	165.34279	Expired on 16.11.2018	Letter issued
10	SIKKIM	23	23	909.21958	17.48499	19.23349	Expired on 07.03.2018	Letter issued
11	CHUZACHEN (GATI)	20	12	115.63343	2.22372	2.44609	Expired on 31.03.2019	Letter issued
12	DIKCHU	19	7	128.3546	2.46836	2.71519	Expired on 20.05.2019	Letter issued
13	DVC	45	4	19887.13946	382.44499	420.68949	Not opened	Letter issued
14	GRIDCO	50	2	22550.74179	433.66811	477.03492	Not opened	Letter issued
15	NTPC	52	4	6247.87876	120.15151	132.16667	Not opened	Letter issued
16	MTPS STG-II	52	4	1785.94282	34.34505	37.77956	Not opened	Letter issued
17	NVVN (IND-BNG)	38	1	1939.58895	37.29979	41.02977	Not opened	Letter issued
18	IND BARATH	N/A	N/A	5.26491	0.10125	0.11137	Not opened	Letter issued
19	NVVN (IND-NEPAL)	43	1	4255.71388	81.84065	90.02472	Not opened	Letter issued
20	HVDC SASARAM	9	4	51.11504	0.98298	1.08128	Not opened	Letter issued
21	HVDC-ALIPURDUAR	7	2	99.14089	1.90656	2.09721	Not opened	Letter issued
22	NPGC	45	12	1200.2697	23.08211	25.39032	Not opened	Letter issued