



सत्यमेव जयते

**Government of India**  
**Ministry of Power**  
**Eastern Regional Power Committee**

**Agenda**  
**for**  
**50<sup>th</sup> TCC Meeting of**  
**ERPC**

**Date: 10.08.2023**  
**Time: 10 : 00 Hrs**  
**Amby Valley, Lonavala, Maharashtra**

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**EASTERN REGIONAL POWER COMMITTEE, KOLKATA**  
**AGENDA FOR 50<sup>th</sup> TCC MEETING**

**Date: 10<sup>th</sup> August, 2023 (Thursday), at 10:00 Hrs**

**Lonavala, Maharashtra**

**ITEM NO. A1:**

**CONFIRMATION OF THE MINUTES OF 49<sup>th</sup> TCC MEETING**

The minutes of the 49th TCC meeting held on 23<sup>rd</sup> March 2023 at Kolkata was circulated vide letter no. ERPC/TCC&COMMITTEE/2023/38 dated 11.04.2023.

**Members may confirm the minutes of 49<sup>th</sup> TCC meeting.**

**PART B: ITEMS FOR DISCUSSION**

**ITEM NO. B1: CERC IEGC Regulation 2023**

CERC vide Gazette notification dated 11.07.2023 had published Indian Electricity Grid Code Regulation 2023 and directed the concerned agencies (NLDC, RLDCs, RPCs & SLDCs etc.) for preparing detailed procedure after stakeholders' consultation. Further, CERC vide notification dated 03.08.2023, notified the date of implementation of IEGC regulation w.e.f 01.10.2023.

ERPC secretariat will give a brief presentation on CERC(IEGC) Regulation 2023.

**Members may discuss.**

**ITEM NO. B2: Development of Common Accounting Software for RPCs**

Commercial settlement mechanism plays a crucial role in the progress of any market in the world. The power sector is no more exception. A transparent, time-bound, grievance-oriented commercial settlement mechanism helps in the progress of the Power system in India. Since RPCs are impartial and neutral entities and the sole purpose of RPCs is to bring cooperation among the entities, the responsibility of commercial settlements among the different entities in the Power systems is assigned to RPCs.

RPC secretariats are issuing energy Accounts such as Deviation Account, SRAS, TRAS, Reactive Energy account, Regional Energy Accounts, Security Constrained Economic Despatch, Ramping Performance, Compensation Account, Regional Transmission Account, Regional Transmission Deviation Account etc. At present all RPCs are following different approaches for accounting though same regulations applicable for all.

In the 13th NPC Meeting held on 05th July 2023 deliberation under agenda item no-10, **Chairperson CEA has directed all the RPCs for standardization of formats and software for all commercial accounts issued by RPCs.**

As per Annexure-7: ACCOUNTING AND POOL SETTLEMENT SYSTEM of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulation 2023

***“The settlement system shall be transparent, robust, scale-able (multi buyer/seller, inter connection with lower and upper pool systems) and dispute-free with integrity and probity and usage of state-of-the-art techniques. The settlement computation details, applicable charges and operation of different regulatory Pool Accounts shall be in accordance with various regulations of the Commission. RPCs shall standardise the formats of various accounts....”***

In line with the mandate given in the CERC IEGC Regulation 2023 and direction of Chairperson, NPC under the agenda item no-10 of the 13th NPC meeting, ERPC secretariat has prepared a concept paper for the development of Common Accounting Software for all RPCs and same has been shared with NPC division, CEA and all RPCs. (Annexure-B2)

#### **Advantages of Common accounting Software:**

##### **Technical consideration:**

- 1) Incorporating features of Modern software in Commercial accounting using state of the art techniques.
- 2) Role based user access can be granted at any level including MoP/CEA/ NPC Division/
- 3) RPCs/ All Users (CGS, ISGS, Beneficiaries, Cross Border Entity, IPPs etc).
- 4) Uniform interpretation and faster implementation of Regulations.
- 5) Error free logic implementation uniformly across all the region.
- 6) Easy implementation of 5 min block accounting in future.
- 7) API integration with WBES system, AMR system or other utilities such as PXs, Regional Entities for seamless data transfer.

##### **Economical Consideration:**

- 1) Cost optimization for development and AMC.
- 2) Easy understanding of the accounting system among officers while inter-RPC transfer or between CEA/NPC & RPC transfer.
- 3) Manual work will be reduced and improvement of the work efficiency of the organization.
- 4) Manpower will be utilized for new energy technologies i.e. Power market, storage technology, green hydrogen, RE integration, Focused analysis of data etc.

##### **Regulatory Consideration:**

- 1) Standardization of input and output format will help the utilities operating across all the regions.
- 2) Timely issuance of error free accounts and revision accounts.
- 3) Reduction of time for implementation of new as well as amended regulations.
- 4) Better Coordination among RPCs in inter regional settlements.
- 5) Complete digitization of Regional Accounting settlement system with Less human interference by complete automation of accounts.

##### **Members may discuss.**

**ITEM NO. B3: PUSHP portal (For Flexibilization of PPA for Optimal Utilization of Resources & Reduction in Cost of Power for Consumers)**

In the 13th NPC meeting held on 05th July 2023 at Kolkata, the following was deliberated:

MS NPC informed that the Portal was launched on 9th March, 2023, and the transaction on the portal was started w.e.f. 3rd April, 2023. She further informed that currently, 17 States are utilizing the portal. However, there is a lack of participation from the states of NR, ER, and limited requisition to avail the surplus power available on the portal from all regions. She informed that 14 requests have been processed completely, and the power has been re-allocated to new beneficiaries.

Chairperson, CEA briefly explained the concept of the portal and highlighted the need for states to utilize power supply avenues other than PPAs and bilateral arrangements. He emphasized the PUSHP portal is a platform to facilitate the flexibilisation of the PPAs and the surplus power of CGS, ISGS, SGS and IPPs and they can be declared and requisition both in long term and short term. The power available on the portal is at regulated tariff determined by the concerned regulatory commission. He appreciated the states like Telangana, Assam & Punjab for availing the power from the portal. He also appreciates the states of UP, Kerala & Mizoram for declaring surplus power on portal and reducing their fixed charge burden. He suggested that surplus power from SGS and IPPs should also be declared on the portal for optimal utilization of generation capacity. He also stated that levying some penalty/incentives on fixed cost for units under RSD may also be think of in future.

Chairperson, TCC (SR) informed that the surplus power of SGS could not be declared due to the contractual obligation. Chairperson, CEA clarified that the contractual obligation could not be a limitation since the norms regarding payment settlement has been established as per the approved scheme and other extant rules and regulations.

Chairperson, NRPC appreciated the PUSHP Portal and mentioned that DISCOMs hesitate to sell power in the open market due to PPA restrictions. He informed that last year, Haryana DISCOMs began making profits and started buying power from the open market, resulting in State Generating Stations (SGS) units with sufficient coal storage remaining under Reserve shut down (RSD) due to low scheduling, as cheaper power is available in the open market. These SGS units with sufficient coal storage, under RSD, could be made to assist in meeting the peak demand of other states and national grid. Chairperson, CEA suggested that such SGS can declare their surplus power on the PUSHP Portal and, these plants can be revived from reserve shutdown to meet the demand of other states/regions of the country.

Director SLDC (Odisha) suggested to have right to recall facility so that the unforeseen demand can be met.

It was also suggested that buyers may be able to put their requirements on the portal.

Chairperson, CEA requested RPCs to suggest improvements in the portal to make it more attractive in terms of providing incentives to both buyers and sellers.

**Decisions:**

- i. The provisions may be made to allow buyers to put their requirements on the portal. (Action: NPC)**
- ii. RPCs may provide suggestions for improving the portal to make it more attractive in terms of offering incentives to buyer and seller, especially for the units under RSD and intimate to NPC for taking up with MoP for modification in scheme.**
- iii. ERPC, NRPC may encourage the states to maximum utilise the PUSHP portal.**

iv. **Generating Units of CGS, ISGS, SGS and IPPs that are currently under RSD due to low schedule/demand can declare their surplus power on the PUSH P Portal and such plants may be revived from reserve shutdown to meet the demand of the other states/ regions of the country.**

**(Action (ii-iv): RPCs/NPC)**

**TCC may discuss.**

#### **ITEM NO. B4: Disaster Management Plan for Power Sector-Eastern Region**

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 Disaster Management Plan for Power Sector and the same is available at CEA website.

In the plan, a four-tier institutional structure has been envisaged i.e. at central level, regional level, state level, and local unit/plant 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 with the responsibilities are as follows:

##### **Regional Level Disaster Management Group (RDMG)**

###### **Composition:**

- a) Member Secretary (RPC) - Chairman
- b) Representative of Secretary in-charge of Rehabilitation and Relief of the affected 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) SLDC in charge of each state.
- g) Chief Engineer, Central Water Commission (CWC), for floods related early warnings.
- h) Deputy Director-General, Indian Metrological Department (IMD), for Earthquake, and Cyclone related early warnings.
- i) Group Head, Ocean Information and Forecast Services Group (ISG), for Tsunami related early warnings.
- j) Head of RLDC

###### **Responsibilities:**

- a) To interact with CDMG for proper coordination.
- b) To ensure that disaster management plans are in place.
- c) To provide inter-state emergency & start-up power supply
- d) To coordinate the early restoration of the regional grid.
- e) To participate in damage assessment.
- f) To facilitate resource movement to affected state (s) from other regional states

Similarly, a group at each state level and plant level is to be formed as per Disaster Management Plan for Power Sector.

**TCC may discuss.**

**ITEM NO. B5: Allocation of firm power from upcoming Hydro Projects of NHPC Ltd, its JVs/Subsidiaries.**

Ministry of Power vide letter dated 27.06.2023 directed CEA to examine the proposal of NHPC for allocation of firm power from upcoming hydro projects of NHPC Ltd, & its JVs/subsidiaries **(Annexure B5)**.

CEA vide email dated 28.06.2023 and 18.07.2023 requested for confirmation regarding the consent of eastern states for not willing to take power from the projects located in eastern region. Subsequently, ERPC vide mail dated 30.06.2023 and 19.07.2023 requested the ER states to confirm their consent regarding unwillingness to take power from the upcoming hydro projects of NHPC Ltd, & its JVs/subsidiaries located in the eastern region. In this regard, ERPC has not received any communication from ER beneficiary states (Odisha, West Bengal, Jharkhand, Bihar, Sikkim).

Odisha, West Bengal, Jharkhand, Bihar, Sikkim may give their consent for unwillingness.

In the 49<sup>th</sup> CCM, ERPC secretariat briefly explained about Ministry of Power letter regarding the allocation of firm power from the upcoming hydro projects of NHPC Ltd, & its JVs/subsidiaries located in the eastern region.

GRIDCO representative informed that they are in the process of giving their consent for availing power from Teesta VI & Ratle Power projects of NHPC.

DVC representative submitted that they want to avail the power from upcoming hydro projects of NHPC located in the Eastern Region.

Bihar representative submitted they are interested in availing power from upcoming hydro projects of NHPC Ltd and they are in the process of obtaining approval of competent authority for giving consent to avail the power from NHPC project.

Jharkhand representative informed that they will intimate their consent after getting approval from the competent authority.

NHPC representative submitted that they have already obtained the consent from the beneficiaries for allocation of power from upcoming NHPC projects and at present no further changes can be done at their end and beneficiaries may approach directly to MoP/CEA for allocation of power from upcoming NHPC projects.

After detailed deliberation, CCM advised all constituents of Eastern Region to write a letter to MoP/CEA for their willingness to avail the Power. Further, CCM advised for placing this issue in the upcoming TCC/ERPC Meeting for detailed deliberation.

Further, ERPC vide email dated 28.07.2023 to CEA has forwarded the consent given by GRIDCO for availing power of 100 MW each from upcoming Teesta-VI & Ratle Power of NHPC Ltd and also requested CEA about willingness of other ER beneficiaries for availing power from upcoming NHPC projects.

**Members may discuss.**

## ITEM NO. B6: GNA requirement by Eastern Region States-Agenda by CTU

CERC has notified Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 and its 1<sup>st</sup> amendment. These Regulation came into effect from 05-04-2023.

As per Regulation 19 of GNA Regulations 2022, the following activities need to be carried out by STUs

*19.1 Within 3 months of coming into force of these regulations, STU may, on behalf of intra-State entities including distribution licensees, apply for additional GNA over and above the GNA deemed to have been granted under clauses (a) to (e) of Regulation 18.1 of these regulations (with entity-wise segregation) indicating GNA within the region and from outside the region.*

*19.2 STU, on behalf of intra-State entities including distribution licensees, may apply, once in a financial year (starting from the financial year following the financial year in which these regulations have become effective) by the month of September each year, for additional GNA for the next 3 (three) financial years (with entity-wise segregation) indicating GNA within the region and from outside the region, as stipulated in the 'Detailed Procedure for Connectivity and GNA', issued in accordance with Regulation 39.1:*

*Provided that such additional GNA quantum to be added in each of the next three financial years shall be applicable from a specified date of the respective financial year.*

Under Regulation 19.1, CTU received only one application on 27-06-2023 for 110MW additional GNA by DVC from 01-06-2025 on behalf of "Tata Steel Captive Consumer". The same is under process. Accordingly, the GNA of various states of ER would remain the same as mentioned in the GNA Regulations, as reproduced below:

States	GNA for 2023-24	GNA for 2024-25
<b>Bihar</b>	5043	5043
<b>DVC</b>	956	956
<b>Jharkhand</b>	1110	1110
<b>Odisha</b>	2157	2157
<b>Sikkim</b>	111	111
<b>West Bengal</b>	3516	3516
<b>Bangladesh</b>	1000	1000
<b>PG-HVDC-ER</b>	2	2
<b>Total</b>	<b>13895</b>	<b>13895</b>

STU may provide the ISTS node wise breakup of envisaged drawl quantum for the above GNA quantum. In this regard, a letter has been sent to all the STUs on 04-08-2023.

Under Regulation 19.2, STU, on behalf of intra-State entities including distribution licensees has to apply for additional GNA for the next 3 financial years by September of every year. However, this provision would be applicable from 2024-25 onwards. Accordingly, all the STUs are advised to apply for additional GNA between 1<sup>st</sup> Apr & 30<sup>th</sup> Sep 2024 for additional GNA for 2025-26, 2026-27 & 2027-28 timeframe. STU may provide the ISTS node wise breakup of envisaged drawl

quantum for the above GNA quantum for each year. In case no change in GNA quantum, state may provide node wise breakup of GNA quantum for each year. The application for additional GNA can be made in the NSWS portal. Based on the request, augmentation of the ISTS system, if required, would be planned. If additional power is required by the STUs, the same can be availed through T-GNA.

In view of above, it is requested to all the states that wherever they are envisaging constraints in export/import of power through ISTS, such information may be shared with CTU so that necessary augmentation would be identified in ISTS timely.

**TCC may deliberate.**

**ITEM NO. B7: Establishment of 400/132kV, 2x315MVA New Laxmikantpur substation of WBSETCL under intra-state scheme through LILO of one circuit of Jeerat New (PMJTL) Subhasgram (POWERGRID) 400KV D/C (Quad) line**

Establishment of New Laxmikantpur 400/132kV, 2x315MVA GIS substation through LILO of both circuits of Haldia (CESC) - Subhasgram (POWERGRID) 400KV D/c line at New Laxmikantpur was agreed for implementation under intra-state scheme by WBSETCL in the 2nd meeting of erstwhile ERSCT held on 05-07-2019.

WBSETCL vide letter dated 20-05-2022 had submitted the proposal of establishment of New Laxmikantpur S/s through LILO of one circuit of under construction Jeerat New (PMJTL) Subhasgram (POWERGRID) 400KV D/C (Quad) line and LILO of one circuit of existing Haldia (CESC) - Subhasgram (POWERGRID) 400KV D/C line, in view of anticipated more reliability and stronger source at Jeerat New 765kV.

In the 15<sup>th</sup> CMETS-ER held on 27-01-2023, following was agreed about establishment of New Laxmikantpur S/s under intra-state:

- A. A committee meeting with officials from ERPC, CTUIL, ERLDC, CESC, HEL and WBSETCL would be held to finalise the modalities of connectivity for New Laxmikantapur 400/132kV S/s and based on the discussion in the meeting, outcomes may be shared by WBSETCL and HEL in the CMETS-ER.
- B. WBSETCL and HEL along with CESC would take up regulatory, commercial and legal matters with WBSERC on the modalities of connectivity for New Laxmikantapur 400/132kV S/s.

Based on the recommendation of the committee, the following scope of works was agreed under intra-state scheme to be implemented by WBSETCL in the 20th CMETS Meeting:

- a. Establishment of New Laxmikantapur 400/132kV, 2x315MVA GIS substation along with associated bays.
- b. LILO of one circuit of Jeerat New - Subhashgram 400kV Die (Quad) line at New Laxmikantapur substation.
- c. 420kV, 125MVAr bus reactor along with associated bay: 1 no.
- d. 400kV line bays: 2 no. (for termination of LILO}
- e. 132kV line bays: 10 nos.
- f. Space for future provisions:

- 2x315MVA along with associated bays or Replacement of present 2x315MVA with 2x500MVA + 1x500MVA 3rd ICT
  - 2x125MVA along with associated bays
  - 400kV line bays: at least 6 no.
  - 132kV line bays: at least 6 no.
- 1.3. In the 20<sup>th</sup> CMETS-ER meeting, WBSETCL mentioned that they would require 28 months from the date of LOA for completion of the above agreed intra-state scheme. Further, it was also decided that LILO of Haldia - Subhashgram 400kV D/C line (one circuit or both circuits) may be bilaterally deliberated between WBSETCL and HEL in view of the recommendations of the committee as mentioned above.
- 1.4. The matter regarding LILO of ISTS lines under intra-state was being deliberated in the 13th meeting of NCT held on 13-05-2023. Therein, it was suggested that LILO of any ISTS line by STU needs to be deliberated in the NCT meeting with observations of concerned RPC.

**TCC may deliberate.**

### **ITEM NO. B8: Reliable power supply in and around Kolkata—Agenda by ERLDC**

Eastern Regional demand met has surpassed previous records and has touched 29633 MW on 28th July 2023, with West Bengal exceeding 11.5 GW and CESC exceeding 2.6 GW. Bihar has also touched all time high demand met of 7578 MW on 27th July 2023.

The increase in demand has put critical infrastructure under extreme stress, particularly in Kolkata and the adjoining districts of 24 N/S Parganas. During the Summer of 2023, system was running in extremely vulnerable condition with serious threat on reliable Power supply to Kolkata area. Unless, immediate action is taken, meeting 2024 summer demand will be very much challenging. The same was also discussed during the different OCC, CMETS meetings, where it was agreed on the technical requirement of strengthening following ICTs, Transmission lines.

Accordingly, the status of the following may be updated which are required to be completed before Summer, 2024:

- Upgradation of ICT Capacity at Subhashgram
- Strengthening of
  - 220 kV Subhashgram (PG)-EMSS(CESC) D/C : CESC
  - 220 kV Subhashgram (PG)-Subhashgram (WB) D/C : WBSETCL
  - 220 kV Subhashgram (WB)-Kasba (WB) D/C : WBSETCL
  - 220 kV Barasat (WB)-Kasba (WB) D/C : WBSETCL

**WBSETCL & CESC may update. TCC may discuss.**

**ITEM NO. B9: Establishment of 765kV substation at Gopalpur under ISTS--  
Agenda by CTU**

To meet the power drawl requirement of upcoming Green Hydrogen and Green Ammonia industries in the Gopalpur area of Odisha, Govt of Odisha has proposed for establishment of 765 kV substation under ISTS. Accordingly, studies were carried out by CTU and an ISTS scheme namely "Eastern Region Expansion Scheme-XXXIX (ERES-XXXIX)" inter alia including establishment of 765kV new substation at Gopalpur was agreed in the 18th Consultation Meeting for Evolving Transmission Schemes in Eastern Region (CMETS-ER) held on 27th April 2023.

Brief scope of works is given below:

Establishment of Gopalpur 765/400kV, 2x1500MVA GIS S/s

- I. Angul (POWERGRID) – Gopalpur 765kV D/c line along with 765kV, 1x330MVAr switchable line reactor with 500ohm NGR (with NGR bypass arrangement) at Gopalpur end, one each in both circuits
- II. Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line
- III. 2 nos. 765kV AIS line bays (along with space for future switchable line reactor) along with bus extension in GIS at Angul 765/400kV S/s for termination of Angul (POWERGRID) – Gopalpur 765kV D/c line.
- IV. 2 nos. 400kV GIS line bays at Gopalpur (OPTCL) S/s for termination of Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line

Detailed scope of work is enclosed at **Annexure-B9**.

**TCC may discuss.**

**ITEM NO. B10: Establishment of 765/400kV, 2x1500MVA S/s at Duburi under  
intra-state by OPTCL through LILO of Angul (POWERGRID) –  
Paradeep (ISTS) 765kV D/C ISTS line—Agenda by CTU**

NCT in its 12th meeting held on 24-03-2023 recommended establishment of 765/400kV Paradeep ISTS substation through Angul (POWERGRID) – Paradeep 765kV D/c line under TBCB route.

OPTCL had requested CTU for construction of a new 765/400kV S/s at Duburi in Odisha under intra-state scheme through LILO of already approved Angul (POWERGRID) – Paradeep 765kV D/c line to meet the upcoming industrial demand of about 1100MW by 2026-27 and 1430MW (additional) by 2029-30.

Accordingly, establishment of 765/400kV, 2x1500MVA new substation at Duburi was discussed in the 17th CMETS-ER held on 29-03- 2023. Further, the matter regarding LILO of ISTS lines under intra-state was being deliberated in the 13th meeting of NCT held on 13-05-2023. Therein it was informed that recently LILO of Angul (POWERGRID) – Paradeep 765kV D/c ISTS line at Duburi (New) under intra-state has been agreed. In this regard, it was suggested that views of ERPC may be taken on the subject scheme and with views of ERPC the scheme may be forwarded to NCT for deliberation. The communication received from CTUIL in this regard is attached at **Annexure-B10**

NCT has suggested that various aspects of the scheme not limited to following may be deliberated at ERPC level:

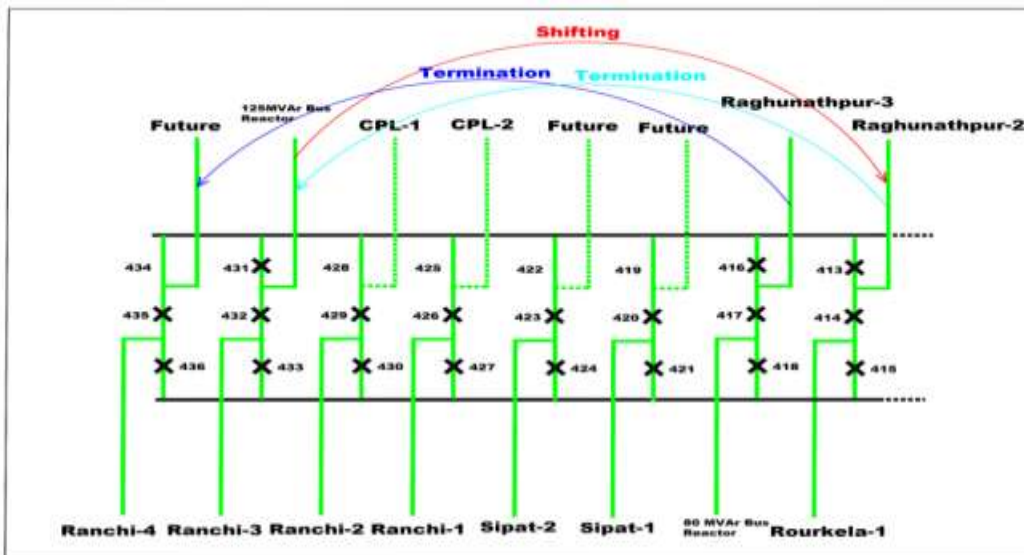
- a. LILO of Angul (POWERGRID) – Paradeep 765kV D/c ISTS line at Duburi (New) under intra-state may involve certain operational issues.
- b. The said LILO would result in reduced demand that can be catered at Paradeep under ISTS for Green Hydrogen & Green Ammonia industries as some capacity of the main ISTS line shall be utilised to meet intra-state demand at Duburi. This may necessitate further strengthening in ISTS immediately.
- c. Industries in Duburi area may also require RE power from outside the state of Odisha, similar to industries in Paradeep and Gopalpur area. If any such industry applies for GNA from ISTS, then ISTS infrastructure would have to again created in Duburi area. Creation of parallel systems in ISTS and intra-state may result into a less optimal planning and the same is not desirable. Already 765/400kV ISTS substations (with space provision for 400/220kV level in view of future requirement) are being established at Paradeep and Gopalpur and OPTCL is also implementing 400/220kV substations under intra state. RoW and land optimisation may be considered.

TCC may discuss.

**ITEM NO. B11: Eastern Region Expansion Scheme-XXXVIII--Agenda by CTU**

The 400 kV bus of Ranchi (POWERGRID) substation is designed for 40 kA and presently fault level of this substation is observed to be about 44 kA and it is expected to further reach to about 51 kA by 2027-28 timeframe. Accordingly, studies were carried out and it is observed that with the rearrangement as proposed below, the fault level of Ranchi (POWERGRID) substation can be brought down to about 39kA from 51kA.

- Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line (of DVC) is to be bypassed from Ranchi (POWERGRID) with any D/c line of Ranchi (POWERGRID) – Ranchi New (POWERGRID) 400kV 2xD/c (Quad) lines (of POWERGRID) to form Ranchi New (POWERGRID) – Raghunathpur (DVC) 400kV (Quad) D/c line.



The implementation of the above arrangement has been agreed in the 19th CMETS-ER meeting as the ISTS scheme ERES-XXXVIII. The scheme detail is enclosed at **Annexure-B11**. Further as the scheme involves dismantling of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 and scarping of the same which have commercial implication, it was decided in CMETS meeting to deliberate the issue at ERPC level as well.

The estimated cost of the scheme is expected to be about INR 42 Cr. excluding the scrap value. The following matters may be deliberated:

- (i) Dismantling of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 and scarping of the same under the ISTS scheme, as dismantling of line section shall vacate the line corridor for future.
- (ii) The scrap value of the tower members, ACSR conductor, auxiliaries etc. of dismantled assets shall be deducted by the ISTS licensee as per prevailing scrap value to arrive at the final cost of the project. As the scrap value of dismantled assets (about 1355m of line) is already being adjusted against the project cost of this new scheme, tariff of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC shall remain unaffected.

**TCC may deliberate.**

**ITEM NO. B12: Renovation of control room of 400/220 kV Biharsharif ss and 400/220 kV Jamshedpur ss.—Agenda by Powergrid**

400/220 kV Biharsharif and 400/220 kV Jamshedpur sub-stations were commissioned in 1991 under Kahalgaon Transmission projects. Both said sub-stations are most critically important for smooth and reliable supply to the downstream transmission lines as well as for smooth evacuation of power from important generating plants of Eastern Region. It is to mention that under ADDCAP tariff block 2019-24 works e.g. replacement of CB, Isolator, FF renovation, AC renovation switchyard PCC have been carried out. However, some works which have not been taken up in previous ADDCAP block, but now important are to be carried out for smooth functioning of sub-stations such as complete renovation of control and protection system.

In addition to the above, replacement of 15 nos. BHEL make 420 kV CBs on ground of obsolescence and discontinuation of spares as well as service support from OEM at Muzaffarpur ss is also envisaged.

Assets details of both sub-stations are as below.

**Jamshedpur ss:**

- 1) 02 Nos of 400 kV Main Bus
- 2) 26 nos. of 400 KV bays
- 3) 03 nos. of 400/220/33KV 315 MVA ICT
- 4) 03 nos. of Bus Reactor i.e. 50 MVAR B/R-1, 125MVAR B/R-2, 125 MVAR B/R-3

Assets completing/completed 25 years' service life:

Sl. No.	Name of Bay/Line/ICT	Make	DOCO
1	400/220/33KV 315MVA ICT 1	BHEL	03.08.1993

2	400/220/33KV 315MVA ICT 2	BHEL	29.12.1993
3	400KV 16.7 X 3 MVAR BUS REACTOR - 1	CGL	30.07.1993
4	400KV Chaibasa Line -2		17.02.2002
5	415V MSB & ACDB		30.07.1993
6	220V DCDB		30.07.1993

**Biharsharif ss:**

- 1) 04 Nos of 400 kV Main bus with 02 nos. of Bus Sectionalizer
- 2) 46 nos. of 400 KV bays
- 3) 03 nos. of 315 MVA ICT & 01 no. 500 MVA ICT
- 4) 04 nos. of Bus Reactor i.e 50 MVAR B/R-1, 80MVAR B/R-2, 125 MVAR B/R-3 & 4
- 5) 05 nos. of Line Reactor i.e 50 MVAR LKS-2, 50 MVAR VNS-1, 50 MVAR VNS-2, 80 MVAR PRN-1, 80 MVAR PRN-2

Assets completing/completed 25 years' service life:

Sl. No.	Name of Bay/Line/ICT	Make	DOCO
1	50MVAR SAS-1 LINE REACTOR	CGL	09.08.1991
2	50MVAR LKS-2 LINE REACTOR	CGL	07.12.1991
3	50MVAR BUS REACTOR-1	CGL	24.09.1992
4	315MVA ICT-2	BHEL	14.07.1992
5	BSF-LKS LINE-1	-	23.10.1992
6	BSF-LKS LINE-2	-	09.08.1991
7	BSF-SAS LINE-1	-	01.08.2002
8	BSF-SAS LINE-2	-	24.11.2002

Further, additional assets under various projects had been added since commissioning, which cause the suppression of old cables to the beneath of cable trench. Furthermore, due to ageing of cables, faults in cable are being observed on regular basis which leads to unwarranted tripping of transmission elements and damages healthy cables also. Further, it is to mention that cables trenches are full of cables and therefore identification of fault and laying of new cable is very difficult.

Further, it is pertinent to mention that the existing sub-station is of conventional type and old electromechanical relays are used for protection system. And therefore, lots of upgradation and modification in existing C&R panels and switchyard equipment are being carried out which involves laying of extra cables from switchyard to control room as well as inter panel cabling but due to space constraints in cable vault room, now it is almost impossible to place new cable.

Keeping in view of above constraints, a small new panel room has been constructed for newly commissioned ICT at Biharsharif ss and KIOSK was proposed for upcoming 125 MVAR Bus Reactor.

In view of above, it is proposed for construction of KIOSK for bays which have completed 30 years of service life at Jamshedpur and Biharsharif ss to mitigate the above-mentioned issues and to avoid any major outage of sub-station due to fire /faults in aged cables. Accordingly, an exercise has been carried out to arrive cost for construction of 05 nos. KIOSK in each sub-station. Total

estimated cost for conversion of existing system to KIOSK system will come to Rs. 10.0 Cr (approx) for each sub-station.

Proposed for in-principle approval from OCC/ERPC for conversion of exiting conventional system to SAS system along with construction of KIOSK, Power & control cables and electro mechanical relays etc.

In the 204<sup>th</sup> OCC meeting, Powergrid ER-I representative delivered a detailed presentation on present unhealthy condition of hydraulic circuit breakers at 400/220 KV Muzaffarpur S/S, whose maloperation or delayed operation was responsible for frequent bus tripping at the substation. Powergrid ER-I representative also submitted that adequate OEM support is also not available for maintaining these CBs in healthy condition as manufacturing of these old model CBs is discontinued. This presentation also included details of conventional cable trenches posing inconvenience in day-to-day operation as well as dilapidated condition of control rooms at 400/220 KV Biharsarif S/s and 400/220 KV Jamshedpur S/S , whose old control panels need immediate replacement. Assessing the merit of the proposal, OCC gave in-principle approval of various modernization works at 400/220 KV Muzaffarpur S/S, 400/220 KV Biharsarif S/s and 400/220 KV Jamshedpur S/S.

OCC referred the agenda to upcoming Commercial sub-committee meeting for deliberation on financial aspects.

In 49<sup>th</sup> CCM, Powergrid was advised to submit item wise proposal along with the cost estimates in the upcoming TCC/ERPC.

**Powergrid may explain. TCC may deliberate.**

**ITEM NO. B13: Retrofitting of 15 nos. BHEL make 420 kV CB installed at 400/220 kV Muzaffarpur ss.—Agenda by Powergrid**

400/220 kV Muzaffarpur sub-station was constructed in the year 2006. Following assets were commissioned under initial construction project:

<b>Sr. No</b>	<b>Asset Detail</b>	<b>Year of Commissioning</b>
1	400 kV Muzaffarpur-New Purnea D/C line along with L/R	2006
2	400 kV Muzaffarpur-Gorakhpur D/C line along with L/R	2006
3	400 kV Muzaffarpur-Biharsharif D/C line	2006
4	400/220 kV, 315 MVA ICT-I & II	2006
5	400kV, 63 MVAR Bus Reactor-I	2006

BHEL make CBs are used in the bay of 400 KV Muzaffarpur-Gorakhpur D/C lines, 400 KV Muzaffarpur-New Purnea D/C line, 400/220 kV 315 MVA ICT-I & II and 63 MVAR Bus Reactor-I. In total ,15 nos. BHEL make CBs (08 nos. PIR type and 07 nos. without PIR type) installed in 2006 at Muzaffarpur ss.

The said BHEL make CBs are having hydraulic type operating mechanism. In BHEL make CB, there is chronic issue of accumulator failure, leakage from pilot valve, drift in open & close time. In recent days, issues in main and arcing contacts have also been observed during routine

maintenance.

To attend the above-mentioned issues, the BHEL make CB needs frequent maintenance for reliable operation of the circuit breaker. Till now, it is being maintained by spare and service support of M/s BHEL.

In past few years we, had witnessed three Bus tripping at Muzaffarpur ss due to non-operation / delay operation of BHEL make CBs.

Further, it to mention that we have been facing difficulties in maintaining CBs for a long time due to a delay in service support as well as the long delivery time (approx. 24 months) for the supply of spares.

Now, M/s BHEL has completely stopped manufacturing and supplying switchgear spares for all three models (125 kV, 245 kV & 42 kV) of SF6 Circuit Breakers (Communication mail enclosed).

Keeping in view of above, the installed 15 nos. BHEL make CBs needs to be replaced on priority though it has completed 17 years of service life only for reliability and stability of the grid.

Total estimated cost for replacement of 15 nos. BHEL make CB will come to Rs.7.81 Cr (Approx).

In 49<sup>th</sup> CCM, after deliberation, CCM agreed and referred to upcoming TCC/ERPC for approval.

**Powergrid may explain. TCC may approve.**

<b>ITEM NO. B14: Provisioning of Switchable feature in upcoming Kahalgaon-I LR at Maithon S/s</b>
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400 KV Maithon-Kahalgaon#1 Lines along with 50 MVAR line Reactors were commissioned in 1993. The above line reactor is in service since last 30 years. However, subject line reactor is going to be replaced under Eastern Region Expansion Scheme-XXXI. Installation of new 63MVAR Line Reactor on Kahalgaon Ckt#1 along with new 500  $\Omega$  NGR in place of existing 50MVAR Line Reactor at Maithon will be done under Eastern Region Expansion Scheme-XXXI.

Above line reactor is non-switchable reactor. This reactor cannot be switched without switching of 400 KV Kahalgaon#1 line which is an important line as it is connected to Kahalgaon generating station. Under Eastern Region Expansion Scheme-XXXI capacity of said line reactor enhanced from 50 MVAR to 63 MVAR, based on study by CTU and subsequent discussion in CMETS. However, non-switchable Reactors generally comes with typical problem of voltage stress and many cases were earlier reported for failure due to stress. Moreover, if the Reactor taken as a switchable one then Grid operator also has the flexibility to open/Close based upon actual Grid conditions.

Add to it, any non-switchable line reactor required line S/D for maintenance of LR also, which may be avoided in case it is made switchable.

Required space is available for installation of circuit breaker for conversion of non-switchable line reactor to switchable line reactor and the same can be implemented without major change in other equipment's layout.

In view of above, it is proposed, for consideration, for conversion of subject LR from Non-Switchable to Switchable under same scheme at Maithon SS. Necessary SLD/Lay Out attached for reference.

In the 49<sup>th</sup> CCM, Powergrid representative explained that non-switchable Reactors generally comes with typical problem of voltage stress and many cases were earlier reported for failure due to stress. Moreover, if the Reactor taken as a switchable one then Grid operator also has the flexibility to open/Close based upon actual Grid conditions. Further, he requested for provisioning of Switchable feature in upcoming Kahalgaon-I LR at Maithon S/s.

After detailed deliberation, CCM approved the proposal for provisioning of Switchable feature in upcoming Kahalgaon-I LR at Maithon S/s and referred the issue to upcoming TCC/ERPC meeting for further approval.

**Powergrid may explain. TCC may approve.**

**ITEM NO. B15: Cost recovery against AMR expenditure/SEM related costs in ER-II from 01.03.2019 to 15.07.2023 for various phases of implementation and associated activities pertaining to Software/Hardware refreshment and upgradation of AMR.**

POWERGRID is entrusted for implementation and subsequent maintenance/troubleshooting of AMR system in entire Eastern Region. For implementation of various phases of AMR and further H/W software refreshment program and migration from GPRS to LAN as per cyber security guidelines, multiple LOAs placed by POWERGRID. On 19.06.2023, updated AMR system with Software/Hardware refreshment, done completely with all necessary cyber security compliances. Moreover, now all concerned sites are connected with LAN only which is as per cyber security guideline.

For conversion of old architecture to new model along with, AMC of in-built system and associated structure/Software's, with cost for GPRS communication certain amount of expenditure incurred for the time frame given.

As POWERGRID has already incurred the expenditures or provisioned for subject heads (LOA placed and liability created), entire amounts to be recovered for budget balancing.

Details of expenditures done in phased manner are given below: -

SL NO	PROJECT NAME	LOA/PO Details	Cost Involvement	Remarks
01.	AMR Phase 1 & 2 (Balance amount from 01.03.19 to 30.06.20)	ER-II/ KOL/ C&N/I-582/P-747/870/3676 Dated: 06-Nov-2012 /ER-II/ KOL/C&N/P-747/ AMEND-IV/748/ 2425 Dated: 02-Sep-2014 (SAP PO-9000007968 & 5200022239).	21,77,392/-	Already earlier consumed value approved in 40th CCM & 30th ERPC (From Initial to 28.02.2019). Balance
02.	AMR Phase-3 (Balance amount	ER-II/KOL/CS/I-1358/P-1398 Dated: 27-Oct-2016.	39,87,747/-	

	from 01.03.19 to 30.06.22)	ER-II/KOL/CS/I-1358/P-1398/ AMEND-III/442. Dated: 10-Jul-2018 (SAP PO- 5100014415).		amount claimed now.
03.	AMR Phase-4 (From 01.07.20 to 31.03.22). All supply/Erection cost included but AMC as per original LOA & QV excluded.	ER-II/KOL/CS/I-2446/P-2420/ 1929 Dated: 20-Jul-2020. ER-II/KOL/CS/I-2446/P-2420/AMEND-II/4374 Dated: 05-Jul-2021/ER-II/ KOL /CS/I-2446/P-2420/AMEND-III /6493 Dated: 07-Jun-2022 (SAP PO- 5100032889).	1,30,19,265/-	Approved in 153rd OCC & 39th ERPC meeting.
04.	AMR Phase-1&2 AMC renewal (From 01.04.2021 to 30.06.2023)	ER-II/KOL/CS/I-2724/P-2702/4285 Dated: 02-Jun-2021 (SAP PO- 5100035446).	2,56,33,881/-	Approved in 170th OCC, 44th CCM, 43rd ERPC.
05.	AMR Data Centre HWSW Refreshment (Full PO).	ER-II/KOL/CS/I-3370/P-3289/6577 dated 24.06.2022 (SAP PO- 5100041788).	2,13,31,973/-	191th OCC & 46th ERPC.
06.	AMR LAN Integration work (From 01.09.2022 to 30.06.2023).	ER-II/KOL/CS/I-3499/P-3414/6841 dated 01.09.2022 (SAP PO- 5100043386).	27,40,552/-	190th OCC, 46th CCM.
07.	AMR Phase-3 AMC renewal for 249 SEM (01.09.22 to 30.06.2023)	ER2/NT/S-AMC /DOM /E00/22 /00692/ 1000000986/I-3645/P-3556 /8045 Dated 29.12.2022 (SAP PO- 5200059035)	27,21,270/-	195th OCC, 47th ERPC.
08.	Transportation of Special Energy Meter to Binaguri for various constituents (Full PO)	SAP PO- 4800017144	23,000/-	As per requirement and discussion with ERLDC/ERP C.
09.	Mobile data for AMR	SAP PO- 5200033984	1,44,997/-	For AMR data transmission through GPRS.
10.	Mobile data for AMR	SAP PO- 5200037273	1,91,054/-	
11.	Mobile data for AMR	SAP PO-5200054713	2,57,832/-	
12.	Mobile data for AMR	SAP PO-5200054715	2,05,724/-	
13.	TOTAL		7,24,34,687/-	
14.	CONSULATNCY FEES	@15% ON SUB-TOTAL	1,08,65,203/-	
15.	GST ON CONSULTANCY FEES	@18% ON CONSULTANCY	19,55,737/-	

16.	GRAND TOTAL		8,52,55,626/-	
			-	

As per above list, total Rs. 8,52,55,626/- (Rs. Eight crore fifty two lacs fifty five thousand six hundred twenty six only) required to be recovered from ER constituents against expenditure done till 15.07.2023.

It is proposed to approve the recovery amount and recovery may be done from concerned beneficiaries (DIC's) w.r.t RTA billing for the month of August-2023.  
Members may approve please.

In the 49th CCM, after detailed deliberation, CCM advised the following to Powergrid:

1. To submit package wise details in respect of total cost, cost recovered if any and methodology of cost sharing.
2. To revisit its claim of consultancy charges against various packages.
3. To submit a comprehensive proposal along with all the details for consideration in the upcoming TCC/ERPC meetings.

**Powergrid may explain. Members may discuss.**

**ITEM NO. B16: Replacement of old static LBB Relays in ER-II on account of enhancement of Reliability of Protective system –Agenda by Powergrid.**

Under various Transmission scheme implemented in Eastern Region earlier, everywhere Static LBB relays are used only. The static relay model comprises RAICA (From ABB) & CTIG (From GE)/ MCTI4 (From AREVA). In many occasions, it is observed that due to maloperation of Static Relay & its auxiliary system, entire Bus & associated elements got tripped.

In addition to that as those Relays are Static in nature analysis of various events, post fault is very difficult. Replacement of those Static LBB relays by available Numerical Relays are only possible solution to avoid such malfunctions. Moreover, in latest Numerical relays, additional Re-Trip function (Opening of self CB after 100 ms) is available which gives additional flexibility in protective system.

Under ADDCAP 2019-24 Tariff block, all old protection system of Chukha TS (Namely Birpara/ Siliguri/Dalkhola/Malda) are taken for complete upgradation and this upgradation is included the replacement of LBB relays also. However, stations namely Maithon (KTPS) & Binaguri are also fitted with old static type LBB relays, which require complete replacement.

A list of such LBB Relays mainly installed at Maithon & Binaguri SS are attached for reference (**Annexure B16**). Total 58 No's Relay require complete replacement and tentative Cost estimate comes to Rs. 2.0 Crores Including all applicable Taxes and duties.

Considering the criticality for continuing of such elements, it is proposed to provide in-principle approval for replacement of such old Static Relays, necessary cost shall be booked in ADDCAP 2019-24 tariff block and actual expenditure shall be placed during truing up.

In the 202nd OCC meeting, Representative of Powergrid submitted that the static relays to be changed in Dalkhola had already been supplied and the work is scheduled to start in the month of May 2023 subjected to availability of shutdown. Replacement work in Birpara and Binaguri is planned to be carried out in the month of July 2023 and August 2023 respectively.

He further submitted that the static LBB relays (58 nos.) at Maithon & Binaguri SS may also be allowed to be replaced with an estimated cost of Rs. 2 crores. The tendering activities would be started once the technical approval is provided. The materials would be procured by the end of September 2023 and the replacement work may be scheduled in the month of November & December 2023.

OCC gave the in-principle approval for the replacement of 58 nos. of static LBB relays (58 nos.) at Maithon & Binaguri SS.

Further, OCC referred the agenda to upcoming Commercial Sub Committee Meeting.

As per discussion in 202nd OCC of ER, it has been finalised to procure 58 No's numerical LBB Relay for Binaguri & Maithon SS for upgradation from conventional static Relays to enhance reliability. It is to be updated, that, vide GeM LOA Ref No:- GEMC-511687755886209 dated 22.06.2023, POWERGRID has placed LOA for procurement of the same to M/S. GE T&D, with time line for completion within 17.02.2024. Total cost implication for procurement and installation of 58 No's Numerical Relay comes to Rs. 2,49,74,783/- (Rs. Two Crore forty-nine lacs seventy-four thousand seven hundred eighty-three only) including all.

In the 49th CCM, Powergrid representative explain the requirement of 58 Nos numerical LBB Relay for Binaguri & Maithon SS for upgradation from conventional static Relays to enhance reliability. Further, he informed that the total cost implication for procurement and installation of 58 No's Numerical Relay comes to Rs. 2,49,74,783/- (Rs. Two Crore forty-nine lacs seventy-four thousand seven hundred eighty-three only) including all.

After detailed deliberation, CCM approved the cost of Rs 2,49,74,783/- including taxes for procurement and installation of 58 Nos numerical LBB Relay for Binaguri & Maithon SS for upgradation from conventional static Relays to enhance reliability and referred the issue to TCC/ERPC meeting for further approval.

**TCC may approve.**

## **ITEM NO. B17: Long Outage of Transmission Lines**

### **A. 220 kV Farakka-Lalmatia S/C Line**

The 220 kV Farakka-Lalmatia S/C was out of service since April 2021 due to tower collapse. The 220/132/33 kV Lalmatia substation is relying on only 132 kV lines. At present the local load at 220 kV Dumka and Godda S/S were being radially fed from 400/220 kV Maithon S/S through 220 kV Maithon-Dumka D/C and 220 kV Dumka-Godda D/C.

In 49<sup>th</sup> TCC Meeting, Representative of JUSNL assured that erection and stringing of the line would be completed by May'2023.

In 204<sup>th</sup> OCC Meeting, Representative of Jharkhand submitted that the 220kV Farakka-Lalmatia S/C line is expected to be completed by 31.07.2023.

**JUSNL may update.**

**B. 132 kV Sagbari-Melli line**

The line is under outage since last four years.

In 49<sup>th</sup> TCC Meeting, Representative of Sikkim assured that the said line would be restored by 15<sup>th</sup> April'2023.

**Sikkim may update.**

**ITEM NO. B18: Reactive VAR charges for Bhutan during the import period-  
Agenda by Bhutan**

Bhutan was issued with the reactive energy charges from 3<sup>rd</sup> to 30<sup>th</sup> April, 2023 during the recent import period. As per invoice raised by PTC India Limited following the charges published by the ERPC, the charges paid/received by Bhutan were as follows:

From 03-04-2023 to 09-04-2023: Rs. 257,119.5 (Receivable)

From 10-04-2023 to 16-04-2023: Rs. 70,455.0 (Receivable)

From 17-04-2023 to 23-04-2023: Rs. 1,578,423.0 (Payable)

From 24-04-2023 to 30-04-2023: Rs. 880,588.5 (Payable)

Sl. No.	Meter No.	Line Name	Net MVarH	Net Reactive Energy Charges (Rs)
1	ER-1002-A	400 KV ALIPURDUAR(PG)-JIGMELING(BHUTAN) (PUNATSANGCHU) LINE-1	8,597.40	-1,418,571.00
2	ER-1004-A	400 KV ALIPURDUAR(PG)-JIGMELING(BHUTAN) (PUNATSANGCHU) LINE-2	6,684.90	-1,103,008.50
3	ER-1102-A	400 KV BINAGURI (PG)-TALA (THP)-4	-1,164.50	192,142.50
4	ER-1507-A	400 KV ALIPURDUAR(PG)-JIGMELING(BHUTAN)-2	4,705.20	-776,358.00
5	ER-1508-A	400 KV ALIPURDUAR(PG)-JIGMELING(BHUTAN)-1	0.00	0.00
6	ER-1611-A	400 KV BINAGURI (PG)-TALA (THP)-2	0.00	0.00
7	ER-2014-A	220 KV BIRPARA (PG) - CHUKHA (CHPC) -2	-0.10	16.50

8	ER-2114-A	400 KV BINAGURI (PG)-TALA (THP)-1	-5,612.30	926,029.50
9	NP-6465-A	220 KV BIRPARA (PG) - CHUKHA (CHPC) -1	-16.70	2,755.50
10	NP-8800-A	132 KV SALAKATI (PG) - GELEPHU (BHUTAN)	155.10	-25,591.50
11	NP-9669-A	132 KV RANGIA(PG)-MOTANGA(BHUTAN)	-4.20	693.00
		Total =	13,344.80	-2,201,892.00

**Note:**

- 1) Rate of Reactive Energy Charge has been considered @ 16.5 paise/KVArH, w.e.f. 01/04/2023
- 2) For reactive energy, (+) means injection and (-) means drawl with respect to utility
- 3) For reactive energy charge, (+) means receivable by the utility and (-) means payable by the utility.

As shown in the table, the reactive energy charges were payable to the tune of Rs. 2,201,892/. It is seen that overall, Bhutan injects reactive energy into the larger Indian grid and most of the injection is from the 400kV Punatsangchhu - Alipurduar line and the 400kV Alipurduar-Jigmeling line whereas reactive energy drawl by the Bhutanese grid is mostly from the 400kV Binaguri - Tala lines. Furthermore, out of 13 interconnecting feeders, ERPC has considered only 11 feeders for reactive energy accounting. The 400kV line from Malbase - Binaguri and 220kV line from Malbase - Birpara were omitted for the calculation.

Overall, the amount payable was attributable to reactive energy injection to the Indian grid, and reference voltage considered was at substations located at Indian periphery. Since most of the lines are lightly loaded in winter seasons, the Indian portion of the transmission lines which are very long will also generate the reactive power injecting it to the Indian grid. In such instances, the voltage profile in the Indian grid will increase even if the sending end voltage at Bhutan periphery is within the permissible limit.

Therefore, Bhutan would like to request ERPC to revisit the reactive energy charge calculation considering all the interconnecting transmission lines, line lengths at the respective end, and voltage profiles of both the ends. Bhutan assures to render all the required support to maintain the voltage profile within the permissible limit.

**DGPC, Bhutan may explain. Members may discuss.**

**ITEM NO. B19: Balance Payment against the Electrical Energy sold to PTC from Mangdechhu Hydropower Plant (MHP) for the period from June – August 2019-Agenda by Bhutan**

The PPA for sale/purchase of power of Mangdechhu Hydro Electric Project (MHEP) was signed between DGPC & PTC India Ltd. on August 15, 2019. The commercial operation date (COD) of individual generating Unit as informed to ERLDC, ERPC and other stakeholders in Bhutan and India are as below:

Unit No. 1 – June 28, 2019 at 12.30 Hrs.  
Unit No. 2 – July 08, 2019 at 12.30 Hrs.  
Unit No. 3 – August 16, 2019 at 23.30 Hrs.  
Unit No. 4 – August 14, 2019 at 12.30 Hrs.

In keeping with the Power Purchase Agreement (PPA) for the sale/purchase of power from the Mangdechhu hydroelectric project signed between DGPC and PTC India on August 15, 2019, the first bill for the energy exported from the Mangdechhu Power Plant for the period from June – August 2019 was sent to PTC India on September 06, 2019. The bill was raised based on the Commercial Operation Date (COD) of individual Unit. However, PTC India informed that COD of the last Unit, which was Unit No. 3 commissioned on August 16, 2019 to be considered as COD, and therefore it was stated that any energy injected from June 16, 2019 (day on which the first unit was commissioned) to August 16, 2019 (day on which the last unit was commissioned) should be considered as energy consumed internally in Bhutan and upward adjustments for this quantum of energy would be considered in the energy exported by Tala, Chhukha and Kurichhu in the ratio as per the Regional Energy Accounting (REA) of June, July and August 2019.

However, DGPC informed PTC India that COD of individual generating Unit should be considered but accepted the upward adjustment of infirm power (energy generated prior to the declaration of COD of each individual Unit) as per the REA.

This was discussed at the 42nd Commercial Sub-Committee Meeting (CCM) of Eastern Regional Power Committee (ERPC) held on February 25, 2020 wherein PTC India was directed to seek clarification from the Ministry of Power (MoP), GoI concerning the consideration of individual Unit's COD of Mangdechhu Power Plant. In the meanwhile, PTC India agreed releasing advance payments as per the provisional REA released by ERPC, GOI. Accordingly, DGPC sent a revised bill to PTC India as per the provisional REA of ERPC on March 02, 2020 amounting to Rs. 1,394,631,712.36. This amount was received in 24 instalments, the last instalment being released on November 18, 2020.

At the 43<sup>rd</sup> Commercial Sub-Committee Meeting (CCM) of ERPC held on September 21, 2020, PTC India informed that the matter was taken up with MoP, GoI wherein it was stated that MoP had advised CEA to convene a meeting. However due to Covid-19 lockdown, meeting could not be conducted. Later, it was informed that CEA had planned to convene a meeting with PTC and the stakeholders of MHEP in the 1st week of October 2020, which also did not get materialized. In spite of numerous follow-ups, PTC India has not confirmed the above matter till date. The above matter was also not updated in the 44th, 45th, 46th, 47th & 48th CCM of ERPC by PTC India.

Based on the DGPC/Royal Government of Bhutan (RGoB)'s position that the COD of individual Unit to be considered for energy accounting and billing purposes, the actual bill for the energy exported during the period June 2019 – August 2019 is computed as Rs. 1,994,149,425.00. Therefore, the difference on account of this actual claim vis-à-vis the bill raised as per the provisional REA is Rs. 599,517,712.64. Therefore, the overall balance amount to be paid by PTC India to DGPC is Rs. 599,517,712.64

At the 47<sup>th</sup> TCC Meeting of ERPC held on November 24, 2022, TCC advised PTC India to resolve the issue expeditiously wherein PTC India representative had assured to expedite resolving the issue and revert.

This issue was again submitted at the 49<sup>th</sup> TCC meeting held on March 23, 2023 wherein representative from PTC had apprised the forum that the matter was already taken up with the O/o Member (PS), CEA. TCC had again advised PTC India to expedite in resolving the early liquidation of the dues to DGPC, Bhutan.

Till date DGPC had neither received the balance payment nor received any update from the PTC India Ltd.

**PTC may update.**

**ITEM NO. B20: Default details of constituents pertaining to Deviation, Reactive and Opening of LC.**

The details of major defaulters as on 24.07.2023 considering the ERPC bills dated 13/07/23 (Wk-26/06/23 to 02/07/23) for DSM charges and Reactive charges are tabulated below-

**Jharkhand:**

	<b>JBVNL</b>
<b>DSM (in Cr)</b>	₹ 22.72 Cr /-
<b>Reactive (in Cr)</b>	-
<b>LC</b>	LC Partially opened of ₹ 1.39 Cr.
<b>Due date of expiry of LC</b>	14/03/2024
<b>Reconciliation</b>	DSM: Pending from Q2 of FY 2020-21 Reactive: Pending from Q1 of FY 2019-20 FnC: Pending from Q1 of FY 2021-22

**Sikkim:**

	<b>Sikkim</b>
<b>DSM (in Cr)</b>	₹ 23.85 Cr /-
<b>Reactive (in Cr)</b>	-
<b>Fees and Charges</b>	₹ 8.63 Lakhs /-
<b>LC</b>	No Valid LC
<b>Due date of expiry of LC</b>	NA
<b>Reconciliation</b>	DSM: Pending from Q2 of FY 2019-20 Reactive: Pending from Q1 of FY 2019-20 FnC: Pending from Q1 of FY 2021-22

Further, the details of other pool members are enclosed as **Annexure-B20.1** and **Annexure-B20.2**.

In 49<sup>th</sup> CCM, Sikkim representative informed that by August-2023, all the outstanding dues will be cleared.

**JBVNL & SIKKIM may confirm the program for payment of outstanding dues.**

**A. Interest due to delayed payment of deviation charges/RRAS**

Due to the delayed payment of deviation charges in the DSM Pool interest was computed for all the DSM Pool Members for FY 2020-21. The current outstanding of OPGC is ₹ 0.24 lakhs. The status of interest is enclosed in **Annexure-B20.3**.

In 49th CCM, all the concerned utilities were advised to clear their outstanding dues at the earliest.

**OPGC may update the status of the same.**

**B. Opening of LC by ER Constituents for DSM Payments.**

The details of LC amount required to be opened, as per ERLDC letter dated 21/04/2023, for default in FY 2022-23 by ER constituents is given in table below -

SI No	ER Constituents	LC Amount (110% of Average weekly Deviation Charge liability)	Due date of expiry	Remarks
1	BSPTCL	404.55551	12-11-2023	LC opened for ₹ 213,53,049 /-
2	JUVNL	347.61817	14-03-2024	LC opened for ₹ 139,64,455 /-
3	DVC	265.67154	-	No Valid LC
4	Sikkim	46.0397	-	No Valid LC
5	APNRL	25.95437	-	No Valid LC
6	CHUZACHEN	2.46842	-	No Valid LC
7	GMR	20.05681	-	No Valid LC
8	JITPL	30.09467	-	No Valid LC
9	JLHEP	25.22302	-	No Valid LC
10	BRBCL	36.77389	-	No Valid LC
11	Dikchu	3.92202	01-08-2023	LC opened for ₹ 174,484 /-
12	Tashiding	8.3789	-	No Valid LC

Further, the details of other pool members are enclosed as **Annexure-B20.4**.

In 49<sup>th</sup> CCM, all the concerned utilities were advised to open their requisite amount of LC at the earliest.

**TCC may discuss.**

**ITEM NO. B21: Non-Opening of requisite amount of LC & Payment outstanding—  
Agenda by Powergrid**

(i) Following constituents are required to enhance/ extend LC towards Payment Security Mechanism, as per Annexure-8 of 8.2 of Para 8.0 of BCD Procedure and CERC Regulations:

SI No	Name of DIC's	Required Value of LC (in Cr.)	Present Value of LC (in Cr.)
(i)	North Bihar Power Distribution Company Limited (NBPDC)	79.99	9.73
(ii)	South Bihar Power Distribution Company Limited (SBPDCL)	93.91	15.27
(iii)	Jharkhand Bidyut Vitran Nigam Ltd (JBVNL)	28.49	11.52
(iv)	Sikkim	3.33	--

- Letter of Credit (LC) to be opened in favour of **CTUIL for POC & POWERGRID** towards **Non-POC Billing**.

In 49th CCM, all the concerned utilities were advised to open their requisite amount of LC at the earliest.

**A. Payment of Outstanding dues more than 45 days:**

SI No	Name of DIC's	Total Outstanding Dues (in Cr.)	Outstanding Dues more than 45 days (in Cr.)
(i)	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	97.01	67.54
(ii)	South Bihar Power Distribution Company Limited (SBPDCL)	200.17	102.82
(iii)	North Bihar Power Distribution Company Limited (NBPDCCL)	170.52	87.58
(iv)	West Bengal State Electricity Transmission Company Ltd. (WBSETCL)	28.08	27.91
(v)	West Bengal State Electricity Distribution Company Ltd. (WBSEDCL)	85.83	9.76
(vi)	Odisha Power Generation Company Limited (OPGCL)	10.96	10.96
(vi)	Jharkhand Urja Sancharan Nigam Limited (JUSNL)	36.04	35.05
	<b>Total</b>	<b>628.61</b>	<b>341.62</b>

In 49th CCM, all the concerned utilities were advised to clear their outstanding dues at the earliest.

**B. Non-payment of RTDA bills:**

The following DIC's are not paying RTDA bills:

SI No	Name of DIC's	Outstanding dues	Remarks
(i)	West Bengal State Electricity Distribution Company Ltd. (WBSEDCL)	9.76 Cr.	Outstanding dues of INR 1.20 Cr. pending for long period, INR 2.91 Cr. (bill dtd. 09.12.2022) & INR 5.65 Cr. (bill dtd. 10.05.2023) against RTDA bills are still pending with WBSEDCL despite of several follow up regarding this.

In 49th CCM, all the concerned utilities were advised to clear their outstanding dues at the earliest.

**WBSEDCL may update.**

**ITEM NO. B22: PLCC issue in Baripada-Kharagpur T/L.**

In reference to the MOM of 190th OCC & 45th TCC of item no. B. 16 & item no 16 respectively PLCC related issues were discussed in reference to the 400kV Kharagpur-Baripada line and following deliberation was made in the meetings.

Deliberation in the meeting: Powergrid Odisha representative submitted that replacement and maintenance of PLCC's at their end is not possible as the asset does not belong to them. He further stressed the fact that while replacement of PLCC's it has to be ensured that both are of same make and are properly tuned. He further submitted that Powergrid is ready to extend any kind of technical assistance to WBSETCL for the replacement and maintenance of the PLCCs. Powergrid would replace the PLCC at their end on a chargeable basis solely to be borne by WBSETCL. WBSETCL representative advised Powergrid to submit documents in support of ownership of the assets. In case the ownership of the asset lies with WBSETCL, they would replace the panels at both the ends. Otherwise, the replacement of the PLCC's to be done on cost sharing basis.

Accordingly, documentary evidence of ownership of PLCC panels attached for ready reference (**Annexure-B22**). (CE/ED/PLCC/Kharagpur/ 793(4) Dt.30/08/2010 & Ref.no: TR. PROJ./T-181/20 Dt.11.04.2012 ). Therefore, WBSETCL is requested to take necessary replacement of PLCC panels at both ends.

In 204<sup>th</sup> OCC meeting, Powergrid Odisha representative submitted that the ownership of PLCC panels at both ends of 400 KV Baripada-Kharagpur S/C Line lies with WBSETCL. He repeatedly stressed on the fact that replacement of PLCC panels at both ends should be done by the entity having original ownership the panels.

WBSETCL representative submitted that irrespective of ownership of existing PLCC panels, it will be replaced by the utilities at their respective substation end or on cost sharing basis. He further added that if the total line is owned by WBSETCL and if the cost of the entire line is adjusted through tariff of WBSETCL, then WBSETCL will replace the panels at both ends. He also submitted that for all the tie-lines throughout the country there should be a uniform process for investment, installation and maintenance.

OCC opined that functional PLCC in place being an important aspect in day-to-day grid operation, the issue can't be kept on hold for long at the cost of compromising with grid security. OCC, therefore, advised WBSETCL to execute the replacement of PLCC panels at both ends of the line at the earliest on cost sharing basis, i.e. 50% cost for the same to be borne by Powergrid Odisha.

OCC referred the agenda to upcoming TCC meeting for further approval.

**TCC may approve.**

**ITEM NO. B23: Notification of the Indian Electricity Grid Code (IEGC) -2023—Agenda by ERLDC**

The Indian Electricity Grid Code (IEGC) has been revised for ensuring a stable, reliable and secure grid operation achieving maximum economy and efficiency of the power system in

consonance with the mandate and statutory framework envisaged in the Electricity Act. The revised IEGC, was finalized on May 29, 2023 and notified in the Gazette on July 11, 2023.

The revised IEGC introduces a number of new activities for better grid operation. To achieve these activities, many new procedures and documents need to be prepared by different agencies. A summary of activities expected from SLDCs is as given below:

### REPORTING REQUIREMENTS

S. No.	Entity Responsible	Reporting / Study Requirement and Frequency	Reference Regulation of these regulations
1.	SLDC	Exception report of UFR (monthly)	Operating Code: Regulation No. 29(13)(d)
		Operational planning (monthly / yearly)	Operating Code: Regulation 31(1)(a)
		Operational planning (Intra-day, Day Ahead, Weekly)	Operating Code: Regulation 31(1)(a)
		Forecast error (intra-day/ day- ahead /weekly/monthly and yearly)	Operating Code: Regulation 31(2)(i)
		Operational analysis (post despatch)	Operating Code: Regulation No. 37(1)
		Flash report and detailed report on any grid disturbance (post grid disturbance)	Operating Code: Regulation No. 37(2)
		Self-audit Report (By 31st July of every year))	Monitoring and Compliance Code: Regulation No. 56(2)(a)

Procedure to be submitted for information of the Central Commission, after preparation and due stakeholder consultation.

S. No.	Entity Responsible	Drafting Responsibilities	Timeline to submit to Commission from date of notification of these regulations	Regulation No.
1.	SLDC	Detailed procedure covering modalities for first time energization and integration of new or modified power system elements	6 months	Connection Code Regulation No. 8(4)
		Operating procedure	6 months	Operating Code: Regulation No. 28(5)
		Procedure for operational planning analysis, real-time monitoring, real-time assessments, and format for data submission and updating	6 months	Operating Code: Regulation No. 31 (1)(d)
		Restoration Procedure	To be	Operating Code:

Consultation meetings for the procedure which needs to be prepared by NLDC/RLDCs are being organized in a phased manner to finalize the different procedures.

SLDC may take up a similar consultation meeting before finalization of the procedure at their level.

**TCC may note.**

**ITEM NO. B24: Furnishing of details such as block wise STOA energy for bilateral and collective transactions, STOA rates, STOA punching data, total all India collection towards STOA – Agenda by GRIDCO.**

Every month CTUIL raises Bill of supply towards first Bill of a billing month. The first Bill of each billing month contains the transmission charges for the billing period in accordance with Regulations 5 to 8 of the CERC Sharing Regulations, 2020. Transmission charges for Short Term Open Access paid by an embedded intra-State entity during a month is reimbursed in the following billing month to the State in which such entity is located. Further, the Transmission Deviation charges recovered through the third bill are reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

It is to be noted that the details being provided by CTUIL in the supporting documents towards the above reimbursements are not sufficient for verification purpose. The supporting documents only contain the amounts towards different credits without providing the background calculations. Hence, CTUIL may be requested to provide all background calculations towards the amounts mentioned in the supporting documents such as block wise STOA energy for bilateral and collective transactions, STOA rates, STOA punching data, total all India collection towards STOA, total all India collection towards deviation charges and other such data which will help in the verification of the Transmission charges. The above activity will help in bringing about more transparency in the Transmission Billing process.

In the 49<sup>th</sup> CCM, GRIDCO representative informed that monthly Transmission charges bill raised by CTUIL in the First bill. Further, he informed that for verification purpose of bill of STOA & RTDA charges reimbursement, CTUIL should provide all background calculations towards the amounts mentioned in the supporting documents such as block wise STOA energy for bilateral and collective transactions, STOA rates, STOA punching data, total all India collection towards STOA, total all India collection towards deviation charges and other such data which will help in the verification of the Transmission charges.

**CTUIL representative was not present in the meeting. However, CCM observed that all the relevant data pertaining to distribution of STOA charges and Transmission deviation charges should be made available to the DICs by the concerned agencies like CTUIL/NLDC/RLDCs. Further, CCM requested CTUIL/NLDC/RLDCs to upload the relevant data in their website.**

**CTU may update.**

**ITEM NO. B25: Additional Agenda, if any.**

## PART C: ITEMS FOR INFORMATION

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

### ITEM NO. C1: Deduction of Sikkim 12% Royalty free Power share from Rangit and Teesta-V.

Reference letter no: ERPC/Comm-I/Gen/Share/2022-23/1456 dated 15.02.2023, ERPC/Comm-I/Gen/Share/2022-23/1538 dated 27.02.2023 & ERPC/Comm-I/Gen/Share/2022-23/1545 dated 28.02.2023 (Flag X) for reallocation of power of central Generating Stations of Eastern Region and Bhutan HPs upon uniform allocation of unallocated power among ER beneficiaries w.e.f. 00:00hrs of 01.03.2023.

The detail of total allocation share percentage (%) with equivalent in MW for Hydro power is as under:

Sl. No	Name of Central Generating Stations	Installed Capacity (MW)	Allocation	
			Percentage (%) share	MW
1	Rangit	60	11.84	7.090
2	Teesta-V	510	11.35	57.789

As above the percentage for the power allocated for Rangit & Teesta V is less than the free share royalty percentage wise., 12%. The allocation share percentage for Rangit & Teesta-V till 16<sup>th</sup> Feb 2023 is 13.33% and 13.19 % respectively (i.e., 12% free share and 1.33% & 1.19% chargeable), but the share allocation percentage from 17<sup>th</sup> Feb 2023 is 11.84% & 11.35% only which is less than the free share royalty to Sikkim.

The share from Rangit & Teesta-V was reallocated to Sikkim vide letter no: ERPC/Comm-I/Gen/Share/2023-24/146 dated 29.04.2023 w.e.f. f 00:00 hrs. of 01.05.2023, but Sikkim face a loss for two months as the 12% royalty share was deducted.

In the 49<sup>th</sup> CCM, Sikkim representative briefly explained the issue. Further he informed that some percentage of free power of Sikkim for the period of March'2023 & April'2023 has been scheduled to other beneficiaries of Teesta-V & Rangit. Further, he requested for giving back the same quantum of power by adjustment in future REA accounts or payment of an amount equivalent to short fall in their free power quota.

ERPC Secretariat submitted that after the implementation of Uniform share allocation of unallocated quota in Eastern Region, the share of Sikkim from TEESTA-V & RANGIT got reduced inadvertently in the month of March & April 2023 and the same has been rectified from May 2023 onwards.

CCM opined that since power has already been scheduled and beneficiaries have used it as per requirement, post facto revision of share will pose a lot of difficulties in accounting and settlement.

After detailed deliberation, CCM advised ERPC secretariat to revise the REA of March 2023 & April 2023 reflecting free share of Sikkim as 12% in Teesta-V & Rangit instead of 11.35% or

11.84% respectively. CCM advised NHPC to refund the requisite amount to Sikkim by adjustment in bills of other beneficiaries to the extent of short fall in the free share quota of Sikkim.

NHPC representative agreed to implement the direction of CCM after the issuance of revised REA.

**TCC may note.**

#### **ITEM NO. C2: Status of PSDF.**

An amount of total ₹ 117.09 Cr (DSM: 100.79 Cr, Reactive: 16.23 Cr) from the Deviation and Reactive Pool account has been transferred to PSDF after the 48th Commercial sub-committee meeting held on 14.03.2023. With this the total amount of ₹ 2181.71 Cr has been transferred to PSDF so far. The breakup details of fund transferred to PSDF (till 05.07.23) is enclosed in **Annexure C2**.

**TCC may note.**

#### **ITEM NO. C3: Reconciliation of Pool Accounts.**

The reconciliation statements of DSM, Reactive, RRAS, AGC and SRAS charges are being issued by ERLDC on quarterly basis and statements are being sent to the respective constituents and also being uploaded at ERLDC website at <https://erldc.in/market-operation/dsmreconciliation/>. The status of reconciliation as on 25.07.2023 is enclosed in **Annexure-C3.1 and C3.2**.

Constituents are requested to take necessary action for the signing of pending reconciliation statements.

In 49<sup>th</sup> CCM, all the constituents were advised to sign the reconciliation statement at the earliest.

#### **ITEM NO. C4: Short term Open Access.**

##### **1. For STOA Payments made to SLDC/STU and CTU.**

The reconciliation statements of STOA payments of Q-4 for FY 22-23 have been sent to the DVC, OPTCL, BSPTCL, Jharkhand, Andhra Pradesh, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, Telangana, WBSETCL and CTU on dated 18.04.2023 and also uploaded the same at ERLDC website at <https://erldc.in/open-access/reconciliation-sldc-stu/>. The constituents were requested to verify /check the same & comment (if any) to ERLDC at the earliest.

The status of reconciliation is enclosed in **Annexure- C4.1**.

In 49<sup>th</sup> CCM, all the constituents were advised to sign the reconciliation statement at the earliest.

## 2. For Payments made to STOA Applicants.

The reconciliation statements of STOA payments for the period of Q4 for FY 22-23 have been sent to the JBVNL, JITPL, APPCPL, DALMIA CEMENT (BHARAT) LIMITED (RCW), HPX, IEXL, IPCL, NALCO(AP), NALCO(OD), KEIPL, PXIL, SPTPL and TPTCL on dated 18.04.2023 and also uploaded the same at ERLDC website at <https://erldc.in/open-access/reconciliation-applicant/>. The constituents were requested to verify /check the same & comment (if any) to ERLDC at the earliest.

The status of reconciliation is enclosed in **Annexure-C4.1**.

In 49th CCM, all the constituents were advised to sign the reconciliation statement at the earliest.

**TCC may note.**

### **ITEM NO. C5: Fees and charges of ERLDC.**

The reconciliation statements of FnC payments by registered users of ERLDC have been sent up to the period of Q4 of FY 2022-23. The same is also available at FnC portal <https://fc.posoco.in/FnCWeb/#/landing>. Many of the users are yet to sign the reconciliation statement. The constituents were requested to verify /check the same & comment (if any) to ERLDC at the earliest.

The status of reconciliation is enclosed in **Annexure- C5**.

In 49th CCM, all the constituents were advised to sign the reconciliation statement at the earliest.

**TCC may note.**

### **ITEM NO. C6: Completion of AMR Hardware/Software refreshment Programme in ER.**

On 191<sup>st</sup> OCC & 46<sup>th</sup> ERPC, forum has agreed for the proposal of Software/Hardware refreshment Programme of existing AMR system in ERLDC. On 19.06.2023, the new architecture after many trials are made Go-Live and thus the package is completed in all respect as committed in given timeline as per 200<sup>th</sup> OCC meeting.

**TCC may note.**

### **ITEM NO. C7: Early commissioning of 220/132 KV, 160 MVA capacity spare ICT at Baripada S/s under provision of spare ICTs in Eastern Region – Powergrid Odisha.**

## 1. PROJECT DETAILS:

- a. Investment Approval (IA) Date: 04.10.2021
- b. Commissioning Schedule (as per IA): 24 months from the date of IA
- c. Project Scope: Procurement of 05 nos Transformer as regional spare for Eastern Region are as per details given below.

Voltage Rating	MVA capacity	Substation Name
400/220kV	500	Pusauli SS
400/220kV	500	Pandiabili SS
400/220kV	500	Maithon SS
220/132kV	160	Daltonganj SS
220/132kV	160	Baripada SS

## 2. AWARD DETAILS:

a. NOA placed on M/s Toshiba Transmission and Distribution Systems (India) Pvt. Ltd. on 15.11.2021 with completion schedule of 18 (eighteen months) from the date of issue of Notification of Award. Thus, contractual completion schedule is 15.05.2023.

(NOA Ref No: CC-CS/1087-ER1/TR-4256/3/G5/NOA-I/ER1-250005, Dtd.15.11.2021)

## 3. PRESENT STATUS:

After completion of Supply and erection activity, commissioning of one no 160MVA capacity, 220/132kV spare Transformer at POWERGRID Baripada substation has been done on dated 31.03.2023. Notification of DOCO Declaration dtd. 31.03.2023 is enclosed as **Annexure-C7**.

## 4. SUBMISSION:

Considering the time-essence of the contract, POWERGRID has put all best efforts and has been able to commission Baripada Spare ICT on 31.03.2023, which is six months ahead of commissioning schedule (i.e. 4th October 2023) as per investment approval. After successful commissioning of this 160 MVA spare ICT at POWERGRID Baripada Substation, regional security of Eastern Region has enhanced.

It is to be appreciated that POWERGRID is keen on exploring the best possibilities and always striving hard for successful commissioning of transmission elements within approved timeline for the betterment of regional as well as national transmission system. Following the trend, 160 MVA spare ICT at Baripada was also commissioned ahead of schedule. Considering above, DOCO of 160 MVA spare ICT at POWERGRID Baripada Substation may be approved as 31.03.2023.

**TCC may note.**

**ITEM NO. C8: Methodology for calculating commercial exbus and AG (Actual Generation) of NTPC Barh Stage-I & II after COD of U#2 of BARH Stage-1**

Existing methodology for calculating net injection of both stages of BARH as approved in the 45<sup>th</sup> TCC meeting:

1. Net Ex-bus NTPC Barh: Sum of (KH-1, KH-2, PAT-1, PAT-2, PAT-3, PAT-4, MOT1, MOT-2)
2. Infirm Power Unit-2: Abs(GT#2) - ST#2
3. Commercial Ex-bus NTPC Barh: Sum of (S.N. 1 & S.N. 2)
4. Stage-I AG: [Abs (GT#1) - ST#1 -ST#3] + (GT#1/(GT#1+GT#4+GT#5)) \*ST#2
5. Stage-II AG: (S.N. 1 - Abs (GT#2)) - [Abs (GT#1) - ST#1 -ST#3] + ((GT#4 + GT#5)/(GT#1+GT#4+GT#5)) \*ST#2

Methodology for calculating net injection of both stages of BARH after COD of U#2 of BARH Stage-1 will be as follows :-

- 1) Net Exbus NTPC Barh: Sum of (KH-1, KH-2, PAT-1, PAT-2, PAT-3, PAT-4, MOT-1, MOT-2)
- 2) Infirm Power Unit-3: Abs(GT#3)-ST#3
- 3) Commercial Exbus NTPC Barh: S.N.(1)- S.N.(2)
- 4) Stage-I AG: Abs(GT#1)+Abs(GT#2)-ST#1-ST#2
- 5) Stage-II AG: S.N.(3)-S.N.(4)

In 49<sup>th</sup> CCM, NTPC representative informed that NTPC has declared the CoD of U#2 of BARH Stage-I wef 01.08.202. Further, he informed that after CoD of U#2 the methodology for segregation of Actual energy of BARH will be changed.

**On 28.07.2023, a special meeting held at ERPC secretariat with representative of ERLDC & NTPC and the following methodology was finalized for segregation of actual energy among Barh Stage-I & II w.e.f 01.08.2023.**

- 1) *Net Exbus NTPC Barh: Sum of (KH-1, KH-2, PAT-1, PAT-2, PAT-3, PAT-4, MOT-1, MOT-2)*
- 2) *Stage-I AG: Abs (GT#1)+Abs(GT#2)-ST#1-ST#2-ST#3*
- 3) *Stage-II AG: S.N.(1)-S.N.(2)*

**Note: As confirmed by NTPC, ST#1, ST#2 & ST#3 are dedicated for BARH Stage-I.**

TCC may note.

**ITEM NO. C9: Methodology OPGW Installation in 400 kV Teesta III – Kishanganj transmission line of TPTL.**

POWERGRID is establishing OPGW based communication systems in the Eastern Region in line with 'Eastern Region Fibre Optic (Additional) Project' as approved by ERPC. Accordingly, POWERGRID is executing the Contract for live line installation of OPGW on various transmission lines in the Eastern Region including 400 kV Teesta III – Kishanganj transmission line of TPTL through their Contractor. Therefore, any issue in executing the Contract including RoW is to be resolved by POWERGRID/ Contractor. As such, TPTL has no direct role in execution of the Contract.

However, it is submitted here that TPTL has always provided assistance and support to POWERGRID OPGW team, as and when requested for resolution of the RoW issues and attended the various meetings with District Administration along with POWERGRID OPGW team, and also provided necessary documents pertaining to the RoW issues as & when desired. Accordingly, the OPGW works in 400 kV Rangpo – Kishanganj section (179 km) of the transmission line has been completed. Also, as of now OPGW works have been completed in about 205 km of the total 215 km transmission line of TPTL, which has been made possible by co-ordination of TPTL and timely assistance provided by TPTL along with District Administration in resolution of the RoW issues. TPTL shall continue to provide assistance and support to complete the balance OPGW works in about 10 km of the transmission line section.

Therefore, it would be desirable that the balance OPGW works in 400 kV Teesta III – Kishanganj transmission line be completed by POWERGRID OPGW team on priority and TPTL shall extend any desired assistance to POWERGRID for due completion of these works at the earliest.

This is for information & record please.

**ITEM NO. C10: List of Assets during March'23 to June'23 of Eastern Region (ER).**

Under the project "Provision of spare ICTs in Eastern Region", procurement of following transformers as regional spare for Eastern Region, were under the scope of work:

**400KV**

- i) 500MVA, 400/220kV 3-phase Auto Transformer as regional spare for Bihar, Odisha & West Bengal (one in each state): 3 nos.
- a) 1 No. 500MVA, 400/220kV ICT at 400/220kV Pusauli SS  
b) 1 No. 500MVA, 400/220kV ICT at 400/220kV Pandiabili SS  
c) 1 No. 500MVA, 400/220kV ICT at 400/220kV Maithon SS

**220KV**

- ii) 160MVA, 220/132kV 3-phase Auto Transformer as regional spare for Jharkhand & Odisha (one in each state): 2 nos.
- a) 1 No. 160MVA, 220/132kV ICT at 400/220/132kV Daltonganj SS  
b) 1 No. 160MVA, 220/132kV ICT at 400/220/132kV Baripada SS

As per the Investment Approval, the commissioning schedule of the project is 24 months from the date of Investment Approval. The date of Investment Approval is 04.10.2021 and hence the assets are to be commissioned and put under commercial operation w.e.f. 04.10.2023. The present status of commissioning of these assets are as follows:

Sl. No.	Asset Description	Present status	Anticipated date of DOCO
1	500MVA, 400/220kV ICT at 400/220kV Pusauli SS	Testing under progress	31.07.2023
2	500MVA, 400/220kV ICT at 400/220kV Pandiabili SS	Oil circulation in Transformer under progress	31.07.2023
3	500MVA, 400/220kV ICT at 400/220kV Maithon SS	Oil filling in storage tank started	15.08.2023
4	<b>1 no. 160MVA, 220/132kV ICT at 400/220/132kV Daltonganj SS</b>	<b>Completed</b>	<b>06.07.2023</b>
5	<b>1 no. 160 MVA, 220/132kV ICT at 400/220/132kV Baripada SS</b>	<b>Completed</b>	<b>31.03.2023</b>

There is no time overrun from schedule date of commissioning as given in the investment approval. As the asset is going to be commissioned early w.r.t. scheduled date of commissioning, it is proposed that the early DOCO of the above-mentioned spare ICTs may be approved by forum.

**ITEM NO. C11: List of Assets during October'22 to February'23 of Eastern Region (ER)**

<b>A</b>	<b>Provision of Spare ICTs in Eastern Region</b>	<b>DOC0</b>	<b>Remarks</b>	<b>Region</b>
1	01 No. 160 MVA, 220/132 KV, 3-Ph ICT at 400/220/132 KV Baripada S/S (Regional Spare ICT for Odisha)	31-03-2023	DOC0 Letter Dtd. 31.03.2023	Odisha Proj.
2	01 No. 160 MVA, 220/132 kV ICT at 400/220/132 kV Daltonganj S/s	06.07.2023	DOC0 Letter Dtd. 10.07.2023	ER-I
<b>B</b>	<b>Baharampur (POWERGRID)- Bheramara (Bangladesh) 2<sup>nd</sup> 400 kV D/C Transmission Line (Indian Portion)</b>	<b>DOC0</b>	<b>Remarks</b>	<b>Region</b>
1	Baharampur (POWERGRID)- Bheramara (Bangladesh) 2 <sup>nd</sup> 400 kV D/C Transmission Line (Indian Portion) and associated bays at Baharampur S/S	27-07-2020	DOC0 Letter Dtd. 13.04.2023	ER-II
<b>C</b>	<b>ERES XXVI</b>	<b>DOC0</b>	<b>Remarks</b>	<b>Region</b>
1	1x500 MVA, 400/220kV 3rd ICT along with associated bays at Ranchi (PG) S/s.	01-06-2023	DOC0 Letter Dtd. 01.06.2023	ER-I
2	400 kV Transformer Bays- 01 No.			
3	220 kV Transformer Bays- 01No.			
<b>D</b>	<b>Package-I: Eastern Region Fibre Optic Expansion Project (Additional Requirement)</b>	<b>DOC0</b>	<b>Remarks</b>	<b>Region</b>
1	Maithon RB-Ranchi (OPGW-188 Km SDH-02 nos	19-06-2021	DOC0 Letter Dtd. 26.06.2023	ER-I
2	Barh-Gorakhpur (OPGW-353.017 Km, SDH - 02 nos., DCPS-01 no.)	12-10-2022		
3	Kishenganj-Patna (OPGW-346.67 Km, SDH-03 nos., DCPS-01 no., NMS-01 no.	17-05-2023		

**ITEM NO. C12: New Regulations/Rules of CEA/CERC/MoP.**

1. Ministry of Power vide Gazette notification dated 26.07.2023 had published Electricity (Second Amendment) Rules, 2023, where the amendments to the Subsidy accounting and payment and new rules for Framework for Financial Sustainability of Discoms were published.
2. Ministry of Power vide Gazette notification dated 14.06.2023 had published Electricity (Rights of Consumers) Amendment Rules, 2023 and introduced Time of Day tariff for Commercial & Industrial Consumers. The relevant points are as below:

Time of Day Tariff for commercial and Industrial consumers having maximum demand more than ten Kilowatt and it shall be made effective from a date not later than 1st April, 2024 and for other consumers except agricultural consumers, the Time of Day tariff shall be made effective not later than 1st April, 2025 and a Time of Day tariff shall be made

effective immediately after installation of smart meters, for the consumers with smart meters

Provided that, the Time of Day Tariff specified by the State Commission for Commercial and Industrial consumers during peak period of the day shall not be less than 1.20 times the normal tariff and for other consumers, it shall not be less than 1.10 times the normal tariff:

Provided further that, tariff for solar hours of the day, specified by the State Commission shall be at least twenty percent less than the normal tariff for that category of consumers: Provided also that the Time of Day Tariff shall be applicable on energy charge component of the normal tariff:

Provided also that the duration of peak hours shall not be more than solar hours as notified by the State Commission or State Load Despatch Centre

3. *CERC vide Gazette notification dated 07.02.2023 had published the CERC(Sharing of Inter-State Transmission Charges and Losses) (First Amendment) Regulations, 2023. Further CERC vide order dated 03.08.2023, notified the date of implementation of same w.e.f. 01.10.2023.*

4. *The 13th NPC meeting was held on 05th July 2023 at Kolkata. The important issues which were discussed in the meeting are as follows:*

- **PUSHP portal (For Flexibilization of PPA for Optimal Utilization of Resources & Reduction in Cost of Power for Consumers).**
- **Best practices/procedures to be followed by RPCs.**
- **Uniform philosophy of PMU locations, new analytics and requirement of up gradation of Control Center under “Unified Real Time Dynamic State Measurement (URTDSM) project phase-II**
- **AUFLS and df/dt scheme**
- **Operation of AUFLS scheme on the grid disturbance in NR:**
- **Introduction of MPLS Technology in ISTS Communication**
- **Implementation of Islanding schemes**
- **National Energy Account (NEA)**
- **Procedure for Power System Stabilizers (PSS) tuning**
- **Membership of RE Generators in RPC forum.**

The minutes of the meeting was published by CEA and same is available in CEA website.

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**PROPOSAL FOR “UNIFIED NATIONAL ACCOUNTING SOFTWARE FOR REGIONAL  
POWER COMMITTEES (UNASR)”**

***I. Role of Regional Power Committees***

Since independence Indian Power system has evolved progressively and became one of the largest integrated, state-of-the-art, robust networks in the world. This transformation was mainly backed by the Electricity Act 2003, in which the role and responsibilities of different entities are clearly defined. Since electricity is in the concurrent list in schedule VII of the Indian constitution, both the Central and States can have different entities for strengthening the associated Power system independently. Regional Power Committees (RPCs) are formulated with the objective of facilitating the integrated operation of the Power systems among the different entities involved in the operation and maintenance of Power systems in that specific region. The role and responsibilities of RPCs as mandated in the Electricity Act 2003 and CERC regulations are as follows:

***As per section 2(55) of the Electricity Act 2003***

*“Regional Power Committee” means a committee established by resolution by the Central Government for a specified region for facilitating the integrated operation of the power systems in that region....”*

***As per section 29(4) of Electricity Act 2003: (Compliance of directions)***

*“The Regional Power Committee in the region may, from time to time, agree on matters concerning the stability and smooth operation of the integrated grid and economy and efficiency in the operation of the power system in that region....”*

***As per clause no-2.4.5 of CERC(IEGC) Regulation 2010:***

*“....RPC Secretariat or any other person as notified by the Commission from time to time, **shall prepare monthly Regional Energy Account, weekly unscheduled interchange account, reactive energy account and congestion charge account,** based on data provided by RLDC and renewable regulatory charge account based on data provided by SLDC/ RLDC of the State/Region in which wind generator is located and any other charges specified by the Commission for the purpose of billing and payments of various charges....”*

***As per CERC(IEGC) Regulation 2023***

*“Accounting and pool settlement system metering, accounting and settlement system: (a) At the Inter State Transmission System (ISTS) level, the basic principle followed is that all settlements for the energy scheduled before the fact are done directly between the sellers and the buyers, with the **Regional Power Committee issuing the Accounts specifying the quantum of energy scheduled.** All deviations from the schedule are settled through a regulatory Pool Account*

*maintained by RLDCs where only the deviation payments are handled. (b) **The settlement system shall be transparent, robust, scale-able (multi buyer/seller, inter connection with lower and upper pool systems) and dispute-free with integrity and probity and usage of state of the art techniques.** The settlement computation details, applicable charges and operation of different regulatory Pool Accounts shall be in accordance with various regulations of the Commission. **RPCs shall standardise the formats of various accounts.** “*

With consistent progress over a period of time, at present India is having five regional grids which were integrated into National Grid. In each region, one Regional Power Committee has been established by the Ministry of Power, Govt of India vide Resolution dated 03rd December 2021 & Corrigendum dated 17th December 2021 for integrated operation of the power system.

## *II. Commercial settlement responsibilities entrusted to RPCs*

Commercial settlement mechanism plays a crucial role in the progress of any market in the world. The power sector is no more exception. A transparent, time-bound, grievance-oriented commercial settlement mechanism helps in the progress of the Power system in India. Since RPCs are impartial and neutral entities and the sole purpose of RPCs is to bring cooperation among the entities, the responsibility of commercial settlements among the different entities in the Power systems is assigned to RPCs.

Different regulations and the relevant clauses which mandates RPCs to issue commercial statements are as follows:

<i>Regulation</i>	<i>Clause</i>
<i>As per clause no-2.4.5 of CERC(IEGC) Regulation 2010:</i>	<i>“...RPC Secretariat or any other person as notified by the Commission from time to time, <b><u>shall prepare monthly Regional Energy Account, weekly unscheduled interchange account, reactive energy account and congestion charge account,</u></b> based on data provided by RLDC and renewable regulatory charge account based on data provided by SLDC/ RLDC of the State/Region in which wind generator is located and any other charges specified by the Commission for the purpose of billing and payments of various charges....”</i>

<p><i>Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2022;</i></p>	<p>“9. Accounting of Charges for Deviation and Ancillary Service Pool Account (1) By every Thursday, the Regional Load Despatch Centres shall provide the data for deviation calculated as per Regulation 6 of these regulations, for the previous week ending on Sunday mid-night to the Secretariat of the respective Regional Power Committees. (2) After receiving the data for deviation from the Regional Load Despatch Centre, the Secretariat of the <b><u>Regional Power Committee shall prepare and issue the statement of charges for deviation prepared for the previous week, to all regional entities by ensuing Tuesday</u></b></p> <p>Provided that transaction-wise DSM accounting for intra-State entities shall not be carried out at the regional level. (3) <b><u>Separate books of accounts shall be maintained for the principal component and interest component of charges for deviation by the Secretariat of the Regional Power Committees.</u></b> “</p>
<p><i>Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2022</i></p>	<p><b><i>Part IV Accounting and Settlement of SRAS and TRAS</i></b></p> <p>“21. Accounting and Settlement of SRAS and TRAS (1) <b><u>Accounting of SRAS shall be done by the Regional Power Committee on a weekly basis, based on SCADA data.</u></b> (2) <b><u>Accounting of TRAS shall be done by the Regional Power Committee on a weekly basis, based on interface meter data and schedules.</u></b> “</p>
<p><i>Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020</i></p>	<p>“14. Accounting (1) The Implementing Agency shall publish transmission charges payable by drawee DICs and injecting DICs with untied LTA for the billing month in Rupee terms. (2) <b><u>Regional Transmission Accounts and Regional Transmission Deviation Accounts for the billing month for the DICs shall be prepared by the Secretariat of the respective Regional Power Committee</u></b> on the basis of: (a) DIC-wise transmission charges for the billing month, as furnished by the Implementing Agency; and (b) Meter readings of all Special Energy Meters for computation of Transmission Deviations for every time block of the corresponding billing period, as furnished by respective RLDCs.”</p>

Regulations mandate RPCs to issue the commercial accounts **using sophisticated technologies/soft-wares in a transparent and time bound manner** (i.e., weekly and monthly, Annually). These commercial accounts issued by RPCs acts as a binding reference document for the entities to settle the bills. For example, the monthly Regional Energy Account (REA) issued by RPCs will be considered by the ISGS/Central Generating stations/IPP's to raise the invoices for the settlement of Monthly fixed charges and Energy charges with the tied beneficiaries. Regional Transmission account (RTA) issued by the RPCs will be considered by the CTU to settle the monthly transmission charges among the beneficiaries for utilizing the inter-state transmission network. The mandate/time frame given by various regulations to RPCs in respect of commercial settlements and the objective of each commercial statement/account are as follows:

<b>Weekly Accounts</b>				
<b>Sl No.</b>	<b>Account</b>	<b>Regulation</b>	<b>Objective of account</b>	<b>Entities involved</b>
1	Deviation Settlement Mechanism (DSM) account	CERC(Deviation Settlement Mechanism and related matters) Regulations, 2022	For facilitating the incentives and dis incentives as mandated by regulation there by enabling the Grid discipline.	Beneficiries, CGS, ISGS, IPPs, Cross Border Entity, RE Generators
2	Secondary Reserve Ancillary Service(SRAS) account	CERC (Ancillary Services) Regulations, 2022	For providing incentives to the Generators in supporting the Grid, through automatic generation control	Generators & Discoms
3	Tertiary Reserve ancillary service(TRAS) account	CERC (Ancillary Services) Regulations, 2022	Commercial support to the Generators for supporting the grid, in the case of contingencies	Generators & Discoms
4	Reactive Energy account	CERC, IEGC 2010 Or CERC IEGC 2023	Providing compensation mechanism for providing reactive power support to the Gird	1.Beneficires only (as per Reg-2010) 2. Beneficiries & Generors
<b>Monthly Accounts</b>				
1	Regional Energy Account (REA)	CERC, Tariff Regulations	For settlement of monthly Capacity charges and Energy charges	CGS, Beneficiries
2	Regional Transmission Account(RTA)	CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020	For settlement of Transmission charges on monthly basis among the beneficiaries	Transmssion Utilities, Designated ISTS Customers, Generators
3	Regional Transmission Deviation Account (RTDA)	CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020	For settlement of Transmission deviation charges on monthly basis among the beneficiaries	Transmssion Utilities, Designated ISTS Customers, Generators
4	Security Constrained Economic Despatch(SCED) Account	CERC Suo moto order	For improving the economy of the Generators	Beneficiries, CGS, ISGS
5	Compensation Account	CERC orders	Part load compensation accounts	Beneficiries, CGS, ISGS
6	DC Certification of IPPs	CERC orders	For settlement of monthly Capacity charges and Energy charges	ISGS, IPPs, Beneficiries
7	Ramping Performance of thermal generators	CERC, IEGC 2010	To certify the Ramping Performance of thermal generators	CGS, Beneficiries
8	Interest Accounts	CERC(Deviation Settlement Mechanism and related matters) Regulations, 2022	Interest calculation of Weekly commercial accounts	Beneficiries, CGS, ISGS, IPPs, Cross Border Entity, RE Generators

### ***III. Present methodology adopted by the RPCs***

Based on data provided by RLDC/NLDC/PXs/Regional Entities, RPC secretariat prepares commercial accounts as per prevailing CERC Regulations. In this regard, every region has a different approach to accounting and settlement though the same logic is applicable to all regions

or all regional Entities. At present, the practices followed in different RPCs for preparation of Commercial Accounts are as follows:

ERPC:	Commercial Accounting software(.php) developed by M/s VS & Tower Pvt ltd. Some accounts through Excel based. (i.e. Compensation A/c)
WRPC:	Commercial Accounting Software(.php) developed by M/s VS & Tower Pvt ltd. Some accounts through Excel based. (i.e. RTDA A/c, Compensation A/c)
SRPC:	In house accounting software(.php) developed by SRPC Secretariat. Some accounts through Excel based. (Oil Compensation A/c)
NRPC:	Commercial Accounting software developed by M/s Kreate. Some accounts through Excel based. (i.e Compensation A/c)
NERPC:	Commercial Accounting software developed by M/s PWC. Some accounts through Excel based. (i.e Compensation A/c)

It is also to be noted the regulations are applicable to all the regions in a similar manner, however, the accounts issued by RPCs are not uniform in all the regions. Many times, it has been observed that the regulations had been implemented in different regions with different interpretations and the utilities who have a presence in all the regions are raising the issues of different accounting approaches among RPCs for the same situations and also accounting is not robust, scalable or standardized.

Further accounts issued by RPCs form the basics for all data submitted to CEA, MoP, CERC, inputs to the Ministry of Power on Parliament Questions, Committees of the Parliament and VIP references etc. However, at presents the accounts are not being stored in a structured database and thus cannot be easily referenced.

#### *IV. Proposed Common Accounting Software for RPCs*

##### **“UNIFIED NATIONAL ACCOUNTING SOFTWARE FOR RPCs - UNASR”**

In the 13<sup>th</sup> NPC meeting, S. R. Narasimhan, CMD, Grid-India informed that Grid-India is developing a Centralized Web Based Energy Scheduling software(C-WBES) for scheduling and despatch of electricity and same will be implemented throught out india within 6 months.

Similarly, as per Annexure-7: ACCOUNTING AND POOL SETTLEMENT SYSTEM of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulation 2023

**“The settlement system shall be transparent, robust, scale-able (multi buyer/seller, inter connection with lower and upper pool systems) and dispute-free with integrity and probity and usage of state-of-the-art techniques. The settlement computation details, applicable charges and operation of different regulatory Pool Accounts shall be in accordance with various regulations of the Commission. RPCs shall standardise the formats of various accounts...”**

Therefore, it is high time for RPCs to develop Common Accounting software using of state-of-the-art techniques as directed in CERC IEGC Regulation 2023. The importance of common accounting software for RPCs will help in the **reduction of time for implementation of new as well as amended regulations, better interpretation of regulations, error-free accounting by incorporating modern software technologies, easy accessibility of data & data analysis and standardization of reports for easy understandability of the utilises.** The advantage of developing Common Accounting software for all the RPCs in the different perspectives are summarised below:

**Technical consideration:**

1. Incorporating features of Modern software in Commercial accounting using state of the art techniques.

Feature	Present	Proposed
User Interface (UI)	Not Available or Rugged UI with no features	Modular, Configurable
Database	Not Availabale or Primitive & does not support all types query, features.	National database with integration of all Region and Back up database.
Integration	Not Available	Full featured back-end integration among all applications.

*\*It is proposed to implement “UNIFIED NATIONAL ACCOUNTING SOFTWARE FOR RPCs – UNASR” in a cloud environment as per Ministry of Electronics and Information Technology (MeITY) empanelled Cloud service Provider (CSP).*

2. Secure programming language and cyber security complaint.
3. Role based user access can be granted at any level including MoP/CEA/ NPC Division/ RPCs/ All Users (CGS, ISGS, Beneficiaries, Cross Border Entity, IPPs etc).

*The data for cross checking/tallying can be easily accessed with role defined in the softwar. Further any user can easily download particular blockwise data for any end use.*

4. Better and uniform interpretation of Regulations.
5. Easy and faster implementation of Regulations/Amendment Regulations.
6. Error free logic implementation uniformly across all the region.
7. Better handling of grievance of Regional Entities.
8. Easy implementation of 5 min block accounting in future.
9. API integration with WBES system, AMR system or other utilities such as Power Exchanges, Regional Entities for seamless data transfer.

**Economical Consideration:**

1. Cost optimization for development and AMC.
2. Reduction of major and minor charges for implementaion of CERC amendment regulations.
3. Easy understanding of the accounting system among officers while inter-RPC transfer or between CEA/NPC & RPC transfer.
4. Manual work will be reduceed and improvement of the work efficiency of the organization.
5. Manpower will be utilized for new emerging technologies i.e., Power market, storage technology, green hydrogen, RE integration, Focused analysis of data etc.

**Regulatory Consideration:**

1. The settlement system shall be transparent, robust, scale-able (multi buyer/seller, inter connection with lower and upper pool systems) and dispute-free with integrity and probity and usage of state of the art techniques. The settlement computation details, applicable charges and operation of different regulatory Pool Accounts shall be in accordance with various regulations of the Commission. RPCs shall standardise the formats of various accounts.
2. Easy and faster settlement of disputes.
3. Standardization of input and ouput format will helps the utilities operating across all the regions.
4. Timely issuance of error free accounts and revision accounts.

5. Reduction of time for implementation of new as well as amended regulations.
6. Better Coordination among RPCs in inter regional settlements.
7. Complete digitization of Regional Accounting settlement system.
8. Less human interference by complete automation of accounting system.

One of the objectives of RPCs is to improve the “economy and efficiency” in the Power sector and to act as a catalyst in the development of the nation. To achieve these objectives, RPCs must transform themselves from the state of “**Data Repository**” to “**Data Enablers**”. This can only be possible if the RPC's existing infrastructure is transformed on par with the current technological up-gradations and considering the future requirements. **Considering these facts and the future course of RPCs, it is requested to NPC Division, CEA takes the lead on the above proposal for the implementation of Common National Accounting Software for RPCs using state of art technologies across all the regions using single vendor (Example: Centralized WBES developed by Grid-India for RLDCs).**

#### **V. BUDGETARY SUPPORT/FUNDING**

In view of the considerable cost for implementation of “**UNIFIED NATIONAL ACCOUNTING SOFTWARE FOR RPCs – UNASR**”, it is proposed that the same may be funded through PSDF funding from the Ministry of Power, Government of India. The designated implementation agency shall submit DPR to MoP for PSDF funding.

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भारत सरकार  
Government of India

विद्युत मंत्रालय  
Ministry of Power  
No. 11/29/2023-NHPC

New Delhi, the 27th June 2023

To,

**The Chairperson,**  
Central Electricity Authority,  
Sewa Bhawan, R.K. Puram  
New Delhi

**Sub: Allocation of firm power from upcoming Hydro Projects of NHPC Ltd, its  
JVs/Subsidiaries.**

Sir,

I am directed to forward herewith a copy of NHPC Ltd.'s letter No. NH/Comml./MOP/Allocation/2023/417 dated 08.06.2023 which is self explanatory. The shares of various states/utilities according to their entitlement from these projects is required to be finalized as per the allocation formula applicable to the central hydro power generating station(s).

2. NHPC Ltd. has indicated that the consent from various DISCOM/States has been received for procurement of Power from above projects. However, the signing of Power Purchase Agreements (PPAs) with States/DISCOMs is under process. As such, CEA is requested to examine the case and furnish their comments to this Ministry at the earliest, on the allocation to be made to the beneficiary states

Encl. As above

Signed by Pankaj Kumar Sangwan  
Date: 27-06-2023 10:26:42  
Reason: Approved

**Dy. Director (NHPC)**  
Tel No. 23324357

**Copy to:**

1. CMD, NHPC Ltd., Sector-33, Faridabad, Haryana

एनएच/वाणिज्यिक/एमओपी/आवंटन/2023/417

दिनांक 08.06.2023

अवर सचिव,  
एनएचपीसी डेस्क,  
ऊर्जा मंत्रालय, भारत सरकार,  
श्रम शक्ति भवन,  
रफी मार्ग, नई दिल्ली-110001

विषय: एनएचपीसी लिमिटेड, उसके जेवी/अनुषंगियों की आगामी जलविद्युत परियोजनाओं से राज्यों को बिजली का आवंटन।

महोदय,

कृपया उपर्युक्त विषय पर संलग्न पत्र एनएचपीसी पत्र संख्या NH/CommL/MOP/  
Allocation/2023/417 दिनांक 08.06.2023 देखें।

धन्यवाद,

सादर,

(एम.के. गुप्ता)

समूह महाप्रबंधक(वाणिज्यिक)  
Email: nhpc-pt@nhpc.nic.in

NH/CommI./MOP/Allocation/2023/ 417

Dated: 08.06.2023

**The Under Secretary,**  
NHPC Desk,  
Ministry of Power, Govt. of India,  
Shram Shakti Bhawan,  
Rafi Marg, New Delhi-110001

**Sub: Allocation of power to states from upcoming Hydro Projects of NHPC Ltd, its JVs/Subsidiaries.**

Sir,

NHPC Limited and its JV /subsidiaries are developing following hydro projects, detailed as under,

- 1) **Lanco Teesta Hydro Power Corporation Limited (LTHPL)**, wholly owned subsidiary of NHPC is developing 500 MW Teesta-VI HE. Project in state of Sikkim.
- 2) **Jal Power Corporation Limited (JPCL)**, wholly owned subsidiary of NHPC is developing 120 MW Rangit-IV HE. Project in state of Sikkim.
- 3) **Chenab Valley Power Projects Private Limited (CVPPPL)**, is a subsidiary Company of NHPC with JKSPDCL (Jammu & Kashmir State Power Development Corporation Ltd) holding equity share of 51% and 49% respectively and it is developing 1000 MW Pakaldul HE. Project and 540 MW Kwar HE Project in UT of J&K
- 4) **Ratle Hydro Power Corporation Limited (RHPCL)** is a subsidiary company of NHPC with JKSPDCL (Jammu & Kashmir State Power Development Corporation Ltd) holding equity share of 51% and 49% respectively and it is developing 850 MW Ratle HE. Project in UT of J&K.
- 5) NHPC approached States / DISCOM(s) across the country for obtaining consent for procurement of Power by States on long term basis. After vigorous follow-up and persuasion efforts by NHPC, consent from following DISCOM/States has been received for procurement of Power from above projects till date i.e.  
Gujarat (1591 MW), Chhattisgarh (950MW), Madhya Pradesh (1020MW), Haryana (900MW), Punjab (180MW), NDMC, Delhi (150 MW), Rajasthan (In principal consent), UT of J&K (900 MW) and Maharashtra (367 MW). Details of

state wise consent against respective projects are enclosed at **Annexure A**. Copy of consent letters received from DISCOM/States is enclosed at **Annexure -B**

- 6) Further, as per clause 8.2 of supplementary Promoter Agreement signed between NHPC, JKSPDC & PDD-J&K for CVPPPL which is reproduced as under(relevant extract enclosed at **Annexure –C**):

*"The GoJK shall get 12% free Power generated from the projects. An additional 1% free power for local area development fund shall also be provided by the company. The fund shall be operated as per the guidelines issued in the hydro power policy 2008. Further, out of balance 87% power, the GoJK would have the right to purchase power from the company in proportion to the share of JKSPDC in the equity of the company at the price determined as per regulatory norms. After this the balance power will be sold by NHPC at the market price to the purchaser with first right of refusal being given to Jammu & Kashmir Power Development Department."*

J&K vide letter dated 08.03.2023 has given consent to procure 480 MW & 170.20 MW from Pakaldul & Kwar H.E. Projects respectively & it includes 12% free power & 1% LADAF. Further, exemption of free power to J&K from Pakaldul & Kwar project from COD of project shall be as per Govt. of J&K order dated 20.06.2014 and 28.12.2021 (copy enclosed at **Annexure –D**)

- 7) In respect of RHPCL, Promoter Agreement dated 13.04.2021 was signed between NHPC, JKSPDCL & Govt. of J&K through PDD. As per clause 8.2 (sharing of benefits) of Promoter Agreement reproduced as under: (Copy of relevant extract is enclosed at **Annexure- E**)

*"In accordance with the extant of National hydro Policy of the GOI, the Government of Union Territory of Jammu and Kashmir is entitled to have 12% Free power and additional 1% free power for the local Area Development (LADF), however to make the project viable government of Union Territory of Jammu and Kashmir has agreed to provide exemption for free power in a decremental manner (i.e. free power to the Government of Union Territory of Jammu and Kashmir would be 1% in the first year after Commercial Operation Date (COD) rising 1% per year to 12% in the 12<sup>th</sup> year), exemption of water cess for 10 years from Commercial Operation Date and local taxes including reimbursement of SGST during the construction period."*

Also, J&K vide letter dated 08.03.2023 has given consent to purchase 560.50 MW including 12% free power & 1% LADF from 850 MW Rattle H.E. Project.

- 8) Some states have given consent for procurement of major capacity and intimated that they will sign PPA only after approval of PPA / capacity from their respective SERC's. They are requesting for firm capacity allocation based on their consent & accordingly they will file petition in commission for approval.(Copy of HPPC, Haryana dated 01.02.2023 & 30.05.2023 enclosed at **Annexure-F** )
- 9) Present status of PPAs signed with states, who have given consent, is enclosed at **Annexure -A** .

In view of above, Ministry of Power, GOI is requested to kindly allocate the power from 500 MW Teesta-VI, 120 MW Rangit-IV, 850 MW Ratle, 1000 MW Pakaldul and 540 MW Kwar HE Projects of NHPC /its subsidiaries /JVs amongst the interested states.

Thanking You,

Yours Sincerely,

*M.K. Gupta*  
*21/09/23*  
(M.K. Gupta)  
Group General Manager (Commercial)  
Email: nhpc-pt@nhpc.nic.in

## DETAILS OF UPCOMING HYDRO PROJECTS

DESCRIPTION	TEESTA-VI	RANGIT-IV	RATLE	PAKALDUL	KWAR	TOTAL
PROJECT OWNERSHIP	LTHPL	JPCL	RHPCL	CVPPL		
INSTALLED CAPACITY (MW)	500	120	850	1000	540	3010
FREE POWER(12%)+ LADF(1%) -MW	65	16	111	130	70	391
STATUS OF PROJECT	Under Construction	Under Construction	Under Construction	Under Construction	Under Construction	
EXPECTED COMMISSIONING	Jul'25	AUG'2025	FEB'26	JUL'2025	NOV'26	
DISCOM/STATES	CONSENT (MW) RECEIVED FROM					
GUVNL, GUJARAT	429	103	377	443	239.6	1591.6
CSPDCL, CHATTISGARH	300		300	250	100	950.00
PSPCL, PUNJAB	85	20	75			180.00
HPPC, HARYANA	100	100	250	250	200	900.00
MPPMCL, MADHYA PRADESH	400	120	500			1020.00
MSEDCL, MAHARASTHRA			213	100	54	367.00
RUVNL, RAJASTHAN			In Principal consent			In Principal consent
NDMC, DELHI	50	50	50			150.00
JKPCL, J&K			560.5	480	170.2	1210.70
<b>TOTAL</b>	<b>1364</b>	<b>393</b>	<b>2325.5</b>	<b>1523</b>	<b>763.8</b>	<b>6369.30</b>
DISCOM/STATES	STATUS OF PPA					
GUVNL, GUJARAT	PPA SIGNED	PPA SIGNED	PPA SIGNED	PPA APPROVED SHALL BE SIGNED SHORTLY		
CSPDCL, CHATTISGARH	PPA SIGNED	-	PPA APPROVED SHALL BE SIGNED SHORTLY			
PSPCL, PUNJAB	PPA APPROVAL UNDER PROCESS AT STATE/DISCOM END					
HPPC, HARYANA	PPA APPROVED, HOWEVER, HPCC IS REQUESTING FOR ALLOCATION OF POWER BEFORE SIGNING.*					
MPPMCL, MADHYA PRADESH	PPA APPROVAL UNDER PROCESS AT STATE/DISCOM END					
MSEDCL, MAHARASTHRA			PPA APPROVAL UNDER PROCESS AT STATE/DISCOM END			
RUVNL, RAJASTHAN			PPA APPROVED SHALL BE SIGNED SHORTLY			
NDMC, DELHI	PPA APPROVAL UNDER PROCESS AT STATE/DISCOM END					

\* HPCC, Haryana has intimated that they shall sign PPA after obtaining approval of their SERC and for filing of petition in SERC they want firm capacity allocation.



**Mamta Verma, IAS**  
Principal Secretary



Government of Gujarat

Energy & Petrochemicals Department  
Government of Gujarat  
Sachivalaya, Gandhinagar-382010

To,  
**Shri Alok Kumar, I.A.S.**  
Secretary (Power)  
Ministry of Power, Govt. of India,  
Shram Shakti Bhavan,  
Rafi Marg, New Delhi- 110001

22 JUN 2022

Respected Sir,

**Sub: Allocation of power to GUVNL from various upcoming Hydro Projects offered by NHPC.**

This is in reference to the offers received from NHPC vide letters dated 18.02.2022, 27.12.2021 and 7.10.2021 for supply of power to Gujarat Urja Vikas Nigam Ltd. (GUVNL) from various upcoming Hydro Electric (HE) Projects and requesting GUVNL to give its consent for procurement of power from the offered projects.

In order to meet the demand of consumers in Gujarat State and to optimize the power purchase cost of State Distribution companies, Gujarat Urja Vikas Nigam Ltd. (GUVNL), Vadodara is willing to off take power from upcoming Hydro Electric (HE) Projects.

In this regard, GUVNL has conveyed its consent for the in-principle approval for procurement of power from following upcoming projects of NHPC for life of the project i.e. 35/40 years at the tariff including terms and conditions as decided by CERC from time to time.

Sr. No	NHPC Projects	Installed Capacity (MW)	Expected COD	Capacity proposed(MW)
1	Teesta- VI	500	Mar-24	429*
2	Ratle	850	Feb-26	377
3	Rangit IV	120	May-24	103*
4	Dibang Multipurpose	2880	2031	500
	Total			1409

\*Capacity proposed after excluding free power & LADF % to home state and Auxiliary Power Consumption

In view of above, Ministry of Power, Govt. of India is requested to allocate above power of 1409 MW to Gujarat/GUVNL from upcoming projects of NHPC for life of the project i.e. 35 /40 years, at the tariff determined by CERC from time to time subject to grant of open access by Central transmission Utility.

Further, this in-principle approval shall be subject to commissioning of projects in reasonable time period including delay from expected Commercial Operation Date. In case of severe Cost overrun/ Time overrun, GUVNL shall reserve its right for not to tie up power from the above project(s).

With regards,

ISSUED  
ON 22 JUN 2022

Yours sincerely,

(Mamta Verma)

**Mamta Verma, IAS**  
Principal Secretary



No. EPCD/POP/e-file/20/2023/0083/K Section

**Energy & Petrochemicals Department**  
Government of Gujarat  
Sachivalaya, Gandhinagar-382010

Government of Gujarat

Date: **23 JAN 2023**

To,  
**Shri Alok Kumar, I.A.S.**  
The Secretary (Power)  
Ministry of Power,  
Shram Shakti Bhavan,  
Rafi Marg,  
New Delhi 110 001

*Handwritten notes:*  
Secty (P) PE Pwr  
ASL/H  
JS(M) - 31.1.23  
Dir (H&T) 31.1.23  
20 (W/P) 31.1.23  
Open to Public So Govt to be advised

**Sub: Allocation of power to GUVNL from upcoming Pakaldul and Kwar Hydro Projects offered by NHPC,**

Respected Sir,

This is with reference to the offer received from NHPC vide letter dated 05.09.2022 for supply of power to Gujarat Urja Vikas Nigam Ltd.(GUVNL) from upcoming Pakaldul & Kwar Hydro Electric (HE) Projects and requested GUVNL to give its consent for procurement of power from the offered projects.

In order to meet the demand of consumers in Gujarat State and to optimize the power purchase cost of State Distribution companies, Gujarat Urja Vikas Nigam Ltd. (GUVNL), Vadodara is willing to off take power from upcoming Pakaldul & Kwar Hydro Electric (HE) Projects.

In this regard, GUVNL has conveyed its consent for the in-principle approval for procurement of power from following upcoming Pakaldul & Kwar Hydro Electric (HE) projects of NHPC for life of the project i.e.35/40 years, at the tariff including terms and conditions as decided by CERC from time to time.

Sr. No	NHPC Projects	Installed Capacity (MW)	Expected COD	Capacity proposed (MW)
1	Pakaldul	1000	July-25	443.70
2	Kwar	540	Nov-26	239.60
	<b>Total</b>	<b>1540</b>		<b>683.30</b>

\*Capacity proposed after excluding free power & LADF % to home state and Auxiliary Power Consumption.

In view of above, Ministry of Power, Govt. of India is requested to allocate of above power of 683.30MW to Gujarat/GUVNL from upcoming Pakaldul & Kwar Hydro Electric (HE) projects of NHPC for life of the project i.e.35/40 years, at the tariff including terms and conditions as decided by CERC from time to time subject to connectivity of the projects directly with ISTS network and the grant of the Open Access by Central Transmission Utility (CTU).

With regards,

Yours faithfully,

*(Signature)*  
(Mamta Verma)

Block No. 5, 5<sup>th</sup> Floor, New Sachivalaya, Gandhinagar-382010.

Phone : (O) 079-23250771, Fax : 079-23250797, E-mail : secepd@gujarat.gov.in

Old Secy (P)  
By No 576555  
Date 31/01/23

78 H&T (H&T)  
01/02/2023



CHHATTISGARH STATE POWER DISTRIBUTION CO. LTD.  
(A Government of Chhattisgarh Undertaking) (A Successor Company of CSEB)  
CIN-U40100GT2003GOC015822  
OFFICE OF EXECUTIVE DIRECTOR (RA & PM) CSPDCL, RAIPUR  
PHONE No. (91) 771 2524441 FAX No. (91) 771 2574442

Website: www.cspdcl.co.in

E-mail ID: cocomeseh@rediff.com

No. 02-02/SE-I/Hydel/ 1976

Raipur, Date 13.11.2021

To,

The General Manager (Comml.)  
NHPC Limited,  
NHPC Office Complex, Sector-33,  
Faridabad - 121 003, Haryana.

Sub: Consent for procurement of power from upcoming Hydro Power Projects of NHPC namely 500 MW Teesta-VI HE Project.

Ref: 1) Your office letter No. NH/Comml./New Project/2021/1149 dated 07.10.2021.

Sir,


This has reference to your office letter cited as above vide which it has been requested to convey consent for procurement of power from upcoming Hydro Power Projects of NHPC namely 500 MW Teesta-VI & 120 MW Rangit-IV HE Projects through long term PPA basis.

On the subject matter, it is to convey that competent authority of Chhattisgarh State Power Distribution Co. Ltd. has "in Principle" agreed to procure a quantum of 300 MW hydro power from Teesta-VI project.

It is requested to advise further needful in the matter.

Thanking You.

Yours faithfully,

  
Executive Director (RA & PM)  
CSPDCL, Raipur

Copy to:-

- 1) The Special Secretary, Energy Department, Govt. of Chhattisgarh, Mantralaya, Mahanadi Bhawan, Nava Raipur, Abal Nagar.



CHHATTISGARH STATE POWER DISTRIBUTION CO.LTD.  
(A Government of Chhattisgarh Undertaking) (A Successor Company of CSEB)  
CIN-U40108CT2003SGC015822  
OFFICE OF EXECUTIVE DIRECTOR (RA & PM) CSPDCL, RAIPUR  
PHONE No. (0771)-2574441 FAX No.(0771)- 2574442

Website: www.cspdcl.co.in

E-mail ID: cecomcseb@radiff.com

No.02-02/SE-I/NHPC/Hydel/ 105

Raipur, Date | 8-04-2022

To,

The General Manager (Comml.)  
Commercial Division,  
NHPC Limited,  
NHPC Office Complex, Sector-33,  
Faridabad – 121 003, Haryana.

**Sub: - Consent for procurement of power from upcoming 850 MW Rattle HE Project developed by Rattle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC).**

Ref: - 1) Your office letter No. NH/Comml./new project/Rattle/2022/146 dated 18.02.2022.

Sir,

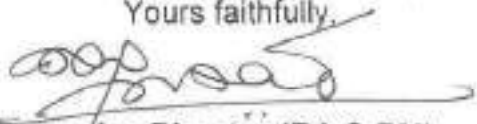
This has reference to your office letter cited as above vide which it has been requested to convey consent for procurement of power from upcoming 850 MW Rattle HE Project developed by Rattle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC) through long term PPA basis.

On the subject matter, it is to convey that competent authority of Chhattisgarh State Power Distribution Co. Ltd. has "In Principle" agreed to procure a quantum of 300 MW hydro power from upcoming 850 MW Rattle HE Project developed by Rattle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC).

It is requested to ensure further needful in the matter.

Thanking You,

Yours faithfully,

  
Executive Director (RA & PM)  
CSPDCL, Raipur



**CHHATTISGARH STATE POWER DISTRIBUTION CO.LTD.**  
(A Government of Chhattisgarh Undertaking) (A Successor Company of CSEB)  
CIN-U40108CT2003SGC016822

OFFICE OF EXECUTIVE DIRECTOR (RA & PM) CSPDCL, RAIPUR  
PHONE No. (0771)-2574441 FAX No.(0771)- 2574442

Website: www.cspdcl.co.in

E-mail ID: cecomscb@rediff.com

No.02-02/SE-I/NHPC/Hydel/ 2017

Raipur, Date 01/12/2022

To,

✓ The General Manager (Comml.)  
Commercial Division,  
NHPC Limited,  
NHPC Office Complex, Sector-33,  
Faridabad - 121 003, Haryana.

Sub: - Consent for procurement of power from upcoming 1000 MW Pakaldul HEP & 540 MW Kwar HEP located in UT of J&K being developed by CVPPPL (JV of NHPC Ltd.)

Ref: - 1) Your office letter No. NH/Comml./CVPPPL/2022/1058 dated 05.09.2022

Sir,


This has reference to your office letter cited as above vide which it has been requested to convey consent for procurement of power from upcoming 1000 MW Pakaldul HEP & 540 MW Kwar HEP located in UT of J&K being developed by CVPPPL (Joint Venture of NHPC Limited & JKSPDC) through long term PPA basis.


On the subject matter, it is to convey that competent authority of Chhattisgarh State Power Distribution Co. Ltd. has "In Principle" agreed to procure a quantum of 250 MW hydro power from upcoming 1000 MW Pakaldul HE Project and 100 MW from upcoming 540 MW Kwar HE Project being developed by CVPPPL (Joint Venture of NHPC Limited & JKSPDC).

It is requested to ensure further needful in the matter.

Thanking You,

Yours faithfully,

  
Executive Director (RA & PM)  
CSPDCL, Raipur

  
GSM (T)

15/12/22



## Punjab State Power Corporation Limited

(Regd Office: PSEB Head Office, The Mall, Patiala-147001 Punjab, India. Website: [www.pspcl.in](http://www.pspcl.in))  
Corporate Identity Number (CIN): U40109PB2010SGC033813. GSTIN: 03AAFCP5120Q1ZC

Office of the Engineer-in-Chief/ PP&R,  
D-3 Shed, Shakti Vihar, PSPCL, Patiala- 147001 (Punjab)  
Tel No. 0175-2970894, E-mail: [ce-ppr@pspcl.in](mailto:ce-ppr@pspcl.in), [cepprpspcl@gmail.com](mailto:cepprpspcl@gmail.com)

To

The General Manager (Commercial), e-mail: [nhpcbilling@nhpc.nic.in](mailto:nhpcbilling@nhpc.nic.in)  
Commercial Division, [nhpc-pt@nhpc.nic.in](mailto:nhpc-pt@nhpc.nic.in)  
NHPC Office Complex,  
Sector-33, Faridabad-121003,  
Haryana.

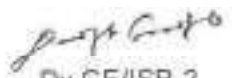
Memo No. 340/61 /ISB- 221 A vol-IV Dated: 20.02.2023

Subject: Consent for purchase of power from Teesta-VI, Rangit-IV and Ratle HEP.

Ref: PSPCL letter no. 1560 dated 16.09.2022 in response to M/s NHPC letters dated 07.10.2021, 18.02.2022 and 02.06.2022 in the matter of proposals of power procurement from Teesta-VI & Rangit-IV and Ratle HEP respectively.

In continuation to the PSPCL's letter no. 1560 dated 16.09.2022 (copy enclosed), regarding allocation of power to PSPCL, it is intimated that the quantum of power from subject cited 3 no. HEPs be limited upto 15%-20% (max.) of installed capacity after deduction of free share of home state.

This issues with approval of the competent authority.

  
Dy. CE/ISB-2  
PSPCL, Patiala

CC:

1. EIC/PP&R for information please.



**PUNJAB STATE POWER CORPORATION LIMITED**

(CE/PP&R (Dy.CE/ISB-2 T-1 A, Shed Thermal Complex) PSPCL, PATIALA)

Email: [seisb2pspcl@gmail.com](mailto:seisb2pspcl@gmail.com)

To

✓ The General Manager (Commercial),  
Commercial Division,  
NHPC Office Complex,  
Sector-33, Faridabad-121003,  
Haryana.

e-mail: [nhpcbiling@nhpc.nic.in](mailto:nhpcbiling@nhpc.nic.in)  
[nhpc-pt@nhpc.nic.in](mailto:nhpc-pt@nhpc.nic.in)

Memo No. 15606/ISB- 221 A vol-iv

Dated: 18/9/22

**Subject: Consent for purchase of power from Teesta-VI, Rangit-IV and Ratle HEP.**

**Ref: NHPC letters dated 07.10.2021, 18.02.2022 and 02.06.2022 regarding proposals of power procurement from Teesta-VI & Rangit-IV and Ratle HEP respectively.**

PSPCL hereby consents to procure power from the following upcoming HEPs of NHPC at the indicative tariff mentioned by NHPC:

Projects	Levelised Tariff (Rs./kwh)
Teesta-VI	4.07
Rangit-IV	4.37
Ratle	3.92

However, PSPCL reserves the right to review its consent afresh in case, the tariff offered now, exceeds at a later date. Accordingly, NHPC shall seek fresh consent from PSPCL, at an appropriate time.

This issues with approval of the competent authority.

  
Dy.CE/ISB-2  
PSPCL, Patiala

CC:

1. EIC/PP&R for information please.

HARYANA POWER PURCHASE CENTRE  
UHBVN Head Office, Sector-14, Panchkula  
Ph. No. 0172-2583728  
E-mail: [cehppc@uhbvn.org.in](mailto:cehppc@uhbvn.org.in)

From

Chief Engineer  
HPPC, Panchkula

To

General Manager (Comm.)  
NHPC Office Complex,  
Sector-33, Faridabad  
Haryana- 121003

Memo No. Ch-63/CE/HPPC/SE/C&R-I/PPA-121

Dated: 14.11.2022


**Subject:** Consent for procurement of power from 500 MW Teesta-VI HEP, 120 MW Rangit-IV HEP, 2880 MW Dibang HEP, 850 MW Rattle HEP and 500 MW Dugar HEP

Please refer your office memo No. NH/Comm./new projects/2022/613-14 dated 02.06.2022 vide which consent of Haryana for procurement of Hydro Power from subject cited Hydro Electric Projects was sought.

In this regard, we hereby give our consent for procurement of 100 MW of power from Teesta-VI HEP, 100 MW of power from Rangit-IV HEP, 400 MW of power from Dibang HEP, 250 MW of power from Rattle HEP and 100 MW of power from Dugar HEP.

It may please be noted that the above consent is subject to the source approval of Haryana Electricity Regulatory Commission (HERC) which shall be taken after the allocation of quantum by Ministry of Power, Govt. of India.

This is for your kind information and necessary action please.

  
14/11/22  
Chief Engineer,  
HPPC, Panchkula

CC:

- 1.SPS to MD/UHBVN, Panchkula for kind information of MD/UHBVN, please.
- 2.SPS to Director/Finance, Panchkula for kind information of Director/Finance, please.

HARYANA POWER PURCHASE CENTRE  
UHBVN Head Office, Sector-14, Panchkula  
Ph. No. 0172-2583728  
E-mail: [cehppc@uhbvn.org.in](mailto:cehppc@uhbvn.org.in)

From

Chief Engineer  
HPPC, Panchkula

To

General Manager (Comm.)  
NHPC Office Complex,  
Sector-33, Faridabad  
Haryana- 121003

Memo No. Ch-64/CE/HPPC/SE/C&R-I/PPA-121

Dated: 14.11.2022

**Subject:** Consent for procurement of power from 1000 MW Pakaldul HEP and 540 MW Kwar HEP

Please refer your office memo No. NH/Comm./CVPPPL/2022/1044 dated 05.09.2022 vide which consent of Haryana for procurement of Hydro Power from subject cited Hydro Electric Projects was sought.

In this regard, we hereby give our consent for procurement of 250 MW of power from Pakaldul HEP and 200 MW of power from Kwar HEP.

It may please be noted that the above consent is subject to the source approval of Haryana Electricity Regulatory Commission (HERC) which shall be taken after the allocation of quantum by Ministry of Power, Govt. of India.

This is for your kind information and necessary action please.

  
14/11/22  
Chief Engineer,  
HPPC, Panchkula

CC:

1. SPS to MD/UHBVN, Panchkula for kind information of MD/UHBVN, please.
2. SPS to Director/Finance, Panchkula for kind information of Director/Finance, please.
3. SPS to MD/CVPPPL for kind information of MD/CVPPPL, please.



# M.P. POWER MANAGEMENT COMPANY LIMITED

CIN: U40109MP2006SGC018637 (A Government of M.P. Undertaking)  
Regional Office, MPPMCL, "Prakash Bhawan", E-4 Arera Colony, Near Bhojpur Club,  
Bhopal-462016, Ph. 0755-2423044, 2423046 (fax), 4056770

No. 05-01-MPPMCL/RO/Dir (Com)/ 246

Bhopal, dated. 01-08-2022

To,

Mr. Omkar Yadav,  
General Manager (Comml),  
Commercial Division, NHPC Limited,  
NHPC Office Complex, Sector-33, Faridabad,  
121 003- Haryana

Mail- nhpc-pt@nhpc.nic.in

Sub: - Consent for procurement from upcoming Projects of NHPC reg.


Dear Sir,

1. This has reference to your letter no. NH/Comml./New Project/610 dated 02.06.2022 vide which consent for procurement of Hydro Power from upcoming Teesta VI, Rangit IV, Ratle, Dibang MPP and Dugar projects of NHPC has been sought.
2. We have examined the details of the projects given in your said letter dated 02.06.2022 and we are pleased to convey in principle approval for procurement of certain quantum of power from various projects of NHPC subject to confirmation by Board of Directors and approval by MP Electricity Regulatory Commission as under:-

Description	Teesta VI	Rangit IV	Ratle
State/UT	Sikkim	Sikkim	UT of J&K
Installed Capacity (MW)	500	120	850
Design Energy (MU)	2400	507.88	3136.77
Peaking Capacity	2.3 Hrs.	3.0 Hrs.	1.96 Hrs.
Expected Commissioning	March'2024	May'2024	Feb'2026
Levelised Tariff (Rs./kWh)	4.07	4.37	3.92
Status of Project	Under Construction	Under Construction	Under Construction
In-principle consent of MPPMCL for procurement of power	400 MW	120 MW	500 MW

Thanking you,

Yours Sincerely

  
(Rajeev Baskar)  
Director (Commercial)



महाराष्ट्र राज्य वितरण

**MAHAVITARAN**

Maharashtra State Electricity Distribution Co. Ltd.  
(A Government of Maharashtra Undertaking)  
(CIN: U40109MH2005SGC153645)

**DR. MURHARI KELE**  
Director (Commercial)

Ref. No.: MSEDCL/CE/PP/ 026085

Date: 3 OCT 2022

To,  
The General Manager (Comml.),  
Commercial Division,  
NHPC Limited,  
NHPC office Complex, Sector – 33,  
Faidabad – 121 003, Haryana.

**Subject:** Consent for Procurement of Power from 1000 MW Pakaldul HEP & 540 MW Kwar HEP located in UT of J&K being developed by CVPPPL (JV of NHPC Ltd.).

**Reference:** 1) NH/Comml./CVPPPL/2022/1099 dated 13.09.2022  
2) MSEDCL/CE/PP/23373 dated 7.09.2022  
3) NH/Comml./CVPPPL/2022/1063 dated 5.09.2022

MSEDCL is in receipt of the NHPC's letters under reference requesting MSEDCL's consent for procurement of power from 1000 MW Pakaldul HEP & 540 MW Kwar HEP located in UT of J&K being developed by CVPPPL (JV of NHPC Ltd.).

- In this regards, it is to intimate that MSEDCL is interested in procurement of
- 1) 100 MW (10%) power from 1000 MW Pakaldul HEP at the intimated levellised tariff of Rs. 4.28 per unit and
  - 2) 54 MW (10%) power from 540 MW Kwar HEP at the intimated levellised tariff of Rs. 4.44 per unit.

Thanking you.

  
Director (Commercial)  
MSEDCL

**Copy s.w.rs. to:**

Chairman & Managing Director, MSEDCL, CO, Mumbai

**Copy to:**

The Chief Engineer (Power Purchase), MSEDCL, Prakashgad, Mumbai

**Maharashtra State Electricity Distribution Co. Ltd.**

Office of the Director (Commercial)

Prakashgad, 6th Floor, Station Road, Bandra (E), Mumbai-400 051. Tel.: (P) 26476743 (O) : 26474211 Extn.: 2066  
Email: directorcomm@mahadiscom.in / directorcomm@sedcl@gmail.com • Website : www.mahadiscom.in



महाराष्ट्र राज्य वितरण



MAHAVITARAN  
Maharashtra State Electricity Distribution Co. Ltd.  
(A Government of Maharashtra Undertaking)  
(CIN: U40109MH2005SGC153645)

DR. MURHARI KELE  
Director (Commercial)

Ref. No.:Dir-Comm/PP/NHPC/021404

Date: 12<sup>th</sup> Aug. 2022

To,  
The General Manager (Comm.),  
Commercial Division, NHPC Limited,  
NHPC office Complex, Sector - 33,  
Faidabad - 121 003, Haryana.

**Subject:** Consent for Procurement of Power from upcoming Hydro Projects viz. (1) 850 MW Ratle HE Project developed by Ratle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC) (2) 500 MW Dugar HE Project, Himachal Pradesh of NHPC (3) 2880 MW Dibang Multipurpose Project of NHPC.

**Reference:** 1) NH/CommL/new project/Dugar/2022/573 dated 27.05.2022  
2) MSEDCL/CE/PP/12567 dated 23.05.2022  
3) NH/CommL/Dugar/2022/419 dated 29.04.2022  
4) NH/CommL/new project/Ratle/2022/322 dated 30.03.2022  
5) MSEDCL/CE/PP/6484 dated 16.03.2022  
6) NH/CommL/new project/Ratle/2022/151 dated 18.02.2022  
7) NH/CommL/new project/Dibang MPP/2021/1466 dated 30.12.2021  
8) MSEDCL/CE/PP/31458 dated 28.12.2021  
9) NH/CommL/new project/Dibang MPP/2021/1448 dated 27.12.2021


Sir,

MSEDCL is in receipt of a NHPC's letters under reference requesting consent for procurement of power through Long Term PPA basis from upcoming Hydro Projects of NHPC viz. (1) 850 MW Ratle HE Project developed by Ratle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC) (2) 500 MW Dugar HE Project, Himachal Pradesh of NHPC (3) 2880 MW Dibang Multipurpose Project of NHPC.

In this regards, it is to inform that MSEDCL is interested in procurement of :

- 1) 213 MW (25%) power from 850 MW Ratle Hydroelectric Project at the intimated levellised tariff of Rs. 3.92 per unit,
- 2) 50 MW (10%) power from 500 MW Dugar HE Project at the intimated levellised tariff of Rs. 4.46 per unit and
- 3) 288 MW (10%) power from 2880 MW Dibang Multipurpose Project at the intimated levellised tariff of Rs. 4.73 per unit.

Thanking you.

  
Director (Commercial), MSEDCL

Copy s.w.rs to:-

Chairman & Managing Director, MSEDCL, Mumbai

Maharashtra State Electricity Distribution Co. Ltd.

Office of the Director (Commercial)

'Prakashgad' 5th Floor, Station Road, Bandra (E), Mumbai-400 051. Tel.: (P) 26476743 (O) : 26474211 Extn.: 2666  
Email: directorcomm@mahadiscom.in / directorcomm@sedcl@gmail.com • Website : www.mahadiscom.in



## RAJASTHAN URJA VIKAS NIGAM LIMITED

(A Government of Rajasthan Undertaking)

Corporate Identity Number (CIN) - U40104RJ2015SGC048738

Regd. Office - Vidyut Bhawan, Janpath, Jyoti Nagar, Jaipur-302005

Work Office at: Shed No. 5/4, Vidyut Bhawan, Janpath, Jaipur-302005

E-mail: ce.ruvnl@rajasthan.gov.in; Website: www.energy.rajasthan.gov.in/ruvnl

No. CE/RUVNL/F./D.

121

Jaipur, Dated: 30/05/22

General Manager ( Comml.)  
Commercial Division, NHPC  
NHPC complex, Sector-33,  
Faridabad, Haryana-121003

Subject: Consent for procurement of Power from upcoming 850 MW Ratle HE project.

Ref.: Letter no. NH/ Comml./ new project/ Ratle/ 2022/ 136 dated 18.02.2022

Sir,

In reference to above cited subject and your letter under reference, Rajasthan Urja Vikas Nigam Limited on behalf of Rajasthan Discoms conveys its consent for procurement of power on long term basis from upcoming 850 MW Ratle hydroelectric project developed by Ratle Hydroelectric Power Corporation Limited at a tariff determined by CERC.

(M.C. Bansal)

Chief Engineer, RUVNL

Copy submitted to the following for information please:

1. Managing Director JVVNL/ AVVNL/ JdVVNL, Jaipur/Ajmer/ Jodhpur
2. The Director (PT/ Finance), RUVNL, Jaipur
3. TA to CMD, RUVNL, Jaipur
4. Superintending Engineer( PP/ Billing), RUVNL, Jaipur
5. O/c, M/f

Chief Engineer



OFFICE OF THE DIRECTOR (POWER)  
NEW DELHI MUNICIPAL COUNCIL  
PALIKA KENDRA - NEW DELHI

No. D-65/EE(SLD) 2022

Date: 28-12-2022

Sh. Onkar Yadav,  
General Manager(Comml.)  
NHPC Office Complex  
Sector-33 Faridabad-121003,  
Haryana

**Sub: Consent for procurement of 150MW Hydro Power for a period of 25 years from upcoming Hydro Projects of NHPC.**

Sir,

With reference to your letter No. NH/Comml/Now Project/2021/1137 dated 07.10.2021 followed by letter No. NH/Comml/CVPPPL/2022/1045 dated 05.09.2022 & the list of upcoming projects of NHPC shared during the meeting held in the chamber of Director (Power) NDMC on dated 11.11.2022 the undersigned is directed to convey the 'in principle approval' of the Competent Authority of NDMC for providing the consent for procurement of 150MW Hydro Power for a period of 25 years from upcoming Hydro Projects of NHPC as per the order of preference given below.

DESCRIPTION	HATLE (Preference-I)	YEESTA VI (Preference-II)	RANGIT IV (Preference-III)
INSTALLED CAPACITY (MW)	850	500	120
PROJECT OWNERSHIP	RHPCL (Joint Venture of NHPC Limited & JKSPDC)	LTHPL (wholly owned subsidiary of NHPC)	JPCL (wholly owned subsidiary of NHPC)
LEVELLISED TARIFF with the quantum to be allocated (RS/KWH)	3.92	4.07	4.37
EXPECTED COMMISSIONING	Feb 2026	July 2025	August 2024

The Power Purchase Agreement (PPA) will be signed after approval of Delhi Electricity Regulatory Commission and NDMC-Council.

Thanking you,

Signed by R P Sati  
Date: 27-12-2022 16:32:03  
Dir (Power) (IC)  
NDMC



**OFFICE OF THE CHIEF ENGINEER (TRADING),  
JAMMU AND KASHMIR POWER CORPORATION LIMITED**  
Regd. Office :- SLDC Building Gladni Grid Complex Jammu/  
PDD Complex Bemina Srinagar.  
Email :- cejkpcl@gmail.com

General Manager (Planning),  
CVPPPL.

No. CE/JKPCL/J/T-CVPPPL/ 2722-24

Dated:- 08.03.2023

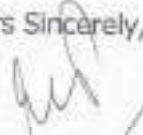
Subject: Power Purchase Agreements in respect of Pakal Dul & Kwar HEPs.

Dear Sir,

In continuation to this office comm. no. CE/JKPCL/J/T-CVPPPL/2711-13 dated: 06.03.2023, it is to intimate that the quantum of power @ 350 MW from Pakal Dul and @100 MW from Kwar HEP as approved by Finance Department, UT of J&K is exclusive of 13% (12% free power + 1% LADF) royalty power to the UT, details thereof are tabulated as under:

SNo.	Name of Power Station	Installed capacity (MW)	13% royalty power to the UT of J&K (@12% free power + 1% for LADF)	Quantum consented for procurement (MW)	Total quantum (MW)
1.	Pakal Dul	1000	130	350	480
2.	Kwar	540	70.2	100	170.2

Yours Sincerely,

  
Chief Engineer (Trading),  
JK Power Corporation Limited,  
Jammu.

Copy to the :-

1. Principal Secretary to Govt., JKPDD for information.
2. Managing Director, JKPCL for information.



**OFFICE OF THE CHIEF ENGINEER (TRADING),  
JAMMU AND KASHMIR POWER CORPORATION LIMITED**  
Regd. Office :- SLDC Building Gladni Grid Complex Jammu/  
PDD Complex Bemina Srinagar.  
Email :- cejkpcl@gmail.com

CEO,  
RHPCL.

No. CE/JKPC/L/J/T-Ratle/ 2719-21

Dated:- 08.03.2023

Subject: Turnkey execution of 850 MW Ratle HE Project-Execution of Power Purchase Agreement (PPA) Regarding.

Dear Sir,

In continuation to this office comm. no. CE/JKPC/L/J/T-Ratle/2716-18 dated: 06.03.2023, it is to intimate that the quantum of power @ 450 MW from Ratle as approved by Finance Department, UT of J&K is exclusive of 13% (12% free power +1% LADF) royalty power to the UT, details thereof are tabulated as under :-

SNo.	Name of Power Station	Installed capacity (MW)	13% royalty power to the UT of J&K (@12% free power + 1% for LADF)	Quantum consented for procurement (MW)	Total quantum (MW)
1.	Ratle	850	110.5	450	560.5

Yours Sincerely,

  
Chief Engineer (Trading),  
JK Power Corporation Limited,  
Jammu.

Copy to the :-

1. Principal Secretary to Govt., JKPDD for information.
2. Managing Director, JKPC/L for information.



सत्यमेव जयते

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Government of Jammu and Kashmir

e-Stamp

Certificate No.	: IN-JK91606411425351U
Certificate Issued Date	: 15-Nov-2022 03:57 PM
Account Reference	: NEWIMPACC (SVY/JK12599104/ RAIL HEAD COMPLEX JAMMU/ JK-JM
Unique Doc. Reference	: SUBIN-JKJK1259910477118557088305U
Purchased by	: PADHIYAR ANISH H
Description of Document	: Article 5 Agreement or Memorandum of an Agreement
Property Description	: SUPPLEMENTARY PROMOTERS AGREEMENT OF CHENAB VALLEY POWER PROJECTS PRIVATE LIMITED (CVPPPL)
Consideration Price (Rs.)	: 0 (Zero)
First Party	: JKSPDC AND JKPCDD
Second Party	: NHPC LIMITED FARIDABAD
Stamp Duty Paid By	: JKSPDC AND JKPCDD
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)



SANJEEV KUMAR  
STAMP VENDOR  
License No. 458  
Rail Head Complex, Jammu

Please write or type below this line

**SUPPLEMENTARY PROMOTERS AGREEMENT**

0029022035

1 of 21

**Statutory Alert:**

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## SUPPLEMENTARY PROMOTERS AGREEMENT

This Agreement made on this 21<sup>st</sup> day of Nov 22 among the Lt. Governor of Jammu and Kashmir through Principal Secretary to Government, Power Development Department, Govt. of Jammu & Kashmir (hereinafter referred to as 'GOJK') which expression shall unless repugnant to the context or meaning thereof includes its successors, authorized representatives and permitted assigns of the First Part.

And

Jammu and Kashmir State Power Development Corporation Limited (CIN - U40101JK1995SGC001418) (hereinafter referred to as 'JKSPDC'), a company incorporated under the Companies Act, 1956 having its registered Office at Exhibition Ground, Srinagar-190009 through its Managing Director, which expression shall unless repugnant to the context or meaning thereof includes its successors, authorized representatives and permitted assigns of the Second part.

And

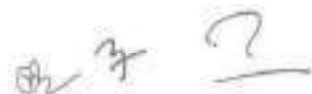
NHPC Limited (CIN - L40101HR1975GOI032564), a company incorporated under provisions of the Companies Act, 1956 having its Registered Office at NHPC Office Complex, Sector 33, Faridabad, 121003 (Haryana) (hereinafter referred to as "NHPC") through its Chairman and Managing Director, which expression shall unless repugnant to the context or meaning thereof includes its successors, authorized representatives and permitted assigns of the Third part

NHPC and JKSPDC shall in this agreement be individually referred to as 'party' and collectively as 'parties'. Whereas GOJK shall be referred to as 'confirming party'

Whereas, the Government of Jammu and Kashmir is committed to harness the hydroelectric potential of Pakal Dul (1000 MW), Kiru (624 MW), Kwar (540 MW), and Kirthal II (930 MW) hydroelectric projects with installed capacity of about 3094 MW in the Chenab River Basin in accordance with the provisions of Indus Waters Treaty and whereas the Ministry of Power, Government of India is keen to add new power generation capacity with a view to meet the gap between demand and supply in the country.

Whereas, the GoJK, JKSPDC, NHPC, and PTC have signed a Memorandum of Understanding (MoU) on 10th October, 2008, a copy of which is appended as Appendix- A.

Whereas, the parties had affirmed their joint commitment to manage and complete Pakal Dul and two other Hydroelectric Projects with aggregate installed capacity of



## SECTION -7

### 7.0 OBLIGATION OF PARTIES

- 7.1 The parties shall assist the Company by providing managerial, legal, commercial and technical support on mutually agreed consideration.
- 7.2 The Company shall not compete with either of the Parties, without the prior written consent of the Parties, as the case may be, in their respective areas of business activities. Such consent shall be granted at the sole discretion of the respective Parties, whose decision shall be final.
- 7.3 The lease hold rights of the land required for the Projects, against payment and land revenue as fixed by UT Government, shall be granted initially for a period of 40 years in accordance with UT laws. On expiry of that period, the lease shall be renewed for a further term not exceeding 40 years at a time subject to Maximum period of 90 years.
- 7.4 Each party agrees to keep in confidence and to use the same degree of care as it uses with respect to its own proprietary data to prevent disclosure to third parties of all technical information, data and confidential business information (hereinafter referred to as "Data"). Exchange, use and maintaining confidentiality of Data shall be mutually discussed and agreed to by the parties.

## SECTION-8

### 8.0 SHARING OF BENEFITS

- 8.1 The benefits of Joint Venture shall be shared by respective parties in proportion to their actual contribution in share holding of Company.
- 8.2 The GoJK shall get 12% free power generated from the Projects. An additional 1% free power for local area development fund shall also be provided by the Company. The fund shall be operated as per the guidelines issued in the Hydro Power Policy 2008. Further, out of balance 87% power, the GoJK would have the right to purchase power from the Company in proportion to the share of JKSPDC in the equity of the Company at the price determined as per regulatory norms. After this, the balance power will be sold by NHPC at the market price to the purchaser with the first right of refusal being given to Jammu & Kashmir Power Development Department.

## SECTION-9

### 9.0 RIGHTS AND OBLIGATIONS OF THE GOVERNMENT OF JAMMU & KASHMIR AND OF THE COMPANY

- 9.1 Revenue receipts on account of sale of timber, royalty on river bed materials etc. arising as a result of the submergence of areas by the Projects shall accrue to GoJK.

No.10/1/2008-NHP (Vol.V)  
Government of India  
Ministry of Power

SECRET



Government of Jammu and Kashmir  
Power Development Department

Subject:- Implementation of 1000 MW Pakal Dul HEP- providing of concessions thereof.

Reference:- Cabinet Decision No. 114/09/2014 dated 19.06.2014

Government Order No. 130-PDD of 2014  
Dated. 20.06.2014

Sanction is hereby accorded to that:

- i. Exemption from WCT/entry tax and waiver of 12% free power as well as water user charges for a period of 10 years from the completion of the project in respect of 1000 MW Pakal Dul HEP.
- ii. Purchase of 49% of power from the Pakal Dul HEP.

By order of the Government of Jammu and Kashmir

Sd/  
(A. K. Mehta) IAS  
Principal Secretary to Government  
Power Development Department

No. PAD/IV/34/2008

Dated. 20.06.2014

Copy to the

1. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, New Delhi.
2. Principal Secretary to Government, Planning & Dev. Department.
3. Principal Secretary to Govt. Finance Department.
4. Principal Secretary to Hon'ble Chief Minister.
5. Chairman, Chenab Valley Power Projects Public Limited, Jammu.
6. CMD, National Hydroelectric Power Corporation, NHPC Office Complex Section 33, Faridabad 121003
7. Secretary to Government, General Administration Department.
8. Managing Director, J&K SPDC, Srinagar.
9. Secretary to Government, Law Department.

(4)

**GOVERNMENT OF JAMMU & KASHMIR**  
**Power Development Department,**  
**Civil Secretariat, Jammu.**

**Subject:** Implementation of 540 MW Kwar HE Project-Consent to the PIB Memo thereof; reg.  
**Ref:** Administrative Council Decision No. 140/16/2021 dated 15.12.2021.

**Government Order No: 208 -JK (PDD) of 2021.**

**Dated: 28 - 12 - 2021.**

Sanction is hereby accorded to the partial modification of Government Order No 172-PDD of 2020 dated 11-11-2020 issued under endorsement No. PDD/IV/61/2008-I dated:11.11.2020 as under:-

1. Para -A (i) is replaced by the following formulation

A. For 540 MW Kwar HEP :-

i) Exemption of free power in a decremental manner from the COD of the project upto 5th year. The exemption of free power will be 10% in the first year and will decrease by 2% every year upto 5th year after COD of the project. The share of free power will restore to 12% from 6th year onwards .

2. Para -A (viii) deleted.

3. The following para occurring after para B (ix) is deleted and replaced by the formulation as below :-

The concessions at (i), (ii) and (iii) being granted in respect of 540 MW Kwar HEP are conditional and are predicated on the understanding that corresponding concession(s) at (vii) will be accorded by the Government of India.

**By order of the Lieutenant Governor.**

Sd/-  
(Nitishwar Kumar) IAS  
Principal Secretary to the Government


PDD-PS/20 /2021-01-PDD

Dated 28 .12.2021

Copy to the:

1. Secretary, Ministry of Power, Government of India, New Delhi.
2. Financial Commissioner, Finance.
3. Joint Secretary (J&K) Ministry of Home Affairs, Government of India.
4. Principal Secretary to Government, General Administration Department.

5. Secretary to the Government, Planning Development & Monitoring Department.
6. Secretary to the Government, Department of Law, Justice and Parliamentary Affairs.
7. CMD, National Hydroelectric Power Corporation, NHPC office complex, Sector-33, Faridabad.
8. Managing Director, JK Power Development Corporation Limited.
9. Director, Archives, Archeology and Museums, J&K, Jammu.
10. Director, Finance, Power Development Department.
11. Managing Director, CVPPPL, J&K Jammu.
12. Private Secretary to Chief Secretary, UT of J&K.
13. Private Secretary to Principal Secretary to Government, PDD.
14. I/C website, PDD.
15. Government Order file (w.2.s.c.).
16. Stock file.

  
(Dr. Tahir Firdous), JKAS  
Additional Secretary to the Government

Government of Jammu and Kashmir  
Power Development Department  
Civil Secretariat, Jammu

Subject- Implementation of 540 MW Kwar HE Project, 624 MWs Kiru HE Project and 1000 MW Pak Dul HE Project providing of concessions thereof.

Reference: Administrative Council Decision No. 133/22/2020 dated 21-10-2020.

Government Order No: 172 - PDD of 2020  
D A T E D: 11 - 11 - 2020

Sanction is hereby accorded to the:-

A. For 540 MW Kwar HEP:-

- i) Exemption of 12% Free Power for a period of 10 years from the first year of Commercial Operation (CoD) of the Project.
- ii) Waiver of Water Usage Charges (WUC) for a period of 10 years from the first year of Commercial Operation (CoD) of the Project.
- iii) Reimbursement of 5GST by the Union Territory of Jammu and Kashmir for all supplies to the project.
- iv) In principle consent to purchase 49% of power generated, [less 1% of the total power generation from Kwar HE Project for LADF], for a period of 10 years from the date of Commissioning of the Project.
- v) In principle consent to the purchase of 49% of power generated, [less 13% of the Total power generation from Kwar HE Project (1% for LADF and 12% Free Power)], after 10 years from the date of Commissioning of the Project.

CVPP Limited  
100 Stn.  
Disputes  
12-11-2020

CGM (PKD) / GM (KWAR) / GM-S/C (KIRU)  
GM (KIRU) / GM (GIR) / GM (PLUG)  
for information & further nod/af.  
by  
12/11/2020

7

- vi) Approval for exercising first Right of Refusal for purchase of the balance power from Kwar HE Project, Decision in this regard shall be conveyed by the Power Development Department to M/S CVPPPPL at appropriate time.
- vii) Approval for taking up the matter with GoI for 'Sanction of JKSPDCL equity as Grant to M/S CVPPPPL from GoI for implementation of Kwar HE Project.'
- viii) Approval for taking up the matter with GoI for 'Sanction of Subordinate debt of Rs. 2000 Cr @ 1% interest after completion of the Project with repayment to start from the 7<sup>th</sup> year after completion of the Project and continue till the 18<sup>th</sup> year. There shall be no interest on Subordinate debt during construction and the interest will accrue and be paid annually after commissioning.'

**B. For 1000 MW Pakal Dul HEP and 624 MW Kiru HEP:-**

- ix) Reimbursement of SGST by the Union Territory of Jammu and Kashmir for all supplies to the Projects.

The concessions at (i), (ii) and (iii) being granted in respect of 540 MW Kwar HEP are conditional and are predicated on the understanding that corresponding concessions at (vii) and (viii) will be accorded by the Government of India.

By order of the Government of Jammu and Kashmir.

Sd/-  
(Rohit Kansal)IAS  
Principal Secretary to the Government  
Dated: 11-11-2020

No. PDD/IV/61/2018-I  
Copy to the:-

- 1. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, New Delhi.
- 2. Financial Commissioner, Finance.

3. Principal Secretary with the Hon'ble Lieutenant Governor,
4. Managing Director, J&K Power Development Corporation, Jammu.
5. Joint Secretary (J&K), Ministry of Home Affairs, Government of India, New Delhi.
6. Commissioner/Secretary to the Government, General Administration Department.
7. Secretary to the Government, Jal Shakti Department
8. Secretary to the Government, Planning, Development and Monitoring Department.
9. Secretary to the Government, Department of Law, Justice & Parliamentary Affairs.
10. CMD, National Hydro Electric Power Corporation, NHPC Office Complex, Sector-33, Faridabad
11. Director, Archives, Archaeology and Museums, J&K, Srinagar.
12. Director Finance, Power Development Department.
13. Managing Director, CVPPPL, J&K Jammu.
14. OSD to Advisor (BK) to the Hon'ble Lieutenant Governor, I/C PDD
15. Private Secretary to the Chief Secretary.
16. Private Secretary to the Secretary to the Government, Power Development Department.
17. In-charge Website, PDD.
18. Government Order File (w.3.s.c).
19. Stock file.

(Dr. Tahir Firdous) KAS

Additional Secretary to the Government



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Government of Jammu and Kashmir

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Certificate No.	: IN-JK05976911389503T
Certificate Issued Date	: 12-Apr-2021 09:51 AM
Account Reference	: NEWIMPACC (SV) / 12519204/ JAMMU/ JK-JM
Unique Doc. Reference	: SUBIN JKJK 1251920411517767580195T
Purchased by	: Sanjeev Arora
Description of Document	: Article 5 Agreement or Memorandum of an Agreement
Property Description	: Promoters agreement formation incorporation joint venture company implementation Ralte HE Project
Consideration Price (Rs.)	: 0 (Zero)
First Party	: JKSPDC AND JKPDD
Second Party	: NHPC LTD Faridabad
Stamp Duty Paid By	: JKSPDC AND JKPDD
Stamp Duty Amount (Rs.)	: 100 (One Hundred only)

*Rajesh Kohli*  
RAJESH KOHLI  
Stamp Vendor  
Licence No. 310  
Mubarak Mandi, Jammu.



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## PROMOTERS' AGREEMENT

*Sanjeev Arora*      *Rajesh Kohli*

KC 0002281544

## Statutory Alert

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2. The issuer of checking the legitimacy is via the QR code of the certificate.
3. In case of any discrepancy, please inform our Complaints Helpline.

Hon'ble Lieutenant Governor of Union Territory of Jammu and Kashmir for and on behalf of the President of India, through Principal Secretary to Government, Power Development Department, Govt. of Union Territory of Jammu & Kashmir which expression shall unless repugnant to the context or meaning thereof includes its successors, authorized representatives and permitted assigns of the First Part.

And

Jammu and Kashmir State Power Development Corporation Limited (hereinafter referred to as 'JKSPDCL'), a company incorporated under the Companies Act, 1956 having its registered Office at Exhibition Ground, Srinagar-190001 through its Managing Director, which expression shall unless repugnant to the context or meaning thereof includes its successors, authorized representatives and permitted assigns of the Second part.

And

NHPC Limited, a company incorporated under provisions of the Companies Act, 1956 and also a Generating & Power Trading company within the meaning of the Electricity Act, 2003, having its Registered Office at NHPC Office Complex, Sector 33, Faridabad, 121003 (Haryana) (hereinafter referred to as "NHPC") through its Chairman and Managing Director, which expression shall unless repugnant to the context or meaning thereof includes its successors, authorized representatives and permitted assigns of the Third part

JKSPDCL and NHPC shall in this agreement be individually referred to as 'party' and collectively as 'parties'. Whereas Government of Union Territory of Jammu and Kashmir shall be referred to as 'confirming party'

Whereas, the Government of Jammu and Kashmir is committed to harnessing the hydroelectric potential of Chenab River through Ratle Hydroelectric Project of installed capacity 850 MW in the Chenab River Basin in accordance with the provisions of Indus Waters Treaty and whereas the Ministry of Power, Government of India is keen to add new power generation capacity with a view to meet the gap between demand and supply in the country.







## SECTION - 7

### 7.0 OBLIGATION OF PARTIES

- 7.1 The parties shall assist the Company by providing managerial, legal, commercial and technical support on mutually agreed consideration.
- 7.2 The Company shall not compete with either of the Parties, without the prior written consent of the Parties, as the case may be, in their respective areas of business activities. Such consent shall be granted at the sole discretion of the respective Parties, whose decision shall be final.
- 7.3 The lease hold rights of the land required for the Project, against payment as fixed by Government of Union Territory of Jammu and Kashmir, shall be granted for the life of the project as per applicable laws of Union Territory of Jammu and Kashmir.
- 7.4 Each party agrees to keep in confidence and to use the same degree of care as it uses with respect to its own proprietary data to prevent disclosure to third parties of all technical information, data and confidential business information (hereinafter referred to as "Data"). Exchange, use and maintaining confidentiality of Data shall be mutually discussed and agreed to by the parties.
- 7.5 The JVC will not be under obligation to bear any cost arisen from any arbitral/ contractual liability pending against the project prior to its takeover by the JVC from JKPDD.
- 7.6 The cost of work done on the project at the time of its taking over as assessed by IIT Delhi, who have already been appointed by the then GoJK, shall be booked to the JVC.

## SECTION - 8

### 8.0 SHARING OF BENEFITS

- 8.1 The benefits of Joint Venture shall be shared by respective parties in proportion to their actual contribution in share holding of Company.
- 8.2 In accordance with the extant National Hydro Policy of the GoI, the Government of Union Territory of Jammu and Kashmir is entitled to have 12% free power and additional 1% free power for the Local Area Development Fund(LADF). However, to make the Project viable, Government of Union Territory of Jammu and Kashmir has agreed to provide exemption for free power in a decremental manner (i.e the free power to the Government of Union Territory of Jammu and Kashmir would be 1% in the first year after the Commercial Operation Date (COD) rising

1% per year to 12% in the 12th year), exemption of water cess for 10 years from the Commercial Operation Date and local taxes including reimbursement of SGST during the construction period. However, UT of J&K shall get 1% free power for the Local Area Development Fund(LADF) from the first year after the Commercial Operation Date (COD) of the Project.

- 8.3 The Government of Union Territory of Jammu and Kashmir shall be entitled to have first right of refusal for purchase of power from the JVC in proportion to the share of JKSPDCL, in the equity of the JVC at the price determined as per regulatory norms.

## SECTION - 9

- 9.0 RIGHTS AND OBLIGATIONS OF THE GOVERNMENT OF UNION TERRITORY OF JAMMU & KASHMIR/JKSPDCL AND OF THE COMPANY
- 9.1 The Government of Union Territory of Jammu and Kashmir / JKSPDCL shall facilitate the transfer of all clearances from the Government of India and Union Territory Government as would be mandatory for the Project implementation, in favour of JVC.
- 9.2 Revenue receipts on account of sale of timber, royalty on river bed materials etc. arising as a result of the submergence of areas by the Project shall accrue to Government of Union Territory of Jammu and Kashmir.
- 9.3 Rights in fisheries, navigation, exploitation of tourism potential etc. in respect of the ponds created by the Project shall vest with the Government of Union Territory of Jammu and Kashmir.
- 9.4 Government of Union Territory of Jammu and Kashmir will have the right to develop / allot other schemes proposed to be executed in the upstream and downstream as also in the vicinity of the Project provided design and execution of such schemes does not affect design & operation of the Project adversely.
- 9.5 Without prejudice to Government of Union Territory of Jammu and Kashmir land laws, the Company shall have exclusive rights over the Project.
- 9.6 The design, construction and operation of the Project would be as per provisions of the Indus Waters Treaty. Company shall also render all assistance needed by the Govt. of India in view of the provisions of the Treaty.
- 9.7 The Company would comply with conditions imposed by the Government of India from time to time in respect of clearances to the Project. It would also

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Government of Jammu and Kashmir  
Power Development Department  
Civil Secretariat, Jammu

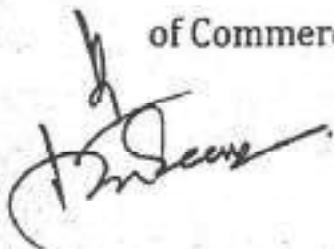
**Subject:-** Implementation of 850 MW Ratle HEP through a Joint Venture Company with NHPC Limited-Approval of Supplementary MoU and providing of concessions thereof.

**Reference:** Administrative Council Decision No138/24/2020 dated 27-11-2020

**Government Order No: 177 - PDD of 2020**  
**D A T E D: 01 - 12 - 2020**

Sanction is hereby accorded to the:-

- (I) Formation and incorporation of a Joint Venture Company (JVC) between NHPC and Jammu & Kashmir State Power Development Corporation Ltd. (JKSPDC) under the name "Jammu Hydroelectric Power Corporation Limited" with equity contribution of 51% and 49% by NHPC & JKSPDC, respectively, wherein the share of NHPC in the JV should not be brought below 51% and share of JKSPDC should not be brought below 49%.
- (II) Exemption of free power from 850 MW Ratle HEP in a decremental manner from first year of Commercial operation of project (CoD) upto 12th year. The exemption of free power will be 11% in the first year and will decrease by 1% every year upto 12th year after COD of the project. The share of free power will restore to 12% from 12th year onwards.
- (III) Waiver of water usage charges (WUC) for 850 MW Ratle HEP for a period of 10 years from the first year of Commercial operation (CoD) of the Project.



(IV) Reimbursement of SGST by the Union Territory of Jammu and Kashmir for all supplies to the project.

(V) Signing of the Supplementary MoU between JKPDD, Government of Union Territory of J&K and JKSPDCL with NHPC Limited for implementation of 850 MW Ratle HEP in Kishtwar J&K. The supplementary MoU will be read along with the original MoU signed on Feb 3, 2019

(VI) Authorizing the Principal Secretary to the Government of Union Territory of J&K, PDD to take such actions and sign such documents as may be required in this regard for registration of the JV Company, signing of the MoU and all other consequential actions arising out of the above decisions.

**By order of the Government of Jammu and Kashmir.**

**Sd-**

**(Rohit Kansal)IAS**

Principal Secretary to the Government

Dated: -12-2020


No. PDD/IV/42/2019-I

Copy to the: -

1. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, New Delhi.
2. Financial Commissioner, Finance.
3. Joint Secretary (J&K), Ministry of Home Affairs, Government of India, New Delhi.
4. Principal Secretary with the Hon'ble Lieutenant Governor.
5. Commissioner/Secretary to the Government, General Administration Department.
6. Secretary to the Government, Jal Shakti Department.
7. Secretary to the Government, Planning, Development and Monitoring Department.
8. Secretary to the Government, Department of Law, Justice & Parliamentary Affairs.

9. Managing Director, J&K Power Development Corporation, Jammu.
10. CMD, National Hydro Electric Power Corporation, NHPC Office Complex, Sector-33, Faridabad
11. Director, Archives, Archaeology and Museums, J&K, Srinagar.
12. Director Finance, Power Development Department.
13. Managing Director, CVPPPL, J&K Jammu.
14. OSD to Advisor (BK) to the Hon'ble Lieutenant Governor, I/C PDD
15. Private Secretary to the Chief Secretary.
16. Private Secretary to the Principal Secretary to the Government, Power Development Department.
17. In-charge Website, PDD.
18. Government Order File (w.3.s.c).
19. Stock file.

  
(Malik Waseem) KAS

 Deputy Secretary to the Government

HARYANA POWER PURCHASE CENTRE  
UHBVN Head Office, Sector-14, Panchkula  
Ph. No. 0172-2583728  
E-mail: [cehppc@uhbvn.org.in](mailto:cehppc@uhbvn.org.in)

From

Chief Engineer  
HPPC, Panchkula

To

General Manager (Comm.)  
NHPC Office Complex,  
Sector-33, Faridabad  
Haryana- 121003

Memo No. Ch-76/CE/HPPC/SE/C&R-I/PPA-121

Dated: 01.02.2023

**Subject: Regarding draft Power Purchase Agreements forwarded by NHPC.**

- Ref: 1) NH/Comm./2022/1416 dated 29.12.2022  
2) HPPC letter no. Ch-72/CE/HPPC/SE/C&R-I/PPA-121 dated 26.12.2022  
3) NHPC letter no. NH/Comm./2022/1329 dated 16.11.2022  
4) HPPC letter no. Ch-63/CE/HPPC/SE/C&R-I/PPA-121 dated 14.11.2022

Please refer your office memo No. NH/Comm./2022/1416 dated 29.12.2022 vide which Haryana is requested to confirm the modification/suggestion of NHPC in draft PPAs for subsequent signing of PPAs between NHPC and HPPC.

In this regard, it is intimated that consent for procurement of power from NHPC projects was given subject to the approval of HERC. HPPC has to take Source approval and PPA approval from HERC (Haryana Electricity Regulatory Commission) before signing the PPA. HPPC can approach HERC only after the firm allocation by MoP, GoI. It is pertinent to mention here that fee to be deposited in HERC for source approval and PPA approval is directly depends on the quantum to be procured.

Therefore, it is intimated that HPPC confirms the suggestion proposed by NHPC in draft PPAs. Further, it is also reiterated that HPPC can sign the PPA only after firm allocation by MoP, GoI and PPA approval by HERC.

  
11/2/23  
Chief Engineer,  
HPPC, Panchkula

CC:

1. SPS to MD/UHBVN, Panchkula for kind information of MD/UHBVN, please.
2. SPS to Director/Finance, Panchkula for kind information of Director/Finance, please.

**HARYANA POWER PURCHASE CENTRE**  
**IP 3 & 4, UHBVN Head Office, Sector-14, Panchkula**  
**Ph. No. 0172-2583728**  
**E-mail: [cehppc@uhbvn.org.in](mailto:cehppc@uhbvn.org.in)**

From

Chief Engineer  
HPPC, Panchkula

To

General Manager (Comml.)  
NHPC Office Complex,  
Sector-33, Faridabad  
Haryana- 121003

Memo No. Ch-80/CE/HPPC/SE/C&R-I/PPA-121

Dated: 30.05.2023

**Subject: Regarding draft Power Purchase Agreements forwarded by NHPC for Pakaldul and Kwar HEP.**

- Ref:** 1. NHPC office memo No. NH/Comml./CVPPPL/2022/1044 dated 05.09.2022.  
2. HPPC memo no. Ch-64/CE/HPPC/SE/C&R-I/PPA-121 dated 14.11.2022  
3. NHPC office memo No. NH/Comml./ 2023/270-71 dated 12.04.2023

In reference to memo at S. No. 3, HPPC provides the approval of draft PPAs for Pakaldul and Kwar HEP. However, HPPC will sign the PPAs after MoP allocation and source & PPA approval by HERC.

This is for your kind information please.

  
30/5/23  
Chief Engineer  
HPPC, Panchkula

CC:

1. SPS to MD/UHBVN, Panchkula for kind information of MD/UHBVN, please.
2. SPS to Director/Finance, Panchkula for kind information of Director/Finance, please.
3. SPS to MD/CVPPPL for kind information of MD/CVPPPL, please.



## Annexure-I

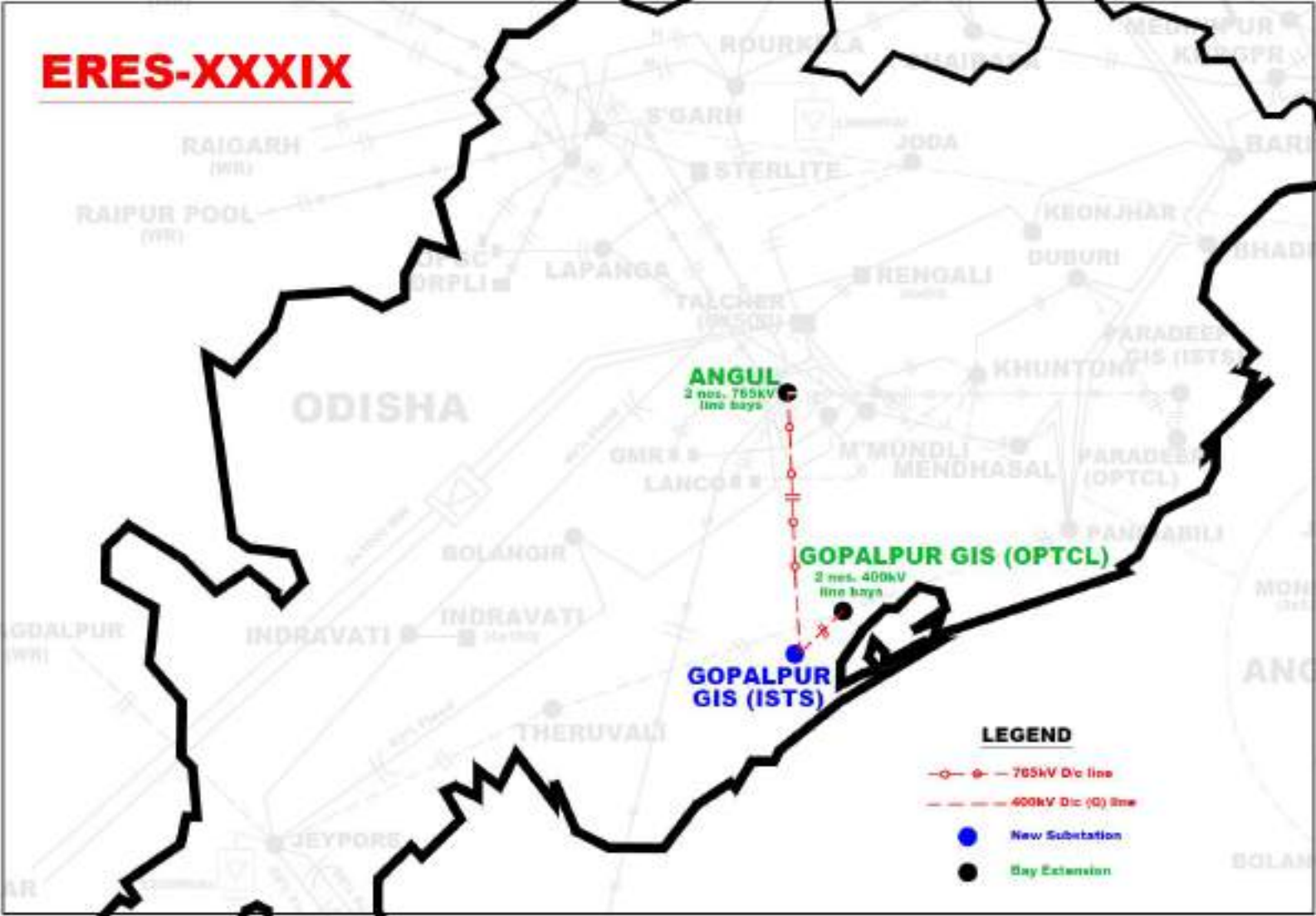
### Agenda for ERPC: Eastern Region Expansion Scheme-XXXIX (ERES-XXXIX)

Sl. No.	Items	Details
1.	<b>Name of scheme</b>	Eastern Region Expansion Scheme-XXXIX (ERES-XXXIX)
2.	<b>Scope of the scheme</b>	<p>Brief scope of works is given below. Detailed scope of works is enclosed at <b>Appendix-A</b>.</p> <ul style="list-style-type: none"> <li>i. Establishment of Gopalpur 765/400kV, 2x1500MVA GIS S/s</li> <li>ii. Angul (POWERGRID) – Gopalpur 765kV D/c line along with 765kV, 1x330MVA switchable line reactor with 500ohm NGR (with NGR bypass arrangement) at Gopalpur end, one each in both circuits</li> <li>iii. Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line</li> <li>iv. 2 nos. 765kV AIS line bays (along with space for future switchable line reactor) along with bus extension in GIS at Angul 765/400kV S/s for termination of Angul (POWERGRID) – Gopalpur 765kV D/c line.</li> <li>v. 2 nos. 400kV GIS line bays at Gopalpur (OPTCL) S/s for termination of Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line.</li> </ul>
3.	<b>Depiction of the scheme on Transmission Grid Map</b>	Refer <b>Exhibit-1</b> .
4.	<b>Upstream/downstream system associated with the scheme</b>	Establishment of Gopalpur (OPTCL) 400/220kV S/s by OPTCL. Expected by Mar 2026 (as per OPTCL's email dated 02-06-2023).
5.	<b>Objective / Justification</b>	Additional Chief Secretary to Government, Department of Energy, Govt. of Odisha vide letter dated 08-02-2023 addressed to Secretary (Power), Ministry of Power, Govt. of Odisha has proposed for construction of Gopalpur 765kV substation under ISTS. As per the said inputs, new industrial demand from Green Hydrogen & Green Ammonia industries in the range of about 3GW is expected in Gopalpur area starting from FY 2025-26 onwards. Gopalpur is emerging as Green Hydrogen hub and various

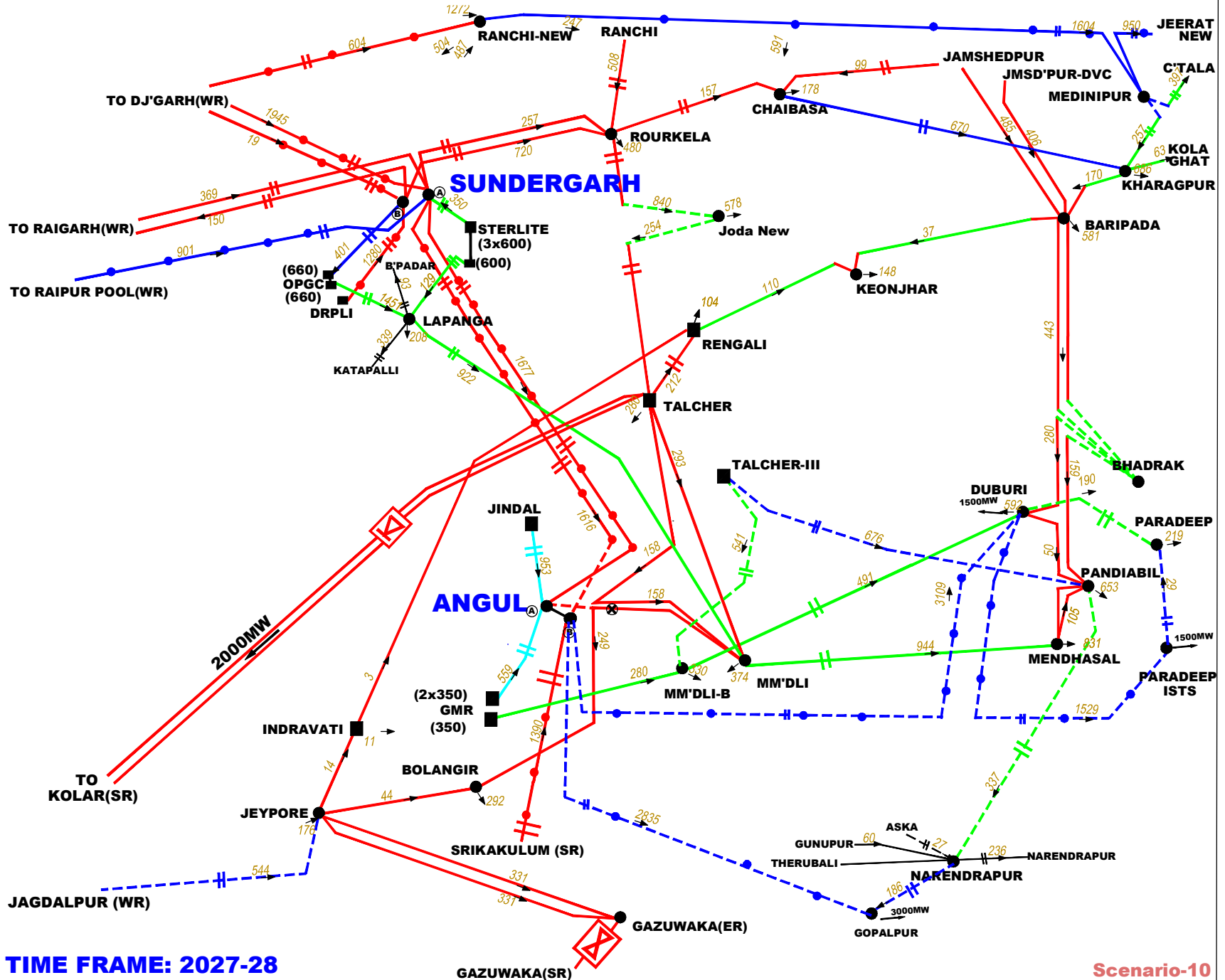
Sl. No.	Items	Details
		<p>industries have expressed investment intentions to set up Green Hydrogen and Green Ammonia plants in Gopalpur due its location advantage.</p> <p>There is a requirement of ISTS corridor to supply RE power from outside Odisha to such industries, to meet the RPO. Thus, keeping in view critical nature of large industrial demand and quantum of power requirement it is essential that Gopalpur substation is feed reliably from ISTS, and with high capacity lines.</p> <p>The quantum of power requirement by some of the industries as informed by OPTCL are Avaada Ventures (700MW), and Ocior Energy (1400MW). In addition to above, additional industries by Renew Power, SMP Energy and WAREE Energy are also envisaged. Accordingly, it is proposed to establish a 765/400kV substation at Gopalpur under ISTS.</p> <p>As Gopalpur is in coastal area and within 60km form coastline, Gopalpur (ISTS) S/s is planned to be implemented in GIS in line with the recommendation of Report of Task Force on Cyclone Resilient Robust Electricity Transmission and Distribution Infrastructure in coastal area published by CEA in May 2021 for construction of new substations upto 60km from the coastline.</p> <p>The present scheme is for establishment of Gopalpur 765/400kV new substation along with Angul – Gopalpur 765kV D/c line &amp; Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line, which has been approved in the 18<sup>th</sup> CMETS-ER held on 27<sup>th</sup> Apr 2023.</p> <p><b>Note:</b></p> <p><i>(a) OPTCL (STU of Odisha) is yet to confirm (sought more time vide letter dated 26-05-2023) availability of a suitable land parcel in Gopalpur area so that both substations (under ISTS and intra-state) can be co-located and implemented in a contiguous land. This would result in minimal requirement of interconnecting system between the two substations.</i></p> <p><i>If contiguous land can be arranged by OPTCL, then OPTCL to clarify whether they shall be agreeable to</i></p>

Sl. No.	Items	Details
		<p><i>procure the entire land for establishment of both substations and can provide land for establishment of ISTS substation to successful ISTS licensee at appropriate cost. Accordingly, the same would need to be incorporated in the scheme.</i></p> <p><i>Till the identification of contiguous land by OPTCL the line length of Gopalpur – Gopalpur (OPTCL) line has been considered as 30km, as per OPTCL's letter dated 26-05-2023.</i></p> <p><i>(b) As decided in the CMETS-ER the scheme is being taken up for approval at various forums, but implementation activity viz. bidding/allocation would be taken up only after receipt of Connectivity/GNA applications by CTU/OPTCL.</i></p>
6.	<b>Estimated Cost</b>	INR 2824 Cr.
7.	<b>Impact on the total Annual Transmission Charges in % along with the existing ATC</b>	<p>A. ATC (considering levelized tariff @15% of estimated cost): ₹423.6 Cr.</p> <p>B. Present ATC: ₹45726.66 Cr.*</p> <p>C. A/B: 0.926%</p>
8.	<b>Need of phasing, if any</b>	Nil
9.	<b>Implementation timeframe</b>	24 months
10.	<b>Inclusion of any wild life/protected area along the transmission line route</b>	<p><b>(a) Angul – Gopalpur:</b> The line may pass through Satkosia Gorge WLS or its buffer zone in the state of Orissa. However, for details of forest/protected areas survey is required to be done.</p> <p><b>(b) Gopalpur – Gopalpur (OPTCL):</b> No major NP, WLS, other protected areas observed. However, for details of other forest/protected areas, survey is required to be done.</p>
11.	<b>Deliberations with RPC along with their comments</b>	<b>ERPC may add their deliberations here.</b>
12.	<b>System Study for evolution of the proposal</b>	Refer <b>Exhibit-2</b> .

\*Total YTC allowed for April 2023, as per notification of transmission charges payable by DICs for billing month of June 2023 dated 25-05-2023 published on NLDC website (available @ <https://posoco.in/transmission-pricing/notification-of-transmission-charges-for-the-dics/>)



# System Studies for ISTS in Odisha: Paradeep 765kV, Gopalpur 765kV, Duburi 765kV, Talcher-III



## Eastern Region Expansion Scheme-XXXIX (ERES-XXXIX)

Sl. No.	Scope of the Transmission Scheme	Capacity (MVA) / Line length (km)/ Nos.
1.	<p>Establishment of new 765/400kV, 2x1500MVA GIS substation at Gopalpur in Odisha</p> <p><b>Additional space for future expansion:</b></p> <ul style="list-style-type: none"> <li>- 765/400kV, 4x1500MVA ICTs (12x500MVA single phase units) along with associated ICT bays at both voltage levels</li> <li>- 400/220kV, 4x500MVA ICTs along with associated ICT bays at both voltage levels</li> <li>- 765kV, 2x330MVA (6x110MVA single phase units) bus reactor along with associated bays</li> <li>- 420kV, 2x125MVA bus reactor along with associated bays</li> <li>- 8 nos. of 765kV line bays (along with space for switchable line reactor) for future lines</li> <li>- 10 nos. of 400kV line bays (along with space for switchable line reactor) for future lines</li> <li>- 12 nos. of 220kV line bays for future lines</li> <li>- 765kV bus sectionaliser bay: 1 set</li> <li>- 400kV bus sectionaliser bay: 1 set</li> <li>- 220kV bus sectionaliser bay :1 set</li> <li>- 220kV bus coupler bay: 2 no.</li> </ul>	<p>765/400kV, 1500MVA ICTs: 2 nos. (7x500MVA single phase units including one spare)</p> <p>765kV ICT bays: 2 nos. 400kV ICT bays: 2 nos.</p> <p>765kV, 330MVA Bus reactor: 2 nos. (7x110MVA single phase units including one spare unit for both bus and line reactors)</p> <p>765kV Bus reactor bays: 2 nos.</p> <p>420kV, 125MVA Bus reactor: 2 nos. 400kV Bus reactor bays: 2 nos.</p> <p>765kV line bays: 2 nos. <i>[for termination of Angul (POWERGRID) – Gopalpur 765kV D/c line along with 765kV, 1x330MVA switchable line reactor at Gopalpur end in both circuits]</i></p> <p>400kV line bays: 2 nos. <i>[for termination of Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line]</i></p> <p>765kV, 330MVA (3x110MVA single phase units) switchable line reactor along with associated bay and 500ohm NGR (with NGR bypass arrangement) <i>[at Gopalpur end in both circuits of Angul (POWERGRID) – Gopalpur 765kV D/c line]:</i> 2 nos.</p>
2.	Angul – Gopalpur 765kV D/c line	205km
3.	Extension at 765kV level at Angul (POWERGRID) S/s including bus extension in GIS	765kV AIS line bays (along with space for future switchable line reactor): 2 nos. <i>[for termination of Angul (POWERGRID) – Gopalpur 765kV D/c line]</i> Bus extension in GIS: about 3000m
4.	Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line <sup>@</sup>	@30km

Sl. No.	Scope of the Transmission Scheme	Capacity (MVA) / Line length (km)/ Nos.
5.	Extension at 400kV level at #Gopalpur (OPTCL) GIS S/s	400kV GIS line bays: 2 nos. [for termination of Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line]

**Note:**

- (a) Implementation of this scheme to be taken up only upon receipt of Connectivity/GNA applications by CTU/OPTCL, as agreed in the 18<sup>th</sup> CMETS-ER.
- (b) @To be reviewed based on inputs of OPTCL regarding availability of contiguous land for establishment of both 765/400kV (ISTS) and 400/220kV (Intra-state) substations at Gopalpur.
- (c) #The bus scheme of 400kV level at Gopalpur (OPTCL) GIS S/s shall be one and half breaker scheme, 2 nos. full diameter i.e. 4 nos. of GIS bays needs to be implemented in the scheme for requirement of 2 nos. GIS bays for termination of Gopalpur (OPTCL) – Gopalpur 400kV D/c (Quad) line in two different diameters. Utilisation of other 2 nos. GIS bays of these diameters shall be identified in future.
- (d) OPTCL shall provide space at under implementation Gopalpur (OPTCL) 400/220kV GIS S/s for implementation of 2 nos. of 400kV GIS line bays for termination of Gopalpur (ISTS) – Gopalpur (OPTCL) 400kV D/c (Quad) line. 2 nos. full diameter i.e. 4 nos. GIS bays shall be established.
- (e) POWERGRID shall provide space at Angul (POWERGRID) 765/400kV S/s for implementation of 2 nos. of 765kV line bays (along with space for future switchable line reactor) along with bus extension in GIS for termination Angul (POWERGRID) – Gopalpur 765kV D/c line.

**Agenda for ERPC: Establishment of 765/400kV, 2x1500MVA S/s at Duburi under intra-state by OPTCL through LILO of Angul (POWERGRID) – Paradeep (ISTS) 765kV D/c ISTS line**

1. In the 14<sup>th</sup> CMETS-ER held on 29-12-2022, establishment of Paradeep 765/400kV substation through Angul (POWERGRID) – Paradeep 765kV D/c line was agreed under the ISTS scheme namely ERES-XXXIV. The same was discussed in the 48<sup>th</sup> TCC/ERPC meeting held on 17<sup>th</sup> and 20<sup>th</sup> Feb 2023. Thereafter, NCT in its 12<sup>th</sup> meeting held on 24-03-2023 recommended the implementation of the scheme through TBCB route. Ministry of Power, Govt. of India vide Gazette notification dated 12-05-2023 has approved implementation of the scheme through TBCB route and has appointed M/s PFCL as BPC.
2. OPTCL vide letter dated 06-03-2023 had requested for construction of a new 765/400kV S/s at Duburi in Odisha under intra-state scheme through LILO of already approved Angul (POWERGRID) – Paradeep 765kV D/c line to meet the upcoming industrial demand of about 1100MW by 2026-27 and 1430MW (additional) by 2029-30. Accordingly, establishment of 765/400kV, 2x1500MVA new substation at Duburi was discussed in the 17<sup>th</sup> CMETS-ER held on 29-03-2023. During the meeting, it was discussed that LILO of ISTS line may be implemented under ISTS so to avoid various operational issues such:
  - (a) Coordination with two different entities during tripping of the lines jointly owned by two utilities.
  - (b) Outage coordination for maintenance of the same transmission lines between two different utilities.
  - (c) Issue in verification of availability during tripping online on fault specially near to LILO portion and checking under whose jurisdiction the reduction in availability will be accounted for.
3. OPTCL and Odisha-SLDC had mentioned in the 17<sup>th</sup> CMETS-ER that there are various instances where ISTS lines have been LILOed by STU and vice versa. Odisha-SLDC mentioned that they do not face any operational issues with such arrangements.
4. After detailed deliberation, following broad scope of works was agreed to be implemented by OPTCL under intra-state scheme:
  - (a) Establishment of new 765/400kV, 2x1500MVA (7x500MVA single phase units including one spare) substation at Duburi (New)
  - (b) LILO of both circuits of Angul – Paradeep 765kV D/c line at Duburi (New) 765/400kV substation.
  - (c) Duburi (New) – Duburi 400kV D/c (Quad) line

- (d) 765kV, 330MVAR (4x110MVAR single phase units including one spare) bus reactor along with associated bay: 1 no.
- (e) 420kV, 125MVAR bus reactor along with associated bay: 1 no.
- (f) 765kV line bays: 4 nos. for present LILO
- (g) 400kV line bays: 2 nos. of present line
- (h) Space for future provision:
  - 765/400kV, 2x1500MVA (6x500MVA single phase units) ICT along with associated ICT bays at both levels
  - 765kV line bays: 6 nos. for future lines
  - 400kV line bays: 10 nos. for future lines
  - 765kV Bus sectionalizer bay – 1 no.
  - 400kV Bus sectionalizer bay – 1 no.
  - 765kV, 330MVAR (6x110MVAR single phase units) bus reactor along with associated bay: 2 no.
  - 420kV, 125MVAR bus reactor along with associated bay: 2 no.

5. The matter regarding LILO of ISTS lines under intra-state was being deliberated in the 13<sup>th</sup> meeting of NCT held on 13-05-2023. Therein it was informed that recently LILO of Angul (POWERGRID) – Paradeep 765kV D/c ISTS line at Duburi (New) under intra-state has been agreed. In this regard, it was suggested that views of ERPC may be taken on the subject scheme and with views of ERPC the scheme may be forwarded to NCT for deliberation. NCT has suggested that various aspects of the scheme not limited to following may be deliberated at ERPC level:

- (a) LILO of Angul (POWERGRID) – Paradeep 765kV D/c ISTS line at Duburi (New) under intra-state may involve certain operational issues.
- (b) The said LILO would result in reduced demand that can be catered at Paradeep under ISTS for Green Hydrogen & Green Ammonia industries as some capacity of the main ISTS line shall be utilised to meet intra-state demand at Duburi. This may necessitate further strengthening in ISTS immediately.
- (c) Industries in Duburi area may also require RE power from outside the state of Odisha, similar to industries in Paradeep and Gopalpur area. If any such industry applies for GNA from ISTS, then ISTS infrastructure would have to again created in Duburi area. Creation of parallel systems in ISTS and intra-state may result into a less optimal planning and the same is not desirable. Already 765/400kV ISTS substations (with space provision for 400/220kV level in view of future requirement) are being established at Paradeep and Gopalpur and OPTCL is also implementing 400/220kV substations under intra state. RoW and land optimisation may be considered.

# सेंट्रल ट्रांसमिशन यूलिटी ऑफ इंडिया लिमिटेड

(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड को स्वामित्व में)

(भारत सरकार का उद्यम)

## CENTRAL TRANSMISSION UTILITY OF INDIA LTD.

(A wholly owned subsidiary of Power Grid Corporation of India Limited)

(A Government of India Enterprise)



Ref: CTU/E/00/ERPC

Date: 19-07-2023

**Member Secretary**  
Eastern Regional Power Committee (ERPC)  
14, Golf Club Road, Tollygunge  
Kolkata-700033

**Subject: Observations of ERPC on the ERES-XXXVIII – reg.**

Dear Sir,

As you are aware, the 400kV bus of Ranchi (POWERGRID) 400/220kV substation is designed for 40kA and presently fault level of this substation is observed to be about 44kA and it is expected to further reach to about 51kA by 2027-28 timeframe. Accordingly, studies were carried out and an ISTS scheme namely "Eastern Region Expansion Scheme-XXXVIII (ERES-XXXVIII)" inter alia including bypassing of one D/c of Ranchi (POWERGRID) – Ranchi New (POWERGRID) 400kV 2xD/c (Quad) line and Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line at Ranchi (POWERGRID) S/s so as to form Ranchi New (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line has been agreed in the 19<sup>th</sup> CMETS-ER held on 30-05-2023. The said bypassing arrangement includes dismantling of 1355m section of existing Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 and scraping of the same.

The estimated cost the scheme is about ₹ 42 Cr. As per MoP's Office Order no. 15/3/2018-Trans-PI(5) dated 28-10-2021 regarding "Re-constitution of the National Committee on Transmission (NCT) - reg.", approval of the scheme is under purview of CTU. However, it was noted in the 19<sup>th</sup> CMETS-ER that as the matter has commercial implications, the scheme may be deliberated at ERPC level as well. Details of the said scheme are annexed herewith at **Annexure-I**.

In view of the above, it is requested that the said scheme may be taken up for deliberations in the forthcoming meeting of ERPC and observations may be communicated to CTU for further processing of the scheme.

Thanking you,

Yours faithfully,

  
19/07/2023

(Rajesh Kumar)

Senior General Manager

**1. Eastern Region Expansion Scheme-XXXVIII (ERES-XXXVIII)**

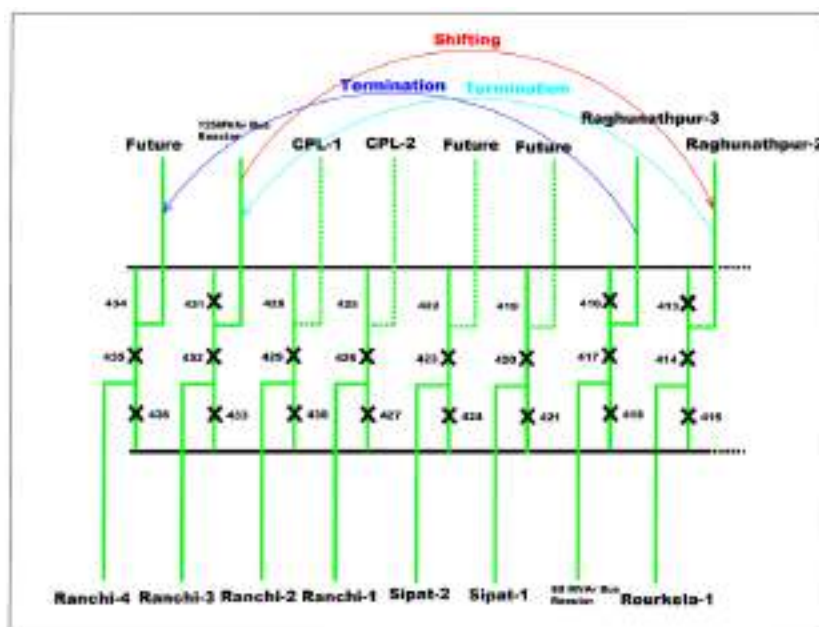
1.1. Presently, the fault level at 400kV bus at Ranchi (POWERGRID) 400/220kV S/s is observed to be about 44kA (designed limit is 40kA) which is expected to increase to about 51kA by 2027-28 timeframe.

1.2. Studies have been carried out for 2027-28 timeframe and upon detailed analysis it is observed that with the rearrangement as proposed below, the fault level of Ranchi (POWERGRID) substation can be brought down to about 39kA from 51kA.

- Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line (of DVC) is to be bypassed from Ranchi (POWERGRID) with any D/c line of Ranchi (POWERGRID) – Ranchi New (POWERGRID) 400kV 2xD/c (Quad) lines (of POWERGRID) so as to form Ranchi New (POWERGRID) – Raghunathpur (DVC) 400kV (Quad) D/c line.

1.3. The above arrangement requires following major works:

- The bus reactor installed in bay 431 needs to be shifted in bay 413 so that adjacent bays viz. 416 and 419 shall be available for termination of a D/c line in future, if required.
- Shifting of equipment of bay no. 416 [released upon shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV ckt-3] to bay no. 434 for completion/establishment of bay no. 434.
- Shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line to bays 431 and 434 in diameters 431-432-433 and 434-435-436: about 1.27km new line section





- 1.4. DVC had confirmed that 1355m section of their Ranchi – Raghunathpur 400kV D/c (Quad) line may be dismantled and scrapped under ISTS scheme so that tariff of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC shall remain unaffected.
- 1.5. In view of the above, following scope of works of the ERES-XXXVIII scheme to be implemented under ISTS in 24 months time-frame from allocation was agreed in the 19<sup>th</sup> CMETS-ER:
  - (a) #Shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line to bays 431 and 434 in diameters 431-432-433 and 434-435-436: about 1.27km new line section.
  - (b) \$Dismantling of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 and scrapping of the same.
  - (c) Shifting of 420kV, 125MVAR bus reactor installed in bay no. 431 to bay no. 413 [*vacated after shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV ckt-2*].
  - (d) Shifting of equipment of bay no. 416 [*released upon shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV ckt-3*] to bay no. 434 for completion/establishment of bay no. 434.
  - (e) Installation of 420kV, 1x80MVAR switchable line reactor, one each in both circuits of Raghunathpur (DVC) – Ranchi-New (POWERGRID) 400kV D/c (Quad) line [*formed after bypassing of Ranchi (POWERGRID) – Raghunathpur (DVC) and Ranchi (POWERGRID) – Ranchi-New (POWERGRID) ckt-3 & 4 400kV D/c (Quad) lines from Ranchi-New through tie circuit breaker in diameters 431-432-433 and 434-435-436*] at Ranchi-New (POWERGRID) end along 400ohm NGR (including NGR bypass scheme).

**Note:** #*(i)* The ISTS licensee shall coordinate with DVC for shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line to bays 431 & 434. Further, ISTS licensee shall also take care of completion of communication link upon line shifting.

*§(ii)* The scrap value of the tower members, ACSR conductor, auxiliaries etc. of dismantled assets shall be deducted by the ISTS licensee as per prevailing scrap value to arrive at the final cost of the project. As the scrap value of dismantled assets (about 1355m of line) is already being adjusted against the project cost of this new scheme, tariff of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC shall remain unaffected.

*(iii)* During the implementation period of the above scheme, ERS can be used for temporary bypassing of Ranchi (POWERGRID) – Raghunathpur (DVC) and Ranchi (POWERGRID) – Ranchi-New (POWERGRID) ckt-3 & 4 lines outside Ranchi S/s so as to facilitate shifting of bus reactor and bay equipment, if required.

*(iv)* Upon implementation of this scheme, the Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line may be bypassed from Ranchi S/s with Ranchi – Ranchi (New) 400kV D/c line (ckt-3 & ckt-4) through tie circuit breakers (432 & 435) as per system requirement and based on instructions from Grid-India.

- 1.6. Further, it was also agreed in the 19<sup>th</sup> CMETS-ER that as the ISTS scheme inter alia includes “Dismantling of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 and scarping of the same”, which has commercial implications, the scheme may be deliberated at ERPC level as well.
- 1.7. The estimated cost of the scheme is expected to be about INR 42 Cr. excluding the scrap value, as the scrap value of metals/other elements is highly volatile. The prevailing scrap value during implementation time-frame shall be adjusted in the scheme cost by the implementing ISTS licensee.
- 1.8. The scheme may be deliberated inter alia on following matters:
  - (i) Dismantling of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 and scarping of the same under the ISTS scheme, as dismantling of line section shall vacate the line corridor for future.
  - (ii) The scrap value of the tower members, ACSR conductor, auxiliaries etc. of dismantled assets shall be deducted by the ISTS licensee as per prevailing scrap value to arrive at the final cost of the project. As the scrap value of dismantled assets (about 1355m of line) is already being adjusted against the project cost of this new scheme, tariff of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC shall remain unaffected.

## **ELECTROMECHANICAL LBB RELAY INSTALLED AT** **400/220 KV BINAGURI SUBSTATION**

SL NO.	FEEDER NAME	RELAY MODEL
1	401 TALA-4 MAIN BAY	MCTI
2	402 TALA-3 & 4 TIE BAY	MCTI
3	403 TALA-3 (MALBASE ) MAIN BAY	MCTI
4	404 ICT-2 MAIN BAY	MCTI
5	405 TALA-2 & ICT-2 TIE BAY	MCTI
6	406 TALA-2 MAIN BAY	MCTI
7	407 ICT-1 MAIN BAY	RAICA
8	408 TALA-1 & ICT-1 TIE BAY	RAICA
9	409 TALA-1 MAIN BAY	RAICA
10	410 RANGPO-1 MAIN BAY	2DAB
11	411 RANGPO-1 & BONG-1 TIE BAY	RAICA
12	412 BONGAIGAON-1 MAIN BAY	RAICA
13	413 RANGPO-2 MAIN BAY	2DAB
14	414 RANGPO-2 & BONG-2 TIE BAY	MCTI
15	415 BONGAIGAON-2 MAIN BAY	MCTI
16	416 KISHANGANJ-1 MAIN BAY	MCTI
17	417 KISHANGANJ-1 & BR-1 TIE BAY	MCTI
18	418 BUS REACTOR-1 MAIN BAY	MCTI
19	419 KISHANGANJ-2 MAIN BAY	MCTI
20	420 KISHANGANJ-2 & BR-2 TIE BAY	MCTI
21	421 BUS REACTOR-2 MAIN BAY	MCTI
22	422 PURNEA-1 MAIN BAY	MCTI
23	423 PURNRA-1 & ALPD-1 TIE BAY	MCTI
24	425 PURNEA-2 MAIN BAY	MCTI
25	426 PURNRA-2 & ALPD-2 TIE BAY	7SV6001
26	201 ICT-1 220KV SIDE	RAICA
27	203 ICT-2 220 KV SIDE	MCTI
28	205 SILIGURI -1	RAICA
29	206 SILIGURI-2	RAICA
30	207 BUS COUPLER	RAICA
31	208 TRANSFER BUS	RAICA
32	209 BIRPARA -1	RAICA
33	210 BIRPARA-2	RAICA
34	213 M1 BUS SECTION-1	RAICA
35	213 M2 BUS SECTION-2	RAICA

<b>TOTAL QUANTITY OF MCTI RELAY</b>	<b>18</b>
<b>TOTAL QUANTITY OF RAICA RELAY</b>	<b>14</b>
<b>TOTAL QUANTITY OF EASUN REYROLLE RELAY</b>	<b>2</b>

<b>TOTAL QUANTITY OF 7SV6001 RELAY</b>	<b>1</b>
<b>TOTAL</b>	<b>35 NOS</b>

<b>ELECTROMECHANICAL LBB RELAY INSTALLED AT 400/220 KV MAITHON SUBSTATION</b>
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<b>SL NO.</b>	<b>FEEDER NAME</b>	<b>RELAY MODEL</b>
1	MAITH-MAIN_BAY_406	VAJSM43SF102B
2	MAITH-MAIN_BAY_407	VAJSM43SF102B
3	MAITH-TIE_BAY_408	RAICA
4	MAITH-MAIN_BAY_409	RAICA
5	MAITH-TIE_BAY_411	RAICA
6	MAITH-MAIN_BAY_412	RAICA
7	MAITH-MAIN_BAY_413	RAICA
8	MAITH-TIE_BAY_414	RAICA
9	MAITH-MAIN_BAY_415	RAICA
10	MAITH-MAIN_BAY_416	RAICA
11	MAITH-TIE_BAY_417	RAICA
12	MAITH-TIE_BAY_420	RAICA
13	MAITH-MAIN_BAY_421	RAICA
14	MAITH-TIE_BAY_423	RAICA
15	MAITH-MAIN_BAY_424	RAICA
16	200KV Maithon-DHN-1_205	RAICA
17	200KV Maithon-DHN-2_204	RAICA
18	500MVA ICT-1_206	RAICA
19	220KV TBC_209	RAICA
20	220KV Bus Coupler_210	RAICA
21	500MVA ICT-2_213	RAICA
22	220KV Kalensawari-1_214	RAICA
23	220KV Kalensawari-2_215	RAICA

<b>TOTAL QUANTITY OF VAJSM RELAY</b>	<b>2</b>
<b>TOTAL QUANTITY OF RAICA RELAY</b>	<b>21</b>
<b>TOTAL</b>	<b>23 NOS</b>

<b>TOTAL</b>	<b>58 NO'S RELAY</b>
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## Annexure-B20.1

## SUMMARY OF DEVIATION CHARGE RECEIPT AND PAYMENT STATUS

BILL UPTO 02-07-2023 (W-14 of FY 2023-24)  
Last Payment Disbursement Date - 21-07-2023

Figures in ₹ Lakhs

CONSTITUENTS	Net outstanding for 2022-23	Receivable by Pool	Received by Pool	Payable From Pool	Paid From Pool	Outstanding for 2023-24	Total Outstanding
BSPTCL	2,547.54813	2,071.06534	0.00000	4,298.76836	0.00000	-2,227.70302	319.84511
JUVNL	114.52322	2,651.70050	0.00000	494.12634	0.00000	2,157.57416	2,272.09738
DVC	0.00000	2,870.17302	2,679.00064	934.28409	934.28409	191.17238	191.17238
GRIDCO	0.00000	2,104.78633	1,951.01988	3,755.41409	3,727.29494	125.64730	125.64730
WBSETCL	0.00000	61.11621	4.39569	10,875.32550	10,818.60498	0.00000	0.00000
Sikkim	1,186.22267	1,304.68716	0.00000	106.16568	0.00000	1,198.52148	2,384.74415
NTPC	0.00000	8,206.50245	7,594.39047	0.00000	0.00000	612.11198	612.11198
NHPC	0.00000	1.90652	1.37824	236.37415	235.84587	0.00000	0.00000
MPL	0.00000	6.80808	4.23679	386.32044	383.74914	-0.00001	-0.00001
APNRL	0.00000	126.88932	61.53893	53.31578	53.31578	65.35039	65.35039
CHUZACHEN	0.00000	96.99039	96.98223	9.85620	9.84804	0.00000	0.00000
NVVN-BD	0.00000	157.93448	136.71076	363.77660	342.55288	0.00000	0.00000
GMR	0.00000	115.31327	97.98844	51.86122	59.17948	24.64309	24.64309
JITPL	0.00000	246.59236	242.72021	243.68542	239.81329	0.00000	0.00000
TPTCL (Dagachu)	0.00000	250.83522	239.07708	47.56495	43.34110	7.53429	7.53429
JLHEP	0.00000	46.33794	0.00000	85.48328	85.48328	46.33794	46.33794
NVVN-NEPAL	0.00000	3,801.02156	3,766.25531	101.86572	101.86572	34.76625	34.76625
BRBCL	0.00000	250.18031	244.56963	46.63215	46.15635	5.13488	5.13488
PGCIL SASARAM	0.00000	20.60875	20.60875	1.05532	1.05532	0.00000	0.00000
TUL (Teesta-III)	0.00000	927.93879	905.32444	370.91258	370.91258	0.00000	0.00000
Dikchu	0.00000	240.78298	240.78296	116.55890	116.55890	0.00002	0.00002
PGCIL-Alipurduar	0.00000	5.65515	0.73550	1.82916	1.82916	4.91965	4.91965
Tashiding(THPE)	0.00000	0.00000	0.00000	81.41900	81.41900	0.00000	0.00000
RONGNICHU	0.00000	9.05377	9.05377	180.92948	180.92948	0.00000	0.00000
NVVN Bhutan	0.00000	344.85483	342.04881	242.94282	240.13680	0.00000	0.00000
ECR	0.00000	0.22709	0.00000	229.33773	229.11064	0.00000	0.00000
<b>Total</b>	<b>3,848.29402</b>	<b>25,919.96182</b>	<b>18,638.81853</b>	<b>23,315.80496</b>	<b>18,303.28682</b>	<b>2,246.01078</b>	<b>6,094.30480</b>

Receivable: Receivable by ER Payable: Payable by ER POOL  
Received: Received by ER P Paid: Paid by ER POOL  
'- ve' Payable by ER pool '+ ve' Receivable by ER pool

**Annexure -B20.2**

**STATUS OF REACTIVE CHARGES**

AS ON 25.07.23

**Figures in ₹ Lakhs**

Name of Parties	Receivable Amount by pool	Received Amount by pool	Payable Amount by pool	Paid Amount by pool	Outstanding Amount Receivable(+Ve) / Payable by pool(-Ve)
BSPHCL	76.29	50.97	32.86	7.54	0.00
JUVNL	147.22	128.11	3.54	0.00	15.57
DVC	9.35	6.67	9.41	9.41	2.67
GRIDCO	24.27	19.61	35.30	35.29	4.65
SIKKIM	0.00	0.00	5.45	5.45	0.00
WBSETCL	76.86	39.99	18.41	3.60	22.06

Receivable:

Received:

'- ve' Payable by ER pool

Receivable by ER POOI Payable:

Received by ER POOL Paid:

'+ ve' Receivable by ER pool

Payable by ER POOL

Paid by ER POOL

## Deviation Interest Bill due to delay payment

Annexure-B20.3

All figs in ₹

Sl No.	Constituent Name	Interest outstanding till Q4_2020-21	Interest Received by Pool against outstanding	Interest Paid by pool against Outstanding	Net Interest outstanding till Q4_2020-21
1	BSPTCL	91,05,608	91,05,608		0
2	DVC	23,718		23,718	0
3	GRIDCO	-2,79,466		2,79,466	0
4	JUVNL	4,34,61,973	4,34,61,973		0
5	Sikkim	11,76,865	11,76,865		0
6	WBSETCL	21,415	21,415		0
7	NHPC	-54,745		54,745	0
8	NTPC	0			0
9	APNRL	11,33,748	11,33,748		0
10	BRBCL	-1,316		1,316	0
11	JLHEP	1,28,853	1,15,968	12,885	0
12	CHUZACHEN	-3,119		3,119	0
13	GMR	1,73,96,828	1,73,96,828		0
14	IBEUL	26,67,585			26,67,585
15	JITPL	8,589	8,589		0
16	KBUNL	40	40		0
17	MPL	-33,428		33,428	0
18	NPGC-Infirm	0			0
19	NPGC	-10,953		10,953	0
20	NVVN-BD	24,603		24,603	0
21	NVVN-NEPAL	0			0
22	OPGC	24,209			24,209
23	PGCIL-Alipurduar	1,72,257	1,72,258		0
24	PGCIL SASARAM	1,686	1,686		0
25	Tashiding(THEP)	1,57,661	1,57,661		0
26	Dikchu	28,701	28,701		0
27	TPTCL (Dagachu)	0			0
28	TUL (Teesta-III)	-1,134		1,134	0

'- ve' Payable by ER pool

'+ ve' Receivable by ER pool

**Note: Ind-bharath interest is calculated till 29.05.2019**

RRAS interest details				
Constituents	Amount in ₹ Lacs	Interest Paid in 1st Quarter 2021-22	Balance	Payment Date
NTPC	-4.85430	4.85430	0.00000	16.06.2020
BRBCL	-0.60400	0.60400	0.00000	16.06.2020
KBUNL	-3.22746	3.22746	0.00000	16.06.2020
MPL	-2.22505	2.22505	0.00000	16.06.2020
NPGC	-0.79683	0.79683	0.00000	16.06.2020
<b>Total</b>	<b>-11.70764</b>	<b>11.70764</b>		

**Current Status of Letter of Credit (LC) amount against DSM charges for ER constituents***Figures in Lacs of Rupees*

SI No	ER Constituents	No. of weeks in which Deviation Charge payable	No of times payment was delayed during 2022-23	Total Deviation charges payable to pool during 2022-23	Average weekly Deviation Charge liability	LC Amount	Defaulting Weeks	Due date of expiry	Remarks
					(C)/52 weeks				
		(A)	(B)	(C)	(D)	(E)	(G)	(F)	(G)
1	Bihar State Power Holding Corporation Limited/ बिहार	37	37	19124.44	367.78	404.55551	ALL Weeks	12-11-2023	LC opened for ₹ 213,53,049 -/-
2	Jharkhand State Electricity Board / झारखंड	36	36	16432.86	316.02	347.61817	ALL Weeks	14-03-2024	LC opened for ₹ 139,64,455 -/-
3	Damodar Valley Corporation / डीवीसी	39	2	12559.02	241.52	265.67154	25, 38	No Valid LC	
4	Power Deptt, Govt. of Sikkim /सिक्किम	28	28	2176.42	41.85	46.03970	ALL Weeks	No Valid LC	
5	APNRL	39	39	1226.93	23.59	25.95437	ALL Weeks	No Valid LC	
6	Gati Chuzachen / चुजाचन	18	13	116.69	2.24	2.46842	All weeks Except 25, 32, 41, 49, 50	No Valid LC	
7	GMR / जीएमआर	45	37	948.14	18.23	20.05681	All week except 9, 10, 11, 12, 14, 15, 17, 18	No Valid LC	
8	Jindal India Thermal Power Ltd.	33	6	1422.66	27.36	30.09467	2, 3, 38, 50	No Valid LC	
9	TPTCL Dagachu/ डग्गचु	45	6	3812.86	73.32	80.65675	36, 38, 39, 40, 44, 45	31-03-2024	LC opened for ₹ 80,65,675 -/-
10	JLHEP	35	31	1192.36	22.93	25.22302	All weeks Except 2, 6, 19, 27	No Valid LC	
11	BRBCL /बीआर बीसीएल	42	2	1738.40	33.43	36.77389	29, 46	No Valid LC	
12	PGCIL-Sasaram / सासाराम	30	3	38.17	0.73	0.80735	43, 52	31-03-2024	LC opened for ₹ 80,735 -/-
13	Dikchu	18	8	185.40	3.57	3.92202	30, 37, 38, 41, 43, 45, 46, 50	01-08-2023	LC opened for ₹ 174,484 -/-
14	PGCIL-Alipurduar / अलीपुरदुआर	15	8	23.14	0.44	0.48940	1, 2, 3, 4, 7, 8	31-12-2023	LC opened for ₹ 86763/-
15	Tashiding	23	17	396.09	7.62	8.37890	All weeks Except 1, 2, 4, 6, 19, 27	No Valid LC	

FAX - 06742-274280 Kind Attn: Mr. A.K. Bhausa, EM Baripoda PGCIL  
**WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED**

( A Govt. of West Bengal Enterprise )

OFFICE OF THE CHIEF ENGINEER ENGINEERING DEPARTMENT

VIDYUT BHAVAN 9TH FLOOR A - BLOCK

SALT LAKE CITY KOLKATA - 700 091

PHONE : (033) 2359 4943 FAX : (033) 2359 1933

E-mail : ceed10@yahoo.in



**WBSETCL**

Reference No. CE/ED/ PLCC/ PGCIL/Kharagpur/

Dated : /8/2010

To

The General Manager (O&M)  
 Power Grid Corporation of India Ltd., ER-II  
 J-1-15, Block-EP,  
 Sector-V, Salt Lake City,  
 Kolkata-700091.  
Fax-2357-2816.

Kind Attn.: Mr. S.K. Sen, GM(O&M), PGCIL.

**Sub:** Installation of PLCC terminals at Baripoda 400/220/132KV Sub-Station for the PLCC links Kolaghat- Kharagpur-Baripoda under Kharagpur Sub-Station package of WBSETCL

**Ref:** Letter no. E-II/BPD/O&M-16 dt. 19.08.10 of the Chief Manager Baripoda PGCIL

Dear Sir,

With reference to above letter of Chief Manager Baripoda PGCIL, the frequencies of operation for twin channel PLC terminal with speech, telemetry, TBF & MODEM in respect of the PLCC link through proposed Kharagpur-Baripoda 400KV S/C line will be as under:

Sl. No. of annexure-I	Type of PLCC Terminal	Station	Direction	TX(kHZ)	RX(kHZ)
05	Twin channel PLC terminal with speech, telemetry, TBF & Modem	Kharagpur	Baripoda	164UL	220UL
06	Twin channel PLC terminal with speech, telemetry, TBF & Modem	Baripoda	Kharagpur	220UL	164UL

The other frequencies mentioned in our letter no. PLN/PLCC/PFC/REC/RIDF/181 dt. 12.08.10 shall remain unaltered as suggested by Chief Manager Baripoda PGCIL.

It is noteworthy that new PLCC terminals for carrier aided protection as well as for Speech and telemetry in respect of Kharagpur - Baripoda PLCC link have already been included in our Kharagpur Sub-Station package.

This is for your information and further necessary action please. This has also intimated to Chief Manager Baripoda PGCIL through copy of this letter.

Yours faithfully,

Sd/-

(M.K. Chowdhury)  
 Chief Engineer Engg. Deptt.

Dated : 30 /8/2010

Memo No. CE/ED/ PLCC/ PGCIL/Kharagpur/ 793 (4)

Copy to:

1. Chief Engineer (CPD) - This has reference to the discussion had with the concerned SE(E) of CPD
2. Chief Engineer IT & C, WBSETCL, Abhiksan, Saltlake, Kolkata-91
3. Addl Chief Engineer, Communication, SLDC, WBSETCL, CLD Building, Danesh Seikh Lane Howrah- 711109, Fax- 26886232.
4. Chief Manager, Baripoda 400/220/132KV Sub-Station, P.O. Kuchli, Dist. MoyurBhanj, Orissa - 757105, Fax-06792-279280

Chief Engineer Engg. Deptt.



# WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED

( A Govt. of West Bengal. Enterprise )

OFFICE OF THE CHIEF ENGINEER TRANSMISSION PROJECT  
VIDYUT BHAVAN 10<sup>TH</sup> FLOOR A - BLOCK  
SALT LAKE CITY KOLKATA - 700 091

PHONE : (033) 2337 7957 FAX : (033) 2337 1737

E-mail : [cetransproject@yahoo.co.in](mailto:cetransproject@yahoo.co.in)

WBSETCL

Memo no: TR. PROJ./ T-181/20

Dt. 11.04.2012

To  
The Chief Manager (I/C),  
400/220/132 KV Baripada Sub-station  
Power Grid Corporation of India Limited  
At+PO - KUCHEI  
Dist : MAYURBHANJ  
ODISHA - 757105  
FAX : 06792-279280

*M. (OSH), BPD  
Pl. Live into!  
20/4*

Kind Attention : Mr. S. J. Lahiri

Sub : Work of PLCC at Baripada 400 KV S/Stn. to be executed by WBSETCL

Dear Sir,

As you are aware WBSETCL is going to commission its Kharagpur 400 KV S/Stn. by LILoing the existing 400 KV S/C Baripada- KTPS line at Kharagpur. Due to this reason fresh PLCC arrangement is required at Baripada sub-station by the way of replacement of existing panels by 3 nos new panels and execution of allied work are to be taken up by our vendor M/s. Alstom T&D India Ltd. These work including commissioning of the new panels are to be executed during the shutdown period which will be availed from 17.04.12 to 22.04.12. The matter has been discussed in details with you by our engineers when they visited your office recently. We are enclosing transformer details and line length for information and taking your further necessary action in this matter.

In view of above, we are enclosing relevant transformer details along with line length you are requested to give us necessary clearance in respect of above so that we can advise our vendor Alstom T&D India Ltd. to execute the work within this shut down period.

Enclo : As stated above.

Yours faithfully,

*P. Das Sharma*

( P. Das Sharma )

Chief Engineer ( Projects )

पावरग्रिड बारिपदा  
wergrid Baripada  
सी सं० 334  
Receipt No.-  
दिनांक -  
Date - 20.04.12

*अतीत  
Sh. A. K. Nayak / ERN  
for S.A. K.  
20/4*

## DETAILS OF DISBURSEMENT TO POWER SYSTEM DEVELOPMENT FUND

Sl No	Nature of Amount	Amount transferred to PSDF (Rs in Lac)	Date of Disbursement	Remarks
	<b>Opening Balance (upto 31.03.2019)</b>	<b>95896.17</b>		
1	Reactive Energy Charge	105.79202	04.04.19	Reactive Charges_18-19
2	Reactive Energy Charge	287.48448	03.05.19	Reactive Charges_18-19 & 19-20
3	Reactive Energy Charge	129.69559	03.06.19	Reactive Charges_19-20
4	Reactive Energy Charge	207.83840	04.07.19	Reactive Charges_19-20
5	Reactive Energy Charge	94.91703	02.08.19	Reactive Charges_19-20
6	Reactive Energy Charge	188.53681	02.09.19	Reactive Charges_19-20
7	Surplus DSM amount transferred	32210.51998	24.09.19	DSM Charges_19-20
8	Reactive Energy Charge	173.06004	01.10.19	Reactive Charges_19-20
9	Reactive Energy Charge	273.15002	01.11.19	Reactive Charges_19-20
10	Reactive Energy Charge	401.09564	04.12.19	Reactive Charges_19-20
11	Reactive Energy Charge	252.53573	02.01.20	Reactive Charges_19-20
12	Reactive Energy Charge	148.65520	07.02.20	Reactive Charges_19-20
13	Reactive Energy Charge	205.22437	04.03.20	Reactive Charges_19-20
14	Bank interest from Reactive acct	0.21706	03.04.20	Bank interest from Reactive acct
15	Reactive Energy Charge	843.03166	03.06.20	Reactive Charges_19-20 & 20-21
16	Reactive Energy Charge	507.80481	07.07.20	Reactive Charges_17-18,18-19 & 20-21
17	Reactive Energy Charge	309.41068	06.08.20	Reactive Charges_17-18,18-19 & 20-21
18	Reactive Energy Charge	83.23955	02.09.20	Reactive Charges_19-20 & 20-21
19	Bank interest of DSM A/C-TDS portion	251.65235	18.09.20	Bank interest TDS portion transferred from POSOCO,CC
20	Bank interest of DSM A/C-TDS portion	15.64788	22.09.20	Bank interest TDS portion transferred from POSOCO,CC
21	Reactive Energy Charge	118.85979	06.10.20	Reactive Charges_20-21
22	Reactive Energy Charge	101.42971	04.11.20	Reactive Charges_20-21
23	Reactive Energy Charge	82.34791	04.12.20	Reactive Charges_20-21
24	Reactive Energy Charge	500.95333	06.01.21	Reactive Charges of 19-20 & 20-21
25	Reactive Energy Charge	92.51486	03.02.21	Reactive Charges of 19-20 & 20-21
26	Reactive Energy Charge	50.22963	04.03.21	Reactive Charges of 19-20 & 20-21
27	Reactive Energy Charge	32.15331	07.04.21	Reactive Charges of 19-20 & 20-21
28	Reactive Energy Charge	39.59760	05.05.21	Reactive Charges of 19-20 & 20-21
29	Reactive Energy Charge	18.96069	01.06.21	Reactive Charges of 20-21 & 21-22
30	Reactive Energy Charge	392.24613	12.07.21	Reactive Charges of 20-21 & 21-22
31	Reactive Energy Charge	214.22298	22.07.21	Reactive Charges 21-22
32	Addl. Dev	392.94201	25.08.21	DSM Charges of 19-20 received from Jharkhand
33	Addl. Dev	5.99326	03.09.21	DSM Charges of 19-20 received from Jharkhand
34	Reactive Energy Charge	330.73064	09.09.21	Reactive Charges 21-22
35	Addl. Dev	1334.97939	23.09.21	DSM Charges of 20-21 received from Bihar
36	Addl. Dev	500.00000	27.09.21	DSM Charges of 20-21 received from Bihar
37	Addl. Dev	1500.00000	29.09.21	DSM Charges of 20-21 received from Bihar
38	Addl. Dev	500.00000	01.10.21	DSM Charges of 20-21 received from Bihar
39	Addl. Dev	1000.00000	05.10.21	DSM Charges of 20-21 received from Bihar
40	Addl. Dev	402.60050	05.10.21	DSM Charges of 20-21 received from Jharkhand
41	Reactive Energy Charge	131.05971	07.10.21	Reactive Charges 21-22
42	Addl. Dev	1000.00000	22.10.21	DSM Charges of 20-21 received from Bihar
43	Addl. Dev	1000.00000	26.10.21	DSM Charges of 20-21 received from Bihar
44	Addl. Dev	539.21266	28.10.21	DSM Charges of 20-21 received from Bihar
45	Reactive Energy Charge	224.70676	03.11.21	Reactive Charges 21-22
46	Reactive Energy Charge	366.25533	03.12.21	Reactive Charges 21-22
47	Reactive Energy Charge	5.33816	09.12.21	Interest Amount received in Reactive Account
48	Addl. Dev	489.56759	04.01.22	DSM Charges of 20-21 received from Jharkhand
49	Reactive Energy Charge	449.70232	04.01.22	Reactive Charges 21-22
50	Reactive Energy Charge	547.40910	04.02.22	Reactive Charges 21-22
51	Addl. Dev	7182.00679	08.02.22	Excess amount after clearing Wk-43
52	Addl. Dev	103.38490	28.02.22	DSM Charges of 20-21 received from Jharkhand and POSOCO CC (REC)
53	Reactive Energy Charge	22.28702	04.03.22	Reactive Charges 21-22
54	Reactive Energy Charge	978.22379	08.03.22	Reactive Charges 21-22
55	Reactive Energy Charge	502.63132	04.04.22	Reactive Charges 21-22
56	Addl. Dev	13586.90110	02.05.22	Addl Dev Charge 21-22
57	Reactive Energy Charge	91.67842	02.05.22	Reactive Charges 21-22
58	Addl. Dev	323.72543	17.05.22	DSM Charges of 21-22 received from Jharkhand
59	Addl. Dev	223.19034	31.05.22	DSM Charges of 21-22 received from Jharkhand
60	Addl. Dev	17070.55890	02.06.22	DSM charges
61	Reactive Energy Charge	104.77973	02.06.22	Reactive Charges 21-22
62	Addl. Dev	700.00000	10.06.22	DSM Charges of 21-22 received from Jharkhand and DVC (Bhutan)
63	Addl. Dev	230.65522	24.06.22	DSM Charges of 21-22 received from Jharkhand and DVC (Bhutan)
64	Addl. Dev	200.00000	28.06.22	DSM Charges of 21-22 received from Jharkhand
65	Addl. Dev	200.00000	01.07.22	DSM Charges of 21-22 received from Jharkhand
66	Reactive Energy Charge	491.14301	08.07.22	Reactive Charges 21-22 received from Bihar
67	Addl. Dev	200.00000	14.07.22	DSM Charges of 21-22 received from Jharkhand
68	Addl. Dev	900.00000	20.07.22	DSM Charges of 21-22 received from Sikkim and Bihar
69	Addl. Dev	300.00000	25.07.22	DSM Charges of 21-22 received from Jharkhand
70	Addl. Dev	200.00000	26.07.22	DSM Charges of 21-22 received from Jharkhand
71	Addl. Dev	400.00000	28.07.22	DSM Charges of 21-22 received from Jharkhand
72	Addl. Dev	553.96908	08.08.22	DSM Charges of 21-22 received from Bihar
73	Reactive Energy Charge	56.45017	08.08.22	Reactive Charges 22-23
74	Reactive Energy Charge	586.61896	07.09.22	Reactive Charges 22-23
75	Reactive Energy Charge	152.77578	07.10.22	Reactive Charges 22-23
76	Addl. Dev	15507.63580	07.11.22	DSM Charges 22-23
77	Reactive Energy Charge	94.63234	07.11.22	Reactive Charges 22-23
78	Reactive Energy Charge	89.18883	02.12.22	Reactive Charges 22-23
79	Reactive Energy Charge	162.52773	05.01.23	Reactive Charges 22-23
80	Reactive Energy Charge	3.93158	07.02.23	Reactive Charges 22-23
81	Reactive Energy Charge	292.70498	06.03.23	Reactive Charges 22-23
82	Reactive Energy Charge	321.80291	30.03.23	Reactive Charges 22-23
83	Addl. Dev	10079.39783	06.04.23	DSM Charges 22-23
84	Reactive Energy Charge	716.65397	04.05.23	Reactive Charges 23-24
85	Reactive Energy Charge	508.35350	07.06.23	Reactive Charges 23-24
86	Reactive Energy Charge	83.11163	05.07.23	Reactive Charges 23-24
	<b>Total</b>	<b>218170.61053</b>		

## Annexure-C3.1

**DSM account Reconciliation Status of ER constituents**

Name of The Utility	2019-20				2020-21				2021-22				2022-23			
	Q1 (17.07.19)	Q2 (21.10.19)	Q3 (13.01.20)	Q4 (15.04.20)	Q1 (15.07.20)	Q2 (23.10.20)	Q3 (20.01.21)	Q4 (28.04.21)	Q1 (06.07.21)	Q2 (07.10.21)	Q3 (11.01.22)	Q4 (18.04.22)	Q1 (15.07.22)	Q2 (21.10.22)	Q3 (19.01.23)	Q4 (28.04.23)
BSPHCL	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
JUVNL	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
DVC	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
GRIDCO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
WBSETCL	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
SIKKIM	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
NTPC	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
NHPC	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO
MPL	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES
APNRL	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CHUZACHEN(GATI)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
NVVN(Ind-Bng)	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO
NVVN(Ind-Nep)	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO
GMR	YES	YES	YES	YES	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
JITPL	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	NO	YES	NO	NO
INBEUL	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA
TPTCL (DAGACHU)	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES
JLHEP(DANS ENERGY)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES
BRBCL	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
POWERGRID (ER-I)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
POWERGRID (ER-II)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
TUL (TEESTA-III)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO
DIKCHU	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SHIGA (TASHIDING)	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	NO	NO	YES	YES
OPGC	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA
Rongnichu	NA				NA				NA				NA			
NVVN Bhutan	NA				NA				NA				NA			

- (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

# Reactive Account Reconciliation Status

	2019-20				2020-21				2021-22				2022-23			
Reactive account Reconciliation Status of ER constituents																
Name of The Utility	Q1 (17.07.19)	Q2 (21.10.19)	Q3 (13.01.20)	Q4 (15.04.20)	Q1 (15.07.20)	Q2 (23.10.20)	Q3 (20.01.21)	Q4 (28.04.21)	Q1 (06.07.21)	Q2 (07.10.21)	Q3 (11.01.22)	Q4 (18.04.22)	Q1 (15.07.22)	Q2 (21.10.22)	Q3 (19.01.23)	Q4 (28.04.23)
BSPHCL	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
JUVNL	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
DVC	YES	N/A	N/A	N/A	YES	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	NO
GRIDCO	YES	YES	YES	YES	YES	YES	YES	YES	Yes	YES	YES	YES	YES	YES	NO	YES
WBSETCL	YES	YES	NO	NO	YES	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
SIKKIM	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

# RRAS Account Reconciliation Status

	2019-20				2020-21				2021-22				2022-23			
RRAS account Reconciliation Status																
Name of The Utility	Q1 (17.07.19)	Q2 (21.10.19)	Q3 (13.01.20)	Q4 (15.04.20)	Q1 (15.07.20)	Q2 (23.10.20)	Q3 (20.01.21)	Q4 (28.04.21)	Q1 (06.07.21)	Q2 (07.10.21)	Q3 (11.01.22)	Q4 (18.04.22)	Q1 (15.07.22)	Q2 (21.10.22)	Q3 (19.01.23)	Q4 (28.04.23)
NTPC	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
BRBCL	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
KBUNL	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES

# AGC Account Reconciliation Status

	2019-20				2020-21				2021-22				2022-23		
Name of The Utility	Q1 (17.07.19)	Q2 (21.10.19)	Q3 (13.01.20)	Q4 (15.04.20)	Q1 (15.07.20)	Q2 (23.10.20)	Q3 (20.01.21)	Q4 (28.04.21)	Q1 (06.07.21)	Q2 (07.10.21)	Q3 (11.01.22)	Q4 (18.04.22)	Q1 (15.07.22)	Q2 (21.10.22)	Q3 (19.01.23)
NTPC	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
MPL	NA				NA				NA	YES	YES	YES	YES	YES	YES
NHPC	NA				NA				NA	NO	NO	NO	YES	YES	YES

# SRAS Account Reconciliation Status

2022-23		
Name of The Utility	Q3 (19.01.23)	Q4 (28.04.23)
NTPC	YES	YES
MPL	YES	YES
NHPC	YES	NO

## Annexure-C4.1

**Reconciliation Between Open Access department of ERLDC and SLDCs, STUs and CTU**

Sl. No.	STUs / SLDCs Name	Quarter-I (2022-23)	Quarter-II (2022-23)	Quarter-III (2022-23)	Quarter-IV (2022-23)
	Date of Issuance	28-07-2022	26-10-2022	30-01-2023	18-04-2023
1	West Bengal - SLDC and STU	NO	NO	NO	NO
2	DVC - SLDC	NO	NO	YES	YES
3	OPTCL-SLDC and STU	YES	YES	YES	YES
4	Jharkhand STU and SLDC	NO	NO	NO	NO
5	Bihar-SLDC and STU	YES	NO	NO	NO
6	Andhra Pradesh	NO	NO	NO	NO
7	CHHATTISGARH	NO	NO	NO	NA
8	Delhi	NO	NO	NO	NA
9	HIMACHAL PRADESH	NO	NO	NO	NO
10	JAMMU & KASHMIR	NO	NA	NA	NA
11	KARNATAKA	NO	NO	NO	NO
12	MADHYA PRADESH	NO	NO	NO	NO
13	MAHARASTRA	NO	NO	NO	NO
14	RAJASTHAN	NO	NO	NO	NO
15	Gujarat	NA	NO	NO	NA
16	Uttar Pradesh	NA	NO	NO	NO
17	Telangana	NA	NA	NO	NO
18	CTU	NO	NO	NO	NO

Reconciliation Between Open Access department of ERLDC and Applicants					
Sl. No.	Applicants Name	Quarter-I (2022-23)	Quarter-II (2022-23)	Quarter-III (2022-23)	Quarter-IV (2022-23)
	Date of Issuance	28-07-2022	26-10-2022	30-01-2023	18-04-2023
1	Bihar State Power Holding Company Limited	NA	NA	NA	NA
2	Calcutta Electric Supply Company	NA	NA	NA	NA
3	GRIDCO Ltd	YES	YES	NA	NA
4	Jindal India Thermal Power Limited	NO	NO	NO	NO
5	Jharkhand Bijli Vitaran Nigam Limited	NO	NO	NO	NO
6	NHPC Limited	NA	NA	NA	NA
7	West Bengal State Electricity Distribution Company Limited	NO	NO	NA	NA
8	ADANI HYBRID ENERGY JAISALMER THREE LIMITED AHS	YES	YES	NA	NA
9	ADANI HYBRID ENERGY JAISALMER THREE LIMITED AHW	YES	YES	NA	NA
10	Arunachal Pradesh Power Corporation Private Limited	NO	NO	NO	NO
11	Clean Solar Power (Jodhpur) Private Limited	YES	YES	YES	NA
12	DALMIA CEMENT (BHARAT) LIMITED (RCW)	NA	NA	NA	NO
13	HINDUSTAN POWER EXCHANGE LIMITED	NA	YES	YES	YES
14	INDIAN ENERGY EXCHANGE LIMITED	NO	NO	NO	YES
15	India Power Corporation Limited	NO	NO	NO	NO
16	ITC Limited Dairy Plant	NO	NO	NA	NA
17	ITC Limited ITD Munger	YES	YES	NA	NA
18	ITC LTD Kidderpore	NO	NO	NO	NA
19	I T C LIMITED, Sonar and Royal Bengal	NA	NO	NA	NA
20	KREATE ENERGY(I) PRIVATE LIMITED	NO	NO	NO	NO
21	NATIONAL ALUMINIUM COMPANY LIMITED AP	NA	NA	NA	NO
22	NATIONAL ALUMINIUM COMPANY LIMITED-OD	NA	NA	NA	NO
23	NTPC VIDYUT VYAPAR NIGAM LIMITED	YES	NA	NA	NA
24	POWER EXCHANGE INDIA LIMITED	NO	YES	YES	YES
25	PTC INDIA LIMITED	YES	YES	NO	NA
26	TATA POWER TRADING COMPANY LIMITED	NO	NO	NO	NO
27	TATA STEEL LIMITED @132kV	NO	NA	NA	NA
28	Saranyu Power Trading Private Limited	NA	NO	NA	NO
29	OSTRO KANNADA POWER PRIVATE LIMITED	NA	NO	NA	NA

## ERLDC Fees &amp; Charges

## Annexure-C5

Sl No	Entity Name	2021-22				2022-23			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Adhunik PNRL	Yes	Yes				Yes		Yes
2	Alipurduar HVDC								
3	Alipurduar Transmission Limited								
4	BARH STG-I	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	BARH-II	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Bharatiya Rail Bijlee Company Ltd.	Yes				Yes	Yes		
7	Bihar State Power Transmission Company Ltd.								
8	Darbhanga-Motihari Transmission Company Ltd.	Yes	Yes						
9	Darlipali Super Thermal Power Project	Yes	Yes						
10	DVC								
11	DVC Seller								
12	ENICL								
13	FSTPP-I - II	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	FSTPP-III	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	GATI INFRASTRUCTURE PVT. LTD					Yes	Yes		
16	GMR Kamalanga Energy Ltd.								
17	GRIDCO	Yes	Yes	Yes	Yes				
18	HVDC SASARAM								
19	Jharkhand Bijli Vitran Nigam Limited								
20	JINDAL INDIA THERMAL POWER LTD.								
21	Jorethang Loop HEP								
22	Kanti Bijlee Utpadan Nigam limited	Yes	Yes	Yes	Yes			Yes	Yes
23	KHSTPP-I	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	KHSTPP-II	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	Maithon Power Limited	Yes	Yes		Yes				
26	Nabinagar Power Generation Corporation Ltd.					Yes		Yes	Yes
27	NORTH KARANPURA TRANSCO LIMITED								
28	NVVN						Yes		
29	Odisha Generation Phase-II Transmission Limited								
30	PMJTL								
31	PMTL								
32	POWERGRID ISTS								
33	POWERLINK ISTS								
34	Purulia & Kharagpur Transmission Comp. Ltd.								
35	RANGEET HEP								
36	Rognichu HEP					Yes			
37	Shiga Energy Private Ltd								
38	SIKKIM								
39	Sneha Kinetic Power Project Private Ltd								
40	TALCHER SOLAR PV POWER STATION,NTPC LIMITED	Yes	Yes						
41	Tata Power Trading Company Limited		Yes	Yes		Yes			
42	TEESTA HEP								
43	Teesta Urja Ltd.(Teesta -III HEP)	Yes							
44	Teestavalley Power Transmission Ltd.								
45	TSTPP-I	Yes	Yes						
46	WBSUEDCL				Yes		Yes		

सन्दर्भ सं: ओडिशा/पी.इ.एस.एम./डी.ओ.सी.ओ./22-23/1047

दिनांक: 31-03-2023

## NOTIFICATION OF DOCO

### व्यवसायिक प्रचालन तिथि अधिसूचना

This is for Notification that consequent to successful installation & completion of pre-commissioning tests/checks, the following asset under "Provision of Spare ICTs in Eastern Region" have been put under Commercial Operation w.e.f. 00:00 Hrs of 31-03-2023 in terms of Clause-5 of CERC (Terms & Conditions of Tariff) Regulations 2019.

### ➤ 1 No. 160MVA, 220/132KV, 3-Ph ICT at 400/220/132KV Baripada Substation (Regional SPARE ICT for Odisha)

Transmission charges of the above Asset is payable w.e.f. 31-03-2023.

सफल स्थापना और प्री-कमीशनिंग परीक्षणों/जांचों के बाद, केंद्रीय विद्वत् विनियामक आयोग नियमावली 2019 खंड-5 के अनुसार यह सूचित किया जाता है कि "Provision of Spare ICTs in Eastern Region" के अंतर्गत 1 नंबर 160MVA, 220/132KV, 3-Ph ICT (ओडिशा के लिए क्षेत्रीय स्पेयर ट्रांसफार्मर) को 400/220/132KV बारीपदा उपकेन्द्र में दिनांक 31-03-2023, 00.00 Hrs से व्यवसायिक प्रचालन के लिए शामिल किया गया है।

उपरोक्त परिसम्पत्ति से संबंधित विद्वत् प्रसारण शुल्क दिनांक 31-03-2023 से लागू होगा।



(वाई. के. दीक्षित)

कार्यपालक निदेशक

ओडिशा परियोजनाएँ, भुवनेश्वर

प्रतिलिपि : विनम्र सूचना के लिए:

1. The Member Secretary,  
Eastern Region Power Committee  
14, Golf Club Road, Tollygunj, Kolkata-700033
2. General Manager,  
ERLDC (POSOCO)  
14, Golf Club Road, Tollygunj  
Kolkata-700033.
3. Chairman  
Damodar Valley Corporation,  
DVC Tower, VIP Road, Kolkata-700054
4. Chairman & Managing Director  
West Bengal State Electricity Distribution Co. Limited,  
DJ block, Vidyut Bhawan, Salt Lake City,  
Kolkata-700091
5. Chairman & Managing Director, BSP(H)CL,  
Bihar State Power Holding Company Limited,  
Vidyut Bhavan, Bailey Road,  
Patna: 800 001
6. Chairman,  
Jharkhand State Electricity Board,  
HEC Building,  
Ranchi: 834 002
7. The Chairman and Managing Director,  
Grid Corporation of Orissa Limited  
Vidyut Bhavan, 4th Floor, Saheed Nagar  
Bhubaneswar- 751 007
8. Secretary (Power), Power Department,  
Govt. of Sikkim, Kaji Road,  
Gangtok: 727 101
9. The Chief Executive Officer  
Maithon Power Limited  
MA-5, Gogna Colony, Maithon Dam Post Office,  
District : Dhanbad, Jharkhand: 828 207
10. General Manager( Power Generation Project),  
Generation Office (W-175),  
M/s Tata Steel Limited,  
Jamshedpur-831001, Jharkhand
11. Managing Director, WBSETCL,  
West Bengal State Elect. Transmission Co. Ltd.,  
DJ Block, Vidyut Bhavan, Salt Lake City  
Kolkata: 700 091

प्रतिलिपि:

ED (CMG), CC Gurgaon

ED, ER-II, Kolkata

ED, ER-I, Patna

ED, Commercial, CC, Gurgaon

CGM (AM), Bhubaneswar/ ER-II, Kolkata/ ER-I, Patna /

CGM (Projects), ER-II, Kolkata/ ER-I, Patna

Sr.GM (Projects & Commercial), Bhubaneswar

CGM (F&A), ER-II, Kolkata/ Sr.GM(F&A)ER-I, Patna / DGM(F), Bhubaneswar

CGM (Commercial), ER-I, Patna

DGM, Baripada

प्रतिलिपि : विनम सूचना के लिए:

Director (Projects)

Director (Operation)