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वशुंधेय कुटुम्वकम् ONE EARTH · ONE FAMILY · ONE FUTURE

सं./No: ERPC/TCC&ERPCCOMMITTEE/2023/ 755

Date: 29.08.2023

सेवा में /To:

As per List

विषय:/Sub: Minutes of the 50th TCC Meeting held on 10th August 2023 at Lonavala-reg

Sir/Madam,

The Minutes of the 50th TCC Meeting held on 10th August'2023 at Aamby Valley City, Lonavala has been issued and uploaded on ERPC website(<u>www.erpc.gov.in</u>). As per the decision of ERPC, distribution of hard copies of the Minutes of the Meeting has been discontinued as Go-Green initiative.

10 अगस्त, 2023 को आम्बी वैली सिटी, लोनावाला में आयोजित 50वीं टीसीसी बैठक का कार्यवृत्त जारी किया गया है और ईआरपीसी वेबसाइट (www.erpc.gov.in) पर अपलोड किया गया है। ईआरपीसी के निर्णय के अनुसार, गो-ग्रीन पहल के रूप में बैठक के कार्यवृत्त की हार्ड प्रतियों का वितरण बंद कर दिया गया है।

भवदीय Yours faithfully,

6-1-127-2 (एन.एस.मंडल)/ (N. S. Mondal)

सदस्य सचिव Member Secretary

Encl: As above

ERPC Members

- 1. Chairperson, ERPC & Chairman, GRIDCO Ltd., Janpath, Bhubaneshwar-751022.
- 2. Chairman-cum-Managing Director, Odisha Power Transmission Corporation Ltd., Janpath, Bhubaneswar-751022.
- 3. Chairman-cum-Managing Director, OHPC Ltd., Orissa State Police Housing & Welfare Corporation Bldg. Vanivihar, Janpath, Bhubaneswar- 751022.
- Managing Director, OPGC Ltd., Zone-A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023. 4
- 5. Chairman-cum-Managing Director, Jharkhand Urja Vikas Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 6. Chairman-cum-Managing Director, Jharkhand Urja Utpadan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 7. Managing Director, Jharkhand Urja Sancharan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 8. Managing Director, Jharkhand Bijli Vitaran Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 9. Managing Director, Tenughat Vidyut Nigam Ltd., Hinoo, Doranda, Ranchi 834002
- 10. Chairman-cum- Managing Director, Bihar State Power Holding Company Ltd., Vidyut Bhavan, Bailey Road, Patna-800001.
- 11. Managing Director, Bihar State Power Transmission Company Limited, Vidyut Bhavan, Bailey Road, Patna- 800001.
- 12. Managing Director, North Bihar Power Distribution Company Limited, Vidyut Bhavan, Bailey Road, Patna- 800001.
- 13. Chairman & Managing Director, West Bengal State Electricity Distribution Company Ltd., Vidyut Bhavan, 7th Floor,
- Block-DJ, Sector-II, Bidhannagar, Kolkata-700091. Managing Director, West Bengal State Electricity Transmission Company Ltd., Vidyut Bhavan, 8th Floor, Block-DJ, Sector-II, Bidhannagar, Kolkata-700091.
- 15. Chairman & Managing Director, West Bengal Power Development Corporation Ltd., Bidyut Unnayan Bhavan, 3/C, Block LA, Sector-III, Bidhannagar, Kolkata-700098.
- 16.Principal Chief Engineer-cum-Secretary, Energy & Power Department, Govt. of Sikkim, Kazi Road, Gangtok 737101, Sikkim.
- 17. Member (Finance), Damodar Valley Corporation, DVC Towers, VIP Road, Kolkata -700054.
- 18. Member (GO&D), Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
- 19. Director (Commercial), NTPC Ltd., Core-7, SCOPE Complex, Lodhi Road, New Delhi -110003.
- 20. Director (Technical), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad, Haryana-121003.
- 21. Director (Operations), Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon-122001.
- 22. Executive Director, ERLDC, GRID-INDIA, 14 Golf Club Road, Tollygunge, Kolkata 700033.
- 23. Chairman-cum- Managing Director, GRID-INDIA, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016
- 24. COO, CTUIL, Saudamini, 1st Floor, Plot-1, Sector-29, Gurgaon-122001
- 25. Director (C&O), PTC India Ltd., 2nd floor, NBCC Tower, 15 Bhikaji Cama Place, New Delhi- 110066.
- 26. Chief Executive Officer, NTPC Vidyut Vyapar Nigam Limited, SCOPE Complex, Core-3, 7th Floor, Lodhi Road, New Delhi-110003.
- 27. Managing Director, Tata Power Trading Company Limited, B12/13, 2nd Floor, Shatabdi Bhavan, Sector-4, Noida-201301, Uttar Pradesh.
- 28. Managing Director (Generation), CESC Ltd., CESC House, 1 Chowringhee Square, Kolkata-700001.
- 29. Chief Executive Officer, Maithon Power Ltd., Village-Dambhui, P.O. Barbindia, Dist.-Dhanbad, Jharkhand- 828205.
- 30.VP(Plant Head), GMR Kamalanga Energy Ltd., AT/PO-Kamalanga, PS-Kantabania, Via- Meramundali, Dist.-Dhenkanal, Odisha-759121.
- 31. Chief Executive Officer, Jindal India Thermal Power Limited, Plot No-12, Sector-B1, Local Shopping Complex, Vasant Kunj, New Delhi-110070.
- 32. Managing Director, Teesta Urja Limited, 2nd Floor, Vijaya Building, 17 Barakhamba Road, New Delhi-110001.
- 33.CEO, BRBCL, Nabinagar, Dist-Aurangabad, Bihar-82430
- 34.CEO, Cross Boarder Power Transmission Limited, Ambience Mall Complex, Gurgaon, Haryana-122001
- 35. MD, Tata Steel UISL, Jamshedpur, Jharkhand-831001

TCC Members

- 1. Chairperson, TCC & Managing Director, GRIDCO Ltd., Janpath, Bhubaneswar-751022.
- 2. Director (Operation), Odisha Power Transmission Corporation Ltd., Janpath, Bhubaneswar 751022.
- 3. Director (Operation), Orissa Power Generation Corporation Ltd, Zone-A, 7th floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023.
- 4. Director (Operation), Orissa Hydro Power Corporation Ltd, Orissa State Police Housing & Welfare Corporation Building, Vanivihar Chowk, Janpath, Bhubaneswar-751022.
- 5. Executive Director (Tech), Jharkhand Urja Utpadan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 6. Director (Project), Jharkhand Urja Sancharan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 7. Chief Engineer (S&D-JBVNL), Jharkhand Urja Vikas Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 8. Chief Engineer (S&D), Jharkhand Bijli Vitaran Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
- 9. General Manager, Tenughat TPS, Lalpania, Dist- Bokaro, Jharkhand-829149.
- 10. Director (Tech.), Bihar State Power Generation Company Limited, Vidyut Bhavan, Bailey Road, Patna-800001.
- 11. Chief Engineer (Commercial), Bihar State Power Holding Company Ltd., Vidyut Bhavan, Bailey Road, Patna-800001.
- 12. Director (Project), North Bihar Power Distribution Company Limited, Vidyut Bhavan, Bailey Road, Patna-800001.
- 13.Director (Operations), West Bengal State Electricity Transmission Company Ltd., Vidyut Bhavan, 8th Floor, Block-DJ, Sector-II, Bidhannagar, Kolkata-700091.
- 14.Director (R&T), West Bengal State Electricity Distribution Company Ltd., Vidyut Bhavan, 7th Floor, Block- DJ, Sector-II, Bidhannagar, Kolkata-700091.
- 15. Director (O&M), WBPDCL, Bidyut Unnayan Bhavan, 3C, Block-LA, Sector-III, Bidhannagar, Kolkata- 700098.
- 16. Principal Chief Engineer-II, Energy & Power Dept., Govt. of Sikkim, Kazi Road, Gangtok-737101.
- 17. Executive Director (Commercial), Damodar Valley Corporation, DVC Tower, VIP Road, Kolkata-700054.
- 18. Chief Engineer (GM), CEA, Sewa Bhawan, R.K. Puram, New Delhi-110066.
- 19. Regional Executive Director (ER-I), NTPC Ltd., 2nd floor, Lok Nayak Jai Prakash Bhawan, Dak Bunglow Chowk, Patna-800001.
- 20. Regional Executive Director (ER-II), NTPC Ltd., 3rd Floor, OLIC Building, Plot No.N-17/2, Nayapalli, Bhubaneswar-751012.
- 21. Executive Director (O&M), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad-121003, Haryana.
- 22. Executive Director (ER-I), Power Grid Corporation of India Ltd, Board Colony, Shastri Nagar, Patna- 800023.
- 23. Executive Director (ER-II), Power Grid Corporation of India Ltd, CF-17, Action Area-I, Newtown, Rajarhat, Near Axis Mall, Kolkata-700091.
- 24. Executive Director (Odisha Project), Power Grid Corporation of India Ltd, Plot No-4, Unit 41, Niladri Vihar, Chandrasekharpur, Bhubaneswar, Odisha-751021.
- 25. Executive Director, ERLDC, GRID-INDIA, 14 Golf Club Road, Kolkata -700 033.
- 26. Executive Director, National Load Dispatch Center, GRID-INDIA, B-9 Qutab Institutional Area, Katwaria Sarai, New Delhi-110016.
- 27. COO, CTUIL, Saudamini, 1st Floor, Plot-1, Sector-29, Gurgaon-122001
- 28. Executive Director (Marketing), PTC India Ltd., NBCC Tower, 15 Bhikaji Cama Place, New Delhi-110066.
- 29. Chief General Manager, NTPC Vidyut Vyapar Nigam Limited, SCOPE Complex, Core-3, 7th Floor, Lodhi Road, New Delhi-110003.
- 30. Head (Marketing), Tata Power Trading Company Limited, B-12/13, 2nd Floor, Shatabdi Bhavan, Sector-4, Noida-201301, Uttar Pradesh.
- 31. Vice President (System Operation), CESC Ltd, CESC House, 1 Chowringhee Square, Kolkata-700001.
- 32. Station Head & General Manager (O&M), Maithon Power Ltd., Village-Dambhui, P.O. Barbindia, Dist.-Dhanbad, Jharkhand-828205.
- 33. GM (Head-Electrical), GMR Kamalanga Energy Ltd., AT/PO-Kamalanga, PS-Kantabania, Via-Meramundali, Dist.-Dhenkanal, Odisha-759121.
- 34. Chief Operating Officer, Jindal India Thermal Power Limited, Plot No-12, Sector-B1, Local Shopping Complex, Vasant Kunj, New Delhi-110070.
- 35. Managing Director, Teesta Urja Limited, 2nd Floor, Vijaya Building, 17 Barakhamba Road, New Delhi- 110001.
- 36. CEO, BRBCL, Nabinagar, Dist- Aurangabad, Bihar-82430
- 37.CEO, Cross Boarder Power Transmission Limited, Ambience Mall Complex, Gurgaon, Haryana-122001
- 38.MD, Tata Steel UISL, Jamshedpur, Jharkhand-831001

Non-Member Participants

- 1. Managing Director, DANS Energy Pvt Ltd, DLF Cyber City, Phase-II, GURGAON 122 002
- 2. Director, Shiga Energy Pvt. Ltd., 5th Floor, DLF Building No. 8, Tower-C, DLF Cyber City, Phase-II, Gurgaon 122002
- 3. CEO, Sneha Kinetic Power Projects Pvt.Ltd. #31 -A, Behind SNOD building, Deorali, Gangtok, Sikkim-737102
- 4. CEO, Rongnichu HEP, MBPCL, Sikkim-737102
- 5. Managing Director, Adhunik Power & Natural Resources Ltd., Lansdowne Towers, 5th Floor, 2/1A Sarat Bose Road, Kolkata-700020.
- 6. CEO, DMTCL, Sekura Energy Limited, Mumbai-400098
- 7. Senior Vice President, Teesta Valley Power Transmission Limited, New Delhi-110066
- 8. CEO, IndiGrid Limited, Mumbai-400079
- 9. CEO, Powerlinks Transmission Limited
- 10. CEO, Alipurdar Transmission Limited, 101, Part-III, G.I.D.C Estate, Gandhinagar, Gujrat-382028
- 11.CEO, SJVN Thermal Pvt Ltd, 169. Pataliputra Colony, Patna-800013
- 12.CEO, Ind-Bharath Energy (Utkal) Ltd, Jharsguda, Odisha-768211
- 13. Managing Director (Generation), Haldia Energy Limited

Special Invitee(s)

- Shri. Chowna Mein, Hon'ble Dy. Chief Minister and I/C Power, Govt. of Arunachal Pradesh, Block No.2 5th Floor, A.P. Civil Secretariat, Itangar-79111
- 2. Shri Ginko Lingi, Chairman, TCC, NERPC & Chief Engineer (P), TPMZ, Department of Power, Govt. of Arunachal Pradesh, Vidyut Bhawan, zero Point, Itanagar-791111
- 3. Shri K Vijayanand, Chairperson, SRPC, Chairman & Managing Director, Transmission Corporation of Andhra Pradesh Limited, Vidyut Soudha, Gunadala, Eluru Rd, Vijayawada, Andhra Pradesh 520004
- 4. Shri AKV Bhaskar, Chairperson TCC, Director (Trasmission & Grid Management), Transmission Corporation of Andhra Pradesh Limited, Vidyut Soudha, Gunadala, Eluru Rd, Vijayawada, Andhra Pradesh 520004.
- 5. Mohammed Shayin, IAS, Chairperson, NRPC, Managing Director, HVPNL, Shakti Bhawan, C-4, sector-6, Panchkula-134109
- 6. Shri Sanjay Dubey, Chairman WRPC & Principal Secretary(Enegry), Govt of M.P, 2, Vallabh Bhawan Annex, Mantralaya, Bhopal-462001
- 7. Shri Raghuraj Rajendran, Chairman-TCC & Managing Director MPPMCL, Block No-15, Shakti Bhawan, Vidyut Nagar, Rampur, Jabalpur-482008
- 8. Shri V.K.Singh, Member Secretary, NRPC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110066
- 9. Shri Deepak Kumar, Member Secretary, WRPC, Plot No- F-3, MIDC Area, Marol, Opp. SEEPZ, Central Road, Andheri (East), Mumbai-40093
- 10.Shri Asit Singh, Member Secretary, SRPC, No.29, Race Course Cross Road, Bengaluru-560009.
- 11. Shri K B Jagtap, Member Secretary, NERPC, NERPC Complex, Dong Parmaw, Lapalang, Shillong-793006
- 12.Smt. Rishika Sharan, Member Secretary, NPC, CEA, New Delhi-110066.
- 13. Chief Engineer, IT Division, CEA, Sewa Bhawan, R.K. Puram, New Delhi-110066
- 14.Director General, Department of Hydropower & Power Systems, Ministry of Economic Affairs, Post Box No.106, Thimpu, Bhutan
- 15. Managing Director, DGPC, Thimpu, Bhutan
- 16.CEO, Adani Power Jharkhand Limited, Adani House, Ahemedabad-382421
- 17. Shri B. B. Mehta, Director, SLDC, Bhubaneswar, Odisha
- 18.Smt Rita Chakraborty, Chief Engineer, SLDC, West Bengal
- 19. Shri A. K. Chaudhary, Chief Engineer, SLDC, Bihar
- 20.Shri D. P. Puitandi, GM, SLDC, DVC
- 21.Shri Arun Kumar, GM, SLDC, Jharkhand
- 22.Smt. Shova Thapa, Chief Engineer, SLDC, Sikkim



Government of India

Ministry of Power

Eastern Regional Power Committee

Minutes

of

50th TCC Meeting of ERPC

Date: 10.08.2023 Aamby Valley, Lonavala, Maharashtra

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EASTERN REGIONAL POWER COMMITTEE, KOLKATA

MINUTES OF 50th TCC MEETING

Date: 10th August, 2023 (Thursday), at 10:00 Hrs

Lonavala, Maharashtra

In Chair: Shri Trilochan Panda, MD GRIDCO & Chairperson, TCC.

ITEM NO. A1:	CONFIRMATION OF THE MINUTES OF 49th TCC MEETING

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

Members may confirm the minutes of 49th TCC meeting.

Deliberation in the 50th TCC Meeting

Members confirmed the minutes of 49th 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.

Deliberation in the 50th TCC Meeting

ED, ERLDC made a presentation on IEGC 2023 and highlighted the major changes that have been incorporated in new IEGC which is to be in effect from 01.10.2023.(PPT attached at Annexure-B1.1)

Representative from ERPC made a brief presentation highlighting the roles and responsibilities OF RPCs & RLDCs under new IEGC. (PPT attached at Annexure-B1.2)

On the provision of IEGC 2023 regarding scheduling of DVC stations by ERLDC, DVC representative shared a brief presentation highlighting the following(PPT Attached at Annexure-B1.3):

- 1. The existing procedure of scheduling of DVC stations by SLDC DVC is continuing in line with the MoM of special meeting dated 09.07.2012.
- 2. The proposed scheduling of DVC stations by ERLDC would be difficult to implement as there is no PPA between DVC generators and the DVC DISCOM.
- 3. He submitted that the unbundling process of DVC has been started and requested that till that time the existing procedure of scheduling may be allowed.

TCC opined that as the scheduling procedure of DVC Generators has already been notified in final IEGC 2023 which is going to be implemented w.e.f. 01.10.2023, DVC may approach Hon'ble CERC for exemption/clarifications in this regard.

Further to implement the above IEGC provision on DVC, TCC decided that a committee may be formed with concerned stakeholders to discuss and resolve the related issues.

After detailed deliberation following was decided:

- 1. Cyber Security Coordination Forum in Eastern Region may be formed in ERPC in line with the direction in the IEGC Regulation 2023 to coordinate and deliberate on the cyber security challenges and gaps in Eastern Region. This is referred to ERPC for approval.
- 2. A working group may be formed by ERPC secretariat consisting of members from SLDCs, transmission utilities, generators & ERLDC for smooth implementation of the various clauses of IEGC.
- 3. TCC recommended for constitution of a committee comprising of members from ERPC, ERLDC, DVC, CEA & CTU to discuss and resolve the challenges likely to be encountered in implementation of the provisions pertaining to the Scheduling and metering of DVC Generators.
- 4. ERPC and ERLDC jointly will conduct workshop on CERC IEGC Regulation 2023 shortly.

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.

Deliberation in the 50th TCC Meeting

ERPC Secretariat representative briefly explained about the common accounting software and further he informed that as per 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 had prepared a concept paper for the development of Common Accounting Software for all RPCs and same was shared with NPC division, CEA and all RPCs.

MS, ERPC informed the forum about the urgent requirement of common accounting software for all RPCs due to frequent changes in the regulation and vast handling of data. Further he highlighted the advantages of common accounting software in terms of technical as well as economical aspect such as uniform logic implementation with error free timely issuance of accounts and further informed that earlier the number of entities were few, now the number of entities have increased exponentially due to allocation through PUShP Portal. Therefore, it is need of hour for a unified accounting software for all RPCs.

MS NPC, CEA informed that as per the direction of Chairperson, CEA in the 13th NPC meeting for standardization reports and accounting software's of RPCs, subgroup meeting was conducted on 08th August 2023, where it was decided for standardization of output format first and all the RPCs will share accounting statement reports with ERPC secretariat and subsequently ERPC secretariat will compile and submit before sub-group for further discussion. Further, she informed that CEA would form a committee comprising all the RPCs for implementation of the scheme at earliest.

MS, NRPC informed that suggestion of ERPC for common software for commercial accounting settlement is a welcome step. Further, he requested NPC division to take a lead on this proposal for early implementation.

On query regarding funding for implementation of the scheme of common accounting software, Member Secretary, NPC informed that as per the clause no 5.3 of PSDF fund regulation there is scope of funding for common accounting software from PSDF fund. Further, she informed that it will take considerable time as per the procedure PSDF regulation.

MS, NPC Division suggested to explore funding for development of the Common accounting software for all RPCs in line with funding for PUShP portal development through NTPC. RED, ER-II assured to look into the issue.

After detailed deliberation followings are deliberated:

1. It is noted that the structure of common format for the output report shall be finalized by the sub-group under NPC Division within August'23.

- 2. TCC agreed to the proposal of common accounting software for all RPCs and requested NPC division, CEA to coordinate with other RPCs and take the matter forward for early implementation of the proposal submitted by ERPC secretariat.
- 3. TCC suggested to take up the standardisation of output as well as input formats and development of software should be taken up simultaneously for early implementation of the same.
- 4. TCC suggested that the development of the software may be funded through PSDF and also to explore funding through NTPC or any other option.

This is referred to ERPC meeting for further deliberation.

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 PUShP 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.

Deliberation in the 50th TCC Meeting

MS, NPC, CEA informed the following to the forum:

- 1. In the 13th NPC meeting, Chairperson, CEA advised the states for maximum utilization of the portal for reduction of cost of power by surrendering surplus power.
- 2. Bihar & Odisha are using PUShP portal but other states of Eastern region are not using the portal.
- 3. NPC division is writing letter to SERC's for advising the utilities to participate in the PUShP portal for optimization of the fixed cost by surrendering surplus power.
- 4. Since the implementation of this scheme of flexibilization PPAs, the Fixed Cost liability of beneficiaries have been reduced by around 1 Crore.

West Bengal representative informed that the surplus power is available in the portal mostly during solar hours when cheaper power is available in the market.

Odisha representative informed that there should be the provision for buy bid and right to recall for surrendering beneficiaries to incentivise the participation of states.

NTPC representative requested ER beneficiaries to participate in the URJA portal which was developed for availing power upto Technical Minimum at the Variable cost and keeping the units on bar.

After Detailed deliberation, TCC advised all the states of Eastern Region to actively participate in the PUShP portal for optimization of resources and flexibilization for PPAs for reduction of cost to the end consumers.

This is for information to ERPC.

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.

Deliberation in the 50th TCC Meeting

Representative of ERPC Secretariat highlighted the provision of constitution of Regional Disaster Management Group under Disaster Plan prepared by CEA and intimated that the same would be formed for Easter Region with the members as mentioned above.

TCC noted and referred to ERPC for information.

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 Itd, & 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 49th 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.

Deliberation in the 50th TCC Meeting

NHPC representative gave a brief presentation highlighting the details of upcoming hydro projects including its levelized tariff and likely date of commissioning. He also highlighted about under construction projects in Eastern Region.(PPT at Annexure-B5.1)

MS ERPC opined that sufficient hydro capacity is required for meeting peak hours requirement as well as for balancing of thermal and RE power integration. He suggested that separate study may be carried out to ascertain the optimal hydro power requirement for Eastern Region.

Odisha, DVC & West Bengal representative informed that they have already sent their consent to ERPC/CEA/MoP for availing power from upcoming hydro projects of NHPC.

After detailed deliberation the following was decided:

- 1. TCC requested Bihar, Jharkhand & Sikkim to give their consent for availing power from upcoming hydro projects of NHPC at the earliest to ERPC/CEA/MoP.
- 2. TCC requested ER constituents member to avail the hydro power for meeting peak hours requirement as well as the balancing of thermal and RE power in its portfolio.

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 1st 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
Bihar	5043	5043
DVC	956	956
Jharkhand	1110	1110
Odisha	2157	2157
Sikkim	111	111
West Bengal	3516	3516
Bangladesh	1000	1000
PG-HVDC-ER	2	2
Total	13895	13895

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 1st Apr & 30th 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.

Deliberation in the 50th TCC Meeting:

ERPC secretariat representative informed that as per Regulation 19 of GNA Regulations 2022, 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.

CTU representative informed that at present 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.

After detailed deliberation, the following was deliberated:

1. TCC requested all the STUs to plan accordingly and apply for additional GNA requirement on behalf of intra-State entities including distribution licensees for the next 3 financial years by September of every year.

2. TCC requested all the states to inform CTU/ERPC in case they are facing any constraint while export/import of power through ISTS lines, so that timely augmentation of transmission system at ISTS level may be planned accordingly.

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 15th 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
 - 2x125MVAr along with associated bays

- 400kV line bays: at least 6 no.
- 132kV line bays: at least 6 no.
- 1.3. In the 20th 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.

Deliberation in the 50th TCC Meeting

TCC agreed with the proposal of connectivity of proposed New Laxmikantapur substation through LILO of one circuit of Jeerat New -Subhashgram 400kV D/C (Quad) to be implemented as intrastate system. WBSETCL agreed to comply with connectivity as well as grid standard regulations of CEA and to ensure proper communication and protection systems for the LILO portion of the line.

The issue was referred to ERPC for concurrence so that the same may be referred to NCT for approval.

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
 - 220 kV Subhashgram (WB)-Kasba (WB) D/C
 - 220 kV Barasat (WB)-Kasba (WB) D/C

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

Deliberation in the 50th TCC Meeting

ERLDC representative made a brief presentation, as appended in the Annex-B8, addressing the imperative need for ensuring reliable and secure power supply within and around the Kolkata region.

It was underscored that the summer of 2023 witnessed an alarming fragility in the system, with overloading of ICTs of Subhasgram SS posing a grave risk to the reliable power supply to the Kolkata area. The urgency of immediate action was emphasized to meet the anticipated surge in city demand during the summer of 2024.

Further, ERLDC representative drew attention to the necessity for augmenting the capacity by a minimum of 350MVA at Subhasgram (PG) to attain a satisfactory 'N' condition. Furthermore, deliberations were held on the enhancement of the associated 220KV transmission lines of Subhasgram (PG) ahead of the summer of 2024.

In response, Powergrid presented a proposal for the installation of the 7th 500MVA ICT from the regional spare pool at Maithon. This proposition involves minor foundational modifications and the utilization of the secondary side 220KV Bay of Barauipur -1 to avoid delay due to bay construction. However, it was highlighted that the relocation of the existing 125MVAR Bus Reactor is prerequisite for the installation of the 7th ICT, necessitating its immediate recommissioning.

Member Secretary, ERPC raised apprehensions concerning the depletion of the regional pool attributed to the utilization of the spare only 500MVA ICT from regional pool and called for early replenishment with new spare.

WBSETCL stated that the establishment of the 400/132kV, 2x315MVA New Laxmikantpur LILO substation of WBSETCL is poised to relieve the loading burden by approximately 400MW from Subhasgram (PG) by 2025. This may result into underutilisation of proposed 500 MVA ICT of Subhashgram.

He further added that, 315MVA spare ICT of regional pool available at Malda may be explored instead of 500MVA spare ICT at Maithon.

POWERGRID raised concerns regarding the ageing of the spare 315MVA ICT in Malda, which already possesses a service history of 20-22 years, necessitating the need of residual life assessment for an informed decision. The timeline for the shifting, installation, and commissioning of the 500MVA Spare ICT at Maithon was estimated at 5-6 months, while the same for the 315MVA Spare ICT in Malda was anticipated to be 4-5 months.

Furthermore, POWERGRID was requested to share the final cost estimates for the shifting, installation, and commissioning of both ICTs separately, thereby paving the way for the conclusive modalities of cost-sharing between WB and CESC.

SLDC WB also highlighted the need to expedite the issuance of the Letter of Award (LOA) for the 6th ICT meant for CESC, crucial for its timely installation before the summer of 2025.

TCC forum advised POWERGRID to expeditiously furnish the final cost estimates and it was agreed to organize a meeting involving ERPC, ERLDC, PG, SLDC WB, WBSETCL and CESC, with the aim of collectively deciding the modalities of cost-sharing by the end of August 2023.

Further, TCC agreed to utilize the regional spare either 500 MVA located at Maithon or 315 MVA located at Malda, and it needs to be immediately moved to Subhasgram for commissioning and installation once the final decision is taken post consultation between WB and CESC.

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

- 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.

Deliberation in the 50th TCC Meeting

ERPC secretariat briefly explained the scheme as received from CTU.

On a query from CTU regarding implementation of the scheme, Odisha representative informed that based on the requirement received from various industries, the scheme has been envisaged to meet RE power demand of Green Hydrogen & Green Ammonia Industries at Gopalpur. They stated that the implementation process may be initiated and

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subsequently they would take up with the industries for submission of connectivity/GNA application for the required quantum.

TCC agreed to the above proposal of transmission scheme to be implemented under ISTS system and opined that the implementation of the scheme may be taken up delinking it with the receipt of connectivity/GNA applications from the industries and requested Odisha to obtain the connectivity/GNA application from the industries.

TCC referred the issue to ERPC for concurrence.

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 intrastate 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.

Deliberation in the 50th TCC Meeting

The suggestion of NCT on various aspects of LILO of 765 kV Anugul-Paradip D/C line by OPTCL for its 765 kV S/s of Duburi was deliberated as follows:

Regarding operational issue, Odisha representative submitted that there is no such operational issues associated with the proposed scheme. He stated that the matter was already discussed in CMETS meeting and it was opined that the scheme may be implemented as per the given proposal. They clarified that they would take all the necessary measures and extend necessary cooperation for resolving any operational issues if arises in future. OPTCL submitted that they would comply with CEA grid standard and connectivity rules and would ensure proper communication and protection systems for the LILO part of the line.

Regarding capacity utilisation of main ISTS to cater intrastate demand at Duburi, the forum viewed that OPTCL is going to implement 765 kV Kolabira-Duburi D/C line under intrastate system to meet their demand at Duburi. The proposed 765 kV Kolabira-Duburi line would also provide a alternate path for meeting the demand at Paradip.

With above observations, TCC recommended the proposal of OPTCL for LILO of 765 kV Angul-Paradip D/C line at Duburi S/s under intrastate system.

The matter was referred to ERPC for concurrence.

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.

Deliberation in the 50th TCC Meeting

The matter regarding dismantling and scraping of line section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC as part of the scheme to control fault level at Ranchi S/s was deliberated and TCC agreed with the proposal of deducting the scrap value from final cost of the scheme which is to be implemented by ISTS licensee.

TCC referred the issue to ERPC for approval.

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:

SI. 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:

SI. 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 204th 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,400/220 KV Biharsarif S/s and 400/220 KV Jamshedpur S/S,400/220 KV Biharsarif S/s and 400/220 KV Jamshedpur S/S,400/220 KV Biharsarif S/s and 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 49th 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.

Deliberation in the 50th TCC Meeting

The item wise cost details for renovation of control rooms of 400/220 kV Substations and 400/220 kV Jamshedpur S/s, as updated by representative of Powergrid, are given below:

For Biharsharif S/s:

Description	Supply	Erection	Total (INR)
Relay Panels (With Automation)	2,23,54,948.00	1,73,040.00	2,25,27,988.00

Complete Substation Automation System/Augmentation substation Automation system including hardware and software	96,43,101.00	82,147.00	97,25,248.00
Power & Control Cables	2,86,57,674.00	29,51,598.00	3,16,09,272.00
Kisok, Civil works, Earthmat & other Misc	39,13,570.00	97,35,201.25	1,36,48,771.25
Sub Total	6,45,69,293.00	1,29,41,986.25	7,75,11,279.25
F&I @8%			51,65,543.44
Mandatory Spare			0.00
Total	8,26,76,822.69		
Total incld. GST	9,75,58,650.77		

For Jamshedpur S/s:

Description	Supply	Erection	Total (INR)
Relay Panels (With Automation)	2,43,55,179.00	1,90,535.00	2,45,45,714.00
Complete Substation Automation system/Augmentation substation Automation system including hardware and software	1,03,84,878.00	88,466.00	1,04,73,344.00
Power & Control Cables	2,89,30,659.00	30,02,005.00	3,19,32,664.00
Kisok, Civil works, Earthmat & other Misc	48,96,875.00	96,06,401.25	1,45,03,276.25
Sub Total	6,85,67,591.00	1,28,87,407.25	8,14,54,998.25
F&I @8%			54,85,407.28
Mandatory Spare			9,67,487.00
Total	8,79,07,892.53		
Total incld. GST	10,37,31,313.19		

TCC accorded the above proposal and referred ERPC for approval.

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:

Sr. No	Asset Detail	Year of Commissioning
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, 4002/220 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 arching 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 49th CCM, after deliberation, CCM agreed and referred to upcoming TCC/ERPC for approval.

Powergrid may explain. TCC may approve.

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Deliberation in the 50th TCC Meeting

TCC agreed with the proposal for replacement of 15 nos. BHEL make Circuit Breakers at a cost of Rs Rs.7.81 Cr(approx.) and referred to ERPC for further approval.

ITEM NO. B14: Provisioning of Switchable feature in upcoming Kahalgaon-I LR at Maithon S/s

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 Ω 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 49th 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.

Deliberation in the 50th TCC Meeting

TCC approved the proposal for provisioning of Switchable feature in upcoming Kahalgaon-I LR at Maithon S/s.

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.

SL	PROJECT NAME	LOA/PO Details	Cost	Remarks
NO			Involvement	
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
02.	AMR Phase-3 (Balance amount from 01.03.19 to 30.06.22)	ER-II/KOL/CS/I-1358/P- 1398 Dated: 27-Oct-2016. ER-II/KOL/CS/I-1358/P- 1398/ AMEND-III/442. Dated: 10-Jul-2018 (SAP PO- 5100014415).	39,87,747/-	to 28.02.2019). Balance 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.

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

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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/-	
10.	Mobile data for AMR	SAP PO- 5200037273	1,91,054/-	For AMR data
11.	Mobile data for AMR	SAP PO-5200054713	2,57,832/-	transmission through
12.	Mobile data for AMR	SAP PO-5200054715	2,05,724/-	GPRS.
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.

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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.

Deliberation in the 50th TCC Meeting

Powergrid updated the followings:

- Details cost expenditure up to June-2023 (Last quarter ended) is Rs. 6,01,20,823/ The detail sheet is attached at Annexure B1.11. The earlier proposed value was expenditure upto 15.07.2023, but as the auditor certificate issued on quarter basis, the expenditure calculation has been restricted up to June-23 only.
- *II.* All cost of TCS & Airtel applicable upto June-23 is attached.
- III. Consultancy charges @15% are standard for Powergrid and in 30th ERPC the same has been recovered earlier. The same methodology applied in the instant case also.
- IV. Powergrid will further submit auditor certificate for actual billing purpose. For sharing of total cost, they requested to consider LTA ratio of last month, i.e, July-2023.

TCC accorded the above expenditure of Rs. 6,01,20,823/- and referred it to ERPC for approval.

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.

Deliberation in the 50th TCC Meeting

TCC 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 and referred to ERPC for further approval.

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

In 204th 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.

Deliberation in the 50th TCC Meeting

Jharkhand representative infomred that the line is expected to be restored by March 2024.

B. 132 kV Sagbari-Melli line

The line is under outage since last four years.

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

Sikkim may update.

Deliberation in the 50th TCC Meeting

Sikkim representive informed that 132KV Sagbari_Melli is ready for charging. Problem has arised at Sagbari SS where Circuit breaker is not working. New circuit breaker has been ordered, factory visit shall be done soon. After installation of new CB, line shall be charged.

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

Bhutan was issued with the reactive energy charges from 3rd to 30th 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)

SI. 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 drawal 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

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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.

Deliberation in the 50th TCC Meeting

After detailed deliberation, the following was decided:

- 1. TCC advised ERPC secretariat to consider the remaining two lines namely, 400kV line from Malbase Binaguri and 220kV line from Malbase Birpara for reactive Energy Accounting of Bhutan for the period from 03.04.2023 to 30.04.2023 and revise the Reactive Charges account accordingly.
- 2. On the issue of consideration of line lengths at the respective end, and voltage profiles of both the ends while calculating Reactive accounting, TCC advised to take up the issue in the Operation Co-ordination Committee of India and Bhutan.

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), Gol 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 43rd Commercial Sub-Committee Meeting (CCM) of ERPC held on September 21, 2020, PTC India informed that the matter was taken up with MoP, Gol 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 47th 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 49th 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.

Deliberation in the 50th TCC Meeting

PTC representative informed the forum that the issue has already been discussed in highest level of Government of India i.e. Ministry of External Affair. TCC advised PTC to expedite the issue.

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:

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

Sikkim:

	Sikkim
DSM (in Cr)	₹ 23.85 Cr /-
Reactive (in Cr)	-
Fees and Charges	₹ 8.63 Lakhs /-
LC	No Valid LC
Due date of expiry of LC	NA
	DSM: Pending from Q2 of FY 2019-20
Reconciliation	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 49th 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.

Deliberation in the 50th TCC Meeting

TCC advised all the defaulting constituents to clear their outstandaing dues at the earliest.

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.

Deliberation in the 50th TCC Meeting

TCC advised all the defaulting constituents to clear their outstandaing dues at the earliest.

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

TCC may discuss.

Deliberation in the 50th TCC Meeting

TCC advised all the defaulting constituents to open requisite amount of LC as per the prevailing DSM regulation at the earliest.

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 (NBPDCL)	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	

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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.

Deliberation in the 50th TCC Meeting

TCC advised all the defaulting constituents to open requisite amount of LC as per the prevailing regulation.

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 (NBPDCL)	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
	Total	628.61	341.62

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

Deliberation in the 50th TCC Meeting

TCC advised all the concerned utilities 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	
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(i) West Bengal State Elect Distribution Company (WBSEDCL)	tricity 9.76 Cr. Ltd.	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.
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In 49th CCM, all the concerned utilities were advised to clear their outstanding dues at the earliest.

WBSEDCL may update.

Deliberation in the 50th TCC Meeting

TCC advised all the concerned utilities to clear their outstanding dues at the earliest.

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 204th 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.

Deliberation in the 50th TCC Meeting

TCC approved the above proposal refered by OCC forum.

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:

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)

REPORTING REQUIREMENTS

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

stakeholder consultation.

S.	Entity	Drafting	Timeline to	Regulation No.
No.	Responsible	Responsibilities	submit toCommission from date ofnotification of these regulations	
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 updated every year	Operating Code: Regulation No. 34 (1)

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.

Deliberation in the 50th TCC Meeting

TCC noted.

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 49th 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.

Deliberation in the 50th TCC Meeting

CTUIL representative infomed that they are providing information as per the account issued.

On query, GRIDCO representative informed that they have not received data in consolidated format and requested for the data in respect of Entity wise total billing of Transmission Deviation, Entity wise total collection of Transmission Deviation charges and first bill of each entity in a single excel sheet and also requested for supporting documents such as block wise STOA energy for bilateral and collective transactions, STOA rates blockwise, applicant details block wise, total all India collection towards STOA, pending STOA amount adjustment against intra-State entities and untied LTA adjustment.

After detailed deliberation, TCC advised the following:

- 1. All the relevant data pertaining to distribution of STOA charges and consolidated Transmission deviation charges should be made available to the DICs by the concerned agencies like CTUIL/NLDC/RLDCs.
- 2. Further, advised CTUIL/NLDC/RLDCs to upload all the relevant data in their website.

ITEM NO. B25: Sharing of Transmission cost of Raigarh-Pugalur-Trissur HVDC Transmission System—Agenda by GRIDCO

+/- 800kV, 6000MW Raigarh-Pugalur-Trissur HVDC Transmission System has been planned to facilitate Power flow between Chhattisgarh (WR) and Kerala (SR). Due to bi-directional power flow in the Transmission System, it is beneficial for both WR and SR constituents. The HVDC Transmission System has been commissioned from Sept 2020 – Oct 2021.

MoP, Gol vide letter dated 30.05.2022 has requested CERC to consider the Transmission Charges of the above System under NC (National Component) while determining the Tariff of

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the said HVDC Transmission System as per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (Sharing Regulations, 2020, in short). CERC vide order dated 29.09.2022 in Petition No. 685/TT/2020 has directed that, 30% of YTC (Yearly Transmission Charges) shall be under NC and 70% of YTC under RC (Regional Component). The National component shall be shared by all the beneficiaries of the Nation as per the Sharing Regulations, 2020. However, the above order of CERC was challenged by Tamil Nadu before APTEL in Appeal No. 433 of 2022. APTEL vide order dated 18.07.2023 has set aside the Order of CERC and directed to pass fresh order considering the letter dated 30.05.2022 of MoP. Extract of APTEL order:

' XXXXX

33. We, therefore, find it appropriate to set aside the Impugned Order and direct the Central Commission to pass fresh order in the light of the observations recorded in the foregoing paragraphs and also duly consulting the statutory authorities i.e. CEA, CTU and POSOCO in the matter and also considering the aforementioned MoP's letter dated 30.05.2022. xxxxx '

It may be noted that the ER constituents were not impleaded neither in the Petition filed by PGCIL nor in the Appeal filed by Tamil Nadu.

The above HVDC System (Length of Line is about 1838 Km) has been implemented by PGCIL with a huge investment of about 20,000 Crore, as per the statement of the Appellant (Tamil Nadu) in the above APTEL Order. If the HVDC System shall be treated under NC, the constituents of ER shall have to bear Transmission Charges, as shown in **Annexure**-B1.14. For Odisha the impact shall be roughly about Rs. 2 Crore/month. On the contrary, if 30% of Transmission Tariff of the above HVDC system shall be treated under NC and 70% under RC, the Transmission Charges to be recovered from the constituents of ER, are also shown in the attached **Annexure**. In that case Odisha has to bear Rs. 0.6 Crore/month (approx).

Since SR and WR constituents are the beneficiaries of the above HVDC System, it is requested that the Transmission Charges be shared between the beneficiaries of these two Regions only.

Deliberation in the 50th TCC Meeting

GRIDCO representative explained the matter in brief. He informed that ER constituents have to bear additional transmission charges if the YTC of the above project will be considered under national component. Further they informed that ER constituents were not impleaded neither in the Petition filed by PGCIL nor in the Appeal filed by Tamil Nadu.

TCC referred the issue to ERPC for further discussion.

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. 00:00hts of 01.03.2023.

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

SI. No	Name of Central	Installed	Allocation	
	Generating Stations	Capacity (MW)	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 percentagewise., 12%. The allocation share percentage for Rangit & Teesta-V till 16th 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 17th 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/Comml-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 49th 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.

Deliberation in the 50th TCC Meeting

TCC noted.

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.

Deliberation in the 50th TCC Meeting

TCC noted.

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 <u>https://erldc.in/market-operation/dsmreconcilation/</u>. 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 49th CCM, all the constituents were advised to sign the reconciliation statement at the earliest.

Deliberation in the 50th TCC Meeting

TCC noted.

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 49th 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-C4.2.

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

TCC may note.

Deliberation in the 50th TCC Meeting

TCC noted.

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 <u>https://fc.posoco.in/FnCWeb/#/landing</u>. 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.

Deliberation in the 50th TCC Meeting

TCC noted.

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

On 191st OCC & 46th 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 200th OCC meeting.

TCC may note.

Deliberation in the 50th TCC Meeting

TCC noted.

ITEM NO. C7: Approval for 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

Copy of Investment approval attached is enclosed as Annexure-C7.1.

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)

Copy of NOA is enclosed as Annexure – C7.2.

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-C7.3**.

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.

Deliberation in the 50th TCC Meeting

TCC noted.

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 45th 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 49th CCM, NTPC representative infomed 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.

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TCC may note.

Deliberation in the 50th TCC Meeting

TCC noted.

ITEM NO. C9: Methodology of 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.

Deliberation in the 50th TCC Meeting

Powergrid representative has submitted the followings:

- 1. POWERGRID took up the work for OPGW Installation on Transmission Lines owned by IPPs upon request of ERLDC and upon assurance of providing necessary work front and ROW by concerned utilities/Generating stations.
- 2. The same was discussed at length in 38th ERPC meeting in June 2018, wherein ERPC forum decided that the necessary work front and ROW resolution shall be provided to Power Grid by concerned utility/generating station and subsequent O&M of the opgw links shall be in scope of respective utilities.

- 3. Upon such assurances, POWERGRID took up the work for OPGW installation on Teesta III-Kishanganj TL owned by M/s TPTL for which LOA was awarded in Sept'2018. However, severe ROW was faced at various locations in Kishanganj, Darjeeling, South Sikkim area. The predominant reasons for ROW was public complaint over compensation related issues and induction related problems due to low clearance of conductor. Apart from this there had been many instances of non-receiving of PTW/late issuance of PTW. All the aforementionedissues lead to delay in OPGW installation work which have been duly recorded in 3rd to 12th TeST Meetings Minutes.
- 4. Since the scope of ROW resolution for OPGW Installation work on IPP TLs had already been decided and settled by ERPC forum and only upon such assurance POWERGRID took up the task for OPGW installation on such TLs, it would be unethical and unjust on part of concerned TL owner to unilaterally challenge the terms of understanding evolved and agreed for above work, thereby causing disrespect to the decision taken by ERPC forum.
- 5. Despite multiple challenges as mentioned above POWERGRID has completed 205 km out of 215 km. The remaining 10 km is kept on hold due to non-availability of PTW (on account of High Hydro) and shall be taken up after Oct,2023 as mentioned in 204th OCC meeting. However, it is noteworthy to mention here that POWERGRID is undertaking above work only for better SCADA data reporting of Teesta-III HEP at ERLDC and shall have no real value addition to its existing communication equipment nodes. Further, it must be appreciated that POWERGRID has toiled hard and put in serious effort to complete the OPGW installation work on Teesta III-Kishanganj TL despite spiralling IDC & IEDC charges incurred due to delay in project due to ROW and PTW issues. Therefore, end beneficiaries may extend necessary co-operation and assistance as already decided by ERPC forum in 38th ERPC meeting.

TCC noted and advised Powergrid & TPTL to resolve the issue bilateraly.

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:

<u>400KV</u>

- 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

<u>220KV</u>

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

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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:

SI. 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	1 no. 160MVA, 220/132kV ICT at 400/220/132kV Daltonganj SS	Completed	06.07.2023
5	1 no. 160 MVA, 220/132kV ICT at 400/220/132kV Baripada SS	Completed	31.03.2023

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.

Deliberation in the 50th TCC Meeting

TCC noted.

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

Α	Provision of Spare ICTs in Eastern Region	DOCO	Remarks	Region
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	DOCO 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	DOCO Letter Dtd. 10.07.2023	ER-I
в	Baharampur (POWERGRID)- Bheramara (Bangladesh) 2 nd 400 kV D/C Transmission Line (Indian Portion)	DOCO	Remarks	Region
1	Baharampur (POWERGRID)- Bheramara (Bangladesh) 2 nd 400 kV D/C Transmission Line (Indian Portion) and associated bays at Baharampur S/S	27-07-2020	DOCO Letter Dtd. 13.04.2023	ER-II
С	ERES XXVI	DOCO	Remarks	Region

1	1x500 MVA, 400/220kV 3rd ICT along with associated bays at Ranchi (PG) S/s.			
2	400 kV Transformer Bays- 01 No.	01-06-2023	DOCO Letter Dtd. 01.06.2023	ER-I
3	220 kV Transformer Bays- 01No.			
D	Package-I: Eastern Region Fibre Optic Expansion Project (Additional Requirement)	DOCO	Remarks	Region
	Maithan DB Danahi (ODC)// 100 Km CDU			
1	02 nos	19-06-2021		
1 2	Barh-Gorakhpur (OPGW-353.017 Km, SDH- - 02 nos., DCPS-01 no.)	19-06-2021 12-10-2022	DOCO Letter Dtd.	ER-I

Deliberation in the 50th TCC Meeting

TCC noted.

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

- 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, where Time of Day Tariff for commercial and Industrial consumers having maximum demand more than ten Kilowatt 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.

Deliberation in the 50th TCC Meeting

ERPC Secretarait representative informed that in the 13th NPC meeting held on 05th July 2023 the following were approved/decided:

- 1. The SOPs for Protection System Audit to be followed by RPCs.
- 2. RPCs may prepare an annual calendar for conducting the protection system audits as per SOP and conduct audit regularly.
- **3.** Other SOPs (Communication outage, Grid disturbance analysis and communication audit for S/s) may be finalised by RPCs/NPC in subgroups at NPC levels.
- 4. Periodicity of conducting Cyber Security Audits -6 months for IT audit and 1 year for OT audit to be followed.
- 5. The procedure for PSS tuning was approved.
- 6. The report of the Sub-committee on 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 was approved by the Committee.

TCC noted.

Annexure-A

Attendance sheet of 50th TCC Meeting

SI.No.	Name	Designation	Organization Name	Mobile No.	Email ID	Signatur
1	 Shubhang Nandan 	Head Powersales & Regulatory	JITPL	9931842606	head.powersales@Jindalgroup.com	Signature
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33	Deepak Kumar Rawat	SM (E)	NHPC	9818392423	devanaton hpc	in Kuch'
34	Vinod Kumar	OSD to CMD	BSPHCL	7763815045		1
25	Abbiiit Kumar	CE, PMC	BSPHCL	7763813825	achiziet to 6000 000	w.d
55	, Whije Release IAS	MD BSPTCL	BSPTCL	7763817700	0	0
36	Dr. Aditya Prakasii, 145	MD, 00, 101		7762916742	rk bsptcl@gmail.com	by
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57 	Rita Chakraborty	C.E., SLDC	WBSETCL	9434910030	ce.wbsldc@gmail.com	, Py
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59	B B Mehta	Director	SLDC Odisha	9438907008		

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63	Younten Jamtsho	Associate Director and Head of Plar	DGFCL	00010 110002 1		Konstellel	1
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Annexure-B1.1



Operational Study RGMO to FGMO Inertia **Compliance monitoring** Paving path for decarbonization **Confusion to clarity IEGC 2023 Reliability first 10 chapters, 7 Annexures** SCUC **Experience to codification Interconnection Study Planning continuum**

CONNECTION CODE

Interconnection studies; new power system elements <u>six months in advance CL.10.(1)</u>:

Purpose

Data submission

Why

> Impact of TTC/ATC

IdentifyConstraint

Design
 SPS/corrective
 action if required
 for grid security

USERS & CONNECTIVITY GRANTEE

- Generation Entity
- Load Serving Entity
- > Transmission Licensee
- Settlement Nodal Agency

Data to be submitted to SLDC, RLDC or NLDC



Consultation with RLDCs/SLDCs/NLDC/STU & CTU

OPERATING CODE

Defence Mechanism



OPERATING CODE Operational Planning

Input from		TIMELINE FOR DEN	/IAND ESTIMATION(32.2.(h))
STU forecast	Daily	demand estimation	10:00 hours of previous day
for short	Week	kly demand estimation	First working day of previous week
resource adequacy	Montestim	hly demand ation	Fifth day of previous month
	Yearly	y demand estimation	30 th September of the previous year
Outage		Forecasting erro	r to be uploaded in website
Plan Demand		TTC calculation 11 month ahead on rolling basis by SLDC/RLDC/NLDC	Release of T-GNA Margin
forecast			

OPERATING CODE

Operational Planning



COMMISSIONING AND COMMERCIAL OPERATION CODE

Generating plant

- 1. Infirm injection period increased to one year from sixmonth CL.19.(2)
- 2. AGC connectivity mandatory CL.24.2
 - Thermal-200 MW and above
 - ➢ Hydro-25 MW and above
- 3. primary response test, reactive capability, black start, ramping, 55% of MCR operation etc testing based on technology. **CL.24**
- 4. Scheduling of the generating station From 00:00 hrs. of D+2 ,where D is COD date CL.27.(1)

Transmission

1. Notice period of 7 days for trial operation CL.21.(2)

SCHEDULING AND DESPATCH CODE



SCHEDULING AND DESPATCH CODE

Scheduling from alternate source by Generator



SCHEDULING AND DESPATCH CODE

Security Constrained Unit Commitment (SCUC)

Commit generating station or unit (scheduled below min. turndown level) for **reserve maximization** in interest of grid security **on D-1 basis**. If needed NLDC can carry out SCUC in D-3 basis.

Incremental schedule from gen. under min. turndown level cl.46.4.d



Equivalent reduction in SCED generators till min. turndown level Power reserved in SCUC gen.- Can't be recalled or sold in market

Cl.46.4.e

Downward revision not allowed for SCUC gen. brought upto min. turndown level

PROTECTION CODE

User

◆ Third party audit every 5 year or after event based on RPC recommendation CL.15.(4)
 ◆ Sharing of protection performance index on monthly basis: CL.15.(6)
 ✓ The Dependability Index defined as D = NC / NC+Nf
 ✓ The Security Index defined as S = NC / NC+NI
 ✓ The Reliability Index defined as R = NC / NC+NI

Nc – No. correct operations at internal power system faults Ni – No. incorrect operations and is the sum of Nf and Nu Nf –No. failures to operate at internal power system faults Nu –No. unwanted operations Protection system performance of all users to be monitored at Regional level
MONITORING AND COMPLIANCE CODE



CYBER SECURITY

Measures to be taken to safeguard the GRID from CYBER ATTACKS

A chapter on Cyber Security has been introduced for the first time in IEGC.



RESOURCE PLANNING CODE

"<u>Resource Adequacy</u> means tying up sufficient capacity to reliably serve expected demand of the consumers in the DISCOMs license area in a cost-effective manner."- Guidelines For Resource Adequacy Planning Framework For India, CEA



Annexure-B1.2

CERC(IEGC) Regulation 2023

By: S K Pradhan, Deputy Director, ERPC, MoP, Govt of India, M: 8249244719

PROTECTION CODE

- RPC shall develop/review/revise the protection protocol in consultation with the stakeholders in the concerned region
- PRPCs shall undertake review of the protection settings, assess the requirement of revisions in protection settings and revise protection settings in consultation with the stakeholders of the respective region
- RPC shall carry out detailed system studies for protection settings & changes, if any and inform CTU/STU/Users : Once a year
- The changes in the network and protection settings of grid elements connected to 220kV and above (132 kV and above in NER) shall be informed to RPCs by CTU and STUs, as the case may be.
- The elements of network below 66kV and radial in nature which do not impact the National Grid may be excluded as finalized by the respective RPC.
- The disturbance recorders shall have time synchronization and a standard format for recording analogue and digital signals which shall be included in the guidelines issued by the respective RPCs.

Commissioning Code

The COD of a transmission element of the transmission system under Tariff Based Competitive Bidding shall be declared only after the declaration of the COD of all the pre-required transmission elements as per the Transmission Services Agreement:

Provided that in case any transmission element is required in the interest of the power system as certified by the concerned RPC(s), the COD of the said transmission element may be prior to the declaration of the COD of its prerequired transmission elements.

Operating Code

- Power System Stabilizers (PSSs), AVRs of generating units and reactive power controllers shall be properly tuned by the generating station as per the plan and the procedure prepared by the concerned RPC
- RPCs shall prepare the islanding schemes in accordance with the CEA Grid Standards for identified generating stations, cities and locations and ensure their implementation.
- All users, CTU and STUs, licensees shall follow the annual outage plan. If any deviation is required, the same shall be allowed only with the prior permission of the concerned RPC, which shall consult the concerned RLDC and NLDC.
- Operation planning study by RPC for monthly/yearly basis for various operating conditions using offline tools.
- The deviations, from operational planning study reccommondations shall be reviewed in the monthly operational meeting of RPC and significant deviations shall be monitored by RPC for early resolution.
- Defense mechanisms like system protection scheme, load-rejection scheme, generation run-back, islanding scheme or any other scheme for system security shall be proposed by the concerned user or SLDC or RLDC or NLDC and shall be deployed as finalized by the respective RPC.

Scheduling Jurisdiction of DVC

- Generating stations of DVC which are connected to the transmission lines of inter-State transmission licensees including those owned and operated by DVC which are included in MTC under the Sharing Regulations shall be under control area jurisdiction of RLDC;
- Generating stations which are exclusively connected to the transmission system owned and controlled by DVC but are not included in MTC under Sharing Regulations shall be under control area jurisdiction of DVC LDC.
- Generating stations which are connected to transmission system covered under both sub-clause (i) and (ii), shall be within the jurisdiction of RLDC if more than or equal to 50% of the quantum of connectivity is with transmission system covered under sub-clause (i) of this clause and in other cases will be under the control area of jurisdiction of DVC LDC.

Declaration of Declared Capacity

- a. high inflow period shall be notified by the respective RPC for Hydro Generating station. 10% overload capability.
- b. RLDC may ask each generating station except WS seller to demonstrate the declared capacity.

For mis-declaration of DC, charges shall be levied on the generating station by RPC as follows:

first mis-declaration for a block or multiple blocks in a day shall be the charges corresponding to two days' fixed charges at normative availability and for subsequent mis-declarations, the charges shall increase in a geometric progression over a period of a month.

Part Load Compensation

Regional entity thermal generating stations whose tariffs under Sec 62 or Sec 63 of the Act, shall be compensated for part load operation.

Drawal of Power during Non Generation hours & Start up Power prior to CoD

- A generating station, including renewable energy generating station, shall enter into a valid contract with a seller or distribution licensee or through power exchange:
- Provided that where the generating station including a renewable energy generating station is unable to enter into a contract for the drawal of power during non-generation hours, it may draw power from ISTS on payment of deviation charges as per the DSM Regulations

Provision Related to SCUC & USD

- After 1430 Hrs (D-1day), NLDC prepare the list of such generating units that are likely to go below their minimum turndown level & stacked generating units as per merit order. generating units so identified shall be considered for undertaking SCUC
- In order to maintain load generation balance consequent to scheduling of incremental generation, the NLDC in coordination with RLDCs, shall make commensurate reduction in generation from the on-bar generating station(s),
- The generating station from which incremental energy has been scheduled shall be paid from the Deviation and Ancillary Services Pool Account, and the generating station from which reduction in generation has been directed shall pay back to the Deviation and Ancillary Services Pool Account.
- Compensation for part load operation of a generating station or unit thereof brought on bar under SCUC shall be paid from the Deviation and Ancillary Services Pool Account.
- URS of generating stations or units brought on bar under SCUC shall be deemed to available under SRAS & TRAS.

Provision Related to SCUC & USD

In case a generating station, or unit thereof, opts to go under unit shut down (USD), the generating company owning such generating station or unit thereof shall fulfil its obligation to supply electricity to its beneficiaries who had made requisition from the said generating station prior to it going under USD, by entering into a contract(s) covered under the Power Market Regulation or by arranging supply from any other generating station or unit thereof owned by such generating company subject to honouring of rights of the original beneficiaries of the said generating station or unit thereof from which supply is arranged.

Scheduling & Despatch Code

- (13) Inspection of Records:
- The operational logs and records of the regional entity generating stations and interState transmission licensees shall be available for inspection and review by the RLDCs and RPCs.
- (14) Oversight of Injection and Drawal:
- NLDC or RLDC, as the case may be, shall periodically review the over drawal from or under injection into the grid. In case of persistent over drawal or under injection, the matter shall be reported to the RPC and the Commission for necessary action.

Grid disturbance of category GD-5:

Energy and deviation settlement for the period of such grid disturbance causing disruption in injection or drawal of power shall be done by the concerned RPC(s).

Reactive Power Compensation:

- Reactive power compensation should ideally be provided locally, by generating reactive power as close to the reactive power consumption as possible.
- The charge for VArh shall be at the rate of 5 paise/kVArh w.e.f. the date of effect of these regulations. This rate shall be escalated at 0.5paise/kVArh per year thereafter, unless otherwise revised.
- RPC Secretariat shall also issue the weekly statement for VAR charges, to all regional entities.

Energy Metering and Accounting

CTU

- Responsible for procurement and installation of IEMs, at the cost of respective entity, at all the ISTS interface points, points of connections between the regional entities, cross border entities.
- Responsible for replacement of faulty meters.

Regional Entity:

- operation and periodic calibration.
- monitoring the healthiness of the CT and PT inputs to the meters.
- monitoring and ensuring that the time drift of IEMs

RLDC

- Shall, based on the IEM readings, compute time block wise actual net injection and drawal of regional entities and cross border entities within their control area.
- Forward the IEM readings and the implemented schedule to the concerned RPC on a weekly basis

ACCOUNTING AND POOL SETTLEMENT SYSTEM

RPC

- Prepare and issue the various accounts such as DSM, reactive charges, congestion charges, ancillary services, SCED, heat rate compensation charges, and regional transmission deviation
- Settlement system shall be transparent, robust, scale-able (multi buyer/seller, interconnection with lower and upper pool systems) and dispute-free with integrity and probity and usage of state of the art techniques
- ▶ RPCs shall **standardise** the formats of various accounts.
- Energy Accounts inter-alia shall indicate Declared Capability of generating stations, Entitlements, Requisitions, Scheduled loss, Scheduled transactions GNA and T-GNA and actual Interchange, Reactive Power Accounts, SCED scheduled energy and any other accounts.
- **Assumptions**, if any, in the accounts shall be clearly stated in **Notes to the Accounts**.
- Each regional entity (whether generator, RE Generator, QCA, captive Power Plant, OA customer connected at ISTS) in a region shall be a member of the regional pool.

CYBER SECURITY COORDINATION FORUM:

(1) The sectoral CERT (Computer Emergency Response Team) for wings of power sector, as notified by Government of India, from time to time, shall form a Cyber Security Coordination Forum with members from all concerned utilities and other statutory agencies to coordinate and deliberate on the cyber security challenges and gaps at appropriate level. A sub-committee of the same shall be formed at the regional level.

Action: RPC shall constitute the Sub-Committee at Regional Level.

MONITORING AND COMPLIANCE:

- The Regional Power Committee (RPC) in the region shall also continuously monitor the instances of non-compliance of the provisions of these regulations and endeavor to sort out all operational issues and deliberate on the ways in which such cases of non-compliance shall be prevented in future. The Member Secretary of respective RPCs may also report any unresolved issues to the Commission.
- RPC shall undertake a monthly review of the UFR and df/dt scheme and also carry out random inspection of the under-frequency relays. RPC shall publish such a monthly review along with an exception report on its website.
- Publishing draft/final LGBR and draft/final outage plan of regional grid for next financial year on the concerned RPC's website for inviting suggestions, comments, objections of stakeholders by 30th November/31st December.

Reporting Requirement

Entity Responsible	Drafting Responsibilities	Timeline to submit to Commission from date of notification of these regulations	
RPC	Exception report of UFR (monthly)	Periodical	
	Annual outage plan		
	All India LGBR		
	Feedback Report to address potential violation of system	Quarterly	

PROCEDURE TO BE SUBMITTED FOR INFORMATION OF THE CENTRAL COMMISSION, AFTER PREPARATION AND DUE STAKEHOLDER CONSULTATION

Entity Responsible	Drafting Responsibilities	Timeline to submit to Commission from date of notification of these regulations	
RPC	Tuning procedure for Power System Stabilizers, AVRs of generating units and reactive power controllers	60 days	
	Common outage planning procedure	60 days	

Thank You

Control area jurisdiction of DVC Generators

clause No-43(9) of chapter 7 in IEGC

Provisions of IEGC-2010

- Scheduling Jurisdiction of Gen. Stn. having **Dual** Connectivity:
 - Share Allocation > 50% to own state SLDC else RLDC.
- DVC Stations having Allocation more than 50% -- Still Scheduled by SLDC/ CLD.
- Exception allowed against
- i) MoM of Special Meeting Between ERPC, ERLDC & DVC Dtd. 09-07-2012
- ii) Discussions of 75th OCC Agenda of ERPC

Provisions of IEGC-2023

 Separate provision made for DVC generators – Not published in the Draft notification.

- Jurisdiction based on Quantum of Connectivity of Generators for Dual Connectivity
- Connectivity with ISTS > 50% -- RLDC Jurisdiction else SLDC

Issues i.r.o DVC

- Vertically integrated system ----no separate DISCOM.
- STU connectivity of generating projects were undertaken later
- No valid PPA ---- DVC Generator and Firm Consumers.
- Firm consumer tariff ---2 different SERCs (WBERC and JSERC)
- No station specific PPA with Bangladesh. ---300 MW contract between DVC pool and Bangladesh.

Submission

- DVC is in the process of Unbundling.
- At least 2/3 years' time line required to complete the Unbundling process. Accordingly DVC Act has to be amended.
- TCC may allow DVC to continue the present mode of scheduling till Unbundling of DVC.

<u>PROPOSAL FOR "UNIFIED NATIONAL ACCOUNTING SOFTWARE FOR REGIONAL</u> <u>POWER COMMITTEES (UNASR)"</u>

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:

Regulation	Clause	
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, <u>shall prepare monthly Regional Energy Account</u> , <u>weekly</u> <u>unscheduled interchange account</u> , <u>reactive energy account and congestion</u> <u>charge account</u> , 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"	

Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2022;	"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 <u>Regional Power</u> <u>Committee shall prepare and issue the statement of charges for deviation</u> <u>prepared for the previous week, to all regional entities by ensuing Tuesday</u> Provided that transaction-wise DSM accounting for intra-State entities shall not be carried out at the regional level. (3) <u>Separate books of accounts shall be</u> <u>maintained for the principal component and interest component of charges</u> <u>for deviation by the Secretariat of the Regional Power</u> Committees. "
Central Electricity Regulatory	Part IV Accounting and Settlement of SRAS and TRAS
Commission (Ancillary Services) Regulations 2022	"21. Accounting and Settlement of SRAS and TRAS (1) Accounting of SRAS
Kegunanoms, 2022	shall be done by the Regional Power Committee on a weekly basis, based on SCADA data. (2) <u>Accounting of TRAS shall be done by the Regional Power</u> <u>Committee on a weekly basis</u> , based on interface meter data and schedules. "
Central Electricity Regulatory	"14. Accounting (1) The Implementing Agency shall publish transmission
State Transmission Charges and	charges payable by arawee DICs and injecting DICs with united LIA for the billing month in Rupee terms. (2) Regional Transmission Accounts and
Losses) Regulations, 2020	Regional Transmission Deviation Accounts for the billing month for the
	DICs shall be prepared by the Secretariat of the respective Regional Power <u>Committee</u> 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."

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/IPPs 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:

Weekly Accounts				
Sl No.	Account	Regulation	Objective of account	Entities invlved
1 2	Deviation Settlement Mechanism (DSM) account Secondary Reserve	CERC(Deviation Settlement Mechanism and related matters) Regulations, 2022 CERC (Ancillary	For facilitating the incentives and dis incentives as mandated by regulation there by enabling the Grid discipline. For providing incentives to the	Beneficiries, CGS, ISGS, IPPs, Cross Border Entity, RE Generators Generators & Discoms
	Ancillary Service(SRAS) account	Services) Regulations, 2022	Generators in supporting the Grid, through automatic generation control	
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. Beneficries & Generors
	Monthly Accounts			
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 13th NPC meeting, S. R. Narasimhan, CMD, Grid-India informed that Grid-India is developing a Centralized Web Based Energy Scheduling softare(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-ofthe-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	Not Available or Rugged UI	Modular, Configuarable
(UI)	with no features	
Database	Not Availabale or Primitive &	National database with integration
	does not support all types query,	of all Region and Back up
	features.	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.
- 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 easyly 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 implementation of CERC amendment regulations.
- 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.



भारत सरकार Government of India विद्युत मंत्रालय Ministry of Power No. 11/29/2023-NHPC

New Delhi, the 27th June 2023

To,

The Chairperson, Centeral 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 Yours faithfully, 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/ 4/7

दिनांक 08.06.2023

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

विषयः 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

पंजीकृत कार्यालय:एनएचपीसी ऑफिस कॉम्प्लेक्स, सैक्टर-33,फ़रीदाबाद,हरियाणा-121003 Regd. Office: NHPC OFFICE COMPLEX, SECTOR-33, FAIDABAD-121003, HARYANA CIN-L4010HR1975GOI032564: Website: www.nhpcindio.com Email : webmaster@nhpc.nic.in EPABX No.:0129-2588110/2588500



NH/CommI./MOP/Allocation/2023/ 4/7

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,

- Lanco Teesta Hydro Power Corporation Limited (LTHPL), wholly owned subsidiary of NHPC is developing 500 MW Teesta-VI HE. Project in state of Sikkim.
- 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

पंजीकृत कार्यालयःएनएचपीसी ऑफिस कॉम्प्लेक्स, सैक्टर-33,फ़रीझबीद,हरियाणा-121003 Regd, Office: NHPC OFFICE COMPLEX, SECTOR-33, FAIDABAD-121003, HARYANA CIN-L4010HR1975COl032564: Website: <u>www.nhpcindia.com</u> Email : webmaiter@nhpc.nic.in_EPABX No.0129-2568110/2588500


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

 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)

 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 12th 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 Ratle H.E. Project.

पंजीकृत कार्यालय,एनएचपीसी ऑफिस कॉम्प्लेक्स, सैक्टर-33,फ़रीदाबाद,हरियाण्ड्र-123003 Regd. Office: NHPC OFFICE COMPLEX, SECTOR-33, FAIDABAD-121003, HARVANA CIN-L4010HR1975GOI032564: Website: www.nhpcindia.com Email : webmaster@nhpc.nic.in EPABX No.30129-2588110/2588500



- 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)
- 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 Pakaidul and 540 MW Kwar HE Projects of NHPC /its subsidiaries /JVs amongst the interested states.

Thanking You,

Yours Sincerely,

(M.K. Gupta) Group General Manager (Commercial) Email: nhpo-pt@nhpc.nic.in

पंजीकृत कार्यालय,एनएचपीसी ऑफिस कॉम्प्लेक्स, सैक्टर-33,फ़रीदाबाद,हरियाणा-1,23003 Regd. Office: NHPC OFFICE COMPLEX, SECTOR-33, FAIDABAD-121003, HARYANA CIN-L4010HR1975CO1032564: Website: www.nhpcindia.com Email : webmaster@nhpc.nic.in EPABX No.0129-2588110/2588500

DETAILS OF UPCOMING HYDRO PROJECTS

DESCRIPTION	TEESTA-VI	RANGIT-IV	RATLE	PAKALDUL	KWAR	TOTAL
PROJECT OWNERSHIP	LTHPL	JPCL	RHPCL	CVPPPL		
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 28	JUL'2025	NOV'25	
DISCOM/STATES		CON	SENT (MW) REC	CEIVED 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
TOTAL	1364	393	2325.5	1523	763.8	6369.30
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		Y			
PSPCL, PUNJAB	PPA APPROVAL UNDER PROCESS AT STATE/DISCOM					
HPPC, HARYANA	PPA APPROVED, HOWEVER, HPCC IS REQUESTING FOR ALLOCATION OF POWER BEFORE					
MPPMCL, MADHYA PRADESH	PPA APPROVAL UNDER PROCESS AT STATE/DISCOM			1		
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					

* HPCC, Haryans 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.



ANNEXURE - B GUV-12-2022-1792-K

Energy & Petrochemicals Department

Sachivalaya, Gandhinagar-382010

Mamta Verma, IAS

Principal Secretary



Government of Gujarat

12 2 JUN 2027

Government of Gujarat

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

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,

LSSUED 85 22 HIN 2077

Yours sincerely, Verma) charge ist :

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

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

> Sub: Allocation of power to GUVNL from upcoming Pakaldul and Kwar Hydro Projects offered by NHPC₁

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
	Total	1540		683.30

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,

TH BAC (HID

1 Jul

20

faithfully. AUTE mita Verma)

Block No. 5, 5th Floor, New Sachivalaya, Gandhinagar-382010. Phone: (O) 079-23250771, Fax: 079-23250797, E-mail: secepd@gujarat.gov.in CFPDCL CHHATTISGARH STATE POWER DISTRIBUTION CO.LTD (A Government of Commercent Undertaking) (A Surcessor Company of CSEB) CH-U44108CT20039GC015822 OFFICE OF EXECUTIVE DIRECTOR (As & PM) (CSPDCL, RAIPUR PHONE HE (9771287441 FAX No.1071) 287442

Website: www.cspdck.co.in

E-mail ID: cocorncseb@rediff.com

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

Raipur Date 15+11-2621

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 latter 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-W HE Projects through long term PPA basis.

On the subject matter, it is to convey that competent authority of Chartergarh State Power Distribution Go. Ltd. has "In Poncipie" agreed to produce a quantum of 360 MW hydro power from Teesta VI project.

this reducated to unware further owerful in the matter.

Thanking You.

Yours faithfully,

Executive Director (RA & PM) CSPDCL, Raipur

Capy to: -

 The Special Socratury, Energy Department, Govi, of Ohhatilagarh, Minimalaya, Mahanadi Bhawan, Nava Reipur, Atai Negar.

Days rated Ways have Deputy. Targeries Have Climber (11)

C+PDCL 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/ 10_5

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 Ratle HE Project developed by Ratle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC).

Ref: - 1) Your office letter No. NH/Comml./new project/Ratle/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 Ratle HE Project developed by Ratle 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 Ratle HE Project developed by Ratle Hydroelectric Power Corporation Limited (Joint Venture of NHPC Limited & JKSPDC).

It is requested to ensure further needful in the matter.

Thanking You,

Yours faithfully. (DV)

Executive Director (RA & PM) CSPDCL, Raipur

Regd. Office "Vidyut Seva Bhavan", Danganiya. Raipur (CG)-492 013



CHHATTISGARH STATE POWER DISTRIBUTION CO.LTD. (A Government of Chihattisgarh 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: cecomoseb@rediff.com

No.02-02/SE-I/NHPC/Hydel/ -2014-

Raipur, Date 01 / 12 / 2022

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,

To,

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 Pakaidul 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,

GSM (T)

Yours faithfully, Executive Director (RA & PM) CSPDCL, Ralpur

Rept: Office "Vidyut Seva Bravan", Danganiya, Raipur (CG)-492 013

Regd Office PSEB Head Office The Mail Patala-147001 Punjab India Website www.pspcl.in) Corporate Identity Number (CIN) U40109PB20105GC033813 GSTIN 03AAFCP512001ZC

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, cepprpspcl@gmail.com

To

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

Memo Noglo (1 /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 Ratie 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: <u>seisb2pspcl@gmail.com</u>

To

The General Manager (Commercial), Commercial Division, e-mail: nhpcbilling@nhpc.nic.in nhpc-pt@nhpc.nic.in

NHPC Office Complex,

Sector-33, Faridabad-121003,

Haryana.

Memo No. /560-6//ISB- 221 A vol-iv

Dated: 16/9/22-

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

C-1+6-+6 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: <u>cehopc@uhbvn.org.in</u>

From

Chief Engineer HPPC, Panchkula

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

Memo No. Ch-63/CE/HPPC/SE/C&R-I/PPA-121 Dated: [4.11.2012

Subject:

Consent for procurement of power from 500 MW Tecsta-VI HEP, 120 MW Rangit-IV HEP, 2880 MW Dibang HEP, 850 MW Ratle HEP and 500 MW Dugar HEP

Please refer your office memo No. NH/Commi./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 Ratle 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.

Chief Engineer, HPPC, Panchkula

CC.

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

To

HARYANA POWER PURCHASE CENTRE UHBVN Head Office, Sector-14, Panchkula Ph. No. 0172-2583728 E-mail: <u>cehppc@uhbvn.org.in</u>

From

Chief Engineer HPPC, Panchkula

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

Memo No. Ch-6%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/CommI/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.

HIVE

Chief Engineer, HPPC, Panchkula

CC:

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

SPS to Director/Finance, Panchkula for kind information of Director/Finance, please.

3. SPS to MD/CVPPPL for kind information of MD/CVPPPL, please.

То

(P Q

M.P. POWER MANAGEMENT COMPANY LIMITED

CIN: U40109MP20065GC018637 (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. 2.022

To,

Mr. Omkar Vaday,

Mail- nhpc-pt@nhpc.nic.in

General Manager (CommL), Commercial Division, NHPC Limited, NHPC Office Complex, Sector-33, Faridabad, 121 003- Haryana

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

Dear Sir,

- 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.
- 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 Keskar) Director (Commercial)

Begd. Office: Shakti Bhawan, Vidyut Nagar, Rampur, Jabalpur, Madhya Pradesh India Piu: 482008 Tel: (0761)-2660909 & 2660900, FAX: (0761)-2664749, Website: www.inppmcl.com





DR. MURHARI KELE Director (Commercial)

Ref. No.: MSEDCL/CE/PP/ 0 2 6 0 8 5

Date: E 3 DET 2022

To.

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

Consent for Procurement of Power from 1000 MW Pakaldul HEP & 540 Subject: 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

- 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.

Aller

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), Mumbal-400 051, TeL: (P) 26476743 (O) : 26474211 Extn.: 2066 Email: directorcomm@mahadiscom.in / directorcommsedcl@gmail.com - Website : www.mahadiscom.in





DR. MURHARI KELE Director (Commercial)

Date: 12 16 Aug. 2022

Ref. No.:Dir-Comm/PP/NHPC/021464

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 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

NH/Comm1./new project/Ratle/2022/322 dated 30.03.2022

MSEDCL/CE/PP/6484 dated 16:03:2022

NH/Comml./new project/Ratle/2022/151 dated 18:02:2022

NH/CommL/new project/Dibang MPP/2021/1466 dated 30.12.2021

8) MSEDCL/CE/PP/31458 dated 28.12.2021

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, Himachai 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 :

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

Thanking you.

color

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.: 2066 Email: directorcomm@mahadiscom.in / directorcommsedcl@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

121

No. CE/RUVNL/F. /D.

Jaipur, Dated: 2005 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

Gar

Chief Engineer

P-18011/2/2021-Power Deptt.

1/51357/2022



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

No D-65 EE (SLDS) QOAR

Data: 28-12-2022

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

Sub: Consent for procurement of 152MW Hydro Power for a period of 25 years from upcoming Hydro Projects of NEPC.

Sir,

With reference to your latter No. NH/Caermi/New Project/2021/1137 dated 07.10.2021 followed by letter No: NH/Commi/CVPPPL/2022/1046 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 'n 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 par the order of preference given below.

DESCRIPTION	RATLE (Protorence-I)	TEESTA VI (Preference-II)	RANGIT IV (Proference-III)
INSTALLED CAPACITY (MW)	850	500	120
PROJECT OWNERSHIP	RHPCL (Joint Venture of NHPC Limited & JKSPDC)	LTHPL (wholly owned aubsidiary of NHPG)	JPCL (wholly owned subsidiery 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 Qele 2242-2022 16:32:03 Dir (Power) (UC) 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 :- ceikpcl@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), pwer 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 :- cejkpci@gmail.com

CEO, RHPCL,

No. CE/JKPCL/J/T- Ratle/ 2719-21

Dated:-0 8 .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/JKPCL/J/T-Ratie/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.	Ratie	850	110.5	450	560.5

Yours Sincerely,

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

Copy to the :-

1. Principal Secretary to Govt., JKPDD for information.

2. Managing Director, JKPCL for Information.

Annexue - C



INDIA NON JUDICIAL

Government of Jammu and Kashmir

मन्त्रमंच जस्यत

Stamp

Certificate No. Certificate Issued Date Account Reference

Unique Doc. Reference Purchased by Description of Document Property Description

Consideration Price (Rs.)

First Party Second Party Stamp Duty Paid By Stamp Duty Amount(Rs.)

IN-JK91606411425351U

15-Nov-2022 03:57 PM NEWIMPACC (SV)/ jk12599104/ RAIL HEAD COMPLEX JAMMU/ JK JM

SUBIN-JKJK1259910477118557088305U

PADHIYAR ANISH H

- Article 5 Agreement or Memorandum of an Agreement
- SUPPLEMNTARY PROMOTERS AGREEMENT OF CHENAB VALLEY POWER PROJECTS PRIVATE LIMITED (CVPPPL)
- C) (Zero)
- JKSPDC AND JKPDD
- NHPC LIMITED FARIDABAD
- JKSPDC AND JKPDD
- 100
- (One Hundred only)

ANJEEV KUMAR AMP VENDOR ose No. 458 Complex, Jammu lead Rail

0029022035

SUPPLEMENTARY PROMOTERS AGREEMENT

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SUPPLEMENTARY PROMOTERS AGREEMENT

This Agreement made on this <u>21</u>⁵¹ day of <u>Nov 22</u> 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 Kirthai 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

2 of 21

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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.

11 of 21

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ANNEXURE . 7 No.10/1/2008-NHPC (Vol.Y Government of India Ministry of Power Government of Jammu and Kashmir Power Development Department Subject- Implementation of 1000 MW Pakaldul HEP- providing of cancessions 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 the: 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 Pakel Dul HEP. Purchase of 49% of power from the Pakel Out HEP. ŧ. By order of the Government of Jammu and Kashmir Sd/ (A. K. Mehta) LAS Principal Secretary to Government Power Development Department No. PAD/IV/34/2008 Dated, 20, 06,2014 ¥. 1 Copy to the 1. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan New Dalhi. .2. Principal Secretary to Government, Planning & Dev. Department. 3. Principal Secretary to Gevt, Finance Department. 4. Principal Sebretery to Hon'ble Chief Minister. 5. Chairman, Cheriab Valley Power Project's Public Limited, Jammu, 5. 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. Secretary to Government, Law Department. 9:

Power Development Department, Civil Secretariat, Jammu.

Subject:

Ref:

Implementation of 540 MW Kwar HE Project-Consent to the PIB Memo thereof; reg.

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 :-

 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.

- Para -A (vili) deleted.
- 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

141

Copy to the:

- 1. Secretary, Ministry of Power, Government of India, New Deini.
- 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.
- Secretary to the Government, Department of Law, Justice and Parliamentary Affairs.
- 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 3&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.

. 11 .

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

Governmeist of Jammi and Kashmir Power Development Department Civil Secretariat, Jammu

Subject-

CGM(PKD) GM(KWAY) GM-S/C (KIRU) GM(KM) / GM(Gin) / GM(Phy) LUM/WW NO GM(KM) / GM(Gin) / GM(Phy)

implementation of 540 MW Kwar HE Project, 624 MWs Kiru HE Project and 1000 MW Pak Dul HE Projectproviding 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.

Waiver of Water Usage Charges (WUC) for a period of 10 years from the first year of Commercial Operation (CoD) of the Project.

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.

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Approval for exercising first Right of Refusal vil 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 CVPPPL at appropriate time.

2)

- Approval for taking up the matter with Gol vii) for 'Sanction of JKSPDCL equity as Grant to M/S CVPPPL from GoI for implementation of Kwar HE Project.'
- vili) 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 7th year after completion of the Project and continue till the 18th 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:-

Reimbursement of SGST by the Union ix) Territory of Jamona 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 (vil) and (vili) 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 No. PDD/IV/61/2018-I Dated: // -11-2020

Secretary, Ministry of Power, Government of India, Shram 1. Shakti Bhawan, New Defhi.

Financial Commissioner, Finance.

Copy to the: -

Page 02/03

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- 3. Principal Secretary with the Hon'ble Lieutenant Governor.
- Managing Director, J&K Power Development Corporation, Jammu.
- Joint Secretary (J&K), Ministry of Home Affairs, Government of India, New Delhi.
- Commissioner/Secretary to the Government, General Administration Department.
- 7. Secretary to the Government, Jal Shakti Department
- Secretary to the Government, Planning, Development and Monitoring Department.
- Secretary to the Government, Department of Law, Justice & Parliamentary Affairs.
- 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, CVPPPI, J&K Jaminu.
- OSD to Advisor (BK) to the Honble Lieutenant Governor, I/C PDD
- 15. Private Secretary to the Chief Secretary.
- 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) KAST

Additional Secretary to the Government

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Government of Jammu and Kashmir

ANNEXURE

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e-Stamp

Certificate No.

Certificate Issued Date Account Reference Unique Doc. Reference Purchased by Description of Document Property Description

Consideration Price (Rs.)

First Party Second Party Stamp Duty Paid By Stamp Duty Amount(Rs.)

M-JK05976911389503T

- 12-Apr-2021-09:51 AM
- NEWIMPACC (SV)/ M2519204/ JAMMU/ JK-JM
- SUBW-JKJ81251920411517767580195T
- Sanjeev Arora
- Article 5 Agreement or Memorandum of an Agreement
- Promoters agreement formation incorporation joint venture company implementation Ratie HE Project

ubarak Mandi, Jammu

KC 0002281544

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- NHPC LTD Faridadad
- JKSPDC AND JKRDD
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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.

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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 Gol, 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

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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: 0] - 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) for850 MW
 Ratle HEP for a period of 10 years from the first year
 of Commercial operation (CoD) of the Project.

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(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: -

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

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- 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.
- OSD to Advisor (BK) to the Hon'ble Lieutenant Governor, I/C PDD
- 15. Private Secretary to the Chief Secretary.
- 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.

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(Matik Waseem) KAS

Deputy Secretary to the Government

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ANNEXURE-F

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

From

Chief Engineer HPPC, Panchkula

To

General Manager (Comml.) 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/CommI./2022/1416 dated 29.12.2022

2) HPPC letter no. Ch-72/CE/HPPC/SE/C&R-I/PPA-121 dated 26.12.02022

3) NHPC letter no. NH/Commi./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/CommI./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, Gol. 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.

> Chief Engineer, HPPC, Panchkula

CC:

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

 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: <u>cehppc@uhbvn.org.in</u>

From

Chief Engineer HPPC, Panchkula

To

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

Memo No. Ch-%o/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.

Chief Engineer

HPPC, Panchkula

CC:

- 1. SPS to MD/UHBVN, Panchkula for kind information of MD/UHBVN, please.
- 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-B9

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड

(पावर ब्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)

(भारत सरकार का उदयम)

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: 05-06-2023

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

Subject: Views of ERPC on the new ISTS in ER - reg.

Dear Sir,

As you are aware, the Govt. of Odisha has proposed for construction of Gopalpur 765kV substation under ISTS in order to meet the power drawl requirement of upcoming Green Hydrogen and Green Ammonia industries in the Gopalpur area of Odisha. Accordingly, studies were carried out 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 Apr 2023. Details of the said scheme as per requisite format of NCT are annexed herewith as Annexure-I.

Further, it is to mention that in the 17th CMETS-ER held on 29-03-2023 implementation of Duburi 765/400kV S/s under intra-state scheme has been agreed through LILO of both circuits of under implementation (presently in bldding stage) Angul (ISTS) – Paradeep (ISTS) 765kV D/c line. The scheme may be deliberated at ERPC level in view of LILO of an ISTS line under intra-state scheme. Agenda in this regard is annexed herewith as **Annexure-II**.

It is requested that the said schemes may be taken up for deliberations/ recommendations/ approval, on priority, in the forthcoming meeting of ERPC in line with provisions under MoP's Office Order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding "Re-constitution of the National Committee on Transmission (NCT) - reg.".

Further.

Thanking you,

Yours faithfully,

क्षानका किमान 05/06/2023

(Rajesh Kumar) Senror General Manager

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

SI. No.	Items	Details			
1.	Name of scheme	Eastern Region Expansion Scheme-XXXIX (ERES- XXXIX)			
2.	Scope of the scheme	Brief scope of works is given below. Detailed scope of works is enclosed at Appendix-A .			
		i. Establishment of Gopalpur 765/400kV, 2x1500MVA GIS S/s			
		 ii. 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 			
		iii. Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line			
		 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. 			
		 v. 2 nos. 400kV GIS line bays at Gopalpur (OPTCL) S/s for termination of Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line. 			
3.	Depiction of the scheme on Transmission Grid Map	Refer Exhibit-1.			
4.	Upstream/downstream system associated with the scheme	Establishment of Gopalpur (OPTCL) 400/220kV S/s by OPTCL. Expected by Mar 2026 (as per OPTCL's email dated 02-06-2023).			
5.	Objective / Justification	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			

SI. No.	Items	Details
		industries have expressed investment intentions to set up Green Hydrogen and Green Ammonia plants in Gopalpur due its location advantage.
		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.
		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.
		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.
		The present scheme is for establishment of Gopalpur 765/400kV new substation along with Angul – Gopalpur 765kV D/c line & Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line, which has been approved in the 18 th CMETS-ER held on 27 th Apr 2023.
		Note:
		(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.
		If contiguous land can be arranged by OPTCL, then OPTCL to clarify whether they shall be agreeable to

SI. No.	Items	Details
		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.
		Till the identification of contagious 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.
		(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.
6.	Estimated Cost	INR 2824 Cr.
7.	Impact on the total Annual Transmission	 A. ATC (considering levelized tariff @15% of estimated cost): ₹423.6 Cr.
	Charges in % along with the existing ATC	B. Present ATC: ₹45726.66 Cr.*
	the existing ATO	C. A/B: 0.926%
8.	Need of phasing, if any	Nil
9.	Implementation timeframe	24 months
10.	Inclusion of any wild life/ protected area along the transmission line route	(a) Angul – Gopalpur: The line may pass through Satkosia Gorge WLS or its buffer zone in the state of Orrisa. However, for details of forest/protected areas survey is required to be done.
		(b) Gopalpur – Gopalpur (OPTCL): No major NP, WLS, other protected areas observed. However, for details of other forest/protected areas, survey is required to be done.
11.	Deliberations with RPC along with their comments	ERPC may add their deliberations here.
12.	System Study for evolution of the proposal	Refer Exhibit-2.

*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 @ <u>https://posoco.in/transmission-pricing/notification-of-transmission-charges-for-the-dics/</u>)

Exhibit-1



Exhibit-2



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

SI.	Seens of the Transmission Salama	Capacity (MVA) / Line length (km)/
No.	Scope of the Transmission Scheme	Nos.
1.	 Establishment of new 765/400kV, 2x1500MVA GIS substation at Gopalpur in Odisha Additional space for future expansion: 765/400kV, 4x1500MVA ICTs (12x500MVA single phase units) along with associated ICT bays at both voltage levels 400/220kV, 4x500MVA ICTs along with associated ICT bays at both voltage levels 765kV, 2x330MVAr (6x110MVAr single phase units) bus reactor along with associated bays 420kV, 2x125MVAr bus reactor along with associated bays 8 nos. of 765kV line bays (along with space for switchable line reactor) for future lines 	 765/400kV, 1500MVA ICTs: 2 nos. (7x500MVA single phase units including one spare) 765kV ICT bays: 2 nos. 400kV ICT bays: 2 nos. 765kV, 330MVAr Bus reactor: 2 nos. (7x110MVAr single phase units including one spare unit for both bus and line reactors) 765kV Bus reactor bays: 2 nos. 420kV, 125MVAr Bus reactor: 2 nos. 400kV Bus reactor bays: 2 nos. 765kV line bays: 2 nos.
	 10 nos. of 400kV line bays (along with space for switchable line reactor) for future lines 12 nos. of 220kV line bays for future lines 765kV bus sectionaliser bay: 1 set 400kV bus sectionaliser bay: 1 set 220kV bus sectionaliser bay: 1 set 220kV bus coupler bay: 2 no. 	[for termination of Angul (POWERGRID) – Gopalpur 765kV D/c line along with 765kV, 1x330MVAr switchable line reactor at Gopalpur end in both circuits] 400kV line bays: 2 nos. [for termination of Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line] 765kV, 330MVAr (3x110MVAr single phase units) switchable line reactor along with associated bay and 5000hm NGR (with NGR bypass arrangement) [at Gopalpur end in both circuits of Angul (POWERGRID) – Gopalpur 765kV D/c line]: 2 nos.
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. [for termination of Angul (POWERGRID) – Gopalpur 765kV D/c line] Bus extension in GIS: about 3000m
4.	Gopalpur – Gopalpur (OPTCL) 400kV D/c (Quad) line [®]	[@] 30km

SI. No.	Scope of the Transmission Scheme	Capacity (MVA) / Line length (km)/ Nos.		
5.	Extension at 400kV level at [#] Gopalpur (OPTCL)	400kV GIS line bays: 2 nos. [for		
	GIS S/s	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 18th CMETS-ER.
- (b) [@]To be reviewed based on inputs of OPTCL regarding availability of contagious 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

- In the 14th CMETS-ER held on 29-12-2022, establishment of Paradeep 765/400kV substation though Angul (POWERGRID) – Paradeep 765kV D/c line was agreed under the ISTS scheme namely ERES-XXXIV. The same was discussed in the 48th TCC/ERPC meeting held on 17th and 20th Feb 2023. Thereafter, NCT in its 12th meeting held on 24-03-2023 recommended the implementation of the scheme though 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 PFCCL 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 17th 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.
- OPTCL and Odisha-SLDC had mentioned in the 17th 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 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. 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 intrastate 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.

Annexure-B11



सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड

(पायर प्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्य 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)

Raf: CTU/E/00/ERPC

Data: 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 limeframe. 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) – Raghunathpur (DVC) 400kV D/c (Quad) line has been agreed in the 19th 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 statement and the 19th 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 statement and the 19th 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 19th 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,

(Rajesh Kumar) Senior General Manager

"सोदासिनी , प्रथम तन, प्लॉट स.2, सेक्टर-29, गुरुगाम- 122001 (हरियाणा), दूरभाष. 0124-2822000, सॅर्म्साईएन: U42100dR2020GOID91857 "Saudaminu", 3st Floor, Plot No. 2, Sector-29, Guiugram-122001 (Maryana), 7el: 0124-2822020, CIN: U40100HR2020GOM91857 Website: https://www.ctur.in

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 scraped 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 19th 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 scraping 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 4000hm 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 19th 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.

Annexur B.16

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

TOTAL QUANTITY OF MCTI RELAY	18
TOTAL QUANTITY OF RAICA RELAY	14
TOTAL QUANTITY OF EASUN REYROLLE RELAY	2

TOTAL QUANTITY OF 7SV6001 RELAY	1		
TOTAL	35 NOS		

ELECTROMECHANICAL LBB RELAY INSTALLED AT 400/220 KV MAITHON SUBSTATION

SL NO.	FEEDER NAME	RELAY MODEL
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

TOTAL QUANTITY OF VAJSM RELAY	2		
TOTAL QUANTITY OF RAICA RELAY	21		
TOTAL	23 NOS		
TOTAL	58 NO'S RELAY		

Annexure-B20.1

SUMMARY OF DEVIATION CHARGE RECEIPT AND PAYMENT STATUS

Figures in ₹ Lakhs Net outstanding **Received by Payable From Outstanding for** Total for 2022-23 **Receivable by Pool** Pool Pool **Paid From Pool** 2023-24 Outstanding **CONSTITUENTS** 2,071.06534 0.00000 319.84511 BSPTCL 2,547.54813 0.00000 4,298.76836 -2,227.70302 JUVNL 114.52322 0.00000 494.12634 0.00000 2,272.09738 2.651.70050 2.157.57416 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 65.35039 53.31578 65.35039 0.00000 96.99039 96.98223 9.85620 0.00000 0.00000 CHUZACHEN 9.84804 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 0.00000 246.59236 242.72021 243.68542 239.81329 0.00000 0.00000 250.83522 239.07708 47.56495 43.34110 7.53429 7.53429 TPTCL (Dagachu) JLHEP 0.00000 46.33794 0.00000 46.33794 85.48328 85.48328 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 5.13488 5.13488 46.15635 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(THEP) 0.00000 0.00000 0.00000 81.41900 81.41900 0.00000 0.00000 RONGNICHU 180.92948 0.00000 9.05377 9.05377 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 Total 3.848.29402 25.919.96182 18.638.81853 23.315.80496 18.303.28682 2.246.01078 6.094.30480

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

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

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

Deviation Interest Bill due to delay payment

Annexure-B20.3 All figs in ₹

SI 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									
Total	-11.70764	11.70764											

	Figures in Lacs of Rupees										
ER Constituents	No. of weeks in which Deviation	No of times payment was delayed	Total Deviation charges payable	Average weekly Deviation Charge liability	LC Amount	Defaulting Weeks					
	Charge payable	during 2022-23	to pool during 2022-23	(C)/52 weeks	110% of (B)						
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 /-			
Jharkhand State Electricity Board / झारखंड	36	36	16432.86	316.02	347.61817	ALL Weeks	14-03-2024	LC opened for ₹ 139,64,455 /-			
Damodar Valley Corporation / डीवीसी	39	2	12559.02	241.52	265.67154	25, 38	No Valid LC				
Power Deptt, Govt. of Sikkim /सिक्किम	28	28	2176.42	41.85	46.03970	ALL Weeks	No Valid LC				
APNRL	39	39	1226.93	23.59	25.95437	ALL Weeks	No Valid LC				
Gati Chuzachen / चुजाचेन	18	13	116.69	2.24	2.46842	All weeks Except 25, 32, 41, 49, 50	No Valid LC				
GMR / जीएमआर	45	37	948.14	18.23	20.05681	All week except 9, 10, 11, 12, 14, 15, 17, 18	No Valid LC				
Jindal India Thermal Power Ltd.	33	6	1422.66	27.36	30.09467	2, 3, 38, 50	No Valid LC				
TPTCL Dagachu/ डागाचु	45	6	3812.86	73.32	80.65675	36, 38, 39, 40, 44, 45	31-03-2024	LC opened for ₹ 80,65,675 /-			
JLHEP	35	31	1192.36	22.93	25.22302	All weeks Except 2, 6, 19, 27	No Valid LC				
BRBCL /बीआर बीसीएल	42	2	1738.40	33.43	36.77389	29, 46	No Valid LC				
PGCIL-Sasaram / सासाराम	30	3	38.17	0.73	0.80735	43, 52	31-03-2024	LC opened for ₹ 80,735 /-			
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 /-			
PGCIL-Alipurduar / अलीपुरदुआर	15	8	23.14	0.44	0.48940	1, 2, 3, 4, 7, 8	31-12-2023	LC opened for ₹ 86763/-			
Tashiding	23	17	396.09	7.62	8.37890	All weeks Except 1, 2, 4, 6, 19, 27	No Valid LC				

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 1955 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-7000091. 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:

SI. 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 & Modern	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. Addi Chief Engineer, Communication, SLDC, WBSETCL, CLD Building, Danesh Seikh Lane Howrah- 711109, Fax- 26886232.

Chief Manager, Barlpoda 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 10TH FLOOR A – BLOCK SALT LAKE CITY KOLKATA – 700 091 PHONE: (033) 2337 7957 FAX: (033) 2337 1737 E-mail : cetransproject@vahoo.co.in

WBSETCI,

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

MLOSH), BPD M. LVOR INTO ! M. LVOR INTO ! 2014

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 FAY: 06792-279280

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.

गावरग्रिङ वारिपवा worgrid Baripada ती से॰ 334 -ceipt No .-िनांक Cate - 20.04 - 12 St. N.K. Navali (Ert) for 91.0. k.

Yours faithfully, PARIShrowa

(P.Das Sharma)

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| 7 | Surplus DSM amount transferred

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| 10 | Pank interest of DSM A/C TDS portion

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BSPHCL	YES	YES	YES	YES	YES	YES	YES										
JUVNL	YES	YES	YES	YES	YES												
DVC	YES	YES	YES	YES													
GRIDCO	YES	YES	YES	YES	YES	YES	YES	YES									
WBSETCL	YES	YES	YES	YES	YES	NO	NO	YES	YES								
SIKKIM	YES																
NTPC	YES	YES	YES	YES	YES	YES	YES	YES									
NHPC	YES	NO	YES	YES	YES	YES	YES	YES	YES								
MPL	YES	YES	YES	YES	YES	NO	NO	YES									
APNRL	YES	YES	YES	YES	YES												
CHUZACHEN(GATI)	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		
NVVN(Ind-Nep)	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES		
GMR	YES	YES	YES	YES	NO	NO	NO	YES									
JITPL	YES	NO	NO	NO	NO	YES	NO	NO	YES								
INBEUL	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	NO	NO	YES	YES									
BRBCL	YES	YES	YES	YES	YES	YES	YES										
POWERGRID (ER-I)	YES	YES	YES	YES	YES	YES	YES	YES									
POWERGRID (ER-II)	YES	YES	YES	YES	YES	YES	YES	YES									
TUL (TEESTA-III)	YES	YES	YES	YES	NO	YES	YES										
DIKCHU	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES				
SHIGA (TASHIDING)	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	NO	NO	YES	YES	
OPGC	NO	NA	NA	NA	NA	NA	NA	NA	NA								
Rongnichu		1	NA				NA		NA YES NO				NO	NO	NO	YES	
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C3.1

(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

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Annexure-C4.1

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

SI. No.	STUs / SLDCs Name	Quarter-I (2022-	Quarter-II	Quarter-III	Quarter-IV
		23)	(2022-25)	(2022-25)	(2022-25)
	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	1			
SI. No.	Applicants Name	Quarter-I (2022-	Quarter-II	Quarter-III	Quarter-IV
		23)	(2022-23)	(2022-23)	(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 NO		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 YES		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

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Annexure-C7

पावर गिंड कॉर्पोरेशन ऑफ इंडिया लिमिटेड (भारत सरकर का तयम)



POWER GRID CORPORATION OF INDIA LIMITED (A Covernment of India Enterprise)

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 विद्दूत 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 परिसम्पति से संबंधित विद्दूत प्रसारण शुल्क दिनांक 31-03-2023 से लागू होगा |

(वाई. के. दीक्षित) कार्यपालक निदेशक ओडिशा परियोजनायें, अवनेश्वर

aiffenn परिनोजनाएं : एलाट में-4, युमिट-41, निलाहि विज्ञार, चन्द्रशेखापुर, भुवनेश्वर, 761021, अोडिशा, दूरभाग : 0674-2720754 Odsta Projects : Pict No. 4, Unit 41, Niladri Vitar, Chandrasekharpur, Brutsaneswar - 751021, Ocisha, Phone : 0674-2720754

धंत्रीमूहत्र कार्योलय : वी-6, कुनुम इंग्लीट्सूसनस एपिया, काटमारिया सारान, नई दिद्वी-110016, दूरप्राप : 611-26560112, 265661812, 26564812, 265848812, 26584812, 26584812, 265848812, 26584812, 265848812, 26584812, 26584812, 26584812, 26584812, 26584812, 26584812, 26584812, 26584812, 2658

प्रतिलिपि : विनस सूचना के लिए:

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

प्रतिलिपि : विनम सूचना के लिए:

Director (Projects) Director (Operation)