भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लौंग-७९३००६, मेघालय
NERPC Complex, Dong Parmaw, Lapalang, Shillong - 793006.
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Website: www.nerpc.nic.in

No. NERPC/OP/Committee/2021/5346 - 5419 Date: March 15, 2021

To,

1. Hon'ble Chief Minister & In-charge of Power, Govt. of Assam, Guwahati - 781 006
2. Hon'ble Dy. Chief Minister & In-charge of Power, Govt. of Arunachal Pradesh, Itanagar - 791 111
3. Hon'ble Dy. Chief Minister & In-charge of Power, Govt. of Tripura, Agartala – 799 001
4. Hon'ble Minister of Power, Govt. of Manipur, Imphal – 795 001
5. Hon'ble Minister of Power, Govt. of Meghalaya, Shillong - 793 001
6. Hon'ble Minister of Power, Govt. of Mizoram, Aizawl - 796 001
7. Member (GO&D), CEA, Sewa Bhavan, R.K. Puram, New Delhi - 110 066
8. Commissioner (Power), Govt. of Arunachal Pradesh, Itanagar – 791 111
9. Addl. Chief Secretary (Power), Govt. of Assam, Dispur, Guwahati - 781 006
10. Commissioner & Secretary (Power), Govt. of Manipur, Imphal - 795001
11. Addl. Chief Secretary (Power), Govt. of Meghalaya, Shillong - 793001
12. Secretary (Power), Govt. of Mizoram, Aizawl - 796001
13. Principal Secretary (Power), Govt. of Nagaland, Kohima - 797001
14. Principal Secretary (Power), Govt. of Tripura, Agartala - 799001
15. Chairman & Managing Director, Me.ECL, Lumjingshai', S.R. Road, Shillong - 793 001
16. Chairman & Managing Director, TSECL, Agartala - 799001
17. Chairman & Managing Director, NEEPCO Ltd., Lower New Colony, Shillong - 793 003
18. Chairman, APDCL/AEGCL/APGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
19. Director (Finance), NHPC Ltd., NHPC Complex, Sector-33, Faridabad - 121 003
20. Director (Operation), POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon, Haryana – 122 001
21. Director (Marketing & BD), PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi – 110066
22. Director (Coml.), NTPC Ltd. NTPC Bhawan, Scope Complex, Institutional Area, Lodhi Road – 03
23. Managing Director, OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi - 110019
24. Executive Director (SO), NLDC, B/9, Qutub Institutional Area, Katwaria Sarai, New Delhi – 16
25. CEO, NVVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi – 03
26. Managing Director, APDCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
27. Managing Director, APGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
28. Managing Director, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001

Sub: Minutes of 21st TCC & 21st NER Power Committee Meetings held at Kohima

Sir/Madam,

Please find enclosed herewith the minutes of 21st TCC & 21st NERPC Meetings held at **"Hotel Vivor", Kohima,** Nagaland on **3rd & 4th February, 2021** for your kind information and necessary action. The minute is also available on the website of NERPC, **www.nerpc.nic.in**.

Encl: As above

15/3/2021

(A. K. Thakur)
Member Secretary

Copy to:

1. PS to Chairman, NERPC and Hon'ble Chief Minister & In-charge of Power, Govt. of Nagaland, Kohima - 797 001
2. PS to TCC Chairman and Engineer-in Chief (Power), Department of Power, Government of Nagaland, Kohima – 797 001.

Copy for kind information to:

1. Director (Distribution), Me. ECL, Lumjingshai, S.R. Road, Shillong – 793 002
2. Director (Transmission), Me. PTCL, Lumjingshai, S.R. Road, Shillong – 793 002
3. Director (Generation), Me. PTCL, Lumjingshai, S.R. Road, Shillong – 793 002
4. Director (Tech.), TSECL, Banamalipur, Agartala -799 001.
5. Director (Generation), TPGCL, Banamalipur, Agartala -799 001.
6. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
7. Managing Director, MSPDCL, Secure Office Bldg. Complex, South Block, Imphal – 795 001
8. Director (Tech.), NEEPCO Ltd., Lower New Colony, Shillong-793 003.
9. Regional ED (East –II), NTPC, 3rd Floor, OLIC Bldg., Pl No- N.17/2, Nayapalli, Bhubaneswar-12
10. Executive Director, NERTS, PGCIL, Lapalang, Shillong - 793006
11. Executive Director (Comml.), NEEPCO Ltd., Lower New Colony, Shillong-793003.
12. Executive Director (O&M), NEEPCO Ltd., Lower New Colony, Shillong-793003.
13. Executive Director (Comml.), NHPC, NHPC Office Complex, Faridabad-121003.
14. Executive Director (O&M), NHPC, NHPC Office Complex, Faridabad-121003.
15. Executive Director (Marketing), PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi – 110066
16. Executive Director, NERLDC, Lapalang, Lower Nongrah, Shillong - 793006
17. Chief Engineer (GM), CEA, 6th Floor, Sewa Bhawan, R.K.Puram New Delhi-110066.
18. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi - 110016
19. Engineer-in-Chief, P&E Dept., Govt. of Mizoram, Aizawl – 796 001
20. Chief Engineer (E Zone), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111.
21. Chief Engineer (W Zone), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111.
22. Chief Engineer (TP&MZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 1
23. GM (AM), NERTS, POWERGRID, Lapalang, Shillong – 793006
24. VP (Plant), OTPC, Pallatana, Udaipur, Kakrabon Road, South Tripura – 799116
25. GM (BD), NVVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi – 03
26. Chief Engineer, Loktak HE Project, NHPC, Komkeirap, Manipur-795124.
27. CGM, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
28. CGM, APGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
29. CGM, APDCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
30. CGM (LDC), SLDC Complex AEGCL, Kahelipara, Guwahati-781019.
31. Head of SLDC, Me. ECL, Lumjingshai, S.R. Road, Shillong-793001
32. Head of SLDC, Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111
33. Head of SLDC, Dept. of Power, Govt. of Nagaland, Dimapur
34. Head of SLDC, Dept. of Power, Govt. of Manipur, Keishampat, Imphal-795001
35. Head of SLDC, P&E Dept., Govt. of Mizoram, Aizawl-796001
36. Head of SLDC, TSECL, Agartala – 799001

Special Invitee(s):

37. Chairperson, CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110066
38. Member (Power Systems), CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110066
39. Secretary, North Eastern Council, Nongrim Hills, Shillong – 793 003
40. Member Secretary, ERPC, 14 – Golf Club Road, Tollygunge, Calcutta – 700 033
41. Member Secretary, NRPC, NRPC Complex, 18-A, S.JS.S. Marg, Katwaria Sarai, New Delhi – 16
42. Member Secretary, WRPC, MIDC Area, Marol, Andheri (E), Mumbai – 400 093
43. Member Secretary, SRPC, 29 – R.C. Cross Road, Bangalore – 560 009
44. Managing Director, NETC, 1st Floor, Corporation Tower, AMBIS Mall Complex, NH-8, Gurgoan – 122001.

15/3/2021

Member Secretary

भारत सरकार **Government of India**

विद्युत मंत्रालय **Ministry of Power**

उत्तर पूर्वी क्षेत्रीय विद्युत समिति **North Eastern Regional Power Committee**

RECORD NOTE OF DISCUSSION

OF

21ST TCC MEETING

&

21ST NERPC MEETING

(UNDER THE AEGIS OF DEPT. OF POWER, NAGALAND)

Venue: Hotel Vivor, Kohima

Date (TCC) : 03rd February, 2021

Date (NERPC) : 04th February, 2021

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ANNEXURES

SUMMARY RECORD OF DISCUSSIONS

21ST TECHNICAL COORDINATION COMMITTEE

&

21ST NORTH EASTERN REGIONAL POWER COMMITTEE MEETINGS

The 21st TCC & 21st NER Power Committee meetings were both held on the 3rd & 4th February, 2021 at "Hotel Vivor", Kohima. The meetings were hosted by Department of Power, Government of Nagaland.

The list of participants is enclosed at **Annexure – I & II.**

I : PROCEEDINGS OF THE 21ST TCC MEETING

The meeting started with welcome address by Shri. Moa Aier, Chief Engineer (D&R), Dept. of Power, Govt. of Nagaland. Shri Aier welcomed all TCC members and participants to the 21st TCC meeting and wished all the participants a comfortable stay at the venue. Thereafter, Shri Shikato Sema, Chairman, TCC addressed the 21st TCC meeting. In his brief speech, Shri Sema stated that TCC is an important forum for resolving various issues to make NER a self-reliant in Power sector. He mentioned that Transmission sector has also witnessed rapid growth post-independence. During independence, small isolated power network used to be there. Presently, India has the world's largest synchronised national Grid with 4, 33,510 circuit km of transmission lines at various voltage levels like 765kV, 400kV, and 220k, +/- 500kV and +/- 800kV. A slew of regulatory and policy reforms has also been observed in Indian power sector in the last two decades. These include, inter alia, implementation of ABT mechanism, Open access in transmission system, introduction of power exchanges, DSM regulations, introduction of Renewable Energy Certificate mechanism etc. One of the recent remarkable initiatives in Indian power sector is launch of Real Time market w.e.f. 1st June, 2020. Before this, market option available for power procurement/sale was Day Ahead Market. However, with the launch of RTM, Constituents across India are getting an option to meet their energy requirements closer to real-time operation. And I gather that all the states of NER including Nagaland are actively participating in RTM to optimize their portfolio and meeting their requirement.

His speech is placed at **Annexure – III**.

Shri A. K. Thakur, Member Secretary, NERPC welcomed all delegates of the 21st TCC meeting on behalf of NERPC. He expressed his sincere thanks to Department of Power, Govt. of Nagaland for hosting the 21st TCC & 21st NERPC meetings and for making excellent arrangement and providing a comfortable stay for the delegates.

Thereafter, Chairman, TCC requested Member Secretary, NERPC to take up the agenda items for discussion.

The meeting concluded with the vote of thanks by Shri N. Mozhui, Chief Engineer (T&G) Dept. of Power, Govt. of Nagaland.

II : PROCEEDINGS OF THE 21ST NERPC MEETING

The 21st NER Power Committee meeting commenced with bouquets presentations to dignitaries followed by ceremonial lighting of lamps by Shri Neiphiu Rio, Chairman, NERPC & Hon'ble Chief Minister, Govt. of Nagaland, Shri Jishnu Dev Verma, Hon'ble Dy. Chief Minister & I/c Power, Govt. of Tripura, Shri James K Sangma, Hon'ble Power Minister, Govt. of Meghalaya, Shri Bolo Raja, Hon'ble Adviser (Power), Govt. of Arunachal Pradesh, Shri T. Ayemi, Hon'ble Adviser (Power), Nagaland, Shri A. K. Thakur, Member Secretary, NERPC, Shri Shikato Sema, TCC Chairman & Engineer-in-Chief, DoP, Nagaland, Shri Arun Kumar Kembhavi, CMD, MeECL, Shri V.K. Singh, CMD, NEEPCO & Shri Sanil Namboodiripad, Managing Director, OTPC.

Shri Ayemi, Hon'ble Adviser Power, Govt. of Nagaland, in his welcome address, expressed gratitude to NERPC and NERLDC for providing continued assistance to Nagaland in managing day to day power supply in the state.

He requested all generating agencies engaged in development of various upcoming generation projects like Lower Subansiri HEP (2000MW) and Dibang Hydro Multipurpose Project (2880MW) etc. and restoration of Kopili Stage I & II for early completion in order to mitigate the present power shortage problems faced by us as a short-term measure. Thereafter, we all should plan and open up to attract investors

for harnessing the huge hydro power potential available with us so that the North East can be an economic power through the Energy Industry.

Further, he thanked MoP, GoI for funding the Renovation & Up-gradation of Protection Systems at all 132kV substations in Nagaland with 100% grant from PSDF along with other NE states. However, the 66kV systems were left out due to guidelines for PSDF funding. Department of Power Nagaland had submitted a proposal for funding 66kV systems also under the PSDF for an amount of Rs. 13.09 Cr. with a request to the CEA to consider as a special dispensation. He stated that the protection audit was also carried out by the NERPC and the matter is pending for clearance and recommendation of the Standing committee. I request this meeting to expedite consideration of the proposal.

Full text of the speech of Hon'ble Adviser (Power), Govt. of Nagaland is placed at **Annexure – IV**.

Shri Jishnu Dev Verma, Dy. Chief Minister & I/c Power, Govt. of Tripura, in his brief address, expressed gratitude to NERPC and stated that this is his first opportunity to be in this August forum. He also thanked Dept. of Power, Govt. of Nagaland for their magnanimity of hosting this event.

He mentioned about the implementation of Government of India and World Bank funded project NERPSIP (North East Region Power System Improvement Project) as one such major infrastructure development programme creating a robust power network in the North Eastern States by strengthening and augmenting the Intra-State Transmission and Distribution System. Accordingly, much needed construction of Transmission lines and sub-stations are presently in progress. However, progress so far achieved till date for NERPSIP in Tripura is lagging far behind the schedule. He urged upon the Power Grid Corporation of Indian Limited (PGCIL), the implementing agency to expedite the works for completion of Tranche-I within the revised extended time period of December 2021 for Tripura as well as other NE States, so that planning of Tranche- II can be taken up.

He also mentioned that Tripura has implemented centrally sponsored Rural Electrification flagship schemes like Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA) for Rs. 417.53 Crores, Deen Dayal Upadhyaya Gram Jyoti Yojna

(DDUGJY) for RS 74.12 Crores and DDUGJY Phase 2 for Rs. 358.64 Crores for expansion of electric supply network in rural and remote areas with electrification of all un-electrified households of the State.

Also, Pre-paid metering has been introduced with vending system for 1.84 Lacs consumers in urban and semi-urban areas of the State and is in progress and targeted to be completed by March 2021.

Full text of the speech of Hon'ble Dy. Chief Minister, Govt. of Tripura is placed at **Annexure – V**.

Shri James K Sangma, Hon'ble Power Minister, Meghalaya addressed the 21st NER Power Committee. He stated that one of the major issues which is common in the region for setting up of Transmission lines, is Right of Way (RoW). In a region where each State has different local governance laws, the challenge remains in getting permissions from all stakeholders. Some areas have high population density and in certain cases, the topography of the region can sometimes prove to formidable.

Another major concern for the Electricity Network is reliable communication. It is necessary that Govt. of India extend its full support to this sector at 100% grant funding so that telemetry's availability can be achieved as per CERC's guidelines. Commercial use of our OFC network in the region is very limited and the fact that we have to share 50% of the costs is a great deterrent for states like Meghalaya which is cash-strapped and landlocked. Because of this unfavourable sanctioning ratio, we are unable to accept schemes and this has weakened our telemetry system which directly affects the smooth functioning of the Power transmission system.

Further, he mentioned that the 132KV connectivity between Ampati in Meghalaya and Hatsingimari in Assam will provide power stability in the area and also serve as an alternate source for Tura in West Garo Hills which, till now, is solely dependent on power from Nangalbibra Grid Substation.

Full text of the speech of Hon'ble Power Minister, Govt. of Meghalaya is placed at **Annexure – VI**.

Shri Balo Raja, Hon'ble Adviser (Power), Govt. of Arunachal Pradesh in his address thanked the Forum and MoP GoI for approving 220KV DC Kathaalguri-Namsai and 132 KV Roing-Chapakhowa transmission lines.

Further, he stated that one of the major issues is "Tawang – Bhutan International connectivity". The proposed 132 KV transmission line from khuppi to Tawang would become a long radial line terminating in the district. Such a long radial line is a huge concern from the point of reliability causing serious Operational challenges and issues. Tawang, one of the most beautiful tourist destinations of the region, would very likely suffer due to low reliability, if left alone in a radial feeder configuration. The situation would get aggravated by treacherous path the system would pass though via difficult terrain and the snow cladded Sela pass. Therefore, to overcome this bottleneck, he proposed establishment of a transmission line between Tawang (India) and Bhutan. 600 MW Kholongchu hydro power stations in Bhutan is only a few kilometers away from India. Such a connectivity, apart from improving the reliability of the grid, it will increase heart to heart connectivity among the people of both the countries in the process of bilateral exchange of energy in time of needs and also shall enhance old age traditional bilateral relationship with Bhutan. This will also make our state more visible in the International Electricity Market and Regional International political Scenario.

Full text of the speech of Hon'ble Adviser (Power), Govt. of Arunachal Pradesh is placed at **Annexure – VII**.

Shri Neiphiu Rio, Chairman, NERPC & Hon'ble Chief Minister, Govt. of Nagaland addressed the 21st NER Power Committee and stated that the NERPC has always been relentlessly striving towards making the NER power system operations more reliable, efficient and economically viable and stated that he has great hope and expectations towards a positive outcome from today's discussions and deliberations. He stated that the 21st Technical Co-ordination Committee (TCC) Session held the day before had discussed many operational and technical issues were discussed & resolved and approval and further recommendations of the RPC is to be done.

He mentioned that it is a matter of concern that during the 20th NERPC meeting, the issue regarding 100% funding under PSDF funding for NE as against the existing

guidelines of 50% funding support for "Reliable Communication" was discussed thoroughly and recommended to the Ministry of Power, Govt. Of India. However, till date, no progress in this regard has taken place. Therefore, he proposed that a resolution in this regard be taken in the meeting once again to impress upon the Ministry of Power for consideration. In this regard, He request all the Power Ministers of the Region to take serious note of this matter and join him to pursue the issue.

Finally, he thanked Govt. of India for funding and implementation of various Inter State Transmission Lines in the region. However, to optimize the benefit to the fullest, the downstream connectivity considerations should also be planned & considered accordingly during conceptualization itself by all concerned especially the Central Electricity Authority during the project appraisal.

Full text of the speech of Hon'ble Chief Minister, Govt. of Nagaland & Chairman, NERPC is placed at **Annexure – VIII**.

Shri Thongam Biswajit Singh, the Hon'ble Power Minister, Govt. of Manipur could not attend the meeting due to unavoidable circumstances. In his note he mentioned that 400 kV sub-station at Thoubal, the first of its kind under State Sector in the state, is now complete in all respects. MSPCL is planning to commission it in March, 2021 after carrying out thorough verification of all the technical parameters and conducting pre-commissioning test. Pre-commissioning test of 400kV Thoubal line from PGCI, Yurembam is going on. I wish to thank PGCI for their co-operation. Another important milestone my state has made is in the reduction of AT&C loss from 44.42% in 2015-16 to 22.27% in 2019-20, which is around 100% reduction from the figure of 2015-16.

He stated that extension of 400 kV system to Manipur and Nagaland is done through a 400 kV ring connecting Silchar – Imphal - New Khohima - New Mariani – Misa – Balipara – Rangia – Bongaigaon – Azara –Byrnihat - Silchar along with new 400 kV substation at New Mariani and charging of the New Mariani - Misa line at its rated voltage of 400 kV. This corridor is an alternate for Silchar - Misa line.

Further, Manipur has electrified 1.04 lakh households comprising of APL and poor families through Grid and 3,380 households through Off-Grid. Consumers in the

BPL category have been badly hit by the Covid-19 pandemic. It in turn has resulted in very poor revenue collection and accumulation of huge outstanding dues to be paid to the Central Generating Stations and transmission Companies. Other states in the region might also have faced the same problem. I understand that like in my state most of the consumers in all the NE States are poor domestic consumers. If the recent 'Atmanirbhar Bharat Abhiyan' loan for payment of power purchase dues of the Central Generating Stations is converted to grant as a special case for the NE States a huge burden would be removed.

His speech was taken as read and placed at **Annexure – IX**.

Shri A. K. Thakur, Member Secretary, NERPC welcomed all participants and expressed gratitude for participation in the meeting. He mentioned that during the last one year many developments have taken place in the power sector in the region. He expressed concerned that some of the projects under R&U has not been completed till date inspite of repeated reminder in every OCC Meetings. He also mentioned that some of the NER Sates are not regularly attending in sub-committee meetings, viz. Protection & NETeST. He urged upon the Managements to look into the matter. Further, he mentioned that TCC/NERPC Meetings should be held regularly to address the issues of the region. He requested that the trend should continue. His speech is placed at **Annexure – X**.

After this Chairman, NERPC requested Member Secretary, NERPC to take up the agenda for discussion.

The meeting concluded with the vote of thanks from NERPC Secretariat side by Shri B. Lyngkhoi, Director (O&P) and from Dept. of Power, Govt. of Nagaland by Shri K.D. Vizo, Principal Secretary (Power).

RECORD NOTES OF DISCUSSION OF 21ST TCC & 21ST NERPC MEETINGS

III : CONFIRMATION OF THE MINUTES OF 20TH TCC MEETING & 20TH NERPC MEETING

The minutes of the 20th TCC & 20th North Eastern Regional Power Committee (NER Power Committee) meetings held on 12th September, 2019 at Guwahati were circulated vide letter no. NERPC/OP/Committee/2019/5190-5264 dated 30th September, 2019.

No comments or observations were received from any constituents and hence, TCC and NERPC may confirm the minutes of above meetings.

Deliberation of the TCC

TCC confirmed the minutes of 20th TCC meeting.

Deliberation of the RPC

The RPC confirmed the minutes of 20th NERPC meeting.

CATEGORY – A : ITEMS DISCUSSED AND APPROVED BY THE COMMITTEE

ITEM NO. A.01 : 100% FUNDING FROM PSDF FOR RELIABLE COMMUNICATIONS SCHEME - MEPTCL.

MePTCL recently submitted a proposal amounting to Rs 24.22 Crores to the Government. This is due to the fact that PSDF has sanctioned the earlier DPR at only 50% of the cost. It may be stated that, the proposal for 100% funding is necessary for Meghalaya due to the fact that the OFC infrastructure shall be required mainly for reliability of Meghalaya's transmission system. In view of lack of any substantial commercial uses of OFC infrastructure in Meghalaya and NER as a whole, it is proposed that NERPC may take up the matter for the interests of transmission stability.

*** Although the agenda has been put up by MePTCL but it pertains to all NER states.*

Deliberation of the TCC

Members in unison opined that 100% funding for reliable communication from PSDF is necessary otherwise it would be difficult for NER States to fund the projects. Further, they have mentioned that even for successful completion of differential protection schemes in short lines would not be possible without communication.

It was also deliberated that unlike other regions, any substantial commercial use of OFC infrastructure in NER is not possible, so it will be very difficult for NER States to fund additional 50% from their own resources.

After detailed deliberation, the forum noted the utmost requirement of 100% funding from PSDF for all the states in NER and referred the matter for deliberation in RPC meeting.

Deliberation of the RPC

Hon'ble Power Minister, Govt. of Meghalaya informed that during his tenure as Chairman, NERPC the issue was already referred to Ministry of Power, Govt. of India but response is awaited. He stressed the importance of reliable communication and requested the forum to pass a Resolution in this regard. All RPC members agreed.

The RPC endorsed the view of TCC and decided that a Resolution will be adopted to request Ministry of Power, Govt. of India to grant 100% funding from PSDF, as a special consideration for NER, for Reliable Communication.

ITEM NO. A.02	**:**	**ACUTE RoW CONSTRAINTS FACED BY POWERGRID IN ASSAM AND SOME OTHER PARTS OF NER FOR MAINTENANCE OF TRANSMISSION LINES - NERTS.**

During maintenance of EHV transmission lines by NERTS in different states of NER, there have been multiple instances of ROW which has inordinately delayed restoration/maintenance/project work.During 19th & 20th NERPC Meeting held at Guwahati, the issue of acute ROW problem faced by NERTS for maintaining 800 kV HVDC, BNC-AGRA Line, 400 kV D/C Bongaigaon – Balipara – III & IV, 400 kV D/C Silchar – PK Bari – I & II Line was discussed in details. Matter is being followed up

with administration for solution from time to time. Some of the incidents are cited below:

a. Severe ROW problem has been faced during laying of OPGW in +/- 800kV HVDC B'Chariali-Agra- II line in Baksa and Udalguri district of Assam. It may be noted that recently NERTS had successfully carried out installation/ stringing of pending OPGW over HVDC Link (BNC-Alipurduar: NER part- apx.26km) which was possible only with the help of administration & police force/security.

b. However due to acute ROW issue stringing of approx. 5 kM of earth wire in +/- 800kV HVDC B'Chariali – Agra – I line in Baksa and Udalguri district of Assam could not yet been completed.

c. Also, severe ROW problem has been faced during Shut Down related maintenance activities in 400kV Silchar-PKBari Transmission Line (Presently Charged at 132kV) in the district of Hailakandi and Karimganj of Assam. It is to be mentioned here that in cases, the local people do not allow NERTS to climb the tower for maintenance of lines, clearing of vegetation's, cutting of jungles below the conductor etc. which results in difficulty in maintaining the same.

d. Right of Way Issues in Execution of Diversion Works of 132 kV S/C Nirjuli-Ranganadi Transmission Line for Facilitating Harmoti-Nagarlogun Broad Gauge Line: The diversion works of 132 kV S/C Nirjuli-Ranganadi Transmission Line for Facilitating Harmoti-Naharlogun Broad Gauge Line was held up due to acute Right of Way (ROW) issues involving 03 nos. of locations in Ambabasti Village, Papum Pare district since April,2017.POWERGRID has been pursuing for resolution of the issue with state administration at various levels. Same was also discussed in 20th NERPC/TCC meeting.

Deliberation of the TCC

ED, NERTS requested the support from Govt. of Assam & Govt. of Arunachal Pradesh for the above stated RoW issues. The forum noted the often-insurmountable RoW issues while executing transmission works in NER. The matter was referred to RPC for guidance.

Deliberation of the RPC

Hon'ble Chairman, NERPC enquired from Assam & Ar. Pradesh about the issue.

Both Assam & Ar. Pradesh representatives informed that issue of RoW is known to

them and assured that they will extent full support to NERTS, POWERGRID whenever required

The RPC noted as above.

ITEM NO. A.03 : ROADMAP AND IMPLEMENTATION OF CABIL REPORT RECOMMENDATIONS– NERLDC.

In the 20th TCC meeting, all constituent states noted the road map given by CABIL report and stated that they will try to adhere to the timeline given. It was agreed to follow-up in next TCC meeting.

Step	Activity	Action by	Target (days)	Status
1	Workshops in each SLDC on the report of the sub group	SLDC/ RLDC	15 Zero date: **DEC,18**	All states completed by RLDC
2	Publication of draft Regulations for Fees & Charges of Load Despatch Centre in line with Model F&C Regulation	ERC	30 (DEC'18)	Regulation is not in place for Arunachal, Assam and Tripura
3	Interactive session with Stakeholders to emphasize the need for Institution building/strengthening of LDCs and elaborate on the principles of LDC fees and charge regulations	ERC	45 (JAN'19)	
4	Notification of Regulations for Fees and Charges of Load Despatch Centre after public hearing.	ERC	90 (FEB'19)	
5	Registration of Users of LDC	LDC	100 (MAR'19)	
6	Separation of financial accounts for LDCs and Identification of Assets and Liabilities of LDCs	STU	120 (MAR'19)	
7	Preparation of organization Chart for LDC and Identification of Human Resources for LDCs. Identification of list of Certified Operators	STU	130 (APR'19)	
8	Creation of separate Bank Account for LDC and a separate Bank Accounts for Regulatory Pool funds to be managed by LDCs	LDC	150 (MAY'19)	Assam has opened separate bank account in the name of CGM, SLDC.

9	Preparation of CAPEX plan for up gradation of SCADA, IT and civil infrastructure of LDCs	LDC	150 (MAY'19)	
10	Preparation of plan for application software relevant for the respective LDC	LDC	180 (JUN'19)	
11	Preparation of plan for capacity building of HR personnel in LDC to ensure minimum 7 man-days of training to every employee of LDC	LDC	180 (JUN'19)	
12	Submission of Petition for approval of Fees and Charges of Load Despatch Centre in respective ERC	LDC	210 (JUL'19)	
13	Approval of Fees and Charges for Control period	ERC	300 (OCT'19)	
14	Commencement of billing of LDC fees and charges	LDC	330 (NOV'19)	
15	1st Review of progress in the activities for F&C utilization	ERC	365 (DEC'19)	

Deliberation of the TCC

AGM, TSECL informed that the matter is being pursued with the state government and results in form of more manpower for SLDC is expected. ED, NERLDC explained in detail about the recommendations of CABIL. The forum referred the matter to RPC for further deliberation.

Deliberation of the RPC

ED, NERLDC explained in detailed about the importance of CABIL Reports recommendations, viz increase of manpower, ring fencing etc., of SLDCs. He requested all States to comply the CABIL Report for the benefits of their SLDCs.

Hon'ble Chairman, NERPC requested all SLDCs to look into the matter and give their comments accordingly so that further actions can be taken.

The RPC noted as above.

ITEM NO. A.04 : WITHDRAWAL OF CRPF DEPLOYED AT LOKTAK POWER STATION -NHPC.

NHPC informed vide Ministry of Home Affairs Office Memorandum No. ID-12013/2018/NHPC-Loktak(M)/PF-II dated 07-12-2020 that the proposal for continuation of CRPF for security of Loktak Power Station had been examined in the Ministry and it has been decided to replace the CRPF with CISF for the security of the Loktak Power Station in phased manner. CISF is requested to take over the security of Ithai Barrage at first and followed by Power House at Leimatak.

Earlier, the same issue had been raised in 2011 & 2018 and as per 11th TCC& 11th NERPC meeting held on 05th & 06th May 2011 and 19th TCC held on 28-11-2018, NERPC & Govt of Manipur along with NHPC had taken up the matter in 2012 & 2018 with Ministry of Power, Govt. of India to review the decision of withdrawal of CRPF. The cost of deployment of CISF at Loktak Power Station, Manipur will have higher tariff implications. The withdrawal of CRPF will lead to a sense of insecurity amongst the employees affecting the operation and generation of Loktak Power Station. Further the cost of deployment of CISF personnel at Loktak power station will make the generated power substantially costlier for the beneficiary states. Being an important issue concerning smooth operation of Loktak Power Station and in the interest of NER states, NHPC requests the forum to take up the matter for an early review by Ministry of Home Affairs, Govt. of India.

Deliberation of the TCC

After detailed deliberation, the concerned of NHPC was noted and the forum referred the matter for discussion in RPC.

Deliberation of the RPC

Members opined that the additional cost of deployment of CISF in place of CRPF at Loktak Power station, Manipur will have higher tariff burdens on NER States and as indicated by NHPC a sense of insecurity will also prevailed amongst their employees. They felt that Loktak Power station is one of the oldest power stations in the region with lower power tariff.

The RPC endorsed the view of forum and requested Hon'ble Chairman, NERPC to take up the matter with Home Ministry, Govt. of India to allow NHPC to continue with the

CRPF security arrangement so as to rule out the additional financial burden on NER States as well as a sense of insecurity amongst NHPC employees.

ITEM NO. A.05	**:**	**DE-ALLOCATION OF POWER FROM NTPC-BONGAIGAON.**

Deliberation of the TCC

During the meeting all the state beneficiaries of Bongaigaon Thermal Power Plant (BgTPP) unanimously stated that the power from BgTPP may be de-allocated as it is very expensive and is causing immense burden on the state utilities.

TCC noted and referred for discussion to RPC.

Deliberation of the RPC

Representative from NTPC wanted to record their following views on the issue raised by NER beneficiaries:

a. BgTPP is the only coal based thermal power station situated in NER supplying the much-needed base power to the region and providing stability to the NER Grid.

b. NTPC has been trying consistently to reduce the ECR of the station and has been successful in its effort. The ECR of the station has reduced to 299p/kWh in January '21 and effort is being made for further reduction.

c. With the running of BGTPS with higher PLF, the per unit cost to the beneficiary will be further reduced. For the commercial interest of the beneficiaries, this plant should be scheduled more so that it can run at higher load and in turn reduced per unit cost of power.

d. An expert committee has been constituted by MoP under the chairmanship of Addl. Secretary, MoP, Govt of India to address the high cost of BgTPP where states have been members representing their point of view.

Hence, NTPC requested to NER beneficiary states to look into the above-mentioned views of NTPC and help BgTPP to perform optimally.

The issue was discussed in detailed and RPC also endorsed the view of TCC and decided that a Resolution shall be adopted to request Ministry of Power, Govt. of India to address the issue of further reduction in the tariff, otherwise, to deallocate the firm shares from BgTPP so as to relieve the financial burden on NER States.

ITEM NO. A.06 : TENURE OF CHAIRMANSHIP OF NERPC -NERPC.

Member Secretary, NERPC highlighted that Chairmanship of NERPC is held by alphabetical rotation amongst Hon'ble Power Ministers of NER States for a period of one year i.e 1st April to 31st March. Hence the tenure of present Chairman, NERPC & Hon'ble Chief Minister, Govt. of Nagaland will end by 31.03.2021.

The RPC forum opined that due to Covid19, the tenure of present Chairman could not be carried out as usual and felt that he should be continued for one more term i.e. till March, 2022. Thereafter from April, 2022 – March, 2023 Hon'ble Power Minister, Govt. of Tripura will take over as Chairman, NERPC.

The forum also put in record the sincere appreciation to Hon'ble Power Minister, Govt. of Meghalaya for his immense contributions towards Power Sector in NER during his tenure as Chairman, NERPC till 31.03.2020.

The RPC approved the extension of tenure of present Chairman, NERPC & Hon'ble Chief Minister, Govt. of Nagaland for one more term i.e. upto 31.03.2022.

CATEGORY – B : ITEMS FOR APPROVAL

ITEM NO. B.01 : 132kV S/C LILO CONNECTIVITY TO 132kV KARIMGANJ SUB-STATION FROM 132kV BADARPUR-KUMARGHAT – ASSAM

Request for approval of 132KV S/C LILO connectivity to 132kv Karimganj S/S from 132kv S/C Badarpur – Kumarghat line of PGCIL, which passes by at a distance of 3 km from Karimganj Substation.

A vast area of Southern Assam comprising the Karimganj District including the district HQ has been facing drastic load restriction on account of very unstable power supply received via a substantially long 33kv feeder from Panchgram S/S - so much so, even the supply to the basic amenities like hospitals etc gets frequently disrupted giving rise to widespread public resentment combined with socio-political overtone. As such a 132kv S/S at Karimganj S/S with S/C connectivity from the existing Hailakandi S/S was planned. Towards this venture, the S/S at Karimganj has already been constructed and is ready to be loaded. But the associated S/C line from Hailakandi could not be completed due to unavoidable circumstances.As an urgent remedial measure AEGCL put forwarded an agenda before the NERPC - OCC meeting to allow AEGCL for availing a LILO connectivity from 132kv S/C Badarpur – Kumarghat line of PGCIL to Karimganj S/S. It is pertinent to note that this line passes by at a distance of only 3 KM from Karimganj S/S. The 165th OCC meeting held on 14th February, 2020 deliberated on the issue (copy of the minutes enclosed) and allowed AEGCL to proceed ahead with the LILO works the meeting further directed AEGCL to obtain post facto approval of the LILO from SCM. Accordingly, AEGCL carried out the survey for the LILO connectivity and prepared the BoQ etc and work has been allotted to a contracting firm. The firm has already started the work for early completion of the scheme. Hence, the approval for the said LILO is urgently needed.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and agreed in principle.

ITEM NO. B.02 : REVISED PROPOSAL IN RESPECT OF 220kV MARIANI – NEW MARIANI CONNECTIVITY - ASSAM

The earlier proposal at Clause 18.6 of the Minutes of 6th Standing Committee Meeting held on 03/10/2018 for connectivity on 220kv New Mariani – Mariani needs to be revisited on account of the following reasons:

The Survey carried out for the implementation of the said scheme has revealed that there is not only an acute RoW issue but also there will be need for sprawling "line crossing gantries" necessitating the acquisition of a huge plot of private agricultural land. It may be mentioned that the entry points of 2 no of 400kv circuits and 6 no. of 220kv ckts are all located at the same place. This has further complicated the issue as there will not be sufficient ground clearance (underneath the 220kv New Mariani – Mokokchung line) for entry of the 220kv Mariani line to New Mariani sub-station. Also in view of the approval of Khumtai sub-station, and also due to the same difficulties of entry point issues, the implementation of LILO of 220kv Samaguri – Mariani S/C line at New Mariani will be highly difficult If this proposal is insisted for implementation, then there will be huge cost involvement on the part of AEGCL and the process itself will be highly time consuming resulting in unnecessary delay in the commissioning of associated schemes of PGCIL.

Such a proposition may not be prudent. After joint inspection of the site by AEGCL & PGCIL officials, it is now proposed by AEGCL to amend the proposal as hereunder.

a. 400kv D/C line from MISA to be terminated at New Mariani 400kv Bus.
b. 220kv Mariani - Kathalguri S/C line will remain as it is.
c. There will be 220kv New Mariani - Kathalguri S/C line
d. New connectivity between New Mariani and Mariani shall be established through 220kv S/C Mariani - New Mariani line.
e. Earlier proposal for 220kv LILO connectivity of 220kv Samaguri - Mariani S/C line at New Mariani needs to be dropped.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and agreed in principle.

ITEM NO. B.03	**:**	**RE-CONDUCTORING OF THE 132kV LINE FROM KHLIEHRIAT TO PANCHGRAM BY HTLS CONDUCTOR – MePTCL.**

The 132 kV Khliehriat (Meghalaya) - Panchgram (Assam) S/c line is an ISTS line (approx. 90 km) owned by respective state utilities on each side, and the line was commissioned in 1983 (more than 35 years in operation). Presently, the loading of the line (ACSR Panther conductor) is restricted to 50MW only. MePTCL proposed for up-gradation of 132 kV Khliehriat- Panchgram line with HTLS conductor by MePTCL.

AEGCL has confirmed that about 20km portion of the 132 kV Khliehriat- Panchgram line lies in Assam and AEGCL don't have any issue in reconductoring of this line by MePTCL. Further, AEGCL requested MePTCL to maintain the Assam portion of line as well alongwith the maintenance of the line which lies in Meghalaya.

In the 1st NERPC-TP meeting the proposal of reconductoring of 132kV Khliehriat-Panchgram line with HTLS conductor alongwith uprating of requisite bay equipment by MePTCL was approved.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.04	**:**	**CAPITALIZATION OF 1X80MVAR 420kV BUS REACTOR IN EXISTING GIS BAY AT MISA UNDER NERSS-II(PART-B) WITH DoCO- 23.06.2020, SCHEDULE AUG'20 – NERTS.**

Under Misa GIS Substation (Extension), 01 No. 420kV 80MVAR 3-Ph Bus Reactor has been proposed with commissioning schedule of November 2020.

As discussed in 169th OCCM, 420kV 80MVAR Bus Reactor has been installed and charged at 400kV Misa S/Sn as part of Misa-Mariani line upgradation in June'20. The 220kV line is yet to be upgraded. NERLDC informed that after detailed studies it

has been found that the 400kV Bus voltage at Misa substation was 424kV in Lean Hydro and 421kV in Peak Hydro season without Bus Reactor. With commissioning of 80MVAR Bus Reactor at Misa, there is 8kV reduction in both the cases catering to better grid security.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.05 : RE-INSTATEMENT OF 5MVA 3-PHASE 132/33kV POWER TRANSFORMER AT KUMARGHAT SUSTATION– NERTS.

There was tripping of 5MVA, 3-Phase- 132/33kV Power Transformer (Bharat Bijlee Make) at 132kV Kumarghat S/S on 14.02.2020 due to operation of Buchholz protection. On analysis, it was found that same was due to poor value of degree of polarization w.r.t insulation level of paper over windings due to ageing of the transformer. OEM intimated that there is no more support for repair or rectification as the power transformer was manufactured apx.39yrs ago. Hence it is proposed to procure a new 5 MVA transformer in the ongoing project NERSS VIII. The tentative cost of Transformer is Rs 1.31 Cr (Excluding F&I and Taxes & Duties).

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.06 : APPROVAL OF SCHEMES APPROVED IN THE 1ST AND 2ND NERPC-TP - NERTS

Number of ISTS schemes were agreed for implementation in the 1st meeting of North Eastern Regional Power Committee (Transmission Planning) held on 08.11.2019 at

Shillong. Subsequently, the same were approved in the 3rd meeting of NCT held on 26th-28th May 2020. Thereafter, MoP vide Office Memorandum dated 25.09.2020 has approved implementation of some of those schemes under RTM by POWERGRID, while some other has been approved for implementation through TBCB route. Such schemes requiring approval of TCC & NERPC are given below:

A. <u>By POWERGRID under RTM</u>

(i) North Eastern Region Strengthening Scheme – XI (NERSS-XI)

i. Extension at Imphal (POWERGRID) S/s

- Installation of 420kV, 2x63MVAr switchable line reactors, one in each circuit of Silchar (POWERGRID) – Imphal (POWERGRID) 400kV D/c line at Imphal end.

ii. Augmentation of transformation capacity at Salakati (POWERGRID) S/s

- Installation of 3rd 220/132kV, 1x100MVA ICT along with associated bays

(ii) North Eastern Region Strengthening Scheme – XII (NERSS-XII)

i. Re-conductoring of Siliguri – Bongaigaon 400kV D/c line with Twin HTLS conductor (Ampacity of single HTLS shall be 1596A – equivalent to Twin ACSR Moose cond. for 45ºC ambient and 85ºC maximum conductor temperature) along with upgardation of 2 nos. of 400kV bays each at Siliguri & Bongaigaon substation

ii. Re-conductoring of Alipurduar – Salakati 220kV D/c line with Single HTLS conductor (Ampacity of single HTLS shall be 1596A – equivalent to Twin ACSR Moose cond. for 45ºC ambient and 85ºC maximum conductor temperature) along with upgardation of 2 nos. of 220kV bays each at Alipurduar & Salakati substation

iii. Re-conductoring of BTPS – Salakati 220kV D/c line with Single HTLS conductor (Ampacity of single HTLS shall be 1596A – equivalent to Twin ACSR Moose cond. for 45ºC ambient and 85ºC maximum conductor temperature) along with upgardation of 2 nos. of 220kV bays each at BTPS & Salakati substation

iv. Re-conductoring of Dimapur – Imphal 132kV S/c line with Single HTLS conductor and strengthening of tower, wherever required (Ampacity of single HTLS shall be 798A – equivalent to Single ACSR Moose cond. for

45°C ambient and 85°C maximum conductor temperature) along with upgradation of associated bays along with upgardation of 1 no. of 132kV bay each at Dimapur & Imphal* substation

**Conversion of 132kV level of 400/132/33kV Imphal S/s is also being taken up in NERSS-XIII. Accordingly, upgradation at Imphal may be carried out considering the same*

v. Re-conductoring of Loktak – Jiribam 132kV S/c line with Single HTLS conductor and strengthening of tower, wherever required (Ampacity of single HTLS shall be 798A – equivalent to Single ACSR Moose cond. for 45°C ambient and 85°C maximum conductor temperature) along with upgardation of 1 no. of 132kV bay each at Loktak & Jiribam substation

Subsequently, due to the technical difficulties (mainly associated with limitation in existing tower) in achieving the approved current rating through HTLS and considering power flow requirement as per studies, it was agreed in a meeting taken by CEA on 21-12-2020 that the following ampacity (**mentioned in column E below**) of HTLS conductors for above lines in NER meets the technical requirement:

Sl. No.	**Name of transmission line**	**Ampacity of existing ACSR sub-conductor (A)**	**Ampacity of Single HTLS Conductor as per MoP order dated 25.09.2020 (A)**	**Ampacity of single HTLS sub-conductor agreed considering technical constraints and system requirement (A)**
(A)	**(B)**	**(C)**	**(D)**	**(E)**
1	400kV D/C Siliguri-Bongaigaon line (Twin ACSR Moose)	707	1596	1400
2	220kV D/C Alipurduar-Salakati line (Single ACSR Zebra)	451	1596	1100
3	220kV D/C BPTS-Salakati line (Single ACSR Zebra)	451	1596	1100
4	132kV S/C Dimapur-Imphal line (Single ACSR Panther)	93	798	450
5	132kV S/C Loktak-Jiribam line (Single ACSR Panther)	185	798	600

(iii) North Eastern Region Strengthening Scheme – XIII (NERSS-XIII)

i. Conversion of 132kV bus at Nirjuli (POWERGRID) S/s

- Conversion of 132kV level of 132/33kV Nirjuli (POWERGRID) S/s to Double Main Bus Scheme through GIS.

ii. Conversion of 132kV bus at Imphal (POWERGRID) S/s

- Conversion of old (more than 25 years) 132kV bus section of 400/132/33kV Imphal (POWERGRID) S/s to Double Main Bus Scheme

through GIS and new 132kV bus section to Double Main Bus Scheme through AIS

(iv) North Eastern Region Strengthening Scheme – XIV (NERSS-XIV)

i. LILO of Palatana – Surajmaninagar (ISTS) 400kV D/c line at 400/132kV Surajmaninagar (TSECL) S/s
ii. 4 nos. of 400kV line bays at Surajmaningar (TSECL) S/s for termination of above LILO

B. TBCB

(i) Establishment of new 220/132kV substation at Nangalbibra

i. Establishment of new 220/132kV, 2x160MVA substation at Nangalbibra
ii. Bongaigaon (POWERGRID) – Nangalbibra 400kV D/c line (initially operated at 220kV) alongwith associated bays at both ends
iii. Hastinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line alongwith associated bays at both ends

Note:

(i) *POWERGRID to provide space for extension at Bongaigaon (POWERGRID) S/s: 2 No. of 220kV line bays for termination of Bongaigaon (POWERGRID) – Nangalbibra 400kV D/c line (initially operated at 220kV)*

(ii) *AEGCL/Assam to provide space for extension at Hatsinghmari (Assam) S/s: 2 No. of 132kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line.*

(iii) *MePTCL/Meghalaya to provide space for extension at Ampati (Meghalaya) S/s: 2 No. of 132kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line.*

1.1. Further, following ISTS schemes were approved in the 2nd meeting of North Eastern Regional Power Committee (Transmission Planning) held on 25.09.2020 through Video Conference. Such schemes requiring approval of TCC & NERPC are given below:

(i) North Eastern Region Strengthening Scheme – XV (NERSS-XV)

i. Upgradation of existing 132kV Namsai (POWERGRID) S/s to 220kV (with 220kV side as GIS) with installation of 2x160MVA, 220/132kV ICTs alongwith associated bays and space for 4 no. future line bays
ii. Installation of 1x31.5MVAr, 245kV bus Reactor alogwith associated GIS bay at Namsai (POWERGRID) S/s

iii. Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/c line along with associated GIS line bays at both ends

(ii) Modification in already approved North Eastern Region Strengthening Scheme – IX (NERSS-IX)

i. Construction of 2 no. 132kV **GIS** bays at Nirjuli S/s for termination of LILO of one circuit of Pare HEP - North Lakhimpur (AEGCL) 132kV D/c line (with ACSR Zebra).

(iii) Shifting of Surajmaninagar (TSECL) – Comilla (Bangladesh) 400kV cross border link to Surajmaninagar (ISTS)

1. Shifting of Surajmaninagar (TSECL) – Comilla (Bangladesh) 400kV D/c (operated at 132kV) line to Surajmaninagar (ISTS) and operation as Surajmaninagar (ISTS) – Comilla (Bangladesh) 400kV D/c (operated at 132kV) line
2. 2 no. 132kV line bays at Surajmaninagar (ISTS) 400/132kV S/s for termination of Surajmaninagar (ISTS) – Comilla (Bangladesh) 400kV D/c (operated at 132kV) line

Note: *Shifting will be carried out after expiry of present contract (i.e. March 2021) of export of 160MW from Tripura to Bangladesh.*

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC for above elements except for the following which have not been agreed by TSECL and hence referred back to NERPC-TP for deliberation:

Under North Eastern Region Strengthening Scheme – XIV (NERSS-XIV)

i. LILO of Palatana – Surajmaninagar (ISTS) 400kV D/c line at 400/132kV Surajmaninagar (TSECL) S/s

ii. 4 nos. of 400kV line bays at Surajmaningar (TSECL) S/s for termination of above LILO

Under North Eastern Region Strengthening Scheme – XV (NERSS-XV)

(i) Shifting of Surajmaninagar (TSECL) – Comilla (Bangladesh) 400kV cross border link to Surajmaninagar (ISTS)

1. Shifting of Surajmaninagar (TSECL) – Comilla (Bangladesh) 400kV D/c (operated at 132kV) line to Surajmaninagar (ISTS) and operation as Surajmaninagar (ISTS) – Comilla (Bangladesh) 400kV D/c (operated at 132kV) line
2. 2 no. 132kV line bays at Surajmaninagar (ISTS) 400/132kV S/s for termination of Surajmaninagar (ISTS) – Comilla (Bangladesh) 400kV D/c (operated at 132kV) line

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.07 : APPROVAL OF SCHEMES APPROVED IN THE 1ST NERPC-TP - NERPC

Scheme for relieving congestion in Agia Substation of Assam was approved in the 1st NERPCTP. The same is put up for TCC/RPC approval.

A. Under ISTS

a) Establishment of new 220/132kV, 2x160MVA substation at Nangalbibra

220kV:

- ICTs: 220/132kV, 2x160MVA
- ICT bays: 2 no.
- Line bays: 2 no. [for termination of Bongaigaon (POWERGRID) – Nangalbibra 400kV D/c line (initially operated at 220kV) – under this scheme]
- Bus Reactors: 2x31.5MVAr
- Bus reactor bays: 2 no.
- Space for future line bays: 6 no. [2 no. for termination of Mawngap (Meghalaya) – Nangalbibra (Meghalaya) 220kV D/c line of MePTCL and 4 no. for future lines]

132kV:

- ICT bays: 2 no.

- Line bays: 2 no. [for termination of Nangalbibra – existing Nangalbibra (MePTCL) 132kV D/c (Single Moose) line of MePTCL]
- Space for future line bays: 6 no. (for future lines)

Additional space for future expansion:

Space for future ICTs:

- 220/132kV, 1x200MVA (along with associated bays at both levels)
- 400/220kV, 3x500MVA (along with associated bays at both levels)

Space for 400kV upgradation:

- Line bays along with space for switchable line reactor: 8 no. [2 no. for 400kV operation of Bongaigaon (POWERGRID) – Nangalbibra 400kV D/c line (initially operated at 220kV) and 6 no. for other lines]
- Bus reactor: 420kV, 3x125MVAr
- Bus reactor bays: 3 no.

b) Extension at Bongaigaon (POWERGRID) S/s: 2 no. 220kV line bays for termination of Bongaigaon (POWERGRID) – Nangalbibra 400kV D/c line (initially operated at 220kV)

c) Extension at Hatsinghmari (Assam) S/s: 2 no. 132kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line

d) Extension at Ampati (Meghalaya) S/s: 2 no. 132kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line

e) Bongaigaon (POWERGRID) – Nangalbibra 400kV D/c line (initially operated at 220kV)

f) Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line

B. By MePTCL, Meghalaya under intra-state scheme: to be implemented in matching timeframe of above ISTS scheme

a) Mawngap (Meghalaya) – Nangalbibra (Meghalaya) 220kV D/c line alongwith 220kV line bays at both ends

b) Nangalbibra (ISTS) – existing Nangalbibra (MePTCL) 132kV D/c (Single Moose) line (2 no. 132kV line bays at Nangalbibra (MePTCL) is to be implemented by MePTCL, however, 2 no. 132kV line bays at Nangalbibra (ISTS) is under the scope of ISTS)

C. As part of additional compensation in Southern NER grid at Silchar, the following was approved in the 1st NERPCTP meeting:

Installation of 63MVAr switchable line reactor in Silchar (POWERGRID) - Imphal (POWERGRID) 400kV D/c line at Imphal end – under ISTS. Tentative Cost of the work would be about Rs. 15 Crore.

D. Reconductoring of Dimapur-Imphal and Loktak-Jiribam 132kV S/c lines with HTLS *(ampacity of single HTLS shall be 798A, which is equivalent to Single ACSR Moose conductor for 45°C ambient and 85°C maximum conductor temperature*) along with upgradation of terminal equipment and strengthening of tower, wherever required were agreed to be carried out under ISTS was approved in the 1st NERPCTP meeting.

E. Alternative transmission line for evacuation of power from Tuirial HEP of NEEPCO was approved in the 1st NERPCTP meeting:

132kV Tuirial (HEP) - Kolasib Ckt # II line by P&E Dept., Govt. of Mizoram under intra-state transmission system

F. Additional transmission system for Dikshi HEP in West Kameng, Arunachal Pradesh was approved in the 1st NERPCTP meeting.

1 No. 10MVA 132/33kV transformer is to be installed at Tenga S/s by March, 2020 under intra-state transmission system by Arunachal Pradesh.

G. Reconductoring of 132kV Khliehriat- Panchgram line with HTLS conductor alongwith uprating of requisite bay equipments by MePTCL was approved in the 1st NERPCTP meeting.

***H.* Reconductoring of Umiam Stage-I - Umiam Stage-III 132 kV D/c line with HTLS** conductor alongwith uprating of requisite bay equipments by MePTCL was approved in the 2nd NERPCTP meeting.

I. Modifications in Intra-state transmission system of Assam was approved in the 1st NERPC-TP meeting as attached at **Annexure - B.07**.

J. The following intra-state transmission system for Assam considering load forecast for year 2030 was approved in the 1st NERPCTP meeting.

Two no. of 400kV substations along with associated transmission lines with implementation by AEGCL under intra-state transmission scheme by 2022:

(i) Upgradation of existing 220/132kV substation to 400/220kV GIS substation at Khumtai

a. 400/220kV, 2x500 MVA ICT
b. 220/132kV, 2x160 MVA ICT (already under implementation)
c. 420kV, 2x80 MVAR Bus Reactor
d. Biswanath Chariali (POWERGRID) – Khumtai 400kV D/C (Twin Moose) line
e. 2 nos. of 400kV GIS line bays at Biswanath Chariali (POWERGRID) for termination of Biswanath Chariali (POWERGRID) – Khumtai 400kV D/C (Twin Moose) line

(ii) Establishment of new 400/220/132 kV AIS at Gogamukh

a. 400/220kV, 2x500 MVA ICT
b. 220/132kV, 2x160 MVA ICT
c. 420kV, 2x80 MVAR Bus Reactor
d. 2x63 MVAR Line reactors at Gogamukh end in Biswanath Chariali – Gogamukh 400kV D/c line
e. Biswanath Chariali (POWERGRID) – Gogamukh 400kV D/c (Twin Moose) line
f. 2 nos. of 400kV GIS line bays at Biswanath Chariali (POWERGRID) for termination of Biswanath Chariali (POWERGRID) – Gogamukh 400kV D/c (Twin Moose) line
g. Bihpuria – Gogamukh 220kV D/c line (Sonabil – Bihpuria 220kV D/c line along with 220kV S/s at Bihpuria is already under implementation by AEGCL)
h. North Lakhimpur – Dhemaji 132kV S/c line along with its LILO at Gogamukh

Note: Space provision may be made for installation of ICTs & Reactors and also for termination of additional 400kV, 220kV & 132kV lines in future.

K. Installation of 3rd ICT of 220/132kV 1x100MVA at Salakati under ISTS was approved in the 1st NERPCTP meeting to satisfy N-1 criterion.

L. Modification in scope of establishment of 400/220kV New Kohima Sub-station under NERSS-VI was approved in the 1st NERPCTP.

M. A 7x167 MVA, 400/220 kV GIS substation at New Kohima in place of conventional substation would be established under ISTS.

N. Shifting of Palatana – Surajmaninagar (TSECL) 400kV D/c line (operated at 132kV) to the 400/132kV ISTS S/s at Surajmaninagar – implementation by POWERGRID (by July 2020) as already allocated to them by MoP, GoI was approved in the 1st NERPCTP meeting. The same is put up for TCC/RPC approval.

O. Reconductoring of inter-regional transmission lines were approved in the 1st NERPCTP.

a) Reconductoring of Siliguri – Bongaigaon 400kV D/c line with Twin HTLS conductor *(ampacity of single HTLS shall be 1596A, which is equivalent to Twin ACSR Moose conductor for 45ºC ambient and 85ºC maximum conductor temperature)* along with requisite modifications in line bay equipment at both ends – under ISTS. The reconductoring will be carried out in accordance with outage permission from ERPC/NERPC/NLDC.

b) Reconductoring of the Alipurduar – Salakati (Bongaigaon) 220kV D/c line with single HTLS *(ampacity of single HTLS shall be 1596A, which is equivalent to Twin ACSR Moose conductor for 45ºC ambient and 85ºCmaximum conductor temperature)* along with requisite modifications in line bay equipment at both ends – under ISTS

P. LILO of Alipurduar – Salakati (Bongaigaon) 220kV D/c is proposed at Gossaigaon under intra state system strengthening by Assam was approved in the 1st NERPCTP.

Q. Conversion of remaining two 420kV, 63 MVAR linereactors at Biswanath Chariali end (of Lower Subansiri – Biswanath Chariali 400kV2xD/c lines) as bus reactors through suitable modifications in existing 400kV linebays like installation/provision of NGR by-pass scheme, controlled switching device etc. under ISTS was approved in the 1st NERPCTP meeting.

R. Conversion of 132kV Badarpur, 132kV Khliehriat, 132/33kV Nirjuli and 132kVImphal substations from single main transfer scheme to double main transfer scheme on completion of 25 years age was approved in the 1st NERPCTP meeting.

S. Reconductoring of BTPS- Salakati220kV D/c line with HTLS conductor (*ampacity of single HTLS shall be 1596A, which is equivalent to Twin ACSR Moose conductor for 45ºC ambient and 85ºCmaximum conductor temperature*) along with requisite modification in bay equipment at both ends under ISTS, was approved in the 1st NERPCTP.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.08 : APPROVAL OF SCHEMES APPROVED IN THE 2nd NERPC-TP - NERPC

In the 2nd NERPCTP meeting held on 25th September'20 over Video-Conferencing the Interconnection of 132kV Stations in Upper Assam with neighbouring stations in Arunachal Pradesh was discussed and the following were approved.

Following transmission system to be implemented as North Eastern Region Strengthening Scheme-XV (NERSS-XV) under ISTS:

a. Upgradation of existing 132kV Namsai (POWERGRID) S/s to 220kV (with220kV side as GIS)

220kV:

- ICTs: 220/132kV, 2x160MVA
- ICT bay: 2 no.
- Bus reactor: 220kV, 1x31.5MVAr
- Bus reactor bay: 1 no.
- Line bays: 2 no. [for termination of Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/c line]
- Space for future line bays: 4 no.

132kV:

ICT bays: 2 no.

- Space for future line bays: 4 no.

Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/c line

Extension at Kathalguri (NEEPCO) switchyard: 2 nos. of GIS line bays for termination of Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/cline

Estimate Cost of the Project: Rs. 130 Crores

Expected completion schedule: 36 months from Date of Allocation from MoP

b. One no. of 125MVAR, 400kV Bus-reactor at Subansiri Lower HE Project by NHPC was approved in the 2nd NERPCTP.

c. Modification in NERSS-IX: 2 no. 132kV GIS bays at Nirjuli S/s for termination of LILO of one circuit of Pare HEP - North Lakhimpur (AEGCL) 132kV D/c line (with ACSR Zebra) was approved in 2nd NERPCTP meeting.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.09 : DETAILS OF SEMs, DCDs/CMRIs PROCURED/TO BE PROCURED UNDER PoC MECHANISM - NERTS

It was decided in the 168th OCCM held on 20.07.2020 as well as in the 39th CCM held on 28.08.2020, that from FY 2017-18 onwards, the entire cost of SEMs, laptop, DCDs

and associated items along with O&M costs are to be booked under PoC mechanism. The summary of the said procurement is given here under:

Description	SEMs (Nos.)	DCDs/ CMRIs (Nos.)
Already received & Under process of installation/ handing over	100	20
Procurement order placed through quantity variation clause under existing LoA	50	10
Under Procurement process	125	15
Total	**275**	**45**

Tentative cost involvement for above said procurement will be about Rs. 1.05 Cr.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.10 : IMPLEMENTATION OF SINGLE-PHASE AUTO-RECLOSURE IN 132kV RANGIA-MOTONGA AND 132kV GELEPHU-SALAKATI - NERTS

As per the discussions in the 5th Operational Coordination Meeting between India and Bhutan, Bhutan informed that gang operated circuit breaker at Gelephu station has been replaced with independent pole CB for the 132 kV Salakati – Gelephu line and single-phase auto recloser can be operationalized at any time. Bhutan requested India to replace 3 phase gang operated CB mechanism with single phase CBs at Salakati end. In 132 kV Rangia – Motonga line Single Phase Auto Recloser (SPAR) is ready at Bhutan (Motonga) end but not ready at India end due to the same reason.

In 164th OCC held on 21st January, 2020 it was decided that 3 phase GO CB at Salakati and Rangia is to be converted to Single Pole CB. The forum requested NERTS to prepare the proposal and place it for ratification in the next TCC/RPC with the expenditure being shared under PoC mechanism.

Tentative cost including Supply Installation and Commissioning is INR 50 Lakhs(approx.) but excluding taxes.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.11	**:**	**IMPLEMENTATION OF RELIABLE COMMUNICATION IN NAGALAND–DoP NAGALAND**

A proposal for implementation of reliable communication in Nagaland with funding from PSDF is placed for deliberation. The scope of work are briefly as follows:

- Installation of OPGW Fiber-Optic cables on the existing EHV transmission lines of 66kV and above network.
- Installation of Fiber Optic Terminal Equipment for communication based upon Synchronous Digital Hierarchy or state of the art technology available at the time of finalization of Technical Specifications to be installed in the substations and generating stations.
- Installation of RTUs at 66kV Substations where provision of telemetry does not exist presently.
- Provision of voice communication at interconnecting substations by means of EPABX, VoIP/ analog telephony.
- Installation of DC power supply at all stations envisaged on FO network.
- Installation of underground OFC where XLPE has been laid.

  Total proposal amount INR 65.87Cr.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.12	**:**	**RENOVATION AND UPGRADATION OF PROTECTION SYSTEM IN ALL THE POWER STATIONS – MePGCL.**

The existing switchgear equipment of the Power Stations (not covered in the PSDF scheme) has been giving operational problem frequently and as such affecting our generation to a great extent and thus create system instability in the grid. Replacement of old switchgear equipments, protection system& control cables, establishment of reliable communication and providing carrier inter-trip facility for maintaining stable generation, improvement of DC system for effective tripping, and improvement of Earthing system are required as the stations are located in a rocky area including gravelling of switchyard.

Therefore, it is proposed to include the above envisaged works in the scope of R&U schemes (under Phase-II) through PSDF.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

CE(Gen.), MePGCL informed that proposal has been prepared based on Third Party Protection Audit.

MD, MSPCL informed that numerous stations in Manipur are very old and have completed their lifespan. He opined that a criteria based on ageing of the equipments may be explored so that renovation of all those stations can be done.

TCC noted and recommended the proposal of MePGCL for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.13	**:**	**RESTORATION OF ASSETS DAMAGED AT KOPILI HEP DUE TO FAILURE OF PENSTOCK – NERTS.**

Two numbers penstocks of Kopili HEP failed on 07/10/2019, submerging powerhouse and switchyard for about a week affecting project work under NERSS-III as well. Under NERSS-III, 01 no 220kV AIS bay, 06 nos 132kV GIS bays, 01 no 160MVA 220/132kV & one no. 5MVA 132/33kV ICTs is being commissioned at Kopili substation by

POWERGRID. The executing agency i.e. M/s GE T&D has visited Kopili site and tested all GIS bays including ICT etc. and assessed scope of restoration. Based on same assessment, Rs.6.33 Crore (apx.) is additionally required for repair/ replacement & restoration. The cost implication & recovery process is to be discussed for approval. Restoration schedule by M/s GE is Dec'2021.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

The forum deliberated the issue of repair/replacement of assets damaged under NERSS-III with recovery under tariff mechanism of CERC.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and agreed in principle.

ITEM NO. B.14	**:**	**MOBILE BAYS FOR EMERGENCY RESTORATION OF EHV SYSTEM IN NER – NERTS.**

In NER, it has been experienced that there are outages of substation/Generating Station/EHV element /s due to natural calamities. Recent such example is outage of generating station namely Kopili HEP, NEEPCO due to fresh flood/failure of penstock. Further, for restoration of EHV systems in time, insurmountable constraints are faced by utilities like tough terrain, poor response from vendors for supply & services in NER especially in remote locations within stipulated period.

Hence it is proposed that mobile substation may be kept as regional spare for the region where the affected station (suffering outage) in part can be bypassed under urgency and Incoming & Outgoing TLs be directly connected/terminated to TL Towers through the mobile station solution) till the main station is restored to its shape. The Mobile substation with bay modules will have the following facilities for emergency restoration of bays:

a) 1 no. 220kV Bay with all EHV equipment & protection system
b) 1no. 132kV Bay with all EHV equipment & protection system

Tentative Cost estimate is Rs.8.42 Crore (apx) excluding F&I and taxes & duties.

The procurement cost (including F&I and Taxes & duties) shall be shared by NER Constituents. Also, the maintenance cost/ AMC shall be shared by NER Constituents. Further in case of utilization by any one utility, the entire cost (i.e Transportation and other related expenses such as calling of service engineer etc.) shall be borne by the concerned utilizing utility.

The matter was discussed in 174th OCC meeting on 19th January,2021 wherein members agreed in-principle subject to TCC/RPC approval.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

After detailed deliberation the forum agreed the following and referred for RPC approval:

(i) one no. 220kV bay with all EHV equipment & protection system and one no. 132kV bay with all EHV equipment & protection system to be procured by NERTS as regional spare with the modalities as approved in the 17th TCC/RPC meeting,

(ii) Funding from PSDF/NEC to be explored. In case funding from PSDF/NEC is not approved then all the utilities of NER would share it equally.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.15 : OFFER OF POWER ALLOCATED FROM OTPC-PALATANA TO BENEFICIARY STATES – OTPC.

As per allocation order of Ministry of Power, Govt. of India, 13.5% of Palatana power is allocated to OTPC for bilateral sale. OTPC wants to offer this quantum of power on RTC basis to the existing beneficiaries of Palatana at CERC determined tariff.

Deliberation of the TCC

GM, OTPC informed that Palatana is one of the cheapest generating stations in NER and requested the NER beneficiaries to partake the merchant power under long term PPA. Members noted that congestion free, cheap and green power like Palatana GBPP should be allocated to beneficiaries in the region only. After detailed deliberation all the

state beneficiaries decided to avail the Merchant power as part of firm allocation. It was also decided that in future if one or more states decided not to avail the same then the other states would accept the corresponding share as per allocation decided by MoP.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and agreed to the recommendation of TCC.

ITEM NO. B.16	**:**	**PAINTING WORK TO RESTRICT THE CORROSION FOR THE SAFETY & ENHANCEMENT OF LIFE OF THE TOWERS IN 400kV SILCHAR – BYRNIHAT/AZARA LINE TRAVERSING THROUGH HIGHLY POLLUTED AREA NEAR BYRNIHAT - NETC**

A portion of 400 kV D/C Silchar- Byrnihat/ Azara line is passing through highly polluted terrain near Byrnihat. The pollution level has increased in the Byrnihat area due to its industrialization. Because of such pollution, number of porcelain insulators installed in this section during the construction time got damaged due to lightning flashovers because of dust deposition on the insulators, which were later replaced with Polymer insulator.

Now again, due to this heavy pollution in this area, quite a no. of towers has also got rusted, out of which altogether 6 (Six) no. of towers viz. tower no. 548, 554, 580, 581, 582& 583 are severely affected and suffered intensive corrosion. (*Photographs enclosed for ready reference*). Due to this pollution in the area, several towers of other Transmission lines have also suffered severe corrosion. The industrial pollution causing corrosion would weaken the strength of towers and if such type of corrosion continues, there is an apprehension that a few of the towers may collapse in near future due to damage of stub & lattice members.

Therefore, for the safety & enhancement of tower's life and minimise the impact of further corrosion, NETC has taken up high tech painting of these six towers with zinc rich **anticorrosive** galvanized paint along with application of **rust converter** and **acid resistant** coating. For this work NETC has engaged a highly experienced agency for completing the work prior to heavy wind /storm period (April & May) as well as ensuing rainyseason.

It is mentioned here that, the total cost of subject painting work including supply & execution would come to around Rs. 100 lakhs. As this is a very heavy amount for a small organization like NETC, the matter was taken up in the 174th OCC Meeting with a request for booking of such heavy expenditure through PoC mechanism. After detailed deliberation, the forum, considering the future implication of such nature of damage, had suggested/advised NETC to take up the matter in the next TCC/RPC meeting for inclusion of the cost as requested for.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

MD, NETC informed that inter-alia the proposal shall be approved by CERC under Additional Capital Expenditure. The forum agreed in principle and referred for RPC approval.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and agreed in principle.

ITEM NO. B.17 : ADDITIONAL PSCT LICENSE FOR NER UTILITIES

Deliberation of the TCC

NERPC highlighted that the Protection Databased Management System (PDMS) has been successfully implemented in NER and seeing its benefits, Utilities in NER have requested for 58 nos. of additional licenses. During the initial phase PSDF has approved for only 31 licenses. The approximate cost for additional licenses (58 nos.) for the NER utilities is INR 10Cr.

Members appreciated the PDMS project and its usefulness and requested that additional Protection Setting Calculation Tool license is very much required for the NER utilities.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.18 : AUTOMATIC FAULT ANALYZER SYSTEM FOR NER

Deliberation of the TCC

NERPC highlighted the successful completion of PSDF funded "Procurement of Web based Protection Database Management Software and Protection Setting Calculation Tool for North Eastern Region" which has complete data repository for the protection system of the entire transmission network for NER grid, prepared and available in the server at NERPC for the use of all the constituent members of NERPC. The protection system infrastructure has also been upgraded and modernized by way of installation of IED set ups on a large scale to the state transmission systems under NER. NERPC stated that to reap the best benefits out of these advancements another step forward towards automation of the fault analysis system has been envisaged by implementing "Automatic Fault Analyzer System" software along with relay data acquisition through Remote Access System (RAS).

This software with remote access system will give the users the availability of necessary information of all tripping incidents at finger tips along with an automatic software-based analysis of the fault giving instant results including the vital information of the type, duration, location of the fault and the operations of the protective devices. In one word a complete post mortem analysis of a tripping is done with a click of a button with report generated within a couple of minutes. This will save the expensive engineer hours required for the extraction of DR and EL files and further analysis. This will also provide a conclusive report for the tripping incident and remedial measures can be decided accordingly on a much-reduced timeline.

The approximate cost for the AFAS in NER is INR 50 Cr.

Members appreciated the AFAS project proposed by NERPC and opined that with rampant increasing of power network in the region, this project will greatly help the protection engineers & the system as a whole.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.19 : IMPLEMENTATION OF AUTOMATED DEMAND MANAGEMENT SYSTEM.

MSPCL has planned a project for system integration of 78 nos. of 33 kV Sub-stations with the Main Control Centre at SLDC, Yurembam with an extensive network of Fibre Optic Cable which includes laying of 1353 km of ADSS and 30 km of OPGW. As advised by the TESG, PSDF the project is to be staggered in three phases and the Ministry of Power has already conveyed approval to the installation of RTUs in 20 nos. of 33 kV sub-stations for integration with the SLDC in the first phase at Rs. 13.37 crore. The project is to be funded by PSDF (100% Grant) and the first instalment of Rs.1.34 crore was released on 3rd March, 2018.

Meanwhile, MSPCL has successfully completed installation of ADMS pilot project at four Power Substations (Kakwa, Mongsangei, Thoubal & Wangjing), including Site acceptance test & Go live for implementation of AUTOMATED DEMAND MANAGEMENT SCHEME (ADMS) in November, 2020.

As an extension for automation of demand management, MSPCL is also planning to implement ADMS in the 19 nos. of 33 kV Sub-stations (Airport, Chingarel, Iroishemba, JNIMS, Kangla, Kangpokpi, Keishampat (Imphal P/H), Khuman Lampak, Lamphel, Leimakhong, Mantripukhri, Mayang Imphal, Napetpalli, Nilakuthi, Sagolmang, Sangaipat, Sangaiprou, Sekmai and Sekmaijin) which are already in the list for integration with the SLDC in the first phase.

TCC may kindly deliberate the request of MSPCL and approve the proposal for implementation of ADMS in the above Sub-stations by MSPCL with possible funding from PSDF or other funding Agencies, in the interest of smooth automation of demand management in the state.

***Although the agenda has been put up by MSPCL the same is applicable for other states also for additional scope under ADMS.*

Deliberation of the TCC

MD, MSPCL informed that presently 20nos. 33kV Sub-station integration with SLDC is ongoing and OPGW connectivity for the same is proposed under Reliable Communications Scheme. So, he urged upon the forum to approve the ADMS scheme for the 20 stations to have robust Demand Management in Manipur.

NERPC stated that present ADMS scheme is just a pilot project and expansion of the scheme is very much required after seeing the success of the project.

After detailed deliberation, TCC agreed for the proposed expanded ADMS for all the NER States and recommended that all the NER States may either prepare the DPR separately or may go for common tendering through NERPC for cost optimization & faster implementation in line with the ADMS pilot project.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.20	**:**	**RENOVATION AND UPGRADATION OF 66KV SUBSTATIONS–DoP NAGALAND**

66kV Sub-stations in Nagaland come under Transmission Division of Department of Power, Nagaland. It is essential to upgrade control and protection system and replacement of different substation equipment in 66kV voltage class Sub-stations in Nagaland with funding from PSDF.

Total proposal amount INR 13.09 Cr.

Deliberation of the TCC

SE, DoP Nagaland informed that as per TESG had given two observations in 2019 viz. Third Party Protection Audit and approval of NERPC-TP. The Third Party Audit has been completed and NERPC-TP approval is awaited.

Further, Engineer-in-Chief DoP Nagaland & Chairman, TCC mentioned that 66kV voltage class falls under transmission circle and hence proposal for Renovation and Upgradation of 66kV Transmission System in Nagaland is appropriate for funding under PSDF.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.21 : AWARD OF SAMAST FOR NER STATES – NERPC

Chairman NERPC had given Approval vide dated 11.12.2019 for floating of NITs for the following:

(i) Supply, Installation, Testing and Commissioning of IT solution as part of Scheduling, Accounting, Metering and Settlement of Transaction (SAMAST) system at State Load Dispatch Centre in the North Eastern States of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura.

(ii) Supply, Installation, Testing and Commissioning of 0.2 S Class ABT type energy meters and Automated Meter Reading (AMR) solution as per SAMAST guidelines at various substations of state utilities in the North Eastern States of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura.

Accordingly, NITs were floated for IT solutions for all 7 (seven) NE States & for Metering for 2 (two) States (Assam & Meghalaya) and after successful completion of bidding process, following LOAs were placed by NERPC with due approval of Chairman, NERPC vide dated 07.12.2020:

1. Supply, Installation, Testing and Commissioning of IT solution as part of Scheduling, Accounting, Metering and Settlement of Transaction (SAMAST) system at State Load Dispatch Centre in the North Eastern States of Assam & Meghalaya

2. "Supply, Installation, Testing and Commissioning of 0.2 S Class ABT type energy meters and Automated Meter Reading (AMR) solution as per SAMAST guidelines at various substations of state utilities in the North Eastern States of Assam & Meghalaya"

The SAMAST proposal for remaining 5 (five) States is under active stage for consideration by Monitoring Committee, Ministry of Power.Upon approval by PSDF for remaining 5 (five) States of NER, the NIT for Meter, AMR portion of SAMAST for the 5 States shall be floated as per approval granted by Chairman, NERPC vide dated 11.12.2019 and after completion of bidding process, the award shall be placed to the successful bidder.

Put up for approval of TCC/RPC.

Deliberation of the TCC

Members unanimously agreed to the proposal of NERPC regarding award of SAMAST of NER. It was also decided that the Letter of Award (LoA) to the successful bidder shall be placed by NERPC on behalf of NER States in line with award of above two States.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.22 : ROSTER FOR HOSTING RPC MEETINGS – NERPC

The list of TCC/NERPC meetings hosted by Utilities since formation of NERPC (erstwhile NEREB) is given as below:

SN	TCC/RPC Meetings	Date & Venue	Hosted by:
1	1st NERPC Special	04.03.2006, Guwahati	PGCIL
2	2nd TCC/NERPC	28 & 29th July, 2006, Aizawl	P&E Dept. Mizoram
3	3rd TCC/NERPC	12th & 13th Sept., 2006, Agartala	TSECL
4	4th TCC/NERPC	20th & 21st Aug., 2007, Itanagar	DoP, Ar. Pradesh
5	5th TCC/NERPC	26th & 27th April, 2008, Gangtok	NVVN
6	6th TCC/NERPC	7th & 8th Aug., 2008, Gurgoan	PGCIL
7	7th TCC/NERPC	23rd & 24th Feb. 2009, Shillong	DoP, Nagaland
8	8th TCC/NERPC	11th & 12th Jan. 2010, Imphal	DoP, Manipur
9	9th TCC/NERPC	11th & 12th Aug.2010, Shillong	MeECL
10	10th TCC/NERPC	8th & 9th Feb. 2011, Aizawl	P&E Dept. Mizoram
11	11th TCC/NERPC	5th & 6th May, 2011, Kolkata	NHPC
12	12th TCC/NERPC	14th & 15th Nov. 2011, Amritsar	NTPC
13	13th TCC/NERPC	9th & 10th July, 2012, Faridabad	PTC
14	14th TCC/NERPC	4th Sept. 2013, Agartala	TSECL
15	15th TCC/NERPC	20th & 21st Aug. 2015, Guwahati	NEEPCO
16	16th TCC/NERPC	29th & 30th Jan. 2016, Guwahati	AEGCL/APGCL
17	17th TCC/NERPC	4th Oct. 2016, Imphal	MSPCL

18	18th TCC/NERPC	10th & 11th Oct. 2017, Shillong	MeECL
19	19th TCC/NERPC	28th & 29th Nov. 2018, Guwahati	PGCIL
20	20th TCC/NERPC	12th Sept. 2019, Guwahati	OTPC & NETC
21	21st TCC/NERPC	3rd & 4th Feb. 2021, Kohima	DoP, Nagaland

In view of above, the roaster has been prepared in alphabetical order of host organizations, keeping in view the backlog of host organizations who could not host the meetings as per their turn earlier.

Deliberation of the TCC:

SN	TCC/RPC Meetings	Date & Venue	Hosted by:
1	22nd TCC/NERPC	August/Sept., 2021	NHPC
2	23rd TCC/NERPC	January/Feb., 2022	Ar. Pradesh
3	24th TCC/NERPC	August/Sept., 2022	Assam
4	25th TCC/NERPC	January/Feb., 2023	NTPC
5	26th TCC/NERPC	August/Sept., 2023	Manipur
6	27th TCC/NERPC	January/Feb., 2024	Meghalaya
7	28th TCC/NERPC	August/Sept., 2024	NEEPCO
8	29th TCC/NERPC	January/Feb., 2025	OTPC
9	30th TCC/NERPC	August/Sept., 2025	Mizoram
10	31st TCC/NERPC	January/Feb., 2026	Tripura
11	32th TCC/NERPC	August/Sept., 2026	PGCIL
12	33th TCC/NERPC	January/Feb., 2027	Nagaland

The Roaster should be followed strictly for the benefit of the Region. All constituents are requested not to deviate from the calendar/roaster above.

However, depending upon the decision of Chairman, NERPC, the TCC/RPC can be called as and when required.

TCC noted and recommended for approval of RPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

3. CATEGORY - C : COMMERCIAL ISSUES

ITEM NO. C.01 : OUTSTANDING DUES - NERTS

a) The total outstanding dues of NER beneficiaries as on **30.12.2020** is detailed below. Please note that these figures includes both PoC as well as non-PoC outstanding amounts.

State/DIC	Total Outstanding (Cr)	Outstanding more than 45 days (Cr)	Average billing (FY 2020-21) (Cr)
APDCL (Assam)	108.30	44.18	55.77
MeECL (Meghalaya)	93.95	84.21	7.96
MSPDCL (Manipur)	27.41	20.94	5.48
Mizoram	19.05	13.96	4.09
MSPCL (Manipur)	2.39	2.30	0.10
Ar. Pradesh	4.02	-	2.89
Total	**255.12**	**165.59**	**76.29**

Concerned DICs with >45 days outstanding dues, viz. MeECL, APDCL, MSPDCL, Mizoram & MSPCL may be requested to clear the outstanding dues immediately.

b) Consultancy Service to the Government of Arunachal Pradesh for the Execution of a) Ziro-Daporijo-Along Transmission System, b) Kathalguri-Deomali Transmission System – Release of Overdue Fund Rs.3.434 Cr by DoP, AP to POWERGRID Under Consultancy Agreement dated 14.03.2000

DoP, Govt. Arunachal Pradesh is requested to release the outstanding fund of Rs. 3.434 Cr without any further delay

Deliberation of the TCC

Forum requested all concerned utilities to clear the outstanding dues at the earliest.

All constituents agreed to clear the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.02 : MAINTAINING LETTER OF CREDIT BY NER DICs - NERTS

All NER DICs have been maintaining requisite amount of LC, with the exception of MSPDCL (Manipur). The details of LC requirement of MSPDCL (Manipur) is given as hereunder-

(All Figures in INR Lakh)

Sl. No.	Beneficiary	Required LC Amount	Validity of existing LC	Total LC Amount maintained/ to be maintained including enhanced value		
				Existing	Enhancement Required	Total
1	MSPDCL (Manipur)	**502.51**	**27.03.21**	**236.79**	**265.72**	**502.51**

MSPDCL (Manipur) may be requested upon for enhancement of LC to requisite amount at the earliest as this is a long pending issue.

Forum requested Manipur to enhance the LC at the earliest.

Deliberation of the TCC

MSPDCL agreed to enhance the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.03 : OUTSTANDING DUES - NEEPCO

Outstanding dues of beneficiaries payable to NEEPCO as on 18.01.2021 are as follows:

S.No.	State (UT)	Name of Beneficiary	Outstanding Principal already due (> 45 days)	Late Payment Surcharge (LPS) Due	Total Due (Inclusive of LPS)
1	**ASSAM**	**APDCL**	0.00	172.31	**172.31**
2	**MIZORAM**	**Power & Electricity Dept, Mizoram**	168.32	14.53	**182.85**
3	**MANIPUR**	**MSPDCL, Manipur**	3590.17	107.38	**3697.55**
4	**TRIPURA**	**TSECL**	10710.44	2624.42	**13334.86**

5	**Ar. PRADESH**	**Dept. of Power, Ar. Pradesh**	0.00	7.76	**7.76**
6	**NAGALAND**	**Dept. of Power, Nagaland**	0.00	0.00	**0.00**
7	**MEGHALAYA**	**MePDCL, Meghalaya**	35819.23	34219.40	**70038.63**
	Grand Total		**50288.16**	**37145.79**	**87433.95**

The above statement reflects an alarming situation. Yet, it has to be appreciated that some states are paying regularly and some are trying hard to clear the dues.

Due to accrual of such outstanding dues, NEEPCO is facing difficulty to meet its day-to-day expenditure including fuel costs required for operating its thermal power stations. In the interest of extending better service to its beneficiaries, NEEPCO earnestly requests all the beneficiaries to make the payment on regular basis.

Deliberation of the TCC

Forum requested all concerned utilities to clear the outstanding dues at the earliest.

All constituents agreed to clear the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.04 : OUTSTANDING DUES - OTPC

The current total outstanding dues of OTPC against the NER beneficiary states (as on 13-01-2021) are as under:

(Amount in Rs Crores)

S. No.	Beneficiary	Outstanding Dues (>45 Days)	Total Outstanding
1	Arunachal Pradesh	0	3.77
2	Assam	0	85.81
3	Manipur	26.79	42.50
4	Meghalaya	153	166.21
5	Mizoram	2.70	6.30
6	Nagaland	0	4.95
7	Tripura	6.29	74.34
	Total	**188.78**	**383.89**

The total outstanding dues as on 13-01-2021 are Rs 383.89 Crores out of which outstanding beyond 45 days is Rs 188.78 Crores. The outstanding dues of Meghalaya and Manipur have accumulated to concerning levels. Assam and Tripura are also requested to expedite the payments to avoid spillage over 45 days. The auditors have been regularly reflecting the issue of outstanding dues and absence of LC from Meghalaya as a special concern in our Board Meetings. Constituents, especially Meghalaya and Manipur are hence requested to clear at least the outstanding dues over 45 days, at the earliest. The forum is also requested to impress the urgency of the liquidation of pending amount upon Meghalaya as the dues have not been liquidated despite continued requests.

Deliberation of the TCC

Forum requested all concerned utilities to clear the outstanding dues at the earliest.

All constituents agreed to clear the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.05 : STATUS OF PAYMENT SECURITY MECHANISM OF THE BENEFICIARIES - OTPC

Sl No.	Beneficiary	Letter of Credit (LC) required as per PPA (Rs Crore)	LC amount status (Rs Crore)	Valid Upto	Remarks
1	Arunachal Pradesh	11.62	11.62	31st March,2021	LC is in place
2	Assam	44.53	44.53	27th April,2021	LC is in place
3	Manipur	8.7	3.7 5	27th March,2021 12th Feb,2021	LC is in place
4	Meghalaya	17.22	To be provided	NA	Meghalaya may reinstate the LC at an early date
5	Mizoram	9.6	9.6	6th May,2021	LC is in place
6	Nagaland	9.46	9.46	20th March,2021	LC is in place

7	Tripura	30.93	30.93	19th March,2021	LC is in place.

Meghalaya state is scheduling power by paying on day ahead basis. As, Ministry of Power (MoP) has issued directions to NLDC/RLDC mandating the presence of LC for dispatch of power.

Forum requested Meghalaya to enhance the LC at the earliest.

Deliberation of the TCC

Meghalaya agreed to enhance the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.06 : LIQUIDATION OF OUTSTANDING DUES BY MeECL, MEGHALAYA AND MSPDCL, MANIPUR - NTPC

Sl.No	Beneficiaries	Principal Amount (in Rs Cr)	Late Payment Surcharge	Total Outstanding in Cr. as on 20.01.2021	Outstanding more than 45 days as on 20.01.2021
1	MeECL	377.05	152.88	529.93	510.70
2	MSPDCL	68	2	70.00	58

Meghalaya and Manipur are requested to make the payment at the earliest.

Deliberation of the TCC

Forum requested all concerned utilities to clear the outstanding dues at the earliest.

Manipur & Meghalaya agreed to clear the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.07 : OPENING OF LETTER OF CREDIT - NTPC

As per MOP-GOI order No. 23/22/2019-R&R, dated 28th June 2019 regarding Opening and Maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees. The following beneficiaries don't have the LC of required amount

Sl. No	Beneficiaries	LC Required As per PPA (Cr.)	Remarks
1	MeECL, Meghalaya	18.26	LC Expired on 21.01.2021. No LC
2	MSPDCL, Manipur	13.32	Partially opened for Rs 3.79 Cr

Forum requested Manipur & Meghalaya to enhance the LC at the earliest.

Deliberation of the TCC

MSPDCL & Meghalaya agreed to enhance the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.08 : DEVIATION CHARGES OUTSTANDING OF MANIPUR - NERLDC

NERPC has issued weekly DSM statements upto Week-36 (30-11-2020 to 06-12-2020) of FY 2020-21.

Manipur is the major defaulter with O/s Payable to Pool **₹ 4.54Crores** [O/s greater than 90 Days is **₹ 3.47 Crores**]. Clearance of o/s payable had been regularly followed up and also raised in OCCM & CCM several times. As recorded in 39th CCM Minutes, Manipur/MSPDCL was supposed to clear their o/s by end of September 2020 whereas only **₹1.5 Crores** was paid on 10-12-2020. Manipur is therefore requested to expedite the process of clearing their outstanding dues. As per CERC guidelines, Manipur may be barred from Short-term market upon non-clearance of dues.

Forum requested Manipur to clear the outstanding dues at the earliest.

Deliberation of the TCC

MSPDCL agreed to clear the same soon.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.09 : SIGNING OF RECONCILIATION STATEMENTS - NERLDC

It has been observed that after several reminders also few constituents do not sign on the Reconciliation statements prepared by NERLDC. In case of both DSM & Reactive Reconciliations, Tripura has not reconciled for long period. Therefore, NERLDC is proposing that Reconciliation statements will be treated as Deemed reconciled in future if not signed by Constituents within 30 days of issuance of statements by NERLDC.

Deliberation of the TCC

Forum requested all concerned utilities sign reconciliation statement at the earliest.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.10 : ACCOUNTING OF ENERGY EXCHANGE BETWEEN ASSAM, ARUNACHAL PRADESH AND NAGALAND THROUGH 33kV AND 11kV FEEDERS - NERLDC

Ar. Pradesh & Nagaland draws power from Assam via few 11kV & 33kV feeders. But Interface meters (SEM) are not in place in those energy exchange locations as per the metering regulations. These energy exchanges are accounted based on monthly JMR (Joint Meter Reading) received from Assam by converting the net energy into time block wise energy for settlement through DSM mechanism.

Such adjustment in accounting is not desirable. SEMs are to be installed in these interchange points or alternately these energy exchanges should be settled bilaterally in between Assam & Ar. Pradesh as well as Assam & Nagaland.

Deliberation of the TCC

The forum that a special meeting with the participation from Assam, Ar. Pradesh, NERPC & NERLDC in this regard was already convened by NERPC and based on the record of discussion of the meeting a report prepared by NERPC was forwarded to all concerned utilities. DoP Ar. Pradesh to revert back in 2 months timeframe.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.11 : ADJUSTMENT OF OUTSTANDING ENERGY BILLS - MeECL

Deliberation of the TCC

Director (Trans.), MePTCL apprised the forum of the inordinately high late payment surcharge in Outstanding bills to CSGS/CTU and the difficulties thereof. He requested through the forum that a payment mechanism may be arrived with proper ratio in the principal amount and the late payment surcharge. This adjustment may be done on the outstanding energy bills which are interest bearing in nature. This would enable MeECL to clear the outstanding bills in a judicious manner as the State Government is also availing loans to pay the Generating companies.

The forum noted the factual position faced by Meghalaya and requested the concerned agencies to look into the matter so that unnecessary burden should not fall on any State.

The TCC noted as above and placed to RPC.

Deliberation of the RPC

The RPC noted as above.

4. CATEGORY - D : ITEMS FOR INFORMATION

ITEM NO. D.01	**:**	**DATA CONNECTIVITY UNDER NER-FO AT VARIOUS SUBSTATIONS IN NAGALAND – DoP NAGALAND**

Under NER-FO expansion project the stringing of OPGW for the following links have been completed: (i) 132kV Mokokchung(PG) – Mokokchung(NAG), (ii)132kV Dimapur(PG) – Dimapur(NAG), (iii)132kV Wokha – Kohima alongwith commissioning of all terminal equipments. However, the stations are still reporting via GPRS. Integration and reporting over FO is the need of the hour. Further OPGW stringing for 132kV DHEP-Sanis is yet to be completed.

Deliberation of the TCC

ED, NERTS informed that 132kV DHEP-Sanis has been awarded as amended LoA with target date as 30th May,2021. He requested DoP Nagaland to (i)Integrate bays with RTU wherever not done, (ii)arrange for additional materials like cables etc.

After detailed deliberation it was decided that:

a) Joint survey by NERTS and DoP Nagaland would be carried out in Feb'21 to assess the availability of pre-requisites required for putting through the data reporting over Fiber Optics

b) NERTS to intimate the timeline for all works awarded to M/s TCIL,

c) Status to be monitored in NETeST/OCC meeting periodically.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.02	**:**	**STATUS OF IMPORTANT INTRA-INTER STATE CONNECTIVITY IN ARUNACHAL PRADESH–DoP ARUNACHAL PRADESH**

1. Status of Chapakhowa—Roing 132 kV D/C Line.

2. Status of Kathalghuri-Namsai 220 kV D/C Systems.
3. 132 kV S/C on D/C Inter-Connectivity Transmission Link between Likhabali and Basar.
4. Providing 132 kV LILO Link of Pare-Chimpu Transmission Line to Naharlagun 132 kV Sub-Station.
5. Providing 132 kV ISTS Inter-Connectivity between Jonai and Niglok.

Deliberation of the TCC

(i) For 132kV Roing – Chapakhowa POWERGRID informed that award is likely by 1st Mar'2021 with commissioning schedule as 12 months from date of LoA. In response to SE(SO&PSC), DoP Ar. Pradesh query regarding 132kV Rupai-Chapakhowa, ED, NERPSIP POWERGRID informed that 132kV Rupai-Chapakhowa along with 132kV S/Sn at Chapakhowa would be completed by Mar'21.

(ii) For 220kV Kathalguri – Namsai D/C the same was approved in 2nd NERPCTP and put up for approval of the 21st RPC meeting.

(iii) For the lines mentioned in Sl. No. (3), (4) and (5) the matter was referred to the next NERPC-TP meeting.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.03	**:**	**REPLACEMENT OF TRANSMISSION ELEMENTS OF PACKAGE IN STRINGING OF OPGW UNDER NERPSIP – MSPCL**

During the 15th TCC & 15th NERPC Meeting held on the 20th and 21st of August, 2015 at Guwahati, the TCC recommended the revision of OPGW connectivity for Manipur from 149 Km to 365 Km. RPC noted and approved it. The investment is to be recovered as per tariff determined by CERC.

Since DPRs for stringing of OPGW under NERPSIP project (Tranche-I) & NER Wide Band Expansion Project were prepared at different points of time and initiation of

NERPSIP project (tranche-I) was delayed, the works for stringing of OPGW in Table No. 1 which was already included in Tranche-I of NERPSIP overlapped with that for stringing of OPGW under NER Wide Band Expansion Project. The laying of OPGW in the same sections of 132kV lines under NER Wide Band Expansion Project was agreed in the 15th TCC meeting after a thorough deliberation considering the importance of the transmission lines in Table No. 1.

Table No. 1

Sl. No.	Name of Transmission Elements	Length of Line in Km
1	Imphal-Karong 132kV line	60
2	Yurembam-Yaingangpokpi 132kV line	42
3	Yaingangpokpi-Kongba 132kV	32
4	Kongba-Kakching 132kV line	45

In light of the above facts, CEA was requested to allow the change of scope of laying OPGW in the newly constructed sections of 132kV lines in **Table No. 2** under Tranche-I of NERPSIP in lieu of the 132kV lines in **Table No. 1**.

Table No. 2

Sl. No.	Name of Transmission Elements	Length of Line in Km
1	Churachandpur- Thanlon 132kV line	67
2	Thoubal- Moreh 132kV line	72
3	LILO at Elangkhangpokpi on Churachandpur- Kakching	10
4	LILO at Tipaimukh on Jiribam(PG)-Aizawl(PG) 132kV line	14

Subsequently, in the meeting on "Modification/alteration/addition in NER Power System Improvement Project" (NERPSIP) and "Comprehensive Scheme for Arunachal & Sikkim" (CSAS) held at Guwahati on 30th May 2019, the proposal of MSPCL (Manipur) for replacement of transmission elements in Table No. 1 of the package MAN-TW06 by the transmission elements in Table No. 2 was agreed vide Item No. 2.0 Manipur NERPSIP, 2.1 Installation of OPGW on alternate 132kV intra-state line of the Minutes of Meeting.

During the 19th TCC and NER meeting held on 28th and 29th November 2018 at Hotel Radisson blu, Guwahati, MSPCL requested PGCIL in the interest of NER Grid Security and smooth power management in Manipur for complete installation of OPGW, in which POWERGRID carried out the works promptly.

While appreciating the OPGW works of POWERGRID in Manipur, it is not understood why POWEGRID is having reservation in implementing the agreed proposal of replacing the said transmission elements in Table No. 1 by the transmission elements in Table No. 2 as the scope of work remains the same with that of the substituted lines except for the change of location work site.

Therefore, PGCIL is requested to put up the status and timeline for the above said replacement work before the board for deliberation and TCC may kindly discuss the request of MSPCL and advise PGCIL to carry out the OPGW work of replacing transmission element at the earliest for safe and secure intrastate grid operation.

Deliberation of the TCC

ED, NERPSIP, POWERGRID informed that the proposal for the replacement of transmission elements for laying of OPGW has been approved by CEA and is pending approval of MoP.

MD, MSPCL informed that 132kV Thanlon and Moreh are in advanced stage of construction and OPGW connectivity is very essential. He urged POWERGRID to inform the tentative timeline for completion. He informed that the firm target was given as Dec'21 for completion of OPGW installation for the exchanged links. POWERGRID noted the above target date.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.04 : EARLY APPROVAL OF TESG FOR IMPLEMENTATION OF SAMAST IN MANIPUR – MSPCL.

As on date, approval of TESG (Techno- Economic Sub Group) of PSDF for five states-Manipur, Nagaland, Mizoram, Tripura and Arunachal Pradesh is awaited. And the scheme is under scrutiny of Appraisal & Monitoring Committee at present.

All inputs and queries sought by TESG and NERPC pertaining to MSPCL had been compiled with on issues such as BOD approval, Physical and financial milestones, List

of interface points, Grid network map along with depiction of interface point, Details of existing and proposed ABT meter, Details of metering scheme and as of now, there is no pending issues.

Till now, MOP has given approval for Assam and Meghalaya and LOA has been issued. In this regard, TCC may kindly deliberate the request of MSPCL for speedy approval of TESG and concurrence of Hon'ble Chairman, NERPC for early implementation of SAMAST in the state.

Deliberation of the TCC

Member Secretary, NERPC informed that SAMAST for Arunachal Pradesh, Manipur, Mizoram, Nagaland and Tripura have been cleared by TESG & Appraisal Committee and recommended for approval to the Monitoring Committee.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.05 : OPERATIONALISATION OF KHANDONG-KOPILI-MISA CONNECTIVITY FOR MEGHALAYA – MePTCL.

The operationalization of 132KV Kopili-Khandong line is crucial for Meghalaya as the evacuation of power to NER from Myntdu-Leshka HEP (3*42MW) project depends on this feeder.

Deliberation of the TCC

Director (Trans), MePTCL informed that NEEPCO has been supporting via Khandong and this has helped to meet the demand in the winter season.

Member Secretary, NERPC stated scheme for permanent restoration is yet to be approved by NERPC-TP.

The forum discussed and approved temporary restoration using mobile bays. Pls refer to deliberations in item **A.14.**

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.06	**:**	**EARLY INSTALLATION OF TLSAs IN 400kV SILCHAR-AZARA S/C AND 400kV SILCHAR-BYRNIHAT S/C – NERLDC.**

In the CEA Meeting with NERPC, CTU, NLDC, NERLDC chaired by Chief Engineer (PSPA-II) held on 18.08.2020, it was decided that the transmission licensee (NETC) would survey and identify the locations which require installation of Transmission Line Surge Arresters (TLSA) and install TLSA on selected towers of aforesaid lines to reduce the trippings due to lightning/backlash. These lines pass through the high lightning prone area near Byrnihat. The same was also highlighted in the 2nd Meeting of NERPC(TP)/3rd Meeting of NERSCT. 400kV lines are very critical in evacuation of power from Palatana GBPP.

In the 168th OCCM, NERLDC recommended to install the TLSA in these lines before the onset of the monsoon season. The quarter-wise percentage of trippings due to lightning during 2019 & 2020 is as below:

Year	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
2019	6%	28%	9%	3%
2020	2%	20%	19%	-

Deliberation of the TCC

MD, NETC informed the forum that:

a. After bentonite treatment in critical tower locations the tower footing resistance (TFR) has improved slightly,
b. the number of trippings in the Oct-Dec Quarter is zero,
c. presently TLSAs have not been installed in 400kV system in the country,
d. Markonite treatment shall be done.

After detailed deliberation the forum requested NERPC to monitor the situation in the OCC forum.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.07	**:**	**READINESS OF DOWNSTREAM OF NEW KOHIMA SUB-STATION – NERLDC.**

During the 5th SCM of NER held at Imphal on 8-08-2015, the following elements have been approved:

a. Imphal-New Kohima 400 kV D/C line (under TBCB)
b. 2 no. 400 kV line bays and 1x125 MVAR bus reactor (2nd) at Imphal (PG) (by POWERGRID)
c. Establishment of 2x500 MVA 400/220 kV S/s at New Kohima along with 4 no. 400 kV line bays, 2x125 MVAr bus reactor and 4 no. 220 kV line bays (under TBCB).
d. *New Kohima (400/220 kV TBCB) – New Kohima (220/132kV - Nagaland) 220 kV D/c line with high capacity / HTLS conductor equivalent to twin moose (by Nagaland)*

Note: Nagaland may plan and inform the utilisation of remaining 2 no. 220 kV bays at New Kohima 400/220 kV substation.

"It is to be noted that the point d is yet to be implemented by Nagaland, as a result of which no power flow will occur in 2x500 MVA 400/220 kV ICTs at New Kohima. The entire cost of the ICTs will have to be borne by Nagaland and the YTC of Rs. **17.98** Crores/Annum has been submitted by Kohima Mariani Transmission Limited for 400/200 kV, 2 x 500 MVA Substation at New Kohima.

Implementation of point **d** needs to be expedited by Nagaland.

Deliberation of the TCC

SE(Trans.), DoP Nagaland informed that the 220kV downstream will be awarded soon by DoP Nagaland. Regarding 4 nos 220kV bays at 400/220kV New Kohima(ISTS), Engineer-in-Chief, DoP Nagaland & Chairman, TCC stated that only two nos 220kV bays are required by Nagaland.

The forum referred the matter to next NERPC-TP meeting with a note that the utilization of the 2 nos spare 220kV bays at New Kohima may be decided by NERPC-TP.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.08 : INSTALLATION OF 80MVAR BUS REACTOR AT RANGANADI – NERPC.

In the 1st NERPC-TP meeting held on 08th November,2019 approval was given for installation of 420kV 80MVAr Bus Reactor at Ranganadi using GIS bays. The time frame was 18 months.

Deliberation of the TCC

NEEPCO expressed the difficulties i.r.o. Installation of 80MVAR Bus Reactor at RHEP.

The forum referred the matter to the next NERPC-TP meeting.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.09 : UPGRADATION OF IMPORTANT 132kV LINKS IN TRIPURA – NERPC.

In the 2nd NERPCTP meeting held on 25th September,2020 the LILO of 132kV Surjamaninagar–Budhjungnagar Ckt#II& 132kV PKBari-Ambassa at 400/132kV Surjamaninagar(ISTS) and 400/132kV PKBari(ISTS) respectively was approved with upgradation of the lines to HTLS conductor.

In 173rd OCCM TSECL informed that the LILO works with HTLS have been completed, however the line upgradation with HTLS has not been completed.

Deliberation of the TCC

AGM, TSECL informed the forum that the LILO works have been completed and both the lines i.e.132kV Surjamaninagar-Surjamaninagar(ISTS)- Budhjunganagar and 132kV PKBari-PKBari(ISTS)-Ambassa have been charged. He further stated that Re-conductoring cost can be saved if Palatana is connected to Surjamaninagar via one circuit of 132kV Palatana-Surjamaninagar D/C.

ED, NERLDC stated that studies with the configuration suggested by TSECL has been carried out and it has been noted that overloading of 132kV Surjamninagar-Surjamaninagar(ISTS) is persisting.

After detailed deliberation the forum referred the matter to the next NERPC-TP for resolution.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.10	**:**	**DELAY IN COMPLETION OF CONSTRUCTION OF 132/33kV SUB-STATION AT TAMENGLONG AND KANGPOKPI UNDER TRANCHE-1, WORLD BANK FUNDING – MSPCL.**

NERPSIP is a Central Sector Project sanctioned on 1/12/2014 at the cost of Rs.8111.33crore for 6 (Six) NER states with 50:50 funding from GOI and the World Bank (WB) for strengthening of intra-state and distribution system above 11 kV with completion time of 48months from the release of 1st instalment. The sanctioned cost of Manipur is Rs.442.213 crore. GoI entrusted PGCIL as the implementing agency.

Construction of 2 (two) new 132/33 kV substations at (1) Khongjaron, Tamenglong District (4x6.67MVA) (2)Gamphazol,Kangpokpi District(2x20MVA) are two major work components included under Tranche-I of NERPSIP.

Land for the said substations was handed over to the Implementing Agency on 11th May, 2017 and 21st April, 2017 respectively.

The said substations were envisaged to cater to the surging load demand in the two districts. At present, the two districts are facing acute shortage of power infrastructure & capacity constraint and both remain as the most underdeveloped districts of the State.

While many work components of Tranche-I have been completed and some of them have been put to service, work in the said substations haven't progressed as expected despite issuance of work permit more than 3years ago. This has led to various load management, distribution bottleneck and has hampered downstream evacuation plan in both the districts.

In this regard, NERPC may kindly intervene and call for commitment from PGCIL end, a tentative completion schedule of the said substations at the earliest and avail benefit of the project to the general public.

Deliberation of the TCC

MD, MSPCL informed that Tamenglong is one of the farthest districts of Manipur and the area has been suffering for a long time due to non-reliable power. Further he stated that it has come to notice that there has been no progress of works (since Mar'20) for 132/33kV Khongjaron, Tamenglong district and 132/33kV Gamphazol, Kangpokpi district. ED, NERPSIP, POWERGRID informed the target date as Dec'21.

The forum noted the tardy progress of works under NERPSIP and Comprehensive Project for Arunachal Pradesh.

ED, Comprehensive Project, POWERGRID informed about the challenges faced while executing the project especially Forest Clearance and Compensation issues. He highlighted that in some cases the stations inspite of being ready cannot be charged due to the non-readiness of transmission line.

Director(Trans.), MeECL expressed apprehension regarding the lapsing of warranty of the Sub-station equipments without charging of the same.

The forum requested POWERGRID to relook the terms and conditions of warranty/ guarantee of the sub-station equipments.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.11	**:**	**COMMISSIONING OF 400kV SUBSTATION AT THOUBAL-MSPCL**

In the 2nd NERPCTP meeting held on 25-09-2020, CEA stated that in accordance with ToR-I of the committee i.e. quarterly review of the transmission system (at Agenda-6), a meeting was held through video conferencing on 17.08.2020 to discuss the issues raised by POSOCO regarding non-compliance of N-1 reliability requirement in a few areas/substations in the North Eastern Region Grid, Manipur was requested to provide status regarding commissioning of Imphal (POWERGRID) – Thoubal 400kV D/c line along with charging of 400/132kV ICTs at Thoubal in the next meeting of NERPC-TP.

Deliberation of the TCC

MD, MSPCL informed thaty 400kV Thoubal S/S is completed in all respects. Pre-commissioning test of 400kV Thoubal line from PGCI, Yurembam is going on. After thorough verification of all the technical parameters and pre-commissioning test, MSPCL is planning to commission the 400kV Sub-station at Thoubal in March, 2021.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.12	**:**	**BUS REACTOR AT BYRNIHAT - MePTCL**

Deliberation of the TCC

The 63 MVAR Bus Reactor at Byrnihat is under prolonged outage. Bus Reactor at Byrnihat may mitigate the high voltage problem. In 161stOCC Meeting, MePTCL informed that DPR for 80 MVAR Bus Reactor at Byrnihat was submitted to NLDC/NPC and agreed as per 166th OCC Meeting. Tendering is in progress.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.13 : STATUS OF PSDF FUNDED PROJECTS IN NER - NERPC

State	R&U scheme	ADMS	Capacitor Installation	SAMAST **	Line Differential Protection
Ar. Pradesh	Package-I (Diagnostic tools) Utilization certificate to be sent immediately. P-II (for PLCC & communication) LOA issued. Requisition for 30% to be sent immediately. P-III (Substation equipment) NIT by Dec'20 Station-wise status to be updated	60% disbursement by Dec'20. Requisition for 3rd tranche sent.	-	TESG approved	-
Nagaland	All completed except for PLCC package. Delayed due to COVID situation Station-wise status to be updated.	Second tranche of disbursed. Requisition to be sent for 3rd installment.	-	TESG approved	Lines identified. Under DPR preparation stage.
Mizoram	Completed. 10% remaining claim to be submitted ASAP.	Final 10% requisition submitted.	To reply to TESG queries.	TESG approved.	Lines identified for installation of DPR viz. 132kV Aizawl - Luangmual and 132kV Kawmzawl - Khawiva.

Manipur	Package-II: completed Package-I: WIP Delayed due to COVID situation Station-wise status to be updated.	60% disbursed. Final 10% requisition to be sent immediately.	LOA issued. Requisition to be sent for first tranche.	TESG approved	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribm-Jiribam proposed. Under DPR preparation stage.
	33kV System Integration with SLDC	In tendering stage			
	Reliable Communications for grid connectivity	In tendering stage			
Tripura	Work completed. 10% remaining claim to be sent ASAP. Station wise status to be updated.	Requisition to be sent for 20% & 60% immediately.	Study results to be submitted alongwith DPR	TESG approved	Only single line 132kV 79Tilla to Budhjangnagar. DPR to be prepared.
Assam	LOA issued. WIP, delayed due to COVID situation Station-wise status to be submitted.	Requisition sent for 60% on 09th Dec'20.	-	LoA issued.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Completed in all respects. MePGCL – 10% claim to be submitted ASAP.	Final tranche of 10% disbursed. Project complete in all respects.	-	LoA issued.	WIP. Delayed due to COVID situation

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.14 : STATUS OF ULDC PROJECTS IN NER - NERTS

Deliberation of the TCC

Project	Scope	Current Status
NER Microwave Replacement	1188Km (30 Links)	29 Links commissioned. Commissioning of 1 link (Aizwal – Zimbawak) by 31.01.2021.
NER Fiber Optic Expansion	1960Km (47 Links)	1073Km OPGW stringing completed. 24 links commissioned. 339Km OPGW stringing comprising 23 links are pending for commissioning. Links are expected to be commissioned by June'21.
FO Expansion (Add.)	889Km	Out of 889Km, 505Km OPGW has been supplied at site and 5km stringing have been completed.
Reliable Communication	2054Km	NIT done on 12.02.20 and OBD done on 20.07.20. Package annulled as bidders who had participated required registration as per recent GoI guidelines regarding bidders sharing land border with India. Retendering planned in Jan'21.
NER UNMS	02 Control Centres	NER UNMS project was approved in 20th NERPC dated on 12th Sep 2019. DPR of the subject project has been prepared. Cost estimate is Rs.109.74 Cr. excluding AMC cost which is estimated as Rs. 5.63 Cr per annum. AMC period considered is 7 years. AMC have provision of 24x7 manning for maintaining the system with availability of engineers from contractor on round the clock basis at Regional and National UNMS. For State Sector manpower is for general shift and on call basis as per requirement. Requirement of annual cyber security audit is also part of AMC.

		NIT for UNMS of NER was done on 26.10.20 and OBD is scheduled on 09.02.21.
Replacement of RTUs	14 nos	NIT planned in Jan'21.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.15 : 400kV GIS AT GOGAMUKH AND ASSOCIATED TRANSMISSION LINES–AEGCL

AEGCL may be allowed to construct GIS at Gogamukh instead of AIS and amendment may be allowed in respect of 400kv Khumtai – BNC link and Gogamukh LILO from 400kv twin moose D/C Subansiri – BNC line

It has been found very difficult to locate suitable and adequate area of land for AIS. The district administration is also finding it difficult to find the necessary plot of land for AIS. AEGCL, therefore, proposes construction of GIS instead of AIS at Gogamukh. Land for GIS adequacy has already been identified and the government is willing to allot the same free of cost.

Further, there is a need for clarification with regard to the Minutes of 2nd Meeting of NER Standing Committee on Transmission (NERSCT) held on 08/11/2019.

The earlier proposal as per Minutes of 2nd Meeting of NER Standing Committee on Transmission (NERSCT) held on 08/11/2019 on establishment of 400kv Gogamukh sub-station and the associated transmission lines needs to be revisited on account of the following reasons.

a. For implementation of the said proposal there will be a need for AEGCL to procure 2 (two) more GIS bays at BNC GIS as the 2 no. of allocated bays will be utilized for 400kv Khumtai – BNC line. This will be not only expensive but feasibility for incorporation of the bays at BNC will need to be studied afresh.
b. The preliminary inspection of land for Gogamukh sub-station and route of the transmission corridor from BiswanathChariali (BNC) was conducted by AEGCL

officials. In view of the growing demand of land and also on account of the lengthy route of the line it will be very expensive and time consuming to construct the line within a short span of time. We have already suggested a revised proposal for GIS at Gogamukh instead of AIS.

c. The time period for completion of the scheme may be quite longer which may be detrimental for evacuation of Subansiri Hydro generation.

d. In lieu of a new 400kv D/C link from BNC to Gogamukh, if a D/C LILO connectivity to Gogamukh is drawn fron the existing (under construction) 400kv Subansiri – BNC line, not only the expenditure will be least but also the implementation time will be much less.

In view of the above AEGCL proposes the following amendment to the earlier proposal:

1. AEGCL shall construct and commission 400kv GIS at Gogamukh
2. PGCIL shall allow D/C LILO connectivity to 400kv Gogamukh from 400kv twin moose D/C Subansiri – BNC line
3. AEGCL shall commission 220kv D/C connectivity from 220kv Bihpuria sub-station to 220kv Gogamukh bus
4. AEGCL shall commission 400kv D/C line from Khumtai to BNC utilizing the two GIS bays at BNC reserved for AEGCL
5. AEGCL shall construct 132kv D/C North Lakhimpur – Dhemajickts with S/C LILO at Gogamukh
6. The rating of ICTs and reactors at Gogamukh shall remain as was proposed earlier.

Deliberation of the TCC

GM(P&E), AEGCL strongly opined that 400kV Gogamukh Sub-station should be constructed by AEGCL and at Sub-station at Jonai should be constructed under ISTS.

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.16	**:**	**SECOND 400kV CONNECTIVITY FOR KHUMTAI–AEGCL**

A second 400kv connectivity for Khumtai sub-stationby S/C LILO from 400kv New Mariani – Misa D/C line will increase the stability of Khumtai sub-station. 400KV D/C Misa- Mariani line passes at a distance of 23.1km from the proposed location of Khumtai Substation.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.17	**:**	**UPGRADATION OF 132kV BORNAGAR SUB-STATION AND ITS CONNECTIVITY – AEGCL**

132KV Barnagar Substation needs to be upgraded to 220KV Substation through the connectivity of S/C LILO from 220KV D/C Rangia-Salakati line. This line passes through the vicinity of existing Barnagar Substation (within 10 kms).

Rapid growth of demand along with ever increasing transmission constraint and consequent load restriction in the entire area the up-gradation of the sub-station to 220kv has become highly essential.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.18 : 220kV NEW DHALIGAON SUBSTATION–AEGCL

220KV New Dhaligaon Substation needs to be set up in the IOC (BGR) Complex through connectivity of S/C LILO of 220KV D/C Rangia - Salakati line.

On account of ever-growing transmission corridor constraint in lower Assam (North bank of Brahmaputra) and also in view of the expansion scheme of IOC (BGR), Bongaigaon it has become very important to construct new transmission corridors in the state. Indian Oil Corporation's Bongaigaon Refinery has requested AEGCL for early commissioning of the sub station

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.19 : REMEDIAL MEASURES FOR REMOVING TRANSMISSION CONSTRAINT IN SOUTH ASSAM – AEGCL.

To meet up the transmission constraint of South Assam, a 220KV link via Mariani – Diphu – Haflong – Silcoorie and 220KV Diphu – Sankardev Nagar need to be established. (This proposal was placed in the 2nd NERSCT meeting held in November, 2019).

Presently AEGCL's grid in south Assam is not connected with AEGCL's mainland network. The connectivity is only through PGCIL's network besides a weak 132kv link with Meghalaya grid. To meet up the rapid growth of demand in South Assam it is imperative that a 220kv transmission corridor is established with this part of the state.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.20	**:**	**NEW TRANSMISSION LINE TO CATER TO LOAD OF BARPETA AND SOUTHERN NALBARI – AEGCL**

132KV Barpeta – Doulasal D/C line needs to be established to cater the load of eastern part of Barpeta and southern part of Nalbari district. This is part of the proposal for 132KV Barpeta – Amayapur D/C link via S/C LILO at Doulasal which was placed in the 2nd NERSCT meeting held in November, 2019.

This link will not only enhance the stability of Barpeta Grid sub-station but will also cater to the upcoming load of the State Capital Region

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.21	**:**	**COMMISSIONING OF 400/220KV FACILITY TO FACILITATE FUTURE CONNECTIVITY OF SILCOORIE – AEGCL.**

AEGCL request PGCIL to commission 400/220 KV transformation facility at Silchar Powergrid Substation to facilitate future connectivity between 220KV Silcoorie and Silchar.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.22 : NEW 132/33kV GHILAMORA S/S – AEGCL.

132/33kv Ghilamora S/S is proposed (from S/C LILO of the proposed 132kv D/C North Lakhimpur – Dhemaji new circuits. Ghilamora & Dhakuakhana area of Lakhimpur districts are prone to flood and road distance from the district HQ (North Lakhimpur) is more than the road distance from Dhemaji. This area is normally fed from Dhemaji GSS and often faces interruption of power and low voltage. Dhakukhana is a very old small township but possesses remarkable cultural and intellectual ingredients. The area has long been neglected now awaits rapid development on account of easy access with Dibrugarh after the completion of Bogibeel bridge over the river Brahmaputra.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.23 : 132/33kV S/S MODERTOLI NEAR KAMPUR – AEGCL.

132/33kv S/S at Modertoli near Kampur is proposed (from S/C LILO of 132kV Samaguri – Sankardevnagar D/C line). This area is proposed to be made an industrial hub by the government. Kampur and its adjoining areas which presently draws power from Samaguri grid S/S (around 60km of 33kV line via Kathiatoli and suffers from low voltage problem apart from frequent interruption as the 33kv Kothiatoli sub-station of DISCOM also supplies to other distribution sub-stations. This has necessitated a grid S/S at Modertoli. This will facilitate uninterrupted quality power supply to vast area including a portion of Karbi Anglong District.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO.D.24 : 132/33kV S/S AT LAKHIPUR – AEGCL.

132/33kv Grid S/S is proposed at Lakhipur (Tikrikilla) through LILO of 132kv Agia – Hatsingimari primarily due to the fact that the said route length of the line is more than 110 km and there is no Grid sub-station between Agia and Hatsingimari. The south bank of Brhmaputra in the western part of Assam, although remained under-developed for long, is expected to witness development in the coming years as the proposed Dhubri-Phulbari bridge over the river Brahmaputra is expected to be ready by the year 2026-27. Once constructed, it will be the longest river bridge in the country (19.3 km) which will definitely attract tourists from other parts of the state as well as from rest of the country.

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.25 : CAPACITY AUGMENTATION OF TRANSFORMERS – AEGCL.

S. No	AUGMENTATIONS AND EXTENSIONS OF EXIXTING SUBSTATIONS	
1	Sarusajai 220/132/33kV S/S	New 3x50MVA, 132/33kV in place of old 3x31.5 MVA Transformers
2	Sibsagar 132/33kV S/S	New 2x50MVA, 132/33kV in place of old 2x16 MVA Transformers

3	Sishugram 132/33kV S/S	New 2x50MVA, 132/33kV in place of old 2x30 MVA Transformers
4	Samaguri 132/33kV S/S	New 2x50MVA, 132/33kV in place of old 2x25 MVA Transformers
5	Kukurmara 220/132kV S/S	New 2x160MVA, 220/132kV in place of old 2x50 MVA Transformers
6	Agia 132/33kV S/S	New 1x50MVA, 132/33kV in place of old 1x12.5 MVA Transformers
7	Khaloigaon 132/33kV S/S	New 2x50MVA, 132/33kV in place of old 2x25 MVA Transformers

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.26 : CAPACITY AUGMENTATION OF LINES – AEGCL.

The following proposals pertain to 'capacity augmentation of lines'.

S. No	AUGMENTATIONS OF TRSNSMISSION LINES (Re-conductoring with HTLS)
1	Sonabil-Depota 132kV S/S Line
2	LTPS-Mariani 132kV S/C Line
3	Balipara(PG)-Depota 132kV S/C Line
4	Sonabil- Pavoi 132kV S/C Line
5	Sonabil - Gohpur 132kV S/C Line
6	Pavoi - Gohpur 132kV S/C Line
7	Kahiliparam – Rangia 132kV both circuits with all LILO points & Rangia –

	Nalbari-Dhaligaon 132kV S/C & Dhaligoan-Bornagar-Nathkuchi 132kV S/C Line
8	Dhaligoan - Gossaigoan 132kV S/C Line
9	Srikona - Pailapool 132kV S/C Line

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.27 : NEW TRANSMISSION LINES – AEGCL.

SL. NO	Name of Line	Line Length, KM			TOTAL CKM
		400 KV	220 KV	132KV	
1	LILO of one ckt of 400 kv new Mariana (PGCIL)-Misa (PGCIL) at Khumtai (AEGCL)	26			**26**
2	220kv DC new Diphu – Maraina (AEGCL) line		140		**280**
3	220kv Shankardevnagar (existing AEGCL)-Diphu (AEGCL) line		40		**80**
4	220kv DC new Haflong – Diphu (AEGCL) line		95		**190**
5	220kv DC Silcoorie – Haflong (AEGCL) line		75		**150**
6	220kv Rowta (AEGCL – existing) – Sonabil (AEGCL – existing) DC line		72		**144**
7	LILO of one ckt of 220 kv Rangiya – Salakati (AEGCL) DC line at new Dhaligaon		10		**20**
8	LILO of one ckt of 220 kv Rangiya – Salakati (AEGCL) DC line at Barnagar		12		**24**
9	S/C LILO at Ghilamara of1st ckt of 132 kV Nalkata – Dhemaji DC line			20	**40**
10	LILO of 132 kv Agia – Hatsingimari (AEGCL) SC line Lakhipur (Tikrikilla)			15	**30**
11	132kv Barpeta – Amayapur D/C line			65	**130**
12	LILO of one ckt of 132kv Barpeta – Amayapur (AEGCL) DC line at Doulasal			12	**24**
13	LILO of one ckt of 132kv Samaguri – Shankardevnagar (AEGCL) DC line at Modertoli (Kampur)			20	**20**
14	132kv Dhaligaon (existing) – New Dhaligaon D/C line			4	**4**

15	132kv Bokajan – Diphu S/C line			46	**46**
16	132kv Moran – Betbari (Sibsagar) D/C line			40	**80**
17	LILO of one circuit of 132kv D/C Baghjap (jagirod) – Nagaon Khaloigaon) at Morigaon Substation			15	**30**
18	132kv Baghjap – Khaloigaon D/C line			70	**140**
	TOTAL	**26**	**444**	**307**	**1458**

Deliberation of the TCC

The forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.28 : RE-CONDUCTORING AND STRENGHTENING OF AGED 132kV LINES IN MANIPUR – MSPCL.

The following old 132 kV lines are proposed for strengthening and re-conductoring with HTLS in three phases.

A. First Phase

(i) Imphal (PG)-Yurembam T/C 132kV line: The original 132 line is drawn from 132 kV switchyard, NHPC, Leimatak to Yurembam in 1984 for drawalof state share of power from NHPC, Loktak Power Station, Leimatak. In later stage, POWERGRID has constructed another 132kV line connecting Imphal (PG) and Yurembam. Thereafter, POWERGRID has inserted LILO at Imphal (PG) on Ningthoukhong-Yurembam 132kV line in August 2013, for better supervision and power supply management. With the upgradation of 132kV Imphal (PG) Sub-station to 400 kV, MSPCL has added another third 132kV circuit on D/C tower to enhance power evacuation. Meanwhile, POWERGRID has changed the 132kV line between Imphal (PG) and Yurembam with HTLS conductor. This has necessitated upgradation of the two 132kv lines of MSPCL with HTLS conductor.

Now, there is disparity in the flow of current / load sharing between the two *lines, one* owned by POWERGRID *with HTLS conductors and the other owned by MSPCL with ACSR conductors, connecting (i)*Imphal (POWERGRID) 132 kV substation and (ii) Yurembam (Imphal Sub-station - Manipur) 132 kV substation

(ii) Leimatak, NHPC-Ningthoukhong S/C 132kV line: The original 132 line is drawn from 132 kV switchyard, NHPC, Leimatak to Yurembam in 1984 for drawal of state share of power from NHPC, Loktak Power Station, Leimatak.With the establishment of 132kV Sub-station at Ningthoukhong, LILO on Leimatak–Yurembam was inserted at Ningthoukhong in 1990-91.

(iii) NingthoukhongChurachandpur D/C 132kV line: This line was commissioned in March, 1993.

(iv) YurembamYaingangpokpi D/C 132 kV line: This line was commissioned in September, 1992.

(v) YaingangpokpiKakching D/C 132kV line: This line was commissioned in September,1996. Later on with the upcoming of 132kV Sub-station at Kongba, the line was bifurcated as (1) Yaingangpokpi-Kongba and (2) Kongba-Kakching by inserting LILO at Kongba on Yaingangpokpi–Kakchingline.

Again, with the commissioning of 132kV Sub-station at Thoubal, the Kongba-Kakching DC 132kV line was bifurcated as (1) Thoubal-Kongba and (2) Thoubal-Kakching by inserting LILO at Thoubal on Kongba-Kakching 132kV line.

(vi) (vi) **Imphal (PG)-Ningthoukhong S/C 132 kV line:** The original 132 line is drawn from 132 kV switchyard, NHPC, Leimatak to Yurembam in 1984 for drawal of state share of power from NHPC, Leimatak. For the commissioning of newly established Ningthoukhong Sub-Station LILO at Ningthoukhong was inserted on Leimatak-Yurembam 132 kV line in 1990-91 bifurcating the line as (1) Leimatak-Ningthoukhong and (2) Ningthoukhong-Imphal (PG).

B. Second Phase

(i) Kakching–Churachandpur D/C 132 kV line: This line was commissioned in January, 2001. With the commissioning of 132kV Sub-station at

Elangkhangpokpi in 2017, the line was bifurcated as (1) Churachandpur-Elangkhangpokpi and (2) Elangkhangpokpi-Kakching by inserting a small LILO at Elangkhangpokpi on Kakching–Churachandpur 132 kV line.

(ii) Kakching-Thoubal D/C 132kV line: This line is a portion of the original Yaingangpokpi-Kakching 132kV line which was commissioned in September, 1996. With the upcoming of 132kV Sub-station at Kongba and Thoubal, the line was trifurcated as (1) Yaingangpokpi-Kongba, (2) Kongba-Thoubal and (3) Thoubal-Kakching by inserting LILOs at Kongba and Thoubal on Yaingangpokpi-Kakching 132kV line.

C. Third Phase

(i)**Yurembam-Karong S/C 132kV line**: Yurembam-Mao 132kV line on S/C tower was commissioned in July, 1981 for first time drawal of power at 132kV Voltage in Manipur. Renovation of this line is in progress under North Eastern Region Power System Improvement Project (NERPSIP). However, with the coming up of 2x20MVA 132/33kV Substation midway at Gamphazol under NERPSIP, S/C line may not be sufficient to cater the power requirement of both the Sub-station and their downstream Sub-stations.

MSPCL certifies that the **aged/old towers** of the following 132kV transmission lines are **technically fit** for stringing of the lines with HTLS Conductor.

1. Imphal (PG)-Yurembam D/C 132kV lines
2. Loktak-Ningthoukhong S/C 132kV line
3. Ningthoukhong–Churachandpur D/C 132kV lines
4. Yurembam–Yaingangpokpi D/C 132kV lines
5. Yaingangpokpi-Kongba D/C 132kV lines
6. Kongba- Thoubal D/C 132kV lines
7. Imphal (PG)-Ningthoukhong S/C 132kV line
8. Churachandpur-Elangkhangpokpi D/C 132kV lines
9. Elangkhangpokpi-Kakching D/C 132kV lines
10. Yurembam-Karong S/C 132kV line
11. Kakching-Thoubal D/C 132kV lines

Load flow study for Manipur transmission system (132 kV Grid) was carried out by POWERGRID with peak load of 428 MW forecasted in the 18th Electric Power Survey Report from CEA for the year 2019-2020 with both Silchar–Imphal New Kohima 400kV lines charged at 132 kV with the following future scenarios:

1. With charging of Silchar–Imphal & New Kohima –Imphal
2. New Kohima –Imphal 400 kV line out
3. Silchar-Imphal 400 kV line out
4. 400 kV Thoubal out

In the scenario 1, with 400 kV Sub-Station at Thoubal is not charged the following 132 kV line are loaded excessively beyond their SIL capacity.

1. Imphal (PG)-Yurembam D/C 132kV lines:181MW
2. Loktak-Ningthoukhong S/C 132kV line:114 MW
3. Ningthoukhong–Churachandpur D/C 132kV lines:134MW
4. Yurembam–Yaingangpokpi D/C 132kV lines:108 MW
5. Yaingangpokpi-Kongba D/C 132kV lines:60 MW
6. Kongba- Thoubal D/C 132kV lines:15 MW
7. Imphal (PG)-Ningthoukhong S/C 132kV line:45 MW
8. Churachandpur-Elangkhangpokpi D/C 132kV lines-Kakching D/C 132kV line :77 MW
9. Yurembam-Karong S/C 132kV line(without Kohima connectivity):55 MW
10. Kakching-Thoubal D/C 132kV lines:15 MW

In the scenario 2, with Silchar-Imphal (PG) Line out the following line is loaded excessively:

1.Loktak –Ningthoukhong S/C 132 kV lines: 144 MW

Consequently, the capacities of the old 132 kV transmission lines need to be increased to commensurate with increase in the demand of power. Obtaining forest and environmental clearances for the Right of Way (ROW) for construction of new transmission lines is a big hurdle. The cost also may shoot up because of the compensation to be paid. By reconductoring the old 132 kV lines with high capacity (High Temperature Low Sag, HTLS) conductors the problems of finding new ROWs can be avoided and the capacities of the lines can be increased to more than two times their original capacities.

Considering the above facts and circumstances, MSPCL proposes to strengthen and re-conductor the old 132 kV lines with HTLS conductor in three phases.

TCC may kindly deliberate the request of MSPCL and approve the proposal for the execution by MSPCL with possible funding from PSDF or other funding Agencies, in the interest of NER Grid Security and smooth power supply management in Manipur.

Deliberation of the TCC

After detailed deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.29	**:**	**SOUTH ASSAM-SOUTH MEGHALAYA-LOWER ASSAM TRANSMISSION CORRIDOR– MePTCL.**

In 2nd NERPCTP meeting, regarding proposal of MePTCL about South Assam-South Meghalaya-Lower Assam transmission corridor, Chief Engineer (PSPA-II), CEA stated that it can be taken up in subsequent meetings after detailed proposals are received from MePTCL.

A. Proposal for construction of 400KV, 220KV and 132KV transmission systems along the southern border of Meghalaya to facilitate the export of power to Bangladesh.

Meghalaya has about 3000MW Hydro power potential and only 350MW has been tapped. On the other-hand Bangladesh needs more power. To meet its requirement, Bangladesh has tied up with Nepal for 9000MW. This reinforces the *need* for Meghalaya to strengthen the transmission system in the border with upgradation of identified sub stations. This will enable Meghalaya to provide a transmission corridor to Bangladesh for exporting power by other countries/states/utilities. The proposal for this power corridor are:

a. **220KV D/C lines from Mawphlang to Ichamati through Sohra and 220/132KV, 2*160MVA substation at Ichamati.**

   Survey of this line was sanctioned and is in course of completion. DPR shall be prepared accordingly.

b. **220KV D/C lines from Mawphlang to Nangalbibra (PGCIL) sub-station as agreed in the 1st meeting of NERSCT to be taken up by MePTCL** as intra-state lines. Proposal for survey of this line has been sent to the Govt of Mehalaya in December 2020 for funding of survey works.

c. **220** KV **D/C lines (on 400KV towers) from BongaigoanSub station to Nangalbibra (PGCIL) sub-station and 220/132KV, 2*160MVA Sub-station at Nangalbibra as agreed in the 1st meeting of NERSCT to be taken up by MePTCL** as ISTS.

d. MePGCL has submitted the proposal for construction of the **MyntduLeshka Stage-II project to the GoM for funding under ADB**. Based on this, MePTCL has submitted a proposal to evacuate power through a 220KV D/C line and to LILO the 400KV Silchar-ByrnihatAzara line (NETC) at **Mynkresub station**. For this, construction of a 400/220KV, 2*315MVA GIS Sub-station and 220/132KV, 2*160MVA GIS substation at Mynkre is also proposed in the project cost.

e. It is proposed that a **400KV D/C line from Mynkre – Ichamati – Sohra – NangalbibraSub station be constructed to connect with the proposed ISTS 220 KV line being constructed on 400KV towers at Nangalbibra from Bongaigoan.**

   (Regarding re-conductoring of BTPS-Agia 220kV line by AEGCL it was agreed that the same could be reviewed after commissioning of the proposed Nangalbibra 220/132kV S/s under ISTS).

   Completion of above projects shall strengthen the 220KV/400KV Transmission system along the southern parts of Meghalaya and Assam which will be of great benefit to Assam, Meghalaya and other NER constituents.

Deliberation of the TCC

After detailed deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.30 : N-1 RELIABILITY REQUIREMENT AT SOHRA– MePTCL.

Discussion of 2nd NERPCTP:

"NLDC stated that 132 kV Nangalbibra - Rongkhon - Ampati section is radially connected from Nangalbibra end. Tripping at Nagalbibra results in black out at Rongkhon and Ampati. He added that in the 1st Meeting of NERPCTP/2nd Meeting of NERSCT held on 8th Nov 2019, Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/c line was agreed (point No 5.14A (d) of minutes). He requested for an early implementation of this project to increase the reliability of Rongkhon and Ampati areas of Meghalaya power system.

CTU stated that apart from Hatsinghmari (Assam) – Ampati (Meghalaya) 132kV D/ c line, Bongaigaon – Nangalbibra 400kV D/c line (initially operated at 220kV) along with 220/132kV substation at Nangalbibra was approved for implementation as ISTS in the last meeting of NERPCTP to improve power supply scenario and enhance reliability in western part of Meghalaya.

CE (PSPA-II), CEA informed that the above lines have already been agreed in NERPCTP and also approved by NCT. Necessary notification for implementation of this proposal will be issued by MoP.

NLDC also raised the issue of radial 132kV line between Mawlai and Sohra (Cherapunji). He proposed for additional connectivity of Sohra with either Mawngap or Mawlai. NERPC stated that under NERPSIP 220kV Killing (Byrnihat)- Mawngap-New Shillong D/C line is under construction. Therefore, connecting Sohra with Mawngap would increase reliability in power supply to Sohra as 220kV Killing is connected to 400kV Byrnihat GSS. Therefore, it was agreed that this issue of intra-state strengthening of transmission system in Meghalaya would be included as part of agenda for the forthcoming meeting of NERPC-TP."

Deliberation of the TCC

After detailed deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.31	**:**	**LILO OF 132kV KAHELIPARA-UMTRU AND RE-CONDUCTORING OF 132kV UMTRU-KAHELIPARA AND UMTRU-SARUSAJAI– MePTCL.**

In the 2nd meeting of NERSCT and the 1st NERPCTP meeting, the following additional intra-state system strengthening in Meghalaya was agreed upon to be taken up by MePTCL:

a. LILO of Kahilipara – Umtru 132KV D/C lines at Killing S/s.
b. Reconductoring of Umtru – Kahilipara and Umtru – Sarusajai 132KV D/C line with HTLS conductor.

The following proposals were also agreed upon:

a. Construction of 400KV D/C line from Bongaigoan (PGCIL) to Nangalbibra (PGCIL) to be charged initially at 220KV alongwith Substation at Nangalbibra as an ISTS line to be taken up by PGCIL.
b. Construction of 132KV D/C line from Hatsingamari (Assam) to Ampati (MePTCL) as an ISTS line by PGCIL.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.32 : LILO OF 400kV SILCHAR-BYRNIHAT AT MYNKRE AND NEW SHILLONG ALONG WITH UPGRADATION –MePTCL.

The 400 KV Silchar-ByrnihatAzara line is passing through the north eastern part of Meghalaya just about 5 or 6 Km from a new 220KV/132KV/33KV Substation being constructed under NERPSIP in the New Shillong area. LILO of the line at New Shillong alongwith a 400/220KV substation at New Shillong will go a long way in stabilizing power in the area crucial for the expanding New Shillong township.

The 400 KV Line is also just about 3 KM from the 132 KV Substation at Mynkre in Jaintia Hills an industrial belt. LILO of the 400KV Transmission line at Mynkre (MePTCL) alongwith 400/220/132KV Substation will enable strengthening of the network in the region. Besides evacuation of MLHEP power during high hydro season will be facilitated for the interests of power availability in the region.

The construction of these lines LILO and Substations was taken up at the 1st NERPC-TP meeting dated 08/11/2020. Meghalaya requested that the construction of lines and sub stations be executed and proposal be agreed by TCC.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.33 : EVACUATION OF SURPLUS POWER OF MEGHALAYA – MePTCL.

Evacuation of surplus power of Meghalaya and North East for export to Bangladesh through Meghalaya.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.34	**:**	**INSTALLATION OF 132/33/11kV PT IN ALL POWER STATIONS OF MEGHALAYA –MePGCL.**

Power supply arrangement from the grid by installing 132/33/11 KV PT in all the Power Stations of MePGCL.

a) Installation of 5 MVA, 132/33/11 KV Transformer at Stage – I & II Power Stations.

b) Installation of 5 MVA, 132/33/11 KV Transformer at Stage – IV Power Station.

c) Installation of 5 MVA, 132/33/11 KV Transformer at Umtru Power Station.

Dedicated outside source supply transformer which will be tapping power from the grid in:

1) Stage – I Power Station, Sumer
2) Stage – II Power Station, Umsumer
3) Stage – IV Power Station Nongkhyllem
4) Umtru Power Station, Dehal (Byrnihat)

At present the outside source power supply in different Power Stations is being derived from the Distribution Transformer maintained by MePDCL which are prone to frequent outages as the line passes through thick forest areas and difficult terrain. Therefore, in order to ensure stable and reliable power supply in the Power Station, power transformers are required to be install in different Power Stations.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.35	**:**	**CENTRALIZED GENERATION CONTROL ROOM FOR MONITORING AND CONTROL OF ALL POWER STATIONS–MePGCL.**

New ABT meter for generator in all Power Station, Data concentrator system for collecting date from the field, energy meter for auxiliary units, computer, server, hardware, software and reliable communication link from the Power Station to Control room will be required.

A centralized generation control room will be required in order to maintain energy data in computerized environment to enable MePGCL in optimum scheduling of energy accounting bills/report to ensure technical and financial performance monitoring and to ensure regulatory compliance so as to achieve overall revenue maximization.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.36	**:**	**UPGRADATION OF EXISTING SCADA SYSTEM OF LESHKA–MePGCL.**

Upgradation of the existing SCADA system of Myntdu-Leshka Stage – I Power Station from the obsolete windows XP operating system to windows 10 of the latest version.

The existing SCADA system's response is very slow and hanging of the system is experienced on and off. This is mainly due to the very low RAM and Hard Disk capacity and necessary requirement of upgradation of the system software to the latest available version. It may be noted that the installed software of the SCADA system i.e. Windows Xp is already obsolete and there is no more technical support for the same.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.37	**:**	**UPGRADATION OF CONTROL SYSTEM IN ALL POWER STATIONS–MePGCL.**

Upgradation of Control system in all the Power Stations by installation of SCADA System. For improvement in Control and monitoring of Power Station in order to optimize generation and facilitate an upgraded system.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. D.38	**:**	**RE-ENGINEERING OF EXISTING BUS BAR AT UMIAM STAGE-III– MePGCL.**

Re-engineering of existing 132 KV Bus Bar from ACSR Panther to ACSR Zebra including terminal connectors at 132 KV Switchyard of Stage – III, Power Station, MePGCL, Kyrdemkulai.

Re-engineering of existing 132 KV Bus Bar of 132 KV Switchyard of Stage – III, Power Station. The loading of the existing 132 KV Switchyard Bus Bar of Stage-III Power Station, Kyrdemkulai with Panther conductor has exceeded the permissible loading capacity and with the recent development of Upper Khri Stage-I and Stage-II, re-engineering of the same is required urgently.

Deliberation of the TCC

After deliberation, the forum referred the matter to the next NERPC-TP for deliberation.

TCC noted as above.

This is for information to RPC.

Deliberation of the RPC

The RPC noted as above.

CATEGORY – E : RESOLUTIONS TAKEN DURING THE 21ST NERPC MEETING

The North Eastern Regional Power Committee (NERPC) unanimously resolved in the 21st NERPC meeting held on 04th February, 2021 at Guwahati as follows:

That this Committee strongly urges upon Ministry of Power, Government of India for the following:

RESOLUTION. E.1 : 100% FUNDING FOR RELIABLE COMMUNICATIONS & DATA AQUISITION SCHEME FROM POWER SYSTEM DEVELOMENT FUND (PSDF)

The primary function of the communication network is to provide a highly secured and reliable voice and data communication system in support of the WAM (Wide Area Monitoring) System, SCADA/EMS system, Protection System, Market Operation Service and Service Providers (Forecast, Weather and Ancillary services). The Service Provided is for low & high-speed data, express voice circuits and administrative voice circuits.

The communication system shall finally form a wideband backbone network on all India basis to support the requirement of the Power System Operation and Market operation.

Reliable Communication is one of the crucial issues of Power System in NER and at present the communication network in NER is far behind as compared to the other regions of the country. Moreover, with thin population in NER, substantial commercial use of extra fiber for leasing the bandwidth does not arise. Presently, for the reliable communications and data acquisition scheme, there is a provision of only 50% funding through PSDF and the remaining 50% is to be funded by the respective States.

With this background in mind and considering the poor financial conditions of NER States, we request your good self to intervene into the matter personally to

grant 100% funding from PSDF, as a special consideration for the "reliable communication" in NER.

RESOLUTION. E.2 : DE-ALLOCATION OF POWER FROM NTPC-BONGAIGAON.

As you are aware that NTPC had declared CoD of Unit #I of Bongaigoan Thermal Power Station (BTPS) of capacity of 250 on 01.04.2016 and subsequently other two units of same size (250MW). However, an average cost per unit is Rs. 5.70 as per PPA signed by the constituents. The cost is comparatively high compared with the cost of other plants in the region and thus constitutes a huge liability of the NER constituents.

During the 21st NERPC meeting, the issue was deliberated in detailed and all the state beneficiaries of Bongaigaon Thermal Power Plant (BgTPP) unanimously stated that the power from BgTPP may be de-allocated as it is very expensive and is causing immense burden on the state utilities.

With this background in mind and considering the poor financial conditions of NER States, we request your good self to intervene into the matter personally to address the issue of further reduction in the tariff, otherwise, to deallocate the firm shares from BgTPP so as to relieve the financial burden on NER States.

DATE & VENUE OF THE NEXT MEETING

The next meeting of 22nd TCC & 22nd NERPC is proposed to be held in August, 2021. The exact date & venue will be intimated later. As per roster NHPC will be the host for the next 22nd TCC/RPC Meetings.

The meeting ended with vote of thanks to the Chair

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ANNEXURES

ANNEXURE - I

LIST OF PARTICIPANTS IN 21st TCC MEETING

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
1	ASSAM	Deepankar Deka	CGM (O&M), AEGCL
2		N. Ahmed	GM (TRC), APDCL
3		G.K. Bhuyan	GM, (P&E)
4		Gunajit Sarma	AGM (TI), APDCL
5		A.J. Choudhury	AGM, AEGCL
6		Rupanka k. Goswami	AGM (SO), AEGCL
7	AR. PRADESH	M. Mara	SE (Commercial)
8		T.K. Tara	SE (Trans)
9		Nangkong Perme	SE (E), SO&PSC
10	MANIPUR	N. Sarat Singh	MD, MSPCL
11		H. Shanti kumar Singh	Executive Director, MSPDCL
12		Th. Aton Singh	ED (Com), MSPDCL
13		L. Dinesh Kumar Singh	GM (SLDC)
14		Ng. Birjit Singh	GM
15		Varun Irengbam	Manager, MSPCL
16	MEGHALAYA	Er. A. Kharpran	CE (Tech.), MePTCL
17		Er. R. Syiem	CE (Gen.), MePGCL
18		Er. E.B. Kharmujai	Director (Tech.), MePTCL
19		Er. S.B. Umdor	ACE (Dist.), MePDCL
20		Er. B. Saibon	SE, MePTCL
22	MIZORAM	C. Lalramliana	Joint Secretary
23	NAGALAND	Shikato Sema	Engineer-in-Chief
24		Nribemo Mozhui	CE (T&G)
25		Er. Moa Aier	CE (D&R)
26		Penrithung Yanthan	ACE (T&G)
27		Nitovi A. Wotsa	SE (E)
28		Kasho Chishi	SE (E)
29		Tiameren Walling	SE (E)
30		Er. Visakho Therie	SE (C)

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
31		T. Lithrichum Sangtam	EE (T)
32		M. Ngullie	EE (G)
33		Lhuvoyi	EE (Rev)
34		Moameren	EE (E), Mkg
35		Neiyie Neikha	EE (C), Kma
36		Nitoho Sema	EE (Hydro)
37		Kahoshe Sema	EE (C)
38		Er. Tsiamchi Ndang	EE (E)
39		Shiludi Longkumer	EE (E)
40		Er. S.I Asangba Tikhir	EE (T)
41		Rokobeito Iralu	SDO
42	**TRIPURA**	M.S. Kele	MD
43		D. Sarkar	Director (Tech)
44		Ranjan Deb Barman	AGM
45	**NEEPCO**	N.K. Mao	ED (Coml)
46	**NHPC**	Rodik Hmar	Sr. Mgr. (E)
47		Rajesh Kumar	Sr. Mgr. (Comml.)
48	**NERLDC**	V. Suresh	Executive Director
49		Sourav Mandal	Dy. Manager
50	**POWERGRID**	Naveen Srivastava	Executive Director, NERPSIP
51		Bimlendu Shekhar Jha	Executive Director, A.P
52		R.K. Tyagi	Executive Director
53		U. Kataki	CGM(AM)
54		A.K. Basumatary	Sr. GM, NERPSIP
55		Rajesh Kumar	GM
56	**NTPC**	H.S. Sahu	GM (OS), ER-II
57		G.C. Mohapatra	AGM (Coml), ER-II
58	**NETC**	Satyajit Ganguli	Managing Director
59		Anil R. Sah	DGM
60		Ratan Singh Basnet	Dy. Mgr.
61	**PTC**	Manoj Sabat	Vice President

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
62	NERPC	A.K. Thakur	MS
63		B. Lyngkhoi	Director (O&P)
64		S. Mukherjee	Deputy Director

ANNEXURE - II

LIST OF PARTICIPANTS IN 20th NERPC MEETING

1. Sh. Neiphiu Rio — Hon'ble Chief Minister, Govt. of Nagaland & Chairman
2. Sh. Jishnu Dev Verma — Hon'ble Dy. Chief Minister, Govt. of Tripura
3. Sh. James K. Sangma — Hon'ble Power Minister, Govt. of Meghalaya
4. Sh. Balo Raja — Hon'ble Adviser (Power), Govt. of Ar. Pradesh
5. Sh. T. Ayemi — Hon'ble Adviser (Power), Govt. of Nagaland

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
1	ASSAM	Dipankar Deka	CGM (O&M)
2		G.K. Bhuyan	GM, (P&E)
3		N.Ahmed	GM (TRC), APDCL
4		Gunajit Sarma	AGM (TI), APDCL
5		A.J. Choudhury	AGM, AEGCL
6		Rupanka k. Goswami	AGM (SO), AEGCL
7	AR. PRADESH	M. Mara	SE (Commercial)
8		T.K. Tara	SE (Trans)
9		Nangkong Perme	SE (E), SO&PSC
11	MANIPUR	N. Sarat Singh	MD, MSPCL
12		Th. Aton Singh	ED (Com), MSPDCL
13		Ng. Birjit Singh	GM
14		Varun Irengbam	Manager, MSPCL
15	MEGHALAYA	Arunkumar Kembhavi	CMD, MeECL
16		Er. A. Kharpran	CE (Tech.), MePTCL
17		Er. R. Syiem	CE (Gen.), MePGCL
18		Er. E.B. Kharmujai	Director (Tech.), MePTCL
19		Er. S.B. Umdor	ACE (Dist.), MePDCL
20		Er. B. Saibon	SE, MePTCL
21	MIZORAM	C. Lalramliana	Joint Secretary
22	NAGALAND	Shikato Sema	EnC & Chairman, TCC
		Nribemo Mozhui	CE (T&G)
23		Moa Aier	CE (D&R)
24		Penrithung Yanthan	ACE (T&G)
25		Nitovi A. Wotsa	SE (E)

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
26		Lobosavy Jamir	SE (R)
27		Tiameren Walling	SE (E)
28		Chubathung Kishan	SDO (G)
29	TRIPURA	M.S. Kele	MD
30		D. Sarkar	Director (Tech)
31		Ranjan Deb Barman	AGM
32	NEEPCO	V.K. Singh	CMD
33		N.K. Mao	Executive Director (Coml)
34	NHPC	A.K. Ghosh	CGM
35		K.T. Rajah Pandian	GM (Loktak Project)
36		R.T. Nathan	GM, Faridabad
37		Rodik Hmar	Sr.Mgr. (E)
38		Rajesh Kumar	Sr.Mgr. (Comml.)
39	NERLDC	V. Suresh	Executive Director
40		Sourav Mandal	Dy.Manager
41	POWERGRID	Naveen Srivastava	Executive Director, NERPSIP
42		Bimlendu Shekhar Jha	Executive Director
43		R.K. Tyagi	Executive Director
44		U. Kataki	CGM(AM)
45		A.K. Basumatary	Sr. GM, NERPSIP
46		Rajesh Kumar	GM
47	NTPC	H.S. Sahu	GM (OS), ER-II
48	PTC	Manoj Sabat	Vice President
49	NETC	Satyajit Ganguli	Managing Director
50		Anil R. Sah	DGM
51		Ratan Singh Basnet	Dy. Mgr.
52	OTPC	Sanil Namboodiripad	MD
53		Arup C. Sarmah	GM
54	NERPC	A.K. Thakur	MS
55		B. Lyngkhoi	Director (O&P)
56		S. Mukherjee	Deputy Director

ANNEXURE-III

KEYNOTE ADDRESS OF SHRI SHIKATO SEMA
TCC CHAIRMAN, NERPC
&
ENGINEER-IN-CHIEF, DEPT. OF POWER, GOVT. OF NAGALAND
ON THE OCASSION OF
THE 21st TCC MEETING OF
THE NORTH EASTERN REGIONAL POWER COMMITTEE
HELD ON 03RD FEBRUARY, 2021 AT KOHIMA

Shri. A.K Thakur Member Secretary NERPC, Shri. B. Lyngkhoi Director NERPC, officials from Constituent's members and Power Utilities -, AEGCL, APDCL, PGCIL, NERTS, NEEPCO, MePTCL, MePGCL, MePDCL, DoP Arunachal Pradesh, DoP Mizoram, NERLDC, MSPCL, TSECL, NETC, NHPC, NTPC, PTC India, OTPC and last not forgetting the officials from Power Department, Nagaland. Greetings to all the esteemed participants and dignitaries from NER.

It's good to see you all after a long break since 12th September 2019, the last TCC & RPC meeting. I would like to thank each and every one for making it to this meeting despite of apprehension about Covid-19. I am sorry some of you had to take a detour due to rock slide causing lot of inconvenience. But I hope you have a pleasant stay here in Kohima. I am sure everyone has a purpose of attending this TCC meeting to discuss and resolve the common issues for the betterment of the Power Sector and I am confident we will have a healthy discussion during this meeting for mutual benefit of all stake holders.

The tenure of Chairmanship of both TCC and NERPC for Nagaland is from April 2020 to March 2021, however, due to pandemic situation, even a formal handing over and taking over between the outgoing and incoming Chairmen could not take place so far. I am informed the formal handing over and taking over will be taking place today afternoon between Hon'ble Chief Minister Nagaland and Hon'ble Power Minister Meghalaya.

The power sector in India has undergone significant progress after Independence. When India became independent in 1947, the country had a power generating capacity of 1,362 MW. Present all India installed capacity is approx. 374 GW as on December, 2020, i.e. Generation capacity is augmenting at a CAGR of approx. 7%. Conventional fossil-based generation resources have been domination the energy portfolio over the years. However, installed renewable generation capacity has increased at a fast pace over the past few years, posting a CAGR of 17.33% between FY14-FY20. The Government of India has also set the ambitious target of installing 175 GW of renewable energy capacity by the year 2022, which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power. As far as NER Grid is concerned, there was a time when Kopili HEP, Khandong HEP and Loktak HEP were the only central sector generators in NE region and NER Grid was dependent on power import from Eastern region. Presently, installed capacity of NER Grid is approx. 4.5 GW, which is around 150% of Maximum Demand of the region.

Transmission sector has also witnessed rapid growth post-independence. During independence, small isolated power network used to be there. Presently, India has the world's largest synchronized national Grid with 4, 33,510 circuit km of transmission lines at various voltage levels like 765kV, 400kV, and 220k, +/- 500kV and +/- 800kV.

As far as Power Demand is concerned, Demand met of NER Grid has increased from around 1.5 GW in 2009-10 to approx. 3 GW in 2019-20 and 690 MU/month in 2009-10 to 1360 MU/month in 2019-20, i.e. about 100% growth in last 10 years.

A slew of regulatory and policy reforms has also been observed in Indian power sector in the last two decades. These include, inter alia, implementation of ABT mechanism, Open access in transmission system, introduction of power exchanges, DSM regulations, introduction of Renewable Energy Certificate mechanism etc. One of the recent remarkable initiatives in Indian power sector is launch of Real Time market w.e.f. 1st June, 2020. Before this, market option available for power procurement/sale was Day Ahead Market. However, with the launch of RTM, Constituents across India are getting an option to meet their energy requirements

closer to real-time operation. And I gather that all the states of NER including Nagaland are actively participating in RTM to optimize their portfolio and meeting their requirement.

Coming to the objectives of TCC meeting, the issues which were left out in the last TCC meeting more than a year ago needs to be followed up and resolve while confirming the minutes of 20th TCC meeting held on 12th September, 2019 at Guwahati. Today in this 21st TCC meeting also there are many important agendas which is of common interest of the region are being listed for deliberation.

On commercial issues, there is an alarming situation if we look at the figures of outstanding dues to NEEPCO, OTPC, and NTPC. I urge the constituent's members to take some extra ordinary measures to clear up the dues as the financial health of those generating companies is crucial to the sustainability for the region as a whole.

Since almost all the states have completed the implementation of ADMS pilot project, we need to take up the ADMS project implementation for the entire state as early as possible from PSDF funding.

As far as SAMAST project is concerned which was taken up as common for all north eastern states, it is already under implementation in some states, therefore the rest which was left out need to be pushed for early implementation. I place on record my sincere appreciation to NERLDC for helping in finalising SAMAST DPR. Now, we are awaiting PSDF grant and SAMAST implementation will help all the SLDC in building up its capability to a great extent.

We need to take up forcefully once again with Government of India on the PSDF funding pattern with regards to "Reliable Communication" project for 10% funding as a special case for North east states.

To optimize the benefit to the fullest, the downstream connectivity considerations should also be planned & considered accordingly during conceptualization itself by all concerned especially during project appraisal. The downstream connectivity issue of400/220kV kV sub-station at Zhadima, Nagaland and 11kV downstream

connectivity for NERPSIP in Nagaland is a classic example, where the beneficiary states were not properly apprised of its responsibilities.

On this note, I extend my heartiest greetings to all the participants and look forward to meaningful and successful deliberations.

Thank you very much.

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ANNEXURE-IV

WELCOME SPEECH BY SHRI H. TOVIHOTO AYEMI
HON'BLE ADVISER (POWER) GOVT. OF NAGALAND
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE
HELD ON 04th FEBRUARY 2021 AT KOHIMA

Respected Chairman of the NERPC and Hon'ble Chief Minister Nagaland, Hon'ble Power Ministers from different NE states present here today, dignitaries on the dais, esteemed members of the NERPC representing NE states, central sector and other utilities, distinguished guests, invitees, ladies and gentlemen.

Firstly, I extend a warm welcome to all of you to Kohima and hope that you have a comfortable stay with us. It is a matter of great privilege to address you on this occasion of the 21st NERPC Meeting in-spite of the pandemic with restrictions as per the laid down SoPs.

We are fortunate that the North East is endowed with abundant natural resources and hydro power resources is one of such that it is considered as the hydro power house of the country especially referring to Arunachal Pradesh with an identified hydro power potential to the tune of 50,000 MW.

As per the data made available to me, the installed central sector generation capacity in the NER is about 3000 MW while the maximum demand met during 2020 is also about the same ranging from 2300 MW to 3000 MW. Comparing these two figures, we can summarize that there is a huge shortfall in our generating capacity and due to which the states are compelled to import power at higher cost through Eastern and Northern grids.

I would therefore like to request all generating agencies engaged in development of various upcoming generation projects like Lower Subansiri HEP (2000MW) and Dibang Hydro Multipurpose Project (2880MW) etc. and restoration of Kopili Stage I & II for early completion in order to mitigate the present power shortage problems faced by us as a short-term measure. Thereafter, we all should plan and open up to attract investors for harnessing the huge hydro power potential available with us so that the North East can be an economic power through the Energy Industry.

We all know that Power is within the concurrent list of the Constitution. It therefore means that the Centre and the State has equal concern and responsibility towards infrastructure building as well as in the operation of the sector. However, for Nagaland, we face a lot of difficulties and challenges due to financial resource constraints, which I believe is true for most of the NE States as well. Therefore, the Centre should still continue to come forward to help develop the power infrastructure of the NE States by way of financial grants.

I am informed of another area of concern regarding the R-APDRP Program in the NE. Under the direction of the Ministry of Power, GoI, a common Data Centre and a Disaster Recovery Center was set up at Guwahati and Agartala respectively. The project was funded by the MoP/GoI, but the operation and maintenance costs is to be borne by the NE States. Now I am informed that Assam shall be exiting from this Common Facility after February 2021, and the financial burden amounting to Rs 22.00 cr. per annum shall have to be borne by the other remaining states. Nagaland's share works out to Rs 3.12 Cr. p.a. We shall not be able to take this additional financial burden, and so also the other NE States I believe. I therefore earnestly request the MoP/GoI to consider funding the gap after Assam's exit, for at least 3 more years, within which the States shall also plan their contingencies. If this cushion is not provided by the Center, we may be compelled to revert to hand billing system, which would be a great setback.

We are grateful to the MoP, GoI for funding the Renovation & Up-gradation of Protection Systems at all 132kV substations in Nagaland with 100% grant from PSDF along with other NE states. However, the 66kV systems were left out due to guidelines for PSDF funding. I understand that the department of Power Nagaland had submitted a proposal for funding 66kV systems also under the PSDF for an amount of Rs. 13.09 Cr. with a request to the CEA to consider as a special dispensation. I have been informed that the protection audit was also carried out by the NERPC and the matter is pending for clearance and recommendation of the Standing committee. I request this meeting to expedite consideration of the proposal.

I once again thank the NERPC for organizing this meeting and I wish all the participants a fruitful deliberation and successful outcome.

Thank you and may Almighty God Bless You.

ANNEXURE-V

SPEECH OF SHRI JISHNU DEV VERMA
HON'BLE DY. CHIEF MINISTER, GOVT. OF TRIPURA
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE
HELD ON 04th FEBRUARY 2021 AT KOHIMA

Hon'ble Chief Minister, Nagaland and Chairman of NER Power Committee (NERPC) Shri Neiphui Rio ji, my Colleague Ministers from other North-Eastern States, Officials of the Central and State Governments, Officials from other Central and State Power utilities, Distinguished Guests, Special Invitees, Ladies and Gentlemen.

I am privileged to attend the 21st North Eastern Regional Power Committee Meeting in Kohima, Nagaland. It is my first opportunity to be in this August Forum and I thank the North Eastern Regional Power Committee for organizing this meeting here under the aegis of the Department of Power, Government of Nagaland.

2. The coronavirus COVID-19 pandemic is a defining global health crisis and the greatest challenge that we have faced in our times. The outbreak is in declining state as the world has united in tackling COVID-19. Citizens from all walks of life have come together in carrying out their part and responsibilities. Hopefully, with strategic preparedness and well-executed response plan the COVID-19 pandemic will be overcome very shortly. It is the beginning of the end as far as the pandemic is concerned.

3. Despite this crisis, I hope this particular meeting will resolve many of the significant issues affecting the power sector in the NE Region. As we all know that, NERPC since its formation has been persistently working towards making the NER Power System operations reliable, efficient and economical. I hope that the outcome of the discussions today will extensively contribute towards an efficient power system in this region. This is imperative if we are to achieve our sole objective of providing 24 X 7 Power for all at an affordable price.

4. The geo-graphical isolation of the North East has resulted in many issues which are region specific in nature and thus we have many challenges that need to be dealt with and overcome together. I am very grateful to the Government of India for providing its continues support to NE Region specially in regards to the Power Sector and I hope that the same spirit will be maintained till NER reaches at par with the rest of the country.

5. The implementation of Government of India and World Bank funded project NERPSIP (North East Region Power System Improvement Project) is one such major infrastructure development programme to create a robust power network in the North Eastern States by strengthening and augmenting the Intra-State Transmission and Distribution System. Accordingly, much needed construction of Transmission lines and sub-stations are presently in progress. However, progress so far achieved till date foe NERPSIP in Tripura is lagging far behind the schedule. I take this opportunity to urge upon the Power Grid Corporation of Indian Limited (PGCIL), the implementing agency to expedite the works for completion of Tranche-I within the revised extended time period of December 2021 for Tripura as well as other NE States, so that planning of Tranche- II can be taken up.

6. I am immensely glad to inform the esteemed members of this gathering that Up-gradation of 132 KV Surjamaninagar sub-station of TSECL into 400 KV in Tripura is coming up under North East Special Infrastructure Development Scheme (NESIDS) being funded by the Ministry of DoNER, Government of India to facilitate increased power reliability and improved voltage profile with meeting up future enhanced load demand due to continuous infrastructure development in the State and evacuation of enhanced quantum of power to Bangladesh from Tripura Grid.

Besides this, more 2(two) nos. 400 KV ISTS sub-stations at Purba Noagaon and Mashauli (P.K. Bari) are being implemented in Tripura under the scope of NERSS – V (Part –B) of Ministry of Power, Govt. Of India.

The associated transmission lines inter-linking those 400 DV sub-stations with Palatana GBPP and NER Grid are also under implementation which will benefit Tripura and entire NE Region as a whole in an effective manner.

7. The Asian Development Bank (ADB) has sanctioned Rs. 1,925 Crore Project for Up-gradation of Power Generation and Renovation of Distribution system in Tripura.

The project is envisaged foe installation of Combined Cycle Gas Turbine at Rokhia Gas Thermal Project for additional generation of 60 MW with no additional gas which will result in improvement of efficiency by 100% with reduction in cost and environmental hazards and modernization of Gumti Hydro Electric Power Project for life extension.

Distribution modernization & reliability improvement under this project includes modern technology like Covered Conductor, High Voltage Distribution System (HVDS), Fault Passage Indicator (FPI), Auto-reclosures and Sectionalises, Ring Main Unit (RMU), State of the Art Transformer Testing Lab, Smart metering etc. For meeting future demand growth, improved efficiency and facilitate supply of 24 X 7 reliable and quality power with reduction in AT & C losses.

8. Tripura has implemented centrally sponsored Rural Electrification flagship schemes like Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA) for Rs. 417.53 Crores, Deen Dayal Upadhyaya Gram Jyoti Yojna (DDUGJY) for RS 74.12 Crores and DDUGJY Phase 2 for Rs. 358.64 Crores for expansion of electric supply network in rural and remote areas with electrification of all un-electrified households of the State.

9. For renovation and strengthening of urban area distribution system in the State, a centrally sponsored scheme fo4r Rs. 203.02 Crores under Integrated Power Development Scheme (IPDS) is being implemented and is near completion.

10. Pre-paid metering has been introduced with vending system for 1.84 Lacs consumers in urban and semi-urban areas of the State and is in progress and targeted to be completed by March 2021.

11. Operation of Smart Customer Care Centre and Establishment of Fault Rectification Team (FRT) in State is facilitating prompt complaint resolution and better services to the consumers through single windows web-based integrated complaint management system for 24 X 7 power supply.

12. Adoption of M-POS and all other e-payment facility with introduction of Mobile Point –of – Sale (POS) payment solution has improved the collection through Digital Mode by 50% in TSECL, Tripura.

13. Enterprise Resource Planning (ERP) will be introduced for Rs. 18.16 Crore for establishment of e-governance facility within TSECL, Tripura for improvement of operational performance and efficiency.

14. Online Health Monitoring of Distribution Transformers has been implemented in the State of Tripura with a view to reduce the transformer failures resulting in improved assed life.

15. Various new 132 KV transmission lines and 132 KV substations are also being implemented under Government of India funded NEC, NLCPR and SPA schemes for strengthening Intra-State Network.

16. TSECL has received the “Skoch Order-of Merit” as an acknowledgement for Implementation of Input Based Distribution Franchise as PPP Model towards improving Operational and Financial viability.

17. Tripura has received the “Best Smart Grid Project in India by Utility” in the category of Diamond from India Smart Grid Forum (ISGF) for successful implementation of Smart Grid Pilot Project of Government of India.

18. TSECL, Tripura has received the "Skoch Award 2020" at Silver Category for outstanding performance in "Response to COVID -19" during Pandemic situation for maintaining 24 X 7 power supply services across the State, Safety and Hygiene of employees and consumers.

19. Net Metering facility to its consumers under "Go Green Initiative" has been introduced by TSECL, Tripura to promote environment friendly green non-conventional energy specifically the Solar Energy.

20. LED Street Lighting System along-with distribution of Solar Study Lamp, Installation of Solar Pump, Installation of Biogas Plant under National Biogas and Manure Management Programme, Installation of Roof-Top Solar Plants and Off-grid Solar power plants and Cluster Solar Hybrid Under CSR Scheme continuously are in process of implementation in the State.

PM Kusum Yojana has been promoted and established for socio-economic and livelihoods enhancement in the State and has focused on the farming system development of poor people through provision of timely input supply to farmers in the most-remotest villages through the community managed development centres.

21. Further, I would like to mention few issues for knowledge of the forum:

    i) Palatana to remain connected with Surjamaninagar (TSECL) sub-station, Tripura during the interim period between the commissioning of Surjamaninagar (ISTS) and Surjamaninagar (TSECL) 400 KV sub-stations to avoid vulnerability of Tripura Power System.

    ii) Bangladesh has affirmed to draw power only at 132 KV and the extension of link between Comilla and Surjamaninagar (TSECL) sub-station to Surjamaninagar (ISTS) 400/132 KV sub-station will entail an additional cost which can be saved by retaining the present transmission configuration between Surjamaninagar (TSECL) sub-station and Comilla.

Moreover, Tripura has already proposed to the Ministry of Power Govt. of India to extend Power Supply Agreement for sale of power to Bangladesh for a further period of five years.

iii) Recent notification of Central Electricity Regulatory Commission (CERC) regarding recovery of Inter-State Transmission Charges methodology on Point of Connection (PoC) mechanism will put substantial additional financial burden on the State. Matter needs to be reviewed in the interest of the Region as a whole.

22. I would also like to mention here that development of skilled manpower in the region along-with capacity building its the need of the hour and the process should be effectively and efficiently continued as skills determine ability to execute plans with success.

With these words, I thank all for sharing valuable thoughts and suggestions in this meeting and I look forward to a fruitful outcome with one common goal and objective in developing the North East Region generously.

Thank You all,

Jai Hind

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ANNEXURE-VI

SPEECH OF SHRI JAMES K SANGMA
HON'BLE POWER MINISTER, GOVT. OF MEGHALAYA
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE
HELD ON 04TH FEBRUARY, 2021 AT KOHIMA

Hon'ble Chairman NERPC and my dear colleague Ministers from other North Eastern States, officials of Central government and State Governments, officials from other Central and State Power Utilities, distinguished guests, special invitees, ladies and gentlemen.

2. At the very outset, I wish to convey my gratitude to the Chairman NERPC and the Honourable Chief Minister of Nagaland, Shri Neiphiu Rio, for having invited me to this 21st North East Regional Power Committee (NERPC) meeting here in Kohima. I thank the Department of Power, Government of Nagaland, for hosting this meeting and all the gracious hospitality. I also take this opportunity to express my thanks to the NERPC for their continuous efforts, support and assistance in the Power sector which has immensely benefited the people of the region.

   On behalf of Meghalaya, I bring heartiest and warm greetings to all the participants with certainty in my heart that this meeting will result in meaningful deliberations and decisions that aim at improving and transforming the power sector of our region to be at par with the rest of the country.

3. It is a great pleasure for me to once again be a part of this august gathering and my earnest hope is that through this particular platform, we will seek to address not just the challenges but also explore opportunities in the power sector for my State and the entire North Eastern region.

   In the past, I have had the privilege to chair the NERPC meeting at Guwahati and today as the baton is passed on, I look forward with a lot of hope and

expectation to the leadership of our current Chairman who is one of the senior-most leaders of the North East. I have realized during my time as Chairman and as member that the NERPC, since its inception, has been relentlessly striving to ensure that the power sector in the Northeast remains reliable, efficient and at the same time economical. I also appreciate the fact that the deliberations f the previous NERPC have been carried forward for the benefit of the constituent states of the Northeast. Lt is important that we continue to follow in the same spirit of cooperation to jointly put in our efforts to achieve our common objective of providing 24X7 Power for all with quality and affordability for the people of our region.

4. Although the North Eastern States often face many challenges due to its geographical isolation, the region is however blessed with vast hydro potential. This potential needs to be fully tapped so as to not just feed economic growth of the region but also perhaps contribute substantially to the growth story of our Nation. However, the pace of development in this sector has remained slow due to many hurdles. In terms of Hydro power, the North Eastern region has the potential of about 58,971 MW i.e., almost 40% of the country's total hydro potential. The region also has abundant resource of coal, oil and gas for thermal power generation. To address all of this, the Government of India has been very proactive in extending all support to develop the power sector in the North Eastern region and with continual improvement of infrastructure and communication facilities, the North East region stands to become a major power-house of India by utilizing its surplus power potential especially in the hydel sector.

5. Here, I would like to take this opportunity to spell out a few of our concerns. One of the major issues, which are common for many of us in the region with regards to setting up of Transmission lines, is Right of Way (RoW). In a region where each State has different local governance laws, the challenge remains in getting permissions from all stakeholders. Some areas have high population density and in certain cases, the topography of the region can sometimes prove to formidable.

Some of the projects under NERPSIP in Meghalaya are delayed because of this. I, therefore, would request the forum to raise this issue to find ways and means to expedite the approval of our projects as early as possible.

6. As our region is one of the six most seismically-active regions in the world, we often encounter many geological issues such as slope failure while implementing our hydro power projects. These geological surprises faced during construction often lead to time and cost overruns for our projects which increases our overall capital expenditure. Another issue that confronts implementation of power projects is non-availability of land in our region. Sometimes there are multiple claimants to the same land which result in long delays. We appreciate the efforts of the Government of India for passing several policies such as The National Resettlement and Rehabilitation Policy to ensure transparent and fair compensation and rehabilitation for those displaced due to the development of hydropower projects. On the same note, we are also thankful to the Government of India for taking up hydro Purchase Obligation in the proposed amendment to the Electricity Act. This will go a long way in further providing viability to Hydro Power Projects.

7. Another major concern for the Electricity Network is reliable communication. It is necessary that Govt. of India extend its full support to this sector at 100% grant funding so that telemetry's availability can be achieved as per CERC's guidelines. Commercial use of our OFC network in the region is very limited and the fact that we have to share 50% of the costs is a great deterrent for states like Meghalaya which is cash-strapped and landlocked. Because of this unfavourable sanctioning ratio, we are unable to accept schemes and this has weakened our telemetry system which directly affects the smooth functioning of the Power transmission system.

8. The State of Meghalaya is witnessing an exponential growth in demand for power. We have ensured that the industrial tariff is amongst the lowest in the region at Rs 4.9/unit which would give a boost to industrial activity. To increase power generation Meghalaya, MePGCL intends to further harness

the available hydro-electric potential in the state. Presently, one project is under construction viz. Ganol SHP (3X7.5MW = 22.5 MW) and another project i.e., Riangdo SHP (2X1.5 = 3 MW) is under the pipeline. The total capacity addition, once these projects are commissioned, will increase the total installed capacity for MePGCL from 356.20MW to 381.70 MW. Small Hydro Projects totalling 80.7 MW are being surveyed and funds are being sought from MNRE. Notable recent proposals for Survey and Investigation are Umngot HEP Stage-I (2X70MW), Myntdu-Leshka Stage-II (3X70MW), Selim HEP Stage-I (2X 85 MW) and Mawblei HEP (2 X 7.5MW).

9. We thank the Government of India for sanctioning SAMAST for Meghalaya, which was approved by myself as Chairman, NERPC. It is understood that works for the same will commence soon. As value addition to the project and to reduce the Power Purchase Cost for the state, Meghalaya is planning to award Energy Portfolio Management software which will complement the SAMAST project.

10. There is also renewed focus on Renovation, Modernization and Up-gradation of existing hydro power stations in Meghalaya. At present, the State Government is vigorously pursuing the Renovation and Modernization of Umiam Stage-III Power Station (2X30MW) which was commissioned in the year 1979. Preliminary studies for exploring the possibility of undertaking Renovation and Modernization of Umtru power Station (4X2.8MW) which was commissioned in the year 1957 is also being pursued through external funding.

11. The Government of Meghalaya has also envisaged development of Solar Power parks in the state. At present, the development of two Solar Parks of 10MW capacity each is being taken up by the State at Suchen and Thamar village in the East and West Jaintia Hills District respectively totalling 20MW. Further, Roof Top Solar (70MW) under “rent a roof model” for residential buildings with Net Metering is being implemented.

12. As per the new RPO guidelines Large hydropower projects with capacity >25MW and commissioned after 08.03.2019 shall be considered as RPO

under the non-solar RPO category. This is a welcome step and will benefit my State and other North Eastern States in view of the commissioning of Pare HEP and Kameng HEP as well as upcoming projects. Further since free power is now being considered under RPO the states where the Hydro Electric Projects (HEP) are located will be immensely benefitted. Since, hydro power imported from outside India will not be considered as RPO, I urge the North-Eastern states to avail allocation from all Hydro projects in the region.

13. Power Transmission sector in Meghalaya is being strengthened and expanded through various schemes, including North Eastern Region Power System Improvement Project (NERPSIP). Several proposals, including 100% funding from PSDF for reliable communication & data acquisition, re-conductoring of old lines with HTLS conductor, requirement of OPGW for Line Differential Protection; SAMAST implementation; LILO of 132 KV Khalipara-Umtru double circuit line at Killing sub-station; LILO of 400KV line at Mynkre and New Shillong along with 400/220/132KV Sub-stations, operationalisation of 132 KV Khandong-Kopili-Misa connectivity for Meghalaya, 100% funding of the Bus bar Reactor at Byrnihat against the shortfall amount etc, have been included.

    Re-conductoring of the 132KV Khliehrat-Panchgram line is being proposed for funding and an MOU is being signed between Assam and Meghalaya for implementation by MePTCL. It is hoped that funding for this work is expedited as the completion of the HTLS re-conductoring work will greatly benefit both Assam and Meghalaya.

    The 132KV connectivity between Ampati in Meghalaya and Hatsingimari in Assam will provide power stability in the area and also serve as an alternate source for Tura in West Garo Hills which, till now, is solely dependent on power from Nangalbibra Grid Substation.

14. The TCC would have discussed the implementation of the 220 KV Line from Bongaigaon to Nangalbibra at length and the 220 KV portion from Nangalbibra to Mawngap. We envision the construction of a 220 KV line (to be

upgraded to 400 KV in future) from Mynkre in Jaintia Hills to Ichamati to Sohra and then to Nongalbibra in Garo Hills to connect with the said line from bongaigaon to Nongalbibra. This section of the line will automatically form a South Assam-South Meghalaya-Lower Assam Transmission corridor which will not only provide stability to Meghalaya but also to Assam and the entire NER Grid as a wholw. Besides, line loss will greatly reduce with the implementation of this corridor. Further, the implementation of the 400/220/132 KV Substation in Nangalbibra under ISTS will greatly benefit the region for which Meghalaya shall provide all assistance to the CTU as far as possible.

I would urge the forum to explore new avenues for the evacuation of surplus power from North East to Bangladesh. As Transmission Access Priority for Cross border Trade of electricity is to be determined by CTU, it is proposed that PGCIL drew transmission lines for this purpose through Meghalaya preferably through Sohra Grid Sub-station as it is very near to Sylhet. Further, the Government of Meghalaya has already sanctioned the survey of the 220 KV Sohra-Ichamati line and the work is nearing completion after which, the DPR shall be prepared accordingly. This would enable Meghalaya and other NER states to trade surplus power to Bangladesh and earn additional revenue by providing a transmission corridor to Bangladesh.

Meghalaya's distribution sector being the most critical segment of the entire power supply value chain received a boost from the Govt. of India's assistance through system improvement schemes and electrification schemes, such as DDUGJY, NERPSIP, IPDS and SAUBHAGYA, with the aim of providing 24X7 Power for All. The SAUBHAGYA scheme for the electrification of all households in the entire State is expected for closure this March 2021. The sub-transmission system needs to be upgraded and strengthened for which Meghalaya is presently implementing distribution projects as part of the Meghalaya Power System Improvement Project under funding by ADB.

Meghalaya is aware of the fact that we are not able to commit our full payments towards power purchase dues. But it is hoped that with the availing of the loans to

the tune of Rs. 1,345 crore under the Atmanirbhar Bharat scheme, we may be able to leverage the funds to substantially alleviate the financial situation of CPSUs. However, it is requested that the generating units do consider liquidation of the Energy Charges so that additional levy of surcharge is reduced. As you are all aware, the PFC and REC loans under the scheme come with an interest burden on the utility.

In conclusion, looking at the acute financial situation we are in, I request the Committee to endorse our proposals for the interest of the power sector in Meghalaya and the region especially, with respect to transmission system capacity and reliability in the region. I would also request the Government of India to fast-track the clearance process for new proposed power projects. Furthermore, I also propose that this Committee endorse our proposal to review the funding norm under PSDF, to facilitate expeditious execution of PSDF schemes.

I once again thank you and look forward to a meaningful discussion to benefit Meghalaya as well as the other States of the NER.

THANK YOU

ANNEXURE-VII

WELCOME SPEECH BY SHRI BOLA RAJA
HON'BLE ADVISER (POWER) GOVT. OF ARUNACHAL PRADESH
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE
HELD ON 04th FEBRUARY 2021 AT KOHIMA

Hon'ble Chairman NERPC- the Chief Minister, in charge minister Power, Government of Nagaland, most respected Ministers of Power of all the NE States, who are here as the Members, Member Secretary, all the delegates of all the constituents, Ladies and Gentlemen.

At the outset I wish to begin with greetings to everyone gathered here a very Happy New Year.

I am privileged to attend the 21st North Eastern Regional Power Committee Meeting here in picturesque city of Kohima- the Capital City of Nagaland. It is my privilege to represent my state and first opportunity to be in this August forum. I thank the Government of Arunachal Pradesh for this opportunity and North Eastern Regional Power Committee for organizing this meeting here. I also thank Department of Power, Government of Nagaland for their magnanimity of hosting this event.

Let me start my deliberation with a happy note to Congratulate NEEPCO for successfully commissioning 3rd Unit of 600 MW Kameng Hydro Electric project by declaring the Date of Commercial Operation (COD) at 0000 hrs of 22nd January 2021 and for completion of successful 1st time synchronization of the 4th Unit. I with all the best to NEEPCO and request them for early completion of trial operation of the 4th Unit and declare COD at the earliest.

Arunachal Pradesh is the largest State in the region geographically. However, it has one of the smallest powers System in the Region. Having said so, I don't deny that Arunachal Pradesh has its own stride of developments in the power sector and its contribution to the regional benefits in its own way and pace.

Arunachal Pradesh has boundless natural endowments like enormous hydro power potential reserves which can make the North East a game changer in power sector industry in the country. Such natural gift to the region is an opportunity for all of us to become the highest hydro power producer not only in India but also in the international electricity market as well.

I believe and have faith in this august forum of NERPC that it will have pragmatic and futuristic policy approach to help each state of the region to achieve its goal and make NER capable of writing its own success stories in the Power sector at local and global Electricity market. Let us endeavour to write our own rather than reading others success stories. In this effort, we are committed to give in all possible efforts.

Inter-State/Intra-State Connectivity for Reliability:

Reliability of Grid in my State is a persistent issue because of its long radial feeder starting from RHEP (Ranganadi hydro Electric project) to Namsai. This singly feeder caters to the power needs of more than 50% of the State. Therefore, Arunachal Pradesh had been raising and demanding for more inter connections with the NER (North East Region) Grid so that the log radial feeder is broken down to smaller Ring feeders.

Arunachal Pradesh is eager to end the radial transmission system for once and all to increase the reliability of our system at the earliest possible by making suitable interconnections with regional and neighbouring transmission systems.

I am happy and thankful to this Forum and MoP GoI for approving 220KV DC Kathaalguri-Namsai and 132 KV Roing-Chapakhowa transmission lines. I believe the forum must have discussed the matter and found ways to expedite implementation and early commissioning. Aruanchal being a Hydro rich State, such interconnections would be beneficial to other constituent member states and would become an indispensable part of the system at the times of Grid contingencies and shutdown planning would also like to continue to impress this forum for more such interconnections for which I request NEPRPC and other members to support us. We

had been proposing the following interconnections in the last few years which I appeal the forum to consider. I believe these proposals will also be of interest to other member States, especially the State of Assam. The forum is also requested to draw a timeline for faster implementation to bring the benefit at the earliest to all.

a) **Chapakhowa-Roing132 KV Line:** it is learned that the work is under POWERGRID. A status report and timeline if communicated to my Government shall be appreciated. To complete this, I am made to understand that Rupai-Chapakhowa needs completion earlier or together with Chapakhowa-Roing line. The Status update of Rupai-Namsai shall be appreciated and would helpful in monitoring the progress by this forum.

b) **Kathalguri-Namsai 220 KV DC Line:** Status update of this project is needed to be made from time to time to AP and to this Forum. The Forum is requested to device ways and means to complete the project at the earliest.

c) Providing 132 KV ISTS Inter-Connectivity between Jonai (Assam) to Niglok (AP): Niglok, in East Siang District is about 35 KM from Pasighat and about 10 KM from Jonai. It has an Industrial Growth Centre and a Sainik School. Further, there is an Indian Army Brigade headquarter few kilometres away from Niklog at Rayang. The power requirement has grown and expected to grow exponentially once the Industrial Growth Centre starts functioning in full capacity. Assam shall also greatly benefit from this line.

d) Providing 132 KV SC on DC Inter-Connectivity Transmission line Between Likhabali and Basar (AP): Basar, the District HQ of Lepa Rada District shall be connected with 132 KV line from Daporijo-Aalo 132 KV line. The proposed 132 KV line from Basar to Silapathar via Likhabali would give second interconnection to Basar and Likhabali.

e) Providing 132 KV LILO link to pare- Chimpu Transmission Line to Naharlagun 132 KV S/Station.

Reliable Communication System through 100% funding from PSDF:

Arunachal Pradesh has been trying to install OPGW (Optical Fibre Ground Wire) over its existing transmission system under 'Reliable Communication System Program' under PSDF (Power System Development Fund) funding. However, we are not able to it because of the funding norms of 50:50 ratios on estimated cost. The DOP AP has a DPR of about Rs 33 crore pending with the MOP GOI for which 50% only is admissible as per present norms. In this matter I fully support and go with Meghalaya and Nagaland who had raised the matter in the TCC forum yesterday.

Therefore, I appeal all the members of this forum to come together to strongly urge upon and persuade the Ministry of Power, GoI, to change the funding pattern under PSDF from 50:50 pattern to 100%. AP Grid does not have an inch of OPGW as most of the lines were constructed much before when OPGW technology wasn't easily available in India. Most of the transmission lines either the Transmission line from RHEP to Aalo or from Balipara to Khupi or from Kathalguri to Deomali were constructed by POWERGRID or NEEPCO.

NERPC, being the regional face of the GoI, can therefore lead the forum and play a pivotal role to bring about the change.

Comprehensive Scheme for Development of Transmission and Distribution:

Presently, in Arunachal Pradesh it is the most important Scheme on going in the State in Power Sector. It has been in operation under POWERGRID for the last few years. Due to circumstances, the scheme has passed it timeline of completion. Because of time over run, the Scheme had to be revised to double the original cost at Rs 6501.08 Crore from its original estimated cost of Rs 3199.45 Crore. I request the forum to use its office to impress upon the GOI to accord early Sanction of the revised DPR. Here, I could like to make a point to request the POWERGRID to design and plan the packaging of Tenders so that development of the Assets so created comes up in an equitable, balanced and optimum manner so that no completed parts of assets remain idle due to incompletion of upstream or downstream works. I am made to understand that, in the present scenario, the development of asset seems not to be in balanced and optimum way; for instances

like the situation where progress of Transmission lines does not commensurate with the progress of targeted Sub-Station or vice versa. Such situation may also exist in 33 KV systems as well.

Outbreak of Covid-19 and its impact:

It has been a great concern to entire mankind that the outbreak of the pandemic had put all human activities to grinding halt. That way it had put the developmental works on complete halt all over the world including India and our region of North East. Our Region being, due to various aspects from Geopolitical, topographical, demographical an ethnographical circumstances, different from rest of the regions of the country, impact of such Pandemic has been huge. Regaining the momentum we had prior to outbreak Covid-19, has been very difficult and achieving targets by 31st of March 2021 would be a task for many of us won't be able to fathom. Therefore, I request the forum to draw a resolution and convey to the Ministry of power, GOI, to look at the delays of projects funded by Centre with lenient perspective and help the region to fully recover from all sorts of shocks subjected to us by the pandemic. I hope every member in this forum will agree with me.

Tawang – Bhutan International connectivity:

The proposed 132 KV transmission line from khuppi to Tawang would become a long radial line terminating in the district. Such a long radial line is a huge concern from the point of reliability causing serious Operational challenges and issues. Tawang, one of the most beautiful tourist destinations of the region, would very likely suffer due to low reliability, if left alone in a radial feeder configuration. The situation would get aggravated by treacherous path the system would pass though via difficult terrain and the snow cladded Sela pass.

Therefore, to overcome this bottleneck, I would like to propose establishment of a suitable transmission line between Tawang (India) and Bhutan. 600 MW Kholongchu hydro power stations in Bhutan is away from India by few tens of Kilometres. Such a connectivity, apart from improving the reliability of the grid, it will increase heart to heart connectivity among the people of both the countries in the process of bilateral exchange of energy in time of needs and also shall enhance

old age traditional bilateral relationship with Bhutan. This will also make our state more visible in the International Electricity Market and Regional International political Scenario.

Therefore, I would like to reiterate this issue again in this 21st NERPC meeting. This issue was raised by us in 19th and 20th NERPC meetings in the past.

I propose the planners and the stake holders present here, specially the NERPC, to carry out a feasibility study on the issue and come out with a tangible policy decision as per norms associated with international exchange of Electricity. I believe the members of this Regional Committee will support this idea and help it make to a pragmatic initiative.

With these words, I thank you all for giving me this opportunity to be here in this great forum. I am proud to say that my State is a beautiful on and would like to extend my invitation to visit us. We will be happy host you any time.

JAI HIND

ANNEXURE-VIII

SPEECH OF SHRI NEIPHIU RIO
CHAIRMAN, NERPC
&
HON'BLE CHIEF MINISTER, GOVT. OF NAGALAND
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE
HELD ON 04th FEBRUARY, 2021 AT KOHIMA

My Dear Colleagues, Ministers from North-Eastern States, Officials of the Central and State Governments, Officials from other Central and State Governments, Officials from other Central and State Power Utilities, Distinguished Guests, Special invitees, Ladies and Gentlemen.

It is a matter of great joy for the State of Nagaland to host the 21st NERPC meeting here today in Kohima, Nagaland. After a prolonged lockdown during 2020 and practically suspension of all important offline gatherings and meetings such as today, it is indeed our privilege to have all of you here and we warmly welcome each and everyone of you.

The North Eastern region of India is a region bound together by history and circumstances. We have similar problems and challenges. Insurgency over the past several decades has hampered progress and along with this, poor connectivity with the mainland, difficult mountainous terrain and heavy and destructive monsoons continue to slow down our efforts towards developments. It may also be noted that most part of North Eastern region were carved out of political turmoil, social geography and ethnic consideration and till date actual infrastructural development is yet to take place. For decades, only few and little infrastructure could be created at high cost in North Eastern Region as governance was focused mainly on handling law and order problems. But today our North Eastern Region is peaceful, our youths are progressive and therefore all North Eastern States should join hands to ask the Government of India to provide additional financial assistance to narrow down the developmental gaps that exists in comparison with the mainland. It is felt

that the benefits of a growing economy of the Country should be shared with the small and underdeveloped States of North Eastern Region and I feel India as a Country can truly be called a developed Country only when North Eastern Region prosper in every way.

Power sector is no doubt one of the most complicated sectors, where there is a need to use collective wisdom to strike a proper balance between commercial needs and social obligations. Herein we find that NERPC is the most appropriate Forum to discuss all such pertinent issues facing the power sector in the North Eastern Region. There is a need to collectively try and bring about some consensus on the various complicated issues and we should also use this Forum to collectively present our common views and issues to the Govt of India, in the interest of all constituents.

We are all aware that the last Meeting of NERPC was held on 12th September 2019 and as soon as I took over the reins as the Chairman of the NERPC, I had expressed my sincere intention of holding the meeting sometime in April 2020. However, because of the CoVID-19 pandemic situation, in the interest of all, we had not convened the meeting. It is learnt that in the last meeting, many important issues had been discussed and collective decisions on power sector were taken in the common interest of the North Eastern Region. Well, on this occasion of the 21st North East Regional Power Committee (NERPC) meeting, I hope that we will be able to address and resolve many more issues in the same spirit.

I am aware that the NERPC has always been relentlessly striving towards making the NER power system operations more reliable, efficient and economically viable and I look with great hope and expectations towards a positive outcome from today's discussions and deliberations. I am made to understand that the 21st Technical Co-ordination Committee (TCC) Session was held yesterday and I am sure that many operational and technical issues were resolved and the TCC must have also discussed elaborately on how the power sector and the power system in the NE Region can be taken forward in a progressive manner for approval and further recommendations of the RPC.

On behalf of the North Eastern States, I would like to place on record my sincere gratitude to the Government of India for the continued and constant support to the North Eastern Region especially in regard to the Power sector. Implementation of World Bank funded project like NERPSIP (North East Region Power System Improvement Project) is undertaken by the POWERGRID through the initiative of Ministry of Power, GoI was one such programme which is going to benefit all the North Eastern States immensely. Through this project, the much-needed construction of Transmission lines and Sub-stations are presently in progress in many places and I also take this opportunity to urge upon the POWERGRID, the Implementing Agency, to speed up the work as the Tranche-I of the NERPSIP is already running behind timeline of completion schedule and unless it is expedited the sanction and implementation of Tranche-II will be delayed.

It is a matter of concern that during the 20th NERPC meeting, the issue regarding 100% funding under PSDF funding for NE as against the existing guidelines of 50% funding support for "Reliable Communication" was discussed thoroughly and recommended to the Ministry of Power, Govt. Of India. However, till date, no progress in this regard has taken place. Therefore, I propose that a resolution in this regard be taken today to once again impress upon the Ministry of Power for consideration. In this regard, I request all the Power Ministers of the Region to take serious note of this matter and join me to pursue the issue.

It may please be opted that timely payment of dues and outstanding bills to the CPSUs, like NEEPCO, PGCIL, NTPC and other Generating companies is also a matter to be taken seriously be the Distribution Companies (DISCOMS) and State Governments. We all should acknowledge that buying and selling as well as timely settlement of dyes are the basic requirement for running any business foe sustainability. We also understand that many of our DISCOMS are in a financial distress as the gap between the cost of supply and realization is increasing due to which the Distribution utilities are over burdened with accumulated outstanding dues. On this contentious issue, we all can see that the late payment surcharge is a huge component of the debt which otherwise is actually not a part of the tariff but a commercial obligation. I would therefore, suggest that a compromised arrangement

be worked out suiting all stakeholders in the form of freezing the Late Payment surcharge and apply the securitization principle of the year 2002 on the same issue.

I also take this opportunity to thank Govt. Of India for funding and implementation of various Inter State Transmission Lines in the region. However, to optimize the benefit to the fullest, the downstream connectivity considerations should also be planned & considered accordingly during conceptualization itself by all concerned especially the Central Electricity Authority during the project appraisal.

We all know that most of the power projects in NE Region are hydro based and due to the geological uncertainties, commissioning of hydro projects are being delayed because of which the tariff are comparatively higher. Nevertheless, since Hydro projects are the most potential area of power generation, I request the executing agencies to take up the challenge and put up all efforts for timely commissioning of the projects.

Taking this opportunity, I would also like to share a few points on the Power Scenario in Nagaland:

1. As mentioned above, Reliable Communication is a crucial factor for both System and Market operation in power sector. However, the 66 kV systems in Nagaland which is about 60% of our Intra-State Transmission system have been left out in various central schemes and for this reason, we are unable to effectively manage our Intra-State Transmission system. We have submitted a detailed proposal for Reliable Communication of 66 kV systems in Nagaland to NERPC recently to address this issue. I request this forum to recommend the proposal to the Ministry of Power (MOP) for funding of the project under PSDF as a special dispensation.

2. We have recently come across the concept of OPEX model of funding in power sector by the Centre, where the infrastructure can be funded by private investors or manufactures as the case may be, and the recipient state shall pay a fee for a fixed number of years to the private investor. This concept may look good at face value, where market principles shall apply. However, this

ignores the fact that Nagaland and other NE States were decades late in accessing proper funding from the Centre for infrastructure funding. Therefore, the OPEX model of funding for the NE States context may be studied properly at this stage.

On behalf of NERPC, I once again extend my heartiest greetings to all the participants and look forward to very meaningful and successful deliberations.

THANK YOU VERY MUCH

ANNEXURE-IX

SPEECH OF SHRI THONGAM BISWAJIT SINGH
HON'BLE POWER MINISTER, GOVT. OF MEGHALAYA
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE
HELD ON 04TH FEBRUARY, 2021 AT KOHIMA

Hon'ble Chairman of NERPC, my Colleagues from other North Eastern States, NERPC Members, officials of Central and States Government as well as other Central and State organizations, ladies and gentlemen.

It is a great privilege for me to be among you in this august gathering on the occasion of the 21st NERPC meeting. I express my sincere thanks to the organizers for bringing us together to exchange our views to sort out specific problems and issues of the region. I am sure the deliberations on various issues will be helpful in solving the difficulties encountered while improving infrastructure, strengthening transmission and sub-transmission systems, vitalising communication networks, maintaining NER Grid Security and problems of evacuation from generation projects and power supply management. In other words, the deliberations made here would help in removing the hurdles faced in supplying electricity to the consumers in the region.

At the outset I am happy to inform that 400 kV sub-station at Thoubal, the first of its kind under State Sector in my state, is now complete in all respects. MSPCL is planning to commission it in March, 2021 after carrying out thorough verification of all the technical parameters and conducting pre-commissioning test. Pre-commissioning test of 400kV Thoubal line from PGCI, Yurembam is going on. I wish to thank PGCI for their co-operation. Another important milestone my state has made is in the reduction of AT&C loss from 44.42% in 2015-16 to 22.27% in 2019-20, which is around 100% reduction from the figure of 2015-16.

Manipur depends entirely on Central Sector Generating Stations. The Associated Transmission System (ATS) 400 kV D/C line from Silchar to Imphal is the vital link

for drawing the state's share of power from the Central Sector Generating Stations in the region.

Another inter-state transmission line that plays a very important role in drawing Manipur's share of power from the NE grid is 132 kV Dimapur - Imphal line. This line will serve as an alternative link for drawing power from the NE grid in case of the failure of ATS 400 kV D/C line from Silchar to Imphal.

Expansion of 400 kV network in NER taken up under North Eastern Region Strengthening Scheme (NERSS-VI) is a commendable work.

Extension of 400 kV system to Manipur and Nagaland is done through a 400 kV ring connecting Silchar – Imphal - New Kohima - New Mariani – Misa – Balipara – Rangia – Bongaigaon – Azara –Byrnihat - Silchar along with new 400 kV substation at New Mariani and charging of the New Mariani - Misa line at its rated voltage of 400 kV. This corridor is an alternate for Silchar - Misa line.

My state is now giving fresh impetus to strengthening of the existing transmission system at 132 kV. Some of the old existing transmission and sub-transmission lines with ACSR conductors have already crossed their economic life. At the same time, the capacities of the transmission lines need to be increased to commensurate with the increase in demand of power. Right of Way (ROW) is a big hurdle for construction of new transmission lines. Further, to obtain Forest and Environmental Clearance is a costly affair because of the compensation to be paid and a time-consuming process. The only available option to overcome the problems of finding ROW and getting Forest and Environmental Clearance is to replace to old ACSR conductors of the existing transmission and sub-transmission lines with HTLS conductor.

Since conductors of all the old 132 kV transmissions lines with ACSR conductors cannot be replaced with suitable HTLS conductors at one go because of the cost factor, MSPCL is planning to take up the work in three phases according to priority of the lines. We seek your co-operation in fulfilling our dream of replacing ACSR conductors with suitable HTLS conductors.

As we all know proper accounting of energy transactions has become very important since every state is drawing energy from the grid. For this purpose my state has prepared a scheme for implementation of SAMAST (Scheduling, Metering, Accounting and Settlement of Transactions) and submitted a proposal for funding under PSDF. Other states of the region have also submitted similar schemes. Till date only the proposals of Assam and Meghalaya have been approved by MOP.

MSPCL has complied with all the inputs and queries sought by TESG (Techno-Economic Sub Group) and NERPC. It will go a long way towards proper accounting of energy transaction if TESG clears the proposal without further delay.

Since all the transmission networks are now connected to the grid, it is pertinent to monitor data in real-time to keep the system healthy. Depending on the quality of power (frequency and voltage), the demand of power needs to be segregated very fast from time to time. This will be possible only when Automated Demand Management Scheme (ADMS) is implemented. MSPCL has successfully completed installation of ADMS pilot project at four power Substations. MSPCL is also planning to implement ADMS in another 19 nos. of 33 kV Sub-stations.

With the approval of the proposal for implementation of ADMS in the additional 19 nos. of 33 kV Substations with possible funding from PSDF or other funding Agencies, MSPCL will be able to smoothly manage the demand in the state.

My state has electrified 1.04 lakh households comprising of APL and poor families through Grid and 3,380 households through Off-Grid. Consumers in the BPL category have been badly hit by the Covid-19 pandemic. It in turn has resulted in very poor revenue collection and accumulation of huge outstanding dues to be paid to the Central Generating Stations and transmission Companies. Other states in the region might also have faced the same problem. I understand that like in my state most of the consumers in all the NE States are poor domestic consumers. If the recent 'Atmanirbhar Bharat Abhiyan' loan for payment of power purchase dues of the Central Generating Stations is converted to grant as a special case foe the NE States a huge burden would be removed.

Allow me to reiterate. Since Manipur depends entirely on Central Sector Generating Stations keeping Inter-State transmission lines healthy is a must. I request all the member states and entities looking after generation and transmission of power to extend their cooperation to keep the supply of power in the region trouble free.

I do hope that all the on-going works relating to transmission of power and communication networks in the region under different schemes are completed in time and the new works are taken up as early as possible to minimise the problems in supply of power and communication.

With these few words I extend my warm wishes to all participants here.

Jai Hind!

ANNEXURE-X

KEYNOTE ADDRESS OF SHRI A.K. THAKUR, IES (CPES)
MEMBER SECRETARY, NERPC
ON THE OCCASION OF THE 21ST MEETING OF THE
N. E. REGIONAL POWER COMMITTEE

Hon'ble Chief Minister, Govt. of Nagaland & Chairman, NERPC, Hon'ble Dy. Chief Minister, Govt. of Tripura Shri Dev Varma Ji, Hon'ble Power Minister, Govt. of Meghalaya, Shri Sangma Ji, Hon'ble Adviser (Power), Govt. of Arunachal Pradesh, Sh. Raja Ji, Hon'ble Adviser (Power), Govt. of Nagaland, Shri Ayemi Ji, TCC Chairman & Engineer-in-Chief, Dept. of Power, Govt. of Nagaland Shri Sema Ji, Principal Secretaries, Commissioners & Secretary Power of NER States, CMDs, MDs of States & Central Utilities, and all the Senior officers from NE States, Central Utilities, Special Invitees, ladies and gentlemen.

On behalf of NERPC Secretariat, let me first extend a very warm welcome to all the participants from all the utilities to the 21st NERPC meeting. I would also like to express my humble gratitude to all of you for sparing your valuable time to attend this very important NERPC meeting today. As you know, 21st NERPC meeting was initially planned on 15.01.2021 but due to unavoidable circumstances, the same was postponed to this date i.e. 04.02.2021 and inconvenience caused due to the change of date is deeply regretted. Today we assembled here in this beautiful city of Kohima in Nagaland which is known as the land of the brave hearts, the fighters and especially the big-hearted people and I hope you have a pleasant stay. I am pleased to inform the house that all the delegates from all State & Central Utilities are present today and this shows our sincerity towards improvement of power sector in our region and I hope many important decisions will be taken today which will benefit N.E. Region.

It gives me great pleasure in appreciating the efforts taken by Department of Power, Govt. of Nagaland in hosting the 21st TCC & NERPC Meetings. I, on behalf of NERPC would like to convey our heartfelt gratitude to Shri Shikato Sema Ji, TCC Chairman and especially his team for helping NERPC in convening the meeting in

very short notice. The way you have taken care of us and making comfortable arrangement is highly appreciated by all of us.

Since time is very short, I will not prolong my address, but I would like to highlight the major activities/achievements of NERPC during the last few months.

- To comply with the black out of July, 2012 and the recommendations of Task Force, a Protection Database Management System (PDMS) was envisaged in the country. NERPC with its sincere efforts had commissioned and declared Go Live this project on 14th February, 2020 under the guidance of Ex. Chairman, NERPC, Shri James Sangma Ji. PDMS project is a web-based Protection Database Management System and Protection Setting Calculation Tool (PSCT) which is meant for entire North Eastern Region and with the commissioning of this project; NER can now not only analyze the root causes of every incidences but the complete data for protection is in safe hand. Also, I would like to highlight that the time frame as per the contract was 18 months, but the project was successfully commissioned in 14 months. Training is being done by the executing agency to almost all the NER States and I humbly request all Power Engineers in the region to utilize this asset to the full. Further, observing the benefit of this scheme many utilities of NER have requested NERPC to get the additional licenses sanctioned from PSDF which is being put up for approval in the meeting today.

- In the 5th Forum of Regulators (FOR) Technical Committee meeting in July, 2016 it was decided that a robust mechanism known as SAMAST should be in place in all the States across the Country. The implementation would include Metering at intra-State level, AMR scheme to fetch data to SLDC, intra-State scheduling, Open Access web portal, Accounting, Settlement system etc. This would pave way for intra-State ABT implementation. To comply with above decision; NERPC has taken up the initiative and the necessity was felt by NER States that instead of separate tendering by each state a common tender document may be prepared with the participation from all the NER States so that there should be uniformity for all. This approach of NERPC was not only appreciated by Hon'ble CERC but also by other stakeholders. On the first phase the SAMAST scheme has been

approved by Ministry of Power, Govt. of India only for Assam & Meghalaya. But I want to inform the house that the budget earmarked was too meagre and we have almost lost hope if the project will kick start at all. But with sincere efforts by my team especially Sh. Lyngkhoi & Sh. Srijit Mukherjee the agencies have agreed to come down from their quoted price to fit into the sanction budget. The LoAs have already been issued under the guidance of Hon'ble Chairman, NERPC & Chief Minister, Govt. of Nagaland. This is one of the biggest achievement for the region. Also, I want to highlight that with sincere persuasion from NERPC, the scheme for the remaining 5 (five) States of NER is in the final stage of approval by Ministry of Power, Govt. of India and soon the NIT will be floated by NERPC.

- Another feather for the region is the Implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER in which the overall power supply scenario including scheduling and dispatch could now be monitored in cognizance with Indian Electricity Grid Code, 2010 with respect to real time availability of power to avoid Grid failures. Hence with sincere efforts and dedication, NERPC as directed by 19th NERPC, has called a common tender on behalf of NER States and you would be surprised that the award value was only 8 Crores against the sanctioned amount of Rs. 16 Crores which has optimized the Govt.'s fund. Also, I would also like to mention that the time frame as per the contract was 18 months, but the project was successfully commissioned well before the commissioning schedule in all the NER States.

  Hence, I would like to request the august house that whenever the project of similar nature involving more than two to three States in the region, NERPC Secretariat may be utilized with sincere participation from the concerned utilities for the benefit of cost optimization and timely completion of the projects.

With sincere efforts and dedications; the following major elements were added to NER Grid since last NERPC Meeting and this in turn has enhanced the drawing capacity as well as relieved the congestions of NER Grid.

- 315 MVA ICT-I at BgTPP – charged on 23.01.2020
- 160 MVA ICT I at Balipara(PG) – charged on 31.03.2020
- 160 MVA ICT at Samaguri – charged on 12.06.2020
- 80 MVAR Bus Reactor 2 at Misa – charged on 26.06.2020
- 125 MVAR Bus Reactor at Imphal (PG) S/s –charged on 28.06.2020
- 400kV Imphal-New Kohima Ckt#I & II – charged on 11.11.2020 & 14.11.2020 respectively.
- 400kV New Kohima – New Mariani D/C – charged on 08.12.2020
- 400kV Surajmani Nagar-P.K.Bari Ckt-II & I – charged on 17.01.2021 & 21.01.2021 respectively.
- With sincere efforts and co-ordinations by NERPC with various stakeholders, Kameng HEP of NEEPCO Unit I was successfully commissioned on 17.06.2020, Kameng Unit -II on 01.07.2020 & Kameng Unit-III on 22.01.2021 and the unit IV is likely to be commissioned shortly and with this, 600 MW capacity is added to NER.
- Commissioning of various transmission elements into the NER grid have enhanced transmission networks to all NER States but in order to reach to the common man, Distribution Network has also to be in place. I would therefore like to draw the attention of the August body that as all wings of power sector are under the ambit of NERPC, the DISCOMS should also sent the officers in various Sub-Committee Meetings of NERPC so that the distribution related issues may be discussed and resolved so that various ongoing schemes viz. NERPSIP, Comprehensive Schemes, SAUBHAGHAY Schemes etc., are completed without any further delay for the benefit of NER.
- Communication & Telemetry is one of the most important issues which the region is still lacking as per all India level. But here also NERPC has taken a lead and by July, 2021 when all the NERFO & Upgradation projects are completed, this issue will also be resolved.
- Besides these there were so many goals achieved during the last few months which I cannot mention all of them due to paucity of time.

- Finally, my sincere request is that all the constituents should try earnestly to liquidate their outstanding dues to the concerned agencies so that both the parties can grow together. Unless financial transactions are happening and dues are cleared, it would be difficult to survive as utilities.

Before I conclude I would also like to mention that PSDF fund is 100% grant given by Govt. of India and I would humbly request that we should avail it at the earliest by expediting the PSDF projects before the funds get depleted.

On behalf of NERPC, I once again extend my heartiest greetings to all the participants and look forward to meaningful deliberation.

I once again thank Dept. of Power, Govt. of Nagaland for hosting this meeting in a very Grand way and wish the plenary a grand success.

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Annexure-B.07

1. AGOMONI SUBSTATION :

Sl No.	As per Approved DPR *(CEA letter No. CEA-PS-12-16/13/2018-PSPA-II Division dtd 11.01.2019)*			Revised Proposal			Justification for the change proposal
	Scope of work	Route Length (KM)	Type of Conductor	Scope of work	Route Length (KM)	Type of Conductor	
3	Establishment of new 220/132 kV (2 X 160 MVA) and 132/33 kV (2 X 50 MVA) GIS Substation at Agamoni			Establishment of new 220/132 kV (2 X 160 MVA) AIS at Gossaigaon instead of Agomoni			i. <u>Availability of Land</u>: At 132/33kV, 2x16MVA Gossaigaon Grid substation of AEGCL, about 0.33 acre (1338 sq metre) of AEGCL's owned unutilised land is available where the new 220/132kV Gossaigaon GIS is proposed to be constructed. ii. <u>Reduction in Route Length:</u> The route length of LILO of both ckt of Alipurduar (PGCIL) - Bongaigaon (PGCIL) D/C line at Agomoni (AEGCL- New) is reduced to 3KM from 25KM , which minimises not only the cost of construction of 220kV LILO but also ROW issues. iii. <u>Necessity of 132kV Substation at Agomoni:</u> The 33kV feeders of APDCL (Distribution Company of Assam) are required for catering the demand at surroundings localities
	220 kV:			220 kV:			
	LILO of both ckt of Alipurduar(PGCIL) - Bongaigaon (PGCIL) D/C line at Agamoni (AEGCL- New)	25 kM	ACSR Zebra	LILO of both ckt of Alipurduar (PGCIL) - Bongaigaon (PGCIL) 220kV D/C line at Gossaigaon (AEGCL- New) with HTLS conductor *(ampacity of single HTLS shall be 1596A, which is equivalent to Twin ACSR Moose conductor for 45ºC ambient and 85ºC maximum conductor temperature)*	3 kM	ACSR Zebra	
	132 kV:			132 kV:			
	LILO of Gossaigaon - Gauripur S/C (AEGCL- Existing) Line at Agamoni (AEGCL- New)	10 kM	HTLS	Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Agamoni			
	Load	16 MW	Load	LILO of Gossaigaon - Gauripur D/C (AEGCL-	10 kM	HTLS	

				Existing) Line at Agamoni (AEGCL- New)			of Agomoni. However, the GIS is converted to AIS as there is sufficient land available for 132kV AIS at Agomoni.
				Load	16 MW	Load	

2. GHUNGUR (Silchar-2) GIS :

Sl No.	As per Approved DPR *(CEA letter No. CEA-PS-12-16/13/2018-PSPA-II Division dtd 11.01.2019)*			Revised Proposal			Justification for the change proposal
	Scope of work	Route Length (KM)	Type of Conductor	Scope of work	Route Length (KM)	Type of Conductor	
9	Establishment of new 132/11 kV (2 X 31.5 MVA) GIS Substation at Ghungur (Silchar-2)			Establishment of new 132/33 kV (2 X 50 MVA) GIS Substation at Ghungur (Silchar-2)			i. <u>Suitability in Power Evacuation at 33kV Level</u>: APDCL has requested AEGCL to change downstream voltage level from 11kV to 33kV, which APDCL will be more suitable in evacuating power from the proposed substation. 33kV sub-transmission line from this proposed substation to various load centres of rural areas will reduce the transmission losses to a great extent.
	132 kV:			132 kV:			
	Ghungur (AEGCL- New) - Silchar (PGCIL)- S/C Line	10 kM	XLPE Armoured Al Cable	Ghungur (AEGCL- New) - Silchar (PGCIL)- D/C Line	10 kM	XLPE Armoured Al Cable	
	Load	20 MW		Load	20 MW		

3. ZOO ROAD GIS :

Sl No.	As per Approved DPR *(CEA letter No. CEA-PS-12-16/13/2018-PSPA-II Division dtd 11.01.2019)*			Revised Proposal			Justification for the change proposal
	Scope of work	Route Length	Type of Conductor	Scope of work	Route Length	Type of Conductor	

		(KM)			(KM)		
11	Establishment of new 132/11 kV (2 X 31.5 MVA) GIS Substation at Zoo Road			Establishment of new 132/33 kV (2 X 50 MVA) GIS Substation at Zoo Road			i. Availability of Land: The land of proposed new 132kV Zoo Road GIS is provided by APDCL free of cost inside their campus of existing 2x10MVA, 33/11kV Zoo Road Substation ii. Suitability in Power Evacuation at 33kV Level: APDCLhas requested AEGCL to change downstream voltage level from 11kV to 33kV, which APDCL will be more suitable in evacuating power from the proposed substation.
	132 kV:			132 kV:			
	Zoo Road (AEGCL-New) – Gauhati Medical College(GMC) (AEGCL-Existing) S/C Line	8 kM	XLPE Armoured Al Cable	Zoo Road (AEGCL-New) – Gauhati Medical College(GMC) (AEGCL-Existing) S/C Line	8 kM	XLPE Armoured Al Cable	
	Load	25 MW		Load	25 MW		

4. CHHAYGAON GIS :

Sl No.	As per Approved DPR *(CEA letter No. CEA-PS-12-16/13/2018-PSPA-II Division dtd 11.01.2019)*			Revised Proposal			Justification for the change proposal
	Scope of work	Route Length (KM)	Type of Conductor	Scope of work	Route Length (KM)	Type of Conductor	
12	Establishment of new 132/33 kV (2 X 50 MVA) GIS Substation at Chhaygaon			Establishment of new 220/33 kV (2 X 100 MVA) GIS Substation at Chhaygaon			i. Availability of Land: The land for construction of new Chhaygaon GIS is finalised at Industrial Growth Centre(IGC), Chhaygaon by AIIDC (Assam Industrial Infrastructure Development Corporation) under Industry Deptt of Govt of Assam. The land is provided by AIIDC in the interest of reliable power supply to their existing and upcoming small scale industries. ii. Catering of Future Load Growth with minimum ROW:
	132 kV:			132 kV:			
	Chhaygaon (AEGCL-New) - Boko (AEGCL-Existing) D/C Line	20 kM	AAAC Panther	LILO of 220kV Agia - Azara line at Chayygaon	3 kM	AAAC Zebra	
	Load	28 MW	Load	Load	28 MW		

							The location is a load centre for many upcoming industries of AIIDC. Setting up of 220/33kV GIS inside AIIDC campus , will minimise RoW issues of drawing 33kV lines from a grid substation located at a far distance. iii. <u>Reduction of Route Length:</u> The proposed 132 kV D/C transmission line of route length of 20km from 220kV Boko substation to feed 132kV Chhaygaon substation as approved in the DPR is replaced by LILO of 220kV Mirza(Azara) – Boko line at 220kV Chhaygaon GIS. This reduces not only the RoW issues of 132kV DC line but also the cost of construction. iv. <u>Non-availability of Space for Bay at Boko GSS:</u> In addition to the above, the survey has revealed that sufficient space is not available for construction of the earlier proposed feeder bays at Boko GSS.

5. NAGAON-2 GIS :

Sl No.	As per Approved DPR *(CEA letter No. CEA-PS-12-16/13/2018-PSPA-II Division dtd 11.01.2019)*			Revised Proposal			Justification for the change proposal
	Scope of work	Route Length (KM)	Type of Conductor	Scope of work	Route Length (KM)	Type of Conductor	

17	Establishment of new 132/33 kV (2 X 50 MVA) GIS Substation at Nagaon-2			Establishment of new 220/33 kV (2 X 100 MVA) GIS Substation at Nagaon-2			i. <u>Availability of Land</u>: The land for construction of new Nagaon - 2 GIS is finalised at Laogaon at Northern part of Nagaon town. The land is provided by APDCL. ii. <u>Reduction of Route Length:</u> The LILO of one circuit of 220kV Samaguri – Jawaharnagar line to this proposed Nagaon -2 GIS is found to be the most suitable instead of 132 kV DC line from 220kV Samaguri substation of route length 41kms. The route of of 220kV LILO is 1km only iii. <u>Minimization of RoW issues:</u> It will also minimise RoW issues of crossing National Highways, Railways and densely populated villages near Nagaon town. iv. <u>Non-availability of Space for Bay at Samaguri GSS:</u> In addition to the above, the survey has revealed that sufficient space is not available for construction of the earlier proposed feeder bays at Samaguri GSS.
	132 kV:			220 kV:			
	132kV Samaguri (AEGCL-Existing) – Nagaon-2 (AEGCL-New) D/C Line	41 kM	AAAC Panther	LILO of one circuit of Samaguri (AEGCL-Existing) –Jawaharnagar (AEGCL-Existing) 220kV D/C Line at Nagaon-2 (AEGCL-New)	1 kM	AAAC Zebra	
	Load	25 MW		Load	25 MW		

6. Bay Extension of 132 bays at Samaguri (2 bays) & Boko (2 bays):

As per Approved DPR		Revised Proposal		Justification for the change proposal
Scope of work	No. of Bays	Scope of work	No. of Bays	

Two nos. of 132kV Line Bays for Boko- Chayygaon D/C Line & Two nos. of 132kV Line Bays for Samaguri-Nagaon-2 D/C Line	4	Two nos. of 132kV Line Bays for Boko- Chayygaon D/C Line & Two nos. of 132kV Line Bays for Samaguri-Nagaon-2 D/C Line	0	This is due to change in location of LILO point as described in Sl Nos. 4, 5 as mentioned above

7. MORIGAON Substation :

Sl No.	As per Approved DPR *(CEA letter No. CEA-PS-12-16/13/2018-PSPA-II Division dtd 11.01.2019)*			Revised Proposal			Justification for the change proposal
	Scope of work	Route Length (KM)	Type of Conductor	Scope of work	Route Length (KM)	Type of Conductor	
16	Establishment of new 132/33 kV (2 X 50 MVA) GIS Substation at Morigaon			Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Morigaon			i. <u>Availability of Land</u>: The land identified for construction of new Morigaon Substation is at a remote location. Thus there is sufficient land available for construction of 132/33kV AIS instead of GIS. ii. <u>Ease in Operations and Maintenance in AIS at Remote Substations:</u> In case of substations at remote locations, AIS is more suitable from operations and maintenance point of view as the power restoration works in case of outages can be done easily with the existing manpower that is more acquainted with AIS system.
	132 kV:			132 kV:			
	132kV Baghjap(AEGCL-Existing) – Morigaon(AEGCL-New) D/C Line	20 kM	AAAC Panther	132kV Baghjap(AEGCL-Existing) – Morigaon(AEGCL-New) D/C Line	20 kM	AAAC Panther	
	Load	15 MW		Load	15 MW		