# SUPPLEMENTARY AGENDA FOR 21ST TCC MEETING

**ITEM NO. 1 : 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 Biswanath Chariali (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 – Dhemaji ckts with S/C LILO at Gogamukh

(6) The rating of ICTs and reactors at Gogamukh shall remain as was proposed earlier.

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 2 : SECOND 400kV CONNECTIVITY FOR KHUMTAI – AEGCL**

A second 400kv connectivity for Khumtai sub-station by 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.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 3** | **:** | **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.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 4** | **:** | **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

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 5** | **:** | **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.

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 6 : 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

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 7 : 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.

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 8 : 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 Bramhaputra.

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 9 : 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.

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO.10 : 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 Bramhaputra 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.

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 11 : CAPACITY AUGMENTATION OF TRANSFORMERS – AEGCL.**

| | AUGMENTATIONS AND EXTENSION OF EXISTING SUBSTATIONS | |
|---|---|---|
| 1 | Sarusajai, 220/132/33kV Substation | New 3x50 MVA, 132/33 kV in place of old 3x31.5 MVA Transformers |
| 2 | Sibsagar, 132/33kV Substation | New 2x50 MVA, 132/33kV in place of old 2x16 MVA Transformers |
| 3 | Sishugram, 132/33kV Substation | New 2x50 MVA, 132/33kV in place of old 2x30 MVA Transformers |
| 4 | Samaguri, 132/33kV Substation | New 2x50 MVA, 132/33kV in place of old 2x25 MVA Transformers |
| 5 | Kukurmara, 220/132 kV Substation | New 2x160 MVA, 220/132kV in place of old 2x50 MVA Transformers |
| 6 | Agia, 132/33 kV Substation | New 1x50 MVA, 132/33kV in place of old 1x12.5 MVA Transformer |
| 7 | Khaloigaon, 132/33 kV Substation | New 2x50 MVA, 132/33kV in place of old 2x25 MVA Transformers |

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 12 : CAPACITY AUGMENTATION OF LINES – AEGCL.**

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

| | CAPACITY AUGMENTATION OF TRANSMISSION LINES (Re-conductoring with HTLS) |
|---|---|
| 1 | Sonabil-Depota 132kV S/C 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 | Kahilipara – Rangia 132kv both circuits with all LILO points &Rangia - Nalbari-Dhaligaon132kv S/C &Dhaligaon – Barnagar- Nathkuchi 132kV S/C |
| 8 | Dhaligaon - Gossaigaon, 132kV S/C Line |
| 9 | Srikona-Pailapool, 132kV S/C Line |

**TCC Deliberation :**

**NERPC Deliberation :**

**ITEM NO. 13 : NEW TRANSMISSION LINES – AEGCL.**

| Sl. No. | Name of Line | Line Length, KM | | | TOTAL CKM |
|---|---|---|---|---|---|
| | | 400 KV | 220KV | 132KV | |
| 1 | LILO of one ckt of 400kV new Mariani ( PGCIL) - Misa ( PGCIL) at Khumtai (AEGCL) | 26 | | | **26** |
| 2 | 220kV DC new Diphu - Mariani ( AEGCL) line | | 140 | | **280** |
| 3 | 220kV DC 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 220kV Rangiya - Salakati ( AEGCL)DC line at New Dhaligaon | | 10 | | **20** |
| 8 | LILO of one ckt of 220kV Rangiya - Salakati ( AEGCL)DC line at Barnagar | | 12 | | **24** |
| 9 | S/C LILO at Ghilamara of 1st ckt of 132kV Nalkata - Dhemaji DC line | | | 20 | **40** |
| 10 | LILO of 132kV Agia - Hatsingimari ( AEGCL) SC line at 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** |

**TCC Deliberation :**

**ITEM NO. 14 : 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 drawal of 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–Kakching line.

Again with the commissioning of 132kV Sub-station at Thoubal, the KongbaKakching 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) ChurachandpurElangkhangpokpi 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.**

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 15 :** | **SOUTH ASSAM-SOUTH MEGHALAYA-LOWER ASSAM TRANSMISSION CORRIDOR – MePTCL.** |
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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 :

(i) **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.

(ii) **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.

(ii) **220** KV **D/C lines (on 400KV towers) from Bongaigoan Sub 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.

(iii) MePGCL has submitted the proposal for construction of the **Myntdu Leshka 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-Byrnihat Azara line (NETC) at **Mynkre sub 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.

(iv) It is proposed that a **400KV D/C line from Mynkre – Ichamati – Sohra – Nangalbibra Sub 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.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 16** | **:** | **N-1 RELIABILITY REQUIREMENT AT SOHRA – MePTCL.** |
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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

NERPCTP."

**MePTCL may please state their proposal.**

**TCC Deliberation :**

**NERPC Deliberation :**

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|---|---|---|
| **ITEM NO. 17** | **:** | **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. i) LILO of Kahilipara – Umtru 132KV D/C lines at Killing S/s.

ii) Reconductoring of Umtru – Kahilipara and Umtru – Sarusajai 132KV D/C line

with HTLS conductor.

The following proposals were also agreed upon :

i) 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.

ii) Construction of 132KV D/C line from Hatsingamari (Assam) to Ampati (MePTCL) as an ISTS line by PGCIL.

**TCC Deliberation :**

**NERPC Deliberation :**

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|---|---|---|
| **ITEM NO. 18** | **:** | **LILO OF 400kV SILCAHR-BYRNIHAT AT MYNKRE AND NEW SHILLONG ALONG WITH UPGRADATION – MePTCL.** |

The 400 KV Silchar-Byrnihat Azara 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 NERPCTP meeting dated 08/11/2020. Meghalaya requested that the construction of lines and sub stations be executed and proposal be agreed by TCC.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 19** | **:** | **EVACUATION OF SURPLUS POWER OF MEGHALAYA – MePTCL.** |
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Evacuation of surplus power of Meghalaya and North East for export to Bangladesh through Meghalaya.

**Meghalaya may please deliberate.**

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 20** | **:** | **INSTALLATION OF 132/33/11kV PT IN ALL POWER STATIONS OF MEGHALAYA – MePGCL.** |
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Power supply arrangement from the grid by installing 132/33/11 KV PT in all the Power Stations of MePGCL.

1) Installation of 5 MVA, 132/33/11 KV Transformer at Stage – I & II Power Stations.
2) Installation of 5 MVA, 132/33/11 KV Transformer at Stage – IV Power Station.
3) 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.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 20** | **:** | **CENTRALIZED GENERATION CONTROL ROOM FOR MONITORING AND CONTROL OF ALL POWER STATIONS – MePGCL.** |
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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 centralised generation control room will be required in order to maintain energy data in computerised 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 maximisation.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 21** | **:** | **UPGRADATION OF EXISTING SCADA SYSTEM OF LESHKA – MePGCL.** |
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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.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 22** | **:** | **UPGRADATION OF CONTROL SYSTEM IN ALL POWER STATIONS – MePGCL.** |
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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.

**TCC Deliberation :**

**NERPC Deliberation :**

| **ITEM NO. 23** | **:** | **RE-ENGINEERING OF EXISTING BUS BAR AT UMIAM STAGE-III – MePGCL.** |
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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.

**TCC Deliberation :**

**NERPC Deliberation :**