

North Eastern Regional Power Committee
Agenda For

181st OCC Sub-Committee Meeting

Time of meeting : 10:30 Hrs.

Date of meeting : 20th August, 2021 (Friday)

Venue : “NERPC Conference Hall”, Shillong.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 180th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 180th meeting of Operation Sub-committee held on 16th July, 2021 at Shillong were circulated vide letter No. NERPC/SE (O)/OCC/2020/3052-3089 dated 03rd August, 2021.

The Sub-committee may confirm the minutes of 180th OCCM of NERPC with suitable amendments as no other comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

B.1. Ensuring reliable power supply and redundancy of power connected to oxygen plants:

In 180th OCCM Director(O&P), NERPC informed that all the SLDCs in NER except DoP, Ar. Pradesh & Meghalaya are submitting the report on regular basis. He requested DoP, Ar. Pradesh & Meghalaya to follow the same in line with other SLDCs in NER.

Members may please discuss.

B.2 Implementation of Projects funded from PSDF:

The status as informed in 180th OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I (Diagnostic tools) Complete in all respects. P-II (for PLCC & communication) 50% of materials received on-site. Payment of 10% in process. P-III (Substation equipment) Price Bid Opening on 27-07-2021 and LoA placed by Jul'21	Work completed in all respects. Final 10% to be disbursed.	-	NIT floated. In bidding stage.	-

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Nagaland	Completed in all respects. 10% requisition to be sent alongwith UC.	Final 10% release in process.	-	NIT floated. In bidding stage.	Lines identified. Under DPR preparation stage.
Mizoram	Completed. 10% remaining claim to be submitted ASAP.	Work completed in all respects. Final 10% to be disbursed.	To reply to TESSG queries.	NIT floated. In bidding stage.	DPR submitted.
Manipur	Package-II: completed Package-I: total quantity of material yet to be received at site	Work completed in all respects. Final 10% to be disbursed.	WIP.	NIT floated. In bidding stage.	DPR sent.**
	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.	60% funds not yet received. CA audit papers sent.	Study results to be submitted alongwith DPR	NIT floated. In bidding stage.	Only single line 132kV 79Tilla to Budhjangn agar. DPR to be prepared.
Assam	LOA issued. WIP, delayed due to COVID situation	60% funds not yet received. CA audit papers sent.	-	LoA issued	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Completed in all respects. MePGCL – completed in all respects.	Project complete in all respects.	-	LoA issued.	WIP. Delayed due to COVID situation

Members may please discuss.

B.3. Non-closure of Circuit Breaker at Mustem end for 132kV Khliehriat-Mustem line:

132 kV Khliehriat-Mustem S/C line had tripped on 2nd, 3rd May'21 and was restored by charging the line bypassing the CB at Mustem end due to non-closure issue of the CB as a temporary measure. Also, 132 kV Mustem-Khliehriat S/C and 132 kV Nehu-Mawlyndep S/C lines tripped on 12th May'21 leading to grid disturbance with a load loss of 26 MW at Mustem and Mawlyndep S/S and yet again the 132 kV Khliehriat- Mustem line was charged bypassing the CB at Mustem end.

MePTCL to expedite the rectification of faulty Circuit Breaker at the earliest for reliable operation & provide the schedule for rectification.

In 180th OCCM EE, SLDC, MePTCL informed that both the CBs for Khliehriat and Mawlyndep at Mustem are faulty at present. The hybrid CBs have been dismantled and sent to OEM. The forum requested NERPC to (i) explore installation of GIS CBs at Mustem from spare of NERTS/other utilities, (ii) make suitable modifications in protection settings for isolation of fault from remote end(s).

The forum also requested NERTS, POWERGRID to check the availability of spare GIS CBs

Members may please discuss.

B.4 Operational Performance and Grid Discipline during July,2021:

NERLDC will present the Operational Performance and Grid Discipline in July'2021.

NERLDC may please deliberate.

B.5 Generation Planning (ongoing and planned outages)

- a. Present per day MU and projected number of days of operation.

Plants	Reservoirs level in meter	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II			0.151	
Kopili			0	Will be "0" until further intimation.
Doyang			0.623	
Loktak			0.39	

The outage of other generating stations may be approved considering the present water levels in reservoirs and long term outage of Kopili HEP.

Members may please discuss.

B.6 Outage Planning Transmission elements

It was agreed in the 99th OCC meeting that shutdown will be availed only after approval is given by the OCC forum. It was also agreed that deferment/revision of outages elements other than already approved in OCC will be henceforth put/displayed in the website of NERPC (under Operational Activities/OCC Approved

shutdown) as per CERC regulations/ CEA guidelines etc for ensuring smooth & secure grid operation.

Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC: Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10th of the month, the shutdown availing agency would reconfirm to NERLDC on 7th of the month by 10:00 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

It was decided in the previous OCCM that shutdown would be granted from the 1st day of the following calendar month to the 30th/31st day of the same month.

Members may please discuss.

B.7 Estimated Transmission Availability Certificate (TAC) for the month of June - July,2021:

NETC and POWERGRID have submitted the outage data for the month of June, July 2021. So, the attributability of outage of the said elements may please be finalized.

Members may please discuss.

B.8 Categorisation of grid elements for outage co-ordination:

Presently for any transmission element outage dates cannot be premediated as it is subject to study outcome. In order to alleviate the schedule concerns involving vendors a contingency based categorization of elements is proposed. The scheme would be presented by NERPC in the meeting.

The 180th OCC forum requested NERPC to present a vis-à-vis study for further clarity on the matter.

Members may please discuss.

B.9 Challenges faced for maintaining reliability of Upper Assam Power System:

In 180th OCC forum it was decided that:

a. AGBPP shall strictly maintain their generation to the reduced level as instructed by NERLDC during any shutdown/outage which results in backing down of generation in Upper Assam grid. AGBPP shall restrain themselves from deviating from their reduced schedules whenever such instruction of backing down is given by NERLDC to ensure security and reliability of Upper Assam Grid. NEEPCO may refer to the comments provided by NERLDC in D-1 approved shutdown list for taking preparatory actions.

b. Concerned APGCL representative(s) would attend the next OCC and SLDC, Assam would apprise them about its importance.

c. Restoration of 220kV Samaguri – Mariani –I and 220kV Mariani – New Mariani would be referred to the next NERPCTP meeting.

Members may please discuss.

B.10 Persistent synchronizing issue at AGBPP:

Issue of synchronizing trolley at 220kV AGBPP S/S was raised in 176th& 177th OCCM. However, the same was dropped as it was deliberated by NEEPCO that the issue has been resolved. But the same issue was again observed on 22-06-2021

while synchronizing 220kV AGBPP-Mariani(AS) line after tripping via NERLDC charging code 4740, the line could not be synchronized at AGBPP S/S. Finally the line was charged from AGBPP end and synchronized at Mariani(AS) end via NERLDC code 4743.

In 180th OCC forum it was decided that in the next synchronization attempt involving any line emanating from AGBPP, the line voltage (rather than 220kV Bus voltage) of either 220kV New Mariani(PG) or 220kV Mariani(AS) whichever is already synchronized would be used as reference for the purpose of synchronization.

Members may please discuss.

AGENDA ITEMS FROM NERLDC

B.11 Intimation regarding switching of important grid elements by Mizoram:

It was observed that on multiple occasions (please refer to the tables below), Mizoram has charged Important grid elements after tripping without prior intimation to NERLDC.

Sl No.	Element Name	Date of Tripping	Time of Tripping (hrs)	Charging attempts without intimation or availing charging code (hrs)
1	132 kV Melriat - Zuangtui	30-07-2021	10:18	10:28
2	132 kV Melriat - Zuangtui	30-07-2021	10:46	11:10
3	132 kV Melriat - Zuangtui	02-08-2021	20:42	20:45
4	132 kV Melriat - Zuangtui	02-08-2021	20:46	20:48

Further, on 24th July, ISTS lines were hand-tripped without prior intimation from the state end. Even after opening of said lines, communication was not received regarding the same, which resulted in the loss of integrity and reliability of the Mizoram system and Blackout at Kolasib S/S. Below are the details of the events:

Sl No.	Element Name	Date of Opening	Time of Tripping (hrs)	Time at which Intimation was received from SLDC Mizoram (hrs)
1	132 kV Aizwal - Kolasib	24-07-2021	11:06	14:33
2	132 kV Aizwal - Kolasib	24-07-2021	20:18	21:25
3	132 kV Badarpur - Kolasib	24-07-2021	20:18	21:25

The above mentioned switchings are not in line with regulation 5.2. (c) of IEGC 2010, which states that “No important element of the National/Regional grid shall be deliberately opened or removed from service at any time, except when specifically instructed by RLDC or with specific and prior clearance of RLDC”; regulation 5.2. (d) of IEGC 2010, which states that “Any tripping, whether manual or automatic, of any of the elements included in the list of important elements of Regional grid shall be

precisely intimated by the concerned SLDC /CTU/ USER to RLDC as soon as possible” and also clause 11.2 of NER Operating Procedure, which states that “The regional entities, users, STU, CTU, licensee shall obtain ‘operating code’ from NERLDC before carrying out any switching operation on any of the important elements of the NER power system”.

NERLDC may please deliberate.

B.12 Persisting SF6 leakage at Byrnihat(Killing):

It has been observed that multiple times ESD was availed at Byrnihat S/S for the same elements for SF6 refilling (please refer to the table below).

Sl No.	Element Name	Date of availing E/S/D	Time of ESD (hrs)	Reason for availing S/D on Emergency basis
1	220KV/132KV BYRNIHAT (KILLING) -ICT-2	14-01-2021	13:38	For topping up of low SF6 gas in the LV side CB
2	220KV/132KV BYRNIHAT (KILLING) -ICT-2	14-03-2021	12:39	For topping up of low SF6 gas in the LV side CB
3	220KV/132KV BYRNIHAT (KILLING) -ICT-2	24-04-2021	11:36	For topping up of low SF6 gas in the LV side CB
4	220KV/132KV BYRNIHAT (KILLING) -ICT-2	17-05-2021	14:29	For topping up of low SF6 gas in the LV side CB
5	220KV/132KV BYRNIHAT (KILLING) -ICT-2	13-06-2021	16:35	For topping up of low SF6 gas in the LV side CB of the ICT
6	220KV/132KV BYRNIHAT (KILLING) -ICT-2	04-07-2021	15:36	For topping up of low SF6 gas in the LV side CB of the ICT
7	220KV/132KV BYRNIHAT (KILLING) -ICT-2	02-08-2021	12:17	For topping up of low SF6 gas in the LV side CB of the ICT

Sl No.	Element Name	Date of availing E/S/D	Time of ESD (hrs)	Reason for availing S/D on Emergency basis
1	400KV-BONGAIGAON-BYRNIHAT (KILLING)	19-02-2021	12:48	Low SF6 gas pressure in Y-phase
2	400KV-BONGAIGAON-BYRNIHAT (KILLING)	27-03-2021	11:06	Top up the low SF6 gas pressure in Y-phase chamber.
3	400KV-BONGAIGAON-BYRNIHAT (KILLING)	31-05-2021	16:11	Top up the low SF6 gas pressure in Y-phase chamber.
4	400KV-BONGAIGAON-BYRNIHAT (KILLING)	06-08-2021	11:40	For topping up of low SF6 gas in the Line side compartment of the feeder

Hence, SLDC Meghalaya may take up the issues and resolve it to avoid frequent outage of the elements.

NERLDC may please deliberate.

B.13 Obtaining approval for shutdown of Important Grid Elements as per Outage Planning Procedure:

On 10th August 2021, a grid disturbance occurred in Tripura System which resulted in blackout of 132 kV Udaipur, Monarchak and Rokhia substations. Prior to the GD, shutdown of 132 kV Rokhia – Agartala – I and 132 kV Palatana -Udaipur lines were availed by Tripura. Although, the later was approved in OCC meeting and its impact

on the grid was studied well in advance by NERLDC, the former element was taken under outage by Tripura without prior approval as per the Outage Procedure. The GD was caused due to tripping of 132 kV Rokhia – Agartala – II (conductor snapped) which was the only path available at that time for power evacuation from the sub-system of Tripura.

The above Grid Disturbance could have been avoided if the shutdown of 132 kV Rokhia – Agartala I would have been availed following the Outage Planning Procedure. Also, as the above-mentioned element is also included in List of Important Grid Elements of NER, opening of the same without prior approval of NERLDC is not in line with regulation 5.2(c) of IEGC 2010.

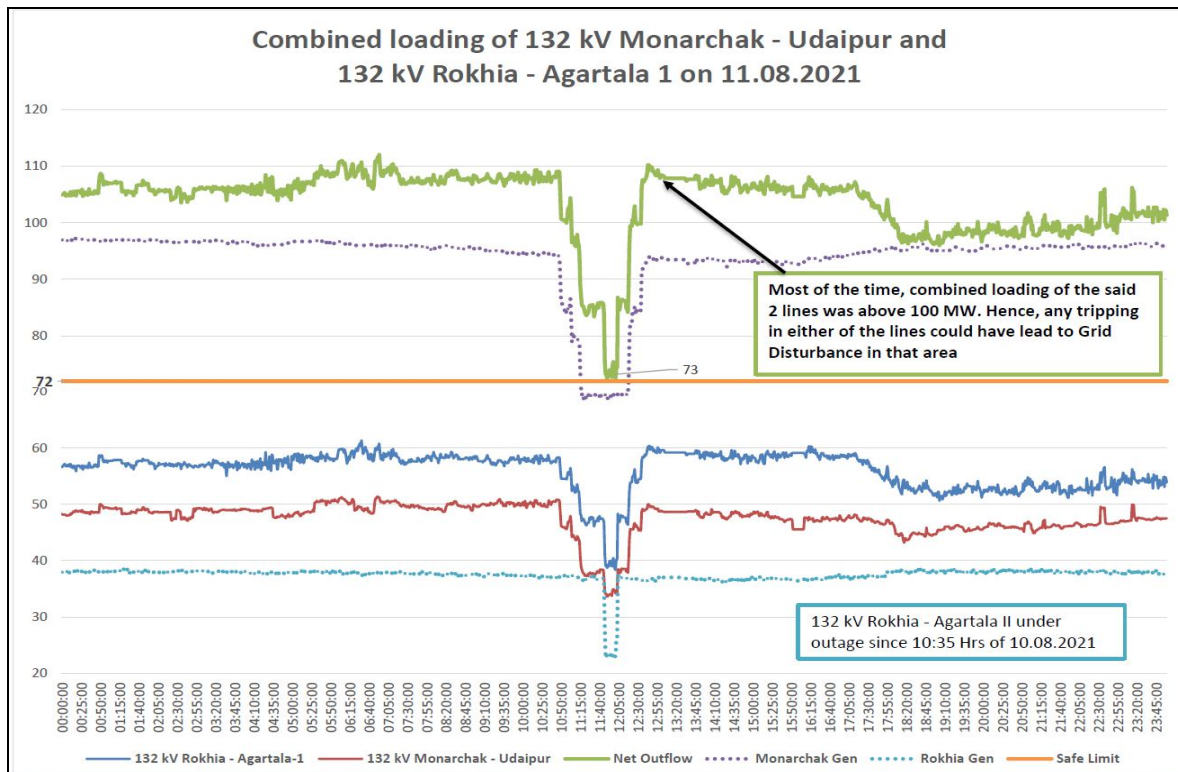
Hence, Tripura as well as all other constituents may follow the outage procedure for availing shutdown of important grid elements.

NERLDC may please deliberate.

B.14 Non-compliance of NERLDC advisory by SLDC Tripura:

Considering the outage of 132 kV Rokhia – Agartala II (conductor snapped) from 10:35 hrs of 10/08/2021, SLDC Tripura was advised by NERLDC on 11/08/2021 to maintain the combined loading of 132kV Rokhia-Agartala I and 132kV Monarchak-Udaipur lines within 72MW considering the N-1 contingency of that area.

However, it was observed that the Net outflow from the pocket was consistently above 72 MW, (please refer to the graph below) which led to vulnerability in Tripura system.



Co-operation from SLDC Tripura is therefore requested in future to maintain safe, secure and reliable grid operation.

NERLDC may please deliberate.

B.15 Repeated tripping of 132kV Along-Pasighat line:

132 kV Along - Pasighat Line tripped 7 (seven) times since January 2021 and 3(three) times within a short span leading to Grid Disturbance in Arunachal Pradesh Power System resulting in total MU loss of around 0.2357. The details of tripping of 132 kV Along - Pasighat Line is listed below:

SL No.	Element Name	Tripping Date & Time	Restoration Date & Time	Outage Time	Energy unserved	Relay Indication Main(S)	Relay Indication Main(R)
1	132 kV Along - Pasighat Line	09-01-2021 19:20	10-01-2021 16:19	20:59	0.016	Earth Fault	Loss of Voltage
2	132 kV Along - Pasighat Line	10-03-2021 00:12	10-03-2021 04:20	4:08	0.0201	No Tripping	Master Trip Relay Operated
3	132 kV Along - Pasighat Line	26-04-2021 12:32	27-04-2021 15:39	27:07	0.1627	Earth Fault	Earth Fault
4	132 kV Along - Pasighat Line	13-06-2021 13:11	13-06-2021 14:23	0:12	0.028	Not Furnished	Loss of Voltage
5	132 kV Along - Pasighat Line	17-07-2021 15:24	17-07-2021 15:40	0:16	0.0043	Over Current	Over Current
6	132 kV Along - Pasighat Line	21-07-2021 12:46	21-07-2021 12:57	0:11	0.0029	Over Current	Over Current
7	132 kV Along - Pasighat Line	28-07-2021 11:52	28-07-2021 11:58	0:06	0.0017	Details Awaited	Loss of Voltage

132 kV Along - Pasighat Line is a vital link to feed power supply to entire Pasighat and radially connected Roing, Tezu&Namsai area of Arunachal Power System and frequent tripping of this line reduces the reliability of these areas.

It is requested to undertake patrolling related activities on regular basis and the report may be shared with NERPC & NERLDC so that the same can be considered during system failure analysis at NERLDC.

Also, it is requested to upload FIR, DR & EL outputs from Along and Pasighat in the Tripping Monitoring Portal of NERLDC for proper analysis.

Hence, co-operation is requested from DoP, Arunachal Pradesh to take appropriate action and resolve the issue at the earliest for ensuring secured & integrated grid operation.

NERLDC may please deliberate.

B.16 Frequent tripping of 132kV Kohima-Wokha and 132kV Dimapur-Kohima lines and non-availability of 132kV Kohima-Melluri line:

It has been observed that lines connected to Kohima System have been tripping frequently. Following list shows the recent trippings related to 132 kV Kohima – Wokha and 132 kV Kohima – Dimapur:

Sl No.	Element Name	Date of Tripping	Time of Tripping (hrs)	Date of Revival	Time of Revival (hrs)
1	132 kV Kohima - Wokha	24-07-2021	15:53	24-07-2021	16:41
2	132 kV Kohima - Wokha	27-07-2021	09:30	27-07-2021	16:04
3	132 kV Kohima - Wokha	02-08-2021	14:42	04-08-2021	16:51
4	132 kV Kohima - Wokha	05-08-2021	14:24	05-08-2021	18:28
5	132 kV Kohima - Wokha	09-08-2021	12:26	09-08-2021	13:48
6	132 kV Dimapur- Kohima	22-07-2021	10:02	23-07-2021	15:37
7	132 kV Dimapur- Kohima	23-07-2021	17:00	24-07-2021	13:59
8	132 kV Dimapur- Kohima	24-07-2021	15:00	24-07-2021	15:17
9	132 kV Dimapur- Kohima	27-07-2021	09:30	27-07-2021	09:51
10	132 kV Dimapur- Kohima	27-07-2021	15:04	27-07-2021	15:19
11	132 kV Dimapur- Kohima	27-07-2021	15:46	27-07-2021	16:38
12	132 kV Dimapur- Kohima	02-08-2021	10:48	03-08-2021	11:50
13	132 kV Dimapur- Kohima	05-08-2021	14:28	05-08-2021	14:50
14	132 kV Dimapur- Kohima	05-08-2021	14:57	06-08-2021	13:46

Also, the following line connected to Kohima is under long outage:

(1) 132 kV Kohima-Meluri Line (out since 12:47 Hrs of 13.07.2021): As the Tower no.92On the verge of collapse.

In addition to the above, three numbers of Grid disturbances had occurred on 27thJuly,2nd Aug and on 03rd Augat Kohima area

Hence, the frequent tripping of thelines is a matter of concern and questions the reliability of the lines as well as the reliability of Capital area of Nagaland.Therefore, it is requested to undertake patrolling related activities on regular basis and the report may be shared with NERPC & NERLDC so that the same can be considered during system failure analysis at NERLDC.

Also, Restoration work of the 132kV Kohima – Meluri line may be expedited forthe safe and secure operation of Nagaland Power System.

NERLDC may please deliberate.

B.17 Frequent tripping of 132kV Balipara-Tenga line:

It has been observed that 132 kV Balipara-Tenga line has tripped ten times from 4th June'21 to 29th Jul'21resulting in frequent Grid Disturbances of GD-1 category at Tenga and Khupi areas of Arunachal Pradesh Power System. Since 132 kV Balipara-Tenga line is a vital link to feed power supply to entire Tenga&Khupi area of Arunachal Pradesh Power System as 132 kV Khupi -Kimi line is not yet commissioned, frequent tripping of this line is a matter of serious concern.

Hence, it is requested to carry out the patrolling related activities as per Cl. 23(2) (3) & (4) of CEA (Grid Standard) Regulation, 2010 on regular basis and measures may be identified and implemented at the earliest in order to enhance reliability and resiliency of NER grid along with sharing a copy of measures identified, and action taken in this regard with NERPC & NERLDC.

Also, as highlighted by NERLDC in the Sub-group Group meeting held on 14th Jul'21, DOP, AP is requested to upload FIR, DR,EL outputs from Balipara and Tenga in NERLDC tripping portal.

NERLDC may please deliberate.

B.18 Details of Railway Traction line:

AEGCL vide its mail to NERLDC dated 10th Aug'21 shared the details of traction load in Assam of two 132 kV/25 kV lines, i.e., DHALIGAON- DANGTOL LINE and NALBARI TRACTION LINE and also informed that at present, total traction load will be evacuated from 22 points as per Railway Authority and if load of any of the 22 points is interrupted due to grid failure/line failure, then the particular load will be catered from the other points as all the Traction points will be interconnected.

AEGCL is requested to provide details of the 22 Railway Traction Lines such as the details of the line through which the load will be connected (line length, conductor type, etc.), voltage level of feeding the traction load, electrical single line diagram of the mentioned traction loads, quantum of traction load, back up supply arrangement for the traction load, etc. and share the interconnection of all the Traction points.

NERLDC may please deliberate.

B.19 Commissioning of 132kV Loktak-Ningthoukhong-II and 132kV Imphal-Ningthoukhong D/C:

High loading is observed in 132 kV Loktak-Ningthoukhong I throughout the day due to the high generation of Loktak HEP because of the ongoing monsoon season. Also, 132 kV Imphal-Ningthoukhong line has to be kept open during the peak hours to maintain the reliability of the Manipur Power System. Hence, commissioning of 132 kV Loktak-Ningthoukhong II and 132 kV Imphal-Ningthoukhong D/C is envisaged for secure grid operation.

Therefore, MSPCL is requested to share the latest status of commissioning of 132 kV Loktak-Ningthoukhong II and 132 kV Imphal-Ningthoukhong D/C with tentative timeline of completion.

NERLDC may please deliberate.

B.20 Introduction of SPS in Leshka S/Sn of Meghalaya:

Leshka generation of Meghalaya has a total installed capacity of 126 MW(3x42 MW) which is connected to the grid via 132 kV Leshka – Khleihriat D/C. On tripping of one circuit of 132 kV Leshka – Khleihriat D/C, full generation of Leshka cannot be safely evacuated via the other circuit.

Therefore, a SPS may be Proposed to limit the generation of Leshka on the account of tripping of one circuit of 132 kV Leshka – KhleihriatD/C.

NERLDC may please deliberate.

B.21 Training session on IEGC for NER power utilities:

NERLDC, POSOCO is planning to organise a training session on the CERC regulation “Indian Electricity Grid Code (IEGC)” tentatively in the second week of September 2021 to familiarize all the NER stakeholders with the operational philosophy of maintaining efficient, secure, and reliable Grid Operation.

It is therefore, requested to nominate officials from all the utilities so that NER Grid Operation can be benefitted as a whole

NERLDC may please deliberate.

AGENDA ITEM FROM AEGCL

B.22 Practices to increase the availability of transmission lines:

As per monthly internal review meeting of AEGCL held on 17.7.2021; SLDC, Assam has been entrusted the responsibility “ to study and adopt the practices used by NETC and POWERGRID while handling the 2 free approved shutdowns of transmission line to increase the percentage availability of lines”.

As of now, SLDC, Assam has been following the regulations laid by AERC for the same. The forum is requested to advise us on the best practices undertaken by NETC, POWERGRID and other entities for improvement of Transmission System Availability.

AEGCL may please deliberate.

AGENDA ITEM FROM OTPC:

B.23 Increase in APC after commissioning of 400kV Palatana-Surjamaninagar:

OTPC is experiencing Increment in Aux power after charging of 400 KV Palatana – SM Nagar Line in the tune of 3 MW i.e. Gross minus Ex bus. However the total of UAT-2, ST-1 and ST-2 is showing correct. It is observed that after 400KV Palatana-SM Nagar line taken into service wef 11.07.2021 aux power consumption recorded on higher side (Anticipated that 400 KV Palatana – SM Nagar line flow is showing & recording 3 MW less than actual flow).

Please find OTPC Aux power consumption pre and post 400 KV Palatana SM Nagar line charging- Annex –**B.23.1** and January & February 2021 auxiliary consumption Annex-**B.23.2** for your kind reference.

OTPC may please deliberate.

AGENDA ITEM FROM MePTCL:

B.24 Certification of lines as deemed ISTS:

Filing of ISTS tariff has been delayed due to the non-availability of the RLDC certificate of Meghalaya Transmission Lines as ISTS lines. It may be mentioned that in the Minutes of the 124th OCC meeting held on 17 August 2016 Para D.21, it was decided that the NERLDC shall submit the load flow pattern study within 15 days and the same shall be communicated to NERPC.

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Till date the required certification has not been received and it is affecting the filing of ISTS tariff under the 2014 Tariff Regulations for consideration of PoC charges.. It is requested that the matter may kindly be taken up from your end at the earliest.

The list of the natural inter-state lines for which tariff was granted by the Commission for 2009-14 period is given below:

SI No	Name of the Line	Connecting States
1	132 kV D/C Umtru-Sarusajai	Assam-Meghalaya
2	132 kV D/C Kahelipara-Umtru	Assam-Meghalaya
3	132 kV Panchgram-Lumshnong	Assam-Meghalaya

The details of **the Additional lines (refer minutes stated above) to be certified** are as follows:

SI No	Name of the Line	Connecting	Line length	No. of Bays	COD
	220 KV D/C Misa-Killing	Assam-Meghalaya	113.42 Km	4	21.04.2010
2	400 KV D/C LLO Palatana-Bongaigaon at Killing S/s	Assam-Meghalaya	2.214 Km	2	March 2013
3	132 KV S/C Nangalbibra-Agia	Assam-Meghalaya	92.15 Km	2	06.08.2013

MePTCL may please deliberate.

AGENDA ITEM FROM NERTS:

B.25 Shutdown sequence of Dimapur for GIS upgradation project:

The GIS upgradation work of 220/132kVAIS Dimapur substation is undergoing at full swing. The upgradation of 220/132kVAIS Dimapur substation to GIS shall necessitate some switchyard and Transmission line connectivity modifications at Dimapur Substation. This modification shall ensure limited shutdown requirement of Dimapur Substations connected transmission lines and hence shall ensure stable power to Nagaland state during the upgradation work. The activities require shutdown of Bus, TL bays etc. at Dimapur AIS substation.

The list of shutdowns with proposed date (subject to changes as per site condition) is mentioned below:

DAY TIME SHUT DOWN OF 220KV MISA # 1 & 2

The above shut down is required for three days with immediate effect for shifting of 220kV GIS Modules to 220kV GIS Hall.

REMOVAL OF 132KV BUS SECTION WITH 132KV DIMAPUR # 1 BAY

Shut Down of 132kV Bus for removal of a part of 132kV Bus Section along with 132kV Dimapur # 1 will be required on 21.08.2021. Subsequently, 32kV Dimapur # 1 will be connected with 132kV Bokajan Line (T-Connection) if system requirement is there and NERPC agrees. Otherwise, 132kV Dimapur # 1 will remain open till final connection to GIS.

Shut Down of 132kV GIS (Outdoor) Bus for connection and charging new GIS will be required on 01.10.2021 after completion of 132kV GIS erection and Testing during the period from 21.08.2021 to 30.09.2021.

Shut Down of 132kV Doyang # 1 for shifting from AIS to GIS will be required during the period from 02.10.2021 to 04.10.2021

Shut Down of 132kV Doyang # 2 for shifting from AIS to GIS will be required during the period from 05.10.2021 to 07.10.2021

Shut Down of 132kV Imphal for shifting from AIS to GIS will be required during the period from 08.10.2021 to 10.10.2021

Shut Down of 132kV Bokajan for shifting from AIS to GIS will be required during the period from 11.10.2021 to 13.10.2021

3. REMOVAL OF 220KV BUS ALONG WITH MISA # 1 & 2 AND ICT # 3

For erection of 220kV Bus Duct of Misa # 1 & 2 and existing ICT # 3 removal of 220kV Bus along with said circuits to be done for final restoration on GIS.

Hence for the purpose, Shut Down of 220kV Bus along with ICT # 3 and Misa # 1 & 2 will be required during the period from 15.10.2021 to 03.11.2021.

NERTS may please deliberate.

C. ITEMS FOR STATUS

C.1. Status update of important grid elements under prolonged outage impacting system operation:

Sl. No	Element	Owner	Status as informed in the 180th OCCM	Latest status
1	OTPC Module-I	OTPC	By 23 rd July'21	
2	132kV Mariani - Mokokchung (out since April'2008)	AEGCL	For Longthu-Mariani section joint inspection by Apr'21.	
3	FSC of 400kV Balipara - Bongaigaon-4(out since 02 nd Sep'20)	NERTS	LoA placed. Completion by Apr'22	
4	132kV Roing-Pasighat (charged through ERS tower)	NERTS	2/32 piles completed. By Mar'22	
5	220kV Mariani-Mokokchung - I	NERTS	Ties with GIS work. By Sep'21	

Members may please update the status.

C.2. Status of commissioning for upcoming projects:

Sl. No	Name of the element	Utility	Status as informed in 180th OCC meeting	Latest status
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Agenda for 181st OCC Meeting to be held on 20th August, 2021

1	132kV Monarchak-Surjamaninagar	TSECL	By Aug'21	
2	PLCC for 132kV Loktak-Ningthoukong and 132kV Loktak-Rengpang	MSPCL	Aug'2021	
3	Construction of 2 nd bay at Balipara for 220kV Balipara-Sonabil-2	AEGCL	By 16th June'21	
4	Bay at 132kV Agia S/Sn for 132kV Agia-Nangalbibra-II	AEGCL	AEGCL has submitted all documents including EI report for FTC. MePTCL to co-ordinate.	
5	Upgradation of 132kV Lumshnong – Panchgram line	MePTCL	NIT to be floated. OPGW to be included in the same.	
6	Diversion of 132kV Bawktlang-Sihhmui	NERTS	By Sep'21	
7	PLCC for 132kV Karong-Kohima	MSPCL	By Sep'21	
8	132kV Loktak-Ningthoukong-II	MSPCL	Delayed due to RoW issues. By July'21	
9	132kV Roing-Chapakhowa	NERTS	Retendering done. By Dec'21	
10	132kV Rupai-Chapakhowa & Chapakhowa S/Sn	POWERGRID	By Dec'21	
11	Re-conductoring 220kV BTPS-Salakati D/C	NERTS	By Mar'22	
12	420kV 80MVAR Bus Reactor	NEEPCO	LOA issued. Completion by Mar'22	
13	220kV Killing - Mawngap	NERPSIP	RoW Ribhoi/ East Khasi Hills districts. By Dec'21	
14	220kV Samaguri - Mariani-I	AEGCL	Referred to NERPCTP	
15	220kV Mariani(AS) - New Mariani	AEGCL	Referred to NERPCTP	

Members may please update the status.

Metering agenda

C.3. SEMs to be procured for Sterlite and KMTL ongoing projects:

NERTS confirmed over mail regarding receipt of 50 Nos. SEM and 10 Nos. DCD at Misa Substation on 23.03.2021. NERLDC prepared a list of 30 nos. SEM and 07 nos. DCD on priority basis and sent to NERTS via mail on 29.04.21. Therefore, currently a total of 20 nos. SEM and 6 nos. DCD is in stock as spare (considering 3 nos. DCD as spare from earlier 20 nos. DCD procurement and 3 nos. from the present DCD procurement of 10 nos.).

In 180th OCCM, NERTS informed that the 30 SEMs have been distributed. The forum requested NERTS to allocate 2 nos of SEMs for 400kV Thoubal.

List of completion of installation of SEMs and distribution of DCD may be provided for record. Further work progress may be discussed.

NERTS may please intimate the status.

C.4. Procurement of SEM&DCD/laptop for future requirements:

NERTS may intimate the status of procurement of:

- 125 nos. SEMs and 15 nos. CMRIs
- Additional 40 nos. of DCD

In 179th OCCM, NERTS informed that supply of 125 nos. SEMs and 15 nos. CMRIs is expected to be completed by Jul'21.

NERTS may please intimate the status

Any other item:

Date and Venue of next OCC

DATE	GTG-1	STG-1	Blk-1 total	GTG-2	STG-2	blk-2 Total	Plant Total Gen	POWER FLOW THROUGH 400 KV LINE 1	POWER FLOW THROUGH 400 KV LINE-2	POWER FLOW THROUGH 132 KV LINE 1	POWER FLOW THROUGH 132 KV LINE-2	POWER FLOW THROUGH 400 KV SMN LINE-1	Net injection to grid	uat-1	uat-2	Station TR-1	Station TR-2	Total Aux cons (ST+UAT)	Drawal from grid	Aux Consumption % AS per UAT and ST reading	Aux Consumption (Gross Gen - Net Injection)	Aux Consumption % (Gross Gen - Net Injection)
2/4/2021	5.079119	2.829364	7.908482	5.082448	2.738509	7.820957	15.729439	7.006800	7.023018	-0.357581	1.505126	0.000000	15.177364	0.154760	0.153193	0.204	0.011865	0.523818	0.000000	3.33%	0.552075	3.51%
2/5/2021	4.992726	2.793782	7.786508	5.082437	2.742109	7.824546	15.611054	7.024582	7.040109	-0.413290	1.398278	0.000000	15.049680	0.153276	0.153837	0.208	0.01086	0.525973	0.000000	3.37%	0.561374	3.60%
2/6/2021	4.854219	2.761218	7.615437	5.024513	2.709036	7.733550	15.348986	6.824873	6.841745	-0.400493	1.553510	0.000000	14.819636	0.151678	0.151495	0.205	0.009225	0.517398	0.000000	3.37%	0.529351	3.45%
2/7/2021	4.052323	2.535545	6.587869	5.085853	2.716309	7.802163	14.390031	6.444327	6.459745	-0.518506	1.449811	0.000000	13.835378	0.144509	0.152308	0.209	0.01038	0.516197	0.000000	3.59%	0.554653	3.85%
2/8/2021	3.909235	2.512509	6.421744	5.083915	2.739564	7.823478	14.245222	6.382436	6.398473	-0.538147	1.461850	0.000000	13.704611	0.143602	0.153442	0.158	0.057465	0.512509	0.000000	3.60%	0.540611	3.80%
2/9/2021	4.471686	2.651127	7.122813	5.080029	2.742164	7.822192	14.945006	6.568436	6.584182	-0.411946	1.657498	0.000000	14.398170	0.149145	0.153847	0.109	0.10665	0.518642	0.000000	3.47%	0.546836	3.66%
2/10/2021	4.904732	2.775818	7.680551	4.898286	2.704491	7.602777	15.283328	6.681564	6.697418	-0.343930	1.688314	0.000000	14.723366	0.152919	0.152468	0.159	0.059925	0.524312	0.000000	3.43%	0.55962	3.66%
7/25/2021	4.369700	2.560964	6.924664	3.760552	2.381345	6.141897	13.066561	2.845236	2.859709	-0.174634	0.824971	6.080691	12.435374	0.148250	0.143752	0.115000	0.103830	0.510832	0.000000	3.91%	0.631187	4.83%
7/26/2021	4.171471	2.516400	6.687871	4.117574	2.469091	6.586664	13.274535	2.747927	2.759818	0.034656	0.856742	6.244218	12.643362	0.147293	0.145119	0.115000	0.104250	0.511662	0.000000	3.85%	0.631173	4.75%
7/27/2021	4.264761	2.562436	6.827198	4.013998	2.441964	6.455962	13.283159	2.778764	2.791527	-0.007219	0.855456	6.230473	12.649000	0.148038	0.144980	0.115000	0.104880	0.512898	0.000000	3.86%	0.634159	4.77%
7/28/2021	4.489589	2.574018	7.063607	4.272512	2.505582	6.778093	13.841701	2.977091	2.990291	0.164371	0.725664	6.360109	13.217526	0.149957	0.146457	0.114000	0.107100	0.517514	0.000000	3.74%	0.624174	4.51%
7/29/2021	4.655901	2.595127	7.251028	4.444799	2.544364	6.989162	14.240190	3.219345	3.232800	-0.130608	0.762394	6.502436	13.586367	0.150269	0.147726	0.116000	0.107190	0.521185	0.000000	3.66%	0.653823	4.59%
7/30/2021	5.297834	2.801436	8.099271	3.938825	2.414291	6.353116	14.452387	3.267236	3.282982	-0.162883	0.805171	6.623200	13.815706	0.155294	0.144407	0.117000	0.106125	0.522826	0.000000	3.62%	0.636681	4.41%
7/31/2021	5.529986	2.900800	8.430786	3.648276	2.352091	6.000366	14.431152	3.210800	3.225782	0.433834	0.518170	6.407600	13.796185	0.159082	0.143421	0.114000	0.106260	0.522763	0.000000	3.62%	0.634967	4.40%

DATE	GTG-1	STG-1	Blk-1 total	GTG-2	STG-2	blk-2 Total	POWER FLOW THROUGH 400 KV LINE-1	POWER FLOW THROUGH 400 KV LINE-2	POWER FLOW THROUGH 132 KV LINE-1	POWER FLOW THROUGH 132 KV LINE-2	POWER FLOW THROUGH 400 KV SMN LINE-1	Net injection to grid	uat-1	uat-2	Drawal from grid	Gen per day in MU	Aux per day in MU	Aux per day in MW	Aux % per day
7/1/2021	0.000000	0.000000	0.000000	5.403280	2.857164	8.260452	3.702945	3.723927	-0.073459	0.603840	0.000000	7.957254	0.000000	0.158125	0.000000	8.260452	0.303199	12.633281	3.670886
7/2/2021	0.000000	0.000000	0.000000	5.379459	2.853745	8.233205	3.523964	3.544509	-0.356150	1.219795	0.000000	7.932118	0.000000	0.156441	0.000000	8.233205	0.301087	12.545296	3.656986
7/3/2021	0.000000	0.000000	0.000000	5.310995	2.833855	8.144850	3.403891	3.428400	-0.301450	1.308672	0.000000	7.839513	0.000000	0.155450	0.000000	8.144850	0.305337	12.722362	3.748831
7/4/2021	0.000000	0.000000	0.000000	5.380238	2.851891	8.232129	3.441309	3.467491	-0.309610	1.328141	0.000000	7.927311	0.000000	0.156056	0.000000	8.232129	0.304798	12.699897	3.702536
7/5/2021	0.000000	0.000000	0.000000	5.313928	2.841891	8.155819	3.326655	3.349964	-0.190886	1.361587	0.000000	7.847319	0.000000	0.162001	0.000000	8.155819	0.308500	12.854175	3.782578
7/6/2021	0.000000	0.000000	0.000000	5.273124	2.823455	8.096579	3.236036	3.257818	-0.152083	1.448698	0.004291	7.794760	0.000000	0.154688	0.000000	8.096579	0.301819	12.575794	3.727736
7/7/2021	0.000000	0.000000	0.000000	5.342511	2.836018	8.178529	3.408255	3.430509	-0.395146	1.420531	0.013600	7.877749	0.000000	0.155311	0.000000	8.178529	0.300780	12.532498	3.677678
7/8/2021	0.000000	0.000000	0.000000	5.240191	2.815782	8.055972	3.291491	3.314982	-0.255427	1.399277	0.000000	7.750322	0.000000	0.159427	0.000000	8.055972	0.305650	12.735422	3.794081
7/9/2021	0.000000	0.000000	0.000000	5.254017	2.820982	8.074999	3.244000	3.269273	-0.172253	1.419667	0.000000	7.766687	0.000000	0.157290	0.000000	8.074999	0.314432	13.096532	3.892409
7/10/2021	0.000000	0.000000	0.000000	5.292575	2.825873	8.118548	3.197491	3.222864	-0.137990	1.522022	0.000109	7.803996	0.000000	0.158730	0.000000	8.118548	0.314553	13.106356	3.874493
7/11/2021	0.000000	0.000000	0.000000	5.268187	2.821600	8.089787	3.052945	3.078255	-0.176389	1.471603	0.354909	7.781523	0.000000	0.154969	0.000000	8.089787	0.308264	12.844320	3.810529
7/12/2021	0.000000	0.000000	0.000000	5.263454	2.817545	8.081000	1.623673	1.646145	-0.410131	0.817190	4.037309	7.714186	0.000000	0.155418	0.000000	8.081000	0.366813	15.283889	4.539207
7/13/2021	0.000000	0.000000	0.000000	5.320175	2.839145	8.159320	1.644800	1.667200	-0.019238	0.598618	3.849236	7.779092	0.000000	0.155902	0.000000	8.159320	0.380228	15.842826	4.660043
7/14/2021	0.000000	0.000000	0.000000	5.284911	2.832836	8.117748	1.067236	1.068909	0.238166	0.767366	4.197709	7.739387	0.000000	0.155675	0.000000	8.117748	0.378360	15.765016	4.660903
7/15/2021	0.000000	0.000000	0.000000	5.274939	2.824909	8.099848	1.534509	1.082145	0.286051	0.679834	4.126727	7.709267	0.000000	0.157939	0.000000	8.099848	0.390581	16.274228	4.822084
7/16/2021	0.000000	0.000000	0.000000	5.324953	2.833000	8.157953	1.614509	1.624000	-0.282797	0.800832	4.007200	7.763744	0.000000	0.155789	0.000000	8.157953	0.394208	16.425348	4.821977
7/17/2021	0.000000	0.000000	0.000000	5.340932	2.841582	8.182514	1.849491	1.858545	-0.464515	0.674304	3.906073	7.823898	0.000000	0.157205	0.000000	8.182514	0.358616	14.942342	4.382714
7/18/2021	0.000000	0.000000	0.000000	5.144023	2.778709	7.922732	1.735891	1.746182	-0.367987	0.719002	3.735091	7.568178	0.000000	0.154350	0.000000	7.922732	0.354554	14.773074	4.475146
7/19/2021	0.000000	0.000000	0.000000	5.133834	2.766400	7.900234	1.681127	1.691382	-0.305276	0.711494	3.765164	7.543791	0.000000	0.153779	0.000000	7.900234	0.356492	14.851767	4.511796
7/20/2021	0.003649	0.000000	0.003649	5.094304	2.762109	7.856413	1.633564	1.666509	-0.417062	0.705792	3.851145	7.460948	0.000013	0.154001	0.000000	7.860062	0.399114	16.620976	5.077751
7/21/2021	1.043195	0.599673	1.642868	3.622314	1.120036	5.742351	1.449455	1.462727	-0.348499	0.628723	3.645236	6.849011	0.048469	0.129569	0.011369	7.385219	0.547577	22.815693	7.414494
7/22/2021	3.551914	2.351709	5.903623	3.787395	1.360836	5.148231	2.674327	2.688873	-0.309043	0.785779	5.610873	11.450809	0.142645	0.144304	0.000000	12.051855	0.601046	25.043581	4.987166
7/23/2021	3.837240	2.441509	6.278749	4.246205	2.481164	6.727369	3.048327	3.063600	-0.441504	0.781018	5.968545	12.419986	0.144516	0.146896	0.000000	13.006617	0.586131	24.422128	4.506588
7/24/2021	4.322124	2.551600	6.873724	3.989281	2.431873	6.421154	3.130800	3.146800	-0.474595	0.779386	6.093636	12.676027	0.147401	0.144699	0.000000	13.294878	0.618851	25.785453	4.654807
7/25/2021	4.363700	2.560964	6.924664	3.760552	2.381345	6.141897	2.845236	2.859709	-0.174634	0.824371	6.080691	12.435374	0.148250	0.143752	0.000000	13.066561	0.631187	26.299477	4.830555
7/26/2021	4.171471	2.516400	6.687871	4.117574	2.469091	6.586664	2.747927	2.759818	0.034656	0.856742	6.244218	12.643362	0.147293	0.145119	0.000000	13.274535	0.631173	26.298884	4.754767
7/27/2021	4.264761	2.562436	6.827198	4.013998	2.441964	6.455962	2.778764	2.791527	-0.007219	0.855456	6.230473	12.649000	0.148038	0.144980	0.000000	13.283159	0.634159	26.423288	4.774157
7/28/2021	4.489589	2.574018	7.063607	4.272512	2.505582	6.778093	2.977091	2.990291	0.164371	0.725664	6.360709	13.217526	0.149957	0.146457	0.000000	13.841701	0.624174	26.607269	4.509377
7/29/2021	4.635901	2.595127	7.251028	4.444799	2.544364	6.989162	3.219345	3.232800	-0.130808	0.763394	6.501436	13.586367	0.150269	0.147716	0.000000	14.240190	0.633623	27.242628	4.591393
7/30/2021	5.297834	2.801436	8.099271	3.938885	2.414291	6.353116	3.267236	3.282982	-0.162883	0.805171	6.623200	13.815706	0.155294	0.144407	0.000000	14.452387	0.636681	26.528358	4.405366
7/31/2021	5.529986	2.900801	8.430786	3.648276	2.352091	6.000366	3.210800	3.225782	0.433834	0.518170	6.407600	13.796185	0.159082	0.143421	0.000000	14.431152	0.634967	26.456965	4.399973
Total	45.531365	26.455673	71.987038	149.481870	82.981127	232.462997	82.583091	83.043418	-5.641181	29.301139	101.616582	290.914418	1.541227	4.709906	0.011369	304.450034	13.546985		

Total Generation 304.450034 MU
Gross injection 290.903049 MU
Aux 13.546985 MU

DATE	GTG-1	STG-1	Blk-1 total	GTG-2	STG-2	blk-2 Total	POWER FLOW THROUGH 400 KV LINE-1	POWER FLOW THROUGH 400 KV LINE-2	POWER FLOW THROUGH 132 KV LINE-1	POWER FLOW THROUGH 132 KV LINE-2	Net injection to grid	uat-1	uat-2	Drawal from grid	Gen per day in MU	Aux per day in MU	Aux per day in MW	Aux %
2/1/2021	4.783701	2.723164	7.506864	5.085551	2.716582	7.802132	7.013745	7.028836	-0.407078	1.164326	14.799830	0.150978	0.151096	0.000000	15.308997	0.509167	21.215284	3.325932
2/2/2021	4.174289	2.539364	6.713653	5.028048	2.708018	7.736066	6.561309	6.577964	-0.457651	1.225901	13.907522	0.145748	0.149484	0.000000	14.449719	0.542197	22.591523	3.752298
2/3/2021	4.163578	2.538945	6.702524	5.104699	2.749655	7.854353	6.440655	6.457200	-0.338986	1.452883	14.011752	0.136673	0.153008	0.000000	14.556877	0.545125	22.713534	3.744792
2/4/2021	5.079119	2.828364	7.907483	5.082446	2.738509	7.820957	7.006800	7.023018	-0.357581	1.505126	15.177364	0.154760	0.153193	0.000000	15.729438	0.552075	23.003133	3.509821
2/5/2021	4.992726	2.793782	7.786508	5.082437	2.742109	7.824546	7.024582	7.040109	-0.413290	1.398278	15.049680	0.153276	0.153837	0.000000	15.611054	0.561374	23.390579	3.596003
2/6/2021	4.854219	2.761218	7.615437	5.024513	2.709036	7.733550	6.824873	6.841745	-0.400493	1.553510	14.819636	0.151678	0.151495	0.000000	15.348986	0.529251	22.056279	3.448766
2/7/2021	4.052323	2.535545	6.587869	5.085853	2.716309	7.802163	6.444327	6.459745	-0.518506	1.449811	13.835378	0.144509	0.152308	0.000000	14.390031	0.554653	23.110539	3.854425
2/8/2021	3.909235	2.512509	6.421744	5.083915	2.739564	7.823478	6.382436	6.398473	-0.538147	1.461850	13.704611	0.143602	0.153442	0.000000	14.245222	0.540611	22.525440	3.795031
2/9/2021	4.471686	2.651127	7.122813	5.080029	2.742164	7.822192	6.568436	6.584182	-0.411946	1.657498	14.398170	0.149145	0.153847	0.000000	14.945006	0.546836	22.784820	3.658986
2/10/2021	4.904732	2.775818	7.680551	4.989286	2.704491	7.602777	6.681564	6.697418	-0.343930	1.688314	14.723366	0.152919	0.152468	0.000000	15.283328	0.559962	23.331745	3.663874
2/11/2021	4.571080	2.674800	7.245880	4.982777	2.624036	7.222314	6.410873	6.426000	-0.387638	1.480090	13.929324	0.149448	0.148132	0.000000	14.468194	0.538870	22.452910	3.724514
2/12/2021	4.351266	2.619527	6.970793	4.98724	2.625818	7.224542	6.464509	6.479891	-0.206189	0.921120	13.659331	0.147997	0.148615	0.000000	14.195335	0.536004	22.333495	3.775916
2/13/2021	4.452433	2.642800	7.095233	4.98413	2.644709	7.243122	6.642036	6.656764	0.094320	0.406406	13.799526	0.149346	0.150013	0.000000	14.338355	0.538828	22.451179	3.757951
2/14/2021	4.927955	2.765655	7.693609	4.97344	2.636545	7.233889	6.972618	6.987127	0.412685	0.015168	14.387598	0.153414	0.149144	0.000000	14.927499	0.539900	22.495551	3.616188
2/15/2021	4.627142	2.699200	7.326342	4.98443	2.626145	7.224588	6.661200	6.678036	0.103267	0.563136	14.005640	0.152237	0.148843	0.000000	14.550930	0.545291	22.720438	3.747462
2/16/2021	4.303448	2.604236	6.907685	4.271815	2.552418	6.824233	6.062545	6.078255	-0.407597	1.463482	13.196685	0.147089	0.147342	0.000000	13.731918	0.535233	22.301373	3.897729
2/17/2021	4.244913	2.589309	6.834222	4.569441	2.644291	7.213731	6.239782	6.255564	-0.427219	1.439520	13.507646	0.148917	0.150586	0.000000	14.047953	0.540307	22.512800	3.846163
2/18/2021	4.368734	2.626582	6.995315	4.602286	2.662709	7.264995	6.294145	6.311018	-0.384845	1.467034	13.687352	0.149465	0.151177	0.000000	14.260311	0.572958	23.873253	4.017851
2/19/2021	4.341377	2.625964	6.967340	4.597773	2.665473	7.263246	6.389527	6.405709	-0.429389	1.340774	13.706622	0.149381	0.153573	0.000000	14.230586	0.529964	21.831842	3.681958
2/20/2021	4.826850	2.740727	7.567578	4.593661	2.642073	7.235734	6.456909	6.472582	-0.258902	1.580928	14.251517	0.153946	0.154516	0.000000	14.803312	0.551795	22.991473	3.727513
2/21/2021	5.152288	2.864782	8.017069	4.721528	2.676382	7.397910	6.742618	6.757455	-0.489542	1.843930	14.854460	0.157929	0.155801	0.000000	15.414980	0.560520	23.354984	3.636201
2/22/2021	4.695394	2.734364	7.429758	4.677048	2.669582	7.346630	6.471236	6.489709	-0.340877	1.599917	14.219985	0.153217	0.155448	0.000000	14.776388	0.556402	23.183428	3.765482
2/23/2021	4.789940	2.660127	7.139068	4.598428	2.643091	7.241518	6.274327	6.289418	-0.322838	1.589626	13.830533	0.150581	0.153573	0.000000	14.380586	0.550053	22.918891	3.824972
2/24/2021	4.717037	2.724473	7.441509	4.601120	2.645055	7.246175	6.439709	6.455600	-0.301805	1.560019	14.152523	0.153223	0.154320	0.000000	14.687684	0.534160	22.256663	3.626791
2/25/2021	4.432104	2.632709	7.064813	4.598268	2.632773	7.231541	6.161055	6.177127	-0.544714	1.914163	13.707631	0.151745	0.153977	0.000000	14.296354	0.588723	24.530111	4.117992
2/26/2021	4.593380	2.698691	7.292071	4.884395	2.697509	7.581904	6.327382	6.343709	-0.233971	1.894618	14.331737	0.153566	0.156177	0.000000	14.873975	0.542238	22.593234	3.645546
2/27/2021	4.739747	2.731291	7.471038	5.016619	2.737836	7.754455	6.425273	6.443164	-0.110515	1.903258	14.661179	0.154661	0.157564	0.000000	15.225493	0.564314	23.513099	3.706378
2/28/2021	4.576390	2.681855	7.258245	4.742782	2.664182	7.406964	6.226836	6.244618	-0.265392	1.905466	14.111528	0.152940	0.155182	0.000000	14.665208	0.553680	23.070014	3.775469
Total	127.786085	74.977927	202.764012	134.022143	74.957564	208.979706	182.611309	183.060436	-6.888768	39.446150	396.429128	4.212390	4.268161	0.000000	411.743718	15.314590		

Total Generation 411.743718 MU
Gross injection 396.429128 MU
Aux 15.314590 MU

DATE	GTG-1	STG-1	Blk-1 total	GTG-2	STG-2	blk-2 Total	POWER FLOW THROUGH 400 KV LINE-1	POWER FLOW THROUGH 400 KV LINE-2	POWER FLOW THROUGH 132 KV LINE-1	POWER FLOW THROUGH 132 KV LINE-2	Net injection to grid	uat-1	uat-2	Drawal from grid	Gen per day in MU	Aux per day in MU	Aux per day in MW	Aux %
1/1/2021	4.871750	2.744927	7.616677	4.490065	2.592345	7.082411	6.739127	6.760218	-0.421853	1.077715	14.155208	0.152118	0.152118	0.000000	14.699088	0.543880	22.661665	3.700093
1/2/2021	5.043110	2.811127	7.854237	4.480009	2.582636	7.062646	6.760982	6.781964	-0.340224	1.177670	14.380392	0.155116	0.148464	0.000000	14.916883	0.536491	22.353802	3.596537
1/3/2021	5.164640	2.837200	8.001840	4.479709	2.591145	7.070854	6.732382	6.753273	-0.321888	1.362394	14.536360	0.155558	0.149927	0.000000	15.072694	0.546334	22.763922	3.624661
1/4/2021	5.321360	2.901764	8.223124	4.601784	2.612564	7.214348	6.805600	6.822691	-0.154387	1.402867	14.881171	0.157915	0.149893	0.000000	15.437471	0.556300	23.179178	3.603571
1/5/2021	4.556080	2.668800	7.224880	4.969047	2.705964	6.675010	6.704800	6.725091	-0.243475	1.170163	14.356579	0.149898	0.154083	0.000000	14.899890	0.543911	22.637973	3.646412
1/6/2021	4.868910	2.748527	7.617437	4.941355	2.696927	7.638282	6.820727	6.841782	-0.259910	1.288205	14.690803	0.152549	0.153900	0.000000	15.255719	0.564916	23.581550	3.702976
1/7/2021	4.454030	2.650818	7.104848	5.086327	2.740909	7.827236	6.736327	6.757564	-0.308429	1.196256	14.381718	0.150214	0.155218	0.000000	14.932084	0.550366	22.931927	3.685797
1/8/2021	3.829250	2.483873	6.313123	5.086809	2.733236	7.820045	6.252836	6.273055	-0.110496	1.150572	13.570467	0.143615	0.155427	0.000000	14.133168	0.562701	23.445875	3.981422
1/9/2021	3.865630	2.502164	6.367794	5.085549	2.730109	7.815658	6.317891	6.334364	-0.190982	1.202266	13.663538	0.143994	0.155513	0.000000	14.183452	0.519914	21.663098	3.665640
1/10/2021	4.817490	2.726818	7.544308	5.092257	2.733655	7.825912	7.036655	7.052255	-0.456970	1.187443	14.819383	0.151863	0.155857	0.000000	15.202200	0.550837	22.951543	3.583794
1/11/2021	4.729580	2.719418	7.448998	5.084663	2.741945	7.826608	6.970982	6.987527	-0.413251	1.181837	14.727095	0.152495	0.156699	0.000000	15.275606	0.548512	22.854649	3.590768
1/12/2021	5.034010	2.810509	7.844519	4.802916	2.674855	7.477771	7.073455	7.089782	-0.484195	1.082054	14.761096	0.155284	0.154589	0.000000	15.322290	0.561194	23.383098	3.662801
1/13/2021	5.137520	2.831909	7.969429	4.601151	2.611873	7.213024	7.014000	7.030182	-0.529862	1.134394	14.649113	0.154982	0.150024	0.000000	15.182455	0.533440	22.223909	3.512871
1/14/2021	5.035050	2.789691	7.824741	4.600141	2.608309	7.208450	6.930545	6.946109	-0.538886	1.147603	14.485371	0.153601	0.149632	0.000000	15.033191	0.547820	22.825823	3.644068
1/15/2021	5.323290	2.884382	8.207672	4.600489	2.618418	7.218907	7.148582	7.164691	-0.507552	1.079405	14.885126	0.156563	0.150416	0.000000	15.426579	0.541453	22.560550	3.590872
1/16/2021	5.078630	2.784724	7.863354	4.599387	2.613545	7.212932	7.003564	7.018873	-0.538915	1.039162	14.522683	0.152994	0.149623	0.000000	15.076287	0.553604	23.066826	3.670717
1/17/2021	5.233880	2.829455	8.063335	4.600813	2.622182	7.222995	7.191309	7.206509	-0.593462	0.937171	14.741527	0.154798	0.149940	0.000000	15.286329	0.544802	22.700088	3.563983
1/18/2021	4.126440	2.552327	6.678767	3.221693	2.257127	5.478820	5.800218	5.821964	-0.428256	0.661651	11.855577	0.145716	0.139238	0.000000	12.157587	0.302010	12.583753	2.484128
1/19/2021	4.064320	2.539145	6.603465	3.165970	2.235709	5.401679	4.283309	5.338800	-0.278573	1.111238	10.454775	0.146145	0.138206	0.000000	12.005144	1.503669	64.588729	12.914210
1/20/2021	5.177590	2.826455	8.004045	4.604951	2.625800	7.230751	6.995309	7.011200	-0.436886	1.112870	14.682493	0.155779	0.150896	0.000000	15.234795	0.552302	23.012583	3.625267
1/21/2021	5.102060	2.816545	7.918605	4.601122	2.623436	7.224559	6.917055	6.933527	-0.445958	1.186618	14.591241	0.155883	0.150195	0.000000	15.149164	0.551923	22.996795	3.644701
1/22/2021	5.123150	2.811745	7.934895	4.626623	2.613618	7.240242	7.056509	7.072545	-0.549120	1.067962	14.647896	0.155155	0.146587	0.000000	15.175137	0.527241	21.968369	3.474373
1/23/2021	5.055620	2.775473	7.831093	4.601588	2.608891	7.210478	6.921236	6.939800	-0.504240	1.143091	14.496888	0.153992	0.146333	0.000000	15.041571	0.544684	22.695151	3.621188
1/24/2021	4.760770	2.702400	7.463170	4.968627	2.695964	7.664590	6.911927	6.928036	-0.464899	1.201901	14.576965	0.151320	0.149172	0.000000	15.127760	0.550795	22.949789	3.640955
1/25/2021	4.642570	2.680127	7.322697	5.085878	2.724218	7.810906	6.903673	6.920036	-0.435965	1.218010	14.605754	0.150388	0.150351	0.000000	15.132794	0.527040	21.959993	3.482766
1/26/2021	4.416510	2.624000	7.040510	5.085709	2.732164	7.817873	6.845309	6.861018	-0.471696	1.078579	13.313210	0.148511	0.151473	0.000000	14.885883	0.545173	22.715522	3.669124
1/27/2021	3.016520	1.727673	4.744193	5.284424	2.796800	8.081224	5.830000	5.852836	-0.486461	1.095341	12.291716	0.097973	0.154315	0.000000	12.825417	0.533700	22.237519	4.161272
1/28/2021	3.935760	2.282764	6.218524	5.010079	2.714982	7.725061	6.296073	6.307527	-0.388848	1.221293	13.436045	0.129400	0.151206	0.000000	13.943584	0.507539	21.147474	3.639949
1/29/2021	4.693170	2.611200	7.304370	5.199052	2.739618	7.938670	6.946909	6.961927	-0.417869	1.282579	14.773547	0.149900	0.151870	0.000000	15.243040	0.469493	19.562218	3.080050
1/30/2021	4.797320	2.719491	7.516811	5.081280	2.725673	7.806953	7.001491	7.017236	-0.426662	1.192558	14.784922	0.151866	0.153171	0.000000	15.323764	0.538841	22.451719	3.516377
1/31/2021	5.040940	2.773473	7.814413	5.344536	2.799727	8.144263	7.018436	7.034691	-0.617021	1.927200	15.363306	0.153674	0.154754	0.000000	15.984676	0.595369	24.807056	3.730694
Total	146.316950	83.168924	229.485874	147.084001	82.104345	229.188346	207.968218	209.548073	-12.767194	36.322867	441.071965	4.639259	4.679090	0.000000	458.674221	17.602256	733.427340	

Total Generation 458.674221 MU
Net injection 441.071965 MU
Aux 17.602256 MU