

पावर सिस्टम ऑपरेशन कॉर्पोरेशन लिमिटेड

(भारत सरकार का उद्यम)

POWER SYSTEM OPERATION CORPORATION LIMITED

(A Government of India Enterprise)



उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र : लोअर नॅगरा, लापालांग, शिलांग-793006, (मेघालय)

North Eastern Regional Load Despatch Centre: Lower Nongrah, Lapalang, Shillong - 793006, (Meghalaya)

Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerldc.org, Email - nerldc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ : उपक्षेत्रीय/ एस.ओ-2/ 2022/12/ 3389

दिनांक/Date: 29.06.22

सेवा में/To:

वितरण सूची के अनुसार / As per Distribution List

प्रतिलिपि/Copy to:

Member Secretary, NERPC, NERPC Complex, Dong Parmaw, Shillong – 793006

विषय/Sub: मई'22 महीने के लिए उत्तर-पूर्वी क्षेत्रीय ग्रिड में ग्रिड व्यवधान और ग्रिड घटनाओं की रिपोर्ट, मूल कारण विश्लेषण और उपचार-उपायों का सुझाव / Report on Grid Disturbances & Grid Incidents of North-Eastern Regional Grid, Root cause analysis and suggested remedial measures for **May'22**

महोदय / Sir,

उत्तर-पूर्वी क्षेत्रीय ग्रिड में ग्रिड व्यवधान और ग्रिड घटनाओं की रिपोर्ट मासिक आधार पर तैयार और अपलोड किया जा रहा है। मई'22 महीने के लिए उत्तर-पूर्वी क्षेत्रीय ग्रिड में ग्रिड व्यवधान और ग्रिड घटनाओं की रिपोर्ट उ.पू.क्षेत्रीय/एस.ओ.के. के वेब साइट <https://www.nerldc.in/grid-disturbance-report/> में उपलब्ध है।

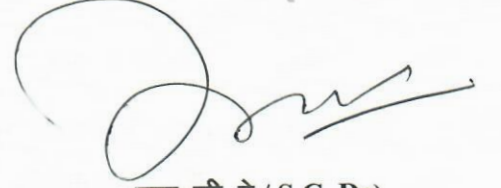
तत्वों की ट्राइपिंग, ग्रिड व्यवधान और ग्रिड घटनाओं का मूल कारण बिजली उपयोगिताओं द्वारा प्रस्तुत आंकड़ों के आधार पर पहचाना जाता है और तदनुसार इन घटनाओं के लिए उपचारात्मक उपायों का सुझाव दिया जाता है। आपके अंत में विश्लेषण के अनुसार मूल कारणों में किसी भी अंतर के मामले में, आपको 1 सप्ताह के भीतर जरूरी औचित्य के साथ मूल कारणों को अवगत कराने का अनुरोध किया जाता है।

Report on Grid Disturbances & Grid Incidents of North-Eastern Regional Grid is being prepared and uploaded in NERLDC website on monthly basis. Report on Grid Disturbances & Grid Incidents of North-Eastern Regional Grid for the month of **May'22** is available at <https://www.nerldc.in/grid-disturbance-report/>.

Root causes of tripping of elements, Grid Disturbances & Grid Incidents are identified based on the data submitted by Power Utilities and accordingly remedial measures are suggested for these events. In case of any difference in root cause as per analysis at your end, you are requested to intimate us the root cause with necessary justifications within 1 week.

सादर/With Regards

भवदीय /Yours faithfully



(एस सी डे / S.C. De)

वरिष्ठ महाप्रबंधक (एस.ओ)/ Sr. G.M. (S.O)
उपक्षेत्राधिकारी, शिलांग / NERLDC, Shillong

वितरण सूची / Distribution List:

1. Sr. Executive Engineer, SLDC T&D Division-2, Department of Power, Arunachal Pradesh- 791111
2. CGM, SLDC Assam, AEGCL, Near 132 kV Grid Substation, Kahilipara, Guwahati – 781019
3. GM, SLDC Manipur, MSPCL, Keishampat, Imphal West, Manipur - 795001
4. Superintending Engineer (SLDC), SLDC Meghalaya, NEHU Substation, Shillong – 793022
5. Superintending Engineer, SLDC Mizoram, Power House, Electric Veng, Aizawl, Mizoram – 796001
6. Executive Engineer (Transmission), SLDC Nagaland, DoP Nagaland, Electricity Colony, Full Nagarjan, Dimapur, Nagaland – 797112
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19. Sr. Mgr, PH & SY, (O&M) , Ranganadi, Hoz, Yaye, Arunachal Pradesh
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22. Sr. Mgr (Operations), AGTCCPP, R.C.Nagar, Tripura
23. Dy. Manager (Maintenance), Khandong, Umrangshu, Assam
24. Manager (Generation & Switchyard Division), Doyang, Wokha, Nagaland
25. Sr. Mgr (Electrical), PEM Division, AGBPP, NEEPCO, Bokuloni Chariali, Assam
26. Engineer(O&M), Sterlite Power Transmission limited, Bhopal, MP-462023
27. Vice President, AM, Sterlite Power Transmission limited, Bhopal, MP-462023
28. C.E.O. (Project's) Kohima Mariani Transmission Ltd. Guwahati, Assam

Grid Disturbances in NER Grid from 01-May-2022 to 31st-May-2022

| Sl. No. | Region | Affected Areas | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Along - Daporijo line. At 14:50 hrs on 19.05.2022, 132 kV Along - Daporijo line tripped. Due to tripping of this element | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards | Fault Clearing Time in msec | Violation of Regulation / Standard |
|---------|--------|--|-------------------------------|---------------------------|------------------------------|-----------------|---|----------------------|----------------|-----------------------|-----------------|------------------------------------|-----------------------------|---|
| 1 | NER | Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Pwer System | DoP, Arunachal Pradesh & DEPL | 04.05.22 13:03 | 04.05.22 13:22 | 00:19 | Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Pwer System were connected with the rest of NER Grid through 132 kV Balipara- Tenga line. At 13:03 Hrs on 04.05.22, 132 kV Balipara- Tenga line tripped. Due to tripping of this element, Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Pwer System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. 132 kV Balipara - Tenga line was declared faulty at 13:22 hrs on 04.05.22. Power was extended to Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Pwer System by charging 132 kV Balipara- Tenga line at 09:28 hrs on 05.05.22 | 8 | 20 | 0.0025 | 0.0063 | GD-I | 160 | NIL |
| 2 | NER | Karong area of Manipur Power System | MSPCL | 06.05.22 12:46 | 06.05.22 13:15 | 00:29 | Karong area of Manipur Power System was connected with the rest of NER Grid through 132 kV Imphal (MSPCL) - Karong & 132 kV Karong - Kohima lines. At 12:46 hrs on 06.05.22, 132 kV Imphal (MSPCL) - Karong & 132 kV Karong - Kohima lines tripped. Due to tripping of these elements, Karong area of Manipur Power System was separated from rest of NER Grid and subsequently collapsed due to no source available in this area. Power was extended to Karong area of Manipur Power System by charging 132 kV Imphal (MSPCL) - Karong line at 13:15 hrs on 06.05.22 | 0 | 16 | 0 | 0.0077 | GD-I | 1306 | 3 (e) of CEA Grid Standard Regulations |
| 3 | NER | Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System | P&ED, Mizoram | 06.05.22 13:17 | 06.05.22 13:25 | 00:08 | Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl - Luangmual line. 132 kV Lunglei - Melriat line was under shutdown to avoid overloading of 132 kV Aizawl-Lungmual line & 132 kV Aizawl - Kumarghat line was under ESD for clearing infringement between LOC no. 154-155. At 13:17 hrs on 06.05.22, 132 kV Aizawl-Lungmual line tripped. Due to tripping of this element, Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System by charging 132 kV Aizawl-Lungmual line at 13:25 hrs on 06.05.22 | 0 | 33 | 0 | 0.0044 | GD-I | 200 | 5.2(R) and 5.9.6 (a) of IEGC & 3 (e) of CEA Grid Standard Regulations |
| 4 | NER | 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bormagar areas of Assam Power System | AEGCL | 06.05.22 22:55 | 06.05.22 23:41 | 00:46 | 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bormagar areas of Assam Power System were connected with the rest of NER Grid through 220 kV BTPS - Rangia 1, 220 kV BTPS -Rangia 2 & 132 kV Motonga (Bhutan) - Rangia lines. 132 kV Nalbari-Barpeta line was under shutdown to avoid overloading of 132 kV BTPS-Dhaligaon D/C lines, 132 kV Sipajhar - Rowta line was under shutdown to avoid overloading of 132 kV Sonabil-Depota line & 132 kV Kamalpur-Rangia D/C lines were under shutdown to avoid overloading of ICT's at 220 kV Rangia S/S. At 22:55 hrs on 06.05.22, 220 kV BTPS - Rangia 1, 220 kV BTPS - Rangia 2 & 132 kV Motonga (Bhutan) - Rangia lines tripped. Due to tripping of these elements, 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bormagar areas of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bormagar areas of Assam Power System by charging 220 kV BTPS - Rangia 2 line at 23:41 hrs on 06.05.22 | 0 | 191 | 0 | 0.1464 | GD-I | 205 | 3 (e) of CEA Grid Standard Regulations |
| 5 | NER | Dhaligaon area of Assam Power System | AEGCL | 16.05.22 01:24 | 16.05.22 01:41 | 00:17 | Dhaligaon area of Assam Power System was connected with the rest of NER Grid through 132 kV Bongaigaon - Dhaligaon 1 & 2 lines. At 01:24 hrs on 16.05.22, 132 kV Bongaigaon - Dhaligaon 1 & 2 lines tripped. Due to tripping of these elements, Dhaligaon area of Assam Power System was separated from rest of NER Grid and subsequently collapsed due to no source available in this area. Power supply was extended to Dhaligaon area of Assam Power System by charging 132 kV Bongaigaon - Dhaligaon 1 line at 01:41 hrs on 16.05.22. | 0 | 24 | 0 | 0.0068 | GD-I | 120 | 5.9.6 (a) of IEGC |

Grid Disturbances in NER Grid from 01-May-2022 to 31st-May-2022

| Sl. No. | Region | Affected Areas | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Along - Daporijo line. At 14:50 hrs on 19.05.2022, 132 kV Along - Daporijo line tripped. Due to tripping of this element | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards | Fault Clearing Time in msec | Violation of Regulation / Standard |
|---------|--------|--|------------------------|---------------------------|------------------------------|-----------------|---|----------------------|----------------|-----------------------|-----------------|------------------------------------|-----------------------------|--|
| 6 | NER | Myndtu Leshka Generating Station of Meghalaya Power System | MePTCL and MePGCL | 18.05.22 06:21 | 18.05.22 06:32 | 00:11 | Myndtu Leshka Generating Station of Meghalaya Power System was connected with the rest of NER Grid through 132 kV Myndtu Leshka - Khleihriat 1 & 2 lines. At 06:21 hrs on 18.05.2022, 132 kV Myndtu Leshka - Khleihriat 1 & 2 lines tripped. Due to tripping of these elements, Myndtu Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path in this area. Power supply was extended to Myndtu Leshka Generating Station of Meghalaya Power System by charging 132 kV Myndtu Leshka - Khleihriat 1 & 2 lines at 06:32 hrs on 18.05.22 | 118 | 0 | 0.0216 | 0 | GD-I | 80 | 5.9.6 (a) of IEGC |
| 7 | NER | Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System | DoP, Arunachal Pradesh | 19.05.2022 14:50 | 19.05.2022 15:50 | 01:00 | Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Along - Daporijo line. At 14:50 hrs on 19.05.2022, 132 kV Along - Daporijo line tripped. Due to tripping of this element, Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas. 132 kV Along - Daporijo line was declared faulty at 15:50 hrs on 19.05.2022. Power supply was extended to Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System by charging 132 kV Along - Daporijo line at 12:33 hrs on 20.05.22 | 0 | 17 | 0 | 0.0170 | GD-I | 200 | 3 (e) of CEA Grid Standard Regulations |
| 8 | NER | Myndtu Leshka Generating Station of Meghalaya Power System | MePTCL and MePGCL | 19.05.2022 03:55 | 19.05.2022 04:06 | 00:11 | Myndtu Leshka Generating Station of Meghalaya Power System was connected with the rest of NER Grid through 132 kV Khleihriat(ME) - Leshka 2 line. 132 kV Khleihriat(ME) - Leshka 1 line tripped at 03:51 hrs on 19.05.22. At 03:55 hrs on 19.05.2022, 132 kV Khleihriat(ME) - Leshka 2 line tripped. Due to tripping of this element, Myndtu Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path in this area. Power supply was extended to Myndtu Leshka Generating Station of Meghalaya Power System by charging 132 kV Khleihriat(ME) - Leshka 2 line at 04:06 hrs on 19.05.22. | 119 | 0 | 0.0218 | 0 | GD-I | 190 | 5.9.6 (a) of IEGC & 3 (e) of CEA Grid Standard Regulations |
| 9 | NER | 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bornagar areas of Assam Power System | AEGCL | 24-05-2022 12:32 | 24-05-2022 12:40 | 00:08 | 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bornagar areas of Assam Power System were connected with the rest of NER Grid through 220 kV BTPS - Rangia 1. 220 kV BTPS - Rangia 2 was under shutdown due to corridor cleaning, 132 kV Nalbari-Barpeta line was under shutdown to avoid overloading of 132 kV BTPS-Dhaligaon D/C lines, 132 kV Sipajhar - Rowta line was under shutdown to avoid overloading of 132 kV Sonabil-Depota line, 132 kV Kahelipara - Kamalpur line was under shutdown due to system requirement. At 12:30 hrs on 24.05.22, 220 kV BTPS - Rangia 1 (132 kV Motonga (Bhutan) - Rangia hand tripped(Bhutan) at 12:32 hrs on 24.05.22) line tripped. Due to tripping of this element, 220 kV Rangia area, 132 kV Rangia, Nalbari, Sipajhar and part load of Bornagar areas of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no load available in these areas. Power extended to 132 kV Rangia, Nalbari, Sipajhar and part load of Bornagar areas of Assam Power System at 12:40 Hrs on 24.05.22 by charging 132 kV Kahelipara-Kamalpur-Rangia line. Power extended to 220kV Rangia Bus by charging 220 kV BTPS(AS)-Rangia(AS)-1 line at 13:30 hrs on 25.05.22. | 0 | 112 | 0 | 0.0149 | GD-I | 120 | NIL |

Grid Disturbances in NER Grid from 01-May-2022 to 31st-May-2022

| Sl. No. | Region | Affected Areas | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Along - Daporijo line. At 14:50 hrs on 19.05.2022, 132 kV Along - Daporijo line tripped. Due to tripping of this element | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards | Fault Clearing Time in msec | Violation of Regulation / Standard |
|---------|--------|--|-------------------------------|---------------------------|------------------------------|-----------------|---|----------------------|----------------|-----------------------|-----------------|------------------------------------|-----------------------------|--|
| 10 | NER | Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Pwer System | DoP, Arunachal Pradesh & DEPL | 28.05.22 22:29 | 28.05.22 22:53 | 00:24 | Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balipara- Tenga line. At 22:29 Hrs on 28.05.22, 132 kV Balipara- Tenga line tripped. Due to tripping of this element, Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. 132 kV Balipara - Tenga line was declared faulty at 23:53 hrs on 28.05.22. Power was extended to Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System by charging 132 kV Balipara- Tenga line at 13:12 hrs on 30.05.22 | 10 | 14 | 0.0040 | 0.0056 | GD-I | 550 | 3 (e) of CEA Grid Standard Regulations |

Grid Disturbances in NER Grid from 01-May-2022 to 31st-May-2022

| Sl. No. | Region | Name of Element | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards |
|---------|--------|-----------------------------|----------------|---------------------------|------------------------------|-----------------|---|----------------------|----------------|-----------------------|-----------------|------------------------------------|
| 1 | NER | AGBPP - Unit 2 | NEEPCO | 04-05-2022 08:48 | 04-05-2022 10:30 | 01:42 | AGBPP - Unit 2 tripped at 0848 hrs on 04-05-22 due to high vibrations of y-axis bearing of turbine. Revision done from Block No. 43 on 04-03-22. | 40 | 0 | 0.0680 | 0 | GI-2 |
| 2 | NER | AGBPP - Unit 2 | NEEPCO | 06-05-2022 16:01 | 06-05-2022 17:30 | 01:29 | AGBPP - Unit 2 tripped at 16:01 hrs on 06-05-22 due to fire trip alarm operated. Revision done from Block No. 71 on 06-05-22. | 32 | 0 | 0.0475 | 0 | GI-2 |
| 3 | NER | AGBPP - Unit 8 | NEEPCO | 09-05-2022 13:04 | 09-05-2022 15:00 | 01:56 | AGBPP - Unit 8 tripped at 16:01 hrs on 09-05-22 due to tripping of cooling fan, winding temp high alarm. Revision done from Block No. 61 on 09-05-22. | 26 | 0 | 0.0503 | 0 | GI-2 |
| 4 | NER | AGBPP - Unit 6 | NEEPCO | 12-05-2022 23:19 | 13-05-2022 01:00 | 01:41 | AGBPP - Unit 6 tripped at 23:19 hrs on 12-05-22 due to exhaust temperature spread high. Revision done from Block No. 05 on 13-05-22. | 25 | 0 | 0.0421 | 0 | GI-2 |
| 5 | NER | BGTTP - Unit 3 | NEEPCO | 13-05-2022 11:39 | 13-05-2022 13:00 | 01:21 | BGTTP - Unit 3 tripped at 11:39 hrs on 13-05-22 due to flame failure. Revision done from Block No. 53 on 13-05-22. | 227.5 | 0 | 0.3071 | 0 | GI-2 |
| 6 | NER | Palatana GT II & ST II | OTPC | 18-05-2022 20:29 | 18-05-2022 22:00 | 01:31 | Palatana GT II tripped at 20:29 hrs on 18-05-22 due to low drum level and Palatana ST II tripped due to tripping of Palatana GT II. Revision done from Block No. 89 on 18-05-22. | 216 | 0 | 0.3276 | 0 | GI-2 |
| 7 | NER | Kameng Unit I | NEEPCO | 21-05-2022 09:44 | 21-05-2022 11:30 | 01:46 | Kameng Unit I tripped at 09:44 hrs on 21-05-22 due to stator earth fault. Revision done from Block No. 47 on 21-05-22. | 151 | 0 | 0.2668 | 0 | GI-2 |
| 8 | NER | AGBPP Unit 1 & AGBPP Unit 7 | NEEPCO | 31-05-2022 08:56 | 31-05-2022 10:45 | 01:49 | AGBPP Unit 1 tripped at 08:56 hrs on 31-05-22 due to power failure at emergency bus (U/V relay optd.) and AGBPP Unit 7 tripped due to non-availability of GTG-1 and 2. Revision done from Block No. 43 on 31-05-22. | 40 | 0 | 0.0727 | 0 | GI-2 |
| 9 | NER | BgTTP Unit 3 | NTPC | 31-05-2022 13:48 | 31-05-2022 15:30 | 01:42 | BgTTP Unit 3 tripped at 13:48 hrs on 31-05-22 due to tripping of boiler due to loss of PA header. Revision done from Block No. 63 on 31-05-22. | 227.5 | 0 | 0.3868 | 0 | GI-2 |

Note: Root Cause and Remedial Measures for these events is available in the following link: <https://www.nerldc.in/root-cause-remedial-measures-of-grid-events/>

The following numbers of Grid Disturbances(GD) & Grid Incidents (GI) occurred in NER during the period w.e.f 01-May2022 to 31-May-2022 as per CEA Grid Standards

| Sl. No. | Category of GD | Total Counts |
|----------------|-----------------------|---------------------|
| 1 | GI 1 | 0 |
| 2 | GI 2 | 9 |
| 3 | GD 1 | 10 |
| 4 | GD 2 | 0 |
| 5 | GD 3 | 0 |
| 6 | GD 4 | 0 |
| 7 | GD 5 | 0 |

Note: Root Cause and Remedial Measures for these events is available in the following link:
<https://www.nerldc.in/root-cause-remedial-measures-of-grid-events/>