



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
उत्तर क्षेत्रीय विद्युत समिति
Northern Regional Power Committee

विषय: उ.क्षे.वि.स. की नवीकरणीय ऊर्जा उप-समिति की 6^{वीं} बैठक की कार्यसूची।

Subject: Agenda of the 6th meeting of Renewable Energy Sub-committee of NRPC.

उ.क्षे.वि.स. की नवीकरणीय ऊर्जा उप-समिति की 6^{वीं} बैठक का आयोजन **23.03.2026 (10:30 बजे से)** को **एनआरपीसी सचिवालय, कांफ्रेंस हॉल, नई दिल्ली** में किया जाएगा। उक्त बैठक की कार्यसूची उत्तर क्षेत्रीय विद्युत समिति की वेबसाइट <https://nrpc.gov.in> पर उपलब्ध है।

कृपया बैठक में उपस्थित होने की सुविधा प्रदान करें।

The 6th Renewable Energy sub-committee meeting of NRPC is scheduled to be held on **23.03.2026 (10:30 hrs. onwards)** at **NRPC Secretariat, Conference Hall, New Delhi**. The agenda of this meeting has been uploaded on the NRPC web-site <https://nrpc.gov.in>.

Kindly make it convenient to attend the meeting.

Digitally signed by
Omkishor

Date: 19-03-2026

16:17:21 (ओमकिशोर)

कार्यपालक अभियंता (प्रचालन)

सेवा में : उ.क्षे.वि.स. की नवीकरणीय ऊर्जा उप समिति के सभी सदस्य।

To : All Members of Renewable Energy Sub-committee of NRPC

List of addressee (via mail)

List of Members of Renewable Energy Sub-committee

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3	Northern Regional Load Despatch Center	ashokkr@grid-india.in;
4	Central Transmission Utility	sandeepk@powergrid.in;
5	Powergrid Corporation of India Ltd.	r.k.dash@powergrid.in; yashpal@powergrid.in;
6	Rajasthan Rajya Vidyut Prasaran Nigam Ltd.	se.pp@rvpn.co.in;
7	Rajasthan State Load Despatch Center	se.ldrvpl@rvpn.co.in;
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10	Indian Wind Power Association	ceo@indianwindpower.com;
ISTS connected RE generators		
11	ABC Renewable Pvt. Ltd	Aman.chaturvedi@petronas.com;
12	ABC Renewable Energy (RJ-02) Pvt. Ltd.	Aman.chaturvedi@petronas.com;
13	ACME Heeragarh powertech Pvt. Ltd	prachi.chauhan@acme.in; planthead.badisidd.solar@acme.in; ashutosh.singh@acme.in;
14	ACME Chittorgarh Solar Energy Pvt Ltd	sandeepk@ayanapower.com; yogesh@ayanapower.com;
15	ACME DEOGHAR SOLAR POWER PRIVATE LIMITED	deepak1.singh@acme.in;
16	ACME PHALODI SOLAR POWER PRIVATE LIMITED	dhruba.chhetri@acme.in;
17	ACME RAISAR SOLAR POWER PRIVATE LIMITED	dhruba.chhetri@acme.in;
18	ACME DHAULPUR SOLAR POWER PRIVATE LIMITED	balaji.r@acme.in;
19	ACME Sikar Solar Pvt. Ltd.	nitish.kumar@acme.in ;
20	Adani Hybrid Energy Jaisalmer One Ltd.	kailash.nagora@adani.com ; sanjay.bhatt@adani.com ;
21	Adani Hybrid Energy Jaisalmer Two Ltd.	
22	Adani Hybrid Energy Jaisalmer Three Ltd.	
23	Adani Hybrid Energy Jaisalmer Four Ltd.	
24	Adani Renewable Energy (RJ) limited Rawara	
25	Adani Solar Energy Jaisalmer One Pvt. Ltd., 450MW (Solar)	
26	Adani Solar Energy Four Private Limited	
27	Adani Solar Energy Jaisalmer Two Private Limited	
28	Adani Solar Energy Jaisalmer Two Private Limited Project Two	

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29	SB ENERGY FOUR PRIVATE LIMITED, Bhadla	
30	SB Energy Six Private Limited, Bhadla	
31	Adani Solar Energy Jodhpur Two Limited, Rawara	
32	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	
33	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	
35	Adani Green Energy Twenty Four Limited	
36	ADANI GREEN ENERGY TWENTY FIVE LIMITED	
37	Adani Solar Energy Jodhpur Six Pvt. Ltd.	
38	Ambuja Cements Limited_300MW	
39	Altra Xergi Pvt. Ltd.	mahendra.kumar@O2power.in;
40	XL Xergi Power Pvt. Ltd.	yudhister@o2power.in; ka.vishwanath@o2power.in;
41	AMP Energy Green Five Pvt. Ltd.	
42	AMP Energy Green Six Pvt. Ltd.	vbhattacharya@ampenergyindia.com;
43	AMP Energy Green Four Pvt. Ltd.	
44	Amplus Ages Private Limited	manish.tak@amplussolar.com;
45	Avaada RJHN_240MW	
46	Avaada sunce energy Pvt limited	
47	Avaada Sunrays Pvt. Ltd.	alpesh.prajapati@avaada.com;
48	Avaada Sustainable RJ Pvt. Ltd.	
49	Ayana Renewable Power Three Private Limited	Venkatraman@ayanapower.com;
50	Ayaana Renewable Power One Pvt. Ltd.	rajeshshukla@ayanapower.com;
51	Azure Power Forty One Pvt limited	sourin.nandi@azurepower.com;
52	Azure Power Forty Three Pvt. Ltd. PSS	manohar.reddy@azurepower.com;
53	Azure Power Forty Three Pvt. Ltd. RSS	manohar.reddy@azurepower.com;
54	Azure Maple Pvt. Ltd.	sourin.nandi@azurepower.com;
55	AZURE POWER INDIA Pvt. Ltd., Bhadla	yogesh.kumar@adani.com;
56	Azure Power Thirty Four Pvt. Ltd.	manohar.reddy@azurepower.com;
57	Clean Solar Power (Jodhpur) Pvt. Ltd.	seetaram.kumhar@herofutureenergies.com; dejendra.sharma@herofutureenergies.com;
58	Clean Solar Power (Bhadla) Pvt. Ltd	atul.tomar@herofutureenergies.com; sushant.sinha@herofutureenergies.com;
59	Eden Renewable Cite Private Limited	operation.ERCPL@eden-re.com; dejendra.Sharma@eden-re.com;
60	Eden Renewable Alma Pvt. Ltd.	
61	Energizent Power Private Limited	Bhawya.chauhan@o2power.in;
62	Gorbea Solar Pvt Ltd	varun.nadarajan@zelestra.energy; selva.kumar@zelestra.energy; sriram.mohan@zelestra.energy;
63	Grian Energy private limited	mehul.sharma@amplussolar.com;
64	Juna Renewable Energy Pvt. Ltd.	rusharma@acciona.com; npalakshaiah@acciona.com;
65	JUNIPER GREEN COSMIC	ashok.sharma@junipergreenenergy.com

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	PRIVATE LIMITED	
66	JUNIPER NIRJARA ENERGY PRIVATE LIMITED	om.cosmic@junipergreenenergy.com
67	Karinsar Solar Plant NHPC Ltd	bikanerspp@nhpc.nic.in
68	Megasolis Renewable Private Limited	pankaj.vaidya@seit.co.in; niraj.shah@seit.co.in;
69	Mega Surya Urja Pvt. Ltd. (MSUPL)	
70	NTPC Devikot Solar plant 240MW	rajivgupta@ntpc.co.in;
71	NTPC Kolayat 400kV	
72	Nedan Solar NTPC	
73	NTPC Nokh Solar	
74	NTPC Nokhra 300MW	
75	One Volt energy Pvt. Ltd.	amarjeet.thakur@amplussolar.com;
76	ReNew Solar Energy (Jharkhand Three) Private Limited	purnendu.chaubey@renew.com; kailash.pandey@renew.com;
77	RENEW SOLAR POWER Pvt. Ltd. Bhadla	
78	Renew Sun Bright Pvt. Ltd. (RSBPL)	
79	Renew Sun Waves Private Limited (RSEJ4L)	
80	Renew Surya Partap Pvt. Ltd.	
81	Renew Surya Ravi Pvt. Ltd.	
82	Renew Surya Roshni Pvt. Ltd.	
83	Renew Surya Vihan Pvt. Ltd.	
84	RENEW SOLAR POWER Pvt. Ltd. Bikaner	
85	Neemba Solar Plant Renew Surya Vihaan Pvt. Ltd.	
86	Renew Surya Jyoti Pvt. Ltd.	
87	ReNew Solar Urja Private Limited	Anilbhai.chaudhari@indigrid.com; Rohit.kashav@indigrid.com;
88	Renew Surya Ayaan Pvt. Ltd.	hiteshbhai.shiyal@indigrid.com;
89	Rising Sun Energy-K Pvt. Ltd.	tushar.gahlot@risingsunenergy.in;
90	Serentica Renewables India 4 Private Limited	ashwary.sharma@serenticaglobal.com;
91	Serentica Renewables India 5 Private Limited	
92	Khidrat Renewable Energy Pvt. Ltd.	
	SJVN Green Energy Limited	cso.sgel@sjvn.nic.in
93	Tata Power Green Energy Ltd. (TPGEL)	vinod.kumar@tatapower.com;
94	Tata Power Renewable Energy Ltd. (TPREL)	anil.pareek@tatapower.com; imran.khan@tatapower.com;
95	Thar Surya Pvt. Ltd.	vivek.reddy2@enel.com; mahendra.vishnoi2@enel.com;
96	TP Surya Pvt. Ltd.	sivanarayana@tatapower.com; sagar.potdar@tatapower.com;
97	Banderwala Solar Plant TP Surya Ltd.	arun.sahoo@tatapower.com;
98	Adept Renewable Technologies Pvt. Ltd.	kak@evrenenergy.com;
99	TRANSITION CLEANTECH SERVICES PRIVATE LIMITED	
100	TRANSITION ENERGY SERVICES PRIVATE LIMITED	
101	Transition Green Energy Private	

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	Limited	
102	Transition Sustainable Energy Services Private Limited	
103	Transition Sustainable Energy Services One Pvt Ltd	
Intra-state RE generators having capacity 250MW & above		
104	NTPC RSDCL Bhadla-1 Solar	akdixena@ntpc.co.in;
105	NTPC Bhadla-2 Solar	
106	NTPC Bhensara Solar	rakeshswami@ntpc.co.in; riteshlakra01@ntpc.co.in;
107	Adani Solar Park Bhadla	yogesh.kumar@adani.com; areprl.bhadla@adani.com;
108	RENEW HANS URJA	mahendra.singh1@renew.com; ashutosh.pandey1@renew.com;
109	RENEW Photovoltaic	
110	FORTUM SOLAR PLUS P(Ltd.)	amitavmukerjee@sprngenergy.com; magsingh@sprngenergy.com;
111	CLEAN SOLAR ENERGY	kalpesh.umaretia@o2power.in; bhawani.singh01@o2power.in;
112	Acme power (Aklera)	prachi.chauhan@acme.in; planthead.barmer.solar@acme.in;
113	Sembcorp Green Infra Private Limited	harish.daukia@sembcorp.com; leeladhar.dudi@sembcorp.com;
114	SAURYA URJA	vinod.halge@sauryaurja.com; sambit.sahoo@sauryaurja.com;
115	Suzlon	manoj.verma@suzlon.com ; nihal.singh@suzlon.com;
116	Inox Wind	indra.darji@inoxwind.com;
117	Enercon -1 & 2	jeetendra.kumar@windworldindia.com; jeetendrakumarchangani@gmail.com;

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Agenda for 6th RE sub-committee meeting of NRPC

A.1. Confirmation of Minutes

A.1.1 5th RE Sub-committee meeting was held on 06.02.2026. Minutes of the meeting were issued vide letter dt. 10.03.2026. No comments received till now.

Decision required from Forum:

The Forum may approve the minutes of 5th RE Sub-committee meeting.

A.2. Submission of periodic testing schedule of RE generators (agenda by NRPC Secretariat)

A.2.1 Regulation 40 (1) of CERC (IEGC) Regulations, 2023 stipulate that there shall be periodic tests, as required under clause (3) of this Regulation, carried out on power system elements for ascertaining the correctness of mathematical models used for simulation studies as well as ensuring desired performance during an event in the system.

A.2.2 The tests shall be performed once every five (5) years or whenever major retrofitting is done. If any adverse performance is observed during any grid event, then the tests shall be carried out even earlier, if advised by SLDC/RLDC/NLDC/RPC, as the case may be.

A.2.3 Further, Regulation 40(1)(b) stipulate that "All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule. In case of any change in the schedule, the owners shall inform the concerned RPC in advance."

A.2.4 Extract of IEGC 2023 clause 40,

"40. PERIODIC TESTING

(1) There shall be periodic tests, as required under clause (3) of this Regulation, carried out on power system elements for ascertaining the correctness of mathematical models used for simulation studies as well as ensuring desired performance during an event in the system.

(2) General provisions

(a) The owner of the power system element shall be responsible for carrying out tests as specified in these regulations and for submitting reports to NLDC, RLDCs, CEA and CTU for all elements and to STUs and SLDCs for intra-State elements.

(b) All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule. In case of any change in the schedule, the owners shall inform the concerned RPC in advance.

(c) The tests shall be performed once every five (5) years or whenever major retrofitting is done. If any adverse performance is observed during any grid event, then the tests shall be carried out even earlier, if so advised by SLDC, RLDC, NLDC, or RPC, as the case may be.

(d) The owners of the power system elements shall implement the recommendations, if any, suggested in the test reports in consultation with NLDC, RLDC, CEA, RPC and CTU.

(3) Testing requirements

The following tests shall be carried out on the respective power system elements:

TABLE 9 : TESTS REQUIRED FOR POWER SYSTEM ELEMENTS

Power System Elements	Tests	Applicability
Synchronous Generator	(1) Real and Reactive Power Capability assessment. (2) Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity (3) Model Validation and verification test for the complete Generator and Excitation System model including PSS. (4) Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions. (5) Testing of Governor performance and Automatic Generation Control.	Individual Unit of rating 100MW and above for Coal/lignite, 50MW and above gas turbine and 25 MW and above for Hydro.
Non synchronous Generator (Solar/Wind)	(1) Real and Reactive Power Capability for Generator (2) Power Plant Controller Function Test (3) Frequency Response Test (4) Active Power Set Point change test. (5) Reactive Power (Voltage / Power Factor / Q) Set Point change test	Applicable as per CEA Technical Standards for Connectivity.
HVDC/FACTS Devices	(1) Reactive Power Controller (RPC) Capability for HVDC/FACTS (2) Filter bank adequacy assessment based on present grid condition, in consultation with NLDC. (3) Validation of response by FACTS devices as per settings.	To all ISTS HVDC as well as Intra-State HVDC/FACTS, as applicable

A.2.5 NRPC secretariat vide letter dated 05.08.2025 had requested all generators, including RE generators to submit a testing schedule for the period 2024-29 in the prescribed format.

A.2.6 However, till date, the schedule for periodic testing has been received from a few RE Generators. List of generating stations from which a schedule for periodic testing has been received is attached as **Annexure-I**.

A.2.7 List of generating stations from the schedule for periodic testing has not been received is as under:

S. No.	Generating Station	S. No.	Generating Station
1	ABC Renewable Pvt. Ltd	40	Azure Power Thirty Four Pvt. Ltd.
2	ABC Renewable Energy (RJ-02) Pvt. Ltd.	41	Eden Renewable Cite Private Limited
3	ACME Heeragarh powertech Pvt. Ltd	42	Eden Renewable Alma Pvt. Ltd.
4	ACME Chittorgarh Solar Energy Pvt Ltd	43	Energizent Power Private Limited
5	ACME DEOGHAR SOLAR POWER PRIVATE LIMITED	44	Gorbea Solar Pvt Ltd
6	ACME PHALODI SOLAR POWER PRIVATE LIMITED	45	Juna Renewable Energy Pvt. Ltd.

7	ACME RAISAR SOLAR POWER PRIVATE LIMITED	46	JUNIPER GREEN COSMIC PRIVATE LIMITED
8	ACME DHAULPUR SOLAR POWER PRIVATE LIMITED	47	JUNIPER NIRJARA ENERGY PRIVATE LIMITED
9	ACME Sikar Solar Pvt. Ltd.	48	Karinsar Solar Plant NHPC Ltd
10	Adani Hybrid Energy Jaisalmer One Ltd.	49	Megasolis Renewable Private Limited
11	Adani Hybrid Energy Jaisalmer Two Ltd.	50	Mega Surya Urja Pvt. Ltd. (MSUPL)
12	Adani Hybrid Energy Jaisalmer Three Ltd.	51	NTPC Devikot Solar plant_240MW
13	Adani Hybrid Energy Jaisalmer Four Ltd.	52	NTPC Kolayat_400kV
14	Adani Renewable Energy (RJ) limited Rawara	53	Nedan Solar NTPC
15	Adani Solar Energy Jaisalmer One Pvt. Ltd. 450MW (Solar)	54	ReNew Solar Energy (Jharkhand Three) Private Limited
16	Adani Solar Energy Four Private Limited	55	Renew Sun Bright Pvt. Ltd. (RSBPL)
17	Adani Solar Energy Jaisalmer Two Private Limited	56	Renew Sun Waves Private Limited (RSEJ4L)
18	Adani Solar Energy Jaisalmer Two Private Limited Project Two	57	Renew Surya Partap Pvt. Ltd.
19	SB ENERGY FOUR PRIVATE LIMITED, Bhadla	58	Renew Surya Ravi Pvt. Ltd.
20	SB Energy Six Private Limited, Bhadla	59	Renew Surya Roshni Pvt. Ltd.
21	Adani Solar Energy Jodhpur Two Limited, Rawara	60	Renew Surya Vihan Pvt. Ltd.
22	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	61	RENEW SOLAR POWER Pvt. Ltd. Bikaner
23	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	62	Neemba Solar Plant Renew Surya Vihaan Pvt. Ltd.
24	Adani Green Energy Twenty Four Limited	63	Renew Surya Jyoti Pvt. Ltd.
25	ADANI GREEN ENERGY TWENTY FIVE LIMITED	64	ReNew Solar Urja Private Limited
26	Adani Solar Energy Jodhpur Six Pvt. Ltd.	65	Renew Surya Ayaan Pvt. Ltd.
27	Ambuja Cements Limited_300MW	66	Rising Sun Energy-K Pvt. Ltd.
28	Altra Xergi Pvt. Ltd.	67	Serentica Renewables India 4 Private Limited
29	XL Xergi Power Pvt. Ltd.	68	Serentica Renewables India 5 Private Limited
30	AMP Energy Green Five Pvt. Ltd.	69	Khidrat Renewable Energy Pvt. Ltd.
31	AMP Energy Green Six Pvt. Ltd.	70	SJVN Green Energy Limited
32	AMP Energy Green Four Pvt. Ltd.	71	Thar Surya Pvt. Ltd.
33	Ayana Renewable Power Three Private Limited	72	Adept Renewable Technologies Pvt. Ltd.
34	Ayaana Renewable Power One Pvt. Ltd.	73	TRANSITION CLEANTECH SERVICES PRIVATE LIMITED
35	Azure Power Forty One Pvt limited	74	TRANSITION ENERGY SERVICES PRIVATE LIMITED
36	Azure Power Forty Three Pvt. Ltd. PSS	75	Transition Green Energy Private Limited
37	Azure Power Forty Three Pvt. Ltd. RSS	76	Transition Sustainable Energy Services Private Limited
38	Azure Maple Pvt. Ltd.	77	Transition Sustainable Energy Services One Pvt Ltd
39	AZURE POWER INDIA Pvt. Ltd., Bhadla		

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A.2.8 In view of the above, all RE generators are requested to furnish a testing schedule for the next five years in the format attached as **Annexure-II** to seo-nrpc@nic.in.

Forum may kindly deliberate.

A.3. Submission of protection performance indices of 220 kV and above system, along with reason and corrective action taken for indices less than unity to NRPC Secretariat for the month of January-February 2026 (agenda by NRPC Secretariat)

A.3.1 As per clause 15 (6) of IEGC 2023;

- Users shall submit the following protection performance indices of the previous month to their respective RPC and RLDC on a monthly basis for 220 kV and above (132 kV and above in NER) system, which shall be reviewed by the RPC:

a) The **Dependability Index** defined as $D = Nc / Nc + Nf$

b) The **Security Index** defined as $S = Nc / Nc + Nu$

c) The **Reliability Index** defined as $R = Nc / Nc + Ni$

where,

Nc is the number of correct operations at internal power system faults,

Nf is the number of failures to operate at internal power system faults,

Nu is the number of unwanted operations,

Ni is the number of incorrect operations and is the sum of Nf and Nu

- Each user shall also submit the reasons for performance indices less than unity of the individual element-wise protection system to the respective RPC and action plan for corrective measures. The action plan will be followed up regularly in the respective RPC.

A.3.2 In the earlier PSC meeting, it was decided that each utility shall submit the performance **indices of the previous month by 7th day of the next month.**

A.3.3 Accordingly, the status of the indices reported for the month of January-February 2026 is attached as **Annexure-III & IV.**

A.3.4 It has been observed that some RE utilities are non-compliant in the submission of protection indices.

A.3.5 Further, based on the submitted data by the utilities as on date, the summary of events that caused indices less than unity is also attached as **Annexure-A.V.**

Decision required from Forum:

Forum may direct RE utilities to submit the performance indices of the previous month by 7th day of next month, element-wise, along with the reason for indices less than unity and corrective action taken.

A.4. Annual protection audit plan for FY 2026-27 (agenda by NRPC Secretariat)

A.4.1 As per clause 15 of IEGC 2023;

- *Annual audit plan for the next financial year shall be submitted by the users to their respective RPC by 31st October. The users shall adhere to the annual audit plan and report compliance of the same to their respective RPC.*

A.4.2 In view of above, all utilities were requested to submit the annual protection audit plan for FY-2026-27 latest by 31st October 2025 in 63rd, 64th, 65th PSC & in the 56th TCC & 81st NRPC meeting (held on 29-30 October, 2025).

A.4.3 Accordingly, annual audit plans submitted by utilities have been compiled (enclosed as **Annexure- A.VI**).

A.4.4 It has been observed that some RE utilities have not submitted audit plan even after passing of deadline. Further, audit report is also awaited for FY 2025-26.

Decision required from Forum:

Forum may direct RE utilities to submit an audit plan for FY 2026-27 as the deadline of 31st October 2025 has already passed. The report may be submitted where audit has been completed.

A.5. Third-party protection audit plan (agenda by NRPC Secretariat)

A.5.1 As per clause 15 of IEGC 2023:

- *All users shall also conduct third party protection audit of each sub-station at 220 kV and above (132 kV and above in NER) once in five years or earlier as advised by the respective RPC.*

A.5.2 In view of above, third party audit plans submitted by utilities have been compiled (enclosed as **Annexure-A.VII**).

A.5.3 It has been observed that some RE utilities have not submitted a third-party audit plan and a report is also awaited.

Decision required from Forum:

Forum may direct RE utilities to submit 3rd party protection audit plan. Further, utilities may update the status of 3rd party protection audit as per the submitted audit plans. Subsequently, the audit reports, along with compliance status, may be submitted to NRPC Secretariat regularly.

The forum may kindly deliberate.

A.6. Cause and mitigation of Voltage Oscillation and Voltage spikes in RE complex (Agenda by Serentica Renewables)

A.6.1 Serentica Renewables has requested a forum to deliberate upon the following:

- i. Impact of Siemens STATCOMs' voltage dead band on oscillations and scope for increasing evacuation under T-GNA post the same.

- ii. Findings on root cause analysis of RE Plants to be discussed and suggested mitigation to be deliberated. In case RE Developers have not submitted root cause analysis, deliberation on way forward and action to be taken.
- iii. Update on latest status of Rajasthan Ph III transmission projects.
- iv. Status of implementation of remedies as mentioned below, suggested by Grid India vide its Note on Restriction of Renewable Energy Generation in Northern Region ISTS RE Complex dated 03.02.2026:
 - a. Root Cause Analysis & tuning of controllers of RE plants and STATCOM
 - b. Upgrading the terminal equipment of 400 kV Bhadla – Bikaner D/C (RRVPLN) & other RVPNL lines
 - c. Interconnection of 400 kV Bikaner PG to Bikaner RS D/C (30 km) may be explored
- v. Roadmap and actionable points for increasing T-GNA margin in RJ and ensuring its monthly follow-up with deliberation in the RE Subcommittee meeting.
- vi. Considering delay in COD of Neemrana 2 S/s (expected Dec 2026) to consider an interim arrangement so as to enhance the evacuation capacity from Bikaner-2/3 substations, such as interconnection of Bikaner 3 – Neemrana 2 765kV 2xD/c (expected Dec 2026) with Sikar-II – Narela 765kV D/c line (schedule Aug 2025, expected in June 2026) so as to form Bikaner-3 – Sikar-II and Bikaner-3 – Narela sections by April 2026, or any other suitable arrangement. This may improve evacuation capacity at Bikaner-2 / 3 substations and facilitate the evacuation of RE power.

The forum may kindly deliberate.

A.7. Modification in the termination arrangement at Fatehgarh-III PS for transmission lines under schemes Rajasthan Phase-III Part F and Part G (Agenda by Resonia)

- A.7.1 Resonia has intimated that, BTL is implementing the Transmission System for Evacuation of Power from REZ in Rajasthan (20 GW) under Phase-III Part F (Part F Project).
- A.7.2 In terms of the TSA, referenced, BTL is required to implement the following elements as part of its transmission project:
 - a. Establishment of 2x1500MVA 765/400kV Substation at suitable location near Beawar along with 2x330 MVA 765kV Bus Reactor & 2x125 MVA 420kV Bus Reactor (Beawar S/s/Element 1)
 - b. LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (LILO of AC Line/Element 2)
 - c. LILO of 400 kV Kota Merta line at Beawar (LILO of KM Line/Element 3)
 - d. Fatehgarh-3 PS-Beawar 765 kV D/c along with 330 MVA Switchable line reactor for each circuit at each end of Fatehgarh-3- Beawar 765 kV D/c line (FB Line/Element 4)
 - e. ±2x300MVA STATCOM, 4x125 MVA MSC, 2x125 MVA MSR at

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Fatehgarh3 PS along with 2 nos. of 400 kV bays at Fatehgarh-3 PS (Statcom/Element 5)

A.7.3 In terms of Schedule 2 of the TSA, Element Nos. 1-4 are required to be commissioned simultaneously.

A.7.4 A meeting under the chairmanship of Chairperson, CEA was held on 20.01.2026 regarding modification in the termination arrangement at Fatehgarh-III PS for transmission lines under schemes Rajasthan Phase-III Part F and Part G. Minutes of the meeting attached as **Annexure-A.VIII**. In the meeting, M/s Resonia was requested to put best efforts to expedite the completion of the Fatehgarh-III PS - Beawar 765 kV line along With Beawar Station and its associated lines by Feb/March 2026.

A.7.5 In terms of Regulation 27(1)(c)(ii) of the CERC (Indian Electricity Grid Code) Regulations, 2023:

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

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

A.7.6 Therefore, in view of the urgent need of evacuation/ISTS transmission margins in the State of Rajasthan, to mitigate against the loss being faced by RE developers due to the recent 4.3 GW T-GNA curtailment in the Rajasthan, and in furtherance of the directions issued by the CEA to BTL, Resonia has requested for requisite certification in terms of Regulation 27(1)(c)(ii) of the CERC (Indian Electricity Grid Code) Regulations, 2023 to allow declaration of COD for the Beawar S/s, LILO of KM Line and/or LILO of AC Line ahead of the COD of other elements otherwise pre-required/required to be commissioned simultaneously.

Forum may kindly deliberate.

A.8. RE generation loss events in case of fault in the vicinity of RE complex and Low Voltage Ride Through (LVRT) & High Voltage Ride Through (HVRT) non-compliance by RE Generators at interconnection point (Agenda by NRLDC)

A.8.1 Regulations pertaining to LVRT & HVRT as per CEA (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019 are as follows.

(i). Clause B2 (3) under Part II of the Schedule for LVRT:

Quote

“The generating station connected to the grid shall remain connected to the grid when the voltage at the interconnection point on any or all phases dips up to the level depicted by the thick lines in the following curve, namely:

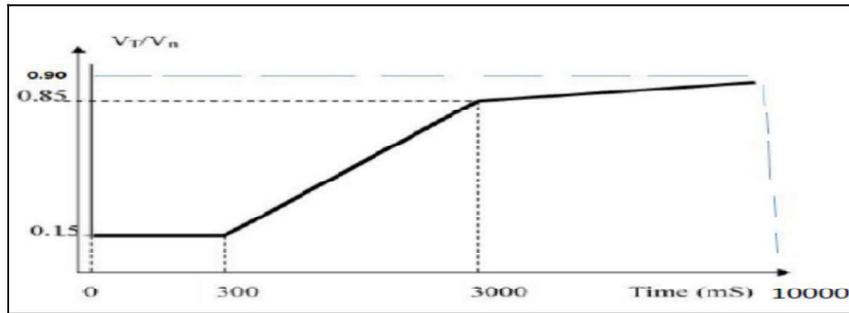


Figure 1 LVRT operating range

Provided that during the voltage dip, the supply of **reactive power has first priority**, while the supply of active power has second priority and **the active power preferably be maintained during voltage drops**, provided, a reduction in active power within the plant's design specifications is acceptable and **active power be restored to at least 90% of the pre-fault level within 1 sec** of restoration of voltage.”

Unquote

(ii). Clause B2(7) under Part II of Schedule for HVRT:

Quote

“The generating station connected to the grid, shall remain connected to the grid when the voltage at the interconnection point, on any or all phases (symmetrical or asymmetrical overvoltage conditions) rises above the specified values given below for specified time”.

Over voltage (pu)	Minimum time to remain connected (Seconds)
$1.30 < V$	0 Sec (Instantaneous trip)
$1.30 \geq V > 1.20$	0.2 Sec
$1.20 \geq V > 1.10$	2 Sec
$V \leq 1.10$	Continuous

Unquot

e

A.8.2 Further, CEA has issued the clarification on the HVRT clause vide file no. 12/X/STD/CONN/GM/2023/438 dated 06.01.2023.

Quote

“In HVRT mode, the generating station shall provide reactive power support (absorption) proportional to the voltage rise at point of interconnection. During this phase, the quantum of reactive current absorption shall be dependent on reactive current gain in the system i.e.

HVRT "K" factor. The active current and overall current shall be limited as per the transient rated current limit of the plant".

**Unquot
e**

A.8.3 **Details of RE generation loss events from on 14.01.2026 and LVRT/HVRT non-compliance of RE generators:**

The issue of renewable energy (RE) generation loss during faults in the vicinity of the RE complex and non-compliance of LVRT/HVRT requirements by RE generators at the interconnection point was thoroughly discussed in the previous meetings for the events that occurred on 14th January 2026.

The necessary action points for RE developers were outlined in the last meeting. Since then, a total **2 numbers of RE generation loss events (>1000MW)** occurred in RE complex of the Northern Region. A summary of these two (2) events is shown below;

Summary of RE Generation loss in NR (16th and 21st Feb'26):

S. No	Date & Time	Fault event	Dip in RE generation	Frequency Dip (Hz)
1	16.02.2026, 11:33Hrs	No fault was observed; however, a sharp voltage dip resulted in generation loss.	2062 MW	0.14
2	21.02.2026, 13:36Hrs	Y phase jumper snapping of 220 KV RSDCL(PSS1)_SL_BHD2 _PG-Bhadla_2 (PG)	1752 MW	0.15

The above two (2) events have been analysed in detail based on SCADA/PMU data available at NRLDC. Based on the analysis, list of LVRT/HVRT Non-compliant RE Plants, their Generation Loss quantum, and details of common inverters are given below.

A.8.4 **16th Feb 2026 event details**

- Dip of approx. 2062 MW in NR total solar generation, among which approx. 1093 MW recovered within 1 minute (dip of approx. 686 MW in Rajasthan solar generation).
- Generation loss of approx. 650 MW at RAPP-D
- Pumping loss of approx. 221 MW at Tehri PSP.

Table-1: List of LVRT/HVRT Non-compliant RE Plants and their Generation Loss quantum for 16th Feb'26, 11:33Hrs event:

Compliance Status of RE plants vis-à-vis CEA Technical Standards for Connectivity to the Grid 11:33Hrs event on 16.02.2026							
S.	Name of	Poolin	Insta	Invert	Invert	Active Power (MW)	HVRT/

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No	SPPD/Generator	g Station	lled Capacity (MW)	er/ WTG Make	er/ WTG Model	Befo re	After	Percent age Recove red immedi ately after fault	LVRT Compli ance
1	RENEW SOLAR POWER Pvt. Ltd. Bhadla	Bhadla	50+200	HUAWE I	SUN2000-95KTL-INH1	109.825	67.37	61.34	Non-Complain t
	AZURE POWER INDIA Pvt. Ltd., Bhadla			SUNGR OW/TMEIC	SG3125 HV/PVH-L2500EQ	109.825	67.37	61.34	Non-Complain t
2	Mega Suryaurja Private Limited (MSUPL)	Bhadla 2	250	SINEN G	EP3125-HA-UD	232.569	185.895	79.93	Non-Complain t
3	NTPC Kolayat 2		200	KEHUA	SPI3125K-B-H	285.64	240.195	84.09	Non-Complain t
4	Avaada Sunrays Pvt. Ltd.		320	SINEN G	SP-250K-INH	326.814	232.991	71.29	Non-Complain t
5	AMP Energy Green FIVE Pvt. Ltd.		100	SUNGR OW	SG320HX	101.436	70.714	69.71	Non-Complain t
6	SBSR Power Cleantech Eleven Private Limited (SPCEP)	Bikaner	300	KEHUA	SPI3125K-B-H	284.768	232.819	81.76	Non-Complain t
7	Azure 43		600	SUNGR OW	SG3125 HV	462	160	34	Non-Complain t
5	SINGRAULI SOLAR PV POWER STATION (SPRJ) - Nedan Solar NTPC	Fatehg arh1	296	HUAWE I	SUN2000-185KTL-INHO	287.246	205.329	71.48	Non-Complain t
6	Adani Solar Park PSS-1 (ASPS1)		250	HUAWE I	SUN2000-185KTL-H1	246.616	166.973	67.71	Non-Complain t
7	Renew Sun Bright Private Limited	Fatehg arh2	300	HUAWE I	Huawei SUN2000-	274.85	193.698	70.47	Non-Complain t

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	(RSBPL)				185KTL -INHO				
8	Adani Hybrid Energy Jaisalmer One Limited ckt1	360	Suzlon WTG	SUN2000-185KTL-H1	184.573	145.439	78.8	Non-Complaint	
	Adani Hybrid Energy Jaisalmer One Limited (ADNHB) ckt2	101	HUAWEI Siemens Gamesa WTG	Siemens Gamesa S2.2	184.573	145.439	78.8	Non-Complaint	
9	Adani Solar Energy Jaisalmer one Limited: Solar (ckt 1)	209	SUNGR OW	SG3125 HV SPI312 K-B-HUD,	143.73	122.343	85.12	Non-Complaint	
	Adani Solar Energy Jaisalmer one Limited: Solar (ckt II)	212.5	SUNGR OW	SPI312 K-B-H2	140.808	119.425	84.81	Non-Complaint	
10	ReNew Solar Energy Jharkhand Three Pvt. Ltd (RJ3PL)	300	HUAWEI	Huawei SUN2000-185KTL-INHO	281.558	223.844	79.5	Non-Complaint	
11	ReNew Solar Urja Private Limited(RSUP L)	300	SUNGR OW/TBEA	SG250 HX-IN/TS208KTL-HV	280.426	146.654	52.3	Non-Complaint	
12	Adani Hybrid Energy Jaisalmer Three Limited (AHEJ3)	300 (300+75)	TBEA	TS208 KTL-HV	274	234	85.4	Non-Complaint	
13	ReNew Sun Waves Private Limited, Fatehgarh-II (RNEWJ)	300	SUNGR OW	SG250HX-IN	279	183	65.6	Non-Complaint	

A.8.5 21st Feb 2026 event details

- Dip of approx. 1752 MW in NR total solar generation, out of which dip of approx. 467 MW in Rajasthan solar generation.
- As reported, at 13:36 hrs, 220 KV RSDCL(PSS1)_SL_BHD2_PG-Bhadla_2 (PG) (RSDCL) Ckt tripped due to snapping of the Y-phase jumper at the Tower Loc. No. 25 (exact nature of protection operation yet to be shared).
- During the same time, 220 KV ABCRenew_RJ01_SL_BHD2_PG-Bhadla_2 (PG) (ABC RJ01) Ckt also tripped on Y-B phase to phase fault (exact reason & location of fault and nature of protection operation yet to be shared).

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Table-2: List of LVRT/HVRT Non-compliant RE Plants and their Generation Loss quantum for 21st Feb'26, 13:36Hrs event:

Compliance Status of RE plants vis-à-vis CEA Technical Standards for Connectivity to the Grid 13:36Hrs event on 21.02.2026									
S. No	Name of SPPD/Generator	Pooling Station	Ins CAPACITY	Inverter/WTG Make	Inverter/WTG Model	Actual MW before tripping	Actual MW after tripping	Generation Recovered(%)	HVRT/ LVRT Compliance
1	ACME Chittorgarh Solar Energy Pvt. Ltd (ACME)	BHADLA (PG)	250	TBEA	TC375 OKF	235	207	88	Non-Complaint
2	Adani Solar Energy Four Private Limited		50	HUAW EI	SUN2 000-185KT L-H2	48	28	58	Non-Complaint
3	SB ENERGY FOUR PRIVATE LIMITED, Bhadla		200	KEHUA	SPI31 25K-B-H	180	158	88	Non-Complaint
4	Azure Power Thirty Four Pvt. Ltd.		130	TMEIC	PVH-L2500 EQ-2	134	61	46	Non-Complaint
5	Adani Hybrid Energy Jaisalmer Three Limited (AHEJ3)	Fategarh 2 (PG)	300 (300 +75)	TBEA	TS20 8KTL -HV	275	234	85	Non-Complaint
6	ReNew Solar Urja Private Limited(RSUPL)		300	SUNGROW/TBEA	SG250 HX-IN/TS208 KTL-HV	290	251	87	Non-Complaint
7	ACME RAISER	Fategarh 1(PG)	300	Sungrow	SG33 00UD -20	321	284	88	Non-Complaint
8	SINGRAULI SOLAR PV POWER STATION (SPRJ) - Nedan Solar NTPC		296	HUAW EI	SUN2 000-185KT L-INHO	300	249	83	Non-Complaint
9	Rising Sun	BHA	190	SINEN	EP-	200	140	70	Non-

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	Energy-K Pvt. Ltd.			G	3125-HB-UD				Complaint
10	ABC Renewable Energy (RJ-01) Private Limited (ABCRL)	DLA2 (PG)	300	TBEA	TC312 5KF	302	0	0	Tripped
11	NTPC Nokh Solar Project		735	Fimer / Sineng	PVS9 80-58-500-L/EP-3300-UB-UD	619	419	68	RSDCL1(24 5MW) tripped
12	Juniper Green Cosmic Private Ltd	BIKANER 2 (PG)	100	Sungrow	SG-4400-UD	101	71	70	Non-Complaint

A.8.6 Key Issues

- The drop in RE generation is primarily attributed to LVRT non-compliance of RE plants during fault events, where several plants failed to restore at least 90% of pre-fault active power within 1 second. In addition, undesirable inverter tripping has been observed in some plants, even though the POI voltage and frequency conditions did not warrant tripping.
- Despite being discussed in multiple previous meetings, adequate corrective measures from some RE developers to address the generation loss issue are still pending.
- Only a few RE developers have submitted the required information for event analysis and identification of the reasons behind generation loss and LVRT/HVRT non-compliance at the POI. Non-submission of tripping details constitutes non-compliance with IEGC Clause 37.2(c) and Clause 15.3 of the CEA Grid Standards, resulting in unresolved issues and continued non-compliance.
- The validation of plant-level simulation models using actual fault events also remains unaddressed. As per the FTC procedure, RE plants are required to validate their plant-level simulation models within three months of commissioning. However, the models submitted during connectivity/FTC often fail to represent actual plant behaviour, mainly due to incomplete modelling of inverter protections and other field-implemented elements, which can lead to abnormal tripping during fault events.

A.8.7 Suggestions for improvement:

- RE plants need to keep the settings of the Plant's internal elements (*from 220kV or 400kV evacuating line to Inverters terminal*) in coordination with Point of Interconnection (POI) as per CEA standards, to prevent tripping of any internal elements of plants (causing generation loss) when voltage and frequency at the Interconnection point remains within the No-trip zone. HVRT, over voltage, over current, Transient O/V and frequency protection settings of Inverters need to be reviewed & rectified for non-compliant RE plants.

- b. RE developers should include the requirement of IEEE 2800-2200 (i.e. No ROCOF protection in inverters) or if frequency protection or df/dt protection is there in inverters then the operation of protection should be on frequency measured by averaging the frequency of 4-5 cycle window. (*Same was suggested in 1st RE sub-committee meeting*)
- c. RE generators need to analyse the reactive power support from the Inverter during HVRT in case of any tripping of the Inverter in Over voltage, as several cases have been observed where the plant didn't absorb reactive power despite the Inverters went in HVRT and tripping on O/V.
- d. Firmware of Inverters may be updated to resolve the issue of sharp reduction in active power during fault (even despite insignificant voltage dip) and to resolve the issue of any reduction in active power during HVRT (until the transient current limit of the Inverter/WTG is not hit).
- e. Firmware of Inverters may be updated for adequate and prompt reactive power support (i.e. injection during LVRT, ceasing reactive power immediately after fault clearance and absorption during HVRT).
- f. RE generators should also analyse the events of generation loss and non-compliance of LVRT/HVRT requirements at their end, high resolution data archiving and data logging facility at least in case of fault event should be ensured at plant end for better analysis of the events, remedial actions should be taken accordingly to resolve the issue.

Drop of significant quantum of RE generation affect the grid security due to large excursion in grid frequency, hence all RE plants are requested to take serious cognizance of the issue of LVRT/HVRT non-compliance of RE plants at POI and to implement necessary corrective measures to ensure LVRT/HVRT compliance at POI, further timely submission of required details for analysing the event and to find the reason of generation loss and LVRT/HVRT non-compliance at POI must be ensured by RE plants to comply with IEGC clause 37.2(c) and CEA grid standard clause 15.3.

Forum may deliberate and discuss the further course of actions.

A.9. Voltage Oscillation and Voltage Spikes issue in RE complex (Agenda by NRLDC)

- A.9.1 Voltage Oscillation/ fluctuation observed in Rajasthan RE complex can be broadly classified into four (4) categories, same is summarized in below Table-1 and detailed case studies are present in the subsequent section.

Table-1: Four types of Voltage Oscillation/ fluctuation observed in Rajasthan RE complex

S.	Type of	Frequenc	Antecedent	Operational
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No.	Oscillation	y Range	System Condition	Observations
1	Low-Frequency Voltage Oscillations	0.1 - 0.2 Hz	High RE penetration + low SCR + RE Plants in voltage control	Generally low amplitude oscillations. Different PPC response time of RE plants operating in voltage control mode is one of the major reasons for these oscillations. PPC standardization is important to address this issue.
2	High-Frequency Voltage Oscillations (80-100kV)	3.5 - 7 Hz	High RE generation + Low SCR + STATCOM Gain Reduction	Low amplitude oscillations of > 4 Hz due to operation of RE plants in low SCR conditions. Amplification of these low frequency oscillations due to gain reduction of STATCOM. Interim solution was implemented by STATCOM OEM in all 05 STATCOMs in Rajasthan on 04 th Feb 2026. The impact of the interim solution is discussed in subsequent section.
3	Sub-Synchronous Oscillations (Both in Voltage and	~8 - 20 Hz	During very low SCR due to transmission line outages. Observed even during very low RE generation.	~16-20 Hz oscillations observed in Rajasthan RE complex while facilitating outage of 400 kV Bikaner PG - Bikaner-II D/C.

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	frequency)			
4	Large voltage dips/spikes (80-90 kV)	System-wide impact (Not cyclic)	High RE generation + Low SCR + No dynamic support from any STATCOMs, (i.e. all STATCOMs are either in Manual Fixed-Q or in Dead-band VDBCM mode)	Observed when all STATCOMs in Rajasthan are either in Fixed-Q mode or in voltage dead-band control mode. System-wide hunting observed in synchronous generators on 4 th Feb 2026 oscillation event.

A.9.2 Low fault level/SCR, improper tuning of RE plants controllers and STATCOM controllers are the major reasons for these oscillations.

A.9.3 Type-1: Low-Frequency Voltage Oscillations (0.1-0.2 Hz)

- o High RE penetration, low SCR, low voltages,
- o RE plants in voltage control mode,
- o Different response time of PPCs,
- o Triggered during high RE penetration, low voltage conditions when RE plants are in Voltage Control mode and no fast dynamic support (from STATCOM) left in the system, i.e. either STATCOMs in Manual Fixed-Q or in Dead-band control (VDBCM) mode with RE plants in Voltage control mode during High RE penetration (low SCR) scenario.
- o Signature is shown in the below PMU plot of Voltage at 765kV Bhadla-II (PG) and Bhadla (PG) as occurred on 03rd Feb'26.



Short-term mitigating measures: (Being taken by NRLDC)

1. Running RE plants in Fixed-Q mode (Compromise the dynamic reactive power support and thus needs manual intervention for managing the voltage during variability of Solar generation).

Or

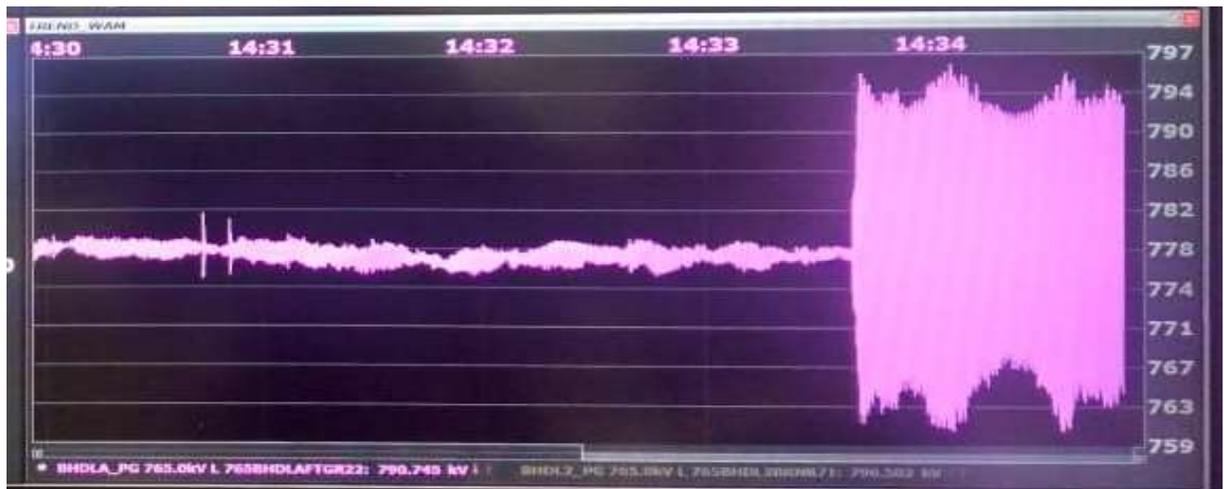
2. Running STATCOMs at Fatehgarh-II (PG) and Bhadla-II (PG) in Auto Voltage Control with single Vref (When STATCOMs run in single Vref, chances of occurrence of High-Frequency Voltage Oscillations, 3.5-5 Hz 70-80kV).

Long-term measures: (Action- RE Plants and CEA)

1. Standardization of PPC Power Plant Controllers (PPC) performance requirements.
2. Uniform communication delays and response time of RE plants.
3. Stable and quick Reactive power (MVar) response from PPC of RE plants for Voltage control, similar to the Automatic Voltage regulator (AVR) of the conventional plant.
4. Proper tuning of gain and time constant as per actual Fault level/SCR of the RE pooling S/s, and review & tuning of parameters time-to-time.

A.9.4 Type-2: High-Frequency Voltage Oscillations (3.5-7 Hz, 80-100kV)

- o High RE penetration, low SCR,
- o STATCOM in Auto Voltage Control with single Vref + low amplitude, high frequency oscillations.
- o Interaction among RE plants.
- o Signature is shown in below PMU plot of Voltage at 765kV Bhadla-II (PG) and Bhadla (PG) for 31st Jan'2026.



Short-term mitigating measures: (Being taken by NRLDC)

1. Running STATCOMs in Manual Fixed-Q mode (defeat the purpose of dynamic reactive power support from STATCOM, Occurrence of large voltage dips/spikes)-Not recommended by STATCOM OEM.

Or

- Running STATCOMs in Auto Voltage Control mode with dead-band (VDBCM) with dual Vref, i.e. Vref (inductive) and Vref (capacitive). (defeat the purpose of dynamic reactive power support from STATCOM within dead-band, Occurrence of large voltage dips/spikes)- Implemented by OEM in STATCOMs at Fatehgarh-II (on 30th Jan'26), at Bhadla-II (on 2nd Feb'26) as an interim measure.

Long-term measures: (Action- RE Plants and STATCOM OEM)

- RE plants need to perform the Root cause analysis (RCA) and needs to tune the Inverter & PPC parameters-List of RE plants published in Table No. 4 & 5 of MoM of 5th RE Sub-committee meeting those were found to have the major oscillatory reactive power as per PMU data analyses of total 14 numbers of High-Frequency Voltage oscillation events (occurred b/w Aug'25 to Jan'26).
- Individual communications were sent to 13 RE developers (24 RE plants) as per list of RE plants published in Table No. 4 of MoM of 5th RE Sub-committee meeting. As of 16.03.26, reply received only from 6 RE developers (8 RE plants), Reply is awaited for remaining 16 RE plants. Further, not a single RE developer submitted the RCA report yet, only 1 RE developer submitted the preliminary report only. Detailed status of Reply received/not received, RCA received/not received and any corrective action implemented by RE plants for the List of RE plants published in Table No. 4 & 5 of MoM of 5th RE Sub-committee is given in **Annexure-IX** and **Annexure-X**. RE plants as mentioned in Annexure-IX may update the status and actions being taken at their end.
- Permanent solutions to STATCOM gain reduction issue need to be expedited so that all the STATCOMs in the complex can be reliably kept in voltage control mode without any dead-band.

A.9.5 Type-3: Sub-Synchronous Oscillations (Both in Voltage and frequency) (8 – 20 Hz)

- o During very low SCR due to transmission line outages,
- o Observed even during very low RE generation.
- o Unique signature- Oscillation in frequency also, 0.07 Hz fluctuation in frequency.
- o Signature is shown in below PMU plot of frequency at 400kV Fatehpur (PG) for 24th Feb'2026.



Background:

- While facilitating the outage of 400 kV Bikaner (PG)-Bikaner-II D/C line for LILO at Bikaner-III from 22nd Feb to 23rd Feb 2026, severe oscillations (~20 Hz) in frequency and voltage were observed. Multiple combinations such as STATCOM mode changes, disconnection of certain RE plants with oscillatory behaviour, STATCOM switching, HVDC Balia- Bhiwadi switching etc. were attempted during this period to identify the root cause of oscillations during this period. However, the oscillations persisted till at least one circuit was taken back In-service.
- As per study, after outage of 400 kV Bikaner (PG)-Bikaner-II D/C, the fault level at 400 kV Bikaner-II is reducing from 17134 MVA (SCR-4.42) to 6870 MVA (SCR-1.77).
- Even when, the generation at Bikaner-II was very less, oscillations were observed after opening of 400 kV Bikaner(PG)-Bikaner-II D/C line, indicating stability issues of inverters to even remain connected in low fault level conditions.
- To ensure the pre-outage SCR, injection limit at Bikaner-II PS had to be restricted to 1555 MW, 801 inverters had to be disconnected to facilitate the S/D.

Short-term mitigating measures: (Being taken by NRLDC)

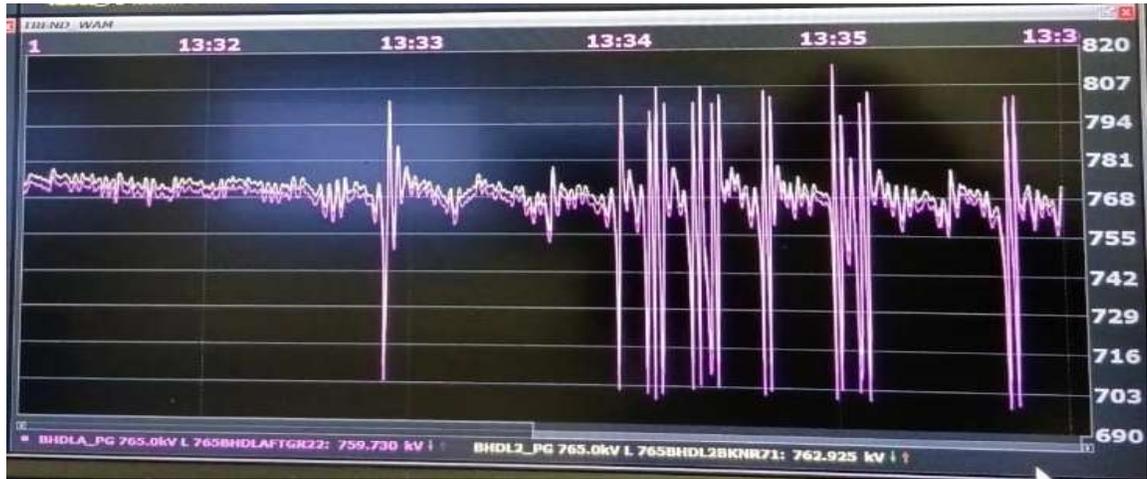
1. In case of very low SCR (<2), no other options work rather than disconnecting the number of Inverters connected at underlying network of RE Pooling S/s.

Long-term measures: (Action- CTUIL)

1. N-1 and N-2 contingency studies for RE pooling S/s to review the SCR in planning scenario and accordingly deploying the Synchronous Condenser in weak RE pooling S/s.

A.9.6 Type-4: Large voltage dips/spikes (80-90 kV) (System- wide impact, no specific frequency)

- o High RE penetration, low SCR,
- o No dynamic support from any STATCOMs, (i.e. all STATCOMs are either in Manual Fixed-Q or in Auto Voltage Control with dead-band (VCDBM) mode.
- o Intermediate dips & spikes in Voltages (80-90kV) observed on 04th Feb'2026 is shown below PMU plot;



Two case studies of 04th Feb'26 and 12th Feb'26 are shown below for providing detailed insight on the large voltage dips/spikes (80-90 kV) events in the grid.

1. Case Study for 04th Feb'2026 event: Inter-Area Oscillation Event / Large Voltage Dip & spikes Event / Interim Solution for STATCOM Issue:

- o The interim solution proposed by the STATCOM OEM to address the gain reduction and oscillation amplitude amplification was implemented by OEM in STATCOMs at Fatehgarh-II (on 30th Jan'26), at Bhadla-II (on 2nd Feb'26) and at Bikaner-II PS (on 04th Feb'26). Thus, on 04th Feb'26 morning all 5 STATCOMs in Rajasthan RE complex (02 nos. – Fatehgarh-II, 02 nos. – Bhadla-II, 01 no. – Bikaner-II) were running in Voltage dead-band Control Mode (VDBCM).
- o In the interim solution, the STATCOMs remains unresponsive within the specified dead-band but provide fast reactive power support whenever the voltage crosses dead-band.
- o On 4th Feb'26, during peak solar hours, all STATCOMs were running in Voltage dead-band Control Mode (VDBCM) as per the interim solution introduced by STATCOM OEM. Though this interim measure helped in addressing the amplification of low magnitude oscillations, the same also resulted in reduction in dynamic reactive power support.
- o Large voltage dips up to 80-90 kV were observed in the system probably due to maloperation of controller of certain RE plants and unavailability of any fast-acting reactive device support (e.g. STATCOM) to arrest such voltage spikes & dips as all STATCOMs were in dead-band (VDBCM). With reduction in dynamic reactive power support due to STATCOM dead-band, it was challenging to address these dips.
- o The inter-area oscillations and voltage dips propagated across regions and far- away located Nuclear, Thermal and Hydro generators also reported hunting.
- o As the RE generation reduction had to be implemented as an operational

measure to control the oscillations. Keeping RE plants in voltage control mode does not help in these situations either, as the support from the power plant controller (PPC) is typically received within a timeframe of 500 ms to 1 second or longer.

- o Post event analysis suggested that at least STATCOM in Rajasthan RE complex should be kept in Auto Voltage control mode without any dead-band (i.e. STATCOMs in single Vref) to provide adequate dynamic reactive power support and dynamic stability in the complex to arrest such large voltage dips/spikes. Accordingly, STATCOM at Bikaner-II PS is running in Auto Voltage control mode without any dead-band (i.e. STATCOMs in single Vref) since 05th Feb'26 onwards.
- o A detailed analysis for 4th Feb'26 event has been carried out; It has been observed that same capacity plant connected at same interconnection point exhibited different Active power (MW) and Reactive power (MVar) fluctuation in same voltage dips/spikes event. Thus, these RE plants are having some issue in controller behaviour and needs proper tuning of controller parameters and implementation other necessary corrective measures, List of these RE plants along with their detailed analysis is enclosed as **Annexure-XI**. RE plants as mentioned in Annexure-XI may update their finding on 04th Feb'26 event.

2. Case Study for 12th Feb'2026 event: Tripping of Bikaner-II STATCOM and Large Voltage Dip & Spikes Event:

- o On 12th Feb 2026, STATCOM at Bikaner-II which was being kept in voltage control mode without any dead-band to provide dynamic reactive power support tripped.
- o After tripping of STATCOM, large voltage dips similar to 4th Feb 2026 were observed in Rajasthan ISTS RE complex as remaining STATCOMs at Bhadla-II and Fatehgarh-II were running in Voltage dead-band control mode (VDBCM) with $\pm 5\%$ dead-band.
- o As Bikaner-II STATCOMs were out of the system, therefore, to address the large Voltage dip & spikes, STATCOMs at either Bhadla-II or Fatehgarh-II were required to be taken in Single Vref i.e. Voltage dead-band control mode without dead-band. However, with STATCOMs in Single Vref could cause the occurrence of High-frequency voltage oscillation. Accordingly, STATCOMs at Fatehgarh-II (PG) was first taken in Manual Fixed-Q mode and immediately STATCOMs at Bhadla-II (PG) was taken in Single Vref i.e. Voltage dead-band control mode without dead-band to provide dynamic reactive power support which helped in arresting the voltage dips & spikes. However, later this mode of STATCOM operation led to amplification of low amplitude oscillations due to which STATCOMs shifted to Fixed 'Q' mode
- o The event highlights the low system strength issues in the complex along with urgent need for fast dynamic reactive power compensation such as

STATCOMs and Synchronous Condenser.

Short-term mitigating measures: (Being taken by NRLDC)

1. At least one STATCOM in Rajasthan RE complex is being operated in Auto Voltage control mode without any dead-band (i.e. STATCOMs in single Vref). *(When STATCOMs run in single Vref, chances of occurrence of High-Frequency Voltage Oscillations, 3.5-5 Hz 70-80kV due to hunting detection and aggressive gain reduction feature of Stability controller of STATCOM).*

Long-term measures: (Action- RE plants, STATCOM OEM and CTUIL)

1. Root Cause Analysis and Fine tuning of various parameters of Inverters and PPC controllers, deploying the adequate infra to ensure the stable operation of RE plants and to mitigate and active and reactive power fluctuation issues in RE plants.
2. Permanent solution to STATCOM gain reduction issue needs to be expedited so that all the STATCOMs in the complex can be reliably kept in voltage control mode without any dead-band.
3. Expedient commissioning of planned transmission system for RE evacuation.
4. Planning for N-1 contingency of STATCOM.
5. N-1 contingency studies for RE evacuating system to review the SCR in planning scenario and ensure adequate SCR as per requirement of CEA technical standard.
6. Planning and commissioning of Synchronous Condensers or any other suitable device for improvement in fault level and dynamic reactive power support on priority
7. Deployment of grid-forming inverters on pilot basis at locations where stability issues are being observed.

Members may like to discuss.

A.10. Status of RE evacuation Phase-III transmission system:

A.10.1 The commissioning of the planned Phase-III transmission system for the evacuation of renewable energy (RE) generation from the Rajasthan RE complex, which is still pending, is critical not only for power evacuation but also for strengthening the RE pocket. It will enhance overall system stability and reduce vulnerability to fluctuations and issues at the Point of Interconnection (POI).

A.10.2 Although approximately ~3.3 GW of Phase-III RE generation capacity has already been commissioned, for which corresponding Phase-III transmission infrastructure is still pending. This mismatch is creating a major bottleneck in RE power evacuation and is resulting in curtailment of RE schedules, being treated as TGNA..

A.10.3 Commissioning of Phase-III transmission system would not only create additional margin but would also relieve constraints in the existing system.

A.10.4 PGCIL/Strelite is requested to provide an update on the status and the expected timeline of commissioning for following elements;

- i. 765kV Sikar-II-Khetri D/C line.
- ii. 765kV Sikar-II-Narela D/C line.
- iii. 765kV Fatehgarh-III-Bewar D/C (Sterlite)
- iv. 765kV Beawar-Dausa D/C
- v. LILO of both circuits of Jaipur (Phagi)-Gwalior 765 kV D/c at Dausa.
- vi. LILO of both circuits of Ajmer – Chittorgarh 765 kV D/c at Beawar.
- vii. LILO of 400kV Kota-Merta at Beawar (Sterlite).
- viii. 2*300MVAR STATCOM at Ramgarh PS.

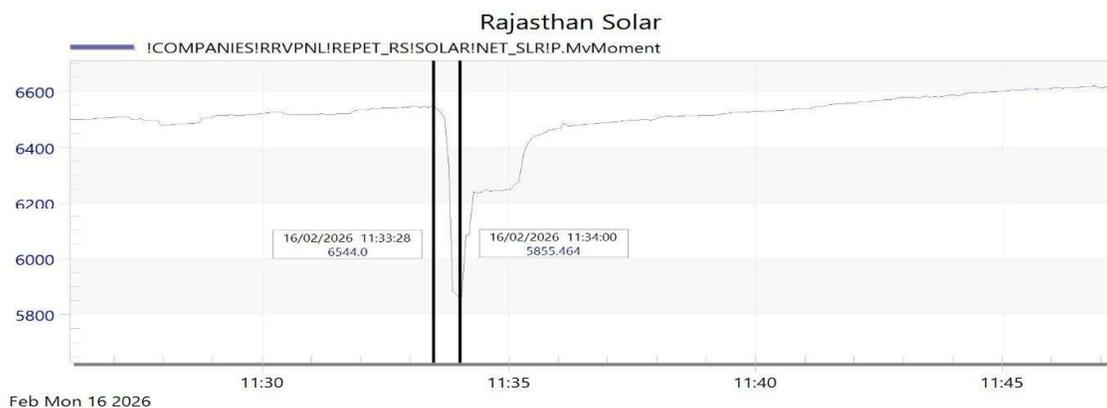
A.10.5 As on 15.03.2026. ~3.3 GW of present commissioned RE power having non effective GNA is being restricted during solar peak hrs. i.e. 11:30hrs to 14:30hrs to ensure the Grid Security and Reliability, evacuation of the restricted RE power can be facilitated with commissioning of above-mentioned Transmission elements.

Forum may discuss the present status and actual timeline of the above-mentioned Transmission elements.

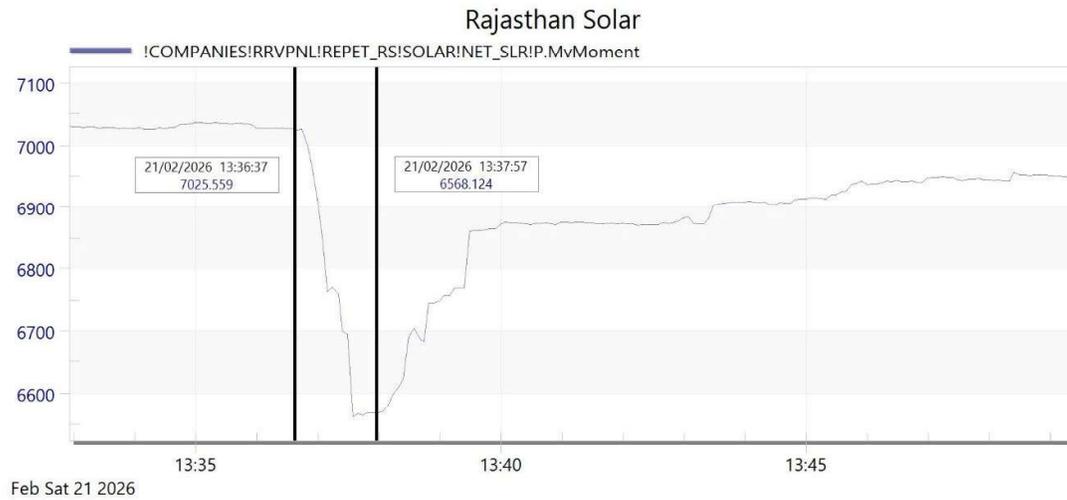
A.11. Assessment of HVRT/LVRT Compliance and Performance of RE Generators during Oscillations in Rajasthan

A.11.1 Rajasthan currently has an **installed renewable energy capacity of approximately 12,000 MW**, with **significant additional capacity under various stages of development and implementation**. With the **growing penetration of intra-state renewable generation** and the **installation of Phasor Measurement Units (PMUs) at renewable generating stations**, it has become essential to carry out **continuous performance monitoring and detailed analysis of RE plants**, particularly to assess their **compliance with HVRT/LVRT requirements**.

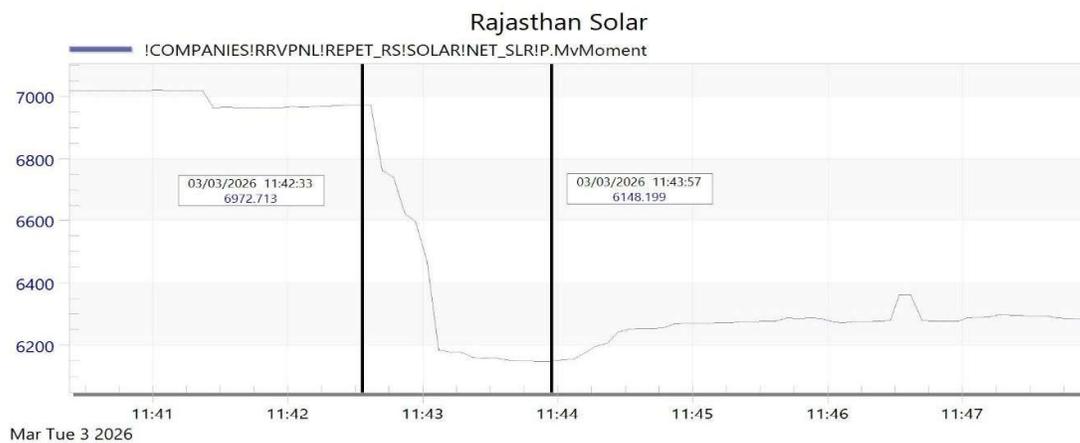
A.11.2 Furthermore, **substantial generation loss has been observed in several intra-state RE generators in Rajasthan**, making it **critical to conduct a detailed technical analysis of plant performance**. Such analysis is necessary to **identify non-compliant plants and pursue corrective actions with the respective developers to resolve the issues**.



16th Feb 2026



21st Feb 2026



3rd March 2026

A.11.3 The above three events show that significant generation loss has been observed in several intra-state RE generators in Rajasthan.

Members may like to discuss.

A.12. Unavailability of PMU Data at RE Generating Stations.

A.12.1 The availability of **PMU data** is essential for **monitoring and analysing the behaviour of renewable energy (RE) plants during grid disturbances**, including assessment of **HVRT/LVRT performance and inverter response**. However, PMU data from several RE-generating stations has been **unavailable or incomplete**, making it difficult to **accurately analyse plant performance and determine the causes of generation loss or abnormal tripping during events**.

A.12.2 An **annexure-XII** is attached, highlighting the instances of **PMU data availability for the period October to December 2025**. Concerned stakeholders are requested to **ensure the continuous availability of PMU data for effective monitoring and analysis**.

Members may like to discuss.

A.13. Protection-related issues in multiple elements tripping, detailed analysis of the events and status of remedial measures:

A.13.1. The list of major RE tripping events occurred during **January-February 2026** is attached as **Annexure-XIII**.

A.13.2. **RE plants are requested to review the above-mentioned grid events, prepare detailed analysis report and present the event details during 06th RE sub-committee meeting.** Necessary actions also need to be taken to ensure the compliance of LVRT/JVRT during any grid events.

Further, it is also emphasised that overvoltage protection setting at RE plants to be kept in coordination with the LVRT/HVRT settings at inverter level to avoid unwanted loss of RE generation.

Members may like to discuss.

A.14. Blackout event at 400/220kV Bikaner2(PG) on 22.02.2026:

A.14.1 A blackout event occurred at 400/220 kV Bikaner-II (PG) at 17:08 hrs on 22 February 2026. Consequently, all Renewable Energy (RE) plants connected at the 400 kV and 220 kV levels of Bikaner-II (PG) were also tripped. Significant drop in NR total RE generation has been observed during these events. Details report is available in **Annexure-XIV**.

A.14.2 List of transmission lines tripped during the event:

S. No	Name of Elements	Outage Time	Revival Time	Reason of tripping
1.	220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt	16:24 hrs	20:48 hrs	Tripped from Bikaner2 end only
2.	220 KV Bikaner_2 (PBTSL)-KSP_NHPC_LTD_SL_BKN2 (KSP_NHPC_LTD)	16:58 hrs	20:21 hrs	Over-voltage
3.	500 KV HVDC Balia-Bhiwadi (PG) Ckt-1	17:08 hrs	19:07 hrs	Sub synchronous resonance 81 SSR block operated
4.	500 KV HVDC Balia-Bhiwadi (PG) Ckt-2			
5.	400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1	17:08 hrs	19:40 hrs	
6.	400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2		19:38 hrs	
7.	400 KV Bikaner_2 (PBTSL)-Khetri	17:09	20:01	Over-voltage stage-

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	(PKTSL) (PBTSL) Ckt-3	hrs	hrs	1 operated at Bikaner2 end
8.	400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-4		18:50 hrs	
9.	400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt		19:13 hrs	Over-voltage stage-2 operated at Bikaner2 end
10.	220 KV ASSPL_SL_BKN2-Bikaner_2 (PBTSL) (ASSPL_BKN2) Ckt		19:44 hrs	
11.	220 KV Renew_Dinkar_SL_Bik2-Bikaner_2 (PBTSL) (Renew Dinkar_UPL) Ckt		20:19 hrs	
12.	220 KV SRI4PL_SL_BIK2_PG-Bikaner_2 (PBTSL) (SERENTICA_RI4PL_Bik2) Ckt	17:10 hrs	19:34 hrs	
13.	220 KV Bikaner_2 (PBTSL)-KHIDRAT_REPL_SL_BKN2 (KHIDRAT_REPL) Ckt		20:43 hrs	
14.	220KV Grian_BIK2_(AMPLUS)-Bikaner_2 (PBTSL) (GRIAN ENERGY PRIVATE LIMITED) Ckt		20:38 hrs	
15.	220 KV Bikaner_2 (PBTSL)-Juna_REPL_SL_BKN2 (Juna_REPL) Ckt		20:15 hrs	Due to loss of evacuation path
16.	220 KV BTPSL_SL_BIK2_PG-Bikaner_2 (PBTSL) (BANDERWALA_TPSL) Ckt		20:15 hrs	
17.	220 KV PGPL_SL_BIK2_PG-Bikaner_2 (PBTSL) (PRERAK GREENTECH PVT LTD) Ckt		19:32 hrs	

A.14.3 Preliminary observations:

- i) It has been observed that at 16:24 hrs, 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt tripped from Bikaner2 end only. The details regarding the tripping may be explained by PG.
- ii) Most of the 220kV feeders were tripped in over-voltage protection. As per NRPC protection philosophy, Over-voltage protection in all 220kV lines needs to be disabled.
- iii) KSP(NHPC) and RDUPL(IP) need to check the exact reason of huge MW fluctuation exhibited by their inverters (SINENG and SUNGROW, respectively). Root Cause Analysis of the same needs to be shared.
- iv) The remedial action taken report may be shared.

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A.14.4 It may be noted that frequent tripping of such elements affects the reliability and security of the grid. Hence, **utilities are requested to analyse the root cause of the tripping and share the remedial measures taken/being taken in this respect.**

Members may like to discuss.

A.15. Status of submission of DR/EL and tripping report for the month of January-February 2026:

A.15.1. The status of receipt of DR/EL and tripping report of utilities for the month of **January-February 2026** are attached as **Annexure-XV**.

A.15.2. ***As per IEGC clause 37.2 (c), Disturbance Recorder (DR), station Event Logger (EL), Data Acquisition System (DAS) shall be submitted within 24 hrs of the event and as per IEGC clause 37.2 (e), the user shall submit a detailed report in the case of grid disturbance or grid incidence within one (1) week of the occurrence of event to RLDC and RPC.***

A.15.3. However, it is evident from the submitted data that the reporting status is not satisfactory and needs improvement. Non-submission of DR/EL & tripping details further affects grid event analysis.

A.15.4. Members may please note and advise the concerned for the timely submission of the information.

A.15.5. **RE plants are requested to upload DR/EL of all the tripping incidents on the Web-Based Tripping Monitoring System “<http://103.7.128.184/Account/Login.aspx>” within 24 hours of the events as per IEGC clause 37.2(c) and clause 15.3 of CEA grid standard.**

A.15.6. Apart from prints of DR outputs, the corresponding COMTRADE files (.cfg/.dat) may *please also be submitted in tripping portal / through email.*

Members may like to discuss.

A.16. Non-submission of Self-audit reports

A.16.1. As per Regulation 56, Clause 2,

Quote

All users, CTU, STUs, NLDC, RLDCs, RPCs and SLDCs, power exchanges, QCAs, SNAs shall conduct annual self-audits to review compliance of these regulations and submit the reports by 31st July of every year. The self-audit report shall inter alia contain the following information with respect to non-compliance: 165 (i) Sufficient information to understand how and why the non-compliance occurred. (ii) Extent of damage caused by such non-compliance. (iii) Steps and timeline planned to rectify the same. (iv) Steps taken to mitigate any future recurrence.

Unquote

However, to date only 7 users have submitted the report.

1. TPREL CHAYAN

2. TRPEL TP Saurya
3. TPSL KSEB
4. TPSL NOORSAR
5. Altra XERGI
6. Manikaran Analytics Ltd (QCA)
7. AREH5PL

A.16.2. It is submitted for the forum's consideration that a format for the annual self-audit report to be provided by RE generators needs to be developed and may be discussed.

Members may like to discuss.

Annexure-I

Annexure-I

Renewable Energy Plants

S. No.	Name of Plant	Pooling Station Name	Installed Capacity	Type (Solar/Wind)	COD	Owner	Sector	Control Area	Inverter/WTG Make	Inverter/WTG Model	PPC Make	Real and Reactive Power Capability for Generator			Power Plant Controller Function Test			Frequency Response Test			Active Power Set Point change test			Reactive Power (Voltage / Power Factor/ Q) Set Point change test			Revised Simulation Models	Whether Revised Models Submitted	Remarks
												Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date			
1	Clean Solar Power Bhadl_R-1 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	15-02-20	Clean Solar Power Bhadl_R-1 Pvt Ltd	MNRE		Huawei	SUN2000-95KTL	Siemens	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25			
2	Clean Solar Power Bhadl_R-2 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	28-02-20	Clean Solar Power Bhadl_R-2 Pvt Ltd	MNRE		Huawei	SUN2000-95KTL	Siemens	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25			
3	Clean Solar Power Bhadl_R-3 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	10-12-19	Clean Solar Power Bhadl_R-3 Pvt Ltd	MNRE		Huawei	SUN2000-95KTL	Adaptive	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25			
4	Clean Solar Power Jodhpur Pvt Ltd	220 KV CSPJ PSS	250	Solar	21-04-22	Clean Solar Power Jodhpur Pvt Ltd	MNRE		Sungrow	SG250HX-IN B. SG2500HV	Adaptive	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27			
5	Amplus AGES	220 KV Bikaner-2 GSS	100		02-08-2024								NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029			
6	GRIAN	220 KV Bikaner-2 GSS	100		02-06-2024								NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029			
7	Onewolt	220 KV Bikaner-2 GSS	100		02-02-2024								NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029			
8	Avaada Sunce Energy Pvt. Ltd.	PGCIL, Bikaner 1	350 MW	Solar	08-Apr-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	EP-3125-HA-UD	Adaptive Engineering Pvt. Ltd.	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027			
9	Avaada Sustainable RJ Project Pvt. Ltd.	PGCIL, Bikaner 1	300 MW	Solar	11-May-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	EP-3125-HA-UD	Adaptive Engineering Pvt. Ltd.	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027			
10	Avaada RJHV Pvt. Ltd.	PGCIL, Bikaner 1	240 MW	Solar	11-May-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	EP-3125-HA-UD: 137.5 MW SP-250K-INH: 102.5 MW	Adaptive Engineering Pvt. Ltd.	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027	22-Aug	No	18-01-2027			
11	Avaada Sunrays Energy Private Limited	Bhadla-II (PG)	320 MW	Solar	10-Dec-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	SP-250K-INH	Armax Automation	23-May	No	17-01-2028	23-May	No	17-01-2028	23-May	No	17-01-2028	23-May	No	17-01-2028	23-May	No	17-01-2028			
12	Singrauli Solar		15	Solar		NTPC Limited	Central	NRLDC						23-12-2028						23-12-2028						23-12-2028			
13	Unchahar Solar		10	Solar		NTPC Limited	Central	NRLDC						23-12-2028						23-12-2028						23-12-2028			
14	Dadri Solar		5	Solar		NTPC Limited	Central	NRLDC						24-12-2028						24-12-2028						24-12-2028			
15	Auraiya Solar		20	Solar		NTPC Limited	Central	NRLDC						25-12-2028						25-12-2028						25-12-2028			
16	Auraiya Floating Solar		20	Solar		NTPC Limited	Central	NRLDC						26-12-2028						26-12-2028						26-12-2028			
17	Fardabhad Solar		5	Solar		NTPC Limited	Central	NRLDC						27-12-2028						27-12-2028						27-12-2028			
18	Anta Solar		90	Solar		NTPC Limited	Central	NRLDC						28-12-2028						28-12-2028						28-12-2028			
19	Nokh Solar-1		167	Solar		NTPC Limited	Central	NRLDC						29-12-2028						29-12-2028						29-12-2028			
20	Nokh Solar-2		245	Solar		NTPC Limited	Central	NRLDC						30-12-2028						30-12-2028						30-12-2028			
21	Nokh Solar-3		245	Solar		NTPC Limited	Central	NRLDC						31-12-2028						31-12-2028						31-12-2028			
22	TPREL (Chhayan)	PGCIL Bhadla-1	300	Solar	24-08-2021	TPREL	Power		TMEIC (TVH-L2500EQ-2)/Sungrow (SG3125HV-20)	TMEIC (TVH-L2500EQ-2)/Sungrow (SG3125HV-20)	ABB/Schneider		Yes	Aug-26		Yes	Aug-26	10-09-2025	No	Aug-26		Yes	Aug-26		Yes	Aug-26			

Status of performance indices reporting of January 2026 (Last date of submission 07.02.2026)						
S. No.	Utility		Received Status (Yes/No)	Vide mail dated	Remarks	Indices less than 1 (Yes/No)
1	ABC Renewable Pvt. Ltd	ABC R Rj01	Y	18.02.2026		No
2	ACME Heeragarh powertech Pvt. Ltd	ACME	Y	05.02.2026		Yes
3	ACME Phalodi	ACME	Y	05.02.2026		No
4	ACME Deogarh	ACME				
5	ACME Raisar	ACME				
6	ACME Dhaulpur	ACME				
7	ACME Sikar	ACME	Y	05.02.2026		Yes
8	ACME Chittorgarh Solar Energy Pvt Ltd (Ayana)	AYANA				
9	AHEJOL-Hybrid-1 Madhopura	ADANI GREEN	Y	05.02.2026		No
10	AHEJ3L - Hybrid-2B 300MW	ADANI GREEN	Y	05.02.2026		No
11	AHEJFL(AEML_250)	ADANI GREEN	Y	05.02.2026		No
12	AHEJ4L(AEML-350)	ADANI GREEN	Y	05.02.2026		No
13	ASEJ2PL(Hapasar 300MW) SPC11PL	ADANI GREEN	Y	05.02.2026		No
14	Adani Renewable Energy (RJ) Limited Rawra 200	ADANI GREEN	Y	05.02.2026		No
15	Adani Solar Energy Four Limited SECI 50	ADANI GREEN	Y	05.02.2026		No
16	Adani Solar Energy Jodhpur Two Limited Merchant 50	ADANI GREEN	Y	05.02.2026		No
17	ASEJ05PL (RJ200)	ADANI GREEN	Y	05.02.2026		No
18	ASERJ2PL - Phalodi 150 MW	ADANI GREEN	Y	05.02.2026		No
19	ASERJ01PL-Pokhran 300 MW (SB energy six)	ADANI GREEN	Y	05.02.2026		No
20	AGE25L(Badi Sid)	ADANI GREEN	Y	05.02.2026		No
21	Bhadla park - South block	ADANI GREEN	Y	05.02.2026		No
22	AGE24L (Bhimsar)	ADANI GREEN	Y	05.02.2026		No
23	AHEJ2L - Hybrid-2A 300MW	ADANI GREEN	Y	05.02.2026		No
24	ASERJ2PL - Devikot 180 MW	ADANI GREEN	Y	05.02.2026		No
25	ASEJOPL-Hybrid 450 MW	ADANI GREEN	Y	05.02.2026		No
26	Altra Xerji Pvt. Ltd.		Y	05.02.2026		No
27	AMP Energy Green Four Pvt. Ltd.	AMPIN ENERGY	Y	05.02.2026		No
28	AMP Energy Green Five Pvt. Ltd.	AMPIN ENERGY				
29	AMP Energy Green Six Pvt. Ltd.	AMPIN ENERGY				
30	Amplus Aqes Private Limited	GENTARI	Y	02.02.2026		No
31	Avaada RJHN_240MW	AVAADA	Y	05.02.2026		No
32	Avaada sunce energy Pvt limited					
33	Avaada Sustainable RJ Project Pvt. Ltd.					
34	Avaada Sunrays Pvt. Ltd.		Y	05.02.2026		No
35	Ayana Renewable Power Three Private Limited		Y	02.03.2026		No
36	Ayaana Renewable Power One Pvt. Ltd.		Y	02.03.2026		No
37	Azure Power Forty One Pvt limited					
38	Azure Power Forty Three Pvt. Ltd._RSS					
39	Azure Maple Pvt. Ltd.					
40	AZURE POWER INDIA Pvt. Ltd., Bhadla					
41	Azure Power Thirty Four Pvt. Ltd.					
42	Clean Solar Power (Jodhpur) Pvt. Ltd.	Hero Future Energies	Y	02.02.2026		No
43	Eden Renewable Cite Private Limited					
44	Grian Energy private limited	GENTARI	Y	02.02.2026		No
45	Mahindra Renewable Private Limited					
46	Mega Surya Urja Pvt. Ltd. (MSUPL)		Y	13.02.2026		No
47	AURAIYA Solar					

48	DADRI SOLAR					
49	SINGRAULI SOLAR					
50	Anta Solar					
51	Unchahar Solar					
52	NTPC Devikot Solar plant-1	NGEL	Y	05.02.2026		No
53	NTPC Devikot Solar plant-2		Y	05.02.2026		No
54	SKB NTPC -1 (250MW)	NGEL	Y	05.02.2026		No
55	SKB NTPC-2 (300MW)		Y	05.02.2026		No
56	NTPC Nokhra 300MW		Y	05.02.2026		No
57	NTPC Fatehgarh 296MW		Y	05.02.2026		No
58	One Volt energy Pvt. Ltd.	GENTARI	Y	02.02.2026		No
59	ReNew Solar Urja Private Limited	IndiGrid				
60	ReNew Solar Energy (Jharkhand Three) Private Limited		Y	04.02.2026		No
61	Neemba Renew Surya Vihan Pvt. Ltd.		Y	04.02.2026		No
62	Renew Sun Bright Pvt. Ltd. (RSBPL)					
63	Renew Surya Partap Pvt. Ltd.		Y	04.02.2026		No
64	Renew Surya jyoti Pvt. Ltd.		Y	04.02.2026		No
65	Renew Surya Ravi Pvt. Ltd.	ReNew	Y	04.02.2026		No
66	Renew Surya Roshni Pvt. Ltd.		Y	04.02.2026		No
67	Renew Surya Vihan Pvt. Ltd.		Y	04.02.2026		No
68	Renew Solar Photovoltaic Pvt Ltd		Y	04.02.2026		No
69	Renew Hans Urja Pvt Ltd.		Y	04.02.2026		No
70	RENEW SOLAR POWER Pvt. Ltd. Bikaner					
71	ReNew Dinkar Urja Pvt. Ltd.		Y	04.02.2026		No
72	Renew Surya Ayaan Pvt. Ltd.	IndiGrid				
73	Rising Sun Energy-K Pvt. Ltd.					
74	Serentica Renewables India 4 & 5 Private Limited	Serentica	Y	02.02.2026		No
75	Khidrat Renewable energy Pvt Ltd.		Y	06.02.2026		No
76	Solzen Urja Private Limited	Sekura	Y	06.02.2026		No
77	Tata Power Green Energy Ltd. (TPGEL)	TATA POWER	Y	02.02.2026		No
78	Tata Power Renewable Energy Ltd. (TPREL)		Y	02.02.2026		No
79	Banderwala Solar Plant TP Surya Ltd.		Y	02.02.2026		No
80	Thar Surya Pvt. Ltd.					
81	TRANSITION ENERGY SERVICES PRIVATE LIMITED					
82	Transition Green Energy Private Limited					
83	Transition Sustainable Energy Services Private Limited					
84	GSPL_BHDL2 (Gorbea Solar Pvt Ltd)	Zelestra	Y	06.02.2026		No
85	Prerak Greentech Pvt Limited		Y	12.02.2026		No
86	Megasolis Renewables Pvt Ltd(MSRPL)		Y	13.02.2026		No

NA
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Annexure-IV

Status of performance indices reporting of February 2026 (Last date of submission 07.03.2026)							
S. No.	Utility		Received Status (Yes/No)	Vide mail dated	Remarks	Indices less than 1 (Yes/No)	Reason submitted and corrective action taken
1	ABC Renewable Pvt. Ltd	ABC R Rj01	Y	11.03.2026		NO	NA
2	ABC Renewable Energy (RJ-02) Pvt. Ltd.						
3	ACME Heeragarh powertech Pvt. Ltd	ACME	Y	05.03.2026		Yes	No
4	ACME Phalodi	ACME	Y	05.03.2026		NO	NA
5	ACME Deogarh	ACME					
6	ACME Raisal	ACME					
7	ACME Dhaulpur	ACME					
8	ACME Sikar	ACME	Y	05.03.2026		Yes	No
9	ACME Chittorgarh Solar Energy Pvt Ltd (Ayana)	AYANA					
10	AHEJOL-Hybrid-1 Madhopura	ADANI GREEN	Y	09.03.2026		NO	NA
11	AHEJ3L - Hybrid-2B 300MW	ADANI GREEN	Y	09.03.2026		NO	NA
12	AHEJFL(AEML_250)	ADANI GREEN	Y	09.03.2026		NO	NA
13	AHEJ4L(AEML-350)	ADANI GREEN	Y	09.03.2026		NO	NA
14	ASEJ2PL(Hapasar 300MW) SPC11PL	ADANI GREEN	Y	09.03.2026		NO	NA
15	Adani Renewable Energy (RJ) Limited Rawra 200	ADANI GREEN	Y	09.03.2026		NO	NA
16	Adani Solar Energy Four Limited SECI 50	ADANI GREEN	Y	09.03.2026		NO	NA
17	Adani Solar Energy Jodhpur Two Limited Merchant 50	ADANI GREEN	Y	09.03.2026		NO	NA
18	ASEJ05PL (RJ200)	ADANI GREEN	Y	09.03.2026		NO	NA
19	ASERJ2PL - Phalodi 150 MW	ADANI GREEN	Y	09.03.2026		NO	NA
20	ASERJ01PL-Pokhran 300 MW (SB energy six)	ADANI GREEN	Y	09.03.2026		NO	NA
21	AGE25L(Badi Sid)	ADANI GREEN	Y	09.03.2026		NO	NA
22	Bhadla park - South block	ADANI GREEN	Y	09.03.2026		NO	NA
23	AGE24L (Bhimsar)	ADANI GREEN	Y	09.03.2026		NO	NA
24	AHEJ2L - Hybrid-2A 300MW	ADANI GREEN	Y	09.03.2026		NO	NA
25	ASERJ2PL - Devikot 180 MW	ADANI GREEN	Y	09.03.2026		NO	NA
26	ASEJOPL-Hybrid 450 MW	ADANI GREEN	Y	09.03.2026		NO	NA
27	Ambuja Cements Limited_300MW	ADANI GREEN					
28	Altra Xergi Pvt. Ltd.		Y	06.03.2026		NO	NA
29	XL Xergi Power Pvt. Ltd.						
30	AMP Energy Green Four Pvt. Ltd.	AMPIN ENERGY					
31	AMP Energy Green Five Pvt. Ltd.	AMPIN ENERGY					
32	AMP Energy Green Six Pvt. Ltd.	AMPIN ENERGY					
33	Amplus Ages Private Limited	GENTARI	Y	06.03.2026		NO	NA
34	Avaada RJHN_240MW	AVAADA	Y	11.03.2026		NO	NA
35	Avaada sunce energy Pvt limited						
36	Avaada Sustainable RJ Project Pvt. Ltd.						
37	Avaada Sunrays Pvt. Ltd.		Y	11.03.2026		NO	NA
38	Ayana Renewable Power Three Private Limited		Y	02.03.2026		NO	NA
39	Ayaana Renewable Power One Pvt. Ltd.		Y	02.03.2026		NO	NA
40	Azure Power Forty One Pvt limited		Y	13.03.2026		NO	NA

41	Azure Power Forty Three Pvt. Ltd._RSS						
42	Azure Power Forty Three Pvt. Ltd._PSS						
43	Azure Maple Pvt. Ltd.						
44	AZURE POWER INDIA Pvt. Ltd., Bhadla						
45	Azure Power Thirty Four Pvt. Ltd.						
46	Clean Solar Power (Jodhpur) Pvt. Ltd.	Hero Future Energies	Y	02.03.2026		NO	NA
47	Eden Renewable Cite Private Limited						
48	Eden Renewable Alma Pvt. Ltd.						
49	Energizent Power Private Limited						
50	Grian Energy private limited	GENTARI	Y	06.03.2026		NO	NA
51	Juna Renewable Energy Pvt. Ltd.						
52	Juniper Green Cosmic Private Limited						
53	Juniper Nirjara Energy Private Limited						
54	Karinsar Solar Plant NHPC Ltd	NHPC	Y	02.03.2026		NO	NA
55	Megasolis Renewables Pvt Ltd(MSRPL)						
56	Mega Surya Urja Pvt. Ltd. (MSUPL)		Y	02.03.2026		NO	NA
57	AURAIYA Solar						
58	DADRI SOLAR						
59	SINGRAULI SOLAR						
60	Anta Solar						
61	Unchahar Solar						
62	NTPC Devikot Solar plant-1	NGEL	Y	06.03.2026		NO	NA
63	NTPC Devikot Solar plant-2		Y	06.03.2026		NO	NA
64	SKB NTPC -1 (250MW)	NGEL	Y	06.03.2026		NO	NA
65	SKB NTPC-2 (300MW)		Y	06.03.2026		NO	NA
66	NTPC Nokhra_300MW		Y	06.03.2026		NO	NA
67	NTPC Fatehgarh 296MW		Y	06.03.2026		NO	NA
68	One Volt energy Pvt. Ltd.	GENTARI	Y	06.03.2026		NO	NA
69	ReNew Solar Urja Private Limited	IndiGrid					
70	ReNew Solar Energy (Jharkhand Three) Private Limited		Y	05.03.2026		NO	NA
71	Neemba Renew Surya Vihan Pvt. Ltd.		Y	05.03.2026		NO	NA
72	Renew Surya Partap Pvt. Ltd.		Y	05.03.2026		NO	NA
73	Renew Surya jyoti Pvt. Ltd.		Y	05.03.2026		NO	NA
74	Renew Surya Ravi Pvt. Ltd.	ReNew	Y	05.03.2026		NO	NA
75	Renew Surya Roshni Pvt. Ltd.		Y	05.03.2026		NO	NA
76	Renew Surya Vihan Pvt. Ltd.		Y	05.03.2026		NO	NA
77	Renew Solar Photovoltaic Pvt Ltd		Y	05.03.2026		NO	NA
78	Renew Hans Urja Pvt Ltd.		Y	05.03.2026		NO	NA
79	RENEW SOLAR POWER Pvt. Ltd. Bikaner		Y	05.03.2026		NO	NA
80	ReNew Dinkar Urja Pvt. Ltd.		Y	05.03.2026		NO	NA
81	Renew Sun Bright Pvt. Ltd. (RSBPL)	Sembcorp					
82	Renew Surya Ayaan Pvt. Ltd.	IndiGrid					
83	Rising Sun Energy-K Pvt. Ltd.						
84	Serentica Renewables India 4 & 5 Private Limited	Serentica	Y	03.03.2026		NO	NA

85	Khidrat Renewable energy Pvt Ltd.		Y	07.03.2026		NO	NA
86	SJVN Green Energy Limited						
87	Solzen Urja Private Limited	Sekura	Y	09.03.2026		NO	NA
88	Tata Power Green Energy Ltd. (TPGEL)	TATA POWER	Y	03.03.2026		NO	NA
89	Tata Power Renewable Energy Ltd. (TPREL)		Y	03.03.2026		NO	NA
90	Banderwala Solar Plant TP Surya Ltd.		Y	03.03.2026		NO	NA
91	Thar Surya Pvt. Ltd.						
92	Adept Renewable Technologies Pvt. Ltd.						
93	Transition Cleantech Services Private Limited						
94	Transition Energy Services Private Limited						
95	Transition Green Energy Private Limited						
96	Transition Sustainable Energy Services Private Limited						
97	Transition Sustainable Energy Services One Pvt Ltd						
98	GSPL_BHDL2 (Gorbea Solar Pvt Ltd)	Zelestra	Y	05.03.2026		NO	NA
99	Prerak Greentech Pvt Limited						

**Reporting of performance indices for protection System
(for element connected at 220kV and above)
Name of Utility : ACME Heergarh- MSEDCL2 Badisidd - 300 MW
Month : January-26**

S.N.	Sub-station	Unit (SPS/Line/ICT/GT/etc)	Nc	Nf	Nu	Ni	Dependability Index (D)	Security Index (S)	Reliability Index (R)	Remark
1	300 MW MSEDCL2 Badisidd	220 kV Badisidd -Bhadla-2	1	0	2	1	1	0.3	0.5	89T isolator of ICT02 (B-Phase) busbar melted, jumper melted from clamp, therefore we connect 89 C isolator of ICT02 after that we start the ICT 02, system taken False signal in malfunction at PGCIL End(Bhadla-02) so 220 kV Acme Line breaker trip in DT fault after checking found nothing.
		150 MVA PTR-1	0	0	0	0	0	0.0	0	
		150 MVA PTR-2	1	0	1	1	1	0.5	0.5	89T isolator of ICT02 (B-Phase) busbar melted due to overheat therefore isolator arching horn also melted so the total length of isolator shorted & start the burning of 89T isolator in B Phase after that jumper melted from clamp so manually trip the ICT02
		Bus coupler Bay	0	0	0	0	0	0.0	0	
		220 kV Main BUS -1	0	0	0	0	0	0.0	0	
		220 kV Main BUS -2	0	0	0	0	0	0.0	0	

Reporting of performance indices for protection System
(for element connected at 220kV and above)
Name of Utility : ACME Heergarh- MSEDCL2 Badisidd - 300 MW
Month : February-26

S.N.	Sub-station	Unit (SPS/Line/ICT/GT/etc)	Nc	Nf	Nu	Ni	Dependability Index (D)	Security Index (S)	Reliability Index (R)	Remark
1	300 MW MSEDCL2 Badisidd	220 kV Badisidd -Bhadla-2	0	0	0	0	0	0.0	0	
		150 MVA PTR-1	1	0	1	1	1	0.5	0.5	Tripped on Differential due BESS trial on date of 28.02.26
		150 MVA PTR-2	0	0	0	0	0	0.0	0	
		Bus coupler Bay	0	0	0	0	0	0.0	0	
		220 kV Main BUS -1	0	0	0	0	0	0.0	0	
		220 kV Main BUS -2	0	0	0	0	0	0.0	0	

PERFORMANCES INDICES FORM ACME Heergarh- MSEDCL2 Badisidd - 300 MW	Dependability Index (D) D=(Nc/(Nc+Nf))	0
	Security Index (S) S=(Nc/(Nc+Nu))	0
	Reliability Index (R) R=(Nc/(Nc+Ni))	0

NOTE:- Reason for performance indices less than unity is mentioned in respective element remark.

Nc - Number of correct operations at internal power system Faults.

Nf - Number of Failures to operations at internal power system Faults.

Nu - Number of unwanted operations.

Ni - Number of incorrect operations, (Ni= Nf+Nu)

**Reporting of performance indices for protection System
(for element connected at 220kV and above)**

Name of Utility : ACME Sikar Solar Pvt Ltd-300 MW

Month : Feb-26

S.N.	Sub-station	Unit (SPS/Line/ICT/GT/etc)	Nc	Nf	Nu	Ni	Dependability Index (D)	Security Index (S)	Reliability Index (R)	Remark
1	300 MW Sikar Nokha	220 kV Sikar -Bikaner-2	2	0	2	2	1	0.5	0.5	Grid fail due to Voltage fluctuation
		150 MVA PTR-1	1	0	1	1	1	0.5	0.5	PTR-1 trip due to HV Box abnormal sound
		150 MVA PTR-2	0	0	0	0	0	0	0	
		Bus coupler Bay	0	0	0	0	0	0	0	
		220 kV Main BUS -1	0	0	0	0	0	0	0	
		220 kV Main BUS -2	0	0	0	0	0	0	0	

PERFORMANCES INDICES FORM ACME Sikar Solar Pvt Ltd-300 MW	Dependability Index (D) D=(Nc/(Nc+Nf))	0
	Security Index (S) S=(Nc/(Nc+Nu))	0
	Reliability Index (R) R=(Nc/(Nc+Ni))	0

NOTE:- Reason for performance indices less than unity is mentioned in respective element remark.

Nc - Number of correct operations at internal power system Faults.

Nf - Number of Failures to operations at internal power system Faults.

Nu - Number of unwanted operations.

Ni - Number of incorrect operations, (Ni= Nf+Nu)

Status of Internal Protection Audit Plan for FY 2026 -27				
S. No.	Organization/Plant	Category	Status	Schedule submitted as per utility
1	ABC Renewable Pvt. Ltd		Received	20-09-2026
2	ABC Renewable Energy (RJ-02) Pvt. Ltd.			
3	ACME Heeraqarh powertech Pvt. Ltd	ACME	Received	Jan-27
4	ACME Pholodi	ACME	Received	
5	ACME Deagarh	ACME		Jan-27
6	ACME Raisar	ACME		
7	ACME Dhoulpar	ACME		
8	ACME Sikar	ACME	Received	Jan-27
9	ACME Chittorgarh Solar Energy Pvt Ltd	AYANA		
10	Adani Hybrid Energy Jaisalmer One Ltd.	AGEL	Received	16-07-2026
11	Adani Hybrid Energy Jaisalmer Two Ltd.	AGEL	Received	25-07-2026
12	Adani Hybrid Energy Jaisalmer Three Ltd.	AGEL	Received	08-08-2026
13	Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 1 -350)	AGEL	Received	15-08-2026
14	Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 2 -250)	AGEL	Received	11-09-2026
15	Adani Renewable Energy (RJ) limited Rawara	AGEL	Received	26-09-2026
16	Adani Solar Enegy Four Private Limited	AGEL	Received	26-09-2026
17	Adani Solar Energy Jaisalmer Two Private Limited Project Two	AGEL	Received	17-10-2026
18	SB Energy Six Private Limited, Bhadla	AGEL	Received	28-10-2026
19	Adani Solar Enegy Jodhpur Two Limited, Rawara	AGEL	Received	26-09-2026
20	Adani Solar Energy Jaisalmer One Ltd. (Hybrid450)	AGEL	Received	03-10-2026
21	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	AGEL	Received	07-11-2026
22	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	AGEL	Received	14-11-2026
23	Adani Green Energy 24 Limited (Bhimsar)	AGEL	Received	26-11-2026
24	Adani Green Twenty-Five Limited (Badisid)	AGEL	Received	04-12-2026
25	Bhadla park - South block	AGEL	Received	16-12-2026
26	AEML-250 WIND (Hybrid-2A)	AGEL	Received	16-09-2026
27	AEML-260 WIND (Hybrid-2B)	AGEL	Received	20-09-2026
28	Hybrid450-WIND (SBE Hybrid 450)	AGEL	Received	07-10-2026
29	Ambuja Cements Limited 300MW	AGEL		
30	Altra Xergi Pvt. Ltd.			
31	XL Xergi Power Pvt. Ltd.			
32	AMP Energy Green Four Pvt. Ltd.			
33	AMP Energy Green Five Pvt. Ltd.			
34	AMP Energy Green Six Pvt. Ltd.			
35	Amplus Ages Private Limited	Gentari	Received	31-12-2026
36	Avaada RJHN 240MW	Avaada	Received	Aug-26
37	Avaada sunce energy Pvt limited	Avaada	Received	Aug-26
38	Avaada Sunrays Pvt. Ltd.	Avaada	Received	Aug-26
39	Avaada Sustainable RJ Pvt. Ltd.	Avaada	Received	Aug-26
40	Ayana Renewable Power Three Private Limited			
41	Ayaana Renewable Power One Pvt. Ltd.			
42	Azure Power Forty One Pvt limited			
43	Azure Power Forty Three Pvt. Ltd. RSS			
44	Azure Power Forty Three Pvt. Ltd. PSS			
45	Azure Maple Pvt. Ltd.			
46	AZURE POWER INDIA Pvt. Ltd., Bhadla			
47	Azure Power Thirty Four Pvt. Ltd.			
48	Clean Solar Power (Jodhpur) Pvt. Ltd.	Hero Future Energies	Received	May, 2026
49	Eden Renewable Cite Private Limited			
50	Eden Renewable Alma Pvt. Ltd.			
51	Energizent Power Private Limited			
52	Grian Energy private limited	Gentari	Received	31-12-2026
53	Juna Renewable Energy Pvt. Ltd.			
54	Juniper Green Cosmic Private Limited			
55	Juniper Nirjara Energy Private Limited			
56	Karinsar Solar Plant NHPC Ltd	NHPC		
57	Megasolis Renewables Pvt Ltd(MSRPL)			
58	Mega Surya Urja Pvt. Ltd. (MSUPL)			
59	AURAIYA Solar			
60	DADRI SOLAR			
61	SINGRAULI SOLAR			
62	Anta Solar			
63	Unchahar Solar			
64	NTPC Devikot Solar plant 240MW	NGEL	Received	15-05-2026
65	NTPC Kolayat (SKB -1)	NGEL	Received	31-05-2026
66	NTPC Kolayat (SKB-2)	NGEL	Received	30-11-2026
67	Nedan Solar NTPC	NGEL	Received	15-05-2026
68	NTPC Nokhra 300MW	NGEL	Received	31-08-2026
69	One Volt energy Pvt. Ltd.	Gentari	Received	31-12-2026
70	ReNew Solar Urja Private Limited (IndiGrid)	IndiGrid		
71	Renew Surya Ayaan Pvt. Ltd. (IndiGrid)	IndiGrid		
72	ReNew Solar Energy (Jharkhand Three) Private Limited	ReNew	Received	24/11/2026
73	RENEW SOLAR POWER Pvt. Ltd. Bikaner	ReNew	Received	17/11/2026
74	Renew Surya Partap Pvt. Ltd.	ReNew	Received	21/11/2026
75	Renew Surya Ravi Pvt. Ltd.	ReNew	Received	18/11/2026
76	Renew Surya Roshni Pvt. Ltd.	ReNew	Received	24/11/2026
77	Renew Surya Vihan Pvt. Ltd.	ReNew		
78	Renew Solar Photovoltaic Pvt Ltd	ReNew		
79	Renew Hans Urja Pvt Ltd	ReNew		
80	Renew Surya Jyoti Pvt Ltd	ReNew	Received	15/10/2026
81	Neemba Renew Surya Vihan Pvt Ltd	ReNew	Received	15/10/2026
82	ReNew Dinkar Urja Pvt. Ltd.	ReNew		

83	Renew Sun Bright Pvt. Ltd. (RSBPL)	Sembcorp	Received (submitted by ReNew)	19/11/2026
84	Rising Sun Energy-K Pvt. Ltd.			
85	Serentica Renewables India 4 Private Limited	Serentica	Received	Sep-26
86	Serentica Renewables India 5 Private Limited	Serentica	Received	Sep-26
87	Khidrat Renewable energy Pvt Ltd.	Serentica	Received	Jun-26
88	SJVN Green Energy Limited	SJVN		
89	Solzen Urja Private Limited	Sekura	Received	November, 2026
90	Tata Power Green Energy Ltd. (TPGEL) (225MW)	Tata Power	Received	31-03-2027
91	Tata Power Renewable Energy Ltd. (TPREL) (300MW)	Tata Power	Received	31-03-2027
92	Thar Surya Pvt. Ltd.			
93	TP Surya Ltd., Noorsar (110MW)	Tata Power	Received	31-03-2027
94	Banderwala Solar Plant TP Surya Ltd. (300MW)	Tata Power	Received	31-03-2027
95	Adept Renewable Technologies Pvt. Ltd.			
96	Transition Cleantech Services Private Limited			
97	Transition Energy Services Private Limited			
98	Transition Green Energy Private Limited			
99	Transition Sustainable Energy Services Private Limited			
100	Transition Sustainable Energy Services One Pvt Ltd			
101	Gorbea Solar Pvt Ltd (GSPL)		Received	Oct-26
102	Prerak Greentech Private Limited (PGPL)			

Status of 3rd Party Protection Audit Plan								
S. No.	Organization/Plant	Category	Status	Schedule submitted as per utility	Present Status Completed (yes/no)	Report Submission Date by audit party	Discussion held in PSC meeting number	Compliance status
1	ABC Renewable Pvt. Ltd							
2	ABC Renewable Energy (RJ-02) Pvt. Ltd.							
3	ACME Heeragarh powertech Pvt. Ltd	ACME	Received	2027				
4	ACME Pholodi	ACME	Received	2028				
5	ACME Desigarh	ACME						
6	ACME Raisar	ACME						
7	ACME Dhoulpar	ACME						
8	ACME Sikar	ACME	Received	2028				
9	ACME Chittoraarh Solar Energy Pvt Ltd	Ayana						
10	Adani Hybrid Energy Jaisalmer One Ltd.		5 years have not completed since commissioning					
11	Adani Hybrid Energy Jaisalmer Two Ltd.		5 years have not completed since commissioning					
12	Adani Hybrid Energy Jaisalmer Three Ltd.		5 years have not completed since commissioning					
13	Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 1-350)		5 years have not completed since commissioning					
14	Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 2-250)		5 years have not completed since commissioning					
15	Adani Renewable Energy (RJ) limited Rawara		Received	15-01-2026				
16	Adani Solar Energy Four Private Limited		5 years have not completed since commissioning					
17	Adani Solar Energy Jaisalmer Two Private Limited Project Two		5 years have not completed since commissioning					
18	SB Energy Six Private Limited, Bhadia		5 years have not completed since commissioning					
19		AGEL						
20	Adani Solar Energy Jodhpur Two Limited, Rawara		5 years have not completed since commissioning					
21	Adani Solar Energy Jaisalmer One Ltd. (Hybrid450)		5 years have not completed since commissioning					
22	Adani Solar Energy RJ Two Pvt. Ltd. (Devkot)		5 years have not completed since commissioning					
23	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)		5 years have not completed since commissioning					
24	Adani Green Energy 24 Limited (Bhimsar)		5 years have not completed since commissioning					
25	Adani Green Twenty-Five Limited (Badisid)		5 years have not completed since commissioning					
26	Bhadia park - South block		Received	28-01-2026				
27	AEML-250 WIND (Hybrid-2A)		5 years have not completed since commissioning					
28	AEML-260 WIND (Hybrid-2B)		5 years have not completed since commissioning					
29	Hybrid450-WIND (SBE Hybrid 450)		5 years have not completed since commissioning					
30	Ambuja Cements Limited 300MW		5 years have not completed since commissioning					
31	Altra Xeral Pvt. Ltd.		Conducted					
32	XL Xeral Power Pvt. Ltd.		Completed		Completed	04.02.2025	60	
33	AMP Energy Green Four Pvt. Ltd.		Received	Nov-27	Completed for common submission			
34	AMP Energy Green Five Pvt. Ltd.		Received	Nov-27		02.09.2025	63	
35	AMP Energy Green Six Pvt. Ltd.		Received	31-12-2028				
36	Amplus Aps Private Limited		Received	31-12-2028				
37	Avaada RJHN 240MW		Received	Aug-26				
38	Avaada sunce energy Pvt limited		Received	Aug-26				
39	Avaada Sunrays Pvt. Ltd.		Received	Aug-27				
40	Avaada Sustainable RJ Pvt. Ltd.		Received	Aug-26				
41	Ayana Renewable Power Three Private Limited		Conducted		24.05.2025		61	
42	Ayana Renewable Power One Pvt. Ltd.		Conducted				59	
43	Azure Power Forty One Pvt limited							
44	Azure Power Forty Three Pvt. Ltd. RSS							
45	Azure Power Forty Three Pvt. Ltd. PSS							
46	Azure Maple Pvt. Ltd.							
47	Azure Power India Pvt. Ltd., Bhadia							
48	Azure Power Thirty Four Pvt. Ltd.							
49	Clean Solar Power (Jodhpur) Pvt. Ltd.	Hero Future Energies	Received	Dec-26				
50	Eden Renewable Cite Private Limited							
51	Eden Renewable Alma Pvt. Ltd.							
52	Energizent Power Private Limited							
53	Grian Energy private limited		Received	31-12-2028				
54	Juna Renewable Energy Pvt. Ltd.							
55	Juniper Green Cosmic Private Limited							
56	Juniper Niraja Energy Private Limited							
57	Karinsar Solar Plant NHPC Ltd	NHPC						
58	Megasolis Renewables Pvt Ltd(MSRPL)							
59	Mega Surya Urja Pvt. Ltd. (MSUPL)							
60	AURAYA Solar							
61	DADRI SOLAR							
62	SINGRAULI SOLAR							
63	Anta Solar							
64	Unchahar Solar							
65	NTPC Devkot Solar plant 240MW		Received	Aug-26				
66	NTPC Kodayat 400KV		Received	May-26				
67	Nedra Solar NTPC		Received	Jul-26				
68	NTPC Nokhra 300MW		Received	Jun-26				
69	One Volt energy Pvt. Ltd.		Received	31-12-2028				
70	ReNew Solar Urja Private Limited	IndiGrid						
71	Renew Surya Ayaan Pvt. Ltd.	IndiGrid	Received					
72	ReNew Solar Energy (Jharkhand Three) Private Limited	ReNew	Not Applicable as Plant running on 33kV	29-01-2027				
73	RENEW SOLAR POWER Pvt. Ltd. Bhadia	ReNew	Received	22-07-2029				
74	Renew Surya Partap Pvt. Ltd.	ReNew	Received	24-07-2027				
75	Renew Surya Ravi Pvt. Ltd.	ReNew	Received	09-04-2029				
76	Renew Surya Roshni Pvt. Ltd.	ReNew	Received	27-08-2029				
77	Neemba Renew Surya Vihan Pvt Ltd	ReNew	Received	30-09-2030				
78	ReNew Surya Jyoti Pvt. Ltd.	ReNew	Received	10-11-2030				
79	Renew Solar Photovoltaic Pvt Ltd	ReNew	STU-connected projects					
80	ReNew Hans Urja Pvt Ltd.	ReNew	STU-connected projects					
81	RENEW SOLAR POWER Pvt. Ltd. Bikaner	ReNew	awaited the PO					
82	ReNew Dimkar Urja Pvt. Ltd.	ReNew						
83	Renew Sun Bright Pvt. Ltd. (RSBPL)	Sembcorp	Received (submitted by ReNew)	16-04-2027				
84	Rising Sun Energy-K Pvt. Ltd.							
85	Serentica Renewables India 4 Private Limited		Received	Mar-29				
86	Serentica Renewables India 5 Private Limited		Received	Mar-29				
87	Khindri Renewable energy Pvt Ltd.		Received	Jun-30				
88	SUN Green Energy Limited	SUN						
89	Solzen Urja Private Limited		Received	Oct-26				
90	Tata Power Green Energy Ltd. (TPGEL) (225MW)		Received	31-03-2027				
91	Tata Power Renewable Energy Ltd. (TPREL) (300MW)		Received	31-03-2027				
92	Thar Surya Pvt. Ltd.							
93	TP Surya Ltd., Noorsar (110MW)		Received	31-03-2027				
94	Bandarwala Solar Plant TP Surya Ltd. (300MW)		Received	31-03-2027				
95	Adapt Renewable Technologies Pvt. Ltd.							
96	Transition Cleantech Services Private Limited							
97	Transition Energy Services Private Limited							
98	Transition Green Energy Private Limited							
99	Transition Sustainable Energy Services Private Limited							
100	Transition Sustainable Energy Services One Pvt Ltd							
101	Gorbea Solar Pvt Ltd (GSPL)							
102	Prerak Greentech Private Limited (PGPL)							



Annexure-VIII

भारत सरकार
Government of India

विद्युत मंत्रालय
Ministry of Power

केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन-I प्रभाग
Power System Planning & Appraisal-I Division

सेवा में / To,

1. COO (CTUIL), Plot No. 16, IRCON International Tower, Institutional Area, Sector 32, Gurugram, Haryana-122001
2. Director (System Operation), Grid- India, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110010
3. Director (Projects), POWERGRID, Saudamini, Sector 29, Gurgaon, Haryana-122001
4. Sh. T. Amarendra Nath Reddy, M/s Resonia, RMZ Infinity, 5th Floor, Plot No. 15, Udyog Vihar, Gurugram, Haryana-122015

विषय/Subject: Meeting to discuss the modification in the termination arrangement at Fatehgarh-III PS for transmission lines under schemes Rajasthan Phase-III Part F and Part G

महोदय / Sir,

Please find enclosed the minutes of the meeting held on 20.01.2026 under the Chairperson, CEA regarding modification in the termination arrangement at Fatehgarh-III PS for transmission lines under schemes Rajasthan Phase-III Part F and Part G.

संलग्न / Encl. - उपरोक्त / as above

भवदीय / Yours faithfully,
Digitally signed by
Nitin Deswal
Date: 30-01-2026

(नितिन देसवाल / Nitin Deswal)

उप निदेशक / Deputy Director

Copy to:

1. SA to Chairperson, CEA
2. SA to Member (PS), CEA
3. Chief Engineer (PSPM)

Minutes of the meeting held on 20.01.2026 under the Chairperson, CEA regarding modification in the termination arrangement at Fatehgarh-III PS for transmission lines under schemes Rajasthan Phase-III Part F and Part G

List of participants is enclosed at **Annexure-I**.

Background:

The transmission scheme 'Rajasthan Phase-III (20 GW) Part F' is being implemented by Beawar Transmission Limited (BTL) under TBCB with inter alia following elements:

- Establishment of 2x1500 MVA, 765/400kV Beawar Substation
- LILO of both circuit of Ajmer - Chittorgarh 765 kV D/c line at Beawar
- LILO of 400 kV Kota – Merta line at Beawar
- Fatehgarh-III – Beawar 765 kV D/c line (*Developer of Fatehgarh-III S/s to provide 2 nos. of 765 kV line bays at Fatehgarh-III S/s*)

The transmission scheme 'Rajasthan Phase-III (20 GW) Part G' is being implemented by Fatehgarh-III Beawar Transmission Limited (F3BTL) under TBCB with inter alia following elements:

- Fatehgarh-III – Beawar 765 kV D/c (2nd) line
- 2 nos. of 765 kV line bays at both at Beawar & Fatehgarh-III PS

Beawar Transmission Limited (BTL) and Fatehgarh-III Beawar Transmission Limited (F3BTL) are subsidiaries of M/s Resonia Limited. Further, Fatehgarh-III – Beawar 765 kV D/c (1st) line (being implemented by BTL) is to be terminated at Fatehgarh-III PS in Bay Nos. 701 & 704 (bays being implemented by owner of Fatehgarh-III PS i.e. POWERGRID). The Fatehgarh-III – Beawar 765 kV D/c (2nd) line (being implemented by F3BTL) is to be terminated at Fatehgarh-III PS in Bay Nos. 713 & 716 (bays being implemented by F3BTL).

M/s Resonia vide letter dated 13.01.2026 has informed that the both the Fatehgarh-III – Beawar 765 kV D/c lines are nearing completion and corresponding bays at Fatehgarh-III PS are completed. Further, M/s Resonia had requested to interchange the corresponding bays assigned for the Fatehgarh-III – Beawar 765 kV D/c lines in order to mitigate the 765 kV lines crossing near the substation and to facilitate the timely commission of the project.

Deliberations in the meeting:

1. M/s Resonia stated the present on-ground configuration of terminating bays at Fatehgarh-III PS would necessitate the crossing of the 765 kV lines of F3BTL & BTL near the Fatehgarh-III PS and the crossing of lines would delay the completion of transmission lines for few more months. Therefore, BTL line to be allowed to terminate at bay assigned with F3BTL line and the F3BTL line to terminate at bays assigned with BTL line, as this would facilitate the timely completion of lines that are planned for evacuation of RE power from Rajasthan.
2. CEA/CTUIL stated that as no technical issue has been envisaged in interchanging the 765 kV bays at Fatehgarh-III PS for termination of the 765 kV Fatehgarh-III PS – Beawar lines.

3. CTUIL stated that with the proposed arrangement of terminating the BTL line in the bay implemented & assigned to F3BTL line, and terminating the F3BTL line in the bay implemented by POWERGRID & assigned to BTL, would be a deviation from the TSAs and the signed Connectivity Agreements.
 4. It was confirmed that there would not be any change in the scope of works being implemented by respective TSPs under transmission schemes and only the assignment of termination bays for 765 kV lines at Fatehgarh-III PS would be changed.
 5. Grid India, citing operational issues, suggested that crossing of lines near the sub-station may be avoided as the maintenance shutdown of a 765 kV line many times necessitates the shutdown of other 765 kV line crossing over it.
 6. Chairperson, CEA opined that in order to resolve the practical difficulty of line crossing, and since there exists a possibility of terminating lines in a straight and more optimal manner, the proposed interchange of bays for termination may be permitted. Further, the ownership of these bays will remain as per the original scope of the scheme and the O&M of the bays could be done as per Operation and Maintenance (O&M) guidelines issued vide CEA's letter dated 22.06.2023.
- ✓ Chairperson, CEA added that the timely commissioning of the transmission scheme would provide relief in the ongoing RE curtailment issues in Rajasthan and therefore, requested M/s Resonia to expedite the completion of the Fatehgarh-III PS – Beawar 765 kV line along with Beawar Station and its associated lines.

Decisions taken in the meeting:

After deliberations, the proposal to terminate the Fatehgarh-III PS – Beawar 765 kV D/c (2nd) line (F3BTL - Part G) at Bay Nos. 701 and 704 (implemented by POWERGRID) and Fatehgarh-III PS – Beawar 765 kV D/c (1st) line (BTL - Part F) at Bay Nos. 713 and 716 (implemented by F3BTL) at the Fatehgarh-III Substation was agreed. Further, M/s Resonia to put best efforts to expedite the completion of the Fatehgarh-III PS – Beawar 765 kV line along with Beawar Station and its associated lines by Feb/March 2026.

Annexure I**List of Participants****Central Electricity Authority**

1. Sh. Ghanshyam Prasad, Chairperson – in the chair
2. Sh. V. K. Singh, Member, Power System
3. Ms. Ammi Ruhama Toppo, Chief Engineer, PSPA-I
4. Sh. Sharvan Kumar, Chief Engineer, PSPM
5. Ms. Kavita Jha, Director
6. Sh. Nitin Deswal, Deputy Director
7. Sh. Chiranshu Taneja, Assistant Director

CTUIL

1. Sh. Vikas Bagadia, Dy. COO
2. Sh. Kishore Kumar Sarkar, CGM
3. Sh. Amit Bhargav, CGM
4. Sh. Sandeep Kumawat, DGM
5. Sh. Chitikena Abhijith, Chief Manager

GRID-INDIA

1. Sh. Bikas Kumar Jha, DGM
2. Sh. Gaurav Singh, Chief Manager
3. Sh. Saibhal Ghosh, Chief Manager
4. Sh. Pradeep Kumar Verma, Dy. Manager

POWERGRID

1. Sh. Abhay Kumar, CGM

M/s Resonia Limited

1. Sh. T.A.N. Reddy, Director
2. Sh. Sandip Maity, Sr. Vice President
3. Ms. Anshu Sharma, Chief Manager
4. Sh. Sangeet Attri, Chief Manager

Annexure-IX

SI No.	RE Plant Name	Pooling Station	Plant Capacity (MW)	Total Nos. of Voltage oscillation instances considered	Number of time RE plant was found giving Oscillatory MVAR (>30 MVar) out of total instances considered	% of time RE plant was found giving Oscillatory MVAR (>30 MVar) out of total instances considered	Owner Name	Any reply received from Plant	Root cause analysis report status	Status of corrective action
1	ACME Solar Holading Pvt. Ltd. (ASHPL, 300x4)	Fatehgarh-I (Adani Pooling)	1200	14	14	100%	ACME	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
2	Avaada Bikaner (Avaada Suncce_350+Avaada Sustainable_300+Avaada RJHN_240)	Bikaner(PG)	890	14	14	100%	Avaada	Plant gave reply vide mail dt. 04.02.2026 1. Plant submitted only PPC and Inverter settings. 2. Plant just re-share the implemented setting as submitted for LVVRT/HVRT Non-compliance issues of the plant. 3. No analysis/data received for voltage oscillation issues plant. 4. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented
3	Ayaana Renewable Bikaner (ARP1PL + ARP3PL)	Bikaner(PG)	600	14	12	86%	Ayaana	Plant gave reply vide mail dt. 11.02.26. 1. Plant submitted only PPC and Inverter settings. 2. No RCA report other information as asked submitted yet.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
4	Adani Solar Energy Jaisalmer Two Private Limited (P1+P2)	Bikaner(PG)	300	14	12	86%	Adani	Plant gave reply vide mail dt. 05.02.26. 1. Only PPC data of (1sec) resolution submitted, plant made the PPC response slightly slower by reducing the gain and time constant but no action at Inverter level. 2. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented (Only HVRT setting of SVGs is revised and PPC Gain & Time constant reduced to make PPC response slower)
5	SB Energy Six Private Limited, Bhadla_ESSEL park	Bhadla(PG)	300	14	12	86%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
6	Mahoba Solar	Bhadla(PG)	300	14	12	86%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
7	Mega Surya Urja Pvt. Ltd. (MSUPL)	Bhadla-II (PG)	250	14	12	86%	Mahindra	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
8	NTPC Nokh Solar	Bhadla-II (PG)	735	14	12	86%	NTPC	Plant gave reply vide mail dt. 20.02.26. 1. Plant submitted only PPC and Inverter settings. 2. No RCA report other information as asked submitted yet.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
9	Altra Xergi Pvt. Ltd.	Fatehgarh-III	380	14	12	86%	O2 Power	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
10	Adani Hybrid Energy Jaisalmer One Ltd	Fatehgarh-II(PG)	390	14	11	79%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
11	Adani Hybrid Energy Jaisalmer Four Ltd.	Fatehgarh-I (Adani Pooling)	700	14	11	79%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
12	SJVNL Solar Project	Bikaner-II (PBTSL)	888	14	11	79%	SJVNL	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
13	RENEW SOLAR POWER Pvt. Ltd. Bikaner	Bikaner(PG)	550	14	10	71%	Renew	Plant gave reply vide mail dt. 05.02.26 and 26.02.26. 1. Plant submitted only PPC and Inverter settings. 2. Plant submitted that there is no provision of recording high resolution data. 3. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
14	Adani Hybrid Energy Jaisalmer Two Ltd.	Fatehgarh-II(PG)	300	14	10	71%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
15	Adani Hybrid Energy Jaisalmer Three Ltd.	Fatehgarh-II(PG)	300	14	10	71%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
16	ReNew Solar Urja Private Limited	Fatehgarh-II(PG)	300	14	10	71%	Indi-Grid	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
17	Eden Renewable Cite Private Limited	Fatehgarh-II(PG)	300	14	10	71%	Eden	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
18	Renew Sun Bright Pvt. Ltd. (RSBPL)	Fatehgarh-II(PG)	300	14	10	71%	Renew	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
19	ReNew Solar Energy (Jharkhand Three) Private Limited	Fatehgarh-II(PG)	300	14	10	71%	Renew	Plant gave reply vide mail dt. 05.02.26 and 26.02.26. 1. Plant submitted only PPC and Inverter settings. 2. Plant submitted that there is no provision of recording high resolution data. 3. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
20	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	Fatehgarh-II(PG)	180	14	10	71%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
21	ACME Heeragarh powertech Pvt. Ltd	Bhadla-II (PG)	300	14	10	71%	ACME	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
22	Rising Sun Energy-K Pvt. Ltd.	Bhadla-II (PG)	190	14	10	71%	Rising sun	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented

23	Renew Surya Roshni Pvt. Ltd.	Fatehgarh-III	400	14	8	57%	Renew	Plant gave reply vide mail dt. 05.02.26 and 26.02.26. 1. Plant submitted only PPC and Inverter settings. 2. Plant submitted that there is no provision of recording high resolution data. 3. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
24	Tata Power Renewable Energy Ltd. (TPREL)	Bhadla(PG)	300	14	7	50%	Tata Power	Plant gave reply vide mail dt. 26.02.26. 1. Plant submitted preliminary report only. 2. In its preliminary report, plant highlighted the issue in TMEIC inverters and it fails to provide reactive support and also due to 1.11pu HVRT setting it was going into HVRT causing active/reactive power fluctuation.	Not Received	Corrective action is yet to be implemented. (HVRT setting changed from 1.11 pu to 1.15 pu, SVG installation is in advance stage, Required implementation of smooth Q polarity transition (+Q to -Q) in ABB PPC)

Sl No.	RE Plant Name	Pooling Station	Plant Capacity (MW)	RE plants MVar fluctuations 17.12.2025 10:51-11:02	% (Max. MVar fluctuation/Plant capacity)	Owner Name	Any reply received from Plant	Root cause analysis report status	Status of corrective action
1	Adani Solar Energy Jaisalmer Two Private Limited (P1+P2)	Bikaner(PG)	300	231	77%	Adani	Plant gave reply vide mail dt. 05.02.26. 1. Only PPC data of (1sec) resolution submitted, plant made the PPC response slightly slower by reducing the gain and time constant but no action at Inverter level. 2. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented (Only HVRT setting of SVGs is revised and PPC Gain & Time constant reduced to make PPC response slower)
2	ReNew Solar Energy (Jharkhand Three) Private Limited	Fatehgarh-II (PG)	300	127	42%	Renew	Plant gave reply vide mail dt. 05.02.26 and 26.02.26. 1. Plant submitted only PPC and Inverter settings. 2. Plant submitted that there is no provision of recording high resolution data. 3. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
3	Mega Surya Urja Pvt. Ltd. (MSUPL)	Bhadla-II (PG)	250	74	30%	Mahindra	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
4	SB ENERGY FOUR PRIVATE LIMTED, Bhadla	Bhadla(PG)	200	52	26%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
5	Azure Power Forty One Pvt limited	Bhadla(PG)	300	77	26%	Azure	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
6	Rising Sun Energy-K Pvt. Ltd.	Bhadla-II (PG)	190	45	24%	Rising sun	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
7	Renew Sun Bright Pvt. Ltd. (RSBPL)	Fatehgarh-II (PG)	300	70	23%	Renew	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
8	RENEW SOLAR POWER Pvt. Ltd. Bikaner	Bikaner(PG)	550	117	21%	Renew	Plant gave reply vide mail dt. 05.02.26 and 26.02.26. 1. Plant submitted only PPC and Inverter settings. 2. Plant submitted that there is no provision of recording high resolution data. 3. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
9	Mahoba Solar	Bhadla(PG)	300	63	21%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
10	Adani Hybrid Energy Jaisalmer One Ltd	Fatehgarh-II (PG)	390	82	21%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
11	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	Fatehgarh-II (PG)	180	38	21%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
12	ACME Heeragarh powertech Pvt. Ltd	Bhadla-II (PG)	300	63	21%	ACME	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
13	ACME Solar Holading Pvt. Ltd. (ASHPL, 300x4)	Fatehgarh-I (Adani Pooling)	1200	242	20%	ACME	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
14	Eden Renewable Cite Private Limited	Fatehgarh-II (PG)	300	60	20%	Eden	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
15	ABC Renewable Pvt. Ltd	Bhadla-II (PG)	300	56	19%	ABC Renewable	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
16	Adani Hybrid Energy Jaisalmer Two Ltd.	Fatehgarh-II (PG)	300	54	18%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
17	Clean Solar Power (Jodhpur) Pvt. Ltd.	Bhadla(PG)	250	44	18%	Hero future	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
18	Azure Maple Pvt. Ltd.	Bhadla(PG)	300	52	17%	Azure	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
19	Adani Hybrid Energy Jaisalmer Three Ltd.	Fatehgarh-II (PG)	300	51	17%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
20	SB Energy Six Private Limited, Bhadla ESSEL park	Bhadla(PG)	300	49	16%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
21	Renew Surya Ayaan Pvt. Ltd.	Fatehgarh-III	300	47	16%	IndiGrid	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented

22	Avaada Sunrays Pvt. Ltd.	Bhadla-II (PG)	320	47	15%	Avaada	Plant gave reply vide mail dt. 04.02.2026 1. Plant submitted only PPC and Inverter settings. 2. Plant just re-share the implemented setting as submitted for LVRT/HVRT Non-compliance issues of the plant. 3. No analysis/data received for voltage oscillation issues plant. 4. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented
23	ReNew Solar Urja Private Limited	Fatehgarh-II (PG)	300	43	14%	Indi-Grid	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
24	Avaada Bikaner (Avaada Sunce_350+Avaada Sustainable_300+Avaada RJHN_240)	Bikaner(PG)	890	123	14%	Avaada	Plant gave reply vide mail dt. 04.02.2026 1. Plant submitted only PPC and Inverter settings. 2. Plant just re-share the implemented setting as submitted for LVRT/HVRT Non-compliance issues of the plant. 3. No analysis/data received for voltage oscillation issues plant. 4. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented
25	Altra Xergi Pvt. Ltd.	Fatehgarh-III	380	51	14%	O2 Power	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
26	Tata Power Renewable Energy Ltd. (TPREL)	Bhadla(PG)	300	40	13%	Tata Power	Plant gave reply vide mail dt. 26.02.26. 1. Plant submitted preliminary report only. 2. In its preliminary report, plant highlighted the issue in TMEIC inverters and it fails to provide reactive support and also due to 1.11pu HVRT setting it was going into HVRT causing active/reactive power fluctuation.	Not Received	Corrective action is yet to be implemented. (HVRT setting changed from 1.11 pu to 1.15 pu, SVG installation is in advance stage, Required implementation of smooth Q polarity transition (+Q to -Q) in ABB PPC)
27	Renew Surya Roshni Pvt. Ltd.	Fatehgarh-III	400	53	13%	Renew	Plant gave reply vide mail dt. 05.02.26 and 26.02.26. 1. Plant submitted only PPC and Inverter settings. 2. Plant submitted that there is no provision of recording high resolution data. 3. No RCA report submitted, abnormal behaviour of plant is still unidentified.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
28	One Volt energy Pvt. Ltd. +Amplus ages +Grian	Bikaner-II (PBTSL)	300	34	11%	Onevolt	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
29	Renew Sun Waves Private Limited (RSEJ4L)	Fatehgarh-II (PG)	300	33	11%	Sulzon	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
30	Ayaana Renewable Bikaner (ARP1PL + ARP3PL)	Bikaner(PG)	600	58	10%	Ayaana	Plant gave reply vide mail dt. 11.02.26. 1. Plant submitted only PPC and Inverter settings. 2. No RCA report other information as asked submitted yet.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
31	SJVNL Solar Project	Bikaner-II (PBTSL)	888	81	9%	SJVN	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
32	Mahindra Renewable Private Limited	Bhadla(PG)	250	22	9%	Mahindra	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
33	NTPC Nokh Solar	Bhadla-II (PG)	735	64	9%	NTPC	Plant gave reply vide mail dt. 20.02.26. 1. Plant submitted only PPC and Inverter settings. 2. No RCA report other information as asked submitted yet.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it
34	AMP Energy Green Six Pvt. Ltd. +AEG5PL +AEG4PL	Bhadla-II (PG)	300	25	8%	AMP	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
35	Adani Solar Energy Jaisalmer One Pvt. Ltd.	Fatehgarh-II (PG)	450	32	7%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
36	XL Xergi Power Pvt. Ltd.	Fatehgarh-III	400	25	6%	O2 Power	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
37	Adani Hybrid Energy Jaisalmer Four Ltd.	Fatehgarh-I (Adani Pooling)	700	35	5%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
38	Renew Surya Jyoti Pvt. Ltd.	Fatehgarh-III	210	10	5%	Renew	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
39	ADANI GREEN ENERGY TWENTY FIVE LIMITED	Bhadla-II (PG)	500	15	3%	Adani	No Reply received yet.	Not Received	Reply awaited from plant, Corrective action is yet to be implemented
40	NTPC Kolayat_400kV	Bhadla-II (PG)	550	PMU Data NA		NTPC	Plant gave reply vide mail dt. 20.02.26. 1. Plant submitted only PPC and Inverter settings. 2. No RCA report other information as asked submitted yet.	Not Received	Corrective action is yet to be implemented. In its preliminary report plant stated they are taking-up with OEMs but no further update received it

Detailed Analysis of 04.02.206 Voltage Oscillation/Fluctuation event																																																																																																																																																																									
Sl No.	RE Plant Name	Pooling Station	Plant Rated Capacity (MW) as on 04.02.2026	Evacuating line	Active Power (MW) fluctuation	Reactive Power (MVAR) fluctuation	Summary of Analysis																																																																																																																																																																		
1	Azure Power Forty Three Pvt. Ltd._PSS	Bikaner(PG)	300	400kV Azure 43 Pvt. Ltd.-Bikaner (PG) S/C line	415	64	Severe fluctuation in Active power observed as per REMC SCADA. Active power was fluctuating from 415 MW to 0 MW. As reported by Plant, it was continuously going In & Out-LVRT. Plant is yet to give the reply on NRLDC communication dt. 04.02.26 and 06.02.26.																																																																																																																																																																		
	Azure Power Forty Three Pvt. Ltd._RSS		300					2	RENEW SOLAR POWER Pvt. Ltd. Bikaner	250	400kV ReNew Bikaner-Bikaner (PG) S/C line	31	76	No major fluctuation observed in Active power, maximum fluctuation in active power observed 31 MW at 11:118 hrs Continous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs in range of 66 MVAR to 182 MVAR, with maximum reactive power fluctuation of 76 MVAR at 11:14 hrs.	Renew Surya Ravi Pvt. Ltd.	300	3	Avaada sunce energy Pvt limited	350	400kV Avaada Pooling-Bikaner (PG) S/C line	14	115	No major fluctuation observed in Active power. Reactive power fluctuation started at 11:02hrs, and maximum fluctuation in reactive power (~115 MVAR) observed after 11:10 hrs	Avaada Sustainable RJ Pvt. Ltd.	300	4	Avaada RJHN_240MW	240	400kV Ayana Pooling-Bikaner (PG) S/C line	38	37	Fluctuation of 38 MW in active power and 37 MVAR in reactive power observed, reactive power fluctuation was predominant and continous fluctuation in reactive power from 11:04-11:44 hrs.	Ayaana Renewable Power One Pvt. Ltd.	300	5	Ayana Renewable Power Three Private Limited	300	220kV Thar Surya 1 Pvt. Ltd.-Bikaner (PG) S/C line	2	14	No major fluctuation observed in Active power and Reactive power.	Thar Surya Pvt. Ltd.	300	6	Tata Power Green Energy Ltd. (TPGEL)	225	220kV TPGEL-Bikaner (PG) S/C line	9	65	No major fluctuation observed in Active power. Reactive power fluctuation started at 11:05hrs with fluctuation of ~20 MVAR, and maximum fluctuation in reactive power (~65 MVAR) observed after 11:42 hrs	TP Surya Pvt. Ltd.	110	7	Adani Solar Energy Jaisalmer Two Private Limited	150	220kV SBSR-Bikaner (PG) S/C line	215	114	Major fluctuation in Active and Reactive power observed. Active power fluctuation started at 11:04 hrs, with maximum active power fluctuation of ~215 MW (72% of rated capacity) observed at 11:42 hrs. Reactive power fluctuation/oscillation started at 11:04 hrs, with maximum reactive power fluctuation of ~114 MVAR observed at 11:30 hrs. Severe issue in plant, need to be resolved on urgent basis	Adani Solar Energy Jaisalmer Two Private Limited Project Two	150	Total capacity_Bikaner(PG)			3575					1	RENEW SOLAR POWER Pvt. Ltd. Bhadla	Bhadla(PG)	50	220kV Adani Bhadla-Bhadla (PG) D/C line	-	-	No major fluctuation observed in Active and Reactive power as per SCADA data. However, resolution is poor for SCADA data of this plant, also Active and Reactive power is coming Zero "0" at 11:16 hrs and 11:42 hrs. Any inference can't be made based on SCADA data. SCADA data reporting at NRLDC needs to be corrected.	AZURE POWER INDIA Pvt. Ltd., Bhadla	200	2	Azure Power Thirty Four Pvt. Ltd.	130	220kV APTFPL-Bhadla (PG)	49	19	Major fluctuation in Active and Reactive power observed. Reactive power fluctuation/oscillation started at 11:03:20 hrs, with maximum reactive power fluctuation of ~20 MVAR observed at 11:15 hrs. Active power fluctuation started at 11:07:05 hrs, with maximum active power fluctuation of ~50 MW (37% of rated capacity) observed at 11:22 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~3.5 mins later) observed.	SB ENERGY FOUR PRIVATE LIMITED, Bhadla	200	3	Clean Solar Power (Bhadla) Pvt. Ltd	300	220kV Surya Urja Bhadla-Bhadla (PG) D/C line	75	25	SCADA data resolution is poor for this plant, also Active and Reactive power is coming Zero "0" at 11:16 hrs and 11:42 hrs. Any conclusive inference can't be made based on SCADA data. SCADA data reporting at NRLDC needs to be corrected.	SB Energy Six Private Limited, Bhadla	300	4	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	150	220kV ESUCRL-Bhadla (PG) D/C line	52	180	Major fluctuation in Reactive power observed. Reactive power fluctuation/oscillation started at 11:03:40 hrs, with maximum reactive power fluctuation of ~180 MVAR observed at 11:15 hrs. Active power fluctuation started at 11:06:39 hrs, with maximum active power fluctuation of ~52 MW (7% of rated capacity) observed at 11:35 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~3 mins later) observed. Further, reactive power fluctuation was pre-dominant.	Ambuja Cements Limited	300	5	Azure Power Forty One Pvt limited	300	220kV Azure 41 Pvt. Ltd.-Bhadla (PG) S/C line	26	59	SCADA data resolution is slightly poor for this plant. Any conclusive inference can't be made based on SCADA data. However, it can be inferred that first fluctuation in reactive power observed (at 11:03 hrs) and then fluctuation in active power (at 11:11 hrs, ~8 mins later) observed.	6	ACME Chittorgarh Solar Energy Pvt Ltd	250	220kV ACME Chittorgarh-Bhadla (PG) S/C line	15	17	SCADA data resolution is poor for this plant. Any conclusive inference can't be made based on SCADA data. However, it can be inferred that after removal of TRAS, with active power ramped from 200 MW to 214 MW at 11:59hrs, at the same time reactive power reduced from 33MVAR to 16 MVAR. Such reduction in reduction power may cause low voltage and triggering of oscillation/fluctuation event.	7	Mahindra Renewable Private Limited	250	220kV MRPL-Bhadla (PG) S/C line	25	30	Initially no major fluctuation in active power observed but after 12:12 hrs fluctuation of ~25 MW observed. First, plant suddenly reduced the reactive power injection from 33 MVAR to 14 MVAR at 10:58hrs, then fluctuation in reactive power started at 11:04 hrs, with major fluctuation of 30MVAR observed at 11:38hrs.	8	Adani Solar Enegy Four Private Limited	50	220kV Mahoba Solar-Bhadla (PG) line S/C line	42	41	Reactive power fluctuation started at 11:03:34 hrs, with maximum reactive power fluctuation of ~41 MVAR observed at 11:20 hrs. Active power fluctuation started at 11:08:19 hrs, active power was fluctuating in 25MW range, maximum active power fluctuation of ~42 MW observed at 11:20 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~5 mins later) observed. Further, It can also be inferred that, before 11:03hrs plant was injecting 15MVAR but after that reactive power was fluctuating between -10 to +7MVAR, net reduction of ~13MVAR.	Adani Renewable Energy (RJ) limited Rawara	200	9	Adani Solar Enegy Jodhpur Two Limited, Rawara	50	220kV Azure Maple Pvt. Ltd.-Bhadla (PG) S/C line	8	64	Reactive power fluctuation started at 11:03:41 hrs, with maximum reactive power fluctuation of ~64 MVAR observed at 11:09 hrs. No major fluctuation observed in active power. Reactive power fluctuation of 32 MVAR started at 11:03 hrs, with maximum fluctuation observed 64 MVAR at 11:09 hrs. Further,	Azure Maple Pvt. Ltd.	300	10	Tata Power Renewable Energy Ltd. (TPREL)	300	220kV TPREL-Bhadla (PG) S/C line	108	57	Major fluctuation in Active and Reactive power observed. Reactive power fluctuation/oscillation started at 11:05:01 hrs, with maximum reactive power fluctuation of ~57 MVAR observed at 11:19 hrs. Active power fluctuation started at 11:09:55 hrs, with maximum active power fluctuation of ~108 MW (36% of rated capacity) observed at 11:34 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~5 mins later) observed.	11	Clean Solar Power (Jodhpur) Pvt. Ltd.	250	220kV CSP(JPL)-Bhadla (PG) S/C line	62	35	Initially no major fluctuation in active power observed but after 11:17 hrs fluctuation of ~48 MW and at 11:21 fluctuation of ~48 MW observed. Continous fluctuation in Reactive power observed from 11:03 hrs to 11:46 hrs, maximum fluctuation in reactive power ~35 MVAR observed at 11:22 hrs.	Total capacity_Bhadla(PG)			3580					1	Adani Hybrid Energy Jaisalmer One Ltd.
2	RENEW SOLAR POWER Pvt. Ltd. Bikaner		250	400kV ReNew Bikaner-Bikaner (PG) S/C line	31	76	No major fluctuation observed in Active power, maximum fluctuation in active power observed 31 MW at 11:118 hrs Continous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs in range of 66 MVAR to 182 MVAR, with maximum reactive power fluctuation of 76 MVAR at 11:14 hrs.																																																																																																																																																																		
	Renew Surya Ravi Pvt. Ltd.		300					3	Avaada sunce energy Pvt limited	350	400kV Avaada Pooling-Bikaner (PG) S/C line	14	115	No major fluctuation observed in Active power. Reactive power fluctuation started at 11:02hrs, and maximum fluctuation in reactive power (~115 MVAR) observed after 11:10 hrs	Avaada Sustainable RJ Pvt. Ltd.	300	4	Avaada RJHN_240MW	240	400kV Ayana Pooling-Bikaner (PG) S/C line	38	37	Fluctuation of 38 MW in active power and 37 MVAR in reactive power observed, reactive power fluctuation was predominant and continous fluctuation in reactive power from 11:04-11:44 hrs.	Ayaana Renewable Power One Pvt. Ltd.	300	5	Ayana Renewable Power Three Private Limited	300	220kV Thar Surya 1 Pvt. Ltd.-Bikaner (PG) S/C line	2	14	No major fluctuation observed in Active power and Reactive power.	Thar Surya Pvt. Ltd.	300	6	Tata Power Green Energy Ltd. (TPGEL)	225	220kV TPGEL-Bikaner (PG) S/C line	9	65	No major fluctuation observed in Active power. Reactive power fluctuation started at 11:05hrs with fluctuation of ~20 MVAR, and maximum fluctuation in reactive power (~65 MVAR) observed after 11:42 hrs	TP Surya Pvt. Ltd.	110	7	Adani Solar Energy Jaisalmer Two Private Limited	150	220kV SBSR-Bikaner (PG) S/C line	215	114	Major fluctuation in Active and Reactive power observed. Active power fluctuation started at 11:04 hrs, with maximum active power fluctuation of ~215 MW (72% of rated capacity) observed at 11:42 hrs. Reactive power fluctuation/oscillation started at 11:04 hrs, with maximum reactive power fluctuation of ~114 MVAR observed at 11:30 hrs. Severe issue in plant, need to be resolved on urgent basis	Adani Solar Energy Jaisalmer Two Private Limited Project Two	150	Total capacity_Bikaner(PG)			3575					1	RENEW SOLAR POWER Pvt. Ltd. Bhadla	Bhadla(PG)	50	220kV Adani Bhadla-Bhadla (PG) D/C line	-	-	No major fluctuation observed in Active and Reactive power as per SCADA data. However, resolution is poor for SCADA data of this plant, also Active and Reactive power is coming Zero "0" at 11:16 hrs and 11:42 hrs. Any inference can't be made based on SCADA data. SCADA data reporting at NRLDC needs to be corrected.	AZURE POWER INDIA Pvt. Ltd., Bhadla	200	2		Azure Power Thirty Four Pvt. Ltd.	130	220kV APTFPL-Bhadla (PG)	49	19	Major fluctuation in Active and Reactive power observed. Reactive power fluctuation/oscillation started at 11:03:20 hrs, with maximum reactive power fluctuation of ~20 MVAR observed at 11:15 hrs. Active power fluctuation started at 11:07:05 hrs, with maximum active power fluctuation of ~50 MW (37% of rated capacity) observed at 11:22 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~3.5 mins later) observed.	SB ENERGY FOUR PRIVATE LIMITED, Bhadla	200	3	Clean Solar Power (Bhadla) Pvt. Ltd	300	220kV Surya Urja Bhadla-Bhadla (PG) D/C line	75	25	SCADA data resolution is poor for this plant, also Active and Reactive power is coming Zero "0" at 11:16 hrs and 11:42 hrs. Any conclusive inference can't be made based on SCADA data. SCADA data reporting at NRLDC needs to be corrected.	SB Energy Six Private Limited, Bhadla	300	4	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	150	220kV ESUCRL-Bhadla (PG) D/C line	52	180	Major fluctuation in Reactive power observed. Reactive power fluctuation/oscillation started at 11:03:40 hrs, with maximum reactive power fluctuation of ~180 MVAR observed at 11:15 hrs. Active power fluctuation started at 11:06:39 hrs, with maximum active power fluctuation of ~52 MW (7% of rated capacity) observed at 11:35 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~3 mins later) observed. Further, reactive power fluctuation was pre-dominant.	Ambuja Cements Limited	300	5	Azure Power Forty One Pvt limited	300	220kV Azure 41 Pvt. Ltd.-Bhadla (PG) S/C line	26	59	SCADA data resolution is slightly poor for this plant. Any conclusive inference can't be made based on SCADA data. However, it can be inferred that first fluctuation in reactive power observed (at 11:03 hrs) and then fluctuation in active power (at 11:11 hrs, ~8 mins later) observed.	6	ACME Chittorgarh Solar Energy Pvt Ltd	250	220kV ACME Chittorgarh-Bhadla (PG) S/C line	15	17	SCADA data resolution is poor for this plant. Any conclusive inference can't be made based on SCADA data. However, it can be inferred that after removal of TRAS, with active power ramped from 200 MW to 214 MW at 11:59hrs, at the same time reactive power reduced from 33MVAR to 16 MVAR. Such reduction in reduction power may cause low voltage and triggering of oscillation/fluctuation event.	7	Mahindra Renewable Private Limited	250	220kV MRPL-Bhadla (PG) S/C line	25	30	Initially no major fluctuation in active power observed but after 12:12 hrs fluctuation of ~25 MW observed. First, plant suddenly reduced the reactive power injection from 33 MVAR to 14 MVAR at 10:58hrs, then fluctuation in reactive power started at 11:04 hrs, with major fluctuation of 30MVAR observed at 11:38hrs.	8	Adani Solar Enegy Four Private Limited	50	220kV Mahoba Solar-Bhadla (PG) line S/C line	42	41	Reactive power fluctuation started at 11:03:34 hrs, with maximum reactive power fluctuation of ~41 MVAR observed at 11:20 hrs. Active power fluctuation started at 11:08:19 hrs, active power was fluctuating in 25MW range, maximum active power fluctuation of ~42 MW observed at 11:20 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~5 mins later) observed. Further, It can also be inferred that, before 11:03hrs plant was injecting 15MVAR but after that reactive power was fluctuating between -10 to +7MVAR, net reduction of ~13MVAR.	Adani Renewable Energy (RJ) limited Rawara	200	9	Adani Solar Enegy Jodhpur Two Limited, Rawara	50	220kV Azure Maple Pvt. Ltd.-Bhadla (PG) S/C line	8	64	Reactive power fluctuation started at 11:03:41 hrs, with maximum reactive power fluctuation of ~64 MVAR observed at 11:09 hrs. No major fluctuation observed in active power. Reactive power fluctuation of 32 MVAR started at 11:03 hrs, with maximum fluctuation observed 64 MVAR at 11:09 hrs. Further,	Azure Maple Pvt. Ltd.	300	10	Tata Power Renewable Energy Ltd. (TPREL)	300	220kV TPREL-Bhadla (PG) S/C line	108	57	Major fluctuation in Active and Reactive power observed. Reactive power fluctuation/oscillation started at 11:05:01 hrs, with maximum reactive power fluctuation of ~57 MVAR observed at 11:19 hrs. Active power fluctuation started at 11:09:55 hrs, with maximum active power fluctuation of ~108 MW (36% of rated capacity) observed at 11:34 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~5 mins later) observed.	11	Clean Solar Power (Jodhpur) Pvt. Ltd.	250	220kV CSP(JPL)-Bhadla (PG) S/C line	62	35	Initially no major fluctuation in active power observed but after 11:17 hrs fluctuation of ~48 MW and at 11:21 fluctuation of ~48 MW observed. Continous fluctuation in Reactive power observed from 11:03 hrs to 11:46 hrs, maximum fluctuation in reactive power ~35 MVAR observed at 11:22 hrs.	Total capacity_Bhadla(PG)			3580					1	Adani Hybrid Energy Jaisalmer One Ltd.	390	220kV AHEJOL-Fatehgarh-II (PG) D/C line	74	32	Continous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Active power was fluctuating from 11:04 hrs to 11:44 hrs in range of 275 MW to 370 MW, with maximum fluctuation of 74 MW observed at 11:30 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -16 MVAR to 47 MVAR, with maximum fluctuation of 32 MVAR observed at 11:23 hrs.			
3	Avaada sunce energy Pvt limited		350	400kV Avaada Pooling-Bikaner (PG) S/C line	14	115	No major fluctuation observed in Active power. Reactive power fluctuation started at 11:02hrs, and maximum fluctuation in reactive power (~115 MVAR) observed after 11:10 hrs																																																																																																																																																																		
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1	RENEW SOLAR POWER Pvt. Ltd. Bhadla	Bhadla(PG)	50	220kV Adani Bhadla-Bhadla (PG) D/C line	-	-	No major fluctuation observed in Active and Reactive power as per SCADA data. However, resolution is poor for SCADA data of this plant, also Active and Reactive power is coming Zero "0" at 11:16 hrs and 11:42 hrs. Any inference can't be made based on SCADA data. SCADA data reporting at NRLDC needs to be corrected.																																																																																																																																																																		
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2	Azure Power Thirty Four Pvt. Ltd.		130	220kV APTFPL-Bhadla (PG)	49	19	Major fluctuation in Active and Reactive power observed. Reactive power fluctuation/oscillation started at 11:03:20 hrs, with maximum reactive power fluctuation of ~20 MVAR observed at 11:15 hrs. Active power fluctuation started at 11:07:05 hrs, with maximum active power fluctuation of ~50 MW (37% of rated capacity) observed at 11:22 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~3.5 mins later) observed.																																																																																																																																																																		
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4	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)		150	220kV ESUCRL-Bhadla (PG) D/C line	52	180	Major fluctuation in Reactive power observed. Reactive power fluctuation/oscillation started at 11:03:40 hrs, with maximum reactive power fluctuation of ~180 MVAR observed at 11:15 hrs. Active power fluctuation started at 11:06:39 hrs, with maximum active power fluctuation of ~52 MW (7% of rated capacity) observed at 11:35 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~3 mins later) observed. Further, reactive power fluctuation was pre-dominant.																																																																																																																																																																		
	Ambuja Cements Limited		300																																																																																																																																																																						
5	Azure Power Forty One Pvt limited		300	220kV Azure 41 Pvt. Ltd.-Bhadla (PG) S/C line	26	59	SCADA data resolution is slightly poor for this plant. Any conclusive inference can't be made based on SCADA data. However, it can be inferred that first fluctuation in reactive power observed (at 11:03 hrs) and then fluctuation in active power (at 11:11 hrs, ~8 mins later) observed.																																																																																																																																																																		
6	ACME Chittorgarh Solar Energy Pvt Ltd		250	220kV ACME Chittorgarh-Bhadla (PG) S/C line	15	17	SCADA data resolution is poor for this plant. Any conclusive inference can't be made based on SCADA data. However, it can be inferred that after removal of TRAS, with active power ramped from 200 MW to 214 MW at 11:59hrs, at the same time reactive power reduced from 33MVAR to 16 MVAR. Such reduction in reduction power may cause low voltage and triggering of oscillation/fluctuation event.																																																																																																																																																																		
7	Mahindra Renewable Private Limited		250	220kV MRPL-Bhadla (PG) S/C line	25	30	Initially no major fluctuation in active power observed but after 12:12 hrs fluctuation of ~25 MW observed. First, plant suddenly reduced the reactive power injection from 33 MVAR to 14 MVAR at 10:58hrs, then fluctuation in reactive power started at 11:04 hrs, with major fluctuation of 30MVAR observed at 11:38hrs.																																																																																																																																																																		
8	Adani Solar Enegy Four Private Limited	50	220kV Mahoba Solar-Bhadla (PG) line S/C line	42	41	Reactive power fluctuation started at 11:03:34 hrs, with maximum reactive power fluctuation of ~41 MVAR observed at 11:20 hrs. Active power fluctuation started at 11:08:19 hrs, active power was fluctuating in 25MW range, maximum active power fluctuation of ~42 MW observed at 11:20 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~5 mins later) observed. Further, It can also be inferred that, before 11:03hrs plant was injecting 15MVAR but after that reactive power was fluctuating between -10 to +7MVAR, net reduction of ~13MVAR.																																																																																																																																																																			
	Adani Renewable Energy (RJ) limited Rawara	200																																																																																																																																																																							
9	Adani Solar Enegy Jodhpur Two Limited, Rawara	50	220kV Azure Maple Pvt. Ltd.-Bhadla (PG) S/C line	8	64	Reactive power fluctuation started at 11:03:41 hrs, with maximum reactive power fluctuation of ~64 MVAR observed at 11:09 hrs. No major fluctuation observed in active power. Reactive power fluctuation of 32 MVAR started at 11:03 hrs, with maximum fluctuation observed 64 MVAR at 11:09 hrs. Further,																																																																																																																																																																			
	Azure Maple Pvt. Ltd.	300																																																																																																																																																																							
10	Tata Power Renewable Energy Ltd. (TPREL)	300	220kV TPREL-Bhadla (PG) S/C line	108	57	Major fluctuation in Active and Reactive power observed. Reactive power fluctuation/oscillation started at 11:05:01 hrs, with maximum reactive power fluctuation of ~57 MVAR observed at 11:19 hrs. Active power fluctuation started at 11:09:55 hrs, with maximum active power fluctuation of ~108 MW (36% of rated capacity) observed at 11:34 hrs. It can be inferred that first fluctuation in reactive power observed and then fluctuation in active power (~5 mins later) observed.																																																																																																																																																																			
11	Clean Solar Power (Jodhpur) Pvt. Ltd.	250	220kV CSP(JPL)-Bhadla (PG) S/C line	62	35	Initially no major fluctuation in active power observed but after 11:17 hrs fluctuation of ~48 MW and at 11:21 fluctuation of ~48 MW observed. Continous fluctuation in Reactive power observed from 11:03 hrs to 11:46 hrs, maximum fluctuation in reactive power ~35 MVAR observed at 11:22 hrs.																																																																																																																																																																			
Total capacity_Bhadla(PG)			3580																																																																																																																																																																						
1	Adani Hybrid Energy Jaisalmer One Ltd.	390	220kV AHEJOL-Fatehgarh-II (PG) D/C line	74	32	Continous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Active power was fluctuating from 11:04 hrs to 11:44 hrs in range of 275 MW to 370 MW, with maximum fluctuation of 74 MW observed at 11:30 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -16 MVAR to 47 MVAR, with maximum fluctuation of 32 MVAR observed at 11:23 hrs.																																																																																																																																																																			

Detailed Analysis of 04.02.206 Voltage Oscillation/Fluctuation event							
Sl No.	RE Plant Name	Pooling Station	Plant Rated Capacity (MW) as on 04.02.2026	Evacuating line	Active Power (MW) fluctuation	Reactive Power (MVAR) fluctuation	Summary of Analysis
2	Adani Hybrid Energy Jaisalmer Two Ltd.	Fatehgarh-II(PG)	300	220kV AHEJ2L-Fatehgarh-II (PG) S/C line	80	68	Continuous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Active power was fluctuating from 11:06 hrs to 11:44 hrs in range of 200 MW to 280 MW, with maximum fluctuation of 80 MW observed at 11:21 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -19 MVAR to 60 MVAR, with maximum fluctuation of 68 MVAR observed at 11:40 hrs.
3	Adani Hybrid Energy Jaisalmer Three Ltd.		300	220kV AHEJ3L-Fatehgarh-II (PG) S/C line	41	39	Continuous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Active power was fluctuating from 11:04 hrs to 11:44 hrs in range of 218 MW to 260 MW, with maximum fluctuation of 41 MW observed at 11:17 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -28 MVAR to 15 MVAR, with maximum fluctuation of 39 MVAR observed at 11:08 hrs.
4	ReNew Solar Urja Private Limited		300	220kV RSUPL-Fatehgarh-II (PG) S/C line	63	65	Continuous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Active power was fluctuating from 11:04 hrs to 11:44 hrs in range of 172 MW to 277 MW, with maximum fluctuation of 63 MW observed at 11:27 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -20 MVAR to 54 MVAR, with maximum fluctuation of 65 MVAR observed at 11:21 hrs.
5	Eden Renewable Cite Private Limited		300	220kV EDEN Renewable-Fatehgarh-II (PG) S/C line	51	33	Continuous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Initial Active power was fluctuating from 275MW to 300MW which further increase at 11:35 hrs and was fluctuating in range of 268 MW to 319 MW, with maximum fluctuation of 51 MW observed at 11:35 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -4 MVAR to 29 MVAR, with maximum fluctuation of 33 MVAR observed at 11:19 hrs.
6	Renew Sun Waves Private Limited (RSEJ4L)		300	220kV RSWPL-Fatehgarh-II (PG) S/C line	75	75	Continuous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Active power was fluctuating from 11:04 hrs to 11:44 hrs in range of 203 MW to 297 MW, with maximum fluctuation of 75 MW observed at 11:20 hrs. Reactive power was fluctuating from 11:03 hrs to 11:44 hrs in range of -32 MVAR to 59 MVAR, with maximum fluctuation of 75 MVAR observed at 11:21 hrs.
7	Renew Sun Bright Pvt. Ltd. (RSBPL)		300	220kV RSBPL-Fatehgarh-II (PG) S/C line	22	109	No major fluctuation observed in Active power, maximum fluctuation of 22MW observed in active power at 11:11-11:12 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -27 MVAR to 64 MVAR, with maximum fluctuation of 109 MVAR observed at 11:22 hrs.
8	ReNew Solar Energy (Jharkhand Three) Private Limited		300	220kV RSEJ3L-Fatehgarh-II (PG) S/C line	35	68	No major fluctuation observed in Active power, maximum fluctuation of 35 MW observed in active power at 11:04-40 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -25 MVAR to 61 MVAR, with maximum fluctuation of 68 MVAR observed at 11:11-48 hrs.
9	Adani Solar Energy Jaisalmer One Pvt. Ltd.		450	220kV ASEJ1L-Fatehgarh-II (PG) D/C line	34	66	No major fluctuation observed in Active power, maximum fluctuation of 34 MW observed in active power at 11:11 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -38 MVAR to 29 MVAR, with maximum fluctuation of 66 MVAR observed at 11:15 hrs.
10	NTPC Devikot Solar plant_240MW		240	220kV NTPC Devikot-Fatehgarh-II (PG) S/C line	15	23	No major fluctuation observed in Active power, maximum fluctuation of 15 MW observed in active power at 11:29 hrs. Intermittent fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of 0 MVAR to 21 MVAR, with maximum fluctuation of 23 MVAR observed at 11:18 hrs.
11	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)		180	220kV ASERJ2PL(F-2)-Fatehgarh-II (PG) S/C line	4	30	No fluctuation observed in Active power, maximum fluctuation of only 4 MW observed in active power at 11:11 hrs. Reactive power suddenly reduced from 68 MVAR to 16 MVAR b/w 11:03:38-11:04:25 hrs, and then Continuous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs in range of 5 MVAR to 42 MVAR, with maximum fluctuation of 30 MVAR observed at 11:30 hrs.
12	Adani Green Energy Twenty Four Limited		500	220kV AGE24L-Fatehgarh-II (PG) D/C line	256	83	Intermittent fluctuation observed in Active power, at 11:09 hrs Active power suddenly dropped from 466 MW to 210 MW (256 MW drop). Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of 94 MVAR to 198 MVAR, with maximum fluctuation of 83 MVAR observed at 11:23 hrs.
Total capacity_ Fatehgarh-II(PG)			3860				
1	Adani Hybrid Energy Jaisalmer Four Ltd.	Fatehgarh-I (Adani Pooling)	700	400kV AREPRL-Fatehgarh-I D/C line	121	118	Active power was fluctuating from 11:08 hrs to 11:44 hrs in range of 760 MW to 889 MW, with maximum fluctuation of 121 MW observed at 11:21 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -75 MVAR to 52 MVAR, with maximum fluctuation of 118 MVAR observed at 11:33 hrs.
	Nedan Solar NTPC		296				
	ACME DEOGHAR SOLAR POWER PRIVATE LIMITED		300				
2	ACME PHALODI SOLAR POWER PRIVATE LIMITED		300	400kV ACME Pooling-Fatehgarh-I S/C line	140	244	Continuous fluctuation in Active and Reactive power observed from 11:03 hrs to 11:44 hrs. Initial Active power was fluctuating from 1136 MW to 1207 MW which further increase at 11:38 hrs and was fluctuating in range of 1134 MW to 1274 MW, with maximum fluctuation of 140 MW observed at 11:40 hrs. First reactive power increased from -95 MVAR to 127 MVAR b/w 11:03 hrs-11:04 hrs, then continuous fluctuation in Reactive power was fluctuating from 11:04 hrs to 11:44 hrs in range of -100 MVAR to 165 MVAR, with maximum fluctuation of 244 MVAR observed at 11:19 hrs.
	ACME RAISAR SOLAR POWER PRIVATE LIMITED		300				
	ACME DHAULPUR SOLAR POWER PRIVATE LIMITED		300				
Total capacity_ Fatehgarh-I (Adani pooling)			2196				
1	ACME Heeragarh powertech Pvt. Ltd	Bhadla-II (PG)	300	220kV ACME Heeragarh-Bhadla-II (PG) S/C line	37	44	Initially no major fluctuation observed in active power but after 12:06 hrs fluctuation of -37 MW observed. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -24 MVAR to 20 MVAR, with maximum fluctuation of 44 MVAR observed at 11:08 hrs.
2	ABC Renewable Pvt. Ltd		300	220kV ABC(RJ-01) Pvt. Ltd.-Bhadla-II (PG) S/C line	64	141	Initially no major fluctuation observed in active power but at 11:37 hrs Active power reduced 297 MW to 233 MW (reduction by 64 MW). Further, after 12:05 hrs slight fluctuation (-30 MW) observed in Active power. Reactive power fluctuation is coming even before the event, continuous fluctuation in reactive power from -108 MVAR to 33 MVAR can be seen in SCADA plot between 10:38-10:47 hrs, however event started at 11:03 hrs. Plant need to analyse it in detailed whether significant reactive power fluctuation in ABC Renewable (RJ-01) even before the event caused the triggering? Further, continuous fluctuation in Active power observed from 11:03 hrs to 11:44 hrs in range of -19 MVAR to 33 MVAR, with maximum fluctuation of 57 MVAR observed at 11:37 hrs.
3	Mega Surya Urja Pvt. Ltd. (MSUPL)		250	220kV MSUPL-Bhadla-II (PG) S/C line	13	43	No major fluctuation observed in Active power, maximum fluctuation of 13 MW observed in active power at 11:12 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs; Fluctuation in range of 25 MVAR to 68 MVAR between 11:03-11:10 hrs and fluctuation in range of -2 MVAR to 35 MVAR between 11:10-11:44 hrs, with maximum fluctuation of 43 MVAR observed at 11:08 hrs.
4	NTPC Kolayat_400kV		550	400kV NTPC Kolayat-Bhadla-II (PG) S/C line	126	106	Intermittent fluctuation observed in Active power. No fluctuation observed till 11:20 hrs, but between 11:20-11:24 hrs fluctuation in active power observed from 519 MW to 393 MW, maximum fluctuation of 126 MW observed at 11:22 hrs. Sudden reduction in Reactive power from 82 MVAR to 17 MVAR at 11:01 hrs, then continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -40 MVAR to 65 MVAR, with maximum fluctuation of 106 MVAR observed at 11:29 hrs. Further, spike of 178 MVAR observed at 11:40 hrs.
5	Avaada Sunrays Pvt. Ltd.		320	220kV ASEPL-Bhadla-II (PG) S/C line	7	43	No major fluctuation observed in Active power, maximum fluctuation of 7 MW observed in active power at 11:38 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of 6 MVAR to 57 MVAR, with maximum fluctuation of 43 MVAR observed at 11:11 hrs.
6	NTPC Nokhra_300MW		300	220kV NTPC Nokhra-Bhadla-II (PG) S/C line	13	48	No major fluctuation observed in Active power, maximum fluctuation of 13 MW observed in active power at 11:32 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -18 MVAR to 39 MVAR, with maximum fluctuation of 48 MVAR observed at 11:15 hrs.
7	Rising Sun Energy-K Pvt. Ltd.		190	220kV RSEKPL-Bhadla-II (PG) S/C line	9	38	No fluctuation observed in Active power, maximum fluctuation of only 9 MW observed in active power at 11:11 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of 1 MVAR to 46 MVAR, with maximum fluctuation of 38 MVAR observed at 11:07 hrs.
	AMP Energy Green Six Pvt. Ltd.		100				
8	AMP Energy Green Five Pvt. Ltd.		100	220kV AEGPL-Bhadla-II (PG) S/C line	5	16	No fluctuation observed in Active power, maximum fluctuation of only 5 MW observed in active power at 11:07 hrs. Sudden reduction in Reactive power from 47 MVAR to 21 MVAR at 10:58-11:00 hrs, then continuous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs in range of 9 MVAR to 29 MVAR, with maximum fluctuation of 16 MVAR observed at 11:10 hrs.
	AMP Energy Green Four Pvt. Ltd.		100				
9	ADANI GREEN ENERGY TWENTY FIVE LIMITED	500	400kV AGE25L-Bhadla-II (PG) S/C line	25	68	No major fluctuation observed in Active power, maximum fluctuation of 25 MW observed in active power at 11:37 hrs. Reduction in Reactive power from 81 MVAR to 32 MVAR at 11:08-11:09 hrs, then Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -20 MVAR to 88 MVAR, with maximum fluctuation of 68 MVAR observed at 11:18 hrs.	
	Adani Solar Energy Jodhpur Six Pvt. Ltd.	50					
10	NTPC Nokh Solar	735	220kV NTPC Nokh-Bhadla-II (PG) S/C line	13	80	No fluctuation observed in Active power, maximum fluctuation of only 13 MW observed in active power at 11:22 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of 60 MVAR to 150 MVAR, with maximum fluctuation of 80 MVAR observed at 11:19 hrs.	

Detailed Analysis of 04.02.206 Voltage Oscillation/Fluctuation event								
Sl No.	RE Plant Name	Pooling Station	Plant Rated Capacity (MW) as on 04.02.2026	Evacuating line	Active Power (MW) fluctuation	Reactive Power (MVar) fluctuation	Summary of Analysis	
11	Gorbea Solar Pvt Ltd	Bikaner-II (PBTSL)	300	220kV Gorbea Solar-Bhadla-II (PG) S/C line	14	-	No major fluctuation observed in Active power, maximum fluctuation of 14 MW observed in active power at 11:12 hrs. Reactive power data is flat zero (suspected)	
12	Eden Renewable Alma Pvt. Ltd.		300	220kV ERAPL-Bhadla-II (PG) S/C line	16	28	No major fluctuation observed in Active power, maximum fluctuation of 16 MW observed in active power at 11:12 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -2 MVar to 24 MVar, with maximum fluctuation of 28 MVar observed at 11:09 hrs	
Total capacity_Bhadla-II(PG)			4395					
1	One Volt energy Pvt. Ltd.		100	220kV GEPL-Bikaner-II (PG) S/C line	5	28	No fluctuation observed in Active power, maximum fluctuation of only 5 MW observed in active power at 11:14 hrs. Continuous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs in range of -3 MVar to 37 MVar, with maximum fluctuation of 28 MVar observed at 11:22 hrs.	
	Amplus Ages Private Limited		100					
	Grian Energy private limited		100					
2	Adept Renewable Technologies Pvt. Ltd.		110	220kV Prerak Green Tech Pvt.Ltd.-Bikaner-II (PG) S/C line	-	31	No conclusive inference can be made as SCADA data resolution is poor for this plant. However, no No fluctuation observed in Active power. Sudden reduction in Reactive power from 99 MVar to 14 MVar at 10:54-10:55 hrs, then continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -4 MVar to 32 MVar, with maximum fluctuation of 31 MVar observed at 11:11 hrs.	
	TRANSITION ENERGY SERVICES PRIVATE LIMITED		60					
	TRANSITION CLEANTECH SERVICES PRIVATE LIMITED		24					
	Transition Sustainable Energy Services Private Limited		50					
	Transition Green Energy Private Limited		100					
	Transition Sustainable Energy Services One Pvt Ltd		56					
3	Banderwala Solar Plant TP Surya Ltd.	300	220kV Banderwala TPSL-Bikaner-II (PG) S/C line	14	18	No major fluctuation observed in Active power, maximum fluctuation of 14 MW observed in active power at 11:12 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs, Fluctuation in range of 43 MVar to 61 MVar between 11:03-11:09, then plant reduced the reactive power from 61 MVar to 21 MVar at 11:09 hrs and to 10 MVar at 11:23 hrs with reactive power fluctuation in range of 1 MVar to 15 MVar between 11:23-11:44 hrs, with maximum fluctuation of 18 MVar observed at 11:07 hrs		
4	Serentica Renewables India 4 Private Limited	168	220kV SRIPL-Bikaner-II (PG) S/C line	7	16	No fluctuation observed in Active power, maximum fluctuation of only 7 MW observed in active power at 11:10 hrs. Sudden reduction in Reactive power from 81 MVar to 20 MVar at 11:00-11:01 hrs, then continuous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs in range of 16 MVar to 47 MVar, with maximum fluctuation of 16 MVar observed at 11:10 hrs.		
	Serentica Renewables India 5 Private Limited	232						
5	JUNIPER GREEN COSMIC PRIVATE LIMITED	100	220kV Juniper-Bikaner-II (PG) S/C line	16	9	No major fluctuation observed in Active power, maximum fluctuation of 16 MW observed in active power at 11:41 hrs. Continuous fluctuation in Reactive power observed from 11:04 hrs to 11:44 hrs, with maximum fluctuation of 9 MVar observed at 11:10 hrs.		
	JUNIPER NIRJARA ENERGY PRIVATE LIMITED	50						
6	SJVNL Solar Project	888	400kV SJVNL-Bikaner-II (PG) S/C line	9	122	No fluctuation observed in Active power, maximum fluctuation of only 9 MW observed in active power at 11:38 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -35 MVar to 118 MVar, with maximum fluctuation of 122 MVar observed at 11:37 hrs.		
7	Karinsar Solar Plant NHPC Ltd	300	220kV NHPC-Bikaner-II (PG) S/C line	10	54	No fluctuation observed in Active power, maximum fluctuation of only 10 MW observed in active power at 11:23 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of -24 MVar to 44 MVar, with maximum fluctuation of 54 MVar observed at 11:06 hrs.		
8	ACME Sikar Solar Power Pvt. Ltd.	300	220kV ACME Sikar-Bikaner-II (PG) S/C line	-	-	Data Not available		
9	Juna Renewable Energy Pvt. Ltd.	335	220kV JREPL-Bikaner-II (PG) S/C line	-	-	Data Not available		
10	Khidrat Renewable Energy Pvt. Ltd.	300	220kV KREPL-Bikaner-II (PG) S/C line	7	15	No fluctuation observed in Active power, maximum fluctuation of only 7 MW observed in active power at 11:12 hrs. Sudden reduction in Reactive power from 74 MVar to 21 MVar at 10:54-10:55 hrs, then continuous fluctuation in Reactive power observed from 11:03 hrs to 11:44 hrs in range of 13 MVar to 28 MVar, with maximum fluctuation of 15 MVar observed at 11:08 hrs.		
11	Renew Dinkar Urja Private Limited	200	220kV RDUPL-Bikaner-II (PG) S/C line	-	-	Data Not available		
Total capacity_Bikaner-II			3873					
1	Altra Xergi Pvt. Ltd.	Fatehgarh-III	380	220kV AXPPPL-Fatehgarh-III S/C line	10	62	No fluctuation observed in Active power, maximum fluctuation of only 10 MW observed in active power at 11:11 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:28 hrs in range of -33 MVar to 49 MVar, with maximum fluctuation of 62 MVar observed at 11:11 hrs. It seems that SCADA data is frozen from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.	
	Renew Surya Vihan Pvt. Ltd.		100	220kV RSVPL-Fatehgarh-III S/C line	-	13	No fluctuation observed in Active power, but momentary dip from 98 MW to 0 W observed at 11:41:08 hrs which recovered immediately, is 98 MW dip actual dip observed or it is data issue? Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:28 hrs in range of -5 MVar to 12 MVar, with maximum fluctuation of 13 MVar observed at 11:41 hrs. It seems that SCADA data is frozen from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.	
Renew Surya Partap Pvt. Ltd.	200							
3	Renew Surya Ayaan Pvt. Ltd.		300	220kV RSAPL-Fatehgarh-III S/C line	92	36	Active power was fluctuating from 11:05 hrs and dropped from 276 MW to 184 MW in 11:08-11:11 hrs. Reactive power injection reduced from 69 MVar (at 10:55hrs) to 15 MVar (10:59 hrs). Further, continuous fluctuation in Reactive power observed from 11:04 hrs to 11:28 hrs in range of -14 MVar to 42 MVar, with maximum fluctuation of 36 MVar observed at 11:22 hrs. It seems that SCADA data is frozen from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.	
4	Renew Surya Roshni Pvt. Ltd.		400	220kV Renew Roshni-Fatehgarh-III S/C line	7	96	No fluctuation observed in Active power, maximum fluctuation of only 7 MW observed in active power at 11:15 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:28 hrs in range of -54 MVar to 55 MVar, with maximum fluctuation of 96 MVar observed at 11:11 hrs. It seems that SCADA data is frozen from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.	
5	Neeamba Solar Plant Renew Surya Vihana Pvt. Ltd.		200	220kV Renew Jyoti-Fatehgarh-III S/C line	-	-	Data Not available	
	Renew Surya Jyoti Pvt. Ltd.		210					

Detailed Analysis of 04.02.206 Voltage Oscillation/Fluctuation event							
Sl No.	RE Plant Name	Pooling Station	Plant Rated Capacity (MW) as on 04.02.2026	Evacuating line	Active Power (MW) fluctuation	Reactive Power (MVar) fluctuation	Summary of Analysis
6	XL Xergi Power Pvt. Ltd.		400	220kV XXPL-Fatehgarh-III S/C line	5	38	No fluctuation observed in Active power, maximum fluctuation of only 5 MW observed in active power at 11:08 hrs. Reactive power fluctuation is coming even before the event, continuous fluctuation in reactive power from 70 MVar to 128 MVar can be seen in SCADA plot between 10:30-10:33 hrs, however event started at 11:03 hrs. Plant need to analyse it in detailed whether significant reactive power fluctuation in ABC Renewable (RJ-01) even before the event caused the triggering? Further, continuous fluctuation in Reactive power observed from 11:03 hrs to 11:28 hrs in range of 9 MVar to 27 MVar. It seems that SCADA data is freezed from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.
7	Energizent Power Private Limited		69	220kV EPPL-Fatehgarh-III S/C line	5	3	No fluctuation observed in Active power, maximum fluctuation of only 5 MW observed in active power at 11:08 hrs. Slight fluctuation in Reactive power observed from 11:03 hrs to 11:28 hrs in range of 2 MVar to 6 MVar, with maximum fluctuation of 3 MVar observed at 11:08 hrs. It seems that SCADA data is freezed from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.
8	ABC Renewable Energy (RJ-02) Pvt. Ltd.		400	220kV ABCR (RJ-02) PL-Fatehgarh-III S/C line	19	35	No major fluctuation observed in Active power, maximum fluctuation of 19 MW observed in active power at 11:07 hrs. Continuous fluctuation in Reactive power observed from 11:03 hrs to 11:28 hrs in range of -21 MVar to 32 MVar, with maximum fluctuation of 35 MVar observed at 11:08 hrs. It seems that SCADA data is freezed from 11:28-11:41 hrs and dip in Active power to Zero "0" value at 11:41 hrs for all the RE plants connected at Fatehgarh-III is also suspected.
Total capacity_Fatehgarh-III			2659				
Total NR ISTS_Rajasthan (Large)			24138				

PMU Data Availability of RE plants in Northern Region from October to December 2025						
S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	SubstationId	DeviceId	PMU Data Availability (%)
1	400 kV Bhadla I (PG)	Adani Solar Energy Jodhpur Two Limited, Rawara	50	RAWRA_IP	220BHDLARAWRA1	99
2	400 kV Bhadla I (PG)	Adani Solar Energy Four Private Limited	50			
3	400 kV Bhadla I (PG)	Adani Renewable Energy (RJ) limited Rawara	200			
4	400 kV Bhadla I (PG)	Mahindra Renewable Private Limited (MRPL)	250	MRPL_IP	220BHDLAMRPL_1	79
5	400 kV Bhadla I (PG)	Azure Power Maple Pvt. Limited (AZRMP)	300	AZRMP_IP	220AZRMPBHDLA1	99
6	400 kV Bhadla I (PG)	ACME Chittorgarh Solar Energy Pvt. Ltd (ACME)	250	ACME_IP	220ACME_BHDLA1	48
7	400 kV Bhadla I (PG)	Azure Power Forty One Private Limited (AZR41)	300	AZR41_IP	220AZR41BHDLA1	82
8	400 kV Bhadla I (PG)	RENEW SOLAR POWER Pvt. Ltd. Bhadla	50	AREPR_IP	220AREPRBHDLA1	99
9	400 kV Bhadla I (PG)	AZURE POWER INDIA Pvt. Ltd., Bhadla	200	AREPR_IP_Azure	220AREPRBHDLA1	99
10	400 kV Bhadla I (PG)	TPREL (Chhayan)	300	TPREL_IP	220BHDLATPREL1	96
11	400 kV Bhadla I (PG)	SB ENERGY FOUR PRIVATE LIMITED, Bhadla	200	SURJA_IP_SB	220BHDLASURJA1	98
12	400 kV Bhadla I (PG)	Clean Solar Power (Bhadla) Pvt. Ltd	300	SURJA_IP_Clean	220BHDLASURJA2	98
13	400 kV Bhadla I (PG)	Azure Power Thirty Four Pvt. Ltd.	130	APTFI_IP	220APTFIBHDLA1	99
14	400 kV Bhadla I (PG)	Clean Solar Power (Jodhpur) Pvt. Ltd.	250	CSPJP_IP	220BHDLACSPJP1	78
15	400 kV Bhadla I (PG)	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	150	ESELM_IP	220ESELMESLN11+220ESELMESLN2 1	97
15	401 kV Bhadla I (PG)	Ambuja Cements Limited	300			
15	400 kV Bhadla I (PG)	Essel Saurya Urja Company of Rajasthan Limited (ESURL)	300			

Status of RE Plants at 765 kV Bhadla 2 (PG)						
S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	PMU Code	DeviceId	PMU Data Availability (%)
1	765 kV Bhadla 2 (PG)	Mega Suryaurja Private Limited (MSUPL)	250	MSUPL_IP	220BHDL2MSUPL1	0
2	766 kV Bhadla 2 (PG)	ACME Heergarh Powertech Private Limited (AHPPL)	300	AHPPL_IP	220AHPPLBHDL21	97
3	767 kV Bhadla 2 (PG)	ABC Renewable Energy (RJ-01) Private Limited (ABCRL)	300	ABCRL_IP	220ABCRLBHDL21	94
4	768 kV Bhadla 2 (PG)	NTPC Kolayat_1	550	SKBSL_NT	400BHDLASKBSL1	45
5	769 kV Bhadla 2 (PG)	NTPC Kolayat 2		SKBS2_NT	400SKBS2SKBSL1	4
6	770 kV Bhadla 2 (PG)	Avaada Sunrays Pvt. Ltd.	320	ASEPL_IP	220ASEPLBHDL21	96
7	771 kV Bhadla 2 (PG)	NTPC Nokhra	300	Nokra_NT	220BHDL2NOKRA1	81
8	772 kV Bhadla 2 (PG)	Rising Sun Energy-K Pvt. Ltd.	190	RSEKPL_IP	220BHDL2RSEPL1	0
9	777 kV Bhadla 2 (PG)	AMP Energy Green Six Pvt. Ltd.	100	AEGPL_IP	220AEGPLBHDL21	81

PMU Data Availability of RE plants in Northern Region from October to December 2025

Status of RE Plants at 765 kV Bikaner (PG)

S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	PMU Code	Deviceld	PMU Data Availability (%)
1	765 kV Bikaner (PG)	Avaada RJHN 240MW	240	AVADA_IP	400AVADABKNR71	98
2	766 kV Bikaner (PG)	Avaada sunce energy Pvt limited	350			
3	767 kV Bikaner (PG)	Avaada Sustainable RJ Pvt. Ltd.	300			
4	768 kV Bikaner (PG)	Ayana Renewable Power	300	AYANA_IP	400AYANABKNR71	98
7	771 kV Bikaner (PG)	Azure Power Forty Three Pvt. Ltd._RSS	300	AZR43_IP	400AZR43BKNR71	0
9	773 kV Bikaner (PG)	Adani Solar Energy Jaisalmer Two Private Limited Project Two	150	SPCEP_IP	220BKNR7SPCEP1	98
10	774 kV Bikaner (PG)	Thar Surya 1 Private Limited (TS1PL)	300	TS1PL_IP	220BKNR7TS1PL1	50
11	775 kV Bikaner (PG)	Renew Surya Ravi Private Limited Bikaner (RSRPL)	300	RSRPL_IP	400BIKNRRSRPL1	87
12	776 kV Bikaner (PG)	Renew Solar Power Pvt Ltd, Bikaner (250MW) (BIKNP)	250	BIKNR_IP	400BIKNRBIKNR1	97
14	778 kV Bikaner (PG)	Tata Power Green Energy Ltd. (TPGEL)	225	TPGEL_IP	220BKNR7TPGEL1	96

Status of RE Plants at 400 kV Fatehgarh (Adani)

S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	PMU Code	Deviceld	PMU Data Availability (%)
1	400 kV Fatehgarh (Adani)	SINGRAULI SOLAR PV POWER STATION (SPRJ) - Nedan Solar NTPC	296	SPRJ_NT	220AFSPSSPRJ_1	89
2	401 kV Fatehgarh (Adani)	Adani Solar Park PSS-1 (ASPS1)	700	ASPS1_IP	220AFSPSASPS11+220AFSPSASPS21+220AFSPSAWPS11+220AFSPSAWPS21	89
3	402 kV Fatehgarh (Adani)	Adani Solar Park PSS-2 (ASPS2)	-	ASPS2_IP	220AFSPSASPS11+220AFSPSASPS21+220AFSPSAWPS11+220AFSPSAWPS21	87
4	403 kV Fatehgarh (Adani)	Adani Wind Park PSS-3 (AWPS1)	-	AWPS1_IP	220AFSPSASPS11+220AFSPSASPS21+220AFSPSAWPS11+220AFSPSAWPS21	74
5	404 kV Fatehgarh (Adani)	Adani Wind Park PSS-4 (AWPS2)	-	AWPS2_IP	220AFSPSASPS11+220AFSPSASPS21+220AFSPSAWPS11+220AFSPSAWPS21	86
6	405 kV Fatehgarh (Adani)	ACME DEOGHAR SOLAR POWER PRIVATE LIMITED	300	ASHPL_IP	400ASHPLFTHGR1	83
7	406 kV Fatehgarh (Adani)	ACME PHALODI SOLAR POWER PRIVATE LIMITED	300			
8	407 kV Fatehgarh (Adani)	ACME RAISAR SOLAR POWER PRIVATE LIMITED	300			
9	408 kV Fatehgarh (Adani)	ACME DHAULPUR SOLAR POWER PRIVATE LIMITED	300			

PMU Data Availability of RE plants in Northern Region from October to December 2025

Status of RE Plants at 765 kV Fatehgarh II (PG)

S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	PMU Code	DeviceId	PMU Data Availability (%)
1	765 kV Fatehgarh II (PG)	Renew Sun Bright Private Limited (RSBPL)	300	RSBPL_IP	220FTGR2RSBPL1	97
2	766 kV Fatehgarh II (PG)	Adani Hybrid Energy Jaisalmer Two Limited (AHEJ2)	300	AHEJ2_IP	220AHEJ2FTGR21	97
3	767 kV Fatehgarh II (PG)	Adani Hybrid Energy Jaisalmer Two Limited (AHEJ2): Wind	0			
4	768 kV Fatehgarh II (PG)	Adani Hybrid Energy Jaisalmer Three Limited (AHEJ3)	300	AHEJ3_IP	220AHEJ3FTGR21	78
5	769 kV Fatehgarh II (PG)	Adani Hybrid Energy Jaisalmer Three Limited (AHEJ3): Wind	0			
6	770 kV Fatehgarh II (PG)	Adani Hybrid Energy Jaisalmer One Limited (ADNHB)	390	ADNHB_IP	220ADNHBFTGR21	88
7	771 kV Fatehgarh II (PG)	Adani Hybrid Energy Jaisalmer One Limited (ADNHB): Wind	0	ADNHB_IP	220ADNHBFTGR22	88
8	772 kV Fatehgarh II (PG)	Adani Solar Energy Jaisalmer one Limited: Solar (ckt 1)	450	ASJ1S_IP_Ckt1	220ASJ1SFTGR21	81
9	773 kV Fatehgarh II (PG)	Adani Solar Energy Jaisalmer one Limited: Solar (ckt II)	0	ASJ1S_IP_Ckt2	220ASJ1SFTGR22	81
10	774 kV Fatehgarh II (PG)	Eden Renewable Cite Private Limited (EDEN)	300	EDEN_IP	220EDEN_FTGR21	98
11	775 kV Fatehgarh II (PG)	ReNew Solar Energy Jharkhand Three Pvt. Ltd (RJ3PL)	300	RJ3PL_IP	220FTGR2RJ3PL1	98
12	776 kV Fatehgarh II (PG)	ReNew Solar Urja Private Limited(RSUPL)	300	RSUPL_IP	220FTGR2RSUPL1	64
13	777 kV Fatehgarh II (PG)	ReNew Sun Waves Private Limited, Fatehgarh-II (RNEWJ)	300	RNEWJ_IP	400FTGR2RNEWJ1	94
14	778 kV Fatehgarh II (PG)	NTPC Devikot Solar Plant	240	DVKOT_NT	220DVKOTFTGR21	98
15	779 kV Fatehgarh II (PG)	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	180	ASER2_IP	220ASER2FTGR21	85
16	780 kV Fatehgarh II (PG)	Adani Green Energy Twenty Four Limited	500	AGE24_IP	220AGE24FTGR21	79

Status of RE Plants at 765 kV Fatehgarh III (PG)

S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	PMU Code	DeviceId	PMU Data Availability (%)
1	Fatehgarh III (PG)	Altra Xergi Pvt. Ltd.	380	AXPPL_IP	220AXPPLFTGR31	91
2	Fatehgarh III (PG)	Renew Surya Vihan Pvt. Ltd.	100	RSVPL_IP	220FTGR3RERSH1	0
3	Fatehgarh III (PG)	Renew Surya Partap Pvt. Ltd.	200		220FTGR3RSAPL1	0
4	Fatehgarh III (PG)	Renew Surya Ayaan Pvt. Ltd.	300	RSAPL_IP	220FTGR3RSAPL1	68
5	Fatehgarh III (PG)	Renew Surya Roshni Pvt. Ltd.	400	RERSH_IP	220FTGR3RERSH1	87
6	Fatehgarh III (PG)	Neemba Solar Plant Renew Surya Vihaan Pvt. Ltd.	200	NRVPL_IP	220NRVPLRSJPL1	44
7	Fatehgarh III (PG)	Renew Surya Jyoti Pvt. Ltd.	210	RSJPL_IP	220FTGR3RSJPL1	98
8	Fatehgarh III (PG)	XL Xergi Power Pvt. Ltd.	400	XXPPL_IP	220FTGR3XXPPL1	84
9	Fatehgarh III (PG)	Energizent Power Private Limited	69	EPPL_IP	220EPPL_FTGR31	97
10	Fatehgarh III (PG)	ABC Renewable Energy (RJ-02) Pvt. Ltd.	340	ABC02_IP	220ABC02FTGR31	0

PMU Data Availability of RE plants in Northern Region from October to December 2025

Status of RE Plants at 765 kV Bikaner-II (PG)

S.No	Connected at	Name of SPPD/Generator	Installed Capacity (MW)	PMU Code	DeviceId	PMU Data Availability (%)
1	Bikaner-II (PG)	One Volt energy Pvt. Ltd.	110	GEPL_IP	220BKNR2GEPL_1	79
2	Bikaner-II (PG)	Amplus Ages Private Limited	60			
3	Bikaner-II (PG)	Grian Energy private limited	24.4			
4	Bikaner-II (PG)	Adept Renewable Technologies Pvt. Ltd.	50	PGPL_IP	220BKNR2PGPL_1	72
5	Bikaner-II (PG)	TRANSITION ENERGY SERVICES PRIVATE LIMITED	100			
6	Bikaner-II (PG)	TRANSITION CLEANTECH SERVICES PRIVATE LIMITED	55.6			
7	Bikaner-II (PG)	Transition Sustainable Energy Services Private Limited	50			
8	Bikaner-II (PG)	Transition Green Energy Private Limited	100			
9	Bikaner-II (PG)	Transition Sustainable Energy Services One Pvt Ltd	55.6	TPSB_IP	220BKNR2TPSB_1	86
10	Bikaner-II (PG)	Banderwala Solar Plant TP Surya Ltd.	300			
11	Bikaner-II (PG)	Serentica Renewables India 4 Private Limited	168	SRI4P_IP	220SRI4PSRI4P1	87
12	Bikaner-II (PG)	Serentica Renewables India 5 Private Limited	232			
13	Bikaner-II (PG)	JUNIPER GREEN COSMIC PRIVATE LIMITED	100	JGCPL_IP	220BKNR2JGCPL1	59
14	Bikaner-II (PG)	JUNIPER NIRJARA ENERGY PRIVATE LIMITED	50			
15	Bikaner-II (PG)	SJVNL Solar Project	888	SGEL__IP	400BKNR2SGEL_1	98
16	Bikaner-II (PG)	Karinsar Solar Plant NHPC Ltd	300	KBNHP_IP	220BKNR2KBNHP1	66
17	Bikaner-II (PG)	ACME Sikar Solar Pvt. Ltd.	300	ASSPL_IP	220ASSPLBKNR21	0
18	Bikaner-II (PG)	Juna Renewable Energy Pvt. Ltd.	335	JREPL_IP	220BKNR2JREPL1	0
19	Bikaner-II (PG)	Khidrat Renewable Energy Pvt. Ltd.	300	KREPL_IP	220BKNR2KREPL1	0

Grid Event summary for January-February 2026

S.No.	Category of Grid Incidents/ Disturbance (GI-1 to GD-V)	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Reviel		Duration (hh:mm)	Event (As reported)	Loss of generation / loss of load during the Grid Disturbance		Fault Clearance time (in ms)	Remarks
					Date	Time	Date	Time			Generation Loss(MW)	Load Loss (MW)		
1	GD-1	1) 220 KV Debari(RS)-RAPS_A(INP) (RS) Ckt 2) 220 KV Debari(RS)-RAPS_B(INP) (PG) Ckt 3) 220/132KV 50 MVA ICT-1 at Debari(RS) 4) 220/132KV 160 MVA ICT-3 at Debari(RS) 5) 220/132KV 160 MVA ICT-4 at Debari(RS) 6) 220/132KV 100 MVA ICT-5 at Debari(RS)	Rajasthan	RVPNL, NPCIL	4-Jan-26	07:02	4-Jan-26	07:15	00:13	i)As reported, at 06:04 hrs, 220 KV Debari(RS)-RAPS_A(INP) (RS) Ckt tripped on Y-N phase to earth fault with fault distance of 103.8 km and fault current of 1.02 KA from Debari(RS) end and fault distance of 97.18 km and fault current of 1.835 KA from RAPS_A(INP) end. ii)As further reported, at 07:02 hrs, during charging attempt of 220 KV Debari(RS)-RAPS_A(INP) (RS) Ckt, bus bar protection mal-operated at 220KV Debari(RS) which resulted in tripping of all 220/132KV ICTs also. Complete blackout occurred at 220/132KV Debari(RS). iii)Supply to following area were disturbed during this event: a)132 KV GSS Dakankotra w.e.f. 07:02 to 07:45 hrs (43 mins) (Along with railway Feeder at Dakan Kotra) b)132 KV GSS Bhatewar w.e.f. 07:02 to 08:18 hrs (16mins) c)132 KV GSS Mavli w.e.f. 07:02 to 07:27 hrs (25 mins) (Along with railway Feeder at Marli(29mins)) d)132 KV HZ feeder and 132 KV UCW feeder and local w.e.f. 07:02 to 07:42hrs (40 mins) feeders v)As per PMU at RAPP_C(INP), no fault was observed in the system. vi)As per SCADA change in demand of approx. 124 MW in Rajasthan control area was observed. vii)Supply was taken from 220 KV Debari-Amberli (PG) Ckt at 07:43hrs. 220 KV Debari(RS)-RAPS_A(INP) (RS) Ckt was charged after replacement of disc string fail at TL-306 (Y Phase). viii)Generation of 220KV AHEJL(IP) station evacuates through 220KV Fatehgarh_III(PG)-AHEJL_PSS HB_FGRAH_PG (AHEJL) (AHEJL) Ckt-1. ix)During antecedent condition, 220KV AHEJL(IP) station was generating approx. 264 MW (as per SCADA). x)As reported, at 10:36 hrs, 220 KV Fatehgarh_III(PG)-AHEJL_PSS HB_FGRAH_PG (AHEJL) (AHEJL) Ckt-1 tripped on Y-N phase to earth fault with fault current of 1.08KA from AHEJL end (exact nature, location and reason of fault yet to be shared) which led to complete blackout out of 220KV AHEJL(IP) S/L. xi)As per PMU at Fatehgarh2(PG), YN phase to earth fault was observed with fault clearing time of 80ms. Voltage dipped upto 0.943 pu during fault. xii)As per PMU, solar generation loss of approx. 264 MW was observed at AHEJL(IP).	0	124	NA	The exact reason of bus bar protection mal-operation and DR/L of all the tripping elements may be shared from both ends. The remedial action taken may be shared.
2	GD-1	1) 220 KV Fatehgarh_III(PG)-AHEJL_PSS HB_FGRAH_PG (AHEJL) (AHEJL) Ckt	Rajasthan	AHEJL, PGCL	11-Jan-26	10:36	11-Jan-26	14:25	03:49	i)As reported, at 10:36 hrs, 220 KV Fatehgarh_III(PG)-AHEJL_PSS HB_FGRAH_PG (AHEJL) (AHEJL) Ckt-1 tripped on Y-N phase to earth fault with fault current of 1.08KA from AHEJL end (exact nature, location and reason of fault yet to be shared) which led to complete blackout out of 220KV AHEJL(IP) S/L. ii)As per PMU at Fatehgarh2(PG), YN phase to earth fault was observed with fault clearing time of 80ms. Voltage dipped upto 0.943 pu during fault. xii)As per PMU, solar generation loss of approx. 264 MW was observed at AHEJL(IP).	264	0	120	The exact reason of fault, location and DR/L along with tripping report may be shared from both ends. Availability and healthiness of SCADA data need to be ensured. The remedial action taken may be shared.
3	GD-1	1) 400 KV Bassi(PG)-Phag(RS) (PG) Ckt-1 2) 765 KV Bhadia_2 (PG)-Fatehgarh_III(PG) (PBT) Ckt-3 3) 220 KV Fatehgarh_III(PG)-RSAPL_RENEW SURYA AAYAN PRIVATE LIMITED) Ckt-1 4) 700 MW RAPS D unit-1	Rajasthan	RVPNL, PGCL, RSAPL, NPCIL	14-Jan-26	13:38	14-Jan-26	14:31	00:53	i)As reported, at 13:38 hrs, 400KV Bassi-Phag ckt-2 tripped on R-Y fault. Fault occurred due to kite thread. As per PMU plot of phase current of line at Bassi(PG), R-Y fault which cleared within 100 msec is observed. ii)On this fault during voltage dip, significant dip in RE generation observed which further led to the overvoltage in transmission network. iii)Due to this overvoltage, 765 KV Bhadia2-Fatehgarh2 ckt-3 tripped on overvoltage stage-1. As per PMU plot of phase voltage of line at Fatehgarh2(PG), overvoltage upto Vph:469KV, ~1.06 pu is observed. At the same time, 220 KV Fatehgarh_III(PG)-RSAPL_RENEW SURYA AAYAN PRIVATE LIMITED Ckt also tripped on overvoltage and RAPS-D unit-1 tripped due to turbine trip during grid disturbance. (Exact reason of RAPS-D unit tripping is yet to be received). Tripping of 220KV RSAPL RE station on overvoltage needs to be reviewed. iv)As per SCADA, total drop of approx. 1680 MW NR RE generation observed during the event. Out of which ~300 MW lost due to tripping of RSAPL RE station and ~100 MW at APTFL, ~90 MW at Devkot, ~50 MW at AHEJL, ~85 MW at TPGL, ~180 MW ASJL, ~82 MW at ARTPL and ~155 MW at MSUPL affected due to suspected LVRT/HVRT non-compliance during the event. Additionally, loss of ~600 MW nuclear generation observed at RAPS-D due to tripping of RAPS-D unit-1.	2281	0	80	Root cause analysis and LVRT behaviour of such RE stations may be reviewed. Cause of tripping of 200KV RSAPL and Renew Dinkar RE generators may be shared. As per protection philosophy, over-voltage protection has to be kept Off at 220KV level. DR/L and voltage protection setting of RSAPL & RAPS RE stations may be shared. Tripping of 765KV feeders from Bhadia_2 may be reviewed. DR/L and tripping analysis of these lines may be shared. The remedial action taken may be shared.
4	GD-1	1) 765 KV SIKAR_2(PSTL)-Aligarh(PG) (PASTL) Ckt-1 2) 220 KV Renew_Dinkar-Bikaner_2 (PBTSL) (Renew Dinkar, UPL Ckt-1 3) 400 KV ACME_Deoghar_Ftg1(PG)-Fatehgarh Pooling(FBTL) Ckt-1 4) 765 KV Bikaner-Bhadia_2 (PG) Ckt-1 5) 765 KV Bhadia_2 (PG)-Fatehgarh_III(PG) (PBT) Ckt-4 6) 400 KV Bikaner(PG)-Bikaner RENEW Solar(RENUEW) (Renew Power) Ckt 7) 400 KV Renew SuryaRavi (RSRPL)-Bikaner Renew Solar(RENUEW) Ckt-1 8) 765 KV Bhadia_2 (PG)-Fatehgarh_III(PG) (PFTL) Ckt-1 9) 765 KV Ajmer-Bhadia_2 (PG) Ckt-1 10) 765 KV Bhiwani(PG)-Narela(PNTL) (PNTL) Ckt-1	Rajasthan	PGCL, RDUPIL, ACME, REWEL, RSRPL	14-Jan-26	14:05	14-Jan-26	15:43	01:38	i)As reported, at 14:05 hrs, 765KV SIKAR2-Aligarh ckt-1 tripped on R-Y three phase fault. Fault occurred due to kite thread. As per PMU plot of phase current of line at SIKAR2(PG), R-Y three phase fault which cleared within 100 msec is observed. ii)On this fault during voltage dip, significant dip in RE generation observed which further led to the overvoltage in transmission network. iii)Due to this overvoltage, 765KV Fatehgarh2-Bhadia2 ckt-1 & 4, 765KV Bikaner-Bhadia2 ckt-1, 765KV Bhadia2-Ajmer ckt-1, 765KV Bhiwani-Narela ckt, 400KV Fatehgarh1-ACME Pool ckt, 400KV Bikaner(PG)-Bikaner Renew Solar ckt, 400KV Bikaner Renew Solar Surya Ravi ckt and 220KV Bikaner2(PG)-Renew Dinkar ckt tripped on overvoltage stage-1. As per PMU plot of phase voltage of line, Vph: 475KV (L075 pu) at Bhadia2(PG) and 462KV (L 027 pu) at Bhiwani(PG) is observed. Tripping of 220KV Renew Dinkar RE station on overvoltage needs to be reviewed. iv)As per SCADA, total drop of approx. 3787 MW NR RE generation observed during the event. Out of which ~1650 MW lost due to tripping of ACME pooling station, Bikaner Renew Solar, Renew Surya Ravi and Renew Dinkar RE station and ~50 MW at SB Energy, ~66 MW at AHEJL, ~74 MW at AHEJL, ~35 MW at EDEN, ~135 MW RSUPL, ~88 MW at Avada SSN, ~78 MW at TPGL, ~65 MW at Koliyat, ~225 MW ABCL, ~293 MW at NTPC Nohra, ~125 MW at Kamiser NHPC, ~82 MW at ARTPL and ~61 MW at RSEKPL affected due to suspected LVRT/HVRT non-compliance during the event.	3787	252	80	The exact nature, location and reason of fault along with detailed tripping report from XL XERGI end may be shared. The reason of tripping of ICTs during A/R of line may be analyzed and O/C E/F protection settings of ICTs at XL XERGI and setting may be in accordance with NTPC protection philosophy. Availability and healthiness of SCADA data may be ensured. Proper DR channel configuration need to be ensured at ICTs of XL XERGI. The remedial action taken at site may be shared.
5	GI-2	1) 765 KV SIKAR_2(PSTL)-Aligarh(PG) (PASTL) Ckt-2	Rajasthan	PGCL	14-Jan-26	14:09	14-Jan-26	23:33	09:24	i)As reported, at 14:09 hrs, 765KV SIKAR2-Aligarh ckt-2 tripped on R-Y fault. Fault occurred due to kite thread. ii) As per PMU plot of phase current of line at SIKAR2(PG), R-Y fault which cleared within 100 msec is observed. iii)On this fault during voltage dip, as per SCADA, total drop of approx. 925 MW NR RE generation observed.	925	0	80	
6	GD-1	1) 220/33 KV 213 MVA ICT 1 at XL_XPPL_SL_Flg3(PG) 2) 220/33 KV 213 MVA ICT 2 at XL_XPPL_SL_Flg3(PG)	Rajasthan	XXPPL_Flg3	10-Feb-26	15:55	10-Feb-26	23:32	07:37	i)Generation of 220KV XL XERGI(IP) station evacuates through 220 KV Fatehgarh_III(PG)-XL_XPPL_SL_Flg3(PG) (XL_XPPL) Ckt which is further connected to 220/33 KV 213 MVA ICT 1 & 2 at XL_XPPL_SL_Flg3(PG). ii)During antecedent condition, 220KV XL XERGI(IP) station was generating approx. 165 MW (as per PMU and SCADA). iii)As reported, at 15:55 hrs, 220 KV Fatehgarh_III(PG)-XL_XPPL_SL_Flg3(PG) (XL_XPPL) Ckt auto-reclosed from Fatehgarh_III(PG) end on R phase to earth fault (exact reason, nature and location of fault yet to be shared). iv)During auto-reclose operation, unbalanced current flow through neutral led to tripping of both 220/33 KV 213 MVA ICT 1 & 2 at XL_XPPL_SL_Flg3(PG) on O/C E/F protection operation. This resulted into complete blackout of 220KV XL XERGI(IP). v)As per PMU at Fatehgarh3(PG), R-N phase to earth fault was observed with fault clearing time of 80ms. Voltage dipped upto 0.57 pu during fault. vi)As per PMU and SCADA, solar generation loss of approx. 165 MW was observed at XL XERGI(IP). As per SCADA, change in NR total generation of approx. 186 MW was observed.	165	0	80	The exact nature, location and reason of fault along with detailed tripping report from XL XERGI end may be shared. The reason of tripping of ICTs during A/R of line may be analyzed and O/C E/F protection settings of ICTs at XL XERGI and setting may be in accordance with NTPC protection philosophy. Availability and healthiness of SCADA data may be ensured. Proper DR channel configuration need to be ensured at ICTs of XL XERGI. The remedial action taken at site may be shared.
7	GI-2	1) 700MW RAPS-D - UNIT 1 2) 250 MW (PSP) TEHRI HPS - UNIT 6	Rajasthan	RAPP-D, Tehri PSP	16-Feb-26	11:33	16-Feb-26	11:57	00:24	i)During antecedent condition, 700MW RAPS-D - UNIT 1 was generating approx. 650 MW and 250 MW (PSP) TEHRI HPS - UNIT 5 & 7 were pumping approx. 265 MW each. 250 MW (PSP) TEHRI HPS - UNIT 6 started pumping at around 11:30 hours and was gradually increasing pumping. Just before tripping, it was pumping approx. 221 MW. NR total solar generation was approx. 2864.2 MW among which Rajasthan solar generation was approx. 554.4 MW. ii)As reported, at 11:33 hrs, 250 MW (PSP) TEHRI HPS - UNIT 6 tripped on QSD (Quick Shut down) due to deadband timeout (exact reason yet to be shared). iii)During the same time, 700MW RAPS-D - UNIT 1 also tripped due to Turbine-Generator (TG) trip on reverse power during MW hunting (exact reason yet to be shared). iv)As per SCADA, Line CB at A43RS(IP) end of 400 KV AZUREP543 SL_BKN_PG-AzureP543 SL_BKN_PG (Azure) Ckt opened at 11:34:11.929 hrs and again closed at 11:34:50.173 hrs. However, Azure43 verbally reported that there was data issue at A43RS(IP) during that time, no tripping or auto-reclosing occurred during that time (written confirmation yet to be received from Azure43). v)As per SCADA SOE, 33kV Feeder and Block tripping was detected at A43RS_IP, ASP52_IP and AVDAS_IP. vi)As per PMU at RAPP-C(INP), consecutive three 3-phase voltage dips were observed with voltage recovery time of 80 ms, 4360 ms and 80 ms. vii)As per SCADA, dip of approx. 2062 MW occurred in NR total solar generation among which approx. 1093 MW recovered within 1 minute (dip of approx. 686 MW in Rajasthan solar generation among which approx. 381 MW recovered within 1 minute). viii)As per SCADA, generation loss of approx. 650 MW at RAPP-D and pumping loss of approx. 221 MW at Tehri PSP was observed.	2491	0	4360	Exact reason of tripping of RAPS-D and PSP TEHRI HPS may be analyzed and RCA report may be shared by NCL and THDC respectively. DR along with tripping report may be shared. Availability and healthiness of SCADA data may be ensured. The remedial action taken report to be shared.
8	GD-1	1) 220 KV ABCRenew_R01_SL_BHD2_PG-Bhadia_2 (PG) (ABC R01) Ckt 2) 220 KV RSDCL(PSS1)_SL_BHD2_PG-Bhadia_2 (PG) (RSDCL) Ckt 3) 765 KV Bhadia_3(PB3TL)-SIKAR_2(PSTL) (PB3TL) Ckt-4	Rajasthan	ABCL, RSDCL, PSS1, PGCL	21-Feb-26	13:36	21-Feb-26	15:05	01:29	i)Generation of 220KV ABCL(IP) and 220KV RSDCL PSS1 (NT) station evacuate through 220 KV ABCRenew_R01_SL_BHD2_PG-Bhadia_2 (PG) (ABC R01) Ckt and 220 KV RSDCL(PSS1)_SL_BHD2_PG-Bhadia_2 (PG) (RSDCL) Ckt. ii)During antecedent condition, 220KV ABCL(IP) and 220KV RSDCL PSS1 (NT) station were generating approx. 303 MW and 207 MW respectively (as per PMU). iii)As reported, at 13:36 hrs, 220 KV RSDCL(PSS1)_SL_BHD2_PG-Bhadia_2 (PG) (RSDCL) Ckt tripped due to snapping of the Y-phase jumper at the Tower Loc. No. 25 (exact nature of protection operation yet to be shared). iv)During the same time, 220 KV ABCRenew_R01_SL_BHD2_PG-Bhadia_2 (PG) (ABC R01) Ckt also tripped on Y-B phase to phase fault (exact reason & location of fault and nature of protection operation yet to be shared). v)Due to tripping of 220 KV ABCRenew_R01_SL_BHD2_PG-Bhadia_2 (PG) (ABC R01) Ckt and 220 KV RSDCL(PSS1)_SL_BHD2_PG-Bhadia_2 (PG) (RSDCL) Ckt, complete blackout occurred at 220KV ABCL(IP) and 220KV RSDCL PSS1 (NT) due to loss of evacuation path. vi)As per PMU, generation loss of approx. 303 MW and 207 MW occurred at 220KV ABCL(IP) and 220KV RSDCL PSS1 (NT) respectively. vii)As per SCADA, at the same time, dip in NR total Solar Generation of approx. 1752 MW among which dip in Rajasthan Solar Generation of approx. 456 MW was observed. viii)Due to drop in solar generation, over-voltage situation occurred due to unloading of EHV lines and subsequently 765 KV Bhadia_3(PB3TL)-SIKAR_2(PSTL) (PB3TL) Ckt-1 tripped on over-voltage stage-1 protection operation. ix)As per PMU of 765 KV Bhadia_3(PB3TL)-SIKAR_2(PSTL) (PB3TL) Ckt-1, voltage reached upto 1.138 pu at Bhadia3(PG) end and 1.129 pu at SIKAR2(PG) end just before tripping of the line. x)As per PMU at Bhadia2(PG), Y-B phase to phase fault was observed with fault clearing time of 80 ms followed by over-voltage condition. Voltage at 220KV Bhadia2(PG) dipped upto 0.832 pu during fault and after 3.6s, voltage rose to 1.042 pu.	1752	0	80	The exact reason of tripping, location of fault and nature of protection setting may be shared. DR/L and detailed tripping report may be shared from both the ends. The remedial action taken report may be shared.

S.No.	Category of Grid Incident/ Disturbance (GI-I to GD-V)	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/Agency	Outage		Reviel		Duration (hh:mm)	Event (As reported)	Loss of generation / loss of load during the Grid Disturbance		Fault Clearance time (in ms)	Remarks
					Date	Time	Date	Time			Generation Loss(MW)	Load Loss (MW)		
9	GD-1	1) 220 KV Bikaner_2 (PBTS)-JGCPL_SL_BIK2_PG (Juniper_NEP1) Ckt 2) 220 KV Bikaner_2 (PBTS)-KSP_NHPC_BKN2 (KSP_NHPC_LTD) Ckt 3) 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 & 2 4) 400 KV Bikaner_2 (PBTS)-Khetri (PKTSL) (PKTSL) Ckt-1, 2, 3 & 4 5) 400 KV Bikaner_2 (PBTS)-SVPL_GEL_BKN2 (SVNGEL_BKN2) Ckt 6) 220 KV ASSPL_SL_BKN2-Bikaner_2 (PBTS) (ASSPL_BKN2) Ckt 7) 220 KV Renew_Dinkar_SL_BIK2-Bikaner_2 (PBTS) (Renew Dinkar_UP1) Ckt 8) 220 KV SRI4PL_SL_BIK2_PG-Bikaner_2 (PBTS) (SERENTICA_SRI4PL_BIK2) Ckt 9) 220 KV Bikaner_2 (PBTS)-KHDRAT_REPL_SL_BKN2 (KHDRAT_REPL) Ckt 10) 220KV Grian_BIK2 (AMPLUS)-Bikaner_2 (PBTS) (GRIAN ENERGY PRIVATE LIMITED) Ckt 11) 220 KV Bikaner_2 (PBTS)-Juna_REPL_SL_BKN2 (Juna_REPL) Ckt 12) 220 KV BTPLS_SL_BIK2_PG-Bikaner_2 (PBTS) (BANDERWALA_TPLS) Ckt 13) 220 KV PGPL_SL_BIK2_PG-Bikaner_2 (PBTS) (PRERAK GREENTECH PVT LTD) Ckt	Rajasthan	PGCL, SGEL, JGCPL, KSP, NHPC, ASSPL, RDUPL, SRI4PL, KREPL, GEPL, JREPL, BTPLS & PGPL	22-Feb-26	17:08	22-Feb-26	19:07	01:59	i)Generation of 400KV SGEL(SVNV) and 220KV JGCPL(IP), KSP(NHPC), ASSPL(IP), RDUPL(IP), SRI4PL(IP), KREPL(IP), GEPL(IP), JREPL(IP), BTPLS(IP) & PGPL(IP) stations evacuate through individual single circuit lines from plants to Bikaner2(PG). ii)400 KV Bikaner_2 (PBTS) – Bikaner (PG) Ckt-1 & 2 were taken under planned outage from 16:00 hrs on 22.02.2026 to 05.03.2026 for LLD of the 400 KV Bikaner_2 (PBTS) – Bikaner (PG) D/C lines at 400 KV Bikaner-III substation. The outage code was issued by NRLDCA at 16:21 hrs. Subsequently, the lines were opened at 16:40 hrs. ISTS solar generation at that time was ~13,600 MW and Bikaner 2 generation at that time was ~1800 MW. After opening of these lines, oscillations observed in the System Frequency from 16:44 hrs onward as per PMU frequency plots. However, no corresponding fluctuation was observed in the PMU voltage plots. Immediately after opening of 400 KV Bikaner_2 (PBTS) – Bikaner (PG) D/C lines at 16:41 hrs, huge fluctuation in active power started in 300MW Karnisar NHPC and 200MW Renew Dinkar at 16:44 hrs. iii)With triggering of active power fluctuation in 300MW Karnisar NHPC and 200MW Renew Dinkar at 16:44 hrs, other RE plants also exhibited the continuous active power fluctuation but magnitude in other plants were comparatively lesser. iv)As reported, at 16:24 hrs, 220 KV Bikaner_2 (PBTS)-JGCPL_SL_BIK2_PG (Juniper_NEP1) Ckt tripped from Bikaner2 end only (exact reason yet to be shared by PG). v)Further, at 16:58 hrs, 220 KV Bikaner_2 (PBTS)-KSP_NHPC_LTD_SL_BKN2 (KSP_NHPC_LTD) Ckt tripped on over-voltage (over-voltage protection in 220KV lines need to be disabled as per NRPC protection philosophy). vi)Followed by this, huge active power fluctuation started at 17:00 hrs almost in all plants connected at Bikaner2(PG). vii)As reported, at 17:08 hrs, 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 & 2 tripped on sub-synchronous resonance S1 SSR block operation (as per EL) followed by tripping of 400 KV Bikaner_2 (PBTS)-Khetri (PKTSL) (PKTSL) Ckt-1, 2, 3 & 4 (over-voltage stage-1) and 400 KV Bikaner_2 (PBTS)-SVPL_GEL_SL_BKN2 (SVNGEL_BKN2) Ckt (over-voltage stage-2). viii)Due to tripping of all four 400 KV Bikaner_2 (PBTS)-Khetri (PKTSL) (PKTSL) Ckt-1, 2, 3 & 4 (with 400 KV Bikaner_2 (PBTS) – Bikaner (PG) Ckt-1 & 2 under outage), all 220KV RE plants connected at Bikaner2(PG), i.e., JGCPL(IP), KSP(NHPC), ASSPL(IP), RDUPL(IP), SRI4PL(IP), KREPL(IP), GEPL(IP), JREPL(IP), BTPLS(IP) & PGPL(IP) also tripped due to loss of evacuation path which led to complete blackout of 400/220KV Bikaner2(PG) along with all RE plants connected at 400KV and 220KV level of Bikaner2(PG). ix)As per PMU, no fault was observed in the system. As per SCADA, reduction in NR total Solar Generation of approx. 525 MW was observed at around 17:08 hrs.	525	0	NA	The exact reason, location and RCA of tripping may be shared. Over-voltage protection setting of all 220KV lines may be disabled as per NRPC protection philosophy. The remedial action taken report may be shared.
10	GD-1	1) 220 KV Bikaner_2 (PBTS)-JGCPL_SL_BIK2_PG (Juniper_NEP1) Ckt	Rajasthan	PGCL, JGCPL	22-Feb-26	16:24	22-Feb-26	20:48	04:24	i)Generation of 220KV Juniper Green(JGCPL)(IP) station evacuates through 220 KV Bikaner_2 (PBTS)-JGCPL_SL_BIK2_PG (Juniper_NEP1) Ckt. ii)During antecedent condition, 220KV Juniper Green(JGCPL)(IP) station was generating approx. 80 MW (as per PMU and SCADA). iii)As reported, at 16:24 hrs, 220 KV Bikaner_2 (PBTS)-JGCPL_SL_BIK2_PG (Juniper_NEP1) Ckt tripped from Bikaner_2(PG) end only, no CB tripping occurred at JGCPL(IP) end (exact reason of tripping yet to be shared by PG). iv)Due to tripping of 220 KV Bikaner_2 (PBTS)-JGCPL_SL_BIK2_PG (Juniper_NEP1) Ckt, complete blackout occurred at 220KV Juniper Green(JGCPL)(IP) due to loss of evacuation path. v)As per PMU at Bikaner2(PG), no fault was observed in the system. vi)As per PMU and SCADA, solar generation loss of approx. 80 MW was observed at 220KV Juniper Green(JGCPL)(IP).	80	0	NA	The exact reason of tripping DR along with detailed tripping report may be shared. Availability and healthiness of SCADA and PMU data need to be ensured. The remedial action taken may be shared.
11	GD-1	1) 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt 2) 220/33kV 100 MVA ICT-1 at Nokhra(NT) 3) 220/33kV 100 MVA ICT-2 at Nokhra(NT) 4) 220/33kV 100 MVA ICT-3 at Nokhra(NT)	Rajasthan	PGCL, Nokhra_NTPC	24-Feb-26	10:19	24-Feb-26	11:51	01:32	i)Generation of 220KV Nokhra (NT) station evacuates through 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt which is further connected to 220/33kV 100 MVA ICT-1, 2 & 3 at Nokhra(NT). ii)During antecedent condition, 220KV Nokhra (NT) was generating approx. 240 MW (as per PMU). iii)As reported, at 10:19hrs, Y-ph VCB (Vacuum Circuit Breaker) of Capacitor bank bay-1 at Nokhra(NT) was burst. iv)Due to this, 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt tripped on Y-N phase to earth fault; fault sensed in zone-1 at Nokhra(NT) end (exact nature and location of fault yet to be shared). As per PMU, fault current of approx. 942.39 A was observed at Nokhra(NT) end. v)During the same time, 220/33kV 100 MVA ICT-1, 2 & 3 at Nokhra(NT) also tripped due to loss of evacuation path which led to complete blackout of 220KV Nokhra(NT) S/s. vi)As per PMU at Bhadia2(PG), Y-N phase to earth fault was observed with fault clearing time of 80 ms. vii)As per PMU at Nokhra(NT), solar generation loss of approx. 240 MW occurred at Nokhra(NT) S/s.	240	0	80	The exact nature and location of fault DR/EL & tripping analysis of the event may be shared. Availability and healthiness of SCADA data need to be ensured. The remedial action taken report may be shared.
12	GD-1	1) 220/33kV 100 MVA ICT-2 at Nokhra(IP) 2) 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt	Rajasthan	PGCL, Nokhra_NTPC	26-Feb-26	17:05	14-Jan-26	19:51	02:46	i)Generation of 220KV Nokhra (NT) station evacuates through 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt which is further connected to 220/33kV 100 MVA ICT-1, 2 & 3 at Nokhra(NT). ii)During antecedent condition, 220KV Nokhra (IP) was generating approx. 105 MW (as per PMU). iii)As reported, at 17:05hrs, 220/33kV 100 MVA ICT-2 at Nokhra(IP) tripped on R-N phase to earth fault along with exact nature of protection operation yet to be shared). iv)During the same time, 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt also tripped (exact reason of tripping and nature of protection operation yet to be shared) sensing the same fault. As per PMU, fault current of approx. 1254.5 A was observed at Nokhra(NT) end. v)With tripping of 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt, complete blackout occurred at 220KV Nokhra (NT) S/s due to loss of evacuation path. vi)As per PMU at Bhadia2(PG), R-N phase to earth fault was observed with fault clearing time of 80 ms. vii)As per PMU at Nokhra(NT), solar generation loss of approx. 105 MW occurred at Nokhra(NT) S/s.	105	0	80	The exact reason, nature and location of fault along with exact nature of protection may be shared. Any protection related issue may be rectified at the earliest to avoid unwanted tripping of line in future. DR/EL & tripping analysis of the event may be shared. The remedial action taken report may be shared.

(Report on Event of tripping at 400/220kV Bikaner2(PG))

1. **Date & Time of event:** 17:08 hrs on 22.02.2026
2. **Location/Control Area:** Rajasthan
3. **Plant/Substation Name:** 400/220kV Bikaner2(PG)
4. **GD/GI Category:** GD-1 (Blackout of 400/220kV Bikaner2(PG) and all RE plants connected at 400kV and 220kV level of Bikaner2(PG))
5. **Antecedent Condition:**
 - NR Load : 46136 MW
 - Affected state load(Rajasthan) : 13198 MW
 - Frequency : 49.99 Hz
 - weather condition : Normal
 - IR exchange : 2006 MW
6. **Generation loss/Load loss:** Reduction in NR total Solar Generation of approx. 525 MW (as per SCADA).
7. **Duration of interruption:** ~01:59 (hh:mm) (Restoration time : 19:07 hrs)
8. **Tripped elements:**

S. No	Name of Elements	Outage Time	Revival Time	Reason of tripping
1.	220 KV Bikaner_2 (PBTS)- JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt	16:24 hrs	20:48 hrs	Tripped from Bikaner2 end only (exact reason yet to be shared by PG)
2.	220 KV Bikaner_2 (PBTS)- KSP_NHPC_LTD_SL_BKN2 (KSP_NHPC_LTD) Ckt	16:58 hrs	20:21 hrs	Over-voltage
3.	500 KV HVDC Balia-Bhiwadi (PG) Ckt-1	17:08 hrs	19:07 hrs	Sub synchronous resonance 81 SSR block operated
4.	500 KV HVDC Balia-Bhiwadi (PG) Ckt-2			

5.	400 KV Bikaner_2 (PBTSL)- Khetri (PKTSL) (PBTSL) Ckt-1		19:40 hrs	Over-voltage stage-1 operated at Bikaner2 end
6.	400 KV Bikaner_2 (PBTSL)- Khetri (PKTSL) (PBTSL) Ckt-2	17:08 hrs	19:38 hrs	
7.	400 KV Bikaner_2 (PBTSL)- Khetri (PKTSL) (PBTSL) Ckt-3	17:09 hrs	20:01 hrs	
8.	400 KV Bikaner_2 (PBTSL)- Khetri (PKTSL) (PBTSL) Ckt-4		18:50 hrs	Over-voltage stage-2 operated at Bikaner2 end
9.	400 KV Bikaner_2 (PBTSL)- SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt		19:13 hrs	
10.	220 KV ASSPL_SL_BKN2- Bikaner_2 (PBTSL) (ASSPL_BKN2) Ckt		19:44 hrs	Due to loss of evacuation path
11.	220 KV Renew_Dinkar_SL_Bik2- Bikaner_2 (PBTSL) (Renew Dinkar_UPL) Ckt		20:19 hrs	
12.	220 KV SRI4PL_SL_BIK2_PG- Bikaner_2 (PBTSL) (SERENTICA_RI4PL_Bik2) Ckt		19:34 hrs	
13.	220 KV Bikaner_2 (PBTSL)- KHIDRAT_REPL_SL_BKN2 (KHIDRAT_REPL) Ckt	17:10 hrs	20:43 hrs	
14.	220KV Grian_BIK2_(AMPLUS)- Bikaner_2 (PBTSL) (GRIAN ENERGY PRIVATE LIMITED) Ckt		20:38 hrs	
15.	220 KV Bikaner_2 (PBTSL)- Juna_REPL_SL_BKN2 (Juna_REPL) Ckt		20:15 hrs	
16.	220 KV BTPSL_SL_BIK2_PG- Bikaner_2 (PBTSL) (BANDERWALA_TPSSL) Ckt		20:15 hrs	
17.	220 KV PGPL_SL_BIK2_PG- Bikaner_2 (PBTSL) (PRERAK GREENTECH PVT LTD) Ckt		19:32 hrs	

9. Details of fault (if any) :

- i) Nature of fault: No fault as per PMU.
- ii) Fault clearing time: NA

10. Brief description of event:

- i) Generation of 400kv SGEL(SJVN) and 220kv JGCPL(IP), KSP(NHPC), ASSPL(IP), RDUPL(IP), SRI4PL(IP), KREPL(IP), GEPL(IP), JREPL(IP), BTPSL(IP) & PGPL(IP)

stations evacuate through individual single circuit lines from plants to Bikaner2(PG).

- ii) 400 kV Bikaner_2 (PBTSL) – Bikaner (PG) Ckt-1 & 2 were taken under planned outage from 16:00 hrs on 22.02.2026 to 05.03.2026 for LILO of the 400 kV Bikaner_2 (PBTSL) – Bikaner (PG) D/C lines at 400 kV Bikaner-III substation. The outage code was issued by NRLDC at 16:21 hrs. Subsequently, the lines were opened at 16:40 hrs. ISTS solar generation at that time was ~11,600 MW and Bikaner 2 generation at that time was ~1800 MW.
- iii) After opening of these lines, oscillations observed in the System Frequency from 16:44 hrs onward as per PMU frequency plots. However, no corresponding fluctuation was observed in the PMU voltage plots.
- iv) Immediately after opening of 400 kV Bikaner_2 (PBTSL) – Bikaner (PG) D/C lines at 16:41 hrs, huge fluctuation in active power started in 300MW Karnisar NHPC and 200MW Renew Dinkar at 16:44 hrs.
- v) With triggering of active power fluctuation in 300MW Karinsar NHPC and 200MW Renew Dinkar at 16:44 hrs, other RE plants also exhibited the continuous active power fluctuation but magnitude in other plants were comparatively lesser.
- vi) As reported, at 16:24 hrs, 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt tripped from Bikaner2 end only (exact reason yet to be shared by PG).
- vii) Further, at 16:58 hrs, 220 KV Bikaner_2 (PBTSL)-KSP_NHPC_LTD_SL_BKN2 (KSP_NHPC_LTD) Ckt tripped on over-voltage (over-voltage protection in 220kV lines need to be disabled as per NRPC protection philosophy).
- viii) Followed by this, huge active power fluctuation started at 17:00 hrs almost in all plants connected at Bikaner2(PG).
- ix) As reported, at 17:08 hrs, 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 & 2 tripped on sub-synchronous resonance 81 SSR block operation (as per EL) followed by tripping of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1, 2, 3 & 4 and 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt.
- x) Sequence of the event as per DR, PMU and SCADA SOE is as follows:
 - a. 17:08:05 hrs: 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 tripped on over-voltage stage-1 protection operation. As per DR, voltage went upto 1.14 pu at Bikaner2 end. As per EL, Over-voltage stage-1 operated with a time delay of 5 s and DT sent to Khetri end.
 - b. 17:08:21 hrs: 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2 tripped on over-voltage stage-1 protection operation. As per DR, voltage went upto 1.23 pu at Bikaner2 end. As per EL, Over-voltage stage-1 operated with a time delay of 6 s and DT sent to Khetri end.

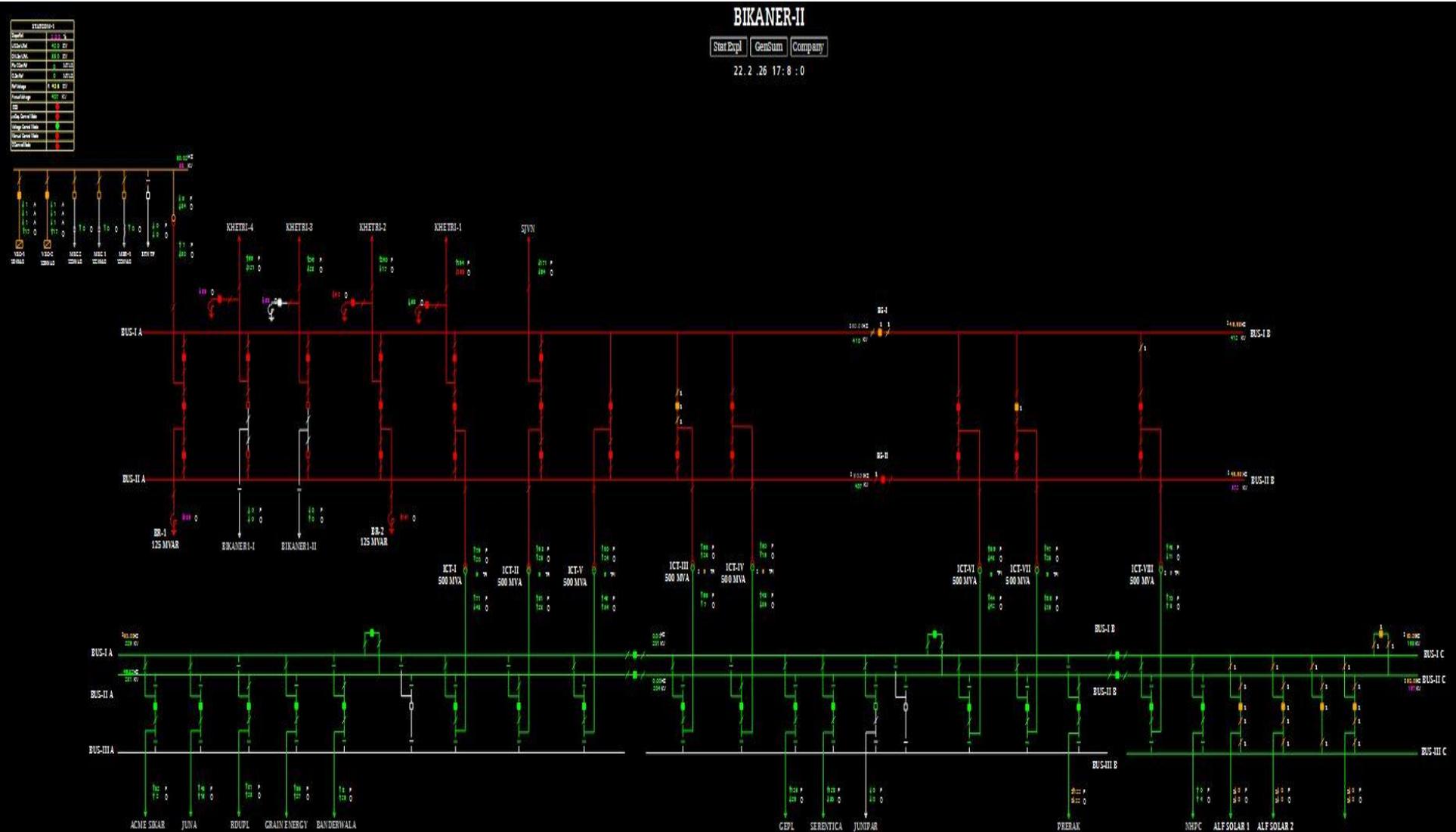
- c. 17:09:16 hrs: 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-3 tripped on over-voltage stage-1 protection operation. As per DR, voltage went upto 1.16 pu at Bikaner2 end. As per EL, Over-voltage stage-1 operated with a time delay of 6 s and DT sent to Khetri end.
- d. 17:10:12 hrs; 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-4 tripped on over-voltage stage-1 protection operation. As per DR, voltage went upto 1.238 pu at Bikaner2 end. Over-voltage stage-1 operated and DT sent to Khetri end.
- e. 17:10:13 hrs: 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL) Ckt tripped on over-voltage stage-2 protection operation. As per DR, voltage went upto 1.38 pu at Bikaner2 end. As per EL, Over-voltage stage-2 operated at Bikaner2 end. DT received from SGEL end.
- xi) Due to tripping of all four 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1, 2, 3 & 4 (with 400 kV Bikaner_2 (PBTSL) – Bikaner (PG) Ckt-1 & 2 under outage), all 220kV RE plants connected at Bikaner2(PG), i.e., JGCPL(IP), KSP(NHPC), ASSPL(IP), RDUPL(IP), SRI4PL(IP), KREPL(IP), GEPL(IP), JREPL(IP), BTPSL(IP) & PGPL(IP) also tripped due to loss of evacuation path which led to complete blackout of 400/220kV Bikaner2(PG) along with all RE plants connected at 400kV and 220kV level of Bikaner2(PG).
- xii) As per PMU, no fault was observed in the system.
- xiii) As per SCADA, reduction in NR total Solar Generation of approx. 525 MW was observed at around 17:08 hrs.

11.Preliminary Observations:

- i) Exact reason of tripping of 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt need to be shared by PG.
- ii) Over-voltage protection in all 220kV lines need to be disabled as per NRPC protection philosophy.
- iii) KSP(NHPC) and RDUPL(IP) need to check the exact reason of huge MW fluctuation exhibited by their inverters (SINENG and SUNGROW make respectively). RCA of the same need to be shared at the earliest.

***Detailed SCADA, PMU and DR analysis are attached in Annexure**

SLD of 400/220kV Bikaner2(PG) before the event



SLD of 765/400kV Khetri(PG) after the event

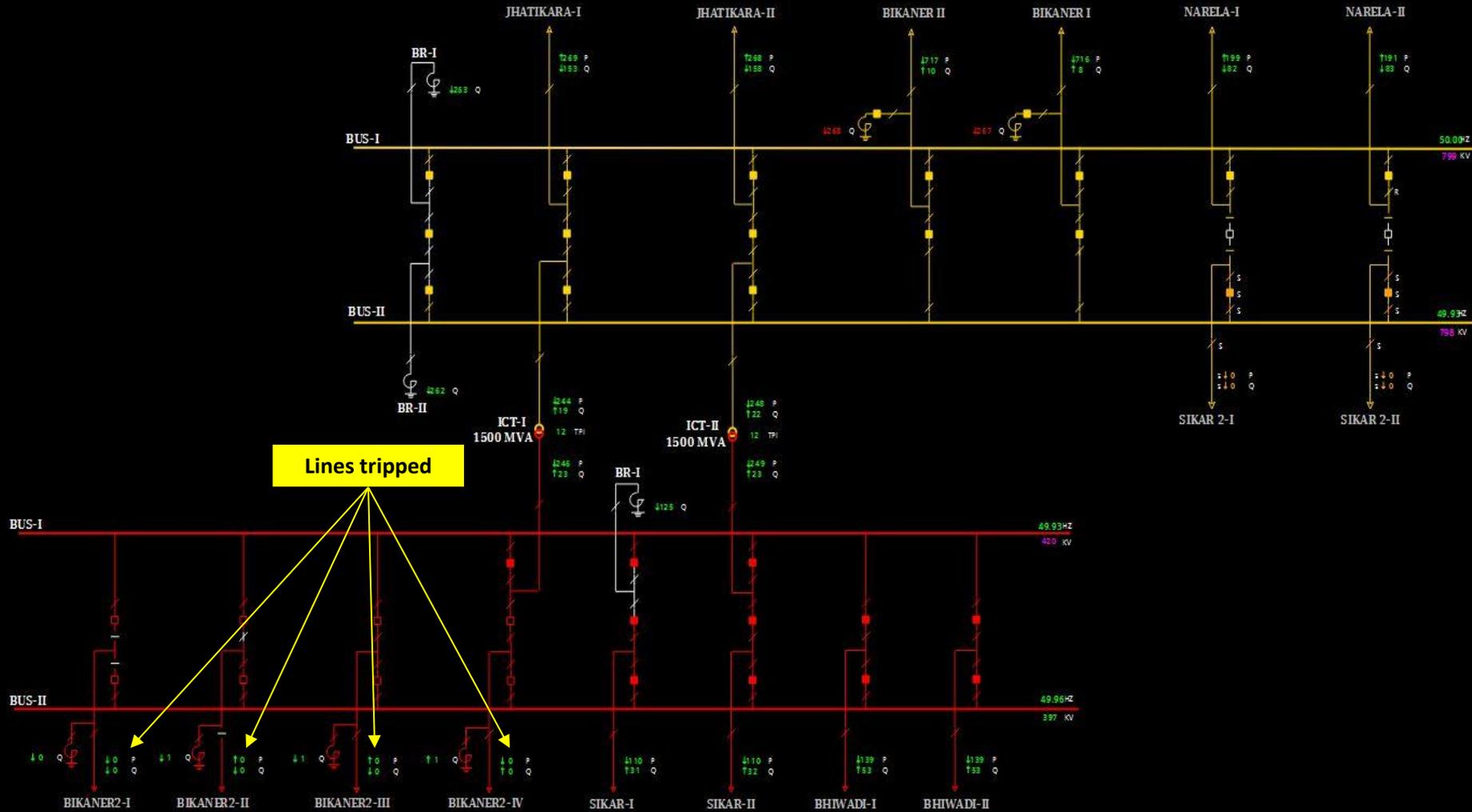
CONTACT DETAILS	
EMA IIL	-
MOBILE	-
HOTLINE	20112511

KHETRI (PG)

Stat Expl GenSum Company

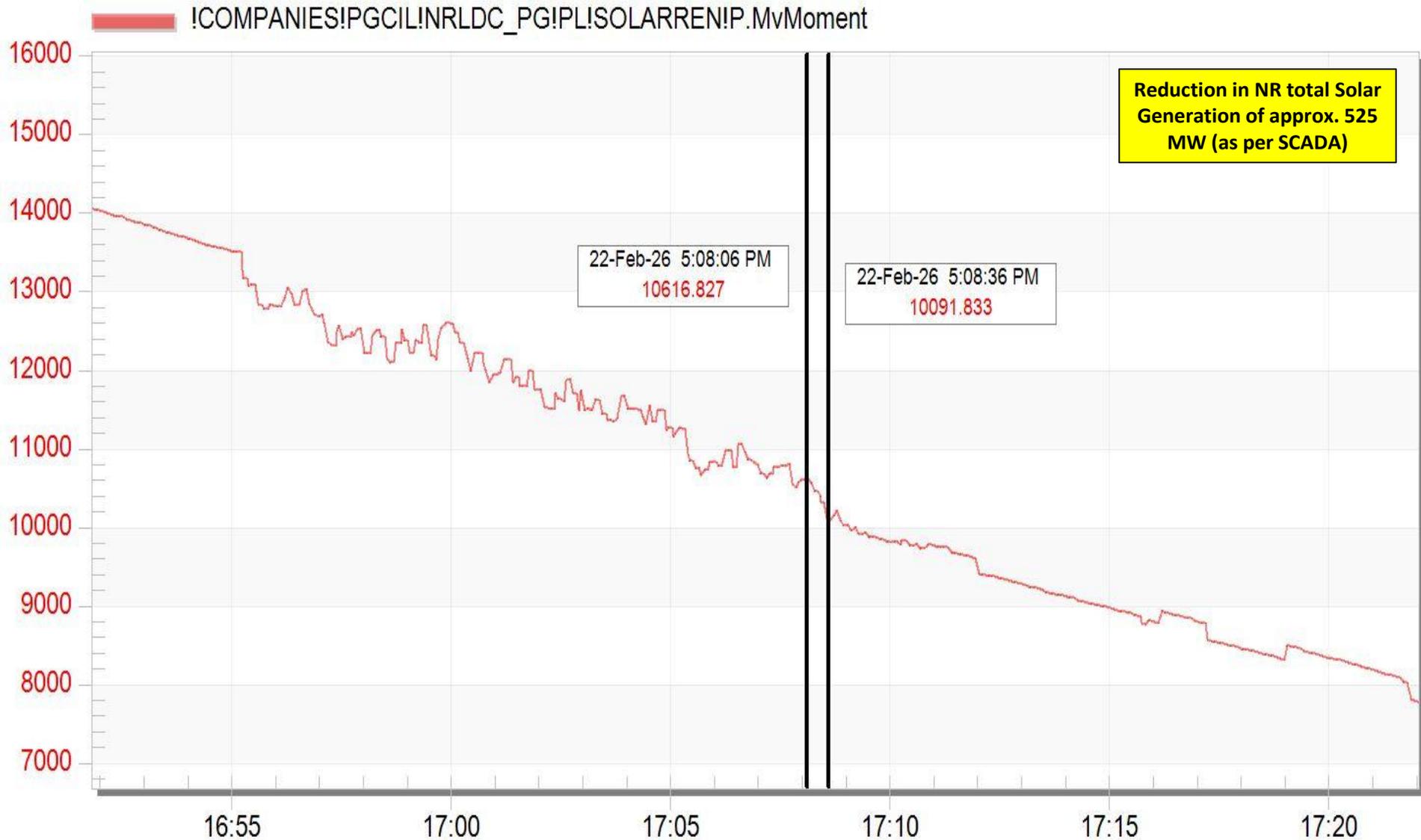
P sum(55 KV) = 48
P sum(400KV) = -278

22.2.26 17:12:0



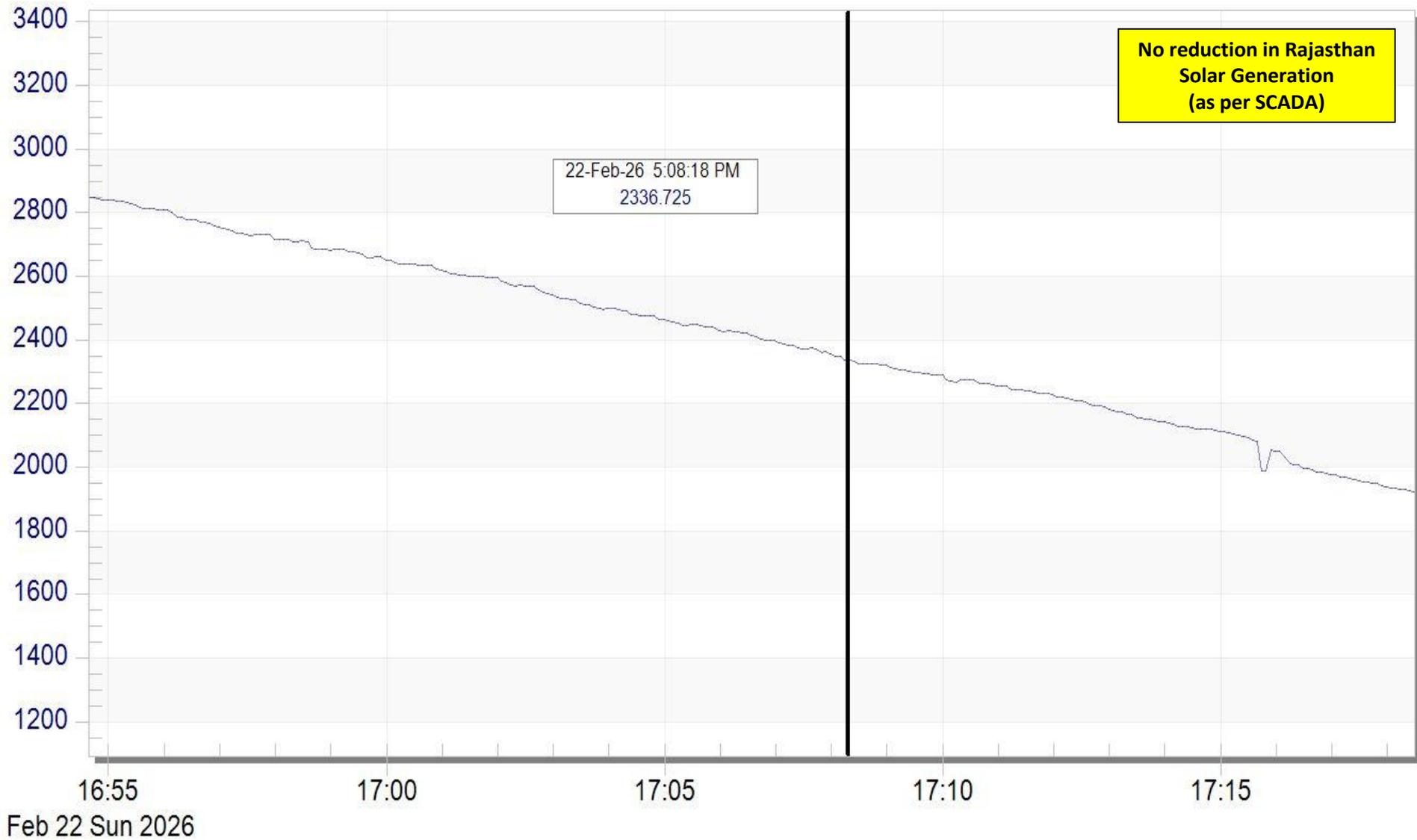
NR Total Solar Generation during the event

Solar Generation



Rajasthan Solar Generation during the event

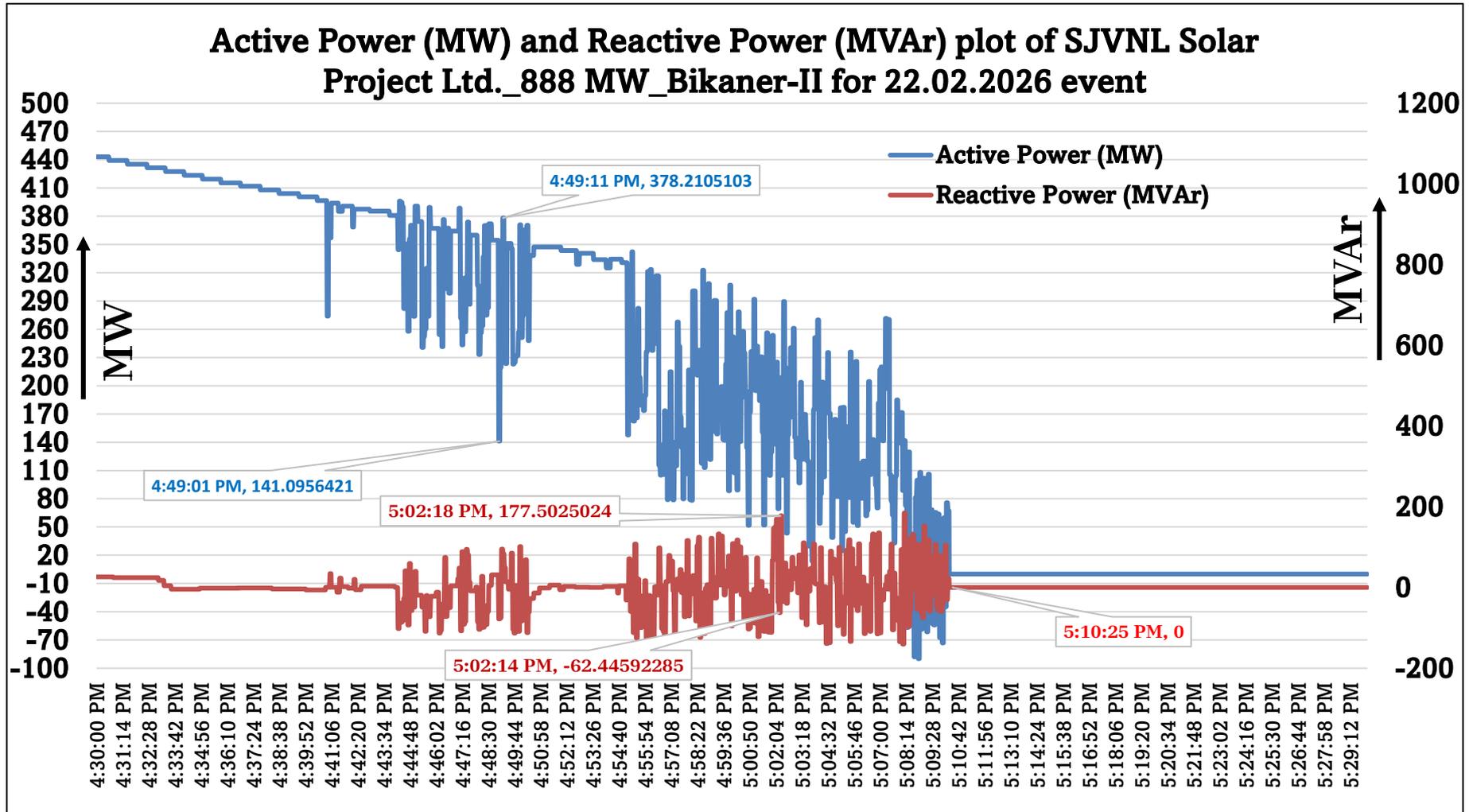
!COMPANIES!RRVPNL!REPET_RS!SOLAR!NET_SLR!P.MvMoment



Details of % MW fluctuation, Starting time of Severe fluctuation in active power, Plant outage time, Inverters Make and model

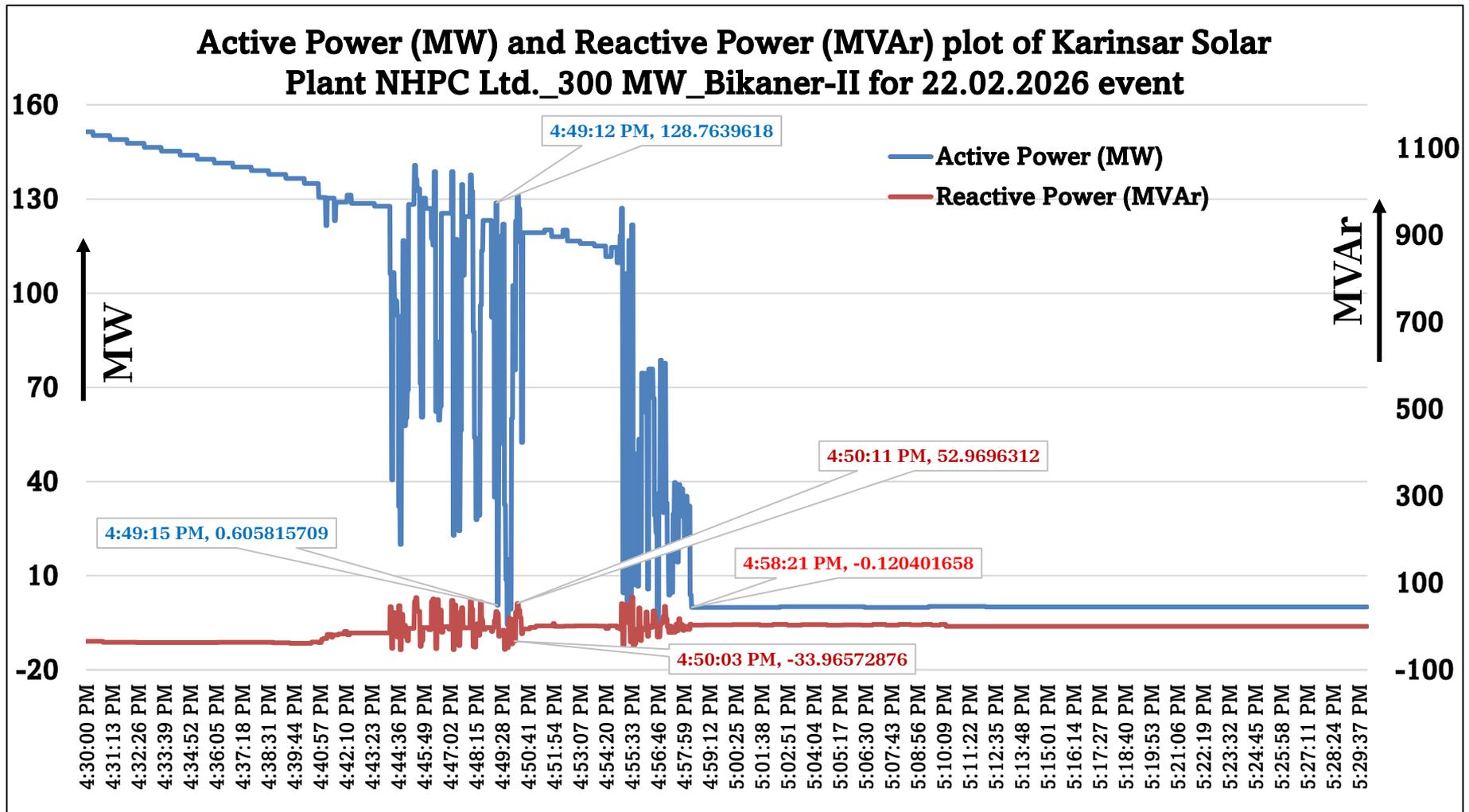
Plant Name	Plant Capacity (MW)	Active Power before the event (16:41 hrs) (A)	Maximum Active power fluctuation (MW) (B)	% of Max. fluctuation w.r.t pre-event active power (B/A)*100	Starting time of Severe fluctuation in active power	Maximum Reactive power fluctuation (MVA r)	Plant outage time	Inverters Make	Inverter's Model	No. of Inverters
Karinsar Solar Plant NHPC Ltd.	300	130	128	98%	16:44	85	16:48	SINENG	EP-3300-HB-UD	112
Renew Dinkar Urja Pvt. Ltd.	200	71	68	96%	16:46	59	17:08	SUNGR OW	SG4400 UD-20	50
								SUNGR OW	SG3300 UD-20	8
Banderwala Solar Plant TP Surya Ltd.	300	128	100	78%	16:53	69	17:10	SUNGR OW	SG4400 UD-20	81
Juna Renewable Energy Pvt. Ltd.	335	200	143	72%	17:00	Data suspected	17:10	SUNGR OW	SG4400 UD-20	80
SJVNL Solar Project Ltd.	888	400	237	59%	16:55	85	17:10	SUNGR OW	SG4400 UD-21	248
Khidrat Renewable Energy Pvt. Ltd.	300	131	70	53%	17:00	66	17:10	SUNGR OW	SG320HX	90
								SUNGR OW	SG3300 UD-20	90
Amplus Grian Onevolt	300	189	100	53%	17:01	96	17:10	SUNGR OW	SG3300 UD-20	89
								SUNGR OW	SG4400 UD-20	13
Juniper Green Cosmic + Nirjara Pvt. Ltd.	150+41(B ESS)	190	67	35%	17:01	86	17:10	SUNGR OW	SG4400 UD-20	36
ACME Sikar Solar Pvt. Ltd.	300	120	33	28%	Data suspected	17	17:08	SUNGR OW	SG4400 UD-20	80
Prerak Green Tech Pvt. Ltd.	400	220	44	20%	Not observed	93	17:09	SUNGR OW	SG3300 UD-20	144
Serentica Renewables India Pvt. Ltd.	400	270	51	19%	Not observed	74	17:10	SUNGR OW	SG3300 UD-20	144

Active Power (MW) and Reactive Power (MVAR) plot of SJVNL Solar Project Ltd. 888 MW Bikaner-II



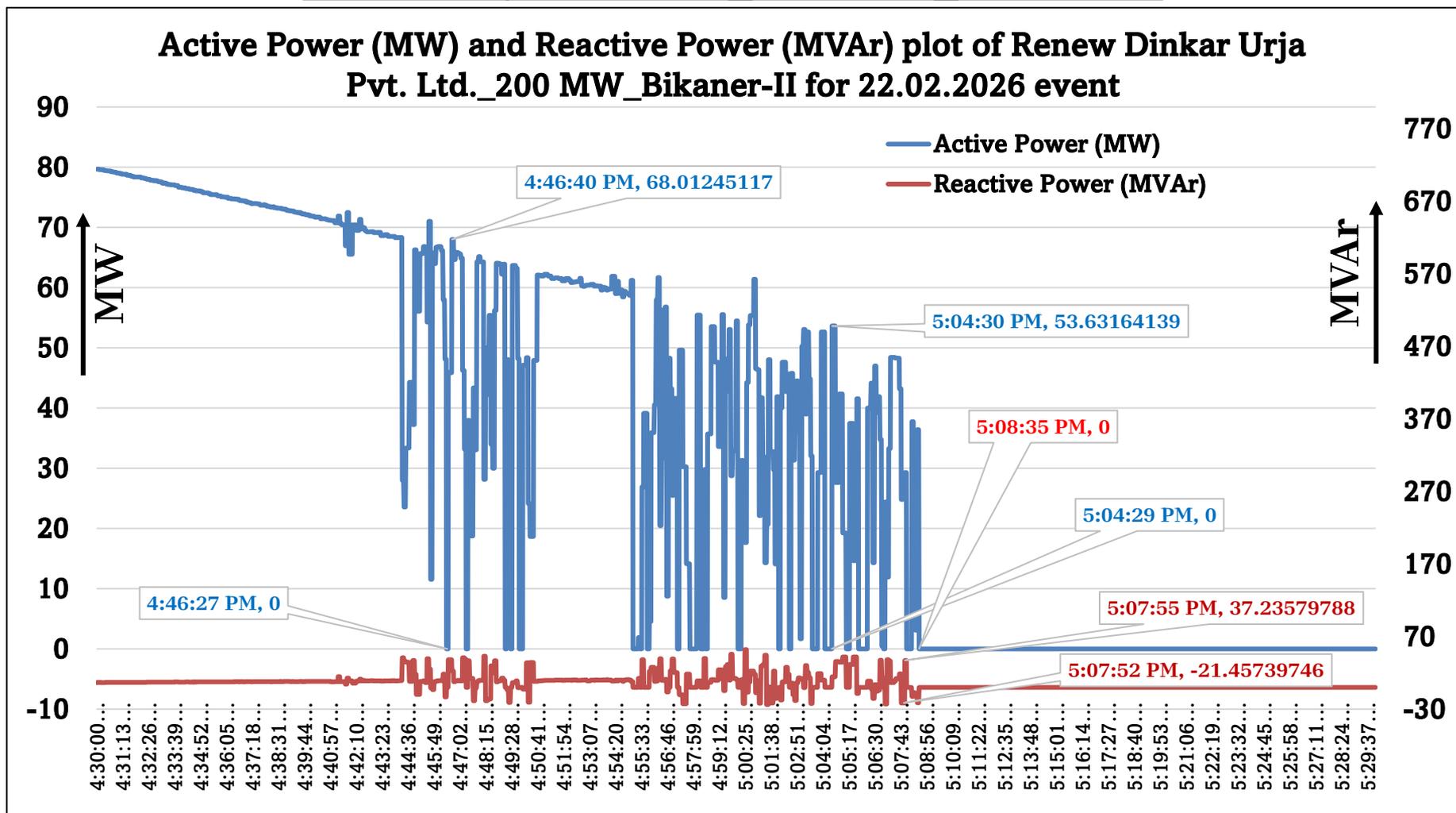
- ✓ Active Power fluctuation: 378 MW to 141 MW, ~237 MW fluctuation in active power
- ✓ Reactive Power fluctuation: 52 MVAR to -33 MVAR, ~85 MVAR fluctuation in reactive power
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: 16:55.

Active Power (MW) and Reactive Power (MVAR) plot of Karnisar Solar Plant NHPC Ltd. 300 MW Bikaner-II



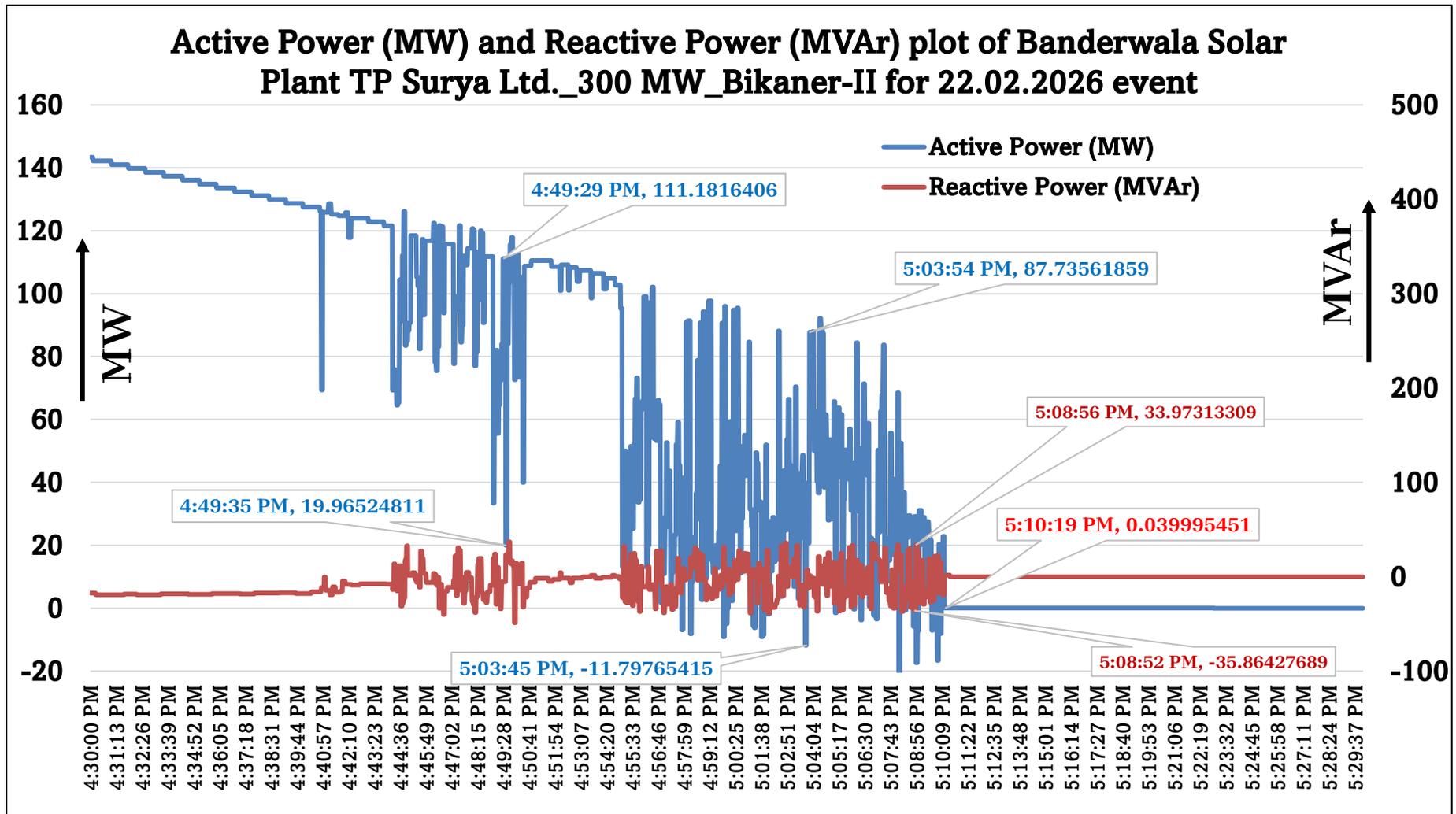
- ✓ Active Power fluctuation: 128 MW to 0 MW, ~128 MW fluctuation in active power
- ✓ Reactive Power fluctuation: 52 MVAR to -33 MVAR, ~85 MVAR fluctuation in reactive power
- ✓ Plant outage time: 16:58:21 hrs
- ✓ Severe fluctuation in active power started at: 16:44.

Active Power (MW) and Reactive Power (MVAR) plot of Renew Dinkar Urja Pvt. Ltd. 200 MW Bikaner-II



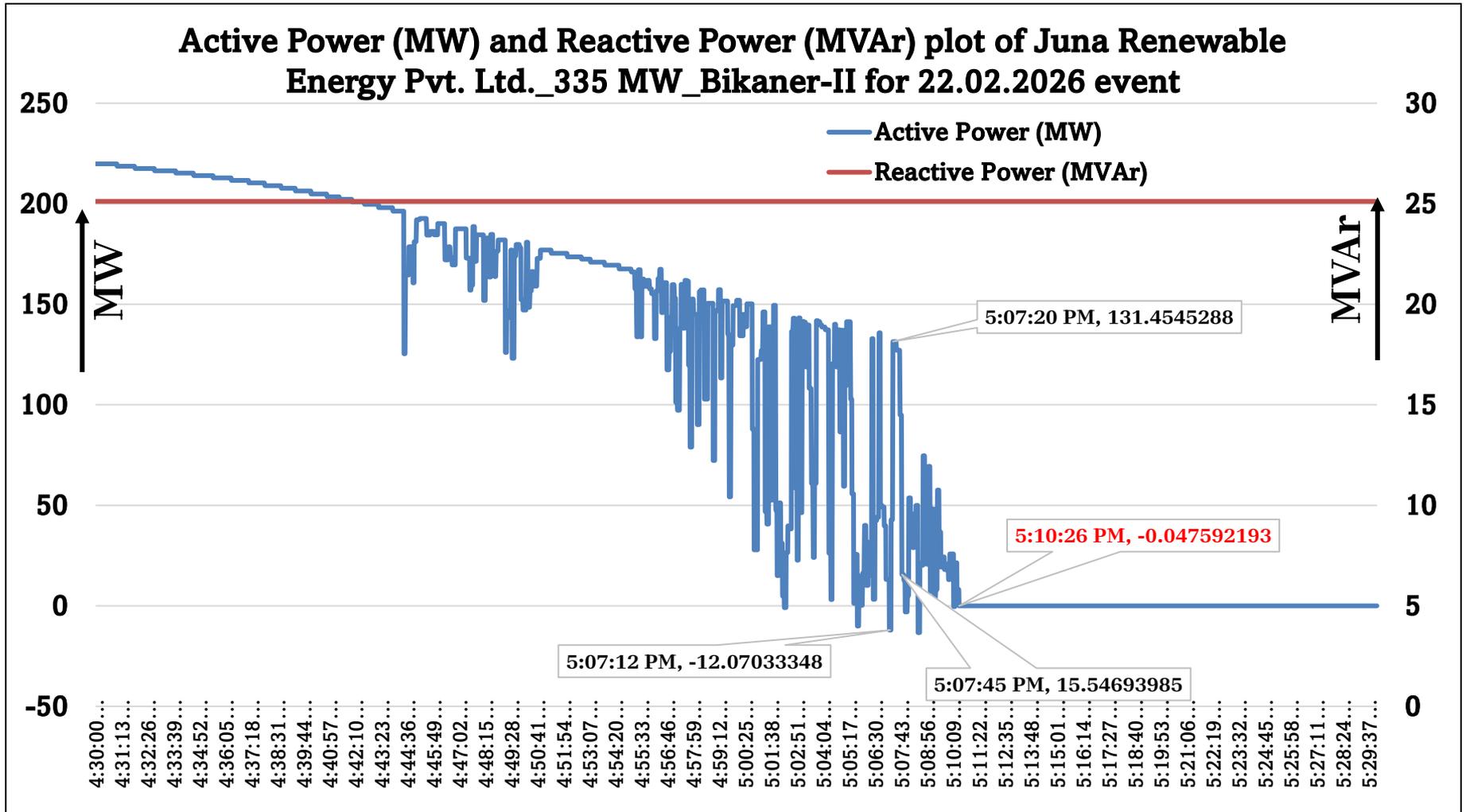
- ✓ Active Power fluctuation: 68 MW to 0 MW, ~68 MW fluctuation in active power
- ✓ Reactive Power fluctuation: 37 MVAR to -21 MVAR, ~59 MVAR fluctuation in reactive power
- ✓ Plant outage time: 17:08 hrs
- ✓ Severe fluctuation in active power started at: 16:46 hrs

Active Power (MW) and Reactive Power (MVar) plot of Banderwala Solar Plant TP Surya Ltd. 300 MW Bikaner-II



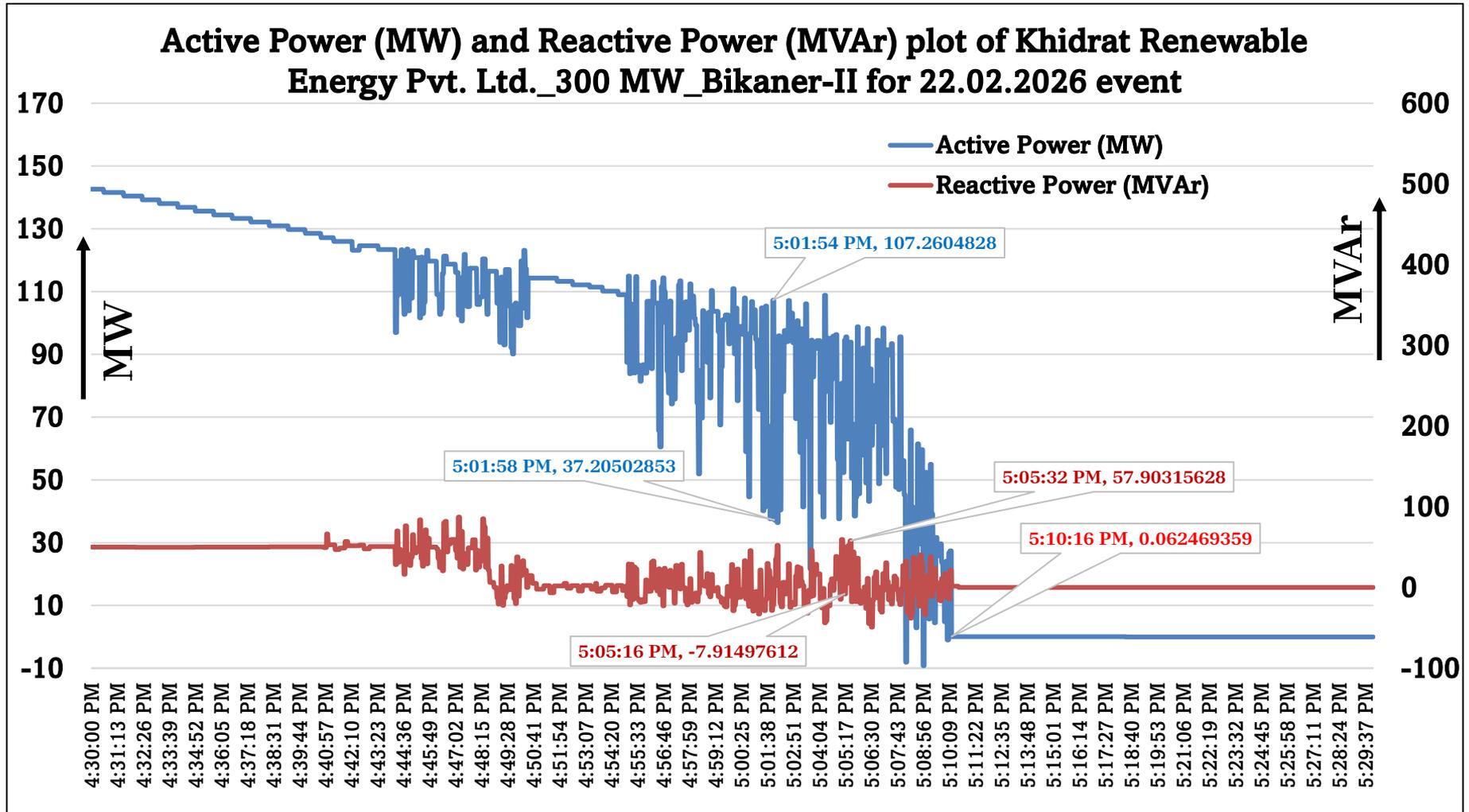
- ✓ Active Power fluctuation: 88 MW to -12 MW, **~100 MW** fluctuation in active power
- ✓ Reactive Power fluctuation: 34 MVar to -35 MVar, **~69 MVar** fluctuation in reactive power
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: 16:53 hrs

Active Power (MW) and Reactive Power (MVar) plot of Juna Renewable Energy Pvt. Ltd. 335 MW Bikaner-II



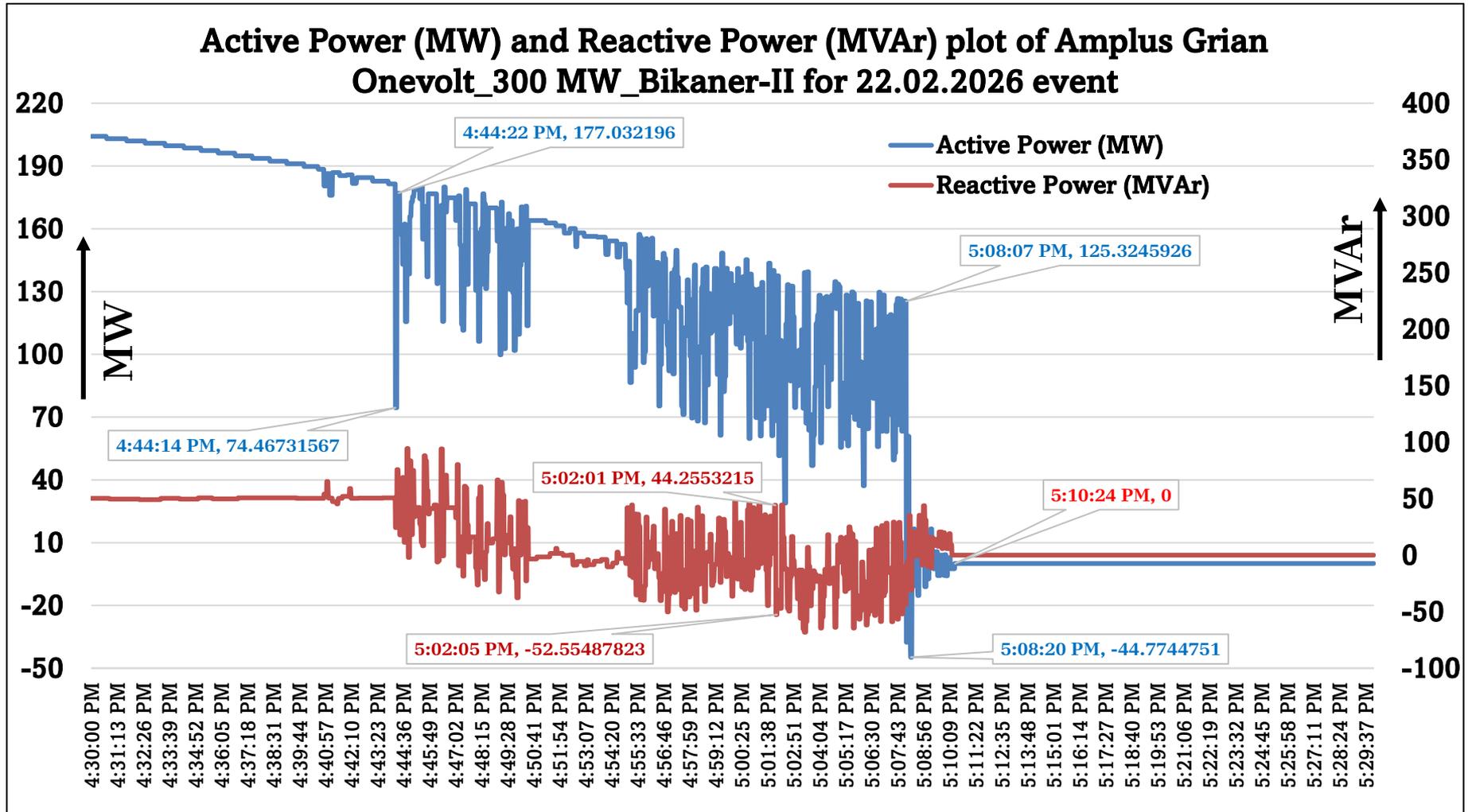
- ✓ Active Power fluctuation: 131 MW to -12 MW, ~143 MW fluctuation in active power
- ✓ Reactive Power fluctuation: Data freeze and suspected
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: 17:00 hrs

Active Power (MW) and Reactive Power (MVAR) plot of Khidrat Renewable Energy Pvt. Ltd. 300 MW Bikaner-II



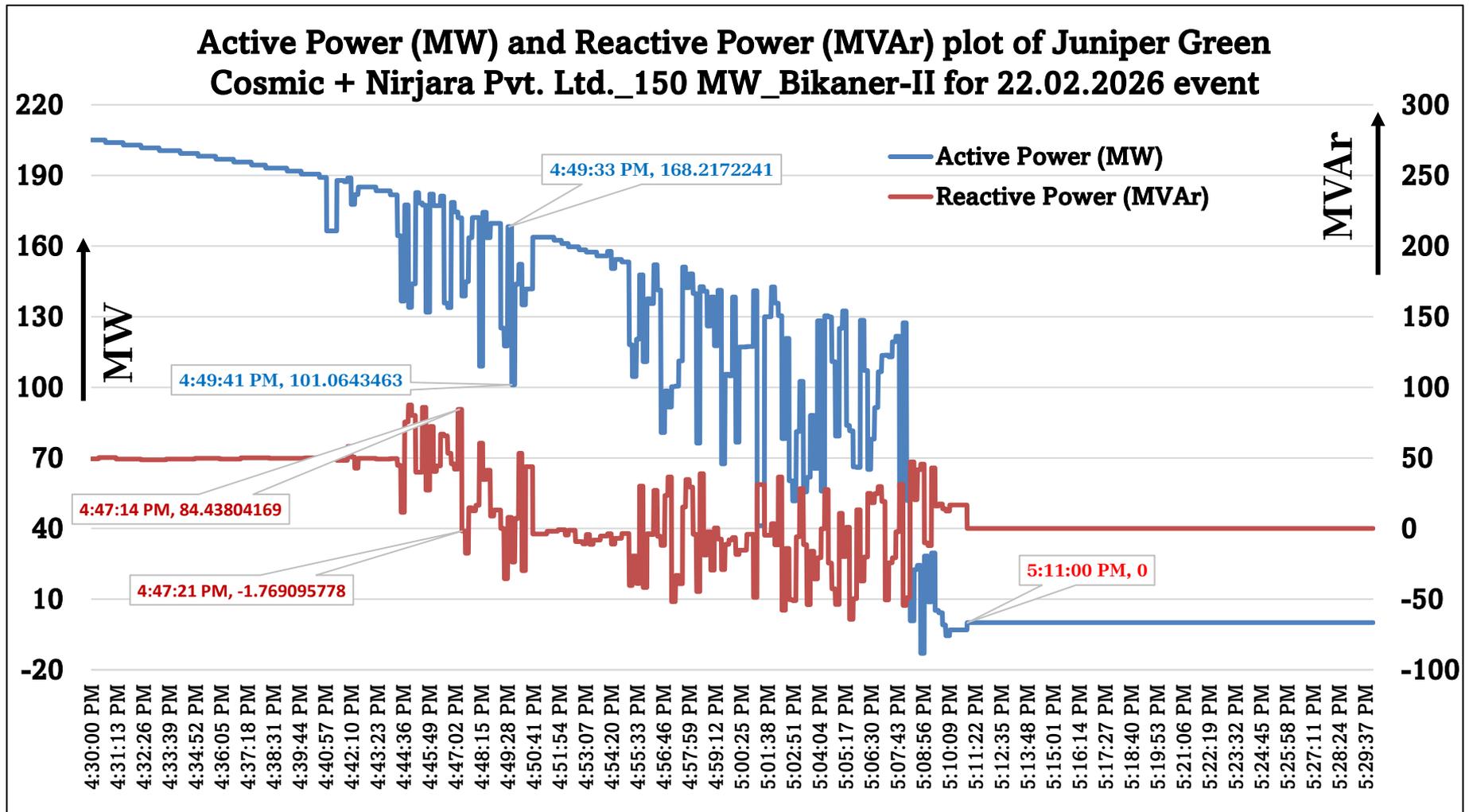
- ✓ Active Power fluctuation: 107 MW to 37 MW, **~70 MW** fluctuation in active power
- ✓ Reactive Power fluctuation: 58 MVAR to -8 MVAR, **~66 MVAR** fluctuation in reactive power
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: 17:00 hrs

Active Power (MW) and Reactive Power (MVar) plot of Amplus Grian Onevolt 300 MW Bikaner-II



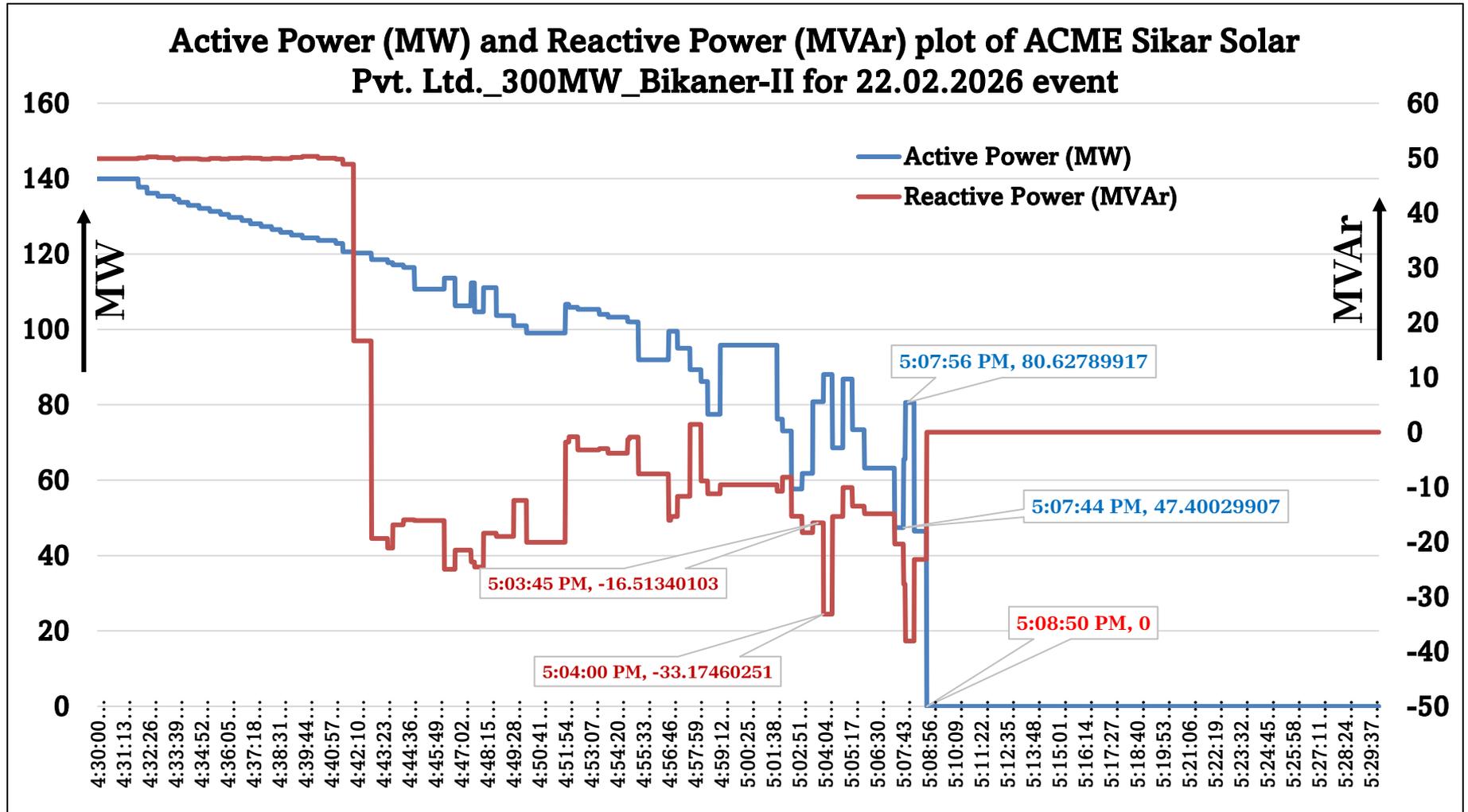
- ✓ Active Power fluctuation: 177 MW to 74 MW, **~100 MW** fluctuation in active power
- ✓ Reactive Power fluctuation: 44 MVar to -52 MVar, **~96 MVar** fluctuation in reactive power
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: 17:01 hrs

Active Power (MW) and Reactive Power (MVar) plot of Juniper Green Cosmic + Nirjara Pvt. Ltd. 150 MW Bikaner-II



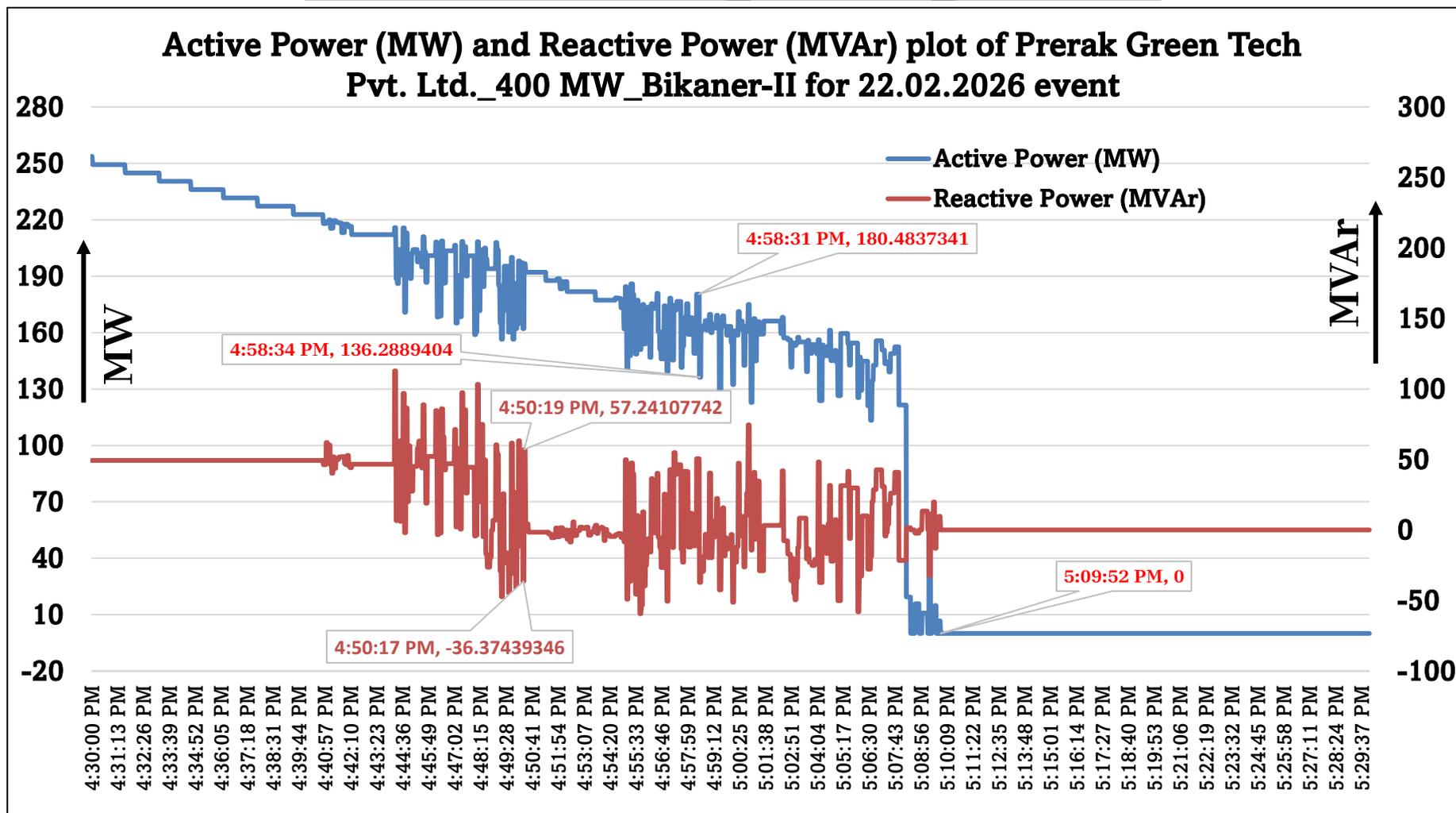
- ✓ Active Power fluctuation: 168 MW to 101 MW, ~67 MW fluctuation in active power
- ✓ Reactive Power fluctuation: 84 MVar to -2 MVar, ~86 MVar fluctuation in reactive power
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: 17:01 hrs

Active Power (MW) and Reactive Power (MVAR) plot of ACME Sikar Solar Pvt. Ltd. 300MW Bikaner-II



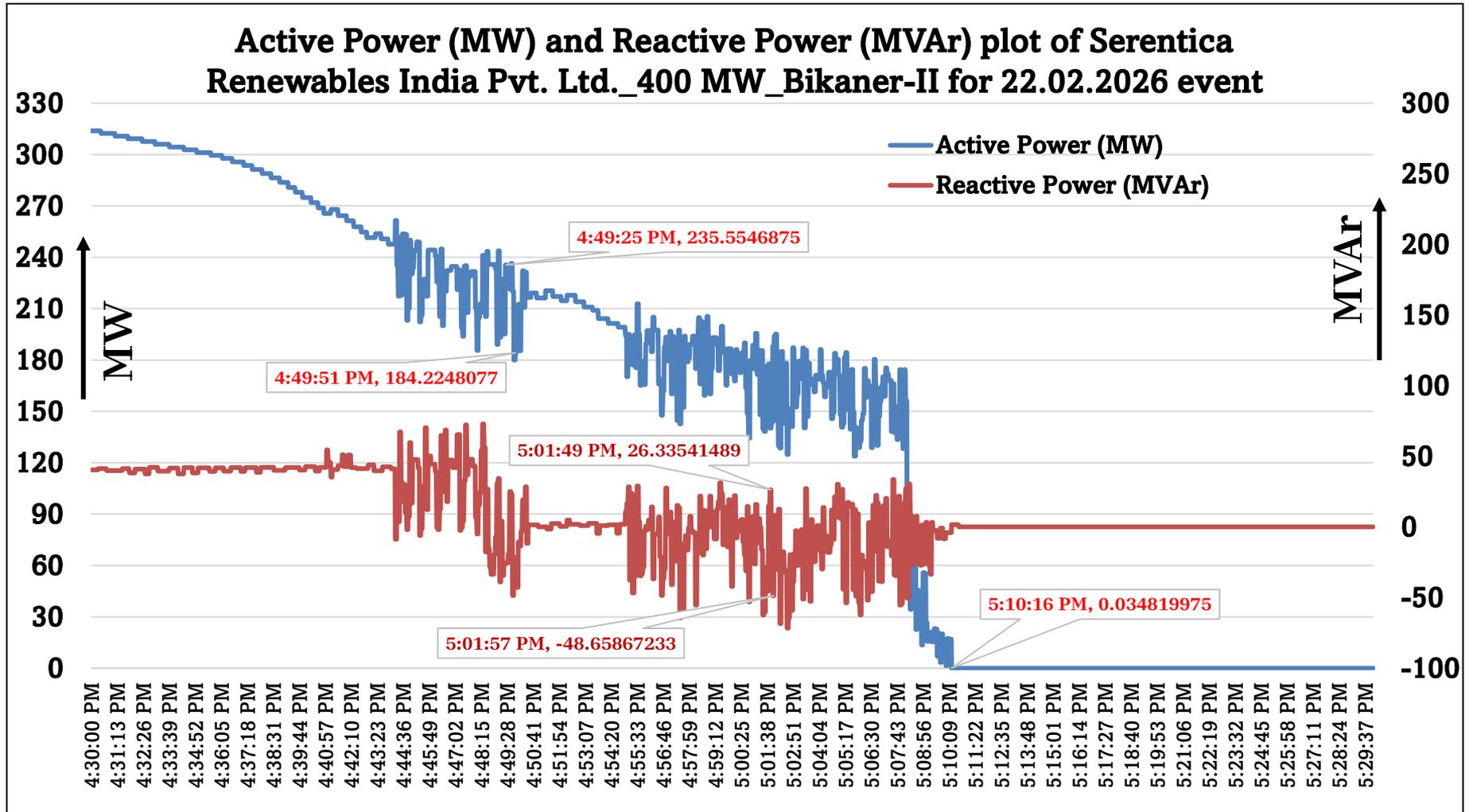
- ✓ Active Power fluctuation: 80 MW to 47 MW, **~33 MW** fluctuation in active power
- ✓ Reactive Power fluctuation: -16 MVAR to -33 MVAR, **17 MVAR** fluctuation in reactive power
- ✓ Plant outage time: 17:08:50 hrs
- ✓ Severe fluctuation in active power started at: **Data suspected.**

Active Power (MW) and Reactive Power (MVAR) plot of Prerak Green Tech Pvt. Ltd. 400 MW Bikaner-II



- ✓ Active Power fluctuation: 180 MW to 136 MW, **~44 MW** fluctuation in active power
- ✓ Reactive Power fluctuation: 57 MVAR to -36 MVAR, **~93 MVAR** fluctuation in reactive power
- ✓ Plant outage time: 17:09:52 hrs
- ✓ Severe fluctuation in active power started at: **Not observed.**

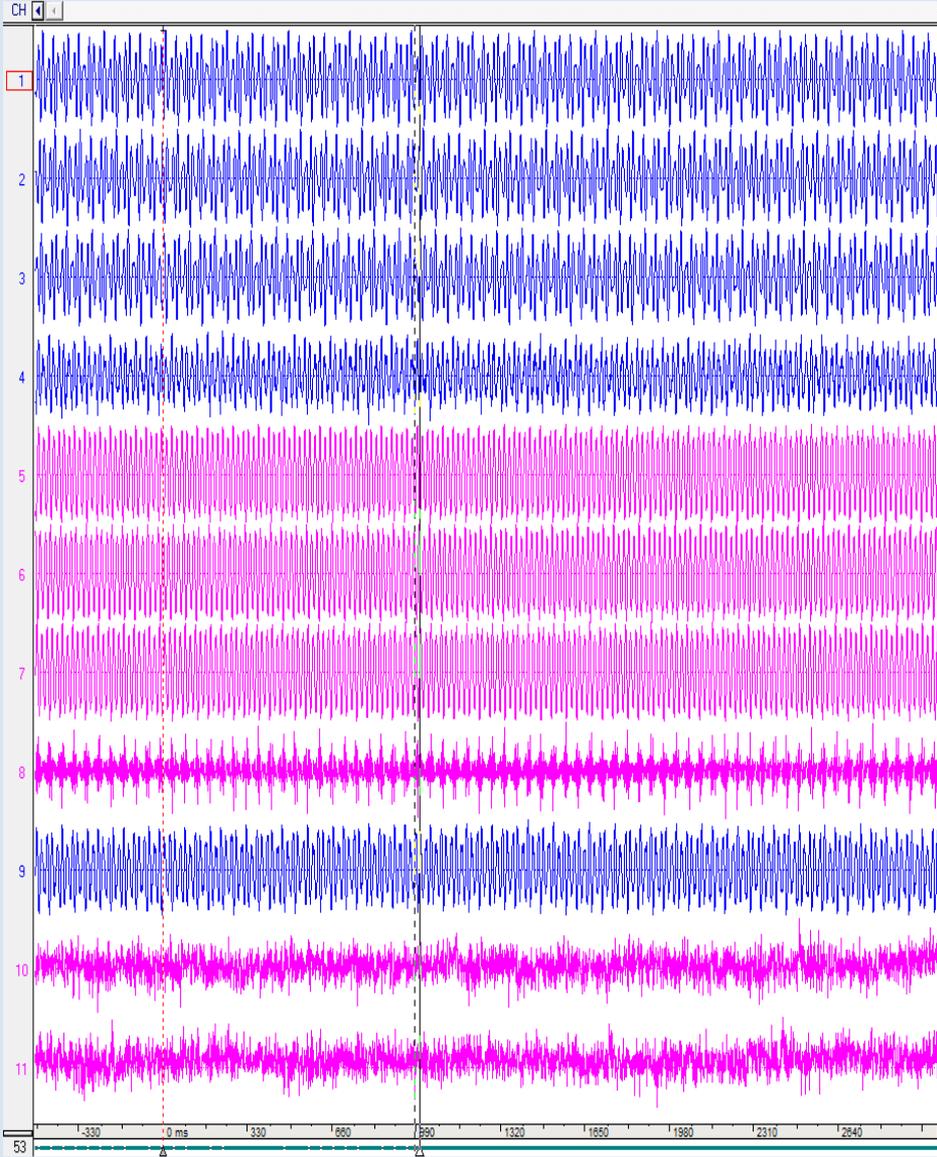
Active Power (MW) and Reactive Power (MVAR) plot of Serentica Renewables India Pvt. Ltd. 400 MW Bikaner-II



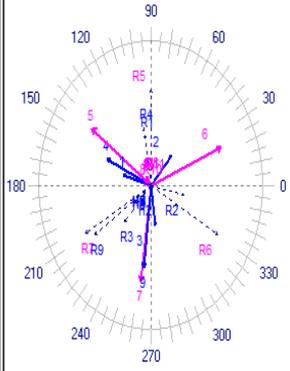
- ✓ Active Power fluctuation: 235 MW to 184 MW, **~51 MW** fluctuation in active power
- ✓ Reactive Power fluctuation: 26 MVAR to -48 MVAR, **~74 MVAR** fluctuation in reactive power
- ✓ Plant outage time: 17:10 hrs
- ✓ Severe fluctuation in active power started at: **Not observed.**

DR of 400 KV Bikaner 2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-1

B413_21M2_DR732_20260222170759.dat - 22/02/2026 - 17:07:59.849 - Primary - (Peak Type)



Title	RMS	InstPeak	Phase	InstVal	RefVal
CURRENT_R_PH	226.125	322.607	162.163°	-487.737	-305.716
CURRENT_Y_PH	246.541	460.451	48.856°	372.030	568.150
CURRENT_B_PH	220.644	-393.819	278.223°	82.485	-284.780
CURRENT_IN	25.038	39.902	154.426°	-33.200	-22.382
VOLTAGE_R_PH	257826.598	387044.414	143.382°	-308522.165	-32108.046
VOLTAGE_Y_PH	260397.710	377550.865	23.135°	315501.783	311487.826
VOLTAGE_B_PH	255763.312	-391731.917	261.938°	-7068.071	-281834.818
VOLTAGE_VN	3514.780	1317.819	159.958°	-86.906	-2468.939
MUTUAL_COMP_CT	21.719	-32.996	262.989°	2.729	-16.647
WA1 VT UL2	89.733	112.929	134.564°	-47.733	22.037
WA2 VT UL2	108.436	102.269	122.392°	155.378	-129.906



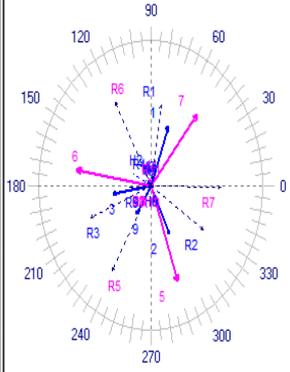
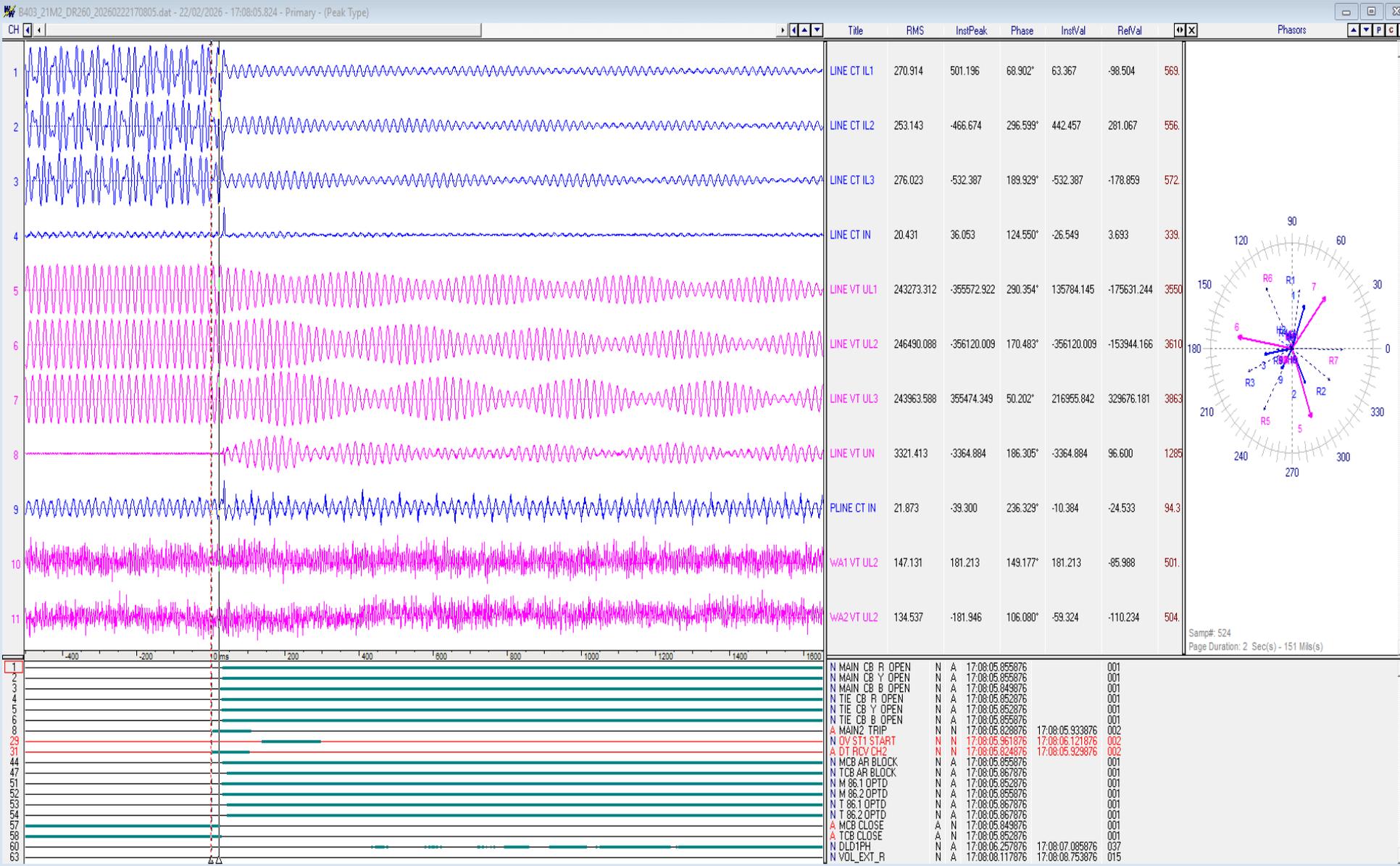
Sampl#: 1505
Page Duration: 3 Sec(s) - 539 Mils(s)

A O/V_STG1_PICKUP A A 17:07:59.361547 17:08:00.809547 046

B413_M2_0_21.2_0_BKNR 2-KTR_CKT_ Sun - 22/02/2026 17:08:00.853 Delta X: 1.004 secs (50.200 cyc @ 50.00 Hz) 1000 Hz AS: ON Delta Y: No Bars

✓ As per DR, voltage went upto 1.14 pu at Bikaner2 end.

DR of 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (end) (PBTSL) Ckt-1



Sampl#: 524
Page Duration: 2 Sec(s) - 151 Mils(s)

1	N MAIN CB R OPEN	N	A	17:08:05.855876		001
2	N MAIN CB Y OPEN	N	A	17:08:05.855876		001
3	N MAIN CB B OPEN	N	A	17:08:05.849876		001
4	N TIE CB R OPEN	N	A	17:08:05.852876		001
5	N TIE CB Y OPEN	N	A	17:08:05.852876		001
6	N TIE CB B OPEN	N	A	17:08:05.855876		001
7	A MAIN2 TRIP	N	N	17:08:05.828876	17:08:05.933876	002
8	N DV ST1 START	N	N	17:08:05.361876	17:08:06.121876	002
9	A DT RCV CH2	N	N	17:08:05.824876	17:08:05.929876	002
10	N MCB AR BLOCK	N	A	17:08:05.855876		001
11	N TCB AR BLOCK	N	A	17:08:05.867876		001
12	N M 86.1 OPTD	N	A	17:08:05.852876		001
13	N M 86.2 OPTD	N	A	17:08:05.855876		001
14	N T 86.1 OPTD	N	A	17:08:05.867876		001
15	N T 86.2 OPTD	N	A	17:08:05.867876		001
16	A MCB CLOSE	A	N	17:08:05.849876		001
17	A TCB CLOSE	A	N	17:08:05.852876		001
18	N DLD1PH	N	A	17:08:06.257876	17:08:07.085876	037
19	N VOL_EXT_R	N	A	17:08:08.117876	17:08:08.753876	015

✓ As per DR, DT received at Khetri end.

EL of 400 KV Bikaner_2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-1

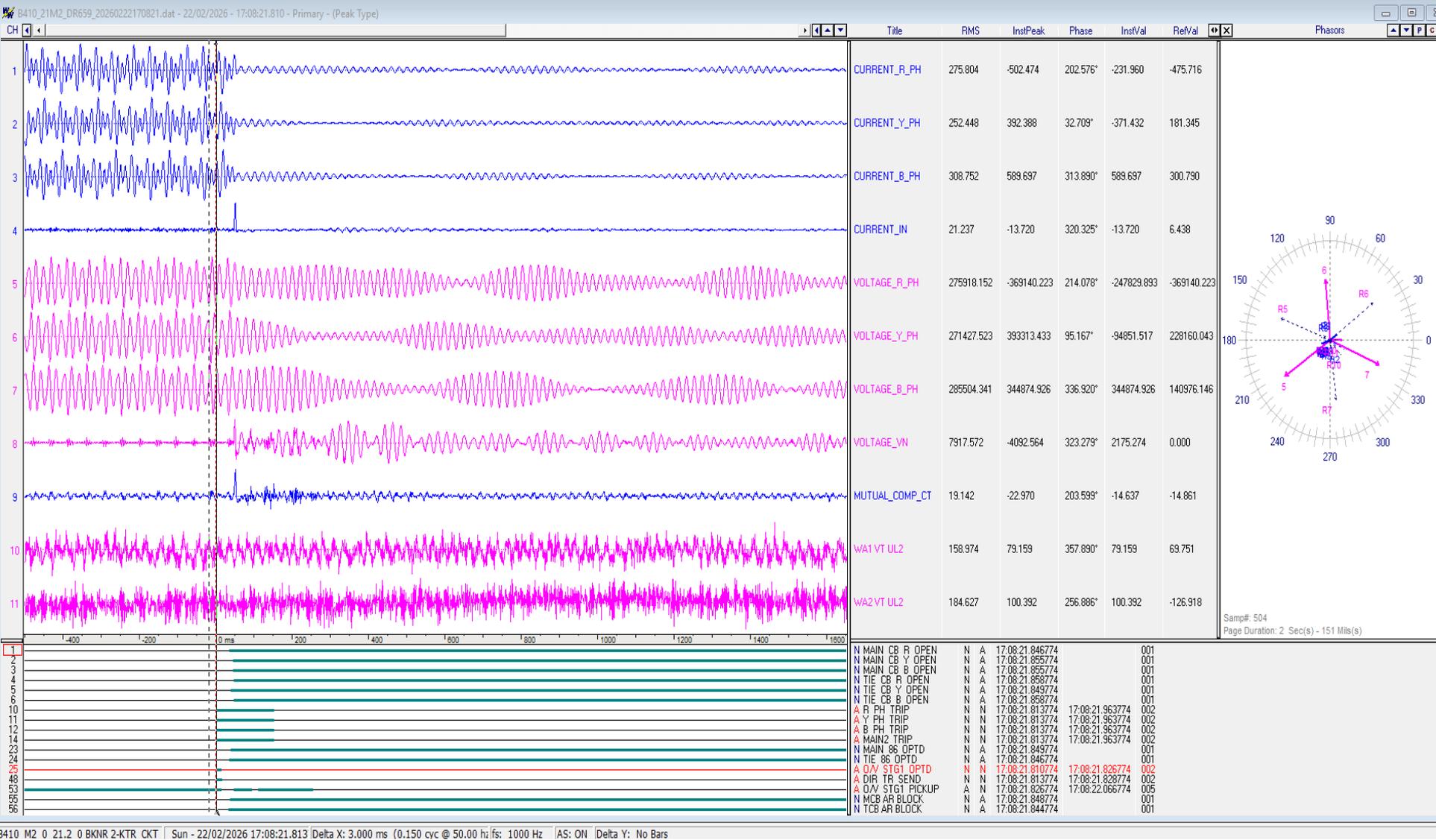
P	2/22/2026 5:08:05 PM	B_PH_TRIP	Off
P	2/22/2026 5:08:05 PM	MAIN2_TRIP	Off
P	2/22/2026 5:08:05 PM	R_PH_TRIP	Off
P	2/22/2026 5:08:05 PM	Y_PH_TRIP	Off
P	2/22/2026 5:08:05 PM	O/V_STG1_PICKUP	On
P	2/22/2026 5:08:05 PM	O/V_STG1_PICKUP	Off
P	2/22/2026 5:08:05 PM	TIE_CB_B_OPEN	On
P	2/22/2026 5:08:05 PM	TIE_CB_Y_OPEN	On
P	2/22/2026 5:08:05 PM	MAIN_CB_B_OPEN	On
P	2/22/2026 5:08:05 PM	O/V_STG1_PICKUP	On
P	2/22/2026 5:08:05 PM	MAIN_CB_R_OPEN	On
P	2/22/2026 5:08:05 PM	MAIN_CB_Y_OPEN	On
P	2/22/2026 5:08:05 PM	TIE_CB_R_OPEN	On
P	2/22/2026 5:08:05 PM	MAIN_86_OPTD	On
P	2/22/2026 5:08:05 PM	MCB AR BLOCK	On
P	2/22/2026 5:08:05 PM	TCB AR BLOCK	On
P	2/22/2026 5:08:05 PM	TIE_86_OPTD	On
P	2/22/2026 5:08:05 PM	DIR_TR_SEND	Off
P	2/22/2026 5:08:05 PM	O/V_STG1_OPTD	Off
P	2/22/2026 5:08:05 PM	O/V_STG1_PICKUP	Off
P	2/22/2026 5:08:05 PM	B_PH_TRIP	On
P	2/22/2026 5:08:05 PM	DIR_TR_SEND	On
P	2/22/2026 5:08:05 PM	MAIN2_TRIP	On
P	2/22/2026 5:08:05 PM	R_PH_TRIP	On
P	2/22/2026 5:08:05 PM	Y_PH_TRIP	On
P	2/22/2026 5:08:05 PM	O/V_STG1_OPTD	On
P	2/22/2026 5:08:00 PM	O/V_STG1_PICKUP	On
P	2/22/2026 5:08:00 PM	O/V_STG1_PICKUP	Off
P	2/22/2026 5:08:00 PM	O/V_STG1_PICKUP	On
P	2/22/2026 5:08:00 PM	O/V_STG1_PICKUP	Off
P	2/22/2026 5:08:00 PM	O/V_STG1_PICKUP	On



				Project	Responsible department	Technical ref...	Document kind	Doc. designation			
				5458_PGCIL_Bikaner-II(3)	ABB Ltd.		IED events	B413_21M2			
			Repla...	5458_PGCIL_Bikaner-II(3).Subst ation.400kV.KEC		Created by	Title BIKA413M2DIS	Document id.			
Re	Modification	Rel.	Created			Based		Approved by	0		
								Rev.	Rel. date	Lan	1 / 109

✓ As per EL, Over-voltage stage-1 operated with a time delay of 5 s and DT sent to Khetri end.

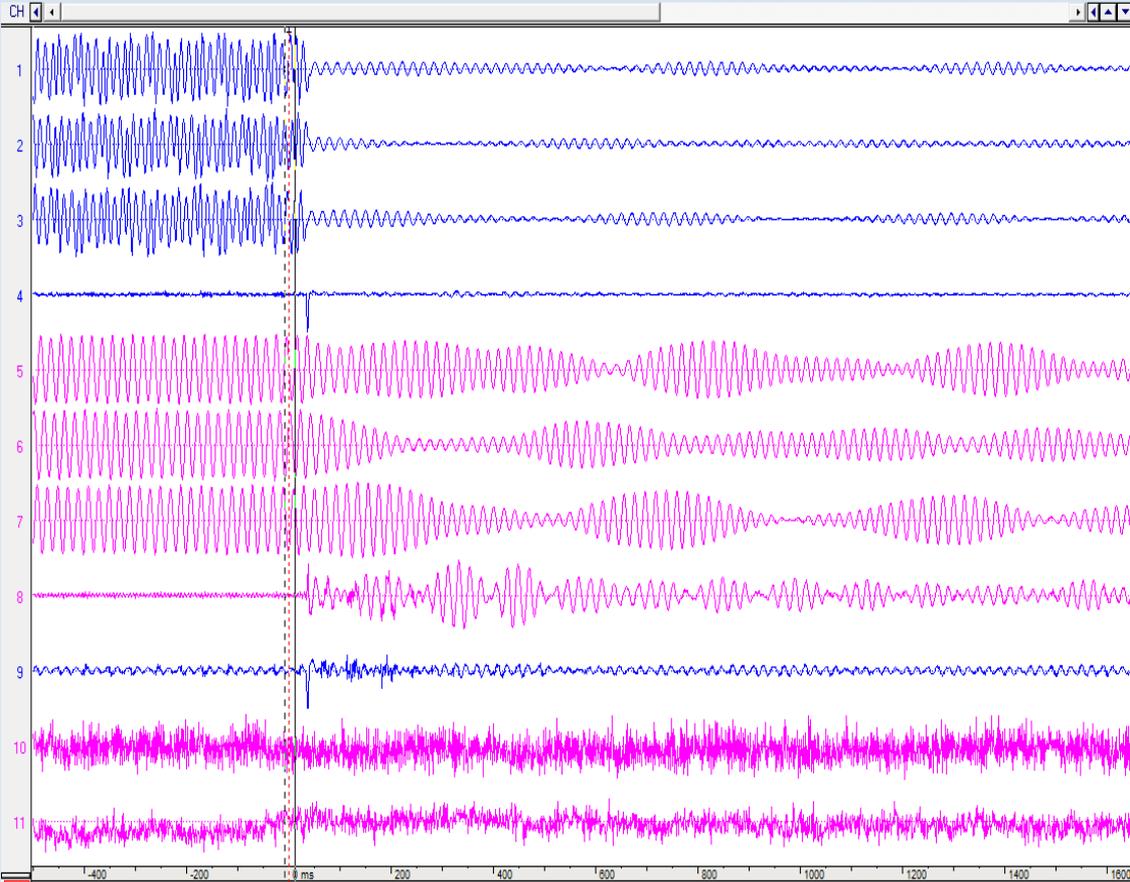
DR of 400 KV Bikaner 2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-2



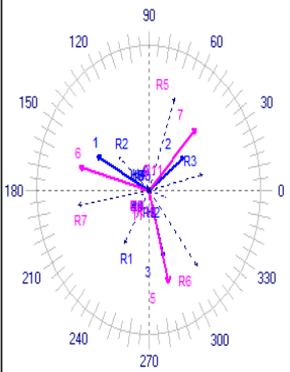
- ✓ As per DR, voltage went upto 1.23 pu at Bikaner2 end.
- ✓ Over-voltage stage-1 operated at Bikaner2 end.
- ✓ DT sent to Khetri end

DR of 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (end) (PBTSL) Ckt-2

B406_21M2_DR772_20260222170821.dat - 22/02/2026 - 17:08:21.825 - Primary - (Peak Type)



Title	RMS	InstPeak	Phase	InstVal	RefVal	
LINE CT IL1	426.923	-307.117	152.819°	89.870	289.809	765.
LINE CT IL2	380.481	501.062	36.363°	-445.411	-600.239	769.
LINE CT IL3	460.050	392.337	286.485°	362.535	306.406	819.
LINE CT IN	8.342	15.395	328.401°	6.989	-4.015	31.2
LINE VT UL1	234864.705	-325403.132	285.803°	67897.632	114094.299	3648
LINE VT UL2	232014.562	330262.302	164.732°	-308857.673	211106.841	3718
LINE VT UL3	231216.010	319668.145	45.659°	242020.461	-328160.301	3891
LINE VT UN	3028.244	5527.235	227.619°	1059.410	-2948.043	9087
PLINE CT IN	7.758	-1.582	117.921°	-1.582	-0.232	64.1
WA1 VT UL2	168.432	-202.001	163.529°	-62.850	-264.487	395.
WA2 VT UL2	71.493	-85.872	282.603°	-33.538	-9.571	282.



Sampl#: 513
Page Duration: 2 Sec(s) - 151 Mils(s)



N MAIN CB R OPEN	N	A	17:08:21.858074	001	
N MAIN CB Y OPEN	N	A	17:08:21.858074	001	
N MAIN CB B OPEN	N	A	17:08:21.858074	001	
N TIE CB R OPEN	N	A	17:08:21.852074	001	
N TIE CB Y OPEN	N	A	17:08:21.858074	001	
N TIE CB B OPEN	N	A	17:08:21.858074	001	
A MAIN2 TRIP	N	N	17:08:21.831074	17:08:21.945074	002
N DV ST1 START	N	N	17:08:21.925074	17:08:22.077074	002
A DT RCV CH2	N	N	17:08:21.825074	17:08:21.939074	002
N MCB AR BLOCK	N	A	17:08:21.851074	001	
N TCB AR BLOCK	N	A	17:08:21.873074	001	
N M 86.1 OPTD	N	A	17:08:21.858074	001	
N M 86.2 OPTD	N	A	17:08:21.858074	001	
N T 86.1 OPTD	N	A	17:08:21.873074	001	
N T 86.2 OPTD	N	A	17:08:21.870074	001	
A MCB CLOSE	A	N	17:08:21.858074	001	
A TCB CLOSE	A	N	17:08:21.852074	001	
N DLDT1PH	N	A	17:08:22.050074	17:08:23.259074	007
N VDL_EXT_R	N	N	17:08:22.839074	17:08:23.427074	004

0406_BIKANER-2_CKT2_0_B406_LINE-2_M2_0_PGCLIL_KHE' Sun - 22/02/2026 17:08:21.837 Delta X: 12.000 ms (0.600 cyc @ 50.001 fs: 1000 Hz AS: ON Delta Y: No Bars

✓ As per DR, DT received at Khetri end.

EL of 400 KV Bikaner_2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-2

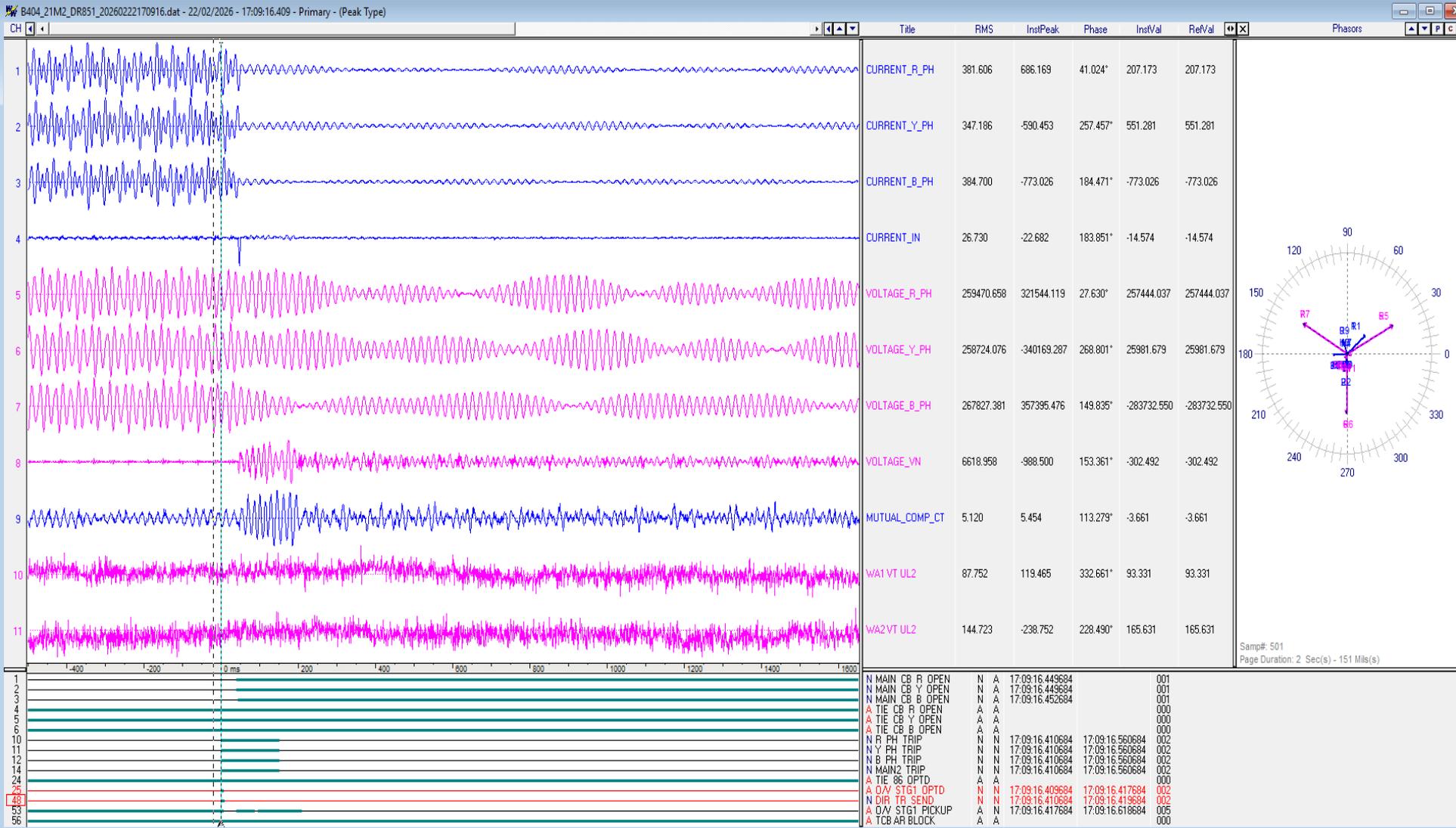
P	2/22/2026 5:08:21 PM	B_PH_TRIP	Off
P	2/22/2026 5:08:21 PM	MAIN2_TRIP	Off
P	2/22/2026 5:08:21 PM	R_PH_TRIP	Off
P	2/22/2026 5:08:21 PM	Y_PH_TRIP	Off
P	2/22/2026 5:08:21 PM	O/V_STG1_PICKUP	On
P	2/22/2026 5:08:21 PM	O/V_STG1_PICKUP	Off
P	2/22/2026 5:08:21 PM	O/V_STG1_PICKUP	On
P	2/22/2026 5:08:21 PM	TIE_CB_B_OPEN	On
P	2/22/2026 5:08:21 PM	TIE_CB_R_OPEN	On
P	2/22/2026 5:08:21 PM	MAIN_CB_B_OPEN	On
P	2/22/2026 5:08:21 PM	MAIN_CB_Y_OPEN	On
P	2/22/2026 5:08:21 PM	MAIN_86_OPTD	On
P	2/22/2026 5:08:21 PM	TIE_CB_Y_OPEN	On
P	2/22/2026 5:08:21 PM	MCB AR BLOCK	On
P	2/22/2026 5:08:21 PM	MAIN_CB_R_OPEN	On

					Project 5458_PGCIL_Bikaner-II(3)	Responsible department ABB Ltd.	Technical ref...	Document kind IED events	Doc. designation B410_21M2	
				Repla...	5458_PGCIL_Bikaner-II(3).Subst ation.400kV.KEC		Created by	Title BIKA410M2DIS	Document id. 0	
Re v.	Modification	Rel. date	Created by	Based on			Approved by		Rev.	Rel. date

Type	Date & Time	Signal name	Status
P	2/22/2026 5:08:21 PM	TIE_86_OPTD	On
P	2/22/2026 5:08:21 PM	TCB AR BLOCK	On
P	2/22/2026 5:08:21 PM	DIR_TR_SEND	Off
P	2/22/2026 5:08:21 PM	O/V_STG1_OPTD	Off
P	2/22/2026 5:08:21 PM	O/V_STG1_PICKUP	Off
P	2/22/2026 5:08:21 PM	B_PH_TRIP	On
P	2/22/2026 5:08:21 PM	DIR_TR_SEND	On
P	2/22/2026 5:08:21 PM	MAIN2_TRIP	On
P	2/22/2026 5:08:21 PM	R_PH_TRIP	On
P	2/22/2026 5:08:21 PM	Y_PH_TRIP	On
P	2/22/2026 5:08:21 PM	O/V_STG1_OPTD	On
P	2/22/2026 5:08:15 PM	O/V STG1 PICKUP	On

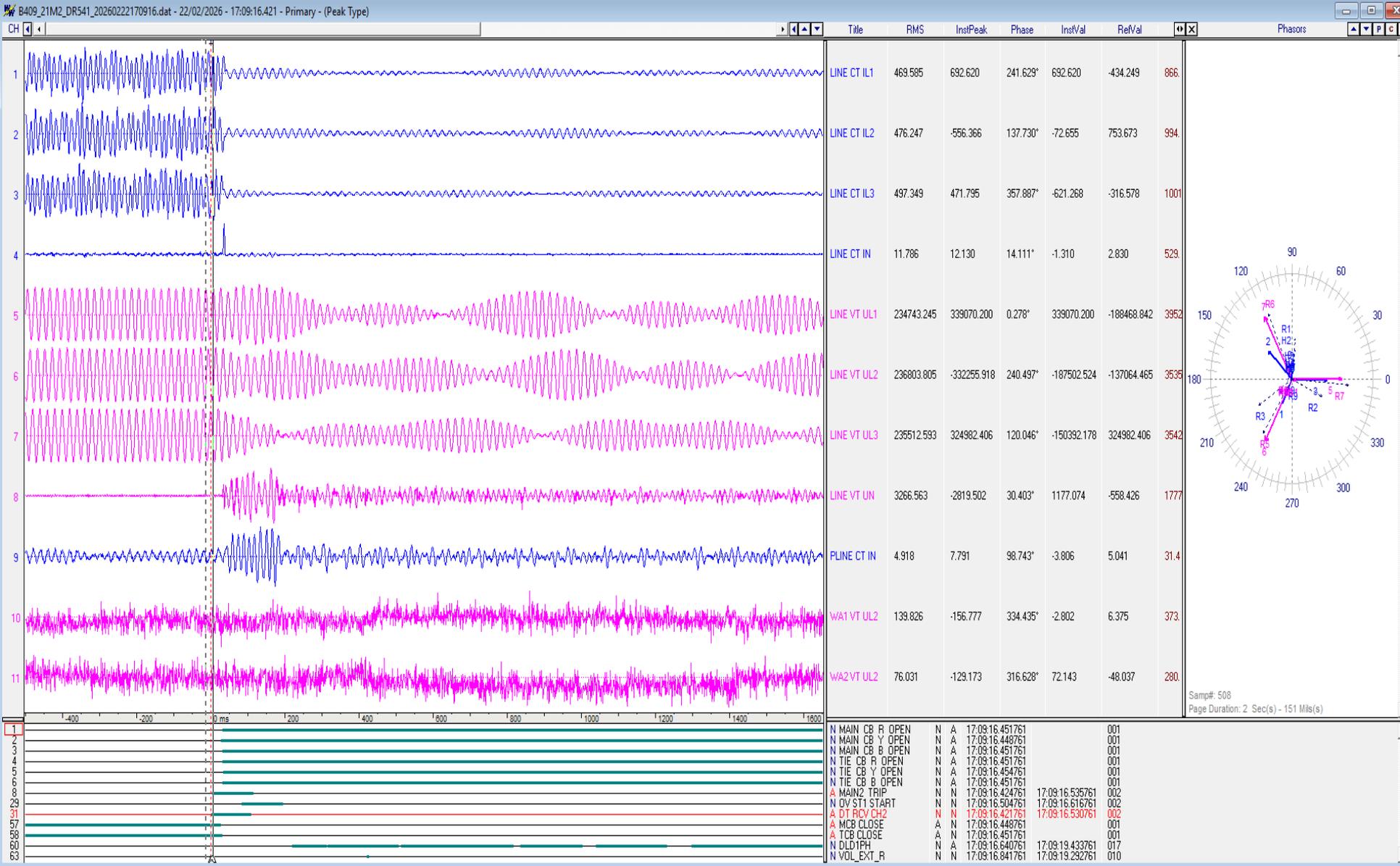
✓ As per EL, Over-voltage stage-1 operated with a time delay of 6 s and DT sent to Khetri end.

DR of 400 KV Bikaner 2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-3



- ✓ As per DR, voltage went upto 1.16 pu at Bikaner2 end.
- ✓ Over-voltage stage-1 operated at Bikaner2 end.
- ✓ DT sent to Khetri end.

DR of 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (end) (PBTSL) Ckt-3



009_BIKANER-2 CKT3_0_B409_LINE-3_M2_0_PGCIL_KHE | Sun - 22/02/2026 17:09:16.427 | Delta X: 7.000 ms (0.350 cyc @ 50.00 Hz) | fs: 1000 Hz | AS: ON | Delta Y: No Bars

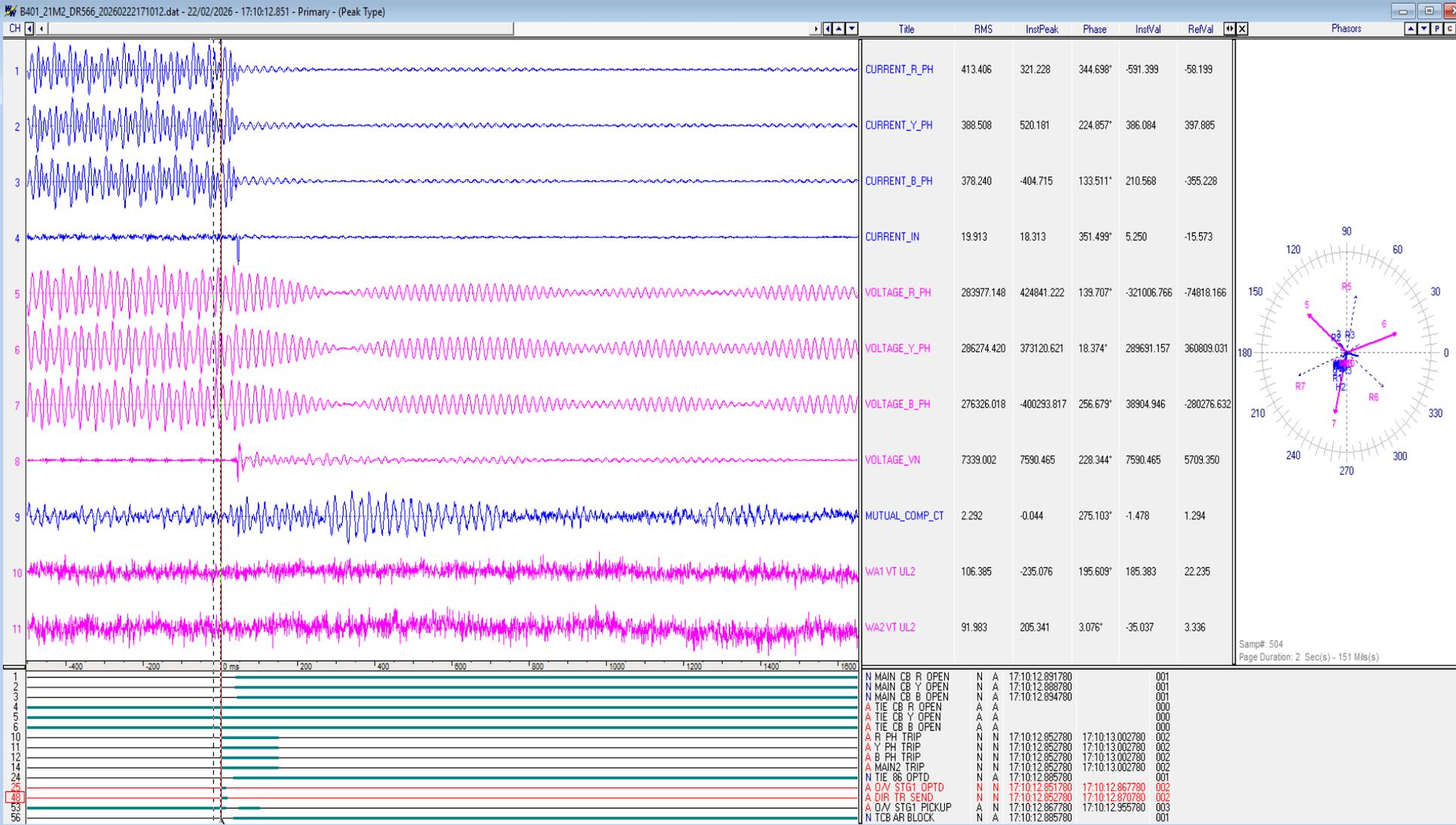
✓ As per DR, DT received at Khetri end.

EL of 400 KV Bikaner_2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-3

P	2/22/2026 5:09:16 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:16 PM	B_PH_TRIP	Off																																																		
P	2/22/2026 5:09:16 PM	MAIN2_TRIP	Off																																																		
P	2/22/2026 5:09:16 PM	R_PH_TRIP	Off																																																		
P	2/22/2026 5:09:16 PM	Y_PH_TRIP	Off																																																		
P	2/22/2026 5:09:16 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:16 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:16 PM	MAIN_CB_B_OPEN	On																																																		
P	2/22/2026 5:09:16 PM	MAIN_CB_R_OPEN	On																																																		
P	2/22/2026 5:09:16 PM	MAIN_CB_Y_OPEN	On																																																		
P	2/22/2026 5:09:16 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:16 PM	DIR_TR_SEND	Off																																																		
P	2/22/2026 5:09:16 PM	O/V_STG1_OPTD	Off																																																		
P	2/22/2026 5:09:16 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:16 PM	B_PH_TRIP	On																																																		
P	2/22/2026 5:09:16 PM	DIR_TR_SEND	On																																																		
P	2/22/2026 5:09:16 PM	MAIN2_TRIP	On																																																		
P	2/22/2026 5:09:16 PM	R_PH_TRIP	On																																																		
P	2/22/2026 5:09:16 PM	Y PH TRIP	On																																																		
P	2/22/2026 5:09:16 PM	O/V_STG1_OPTD	On																																																		
P	2/22/2026 5:09:10 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:10 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:05 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:05 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:04 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:04 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:03 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:03 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:00 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:00 PM	O/V_STG1_PICKUP	Off																																																		
P	2/22/2026 5:09:00 PM	O/V_STG1_PICKUP	On																																																		
P	2/22/2026 5:09:00 PM	O/V_STG1_PICKUP	Off																																																		
<table border="1"> <thead> <tr> <th>Re v.</th> <th>Modification</th> <th>Rel. date</th> <th>Created by</th> <th>Based on</th> <th>Project</th> <th>Responsible department</th> <th>Technical ref...</th> <th>Document kind</th> <th>Doc. designation</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5458_PGCIL_Bikaner-II(3)</td> <td>ABB Ltd.</td> <td></td> <td>IED events</td> <td>B404_21M2</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Repla...</td> <td rowspan="2">5458_PGCIL_Bikaner-II(3).Substation.400kV.KEC</td> <td rowspan="2"></td> <td>Created by</td> <td>Title</td> <td>Document id.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Approved by</td> <td>BIKA404M2DIS</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Rev.</td> <td>Rel. date</td> <td>Lan en</td> <td>1 / 68</td> </tr> </tbody> </table>				Re v.	Modification	Rel. date	Created by	Based on	Project	Responsible department	Technical ref...	Document kind	Doc. designation						5458_PGCIL_Bikaner-II(3)	ABB Ltd.		IED events	B404_21M2					Repla...	5458_PGCIL_Bikaner-II(3).Substation.400kV.KEC		Created by	Title	Document id.						Approved by	BIKA404M2DIS	0									Rev.	Rel. date	Lan en	1 / 68
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							Approved by	BIKA404M2DIS	0																																												
								Rev.	Rel. date	Lan en	1 / 68																																										

✓ As per EL, Over-voltage stage-1 operated with a time delay of 6 s and DT sent to Khetri end.

DR of 400 KV Bikaner 2 (PBTSL) (end)-Khetri (PKTSL) (PBTSL) Ckt-4

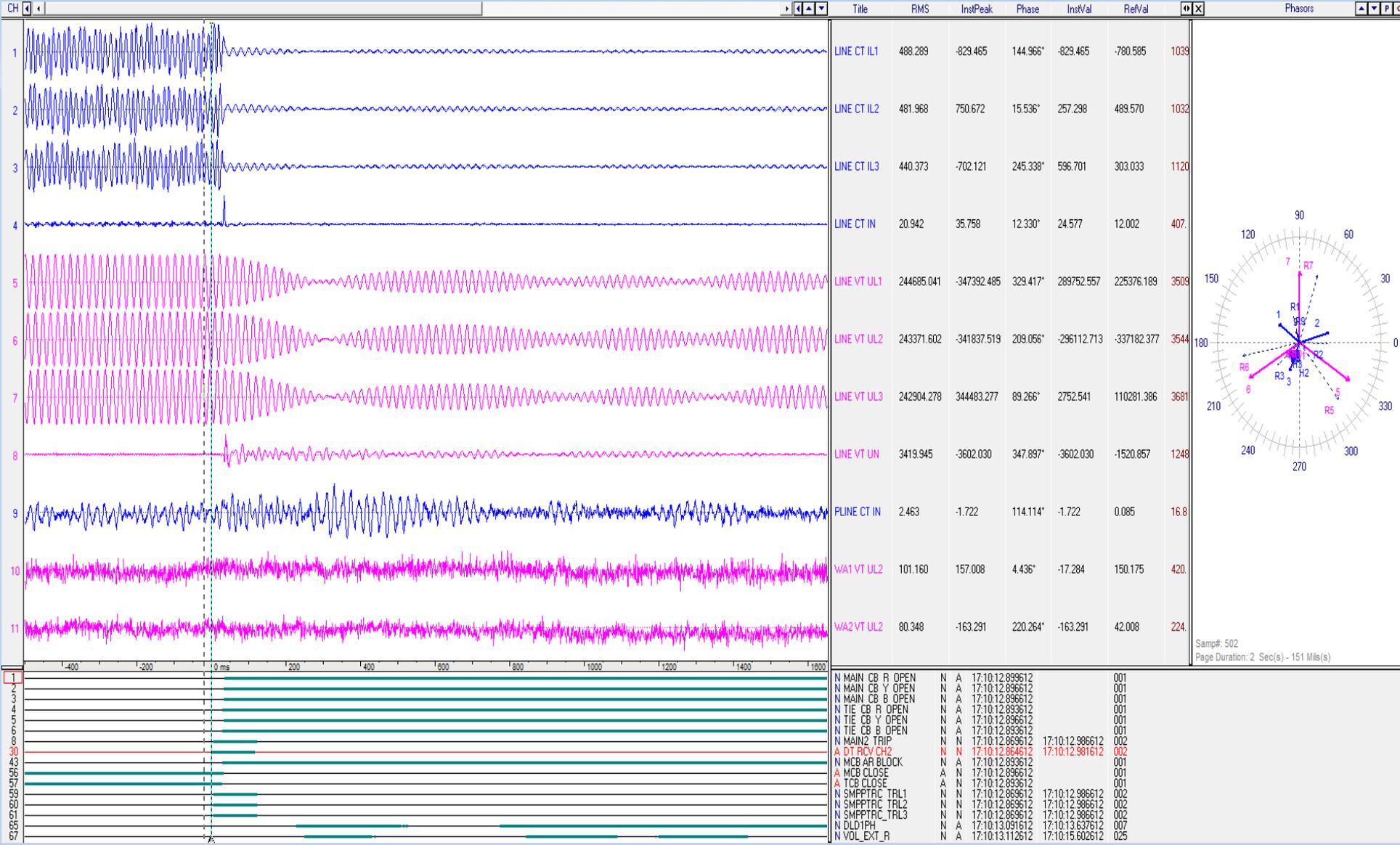


B401_M2_0_21.2_0 BKNR2-KTR CKT_ Sun - 22/02/2026 17:10:12.854 Delta X: 3.000 ms (0.150 cyc @ 50.00 hi/fs: 1000 Hz |AS: ON |Delta Y: No Bars

- ✓ As per DR, voltage went upto 1.238 pu at Bikaner2 end.
- ✓ Over-voltage stage-1 operated at Bikaner2 end.
- ✓ DT sent to Khetri end.

DR of 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (end) (PBTSL) Ckt-4

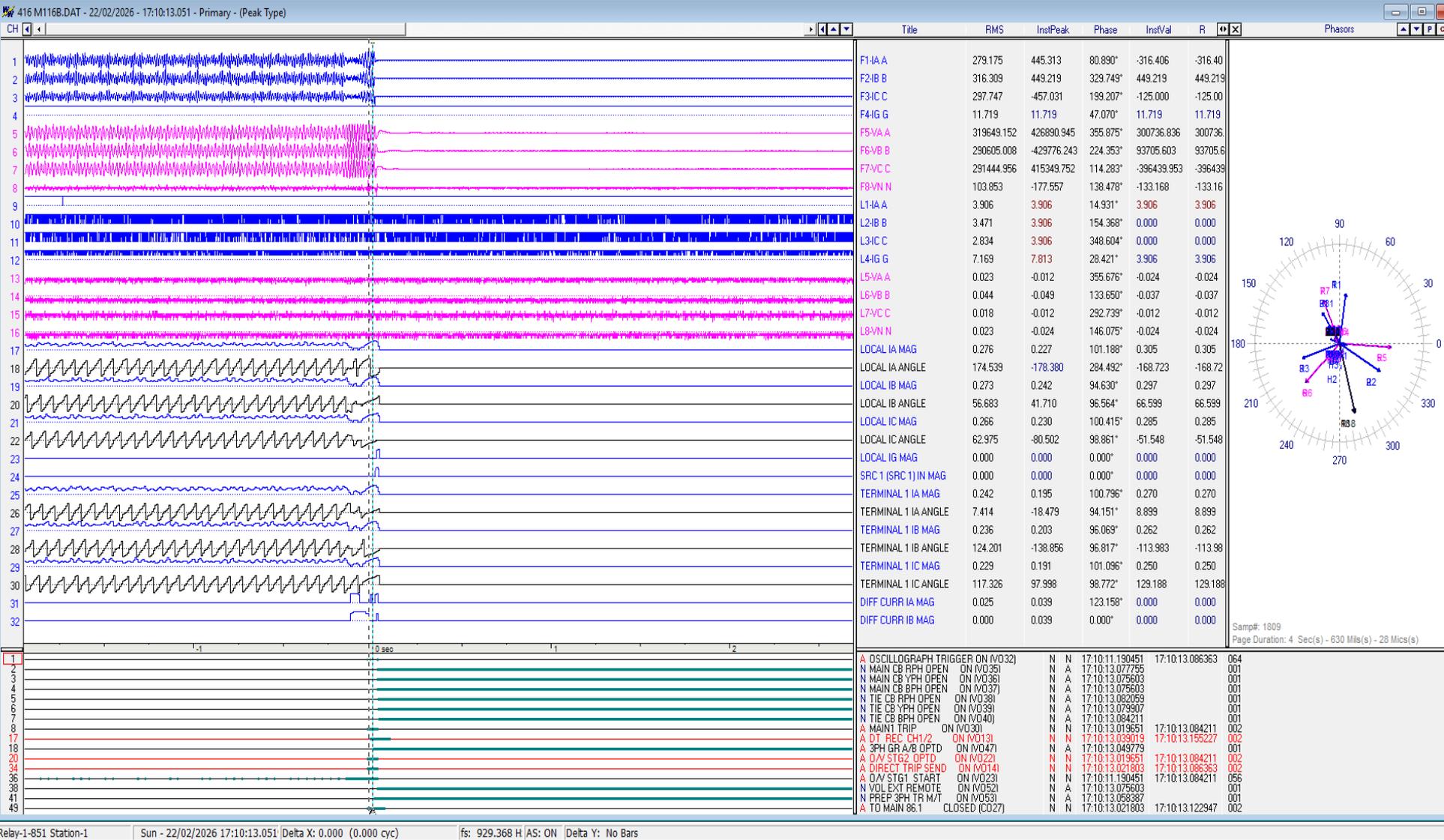
B412_21M2_DR588_20260222171012.dat - 22/02/2026 - 17:10:12.864 - Primary - (Peak Type)



012_BIKANER2_CKT4_0_B412_LINE4_M2_0_PGCIL_KHE | Sun - 22/02/2026 17:10:12.864 | Delta X: 1.000 ms (0.050 cyc @ 50.00 Hz) | AS: ON | Delta Y: No Bars

✓ As per DR, DT received at Khetri end.

DR of 400 KV Bikaner 2 (PBTSL)-SJVN GEL SL BKN2 (SGEL BKN2) Ckt



- ✓ As per DR, voltage went upto 1.38 pu at Bikaner2 end.
- ✓ Over-voltage stage-2 operated at Bikaner2 end.
- ✓ DT received from SGEL end as well as sent to SGEL end.

EL of 400 KV Bikaner 2 (PBTSL)-SJVN GEL SL BKN2 (SGEL BKN2) Ckt

SICAM PAS CC V7 Alarm list

Date	Time	Message Group	Wincc Message Text	Value	Cause	Additional cause
1009	22/02/2026	20.28.43.002	BIKANER400KV410_LR3187R_7SR54	NGR MOG ALARM	CLEARED	general interrogation no error
1010	22/02/2026	20.28.43.002	BIKANER400KV410_LR3187R_7SR54	NGR OTI ALARM	CLEARED	general interrogation no error

22.02.2026
20:29:02
HMI2
MASTER

System Alarms

Legend

400/220KV PGCIL BIKANER-II POOLING STATION
User: Administrator
Alarms
Events
Trends
Reports
Explorer
Editor
Hardcopy
Acknowledge

Events CAME IN TEXT COLOR ---- TEXT CAME OUT TEXT COLOR ---- TEXT

Date	Time	Message Group	Wincc Message Text	Value	Cause	Additional cause
745	22/02/2026	17.10.12.856	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-1 PICKUP	RAISED	spontaneous no error
746	22/02/2026	17.10.12.867	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 B-PH PICKUP	RAISED	spontaneous no error
747	22/02/2026	17.10.12.867	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 R-PH PICKUP	RAISED	spontaneous no error
748	22/02/2026	17.10.12.867	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 PICKUP	RAISED	spontaneous no error
749	22/02/2026	17.10.12.869	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-1 PICKUP	CLEARED	spontaneous no error
750	22/02/2026	17.10.12.877	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 B-PH PICKUP	CLEARED	spontaneous no error
751	22/02/2026	17.10.12.877	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 R-PH PICKUP	CLEARED	spontaneous no error
752	22/02/2026	17.10.12.877	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 PICKUP	CLEARED	spontaneous no error
753	22/02/2026	17.10.12.899	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-1 PICKUP	RAISED	spontaneous no error
754	22/02/2026	17.10.12.917	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 B-PH PICKUP	RAISED	spontaneous no error
755	22/02/2026	17.10.12.917	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 R-PH PICKUP	RAISED	spontaneous no error
756	22/02/2026	17.10.12.985	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-2 Y-PH PICKUP	RAISED	spontaneous no error
757	22/02/2026	17.10.12.985	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-2 PICKUP	RAISED	spontaneous no error
758	22/02/2026	17.10.12.992	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-2 PICKUP	RAISED	spontaneous no error
759	22/02/2026	17.10.12.995	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-2 Y-PH PICKUP	CLEARED	spontaneous no error
760	22/02/2026	17.10.12.995	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-2 PICKUP	CLEARED	spontaneous no error
761	22/02/2026	17.10.13.020	BIKANER400KV416_LN1IGE_L90	MAIN 1 PROTECTION OPERATED	RAISED	spontaneous no error
762	22/02/2026	17.10.13.020	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-2 OPERATED	RAISED	spontaneous no error
763	22/02/2026	17.10.13.026	BIKANER400KV416_LN1IGE_L90	DIRECT TRIP SEND CHANNEL-1/2	RAISED	buffered no error
764	22/02/2026	17.10.13.032	BIKANER400KV416_LN1IGE_L90	DIRECT TRIP RECEIVED CHANNEL-1	RAISED	spontaneous no error
765	22/02/2026	17.10.13.032	BIKANER400KV416_LN1IGE_L90	DIRECT TRIP RECEIVED CHANNEL-1	RAISED	buffered no error
766	22/02/2026	17.10.13.045	BIKANER400KV416_LN1IBC0_6MD86	86.1 TRIP RELAY OPERATED	RAISED	spontaneous no error
767	22/02/2026	17.10.13.047	BIKANER400KV416_LN1IBC0_6MD86	AR BLOCK	RAISED	spontaneous no error
768	22/02/2026	17.10.13.048	BIKANER400KV416_LN1IBC0_6MD86	AR INACTIVE	RAISED	spontaneous no error
769	22/02/2026	17.10.13.048	BIKANER400KV416_LN1IBC0_6MD86	CB INTERLOCKS	CLEARED	spontaneous no error
770	22/02/2026	17.10.13.052	BIKANER400KV416_LN1IGE_L90	AR BLOCK	RAISED	spontaneous no error
771	22/02/2026	17.10.13.052	BIKANER400KV416_LN1IBC0_6MD86	CB B PH POSITION	INTERMEDIATE	spontaneous no error
772	22/02/2026	17.10.13.052	BIKANER400KV416_LN1IBC0_6MD86	CB Y PH POSITION	INTERMEDIATE	spontaneous no error
773	22/02/2026	17.10.13.053	BIKANER400KV416_LN1IBC0_6MD86	CB POSITION	INTERMEDIATE	spontaneous no error
774	22/02/2026	17.10.13.053	BIKANER400KV416_LN1IBC0_6MD86	CB POSITION	INTERMEDIATE	spontaneous no error
775	22/02/2026	17.10.13.055	BIKANER400KV416_LN1IBC0_6MD86	CB R PH POSITION	INTERMEDIATE	spontaneous no error
776	22/02/2026	17.10.13.072	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 R-PH PICKUP	CLEARED	spontaneous no error
777	22/02/2026	17.10.13.084	BIKANER400KV416_LN1IGE_L90	MAIN 1 PROTECTION OPERATED	CLEARED	spontaneous no error
778	22/02/2026	17.10.13.084	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-2 OPERATED	CLEARED	spontaneous no error
779	22/02/2026	17.10.13.084	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-1 PICKUP	CLEARED	spontaneous no error
780	22/02/2026	17.10.13.091	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 Y-PH PICKUP	CLEARED	spontaneous no error
781	22/02/2026	17.10.13.091	BIKANER400KV416_LN1IGE_P546	OVER VOLTAGE STAGE-1 PICKUP	CLEARED	spontaneous no error
782	22/02/2026	17.10.13.119	BIKANER400KV416_LN1IGE_L90	OVER VOLTAGE STAGE-2 PICKUP	CLEARED	spontaneous no error
783	22/02/2026	17.10.13.138	BIKANER400KV416_LN1IGE_L90	DIRECT TRIP RECEIVED CHANNEL-1	CLEARED	spontaneous no error
784	22/02/2026	17.10.13.188	BIKANER400KV416_LN1IGE_P546	DIRECT TRIP RECEIVED CHANNEL-2	RAISED	spontaneous no error
785	22/02/2026	17.10.13.264	BIKANER400KV416_LN1IGE_P546	DIRECT TRIP RECEIVED CHANNEL-2	CLEARED	spontaneous no error
786	22/02/2026	17.10.30.013	BIKANER400KV416_LN1IGE_L90	COMMUNICATION STATUS	HEALTHY	spontaneous no error

Ready
Pending: 4416 To acknowledge: 1836 Hidden: 0 List: 786
2/22/2026 8:29:03 PM

SUBSTATION OVERVIEW
400kV OVERVIEW
DIA-1
DIA-3
DIA-5
DIA-7
DIA-9
DIA-11
DIA-13
428 BS1
220kV OVERVIEW
201
203
205
207
209
211
213
215
217
219
221
223
225
227
229
231

BUS BAR
AUXILIARY SYSTEMS
ANALOG
Network
EXIT

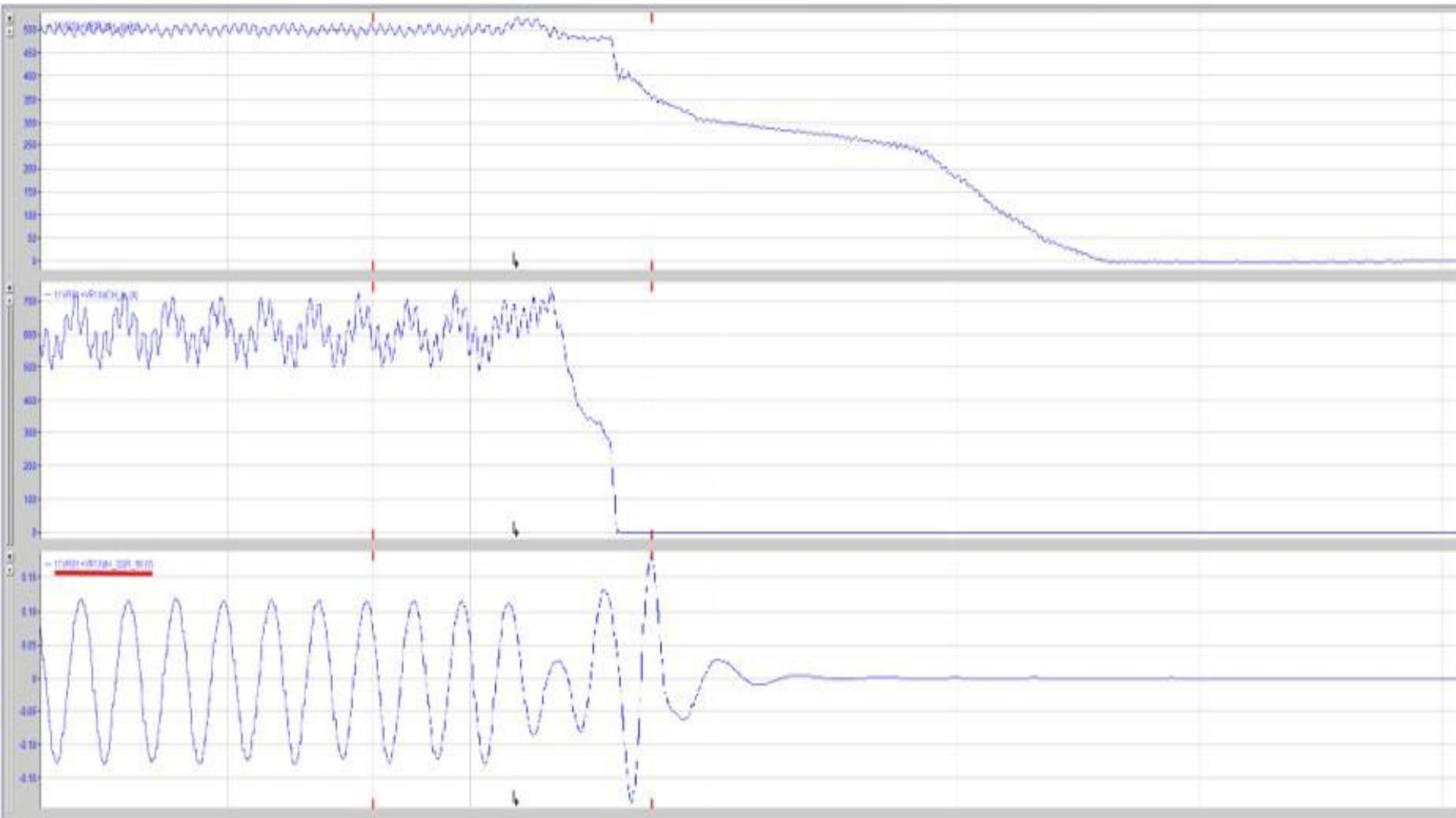
- ✓ As per EL, Over-voltage stage-2 operated at Bikaner2 end.
- ✓ DT received from SGEL end.

Event Logger details at Balia end of 500 KV HVDC Balia-Bhiwadi (PG)

Sl. No.	Date	Time	Number	Device	Message text	Class	Status
826	22/02/2026	16:21:32.068	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
827	22/02/2026	16:21:58.184	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
828	22/02/2026	16:25:01.480	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
829	22/02/2026	16:25:27.596	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
830	22/02/2026	16:28:46.764	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
831	22/02/2026	16:29:12.876	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
832	22/02/2026	16:32:36.145	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
833	22/02/2026	16:33:02.256	102548	11V01	TRANSFORMER OIL TEMP INPUT FAILURE	DIAG	*
834	22/02/2026	17:00:12.452	125215	12V001 A1DCP	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
835	22/02/2026	17:00:12.461	125010	12V001 A1DCP	TD01 IS SELECTED AS ACTIVE BUS	STAT	*
836	22/02/2026	17:00:12.461	125020	12V001 A1DCP	TD02 IS SELECTED AS ACTIVE BUS	STAT	*
837	22/02/2026	17:00:12.466	125291	12V001 A1DCP	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
838	22/02/2026	17:00:12.471	125594	12V007 A1DCP	TD01 IS SELECTED AS ACTIVE BUS	STAT	*
839	22/02/2026	17:00:12.471	125596	12V007 A1DCP	TD02 IS SELECTED AS ACTIVE BUS	STAT	*
840	22/02/2026	17:00:12.482	125305	12V007 A1DCP	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
841	22/02/2026	17:00:12.501	102545	11V001 A1DCP	TD01 IS SELECTED AS ACTIVE BUS	STAT	*
842	22/02/2026	17:00:12.505	105010	11V001 A1DCP	TD02 IS SELECTED AS ACTIVE BUS	STAT	*
843	22/02/2026	17:00:12.505	105020	11V001 A1DCP	CONVERTER SUMMARY BLOCK REQUEST	STAT	*
844	22/02/2026	17:00:12.505	124320	12V000	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
845	22/02/2026	17:00:12.506	105791	11V007 A1DCP	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
846	22/02/2026	17:00:12.516	105791	11V007 A1DCP	TD01 IS SELECTED AS ACTIVE BUS	STAT	*
847	22/02/2026	17:00:12.519	105594	11V007 A1DCP	TD02 IS SELECTED AS ACTIVE BUS	STAT	*
848	22/02/2026	17:00:12.519	105596	11V007 A1DCP	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
849	22/02/2026	17:00:12.532	105305	11V001 A1DCP	CONVERTER SUMMARY BLOCK REQUEST	STAT	*
850	22/02/2026	17:00:12.552	104320	11V000	SUB SYNCHRONOUS RESONANCE BY SSR BLOCK	MROR	*
851	22/02/2026	17:00:12.556	105791	11V007 A1DCP	STOP SEQUENCE RUNNING	STAT	*
852	22/02/2026	17:00:12.558	133301	12V000	SELF EXCITATION LIMITATION ACTIVE	STAT	*
853	22/02/2026	17:00:12.571	163463	10X01 A10PC	POLE POWER TRANSMISSION: 1-1 MIN	STAT	*
854	22/02/2026	17:00:12.573	124312	12V000	STOP SEQUENCE RUNNING	STAT	*
855	22/02/2026	17:00:12.609	103301	11V000	STATUS OF OPERATION DEBLOCKED	STAT	*
856	22/02/2026	17:00:12.622	133295	12V000	TAP CHANGER ANGLE CONTROL	STAT	*
857	22/02/2026	17:00:12.622	133310	12V01	TAP CHANGER U00 CONTROL	STAT	*
858	22/02/2026	17:00:12.622	133311	12V01	TAP CHANGER U00 CONTROL	STAT	*
859	22/02/2026	17:00:12.622	133312	12V01	TAP CHANGER FORCED U00 MODE	STAT	*
860	22/02/2026	17:00:12.622	133461	12V000	FREQUENCY CONTROL OPERATIONAL	STAT	*
861	22/02/2026	17:00:12.652	104317	11V000	POLE POWER TRANSMISSION: 1-1 MIN	STAT	*

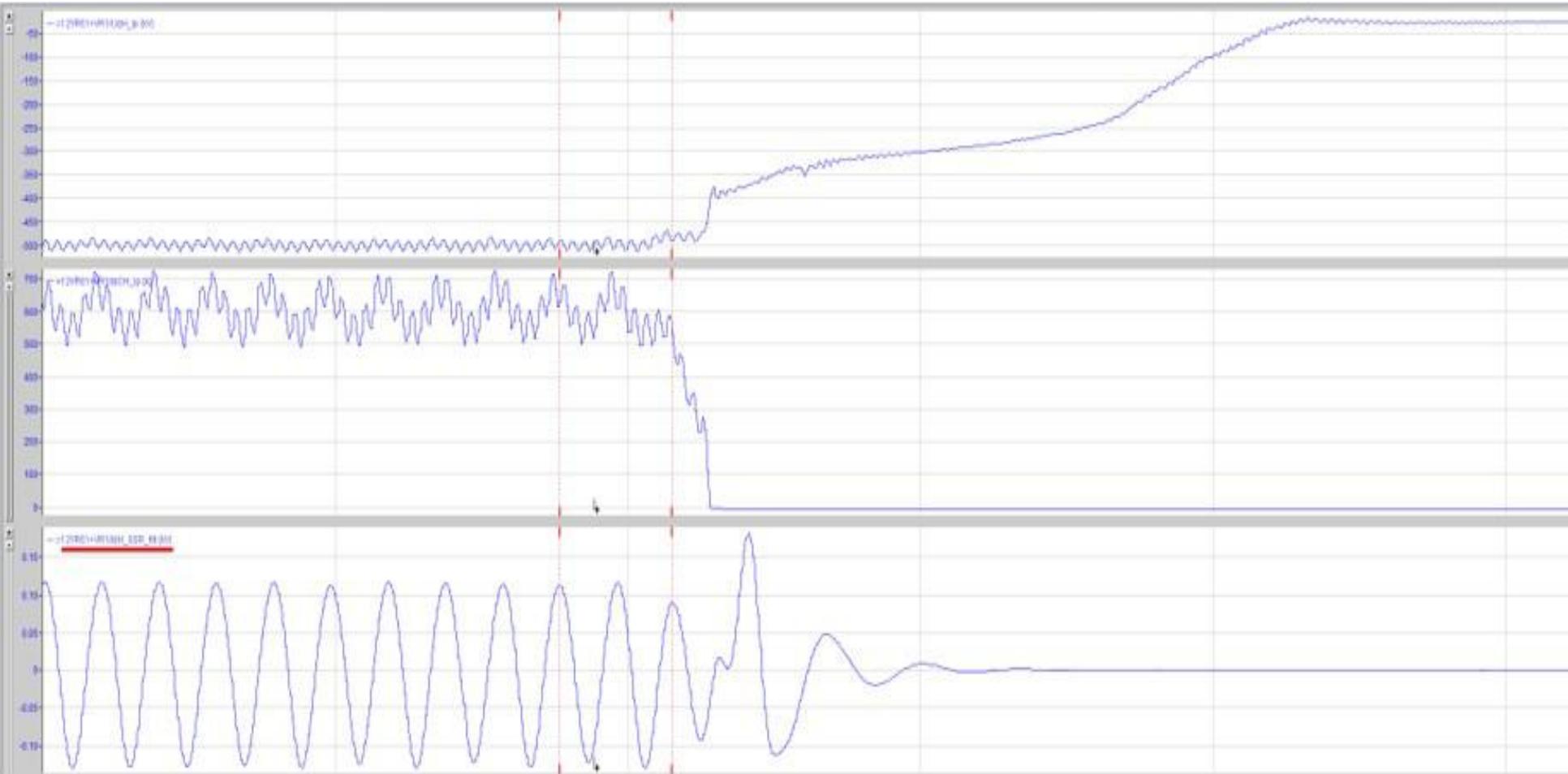
✓ As per EL, HVDC Balia-Bhiwadi both poles tripped on sub synchronous resonance 81 SSR block.

DR at Balia end of 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1



Max	Signatures	X1	X2	X2 - X1	Y1	Y2	Y2 - Y1	Unit
0.15	11R01+R1S0LJ	17.00.12.438	17.00.12.675	2.387	480.33	264.74	-215.59	W
0.10	2 11R01+R1S0CLL	17.00.12.438	17.00.12.675	2.387	882.06	-2.54	-884.60	A
0.05	3 11R01+R1S0L_SDR_RI	17.00.12.438	17.00.12.675	2.387	0.2438	0.2438	0.0000	V
0.05	4 11R01+R1S0L_SDR_RI	17.00.12.438	17.00.12.675	2.387	0.2438	0.2438	0.0000	V

DR at Balia end of 500 KV HVDC Balia-Bhiwadi (PG) Ckt-2



Sl. No.	SignalName	X1	X2	X2 - X1	Y1	Y2	Y2 - Y1	Unit
1	+I2(R01+R1)OH_B	17.08.12.4415	17.08.12.5376	0.0961	-490.31	-487.88	2.43	W
2	+I2(R01+R1)OH_Lp	17.08.12.4415	17.08.12.5376	0.0961	93127	928.48	-92198	A
3	+I2(R01+R1)OH_SSR_00	17.08.12.4415	17.08.12.5376	0.0961	0.1132	0.0008	-0.0224	W
4	+I2(R01+R1)OH_SSR_00	17.08.12.4415	17.08.12.5376	0.0961	0.1132	0.0008	-0.0224	W

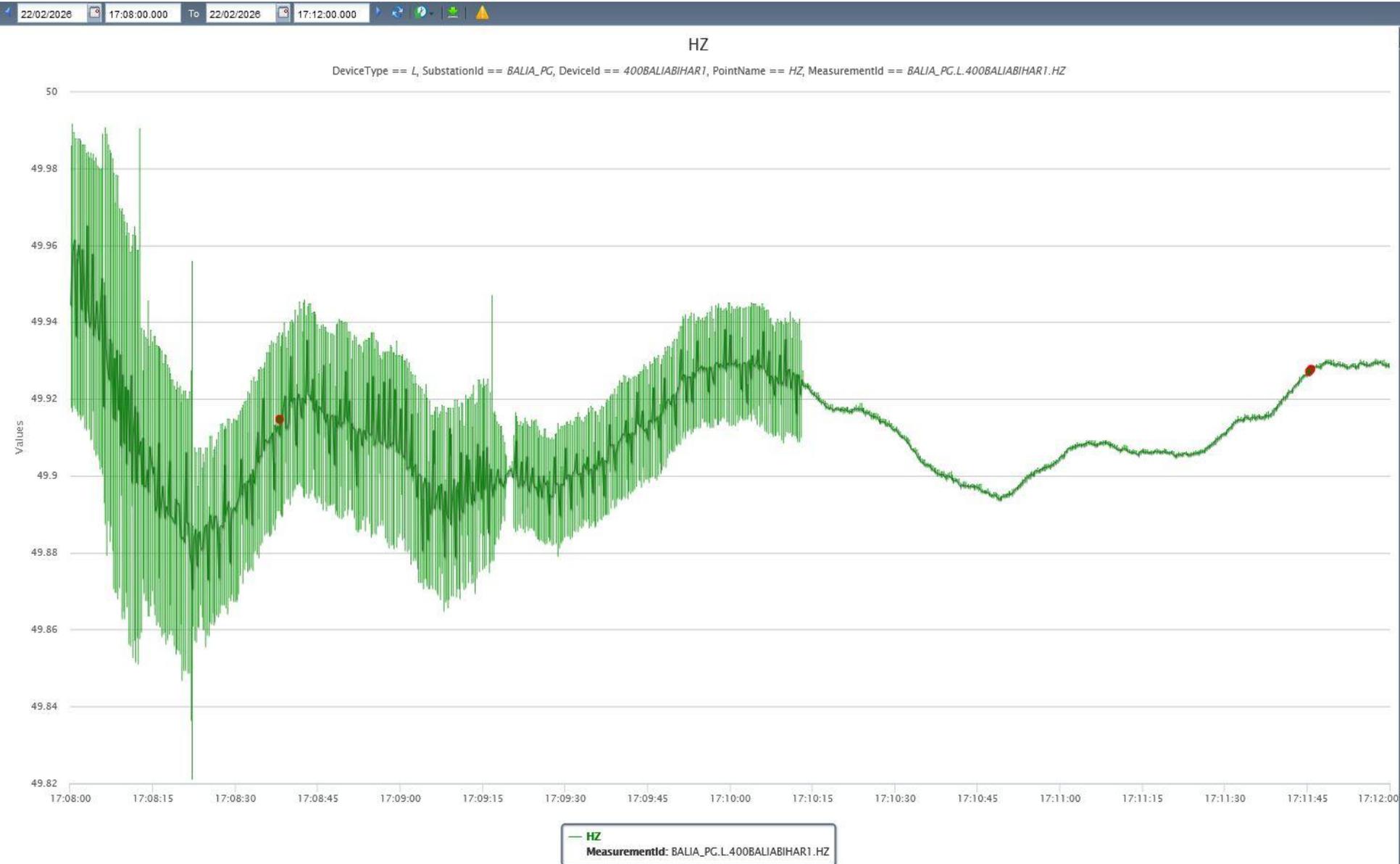
PMU Plot of frequency at Bhiwadi(PG)

17:08hrs-17:10hrs/22-Feb-26



PMU Plot of frequency at Balia(PG)

17:08hrs-17:10hrs/22-Feb-26



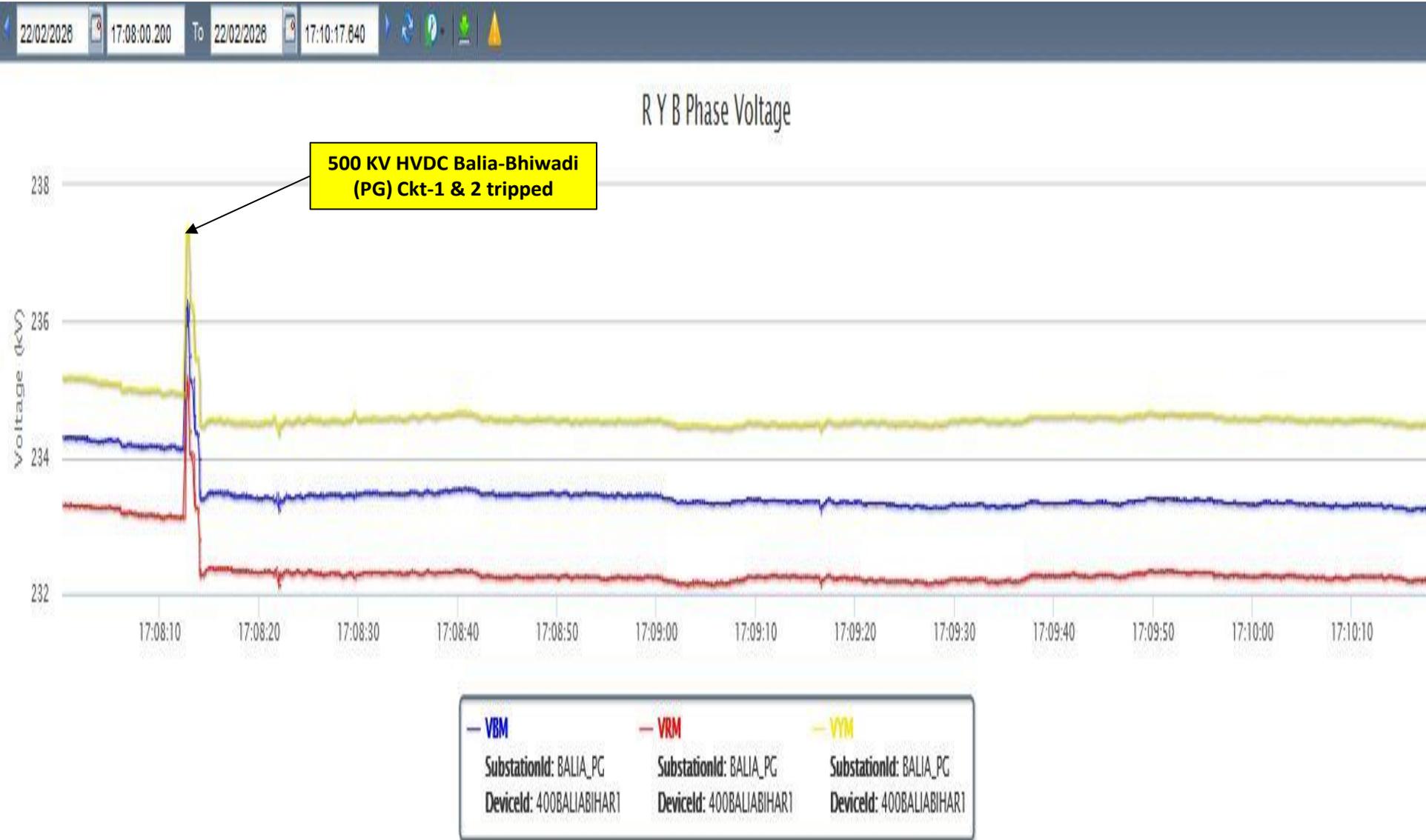
PMU Plot of Phase Voltage Magnitude at Bhiwadi(PG)

17:08hrs-17:10hrs/22-Feb-26



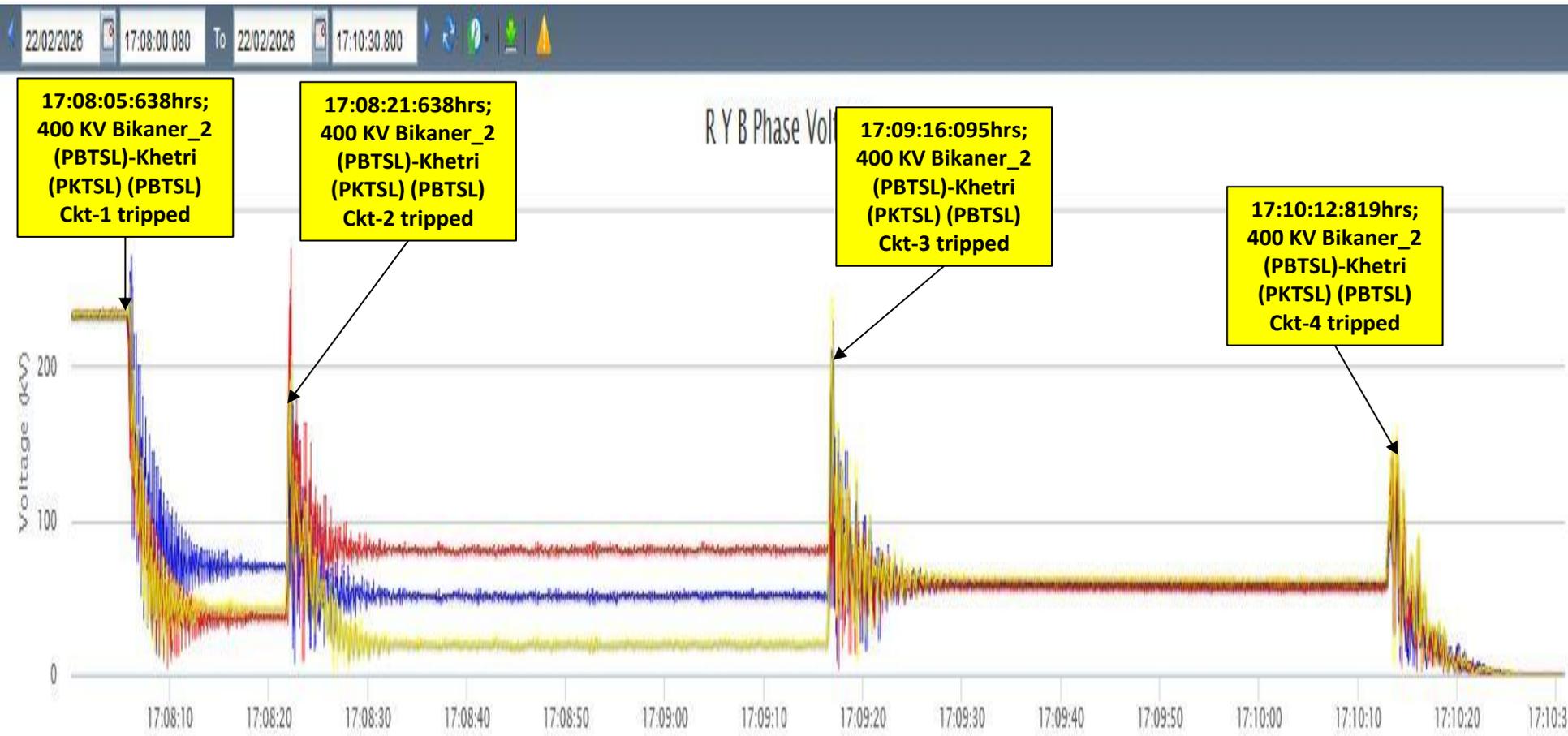
PMU Plot of Phase Voltage Magnitude at Balia(PG)

17:08hrs-17:10hrs/22-Feb-26



PMU Plot of Phase Voltage Magnitude at Bikaner2(PG)

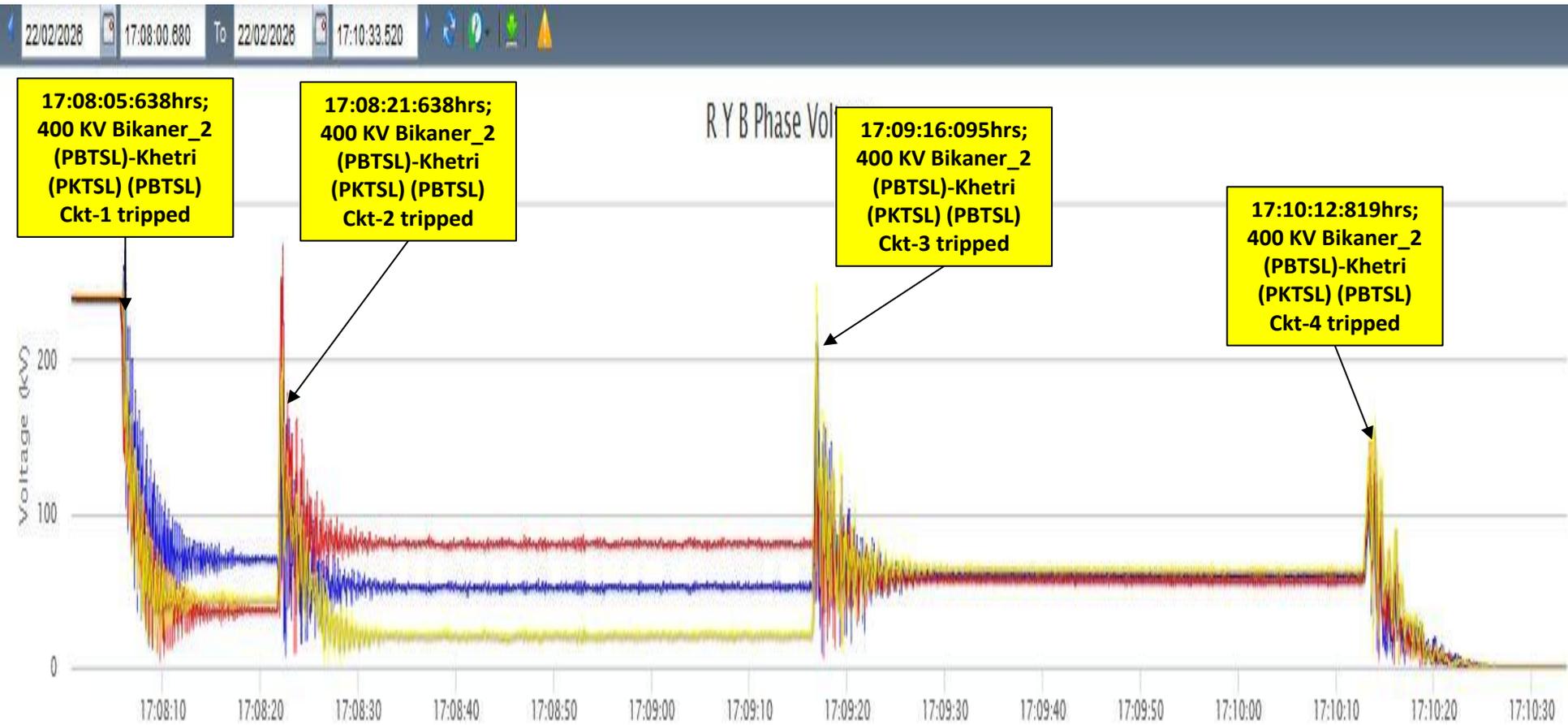
17:08hrs-17:10hrs/22-Feb-26



— VBM	— VRM	— VYM
SubstationId: BKNR2_PC	SubstationId: BKNR2_PC	SubstationId: BKNR2_PC
Deviceld: 400BKNR2KHTRI1	Deviceld: 400BKNR2KHTRI1	Deviceld: 400BKNR2KHTRI1

PMU Plot of Phase Voltage Magnitude at Khetri(PG)

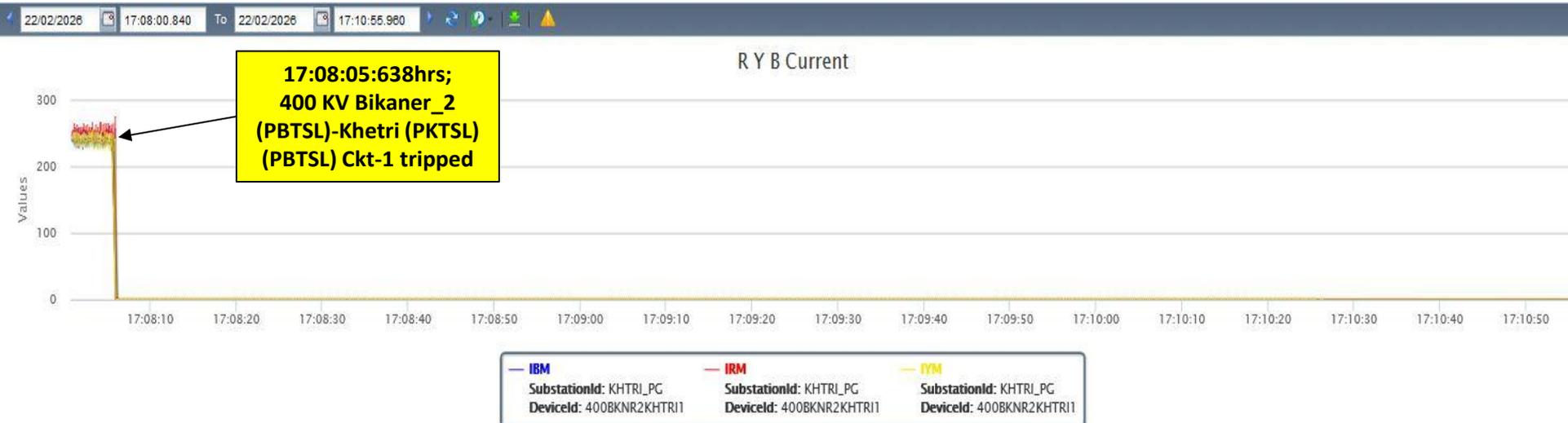
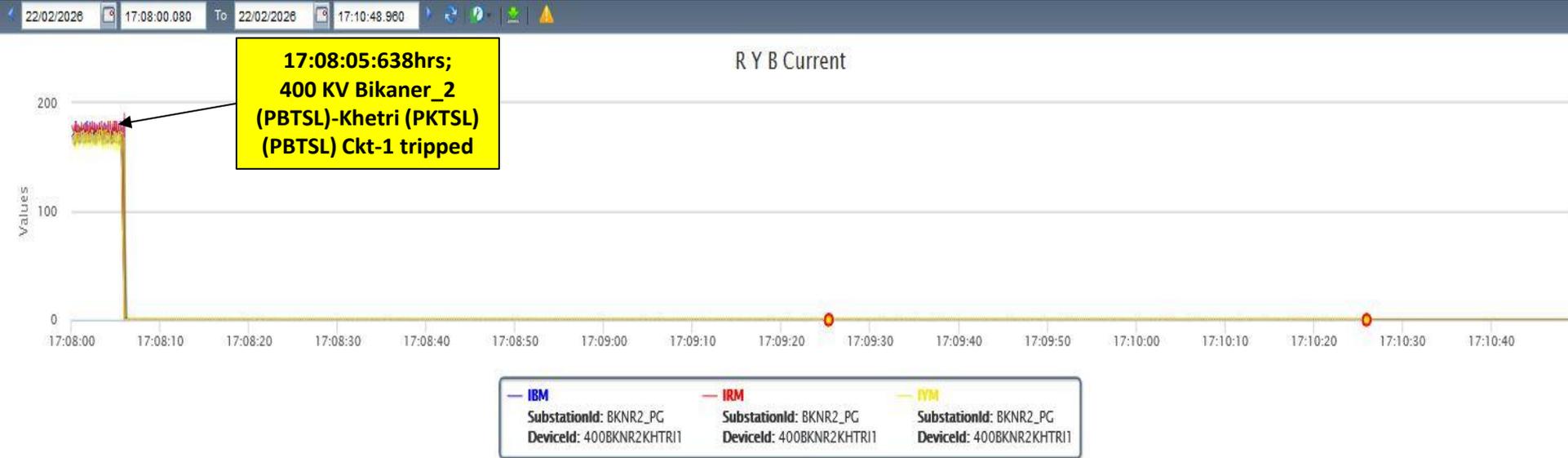
17:08hrs-17:10hrs/22-Feb-26



— VBM	— VRM	— VYM
SubstationId: KHTRI_PG	SubstationId: KHTRI_PG	SubstationId: KHTRI_PG
Deviceld: 400BKNR2KHTRI1	Deviceld: 400BKNR2KHTRI1	Deviceld: 400BKNR2KHTRI1

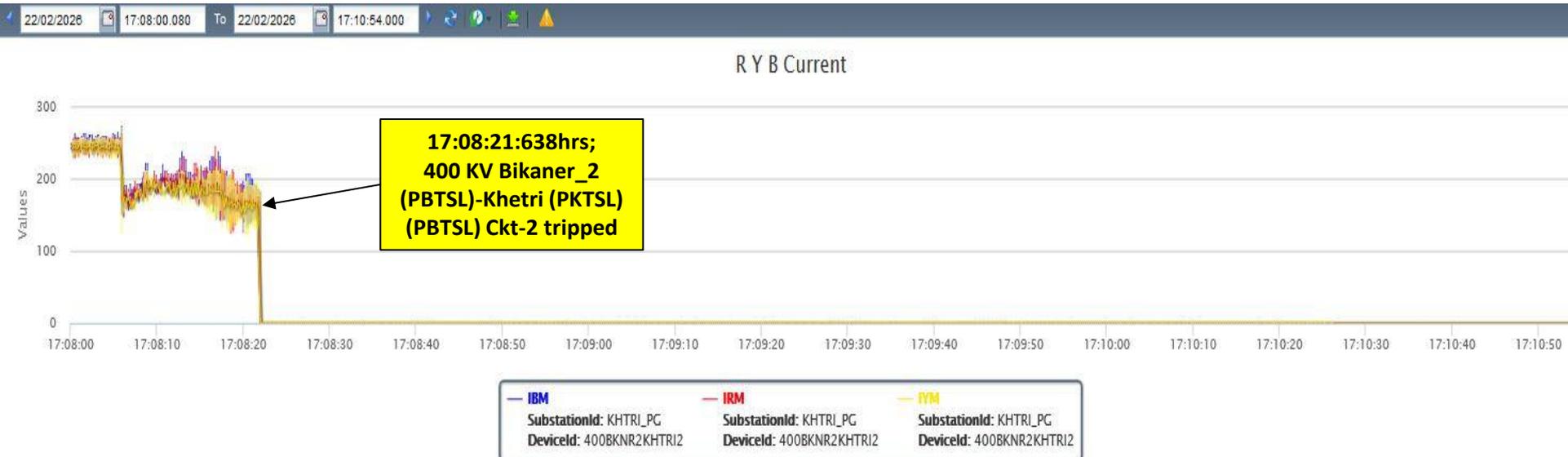
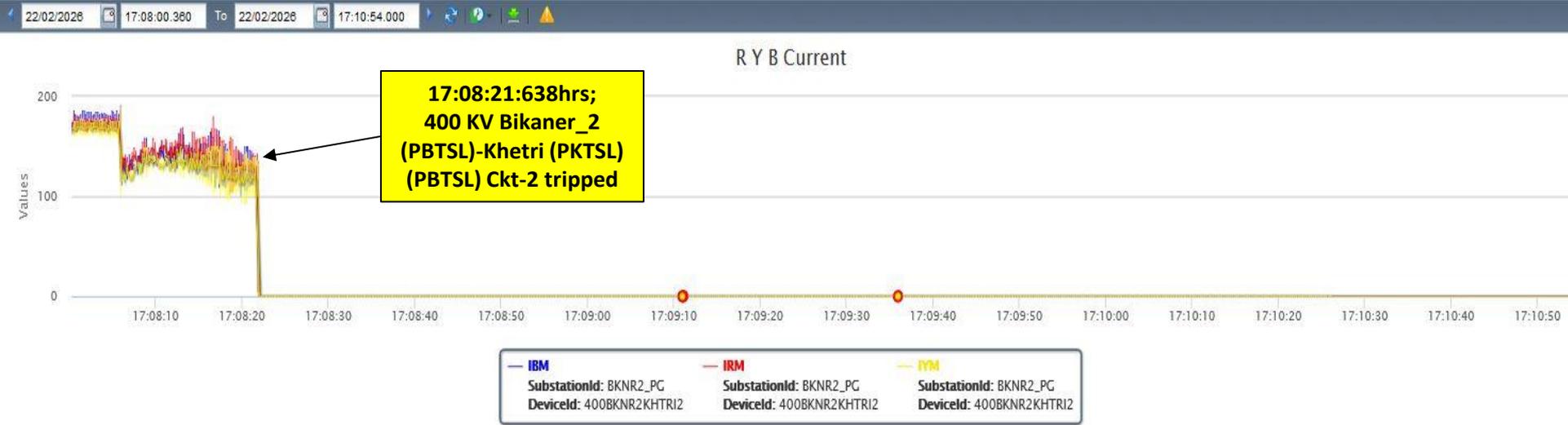
PMU Plot of Phase Current Magnitude of both ends 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1

17:08hrs-17:10hrs/22-Feb-26



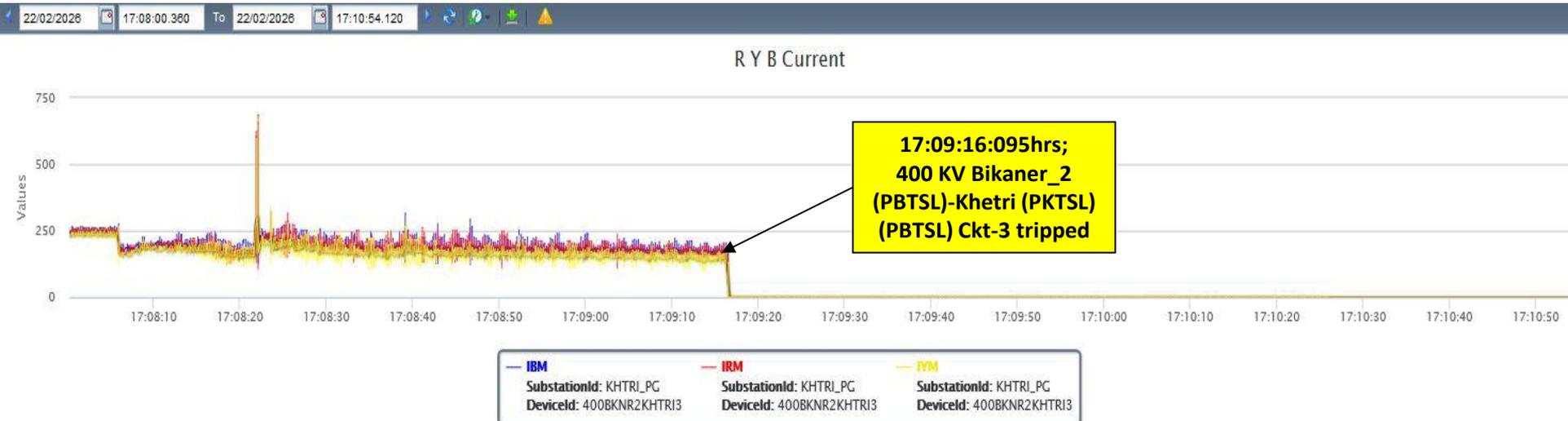
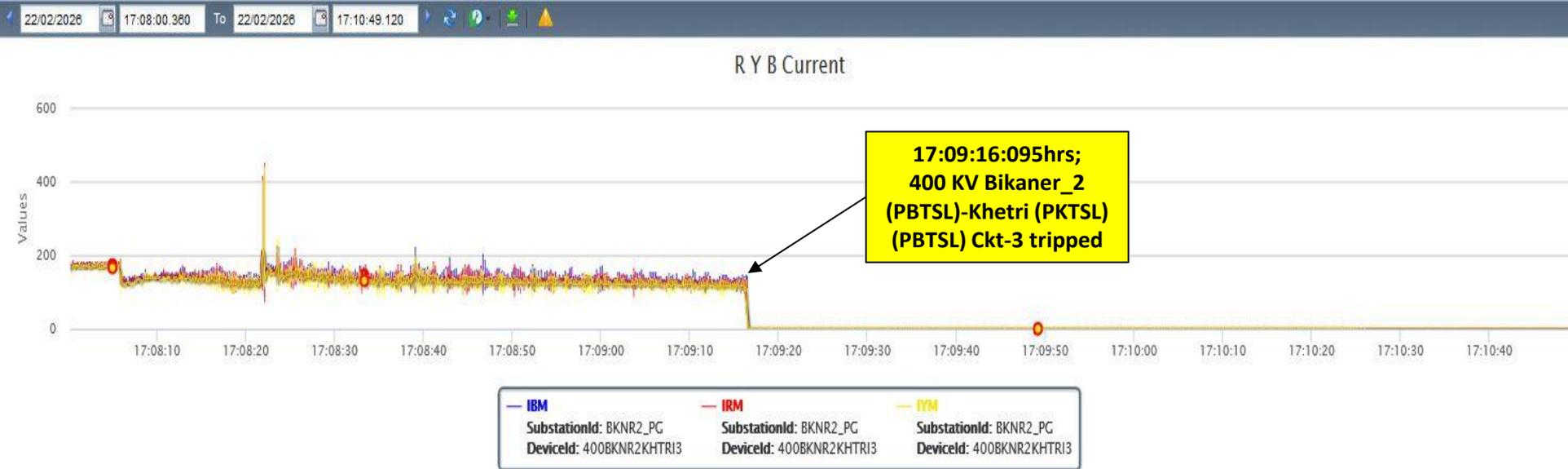
PMU Plot of Phase Current Magnitude of both ends 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2

17:08hrs-17:10hrs/22-Feb-26



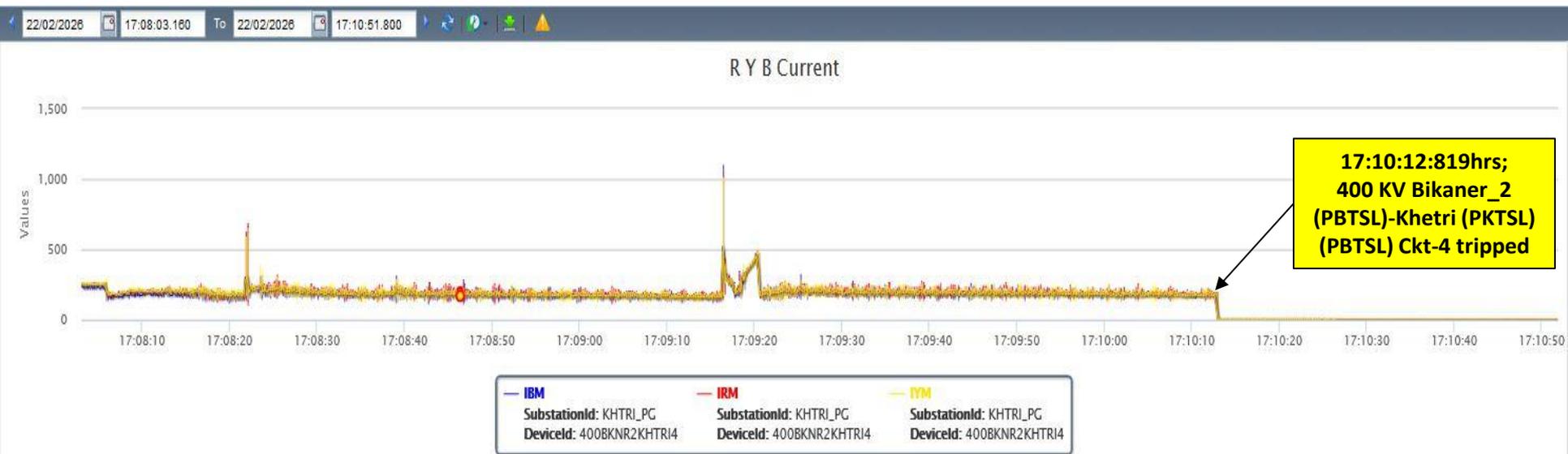
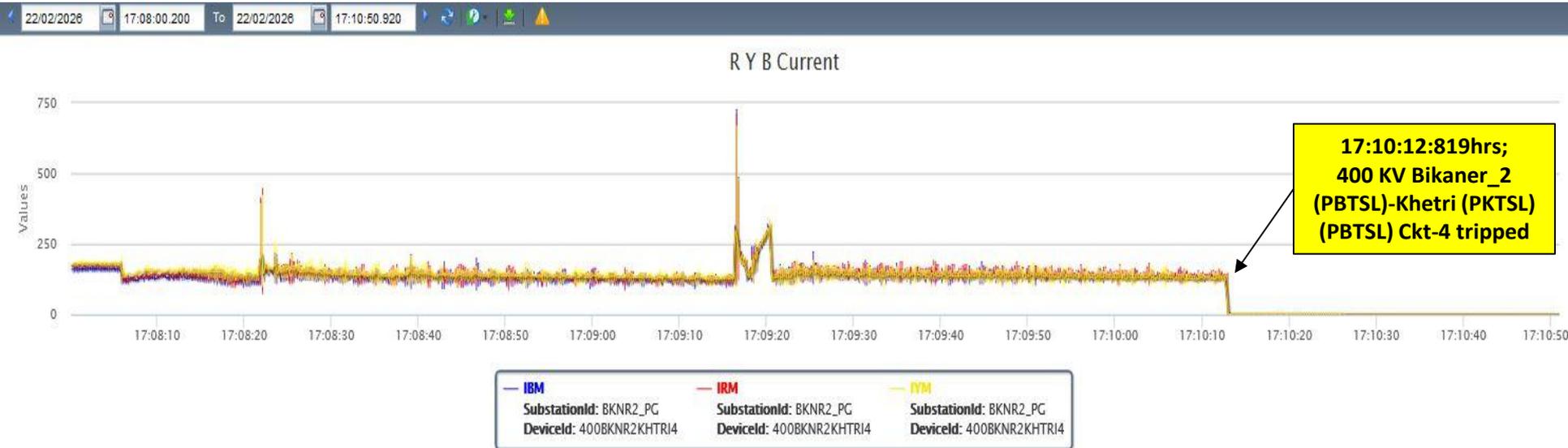
PMU Plot of Phase Current Magnitude of both ends 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-3

17:08hrs-17:10hrs/22-Feb-26



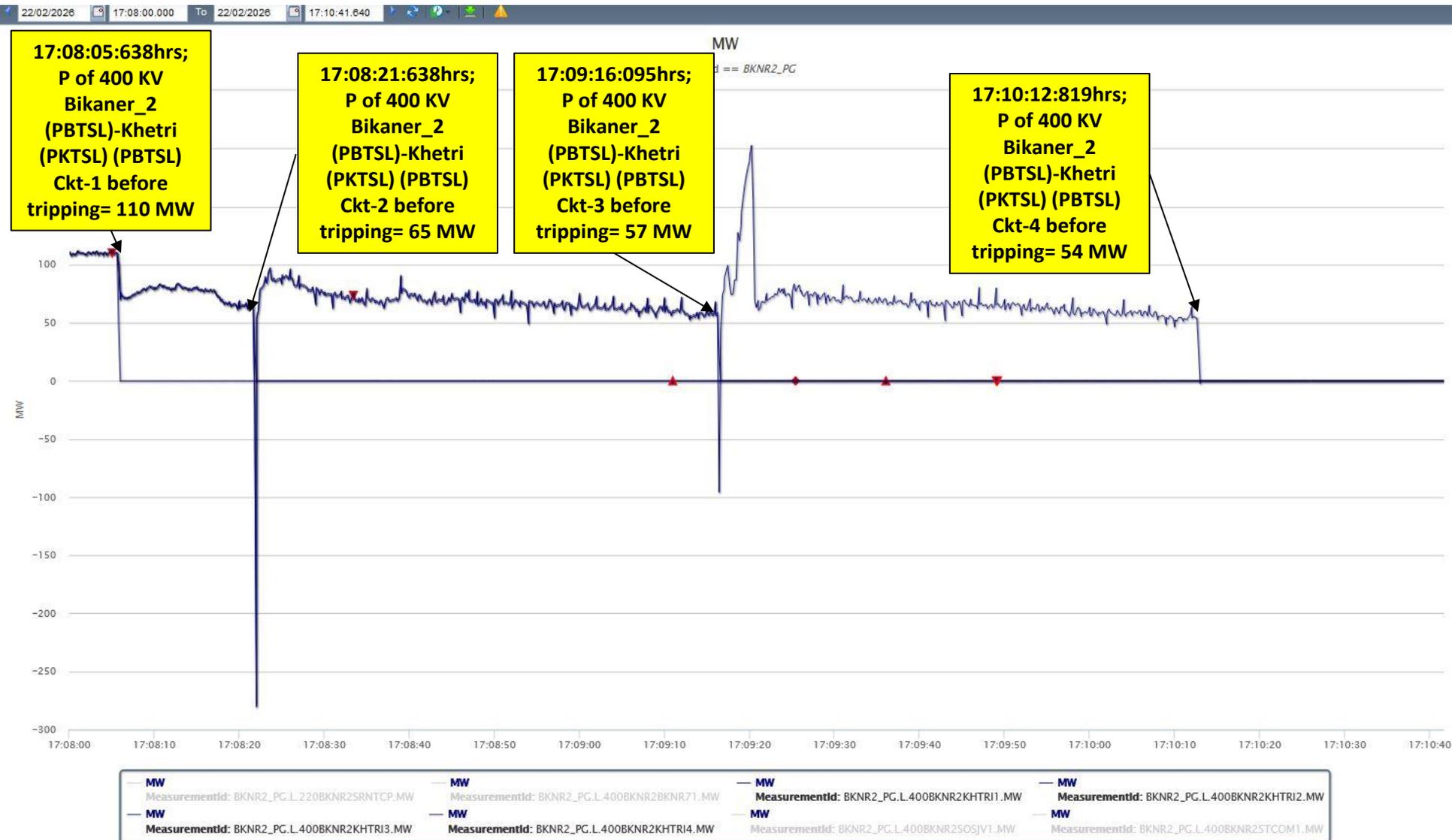
PMU Plot of Phase Current Magnitude of both ends 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-4

17:08hrs-17:10hrs/22-Feb-26

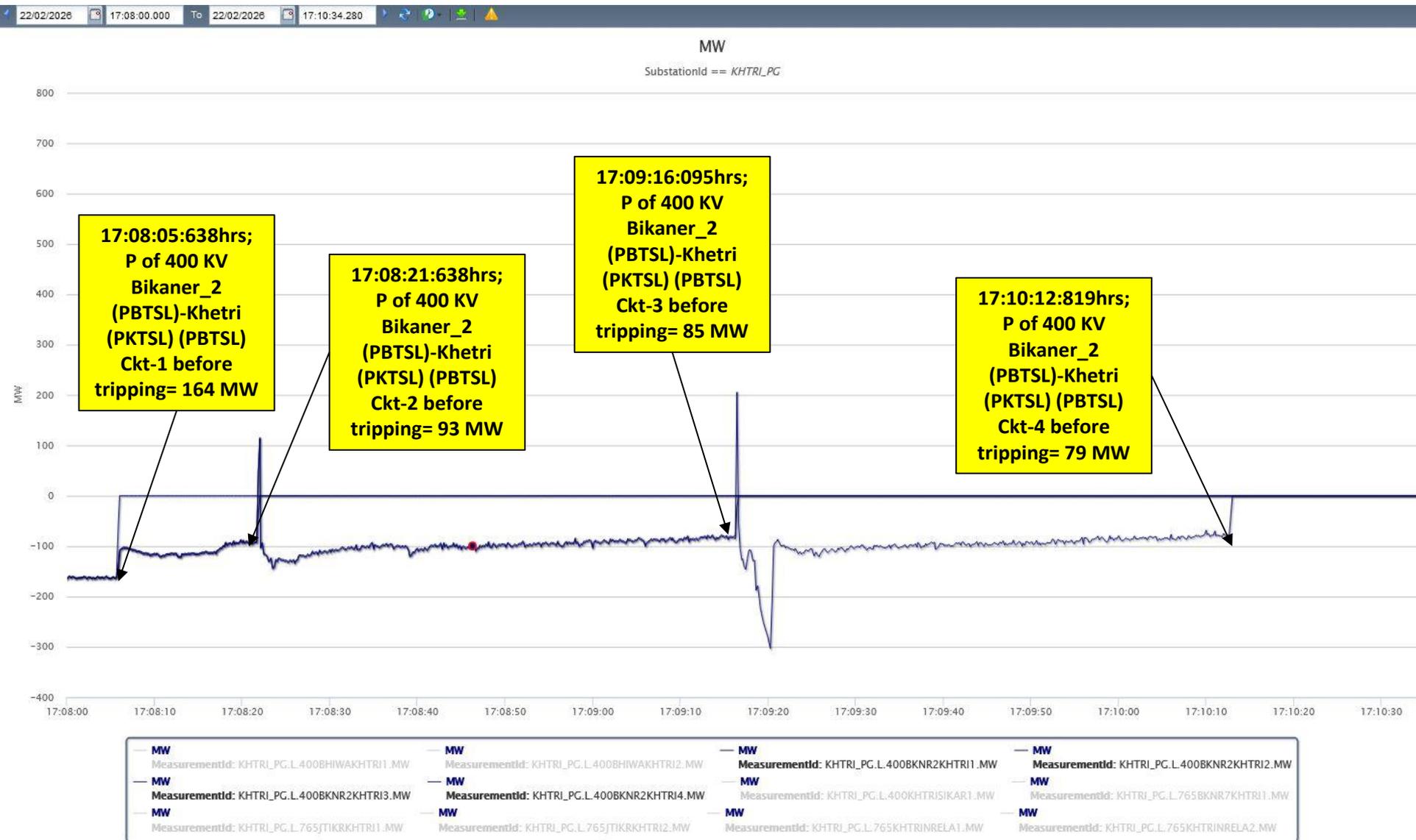


PMU Plot of Active Power flow at Bikaner2(PG) end of 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 , 2, 3 & 4

17:08hrs-17:10hrs/22-Feb-26



PMU Plot of Active Power flow at Khetri(PG) end of 400 KV Bikaner 2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 , 2, 3 & 4 17:08hrs-17:10hrs/22-Feb-26



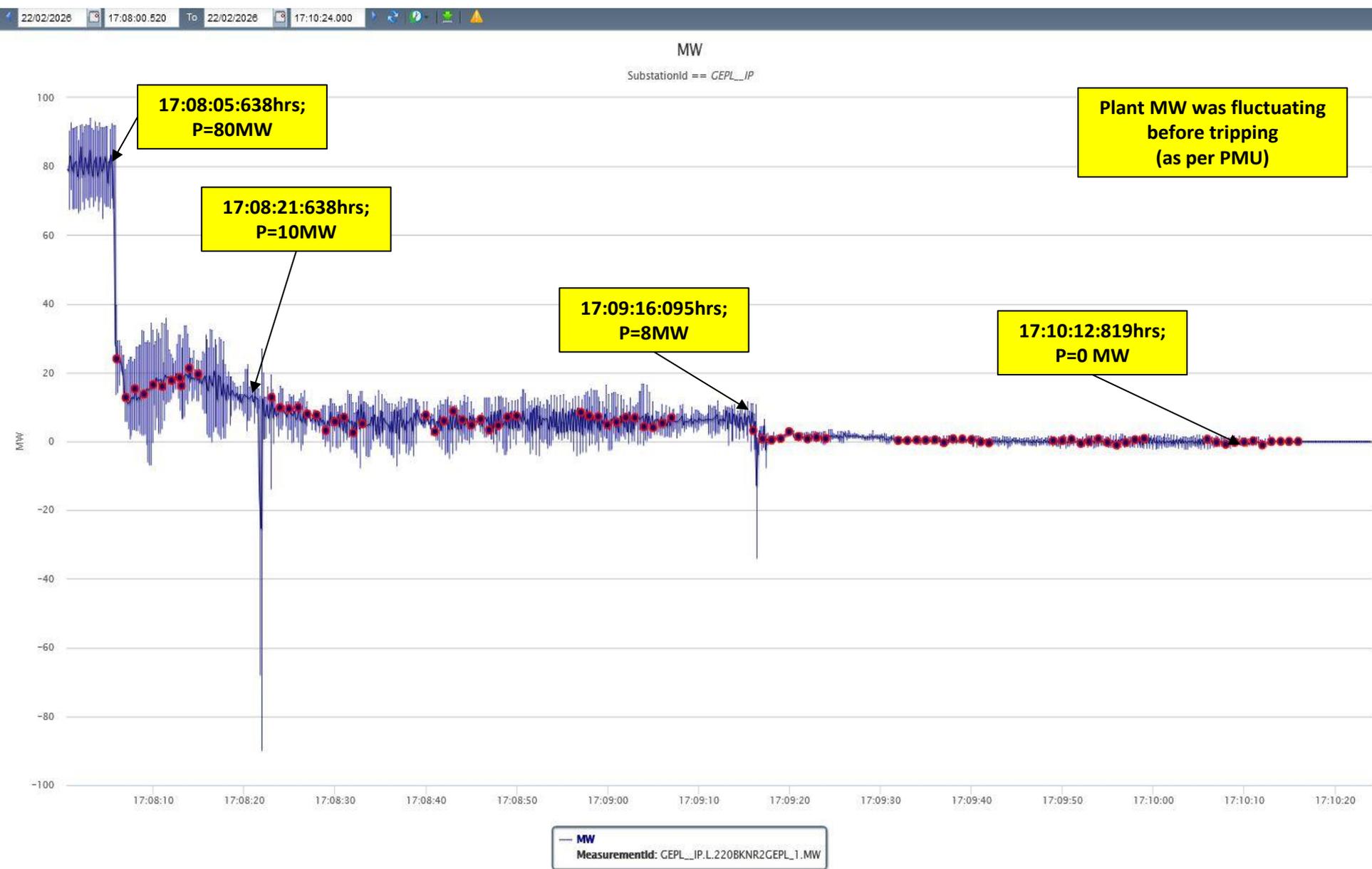
PMU Plot of Active Power at SGEL(IP)

17:08hrs-17:10hrs/22-Feb-26



PMU Plot of Active Power at GPEL(IP)

17:08hrs-17:10hrs/22-Feb-26



PMU Plot of Active Power at RDUPL(IP)

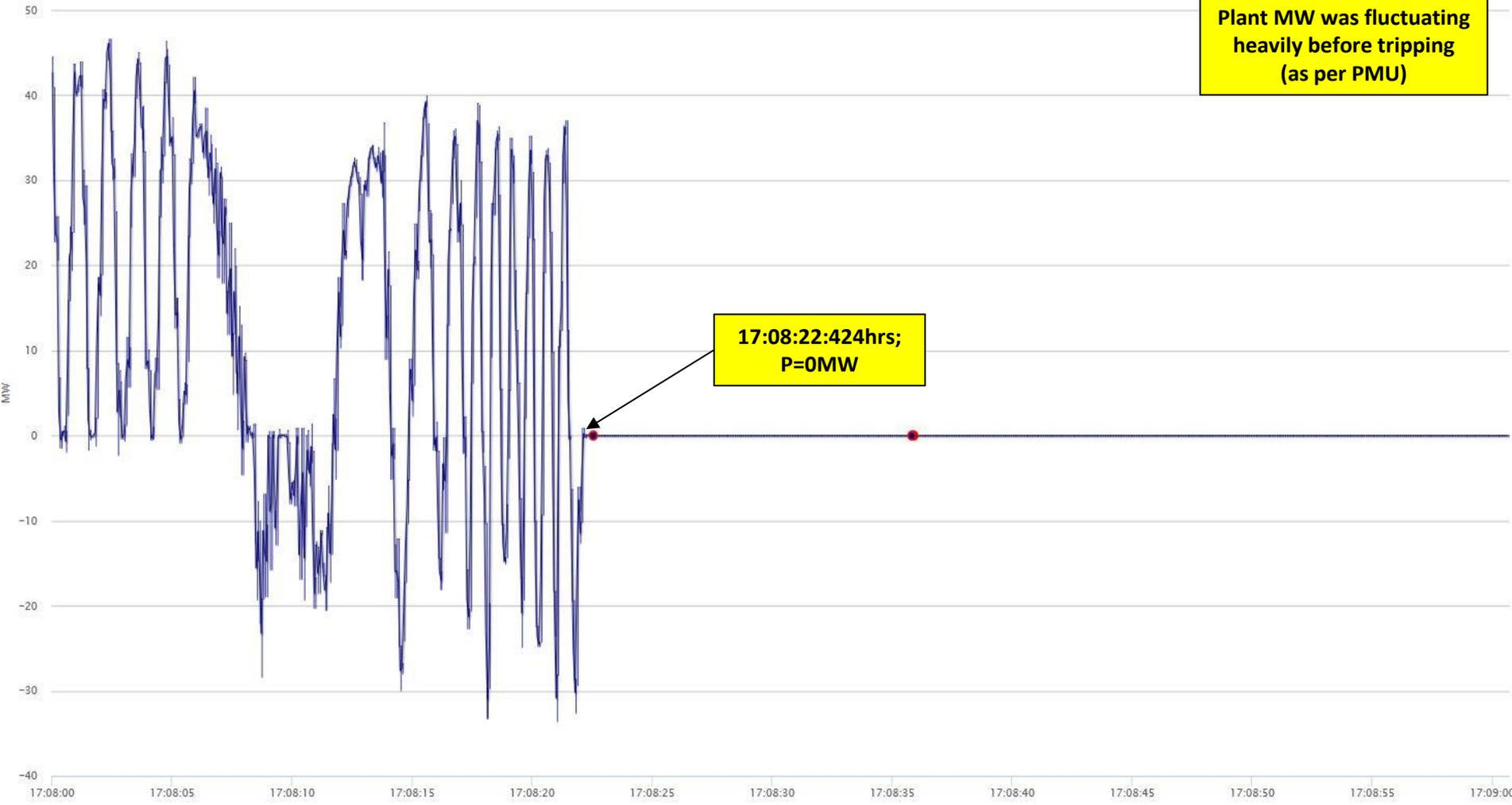
17:08hrs-17:10hrs/22-Feb-26

22/02/2026 17:08:00.000 To 22/02/2026 17:09:00.680

MW

SubstationId == RDUPL_IP

Plant MW was fluctuating heavily before tripping (as per PMU)



17:08:22:424hrs;
P=0MW

— MW
MeasurementId: RDUPL_IP.L.2208KNR2RDUPL1.MW

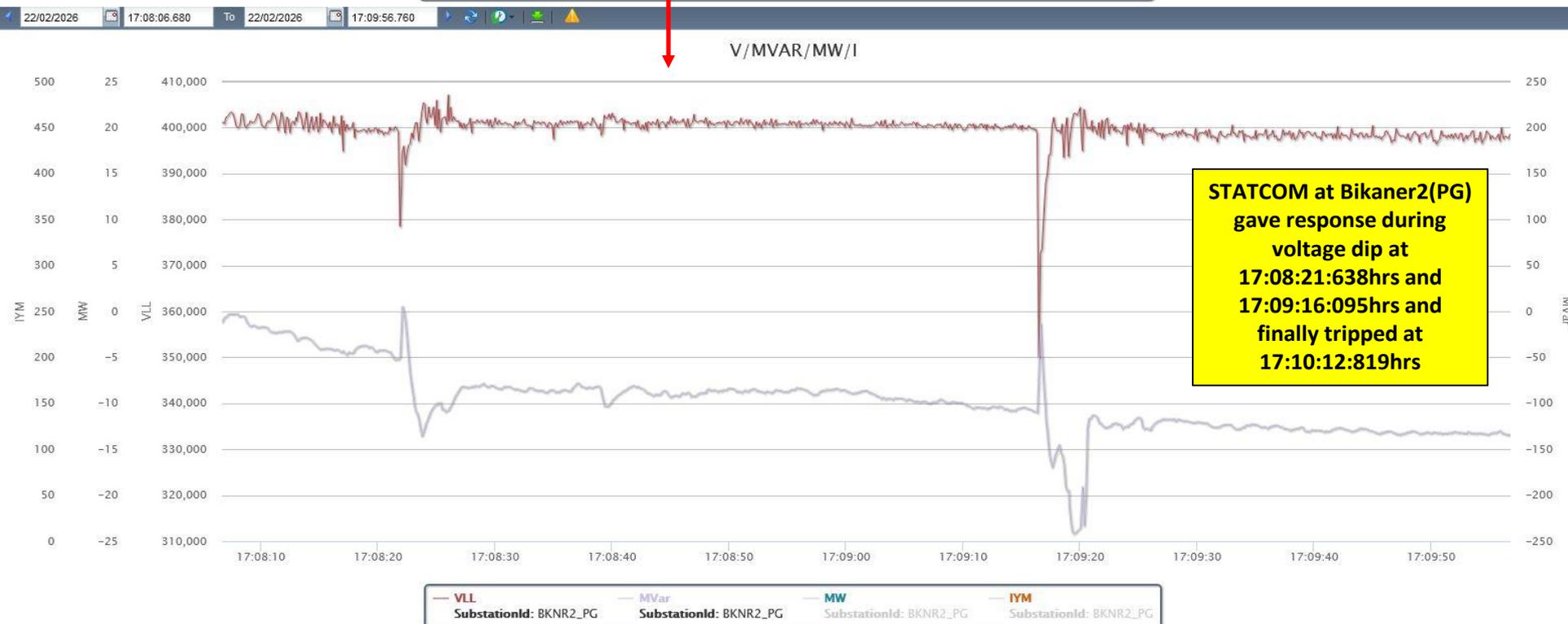
PMU Plot of Active Power at SRI4P(IP)

17:08hrs-17:10hrs/22-Feb-26



PMU Plot of Voltage vs Reactive Power of STATCOM at Bikaner2(PG)

17:08hrs-17:10hrs/22-Feb-26



SCADA SOE

Time	Station Name	Voltage (in kV)	Element Name	Element Type	Element Status	Remarks
17:07:16,675	BKNR2_PG	34.5	1MSC1	Circuit Breaker	Open	CB at 33kV side of MSC-1 at Bikaner2(PG) opened
17:08:05,865	BKNR2_PG	400	13KTRI01	Circuit Breaker	Open	Main CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 opened
17:08:05,870	KHTRI_PG	400	03BKNR21	Circuit Breaker	Open	Main CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 opened
17:08:05,873	KHTRI_PG	400	02TIE	Circuit Breaker	Open	Tie CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 opened
17:08:05,874	BKNR2_PG	400	14TIE	Circuit Breaker	Open	Tie CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-1 opened
17:08:21,871	BKNR2_PG	400	10KTRI02	Circuit Breaker	Open	Main CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2 opened
17:08:21,873	KHTRI_PG	400	06BKNR22	Circuit Breaker	Open	Main CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2 opened
17:08:21,875	BKNR2_PG	400	11TIE	Circuit Breaker	Open	Tie CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2 opened
17:08:21,876	KHTRI_PG	400	05TIE	Circuit Breaker	Open	Tie CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-2 opened
17:09:16,463	KHTRI_PG	400	09BKNR23	Circuit Breaker	Open	Main CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-3 opened
17:09:16,467	BKNR2_PG	400	4KTRI03	Circuit Breaker	Open	Main CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-3 opened
17:09:16,468	KHTRI_PG	400	08TIE	Circuit Breaker	Open	Tie CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-3 opened
17:10:12,910	BKNR2_PG	400	1KTRI04	Circuit Breaker	Open	Main CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-4 opened
17:10:12,913	KHTRI_PG	400	11TIE	Circuit Breaker	Open	Tie CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-4 opened
17:10:12,916	KHTRI_PG	400	12BKNR24	Circuit Breaker	Open	Main CB at Khetri (PKTSL) end of 400 KV Bikaner_2 (PBTSL)-Khetri (PKTSL) (PBTSL) Ckt-4 opened
17:10:13,065	SGEL_IP	400	03BKNR2	Circuit Breaker	Open	Main CB at SGEL(IP) end of 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt opened
17:10:13,066	SGEL_IP	400	02TIE	Circuit Breaker	Open	Tie CB at SGEL(IP) end of 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt opened
17:10:13,074	BKNR2_PG	400	16SOSJVN	Circuit Breaker	Open	Main CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt opened
17:10:13,080	BKNR2_PG	400	17TIE	Circuit Breaker	Open	Tie CB at Bikaner_2 (PBTSL) end of 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt opened

**Status of submission of FIR/DR/EL/Tripping Report
on NR Tripping Portal**

Time Period: 1st January 2026 - 31st January 2026

S. No.	Utility	Total No. of tripping	First Information Report (Not Received)		Disturbance Recorder (Not Received)	Disturbance Recorder (NA) as informed by utility	Disturbance Recorder (Not Received)	Event Logger (Not Received)	Event Logger (NA) as informed by utility	Event Logger (Not Received)	Tripping Report (Not Received)	Tripping Report (NA) as informed by utility	Tripping Report (Not Received)	Remark
			Value	%	Value	%	Value	%	Value	%	Value	%		
1	ACME SIKAR SOLAR PRIVATE LIMITED(ASSPL)	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
2	ACME SOLAR HOLDINGS LIMITED	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
3	ACME_HEERGARH	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
4	ADANI GREEN ENERGY TWENTY FOUR LIMITED	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
5	AHEJ3L	1	0	0	0	0	0	0	0	0	0	0	0	Details received
6	AMPIN ENERGY GREEN EIGHT PRIVATE LIMITED (AEG8PL)	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
7	EDEN (ERCPL)	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
8	KARINSAR SOLAR PLANT NHPC LTD(KSP_NHPC)	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
9	KHIDRAT RENEWABLE ENERGY PRIVATE LIMITED(KREPL)	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
10	RENEW	3	0	0	0	1	0	0	1	0	0	1	0	Details received
11	RENEW DINKAR URJA PRIVATE LIMITED (RDUPL)	2	1	50	0	1	0	0	1	0	1	0	50	DR, EL & Tripping report not submitted
12	RENEW SURYA AAYAN PRIVATE LIMITED	3	0	0	0	0	0	0	0	0	0	1	0	Details received
13	RENEW SURYA JYOTI PRIVATE LIMITED(RSJPL)	1	0	0	0	0	0	0	0	0	0	0	0	Details received
14	RENEW SURYA VIHAAN PRIVATE LIMITED	1	0	0	0	0	0	0	0	0	0	0	0	Details received
15	RSDCL	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
16	SJVN GREEN ENERGY LIMITED	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
Total in NR Region		30	20	67	19	2	68	19	2	68	20	2	71	

As per the IEGC provision under clause 37.2 (c), detailed tripping report along with DR & EL has to be furnished within 24 hrs of the occurrence of the event

**Status of submission of FIR/DR/EL/Tripping Report
on NR Tripping Portal**

Time Period: 1st February 2026 - 28th February 2026

S. No.	Utility	Total No. of tripping	First Information Report (Not Received)		Disturbance Recorder (Not Received)	Disturbance Recorder (NA) as informed by utility	Disturbance Recorder (Not Received)	Event Logger (Not Received)	Event Logger (NA) as informed by utility	Event Logger (Not Received)	Tripping Report (Not Received)	Tripping Report (NA) as informed by utility	Tripping Report (Not Received)	Remark
			Value	%	Value	%	Value	%	Value	%	Value	%		
1	ABC RENEWABLE_RJ01	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
2	ACME SIKAR SOLAR PRIVATE LIMITED(ASSPL)	1	1	100	1	0	100	1	0	100	1	0	100	
3	ACME_HEERGARH	1	1	100	1	0	100	1	0	100	1	0	100	
4	ADANI	1	1	100	1	0	100	1	0	100	1	0	100	
5	AHEJ3L	3	2	67	2	1	100	2	1	100	2	0	67	
6	AHEJ4L	1	0	0	0	0	0	1	0	100	0	0	0	Details received
7	ANTA-NT	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
8	APL	1	0	0	0	0	0	0	0	0	0	0	0	Details received
9	AREPRL	1	0	0	0	1	0	0	0	0	0	0	0	Details received
10	BANDERWALA_TPSL	1	0	0	0	1	0	0	1	0	0	1	0	Details received
11	GRIAN ENERGY PRIVATE LIMITED	1	1	100	1	0	100	1	0	100	1	0	100	Details received
12	JUNA RENEWABLE ENERGY PRIVATE LIMITED(JREPL)	1	1	100	1	0	100	1	0	100	1	0	100	
13	JUNIPER GREEN COSMIC PRIVATE LIMITED	2	1	50	1	0	50	1	1	100	1	0	50	
14	KHIDRAT RENEWABLE ENERGY PRIVATE LIMITED(KREPL)	2	1	50	2	0	100	2	0	100	2	0	100	
15	RENEW DINKAR URJA PRIVATE LIMITED (RDUPL)	1	1	100	1	0	100	1	0	100	1	0	100	
16	RSDCL	1	1	100	1	0	100	1	0	100	1	0	100	
17	SERENTICA RENEWABLES INDIA 4 PRIVATE LIMITED	1	1	100	1	0	100	1	0	100	1	0	100	
18	SJVN GREEN ENERGY LIMITED	3	3	100	3	0	100	3	0	100	3	0	100	
19	XL XERGI POWER PRIVATE LIMITED	2	2	100	2	0	100	2	0	100	2	0	100	
Total in NR Region		27	20	74	21	3	88	22	3	92	21	1	81	

As per the IEGC provision under clause 37.2 (c), detailed tripping report along with DR & EL has to be furnished within 24 hrs of the occurrence of the event