



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

**विषय: प्रचालन समन्वय उप-समिति की 243<sup>री</sup> बैठक की कार्यसूची ।**

**Subject: Agenda of the 243<sup>rd</sup> OCC meeting.**

प्रचालन समन्वय उप-समिति की 243<sup>री</sup> बैठक का वीडियो कॉन्फ्रेंसिंग के माध्यम से दिनांक **15.05.2026** को **10:30** बजे से किया जायेगा । उक्त बैठक की कार्यसूची उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट <https://nrpc.gov.in> पर उपलब्ध है ।

बैठक में सम्मिलित होने के लिए लिंक व पासवर्ड सभी सदस्यों को ई-मेल द्वारा प्रदान किया जाएगा।

कृपया बैठक में उपस्थित होने की सुविधा प्रदान करें।

The **243<sup>rd</sup>** meeting of the Operation Co-ordination sub-committee will be conducted through Video Conferencing on **15.05.2026** from **10:30 Hrs.** The agenda of this meeting has been uploaded on the NRPC web-site <https://nrpc.gov.in>.

The link and password for joining the meeting will be e-mailed to respective e-mail IDs in due course.

Kindly make it convenient to attend the meeting.

(डी. के. मीना)  
अधीक्षण अभियंता (प्रचालन)

**सेवा में : प्रचालन समन्वय उप समिति के सभी सदस्य।**

**To : All Members of OCC**

OCC Members for FY 2026-27			
S. No	OCC Member	Category	E-mail
1	NLDC	National Load Despatch Centre	<b>nomination awaited</b> ( <a href="mailto:mkagarwal@grid-india.in">mkagarwal@grid-india.in</a> )
2	NRLDC	Northern Regional Load Despatch Centre	<a href="mailto:ashokkr@grid-india.in">ashokkr@grid-india.in</a>
3	CTUIL	Central Transmission Utility	<a href="mailto:sandeepk@powergrid.in">sandeepk@powergrid.in</a>
4	PGCIL	Central Government owned Transmission Company	<a href="mailto:rtamc.nr1@powergrid.in">rtamc.nr1@powergrid.in</a> <a href="mailto:rtamcjammu@powergrid.in">rtamcjammu@powergrid.in</a> <a href="mailto:cpcc.nr3@powergrid.in">cpcc.nr3@powergrid.in</a>
5	NTPC	Central Generating Company	<a href="mailto:h rastogi@ntpc.co.in">h rastogi@ntpc.co.in</a>
6	BBMB		<a href="mailto:powerc@bbmb.nic.in">powerc@bbmb.nic.in</a>
7	THDC		<a href="mailto:bhagatsingh@thdc.co.in">bhagatsingh@thdc.co.in</a>
8	SJVN		<a href="mailto:sjvn.cso@sjvn.nic.in">sjvn.cso@sjvn.nic.in</a>
9	NHPC		<a href="mailto:surendramishra@nhpc.nic.in">surendramishra@nhpc.nic.in</a>
10	NPCIL		<a href="mailto:df@npcil.co.in">df@npcil.co.in</a>
11	Delhi SLDC	State Load Despatch Centre	<a href="mailto:gmsldc@delhisldc.org">gmsldc@delhisldc.org</a>
12	Haryana SLDC		<a href="mailto:sesldcop@hvpn.org.in">sesldcop@hvpn.org.in</a>
13	Rajasthan SLDC		<a href="mailto:ce.ld@rvpn.co.in">ce.ld@rvpn.co.in</a>
14	Uttar Pradesh SLDC		<a href="mailto:ceps@upsldc.org">ceps@upsldc.org</a>
15	Uttarakhand SLDC		<a href="mailto:se_slcd@ptcul.org">se_slcd@ptcul.org</a>
16	Punjab SLDC		<a href="mailto:ce-slcd@pstcl.org">ce-slcd@pstcl.org</a>
17	Himachal Pradesh SLDC		<a href="mailto:cehpsldc@gmail.com">cehpsldc@gmail.com</a>
18	DTL	State Transmission Utility	<a href="mailto:bl.gujar@dtl.gov.in">bl.gujar@dtl.gov.in</a>
19	HVPNL		<a href="mailto:cetshsr@hvpn.org.in">cetshsr@hvpn.org.in</a>
20	RRVNL		<a href="mailto:ce.ppm@rvpn.co.in">ce.ppm@rvpn.co.in</a>
21	UPPTCL		<a href="mailto:sanjay.singh1@upptcl.com">sanjay.singh1@upptcl.com</a>
22	PTCUL		<a href="mailto:ce_oandmk@ptcul.org">ce_oandmk@ptcul.org</a>
23	PSTCL		<a href="mailto:ce-tl@pstcl.org">ce-tl@pstcl.org</a>
24	HPPTCL		<a href="mailto:gmprojects.tcl@hpmail.in">gmprojects.tcl@hpmail.in</a>
25	IPGCL	State Generating Company	<a href="mailto:ncsharma@ipgcl-ppcl.nic.in">ncsharma@ipgcl-ppcl.nic.in</a>
26	HPGCL		<a href="mailto:seom2.rgtpp@hpgcl.org.in">seom2.rgtpp@hpgcl.org.in</a>
27	RRVUNL		<a href="mailto:ce.ppmcit@rrvun.com">ce.ppmcit@rrvun.com</a>
28	UPRVUNL		<a href="mailto:cgm.to@uprvunl.org">cgm.to@uprvunl.org</a>
29	UJVNL		<a href="mailto:gm_engg_ujvn@yahoo.co.in">gm_engg_ujvn@yahoo.co.in</a>
30	HPPCL		<a href="mailto:gm_generation@hppcl.in">gm_generation@hppcl.in</a>
31	PSPCL	State Generating Company & State owned Distribution Company	<a href="mailto:ce-ppr@pspcl.in">ce-ppr@pspcl.in</a>
32	UHBVN	State owned Distribution Company (alphabetical rotational basis/nominated by state govt.)	<b>nomination awaited</b> ( <a href="mailto:md@uhbvn.org.in">md@uhbvn.org.in</a> )
33	Jaipur Vidyut Vitran Nigam Ltd.		<b>nomination awaited</b> ( <a href="mailto:md@jvvn.org">md@jvvn.org</a> )
34	Dakshinanchal Vidyut Vitaran Nigam Ltd.		<b>nomination awaited</b> ( <a href="mailto:md@dvvn.org">md@dvvn.org</a> )
35	UPCL		<a href="mailto:cgmupcl@yahoo.com">cgmupcl@yahoo.com</a>
36	HPSEB		<a href="mailto:cesysophpsebl@gmail.com">cesysophpsebl@gmail.com</a>

OCC Members for FY 2026-27			
37	Adani Power Rajasthan Limited	IPP having more than 1000 MW installed capacity	<a href="mailto:Raguvendral.Dewra@adani.com">Raguvendral.Dewra@adani.com</a>
38	Apraava Energy Private Limited		<a href="mailto:niraj.gupta@apraava.com">niraj.gupta@apraava.com</a>
39	Aravali Power Company Pvt. Ltd		<a href="mailto:amit.hooda01@apcpl.co.in">amit.hooda01@apcpl.co.in</a>
40	JSW Hydro Energy Limited		<a href="mailto:roshan.zipta@jsw.in">roshan.zipta@jsw.in</a>
41	Lalitpur Power Generation Company Ltd		<a href="mailto:avinashkumar.ltp@lpgcl.com">avinashkumar.ltp@lpgcl.com</a>
42	MEIL Anpara Energy Limited		<a href="mailto:arun.tholia@meilanparapower.com">arun.tholia@meilanparapower.com</a>
43	MEJA Urja Nigam Ltd.		<a href="mailto:amitkumarmaithil@ntpc.co.in">amitkumarmaithil@ntpc.co.in</a>
44	Nabha Power Limited		<a href="mailto:Durvesh.Yadav@larsentoubro.com">Durvesh.Yadav@larsentoubro.com</a>
45	Neyveli Uttar Pradesh Power Limited (NUPPL) Ghatampur		<a href="mailto:s.ravikumar@nlcindia.in">s.ravikumar@nlcindia.in</a>
46	Prayagraj Power Generation Co. Ltd.		<a href="mailto:anurag.shukla@tatapower.com">anurag.shukla@tatapower.com</a>
47	Rosa Power Supply Company Ltd	<a href="mailto:jeetendra.nigam@relianceada.com">jeetendra.nigam@relianceada.com</a>	
48	Talwandi Sabo Power Ltd.		<a href="mailto:arun.kumar@vedanta.co.in">arun.kumar@vedanta.co.in</a>
49	XL Xergi Power Pvt. Ltd.	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)	<b>nomination awaited</b> ( <a href="mailto:vineet.singh@o2power.in">vineet.singh@o2power.in</a> )
50	UT of J&K	From each of the Union Territories in the region, a representative nominated by the administration of the Union Territory concerned out of the entities engaged in generation/ transmission/ distribution of electricity in the Union Territory.	<a href="mailto:sojppdd@gmail.com">sojppdd@gmail.com</a>
51	UT of Ladakh		<a href="mailto:cepdladakh@gmail.com">cepdladakh@gmail.com</a>
52	UT of Chandigarh		<a href="mailto:seelo-chd@nic.in">seelo-chd@nic.in</a>
53	NVVN	Nodal Agency appointed by the Government of India for coordinating cross-border power transactions	<b>nomination awaited</b> ( <a href="mailto:ceonvvn@ntpc.co.in">ceonvvn@ntpc.co.in</a> )
54	BRPL	Private Distribution Company in region (alphabetical rotational basis)	( <a href="mailto:murthi.thandavarana@relianceada.com">murthi.thandavarana@relianceada.com</a> )
55	NRSS-XXIX Transmission Ltd	Private transmission licensee (nominated by central govt.)	( <a href="mailto:lokendra.ranawat@indigrd.com">lokendra.ranawat@indigrd.com</a> )
56	Shree Cement Limited	Electricity Trader	( <a href="mailto:amarjit.singh@shreecement.com">amarjit.singh@shreecement.com</a> )

OCC Members for FY 2026-27			
		(nominated by central govt.)	<a href="#">om)</a>
57	Adani Green Energy Limited	RE Generating Company having more than 1000 MW installed capacity	nomination awaited <a href="mailto:sanjay.bhatt@adani.com">sanjay.bhatt@adani.com</a>
58	Avaada Energy Private Limited		nomination awaited <a href="mailto:kishor.nair@avaada.com">kishor.nair@avaada.com</a>
59	Azure Power India Pvt. Limited		nomination awaited <a href="mailto:sunil.gupta@azurepower.com">sunil.gupta@azurepower.com</a>
60	NTPC Green Energy Limited		nomination awaited <a href="mailto:ceongel@ntpc.co.in">ceongel@ntpc.co.in</a>
61	ReNew Power Private Limited		nomination awaited <a href="mailto:sumant@renew.com">sumant@renew.com</a>
62	SJVN Green Energy		nomination awaited <a href="mailto:ceo.sgcl@sjvn.nic.in">ceo.sgcl@sjvn.nic.in</a>

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**खण्ड-क: उ.क्षे.वि.स.****Part-A: NRPC****A.1. Confirmation of Minutes**

242<sup>nd</sup> OCC meeting was held on 13.04.2026. Minutes of the meeting were issued vide letter dt. 06.05.2026. No comments received till date.

**Decision required from Forum:**

*Forum may approve the minutes of 242<sup>nd</sup> OCC meeting.*

**A.2. Status of action taken on decisions of 242<sup>nd</sup> OCC meeting of NRPC**

A.2.1. Status of action taken on decisions of 242<sup>nd</sup> OCC meeting is attached as **Annexure- A.I.**

**A.3. Review of Grid operations****A.3.1. Power Supply Position (Provisional) for April 2026**

Anticipated Power Supply Position v/s Actual Power Supply Position (Provisional) of Northern Region during the month of April-2026 is as under:

State / UT	Req. / Avl.	Energy (MU)			Peak (MW)		
		Anticipate d	Actua l	% variatio n	Anticipate d	Actual	% variatio n
CHANDIGARH	(Avl)	190	138	-27.2%	490	340	-30.6%
	(Req)	149	138	-7.4%	323	340	5.4%
DELHI	(Avl)	3450	3184	-7.7%	8290	7091	-14.5%
	(Req)	3300	3184	-3.5%	6375	7091	11.2%
HARYANA	(Avl)	6870	5292	-23.0%	14030	11018	-21.5%
	(Req)	5578	5314	-4.7%	10649	11018	3.5%
HIMACHAL PRADESH	(Avl)	891	921	3.4%	1550	1839	18.6%
	(Req)	1109	924	-16.7%	1900	1839	-3.2%
J&K and LADAKH	(Avl)	1840	1544	-16.1%	2880	2715	-5.7%
	(Req)	1755	1548	-11.8%	3119	2715	-13.0%
PUNJAB	(Avl)	5420	5238	-3.4%	13100	11863	-9.4%
	(Req)	5730	5347	-6.7%	11695	11863	1.4%
RAJASTHAN	(Avl)	10880	7883	-27.5%	22790	14825	-34.9%
	(Req)	9437	7883	-16.5%	16922	14825	-12.4%
UTTAR PRADESH	(Avl)	16950	13755	-18.8%	31050	29475	-5.1%
	(Req)	13424	13758	2.5%	27846	29932	7.5%
UTTARAKHAND	(Avl)	1260	1313	4.2%	2470	2536	2.7%
	(Req)	1442	1341	-7.0%	2629	2691	2.4%
NORTHERN REGION	(Avl)	47751	39268	-17.8%	88900	76600	-13.8%
	(Req)	41925	39436	-5.9%	75900	76900	1.3%

As per above, negative / significant variation ( $\geq 5\%$ ) in Actual Power Supply Position(Provisional) vis-à-vis Anticipated figures is observed for the month of April-2026 in terms of Energy Requirement for Chandigarh, Delhi, Haryana, HP, UTs of J&K and Ladakh, Punjab, Rajasthan, and Uttarakhand and in terms of Peak Demand similar variation is noted for Chandigarh, Delhi, HP, UTs of J&K and Ladakh, Rajasthan, UP, . These states/UTs are requested to submit reason for such variations so that the same can be deliberated in the meeting.

All SLDCs are requested to furnish provisional and revised power supply position in prescribed formats on NRPC website portal by 2<sup>nd</sup> and 15<sup>th</sup> day of the month respectively for the compliance of Central Electricity Authority (Furnishing of Statistics, Returns and Information) Regulations, 2007.

#### A.4. Maintenance Programme of Generating Units and Transmission Lines

##### A.4.1. Maintenance Programme for Generating Units

The meeting on proposed maintenance programme for Generating Units for the month of June-2026 is scheduled on 14-May-2026 via Video Conferencing.

##### A.4.2. Outage Programme for Transmission Elements

The meeting on proposed outage programme of Transmission elements for the month of June-2026 is scheduled on 14-May-2026 via Video conferencing.

#### A.5. Planning of Grid Operation

##### A.5.1. Anticipated Power Supply Position in Northern Region for June 2026

The Anticipated Power Supply Position in Northern Region for June 2026 is as under:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
CHANDIGARH	Availability	240	510	No Revision submitted
	Requirement	231	485	
	Surplus / Shortfall	9	25	
	% Surplus / Shortfall	4.1%	5.1%	
DELHI	Availability	5130	11320	No Revision submitted
	Requirement	4656	9000	
	Surplus / Shortfall	474	2320	
	% Surplus / Shortfall	10.2%	25.8%	
HARYANA	Availability	7950	16430	No Revision submitted
	Requirement	7842	14910	
	Surplus / Shortfall	108	1520	
	% Surplus / Shortfall	1.4%	10.2%	
HIMACHAL PRADESH	Availability	1275	2131	11-May-26
	Requirement	1140	1943	
	Surplus / Shortfall	135	188	

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	% Surplus / Shortfall	11.8%	9.7%	
J&K and LADAKH	Availability	2430	4140	No Revision submitted
	Requirement	1837	3196	
	Surplus / Shortfall	593	944	
	% Surplus / Shortfall	32.3%	29.5%	
PUNJAB	Availability	8010	16720	No Revision submitted
	Requirement	9816	17578	
	Surplus / Shortfall	-1806	-858	
	% Surplus / Shortfall	-18.4%	-4.9%	
RAJASTHAN	Availability	10690	22320	No Revision submitted
	Requirement	9926	19434.45	
	Surplus / Shortfall	764	2886	
	% Surplus / Shortfall	7.7%	14.8%	
UTTAR PRADESH	Availability	17450	33640	No Revision submitted
	Requirement	17500	33000	
	Surplus / Shortfall	-50	640	
	% Surplus / Shortfall	-0.3%	1.9%	
UTTARAKHAND	Availability	1560	2800	8-May-26
	Requirement	1575	2850	
	Surplus / Shortfall	-15	-50	
	% Surplus / Shortfall	-1.0%	-1.8%	
NORTHERN REGION	Availability	55150	103200	
	Requirement	54823	98600	
	Surplus / Shortfall	326.9	4600	
	% Surplus / Shortfall	0.6%	4.7%	

SLDCs are requested to update the anticipated power supply position of their respective state / UT for the month of June-2026 and submit the measures proposed to be taken to bridge the gap between demand & availability, as well to dispose-off the surplus, if any, in the prescribed format.

#### A.6. Follow-up of issues from previous OCC Meetings- Status update.

The updated status of agenda items is enclosed at **Annexure-A.II**.

***All utilities are requested to update the status.***

#### A.7. NR Islanding scheme

Latest status of Islanding Scheme of NR is attached as **Annexure-A.III**.

***Members may kindly deliberate.***

#### A.8. Coal Supply Position of Thermal Plants in Northern Region

A.8.1 In 186<sup>th</sup> OCC meeting, it was agreed that coal stock position of generating stations in northern region may be reviewed in the OCC meetings on the monthly basis.

A.8.2 Accordingly, coal stock position of generating stations in northern region during current month (till 10<sup>th</sup> May 2026) is as follows:

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Req. (Days)	Actual Stock (Days)
ANPARA C TPS	1200	0.83	16	9.8
ANPARA TPS	2630	0.82	16	22.6
BARKHERA TPS	90	0.00	24	52.4
DADRI (NCTPP)	1820	0.42	24	25.1
GH TPS (LEH.MOH.)	920	0.89	24	20.8
GOINDWAL SAHIB TPP	540	0.69	24	21.9
HARDUAGANJ TPS	1265	0.40	24	44.4
INDIRA GANDHI STPP	1500	0.46	24	47.2
KAWAI TPS	1320	0.70	24	25.0
KHAMBARKHERA TPS	90	0.00	24	49.8
KOTA TPS	1240	0.48	24	27.9
KUNDARKI TPS	90	0.00	24	43.9
LALITPUR TPS	1980	0.71	24	21.0
MAHATMA GANDHI TPS	1320	0.72	24	31.2
MAQSOODPUR TPS	90	0.00	24	55.8
MEJA STPP	1320	0.70	24	22.0
OBRA TPS	1094	0.36	24	12.9
PANIPAT TPS	710	0.54	24	41.5
PARICHHA TPS	1140	0.64	24	17.3
PRAYAGRAJ TPP	1980	0.77	24	28.4
RAJIV GANDHI TPS	1200	0.68	24	36.4
RAJPURA TPP	1400	0.90	24	24.5
RIHAND STPS	3000	0.87	16	23.3
ROPAR TPS	840	0.62	24	33.4
ROSA TPP Ph-I	1200	0.68	24	30.4
SINGRAULI STPS	2000	0.82	16	14.6
SURATGARH TPS	1500	0.27	24	27.8
TALWANDI SABO TPP	1980	0.72	24	22.8
TANDA TPS	1760	0.55	24	32.1
UNCHAHR TPS	1550	0.72	24	27.5
UTRAULA TPS	90	0.00	24	42.5

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Req'd. (Days)	Actual Stock (Days)
YAMUNA NAGAR TPS	600	0.60	24	26.9
CHHABRA-I PH-1 TPP	500	0.38	24	28.5
KALISINDH TPS	1200	0.36	24	23.1
SURATGARH STPS	1320	0.47	24	31.3
CHHABRA-I PH-2 TPP	500	0.79	24	21.6
CHHABRA-II TPP	1320	0.65	24	28.6
JAWAHARPUR STPP	660	0.06	24	27.9

## A.9. Periodic testing of generators and FACTS/HVDC Devices (Agenda by NRPC Sectt.)

- A.9.1. 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.9.2. 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.9.3. 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.”

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.9.4. In view of the above Generators and HVDC/FACT owners are requested to furnish Testing schedule for 2026-27 in the format attached as **Annexure-A.IV.a** to [seo-nrpc@nic.in](mailto:seo-nrpc@nic.in) .

A.9.5. List of Generating station from which information is received is attached as **Annexure-A.IV.b**.

A.9.6. List of Generating station from which information is not received is attached as **Annexure-A.IV.c**.

### **Generating Utilities to update status.**

### **A.10. Monthly Review of LGBR for the next 11 months (Availability & Requirement)**

### (Agenda by NRPC Secretariat)

A.10.1. In 236<sup>th</sup> OCC meeting matter regarding monthly Review of LGBR for the next 11 months (Availability & Requirement) was discussed and it was agreed that NR States/UTs shall submit the data for the monthly Review of LGBR for the next 11 months including the break-up of sources through which demand is proposed to be met, such as ISGS, internal generation, bilateral arrangements, DAM/RTM transactions, or other contracts, shall also be provided.

A.10.2. In 237<sup>th</sup> OCC meeting, OCC forum requested NR States/UT's to submit the data for monthly Review of LGBR for the next 11 months in the google sheet to be shared by NRPC Secretariat.

A.10.3. Accordingly, NR States/UTs are requested to update the data for the monthly Review of LGBR for the next 11 months (Jun'26 to Apr'27) in the google sheet. Link to access the google sheet is mentioned below:

<https://docs.google.com/spreadsheets/d/1LmYwSHcFCaRAniwHUIpoiWFwaFCmKnQjIPqFDvWYy1k/edit?usp=sharing>

**SLDC's to update status.**

### A.11. Registration of entities with demand/capacity $\geq 0.5$ MW on Captive Power Portal for Monthly Data Reporting under Format-21 (Agenda by RPSO (North))

A.11.1 In compliance with Format-21 of the Central Electricity Authority (Furnishing of Statistics, Returns and Information) Regulations, 2007 (amended on 17.03.2022), CEA is collecting annual generation/consumption data from CPPs/Industries/Entities having electricity demand of 0.5 MW or above.

A.11.2 Now, there is a requirement for Monthly data from the CPPs to improve visibility of captive generation and ensure accurate assessment of total electricity generation and consumption of the country. Central Electricity Authority (CEA) has recently developed a Captive Power Portal for the collection of monthly data under Format-21 from all concerned entities having electricity demand/CPP capacity of 0.5 MW & above.

A.11.3 Member (Planning), CEA has directed all CPPs/entities with demand/capacity  $\geq 0.5$  MW to register on the portal and submit monthly data starting from April, 2025 onwards.

A.11.4 The portal is accessible via the CEA website (Captive Power Portal tab) or directly at <https://intranet.cea.gov.in/captiveNew/>.

***In view of the above SLDCs/STUs are requested to take up with CPPs to ensure timely registration and regular submission of CPP data through the CEA portal.***

### A.12. Analysis of Partial Outages of Thermal Power Plants (Agenda by NRPC Secretariat)

A.12.1 A meeting was taken by Member (GO&D), CEA on 28<sup>th</sup> Jan, 2026 to discuss the partial outages of thermal power plants and its related issues.

- A.12.2 In the said meeting, RPC's were directed to monthly review in the OCC meeting the station-wise major incidences of partial outages in last month and seek remedial measures from the concerned generating stations.
- A.12.3 Details of generating stations in NR that had reported incidences of partial outage in April'26 is attached as **Annexure-A.V**.
- A.12.4 Generating Utilities as per above mentioned list to submit reasons for partial outages of thermal power plants and the remedial measures taken by utilities to mitigate the partial outages.

***Generating Utilities to update status.***

**A.13. Advisory regarding preparedness measures for ensuring reliable power supply and grid stability during summer 2026 (Agenda by CEA)**

- A.13.1. In view of the heat risks anticipated during the ongoing summer season certain priority actions have been identified by the National Disaster Management Authority (NDMA).

Accordingly, it is advised to take necessary coordinated measures for ensuring uninterrupted power supply, grid security, and reliable operation of the power system during peak demand conditions. Special attention may be given to ensuring uninterrupted electricity supply to critical infrastructure and essential services such as hospitals, water supply systems, emergency services, cooling centres, transport systems, and other critical facilities during heatwave conditions.

- A.13.2. In this regard, the following measures may be closely monitored and implemented:

- i. Fuel Availability, inter-regional transfer capacities may be monitored to resolve any incipient issue.
- ii. Proper maintenance of equipment may be ensured to minimize forced outages and maintain maximum possible generation availability on bar. Emergency Restoration Systems (ERS) may be kept in readiness to address urgent restoration requirements, and all planned maintenance activities may be completed within the committed timelines to ensure reliable system operation during the summer period.
- iii. Closely monitor progress of under-construction thermal and hydro generating units targeted for commissioning by June 2026 and facilitate necessary coordination for timely availability.
- iv. Facilitate and expedite grid connectivity, operational clearances, and system readiness for renewable energy projects, particularly wind power plants and Battery Energy Storage Systems (BESS).
- v. Ensure optimized scheduling of hydro generation for conservation of reservoir storage and utilization during peak demand periods.
- vi. Maintain close coordination among NLDC, RLDCs, SLDCs, DISCOMs, and transmission utilities for advance demand forecasting, reserve management, inter-regional power transfer optimization, and contingency preparedness.

A.13.3. The evolving demand-supply situation may be closely monitored and all necessary operational measures to ensure reliable and secure grid operation during Summer 2026 may be taken.

***Members may kindly note.***

**A.14. Frequent tripping of  $\pm 800$  kV Champa-Kurukshetra inter-regional link (Agenda by NRPC Secretariat):**

A.14.1.  $\pm 800$  kV Champa-Kurukshetra HVDC (2 $\times$ 3000 MW Bipole) is the most critical inter-regional link to facilitate the transfer of power from the Western Region to the Northern Region. Hence, healthiness and availability of this link is very important for ensuring the secure and stable grid operation, as well as for meeting the projected northern regional demand without transmission constraints during the upcoming months.

A.14.2. Further, it is pertinent to mention that the 765 kV Agra-Gwalior D/C line was under forced outage, along with multiple tripping incidents at Agra at 06:28 hours on 30.04.2026. Thereafter, Pole-2 and Pole-4 of Champa-Kurukshetra HVDC link also tripped at 08:34 hrs on 30.04.2026 due to DC Line fault. In view of this contingency, the Northern Regional import Available Transfer Capability (ATC) had to be reduced by 6600 MW. Curtailment of ATC margin during ongoing high NR demand period is a matter of serious concern as it may lead to overloading of other critical transmission corridors and hampers the reliability and security of the grid.

A.14.3. Furthermore, all four poles of the Champa-Kurukshetra HVDC link tripped again at 16:30 hours on 02.05.2026. Consequently, the ATC import margin of the Northern Region was reduced by 5800 MW to handle this contingency. Such a reduction in ATC import margin has an adverse impact on the ability to meet the NR states' demand. It is also observed that restoration time of these poles took significant time resulted in severe impact on the grid reliability.

A.14.4. Moreover, CEA has issued the Technical Committee report dtd 23rd Feb 2026 on addressing trippings of HVDC Champa-Kurukshetra link, wherein comprehensive recommendations have been outlined across short-term, medium-term, and long-term horizons. In view of the prevailing summer conditions and the consequent operational exigencies on the grid, it is earnestly requested that the short-term measures, envisaged for implementation within a timeframe of 0-6 months, may kindly be accorded utmost priority and initiated expeditiously.

A.14.5. In view of above, Powergrid is requested that all necessary measures may kindly be undertaken on priority basis to prevent such repeated tripping of this inter-regional link particularly during the high demand period. Further, the current status of implementation of recommended corrective actions by the Technical Committee may kindly be shared at the earliest with NRPC and NRLDC.

***Members may kindly deliberate.***

**A.15. Request for diversion of 500 MVA, 400/220 kV ICT under Cold Spare Reserve for installation at 400 kV Rishikesh Substation of PTCUL to ensure uninterrupted power supply during Kumbha Mela 2027 at Haridwar. (Agenda by PTCUL)**

- A.15.1. PTCUL has informed that prior to the commissioning of the 400 kV D/C Koteshwar-Rishikesh line, the power supply of the Dehradun area was primarily being catered through 400 kV Substation Sherpur (Dehradun) (PGCIL), whereas the Roorkee, Haridwar & Rishikesh area were being fed through 400 kV Substations Roorkee (PGCIL) and Rishikesh (PTCUL).
- A.15.2. Subsequent to the energization of the 400 kV D/C Koteshwar-Rishikesh line by NRSS-XXXVI on 08.12.2025, the downstream intra-state transmission network of Uttarakhand, particularly the 400/220 kV ICTs (1X315+1X240 MVA) at 400 kV Rishikesh Substation, has been experiencing overloading during periods of low intra-state hydro generation period as well as during high generation from Tehri and Koteshwar HEPs/PSP during morning and evening peak hours. The loading of ICTs at Rishikesh has now become significantly dependent on generation from Tehri/Koteshwar HEPs.
- A.15.3. It has been observed that the loading pattern of these intra-state elements has changed substantially, and certain elements in the network are no longer compliant with N-1 contingency criteria after energization of the aforesaid line. A copy of the loading pattern of ICTs and other related elements as provided by PTCUL is enclosed as **Annexure-A.VI**.
- A.15.4. Due to the above constraints, SLDC has been compelled to frequently open certain intra-state lines, namely 220 kV SIDCUL-Rishikesh, 220 kV IIP-Rishikesh and other 132 kV lines, in order to manage load flow within the state transmission network. Consequently, 220 kV Substations SIDCUL, Haridwar and IIP, Dehradun have at times been operated in radial mode, thereby compromising the reliability and security of the transmission system in the Rishikesh and Haridwar areas.
- A.15.5. The load catered through 220 kV Haridwar and 220 kV Rishikesh substations predominantly serves industrial consumers as well as major pilgrimage locations. Further, PTCUL has submitted that the Kumbha Mela 2027 in the Haridwar/Rishikesh region is scheduled from January 2027 to March 2027. Ensuring reliable and uninterrupted power supply during this period is therefore of utmost importance.
- A.15.6. As a long-term solution, PTCUL has already submitted the DPR for financing the procurement and installation of one 500 MVA, 400/220 kV ICT at Rishikesh under the ADB Phase-II scheme through the Government of Uttarakhand to the Government of India. However, considering the prevailing market conditions and high demand, commissioning of a new ICT is expected to take at least 36 months from the date of award.
- A.15.7. In view of the upcoming Kumbh Mela-2027 PTCUL has earnestly requested that one 500 MVA, 400/220 kV ICT available at Panchkula or Prayagraj may kindly be diverted to PTCUL under the "Cold Spare Reserve" for installation at 400 kV Rishikesh Substation till same is arranged by PTCUL. PTCUL will abide by the provisions of SoP released regarding usage of Cold Spare Reserve.

**Members may kindly deliberate.**

**A.16. Request for Anti-theft charging of sections of Fatehgarh-3 to Bhadla-3 400 kV D/c (Quad) transmission line (Agenda by Apraava Energy Private Limited)**

**Background:**

- A.16.1. The transmission scheme “Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A3” is being developed Apraava Energy Private Limited (AEPL) through Tariff Based Competitive Bidding (TBCB) route. Apraava Energy Private Limited has informed that the schedule completion timeline of this project was on 01.02.2025, however expected completion timeline is 30.09.2026.
- A.16.2. Project is a part of evacuation scheme for 20 GW renewable power from Renewable Energy Zones in Rajasthan. The scheme inter-alia involves construction of a 400 kV D/c (Quad) transmission link between Fatehgarh-3 & Bhadla-3 Pooling stations and bay extension works at PGCIL existing Substation at Fatehgarh-3 and Bhadla-3, which will be interconnected with Fatehgarh-3 & Fatehgarh-2 PS respectively. This scheme shall facilitate evacuation of RE power from Fatehgarh/Bhadla complex for onward dispersal of power to various beneficiaries.

**Current status of project execution:**

- A.16.3. A total of 535/584 foundations, 455/584 tower erections, and 200.48/456 ckm stringing work has been completed. As informed by the transmission licensee project completion is by September 2026. However, progress is being adversely affected by recurring material theft incidents, particularly in the Phalodi and Jaisalmer districts.
- A.16.4. Over the past six months, theft incidents have mainly involved approximately 45 km of strung conductor and around 60 MT of tower materials across multiple locations. Replenishment of these materials, along with rework on already completed sections, is posing a significant challenge and contributing to delays in project completion. Several mitigation measures have been undertaken by the transmission licensee, including strengthening private night security patrols and coordinating with local police authorities to enhance vigilance. Despite these efforts, theft incidents continue to persist.
- A.16.5. To mitigate the theft issues, Apraava Energy Private Limited has proposed to implement anti-theft charging on strung sections of the 400 kV transmission line, as this appears to be the most viable solution to safeguard completed assets and prevent further losses and delay in project completion. Details of the completed sections including locations where the proposed line over-crosses existing charged lines and the respective owners, as provided by Apraava Energy Private Limited in attached Annexure-A.VII.
- A.16.6. With regard to above and considering the importance of the project to the state of Rajasthan, Apraava Energy Private Limited has requested forum to provide the requisite approval for doing anti-theft charging for going ahead with it.

**Members may kindly deliberate.**

**A.17. Implementation of SPS at Hisar (POWERGRID) and Hisar (BBMB) (Agenda by**

## Haryana SLDC)

- A.17.1. Haryana SLDC has submitted that a joint VC meeting was held on 27.06.2025 with NRPC/NRLDC, attended by representatives from PGCIL, HVPNL, BBMB, Rajasthan SLDC, Punjab SLDC, and Haryana SLDC to deliberate upon the installation of SPS at 765 kV Bhiwani (PGCIL) to mitigate N-1 non-compliance. During the meeting, it was observed that the loading on 400/220 kV Hisar (PG) ICTs also exceeds N-1 limits. Further, in the event of SPS operation at 765/400 kV Bhiwani (PG), the power flow would reroute, thereby increasing the loading on 400/220 kV Hisar (PG) ICTs. Accordingly, the installation of SPS at Hisar (PG) ICTs was also deliberated.
- A.17.2. The OCC forum, in its 241st meeting, deliberated that since the feeders had already been identified in the meeting held under SE (O), NRPC on 27.06.2025, the proposed SPS was approved, and POWERGRID was advised to implement the same at the earliest.
- A.17.3. In line with the above decisions, POWERGRID has confirmed the installation of SPS at Hisar (BBMB) and Hisar (PG), and has also shared the wiring terminal details at DTPC for tripping of the approved feeders (i.e., 220 kV Hisar (BBMB)–Sangrur D/C and 220 kV Hisar (BBMB)–Chirawa line). However, the wiring of these feeders is to be carried out by BBMB at 220 kV Substation, BBMB, Hisar.
- A.17.4. In this regard, POWERGRID, vide email dated 21.04.2026 has informed that
- A.17.5. BBMB has not completed wiring of the approved feeders at 220 kV Substation, BBMB, Hisar due to non-receipt of consent from Punjab.
- A.17.6. The matter was again deliberated in the 57<sup>th</sup> TCC and 82<sup>nd</sup> NRPC meetings wherein 'PSTCL has granted consent for the wiring of the 220 kV Hisar–Sangrur line for SPS only up to 31<sup>st</sup> May 2026' and that 'the requirement of SPS and changes required in Hisar (PG) SPS may be discussed in the next OCC meeting.
- A.17.7. In view of the above, the matter is placed before the OCC for deliberation and Haryana SLDC has requested that forum to issue necessary directions to BBMB for expeditious completion of feeder wiring and implementation of SPS till the rectification of observed constraints at 400 kV Substation, POWERGRID, Hisar i.e. commissioning of its additional 500 MVA ICT as well as re-conductoring of 220 kV Hisar (PG) – IA Hisar D/C line, in the interest of grid security & to mitigate overloading risks on the concerned ICTs and associated transmission elements.

***Members may kindly deliberate.***

### **A.18. Revision in logic for SPS at Lalitpur TPS (Agenda by UPSLDC)**

- A.18.1. UPSLDC has informed that SPS at Lalitpur TPS was designed considering evacuation of generation of Lalitpur TPS through 765kV Fatehabad substation. Now, Ghatampur TPS is also connected at 765kV Fatehabad substation so some of its generation is also evacuating through 765kV Fatehabad substation. Although there are two 765kV lines are available for evacuation of Ghatampur TPS generation, in view of synchronization of unit 3 at Ghatampur TPS, there is need of revision in logics of SPS implemented at Lalitpur TPS.
- A.18.2. Revised proposed logics for SPS at Lalitpur TPS are attached as **Annexure-A.VIII.**

**Members may kindly deliberate.**

**A.19. Revision in NAPP islanding Scheme (Agenda by UPSLDC)**

A.19.1. UPSLDC has conducted a review of NAPP islanding Scheme in a joint meeting with concerned officials of NPCIL and UPPTCL on 25.03.2026. As per discussions held in meeting, there is need of revision in load considered in islanding Scheme.

A.19.2. Proposed changes in load of NAPP islanding Scheme are attached as **Annexure-A.IX.**

**Members may kindly deliberate.**

**A.20. SPS for ICTs at 400kV Lucknow PG (Agenda by Powergrid NR 3)**

A.20.1. PGCIL has informed that in 239<sup>th</sup> OCC an agenda by UPSLDC highlighted the need for a System Protection Scheme (SPS) at Lucknow (PG) to take care of N-1 contingency in the upcoming summer season.

A.20.2. UPSLDC submitted in the meeting that the tentative logics for SPS for ICTs at 400kV Lucknow (PG), for review and further implementation.

A.20.3. Based on above, SPS logic recommended by UPSLDC is as follows-

Case	%setting	Time delay	Priority of feeder for load cut off
Case-1	Loading on ICT >95% but less than 110% of rated current	3Sec	1. 220kV Kanduni Ckt-I &II 2. 220kV BKT 3. 220kV Kursi Road Ckt-I &II
Case-2	Loading of ICT >110% of rated current	1500ms	1. 220kV Kanduni Ckt-I &II 2. 220kV BKT 3. 220kV Kursi Road Ckt-I &II

A.20.4. However, POWERGRID has expressed some concern that implementation of priority wise feeders tripping are not possible, as per philosophy Powergrid can trip feeder from relay contract assigned in ICT differential or BUI relay.

A.20.5. Further, isolation at ICT loading >110% of rated current is not feasible, as it nearly coincides with the pickup setting of Phase Overcurrent Protection (PHOC1), thereby risking overlap and unintended tripping.

A.20.6. In view of this POWERGRID has proposed the following SPS logic for implementation at Lucknow ICT.

Case	%setting	Time delay	feeder for load cut off
Case-1	Loading on ICT >95% of rate current	3Sec	1. 220kV Kanduni Ckt-I &II 2. 220kV BKT
Case-2	Loading of ICT>95% of rated current	5Ses	1. 220kV Kanduni Ckt-I &II 2. 220kV BKT 3. 220kV Kursi Road Ckt-I &II

**Members may kindly deliberate.**

**A.21. Re-Routing of 400kV D/c line (Aligarh - Muradnagar) UPPTCL transmission lines (Agenda by NPCIL)**

A.21.1. Presently, NPCIL is operating 2\*220MWe twin unit at NAPS, evacuating power through 220kV lines.

A.21.2. Further, NPCIL has intimated that in-principle approval has been obtained for NAPS-3&4 (2x700MWe), adjacent to the operating units.

A.21.3. NPCIL has submitted that during the planning process, it is observed that one 400 kV D/c line (Aligarh - Muradnagar) belonging to UPPTCL is passing through the proposed plant area of NAPP-3&4, i.e. it is passing through the exclusion zone boundary of Narora Atomic power Station.

A.21.4. This calls for re-orientation of existing tower of 400kV transmission line to create space for construction of new units.

**Members may kindly deliberate.**

**A.22. Transmission charges for Kota-Jaipur lines (Agenda by NPCIL)**

A.22.1. NPCIL has intimated that in July 2010, NPCIL applied for connectivity for RAPP-7, with the Commercial Operation Date (COD) scheduled for June 2016, and RAPP-8, with the COD scheduled for December 2016. Connectivity was granted on 4<sup>th</sup> May 2011, in accordance with the proposed CODs. Additionally, a Long-Term Access (LTA) application was submitted in December 2010 and was granted on 4<sup>th</sup> May 2011, with the LTA start date set to December 2015.

A.22.2. As part of the 29<sup>th</sup> LTA meeting held in December 2010, the power evacuation scheme for both units was finalized, which involved the construction of two transmission lines:

1. 400kV double circuit line from RAPP - Jaipur (with LILO at Kota).

2. 400kV double circuit line from RAPP - Shujalpur.

- A.22.3. M/s PGCIL was assigned the commissioning of RAPP - Jaipur line and M/s RTCL was assigned the commissioning of RAPP - Shujalpur line.
- A.22.4. However, on 02<sup>nd</sup> January 2013, in 31st Standing Committee meeting of NRPC, Shujalpur lines were delinked with RAPP generation and further used for strengthening the North-West grid.
- A.22.5. Further, on September 2014, NPCIL signed an implementation agreement with CTUIL, for RAPP-Jaipur 400kV D/c with one circuit LILoed at Kota, with revised COD for RAPP-7 as 30<sup>th</sup> November 2017, and for RAPP-8 thereafter. Therefore, zero date for connectivity was 30<sup>th</sup> November 2017.
- A.22.6. Both the parties couldn't achieve the COD, later CTUIL achieved the COD for the ATS on 29th March 2019 and approached CERC for truing up of tariff. CERC ordered that delay is from NPCIL end and therefore transmission charges should be paid by NPCIL. As a result, NPCIL is paying transmission charges for the Kota-Jaipur d/c line. The total penalty is around 258cr till December 2025 and will continue till COD of RAPP-8.
- A.22.7. With the implementation of GNA regulations on 5th April 2023, RAPP-7 and RAPP-8 were granted deemed GNA status during the 22nd CMETS meeting on 17th November 2023.
- A.22.8. NPCIL continues to pay the transmission charges for Kota-Jaipur lines, which have been utilized by other entities for their transmission requirements.

***Members may kindly deliberate.***

**A.23. Frequent Tripping on 220kV BTPS-Alwar Line emanating from 220kV Sub-station, BTPS (Agenda by DTL)**

- A.23.1. DTL has intimated that the subject line has been tripping frequently. More than 67 instances of tripping have been observed since March 2025, which indicates serious maintenance lapses and poor Right of Way (RoW) management on the 220kV line section.
- A.23.2. Due to these frequent trippings/breakdowns, continuous electrical stress is being imposed on clamps, connectors, and bay equipment installed at BTPS substation, which may lead to failure of equipment and associated components.
- A.23.3. In view of the above, RVPN has is hereby requested to take urgent action to ensure proper maintenance of subject line to avoid frequent tripping to maintain substation stability.
- A.23.4. Alternatively, the circuit breaker may be kept open from the BTPS end, and arrangements may be made to charge the line from the MIA Alwar substation.

***Members may kindly deliberate.***

**A.24. Provision of Adequate Start-Up Time for Koldam HPS Units in Line with Statutory Requirements under Dam Safety Act, 2021 (Agenda by NTPC)**

**Background:**

A.24.1. Koldam Hydro Power Station (4×200 MW) is a run-of-the-river plant with limited pondage and is operated as a peaking station as per dispatch instructions issued by NRLDC.

A.24.2. Off-late, Koldam HPS is receiving frequent directions from NRLDC for immediate start-up of units within a very short notice period of 10–15 minutes.

**Issue:**

A.24.3. NTPC has submitted that subsequent to the implementation of the Dam Safety Act, 2021, Koldam HPS is statutorily required to strictly adhere to the approved Early Warning System (EWS) protocol prior to any water release.

A.24.4. Unit start-up at Koldam HPS inherently involves release of water downstream; therefore, compliance with EWS protocol is **mandatory and non-negotiable**. The protocol requires advance intimation and sufficient lead time (typically 1.5 hours) for dissemination of warnings to downstream stakeholders.

A.24.5. In view of the above, instantaneous or short-notice start instructions (10–15 minutes) from NRLDC are **not operationally feasible** and may lead to **non-compliance of statutory provisions**, which carries significant safety and legal implications.

**Proposal:**

A.24.6. In the best interest of grid stability, NTPC has proposed that One unit can always be kept on bar rather than utilizing the 800 MW continuously in 3-hour peak slot window. Running one unit continuously for 24 In light of statutory obligations under the Dam Safety Act, 2021, it is proposed that:

- NRLDC may **mandatorily provide adequate lead time** for start-up of Koldam HPS units, keeping in view the time required for implementation of EWS protocol.
- A **minimum start-up notice period (minimum 1.5 hours)** may be mutually agreed and formalized for Koldam HPS in consultation with NRLDC/NRPC.

***Members may kindly deliberate.***

**A.25. Shifting of 220kV Sherpur (PS)-Jamalpur (BB) (PSTCL) transmission circuit to another bay no 204 at 220kV Sherpur(PS) (Agenda by NRPC Secretariat)**

A.25.1. PSTCL vide letter dated 09.04.26 informed to CTU that a connectivity agreement was executed among PSTCL, BBMB and CTUIL for LILO of Dhadri Kalan (PSTCL) - Jamalpur (BBMB) line at 220kV Sherpur on 26.05.25.

A.25.2. At present, the Sherpur-Jamalpur section charged through main bay 201 at Sherpur end which is to be shifted to Bay 204 and Sherpur- Dhadri Kalan ckt will be connected to bay 201. There is no other change in connectivity. PSTCL further stated that they have submitted application to CTUIL regarding shifting of bay for getting approval and issuance of draft connectivity agreement.

A.25.3. The matter regarding connectivity agreement for shifting of 220kV bay of 220kV Sherpur (PSTCL)- Jamaplur (BBMB) line at 220kV Sherpur (PSTCL) was deliberated in 57th TCC/82nd NRPC meeting held on 17-18th Apr'26.

A.25.4. As approval of above bay shifting is not being taken by PSTCL in any meeting/forum before NRPC discussions, CTU mentioned that approval of the same is required to process the connectivity agreement.

A.25.5. In this regard, a meeting was convened among NRPC, NRLDC, CTUIL, PSTCL and Punjab SLDC on 28.04.2026. In the said meeting, PSTCL proposal for shifting of 220kV Sherpur (PS)-Jamalpur (BB) (PSTCL) transmission circuit to another bay no 204 was agreed and PSTCL to process for revised connectivity agreement subject to ratification in next OCC meeting.

**Forum may note the above.**

**खण्ड-ख: उ.क्षे.भा.प्रे.के.**

**Part-B: NRLDC**

## B.1. NR Grid Highlights for April 2026

### B.1.1. Demand met and Consumption details of NR

S.No.	Constituents	Max Demand met (in MW)	Date & Time of Max Demand met	All time Max. Demand	Date & Time of All time Max Demand met
1	Chandigarh	340	27-04-2026 15:30	482	18.06.2024 at 15:28
2	Delhi	7091	28-04-2026 15:26	8656	19.06.2024 at 15:06
4	Haryana	11018	28-04-2026 22:30	14662	31.07.2024 at 14:30
3	H.P.	1839	10-04-2026 07:15	2310	09-01-2026 09:15
5	J&K	2715	11-04-2026 20:00	3362	07-01-2026 10:00
6	Punjab	11863	25-04-2026 09:45	16754	28.06.2025 at 15:00
7	Rajasthan	14825	28-04-2026 22:45	19282	09-01-2026 09:00
9	U.P.	29475	28-04-2026 21:44	31486	11.06.2025 at 00:45
8	Uttarakhand	2536	27-04-2026 20:00	2910	11.06.2025 at 22:00
10	<b>Northern Region</b>	<b>76611</b>	<b>28-04-2026 21:00</b>	<b>91234</b>	<b>19.06.2024 at 14:37</b>

S.No.	Constituents	Max Consumption (in MUs)	Date of Max Consumption	Average Demand met (in MUs)	All time Max consumption	Date of All time Max Consumption
1	Chandigarh	7	27-04-2026	4.61	9.3	12.06.2025
2	Delhi	143	28-04-2026	106.18	177.7	18.06.2024

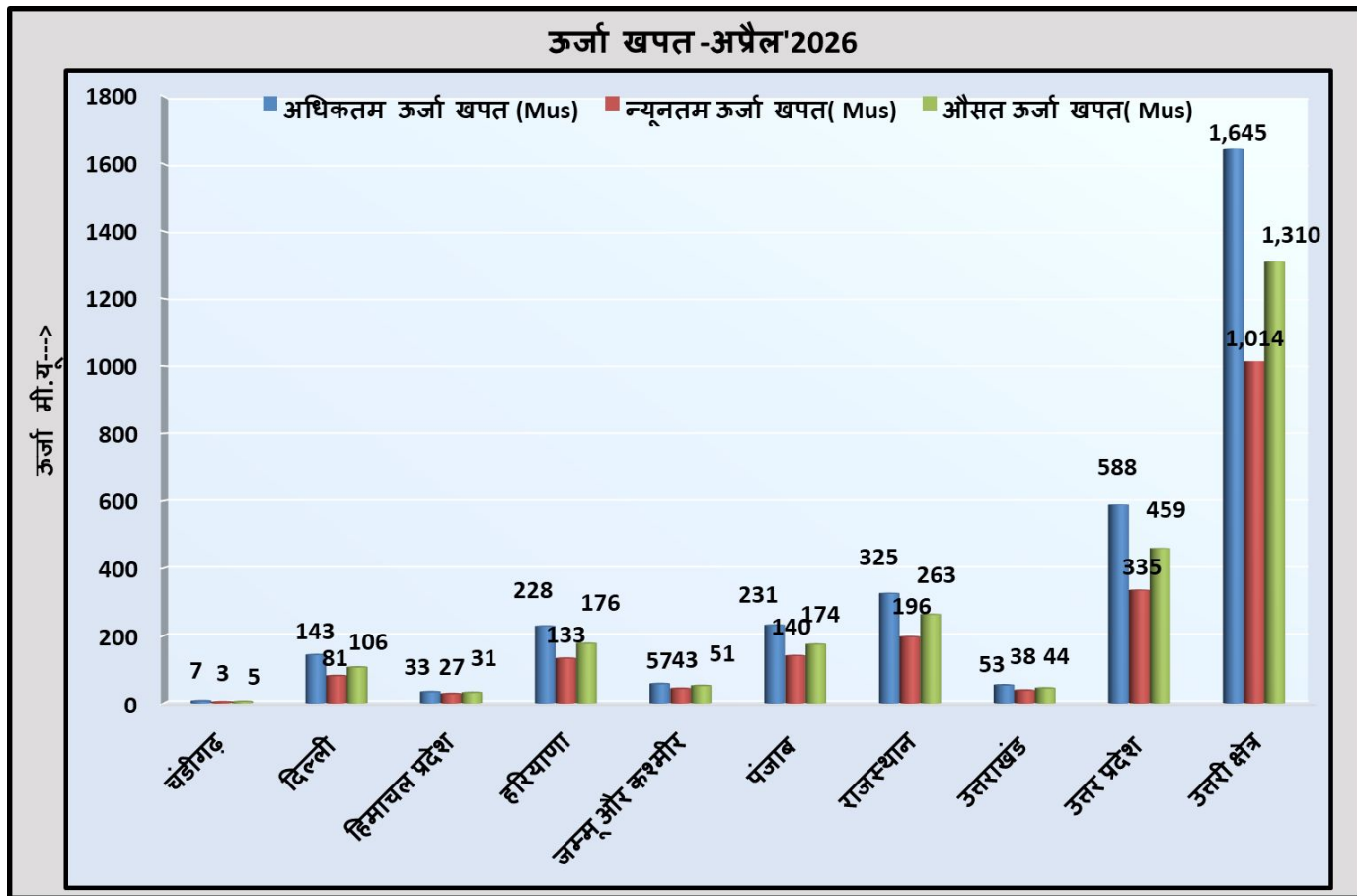
4	Haryana	228	28-04-2026	176.38	293.4	30.07.2024
3	H.P.	33	23-04-2026	30.92	42.9	04.02.2026
5	J&K	57	28-04-2026	51.48	70.3	04.02.2025
6	Punjab	231	27-04-2026	174.02	366.8	21.07.2024
7	Rajasthan	325	28-04-2026	263.02	388.0	11.06.2025
9	U.P.	588	28-04-2026	458.96	658.7	17.06.2024
8	Uttarakhand	53	28-04-2026	44.26	62.1	14.06.2024
10	<b>Northern Region</b>	1645	28-04-2026	1309.83	<b>2022.9</b>	<b>12.06.2025</b>

- In April'26, the Maximum energy consumption of Northern Region was **1645 MUs** on 28<sup>th</sup> April'26 and it was 7.8% higher than April'25 (1525 MUs on 30th Apr'25).
- In April'26, the Average energy consumption per day of Northern Region was **1309.8 MUs** and it was 0.71% lower than April'25 (1319 MUs/day)
- In April'26, the Maximum Demand met of Northern Region was **76611 MW** on 28<sup>th</sup> April'26 @21:00 Hrs as compared to 69880 MW on 30th Apr'25 @21:00 Hrs.

### B.1.2. Comparison of Average Energy Consumption (MUs/Day) – April '25 vs April '26

क्षेत्र/राज्य	अप्रैल - 2025	अप्रैल - 2026	% अंतर
चंडीगढ़	5.0	4.6	-7.5%
दिल्ली	104.4	106.2	1.7%
हिमाचल प्रदेश	33.2	30.9	-6.7%
हरियाणा	173.7	176.4	1.5%
जम्मू और कश्मीर	54.1	51.5	-4.9%
पंजाब	175.5	174.0	-0.9%
राजस्थान	294.7	263.0	-10.8%
उत्तराखंड	43.9	44.3	0.7%
उत्तर प्रदेश	434.7	459.0	5.6%
उत्तरी क्षेत्र	<b>1319.3</b>	1309.8	-0.7%

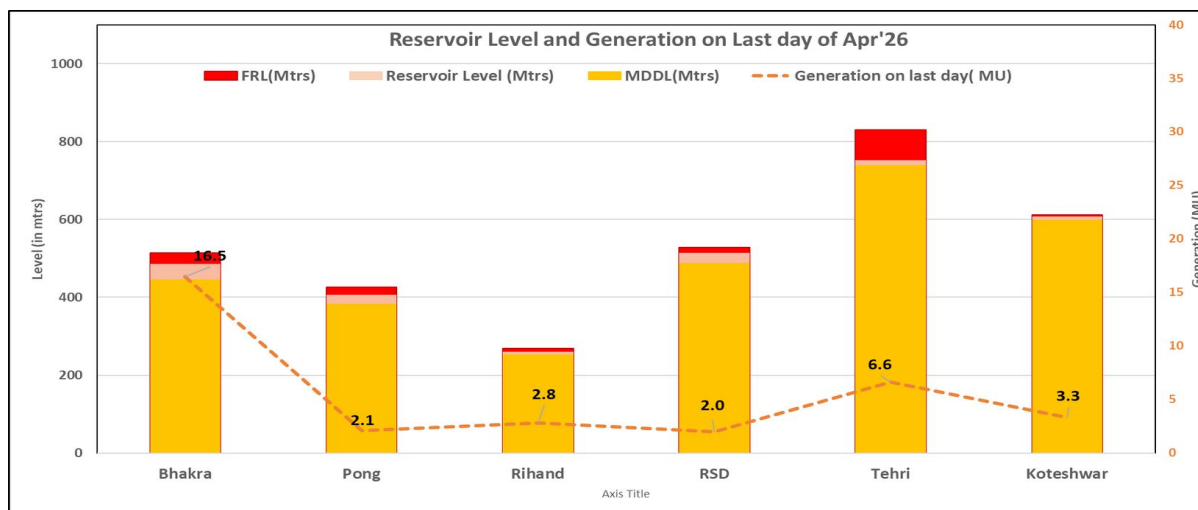
### B.1.3. Energy Consumption



#### B.1.4. Frequency profile

Month	Avg. Freq. (Hz)	Max. Freq. (Hz)	Min. Freq. (Hz)	<49.90 (% time)	49.90 – 50.05 (% time)	>50.05 (% time)
Apr'26	49.998	50.384 (19.04.26 at 17:04:30 hrs)	49.453 (03.04.26 at 10:19:00 hrs)	7.78	73.82	18.4
Apr'25	50.004	50.487 (06.04.25 at 13:03:00 hrs)	49.424 (21.04.25 at 19:04:20 hr)	5.16	75.64	19.20

#### B.1.5. Reservoir Level and Generation on Last Day of Month



### B.1.6. Reservoir Level on last day of April month

(Low: -ve)

(High: +ve)

Year	Bhakra	Pong	Rihand HPS	RSD	Tehri	Koteswar
2026	485	406.74	260.87	514.32	752.55	608
2025	474	394	259	502	753.63	610
Diff (in m)	11.0	12.7	1.9	12.3	-1.1	-2.0

**Detailed presentation on grid highlights of Apr'2026 will be shared by NRLDC in OCC meeting.**

## B.2. Resource adequacy for summer 2026

B.2.1 Considering the high demand expected in the upcoming months, the Ministry of Power (MoP), in the meeting held on 15-01-2026, and has directed RLDCs to carry out Resource Adequacy studies for all States of their respective control regions. Accordingly, NRLDC had conducted Resource Adequacy studies for all the northern region states for the period April-June 2026. The results were discussed in detail in 241 OCC meeting held in March 2026.

B.2.2 The revised month ahead RA study exercise results enclosed as **Annexure-B.I** based on inputs from SLDCs. The results indicate an elevated adequacy gap in forecasted demand and available generation from all sources in the June period, particularly during non-solar hours. A higher risk of unserved energy is observed during this period, highlighting the need for timely and firm power arrangements to meet the state's demand smoothly.

B.2.3 Resource adequacy exercise by SLDCs is also mandated as per Indian Electricity Grid Code (IEGC) 2023. As per clause 31 of IEGC

Quote

(4) Adequacy of Resources (a) SLDCs shall estimate and ensure the adequacy of resources, identify generation reserves, demand response capacity and generation

flexibility requirements with due regard to the resource adequacy framework as specified under Chapter 2 of these regulations.

Unquote

Recent state-wise summary of day ahead, week-ahead and month ahead data submission by NR SLDCs is shown below:

State/Entity	Day Ahead	Week Ahead	Month Ahead (June-2026)
Punjab	As per Format	As per Format	As per Format
Haryana	As per Format	As per Format	As per Format
Delhi	As per Format	As per Format	Yet to be received
Rajasthan	As per Format	As per Format	As per Format
Uttar Pradesh	As per Format	As per Format	As per Format
Uttarakhand	As per Format	As per Format	As per Format
Himachal Pradesh	As per Format	As per Format	As per Format
J&K and Ladakh (UT)	As per Format	As per Format but irregular	Yet to be received
Chandigarh (UT)	As per Format	As per Format	As per Format

\*as on 08.05.2026.

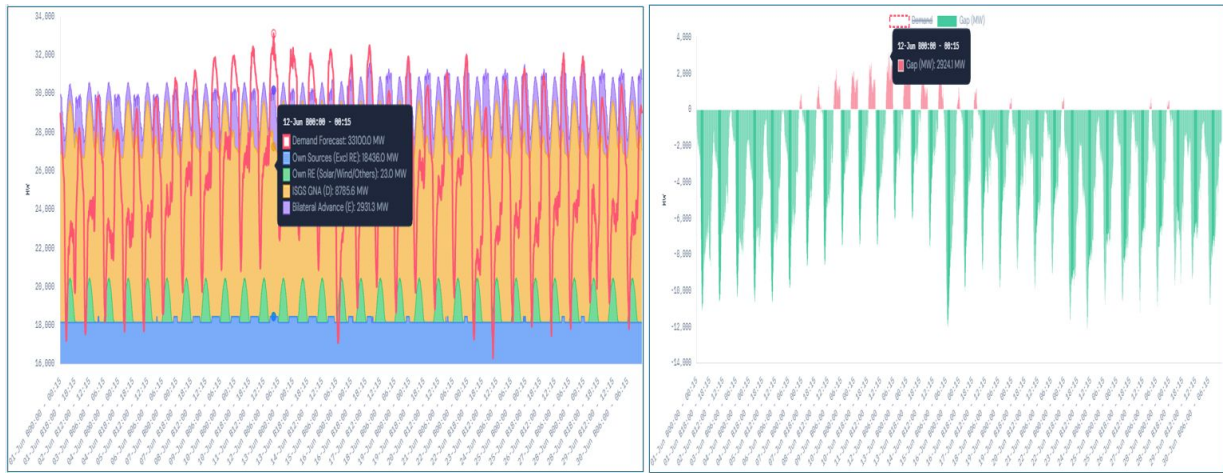
B.2.4 State-wise month-ahead RA analysis observations and discussion during 57<sup>th</sup> TCC and 82<sup>nd</sup> NRPC meetings held in Apr 2026 are mentioned below:

#### B.2.5 UTTAR PRADESH

##### TCC discussion:

UP representative informed that PMC (Power Management Cell) has floated 3 bids which were unsuccessful. Further fresh bid would be invited. 500MW of banking arrangement is under progress. No planned outages were allowed for intra-state generators in the UP. Partial generation outages are also being followed up at higher level.

##### Month ahead RA Analysis Observations: NRLDC



The projected deficit visible prominently during non-solar hours is proposed to be managed entirely through short-term market procurement. As per the data submitted by SLDC, a peak deficit of ~3,181 MW is observed during non-solar hours and it is proposed to be met through short term market, given that bid clearance in the Power Exchange during non-solar hours is minimal, proactive advance bilateral contracting is advised.

#### Actions required:

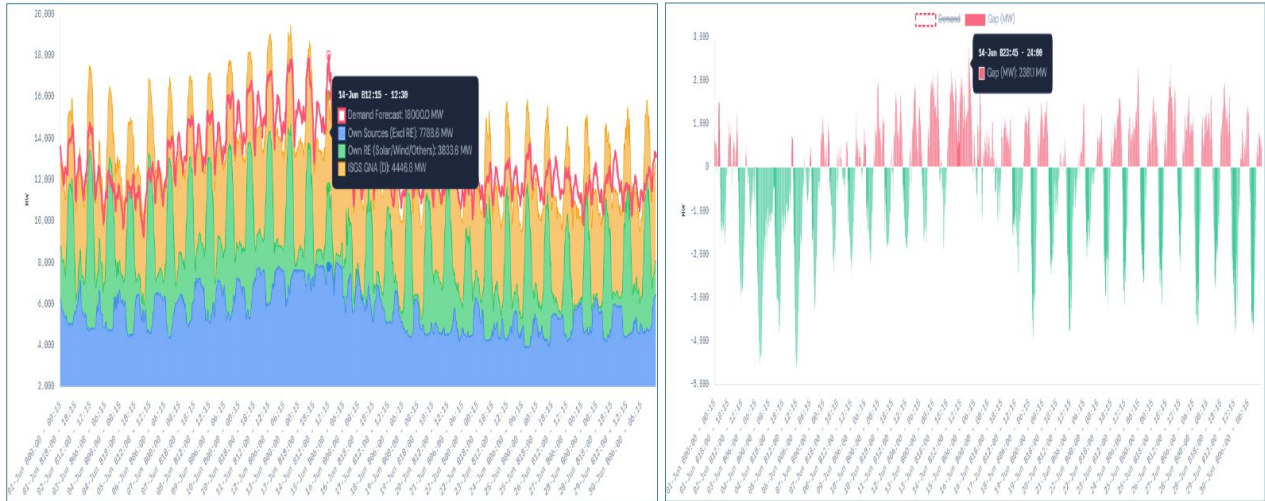
1. SLDC-UP may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

## B.2.6 RAJASTHAN

#### TCC discussion:

1. Rajasthan representative stated that 105MW RTC contract was executed for May 2026. He also informed that Hon'ble SERC has approved for 55% MTL for thermal generating station and it would further help us to control the OD/UD during solar/non-solar hours. 1000MW of CGS allocation has been allotted from Ministry of Power (MoP) for upcoming summer months. On policy level, all the new RE contract would come compulsorily with 5% BESS .
2. ED, NRLDC stated that Rajasthan being a RE rich state and having high potential RE integration in future, it can explore all the avenues such as MTL, flexibility, better forecasting, Ancillary services in intra-state, BESS deployment and explore the RTC (Round the Clock) or FDRE (Firm & Dispatchable Renewable Energy) contract instead of plain vanilla contract of solar.

#### **Month ahead RA Analysis Observations: NRLDC**



As per the data submitted by SLDC, a peak deficit of ~2500 MW is observed during non-solar hours and it is proposed to be met through short term market, given that bid clearance in the RTM/DAM during non-solar hours is minimal, proactive advance bilateral contracting is advised.

#### Actions required:

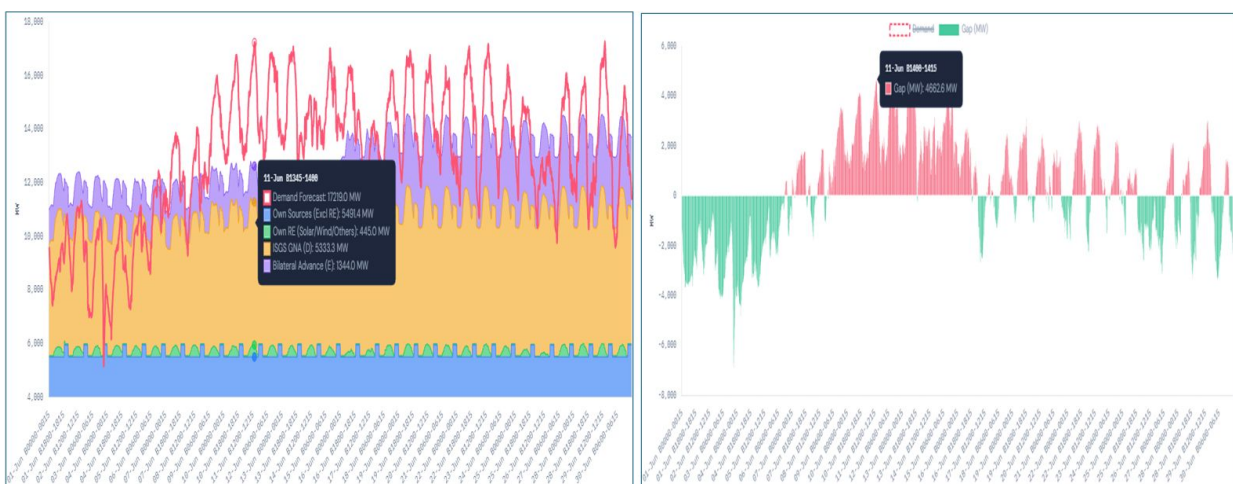
1. SLDC-Rajasthan may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

### B.2.7 PUNJAB

#### TCC discussion:

1. Punjab representative stated that 475MW power has already been tied up at CGPL, Mundra. Another 250MW additional allocation has been done by Ministry of Power (MoP) for summer months. Further, Punjab is pursuing another 1000MW of power via banking arrangement or TAM or allocation from central pool. He has also informed in case of non-availability of power, it will reschedule its agriculture load to those blocks where there is no shortage.

#### Month ahead RA Analysis Observations : NRLDC



As per the data submitted by SLDC, Punjab faces the highest non-solar hour deficit of ~4,663 MW peak. While bilateral advance (~1,988 MW) is planned, the quantum remains significantly short. Dependence on short-term market during non-solar hours at this scale is a critical concern and requires proactive advance bilateral contracting.

**Actions required:**

1. SLDC-Punjab may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

**B.2.8 DELHI****TCC discussion:**

1. Delhi representative informed that 300MW generation in Bawana will be on bar as gas supply will be available as per Hon'ble Supreme Court order. He also stated that Delhi will be running 350-400MW embedded gas-based generation by procuring gas from spot market at any cost as it is very much required for reliability of the intra-state network of Delhi.
2. He further informed that considering all these factors, there would be no shortage in Apr and May months and 250MW shortage may be there in June 2026 for which Delhi is exploring possibility of tie up.

**Month ahead RA Analysis Observations: NRLDC**

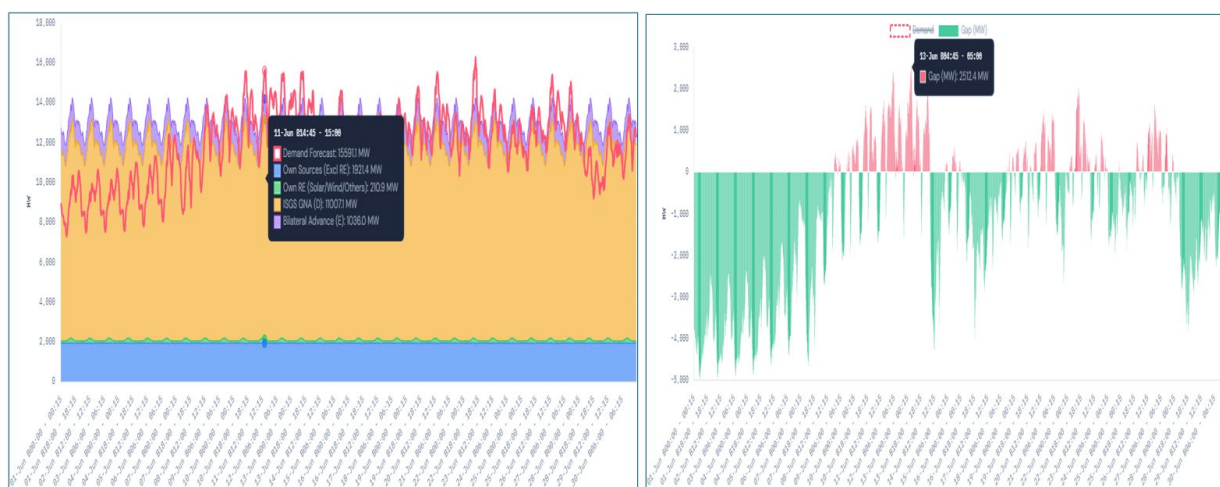
Not available as data not shared by SLDC

**Actions required:**

1. SLDC-Delhi may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

**B.2.9 HARYANA****TCC discussion:**

1. Haryana representative informed that month wise tie up has been done for short term RTC (Round the clock) power in the range of 300-1000MW. Apart from it, approximately 300MW allocation has been increased by Ministry of Power (MoP). Further 380MW tie up has been done with CGPL, Mundra.

**Month ahead RA Analysis Observations: NRLDC**

Haryana has bilateral advance contracts (~1,036 MW avg.) partially covering its requirement, yet a peak non-solar deficit of ~2,512 MW persists. Advance bilateral

contracting for the deficit blocks, particularly in evening and night periods, needs to be firmed up to avoid short-term market reliance.

**Actions required:**

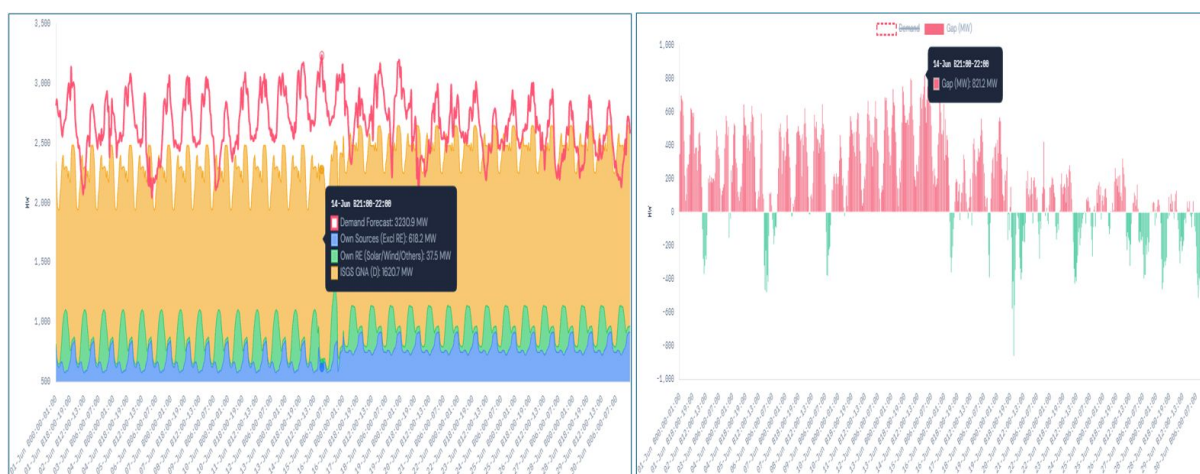
1. SLDC-Haryana may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

## B.2.10 UTTARAKHAND

**TCC discussion:**

1. Uttarakhand representative stated that 100MW RTC (Round the clock) power was finalised from 15-30 Apr 2026. Further for 300MW RTC, Uttarakhand has filed petition before Hon'ble UERC (state regulatory commission). Power in the range of 6-10% of its demand has also been arranged from unallocated quota of CGS (Central Generating Station).

**Month ahead RA Analysis Observations: NRLDC**



No bilateral advance contract details have been submitted by Uttarakhand for June 2026. With a peak gap of ~821 MW, the entire non-solar shortfall is proposed to be met through Power Exchange. Given that bid clearance in the Power Exchange during non-solar hours is minimal, proactive advance bilateral contracting is advised.

**Actions required:**

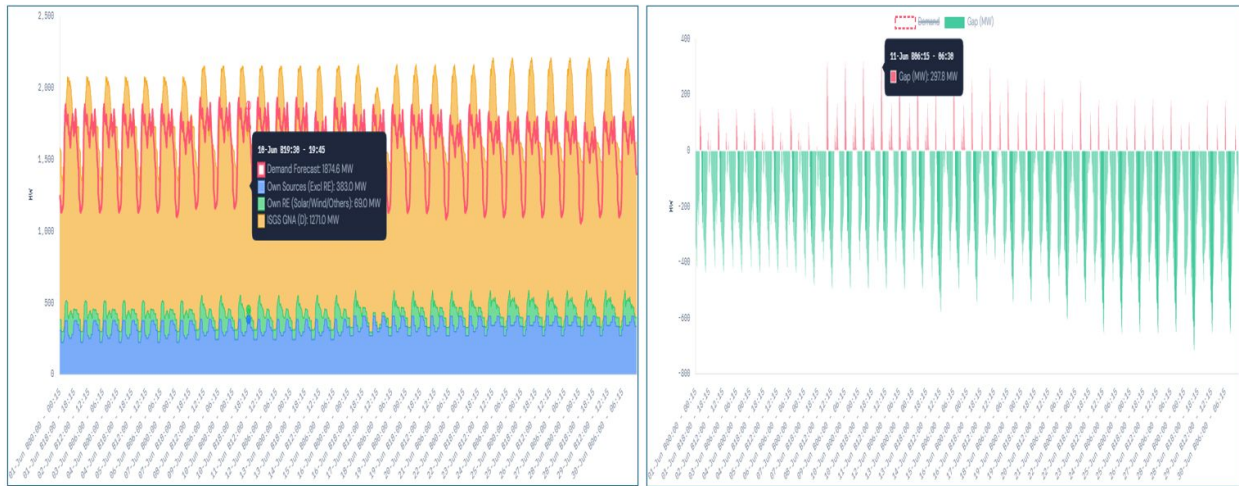
1. SLDC-UK may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

## B.2.11 HIMACHAL PRADESH

**TCC discussion:**

1. HP representative informed that equity power allotted to GoHP (Govt. of HP) will be utilised by HPSEB to meet its own demand and shortage during solar hours may be met from collective markets. He further informed that some banking power will be returned as per bilateral agreement.
2. HP representative also informed that there would not be any shortage in its state control area.

**Month ahead RA Analysis Observations: NRLDC**



As per the data submitted by SLDC, HP is largely a surplus state for June 2026, with availability exceeding demand for most of the month. However, 318 MW peak deficit is observed during non-solar hours across some blocks, where no bilateral advance or DA procurement is scheduled. This residual gap is proposed to be managed through the short-term market during non-solar periods.

#### Actions required:

1. SLDC-HP may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

### B.2.12 JAMMU KASHMIR & LADAKH

#### TCC discussion:

1. J&K representative informed that with the availability of hydro power and low demand in summer months, power position in J&K is expected to be comfortable.

#### Month ahead RA Analysis Observations: NRLDC

Not available as data not shared by SLDC

#### Actions required:

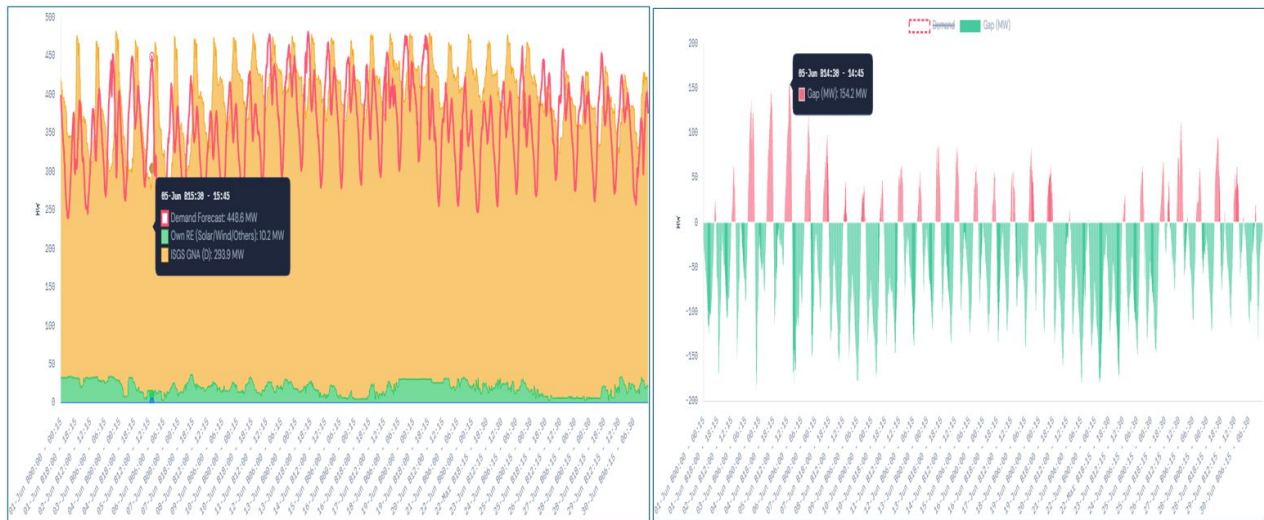
1. SLDC-J&K may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

### B.2.13 CHANDIGARH

#### TCC discussion:

1. No representative from Chandigarh was available during the meeting.

#### Month ahead RA Analysis Observations: NRLDC



140 MW peak deficit is observed during non-solar hours across some blocks, where no bilateral advance procurement is scheduled. This gap is proposed to be managed through the short-term market during non-solar periods.

#### Actions required:

1. SLDC-Chandigarh may kindly share the details of further tied up/ arrangements to meet the peak demand with NRLDC and NRPC.

#### B.2.14 **Following are some of the actions that need to be implemented by all NR states for summer 2026 as per previous discussions:**

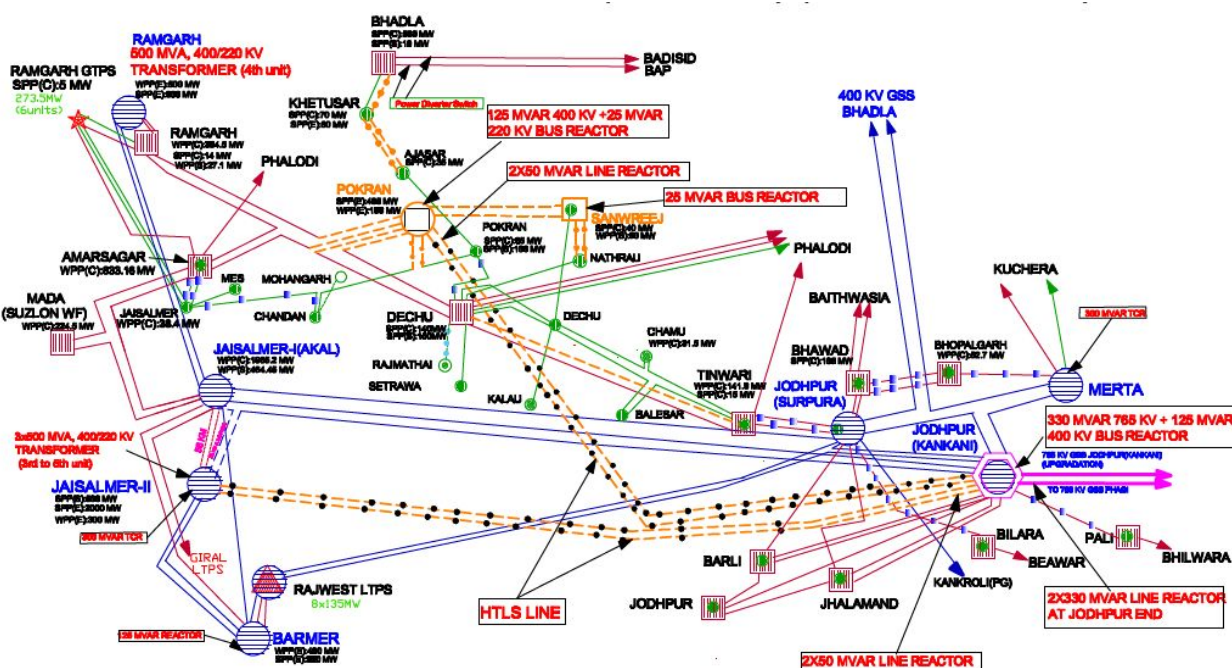
- a. NR States may plan in advance for firm power procurement such as bilateral/banking arrangements for the entire summer period (June and beyond).
- b. Reliance on short-term market purchases such as Day Ahead Market/ Real-Time Market for meeting peak summer demand should be minimised and treated only as supplementary.
- c. All states to review their demand forecast submissions and plan accordingly including a plan for up to 5-6% forecast error. States should also try and ensure reserves which shall be around 3% of the state's demand.
- d. All SLDCs to review the resource adequacy results and provide their comments along with the proposed tie-ups to avoid shortfall during Jun-Jul 2026.
- e. NR states should take up for tie-ups with other states, especially SR states where demand is much lower during this period timely so that based on inter-regional transfer capability limits, their arrangement get priority and gets scheduled in case of any congestion on the inter-regional corridor and avoid relying on DAM and RTM bids.
- f. Visibility/monitoring of all the plants at Real-Time Generation (RTG) monitoring portal with data correctness.
- g. Minimize hydro generation during solar hours and in off peak night hours so that the conserved water could be utilized for peaking requirements especially during non-solar hours

- h. Partial and Forced Outages monitoring in Thermal Power plants.
- i. Physical feeders checking, measures to control OD in real-time
- j. Week-ahead (on rolling) and day-ahead RA Assessment for bringing intrastate units on bar

**All SLDCs may please provide update and share details of their tie-ups for safely meeting demand during Jun-Jul 2026 period. Members may please discuss.**

### B.3. Expediting upgradation of Jodhpur(400kV) to 765kV and 765kV Phagi-Jodhpur D/C line

B.3.1. Proposal for the Transmission System regarding Uprating, Upgrading and Strengthening of Intra-State Transmission Schemes for Renewable Energy Evacuation in Western Rajasthan to be implemented by RRVPNL was approved in 1st NRPCTP meeting held on 24.01.2020. Relevant part of MoM of the meeting is attached as **Annexure-B.II**. With the above proposal of RVPN, total installed RE capacity of 15,052 MW was to be evacuated from the intrastate network.

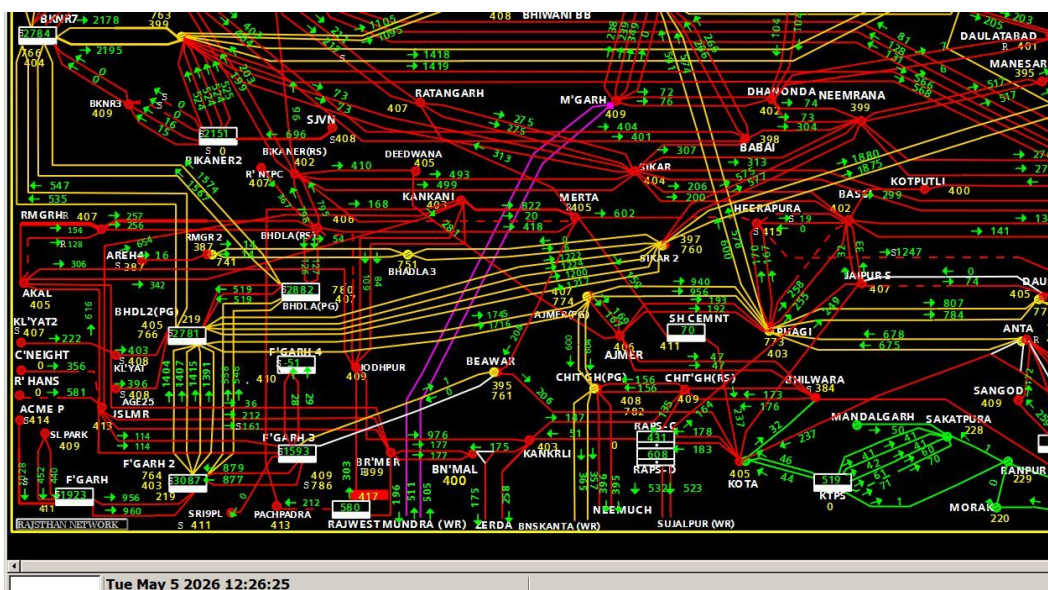


B.3.2. Presently, around 12,600MW of which 4,328MW is wind and 8,269MW is solar generation has already been commissioned in Rajasthan intrastate network. However, one of the major part of the approved scheme was upgradation of 400kV Kankani to 765/400kV substation and D/C line from Kankani to Phagi (Jaipur) which is load centre. Following is the major part of scheme for which work is pending.

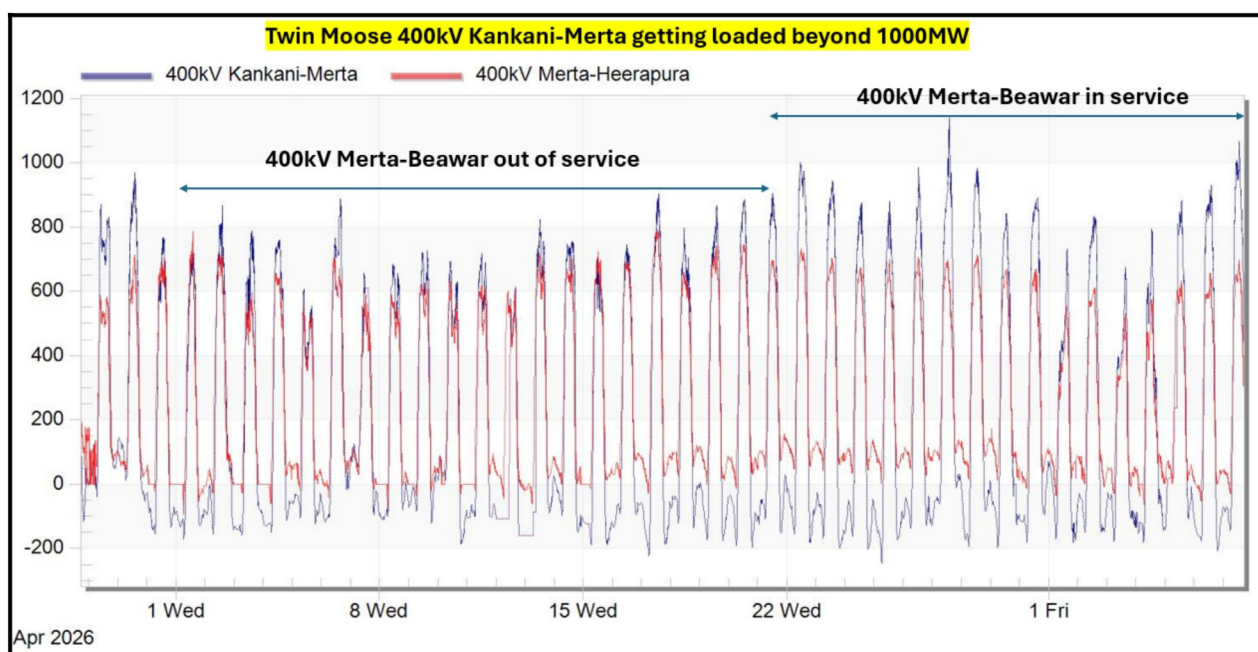
- 3x1500 MVA, 765/400 kV Substation by upgrading 400 kV GSS Kankani(Jodhpur) with 1 x 330 MVAR 765 kV Bus Reactor.

- 300 km, 765 kV D/C Kankani (Jodhpur) - Phagi line with 2x330 MVAR switchable reactors at Kankani (Jodhpur) end and 2x240 MVAR switchable reactors at Phagi end of the line.

B.3.3.The present network connectivity in the area is shown below:



B.3.4.As can be seen from the above diagram, the 400kV Kankani-Merta-Heerapura corridor remains heavily loaded because of delay in commissioning of aforesaid 765kV transmission elements. The loading is on account of high RE injection in Jaisalmer and Jodhpur area and high demand in Jaipur area. Furthermore, such delay in Commissioning is aggravating the overall constraints in RE complex. Loading pattern of 400kV Kankani-Merta and 400kV Merta-Heerapura for last one month is shown below:



B.3.5.If the approved works of upgradation of 400kV Kankani to 765/400kV substation and D/C line from Kankani to Phagi (Jaipur) had been timely commissioned, this network would not have been highly loaded.

B.3.6. It is important to note that as the above transmission scheme was approved in 2020, the studies carried out by CTUIL after 2020 for planning of ISTS RE transmission network from Western Rajasthan, has included these elements in CTUIL studies. Non-commissioning of these transmission elements is also stressing the ISTS transmission system which is already lagging behind the schedule whereas ISTS connected RE plants are rapidly getting connected.

***Accordingly, to manage present intrastate line loadings, improve system strength and to bring load centre close to RE generation, it is requested that RRVNL may expeditiously commission upgradation of 400kV Kankani to 765/400kV substation and D/C line from Kankani to Phagi (Jaipur) which was approved in Jan 2020 from CEA side.***

***Members may please discuss.***

#### **B.4. Follow-up issues from previous OCC meeting related to Rajasthan**

##### **a) Revision in SPS for Chhabra-Kawai-Kalisindh complex**

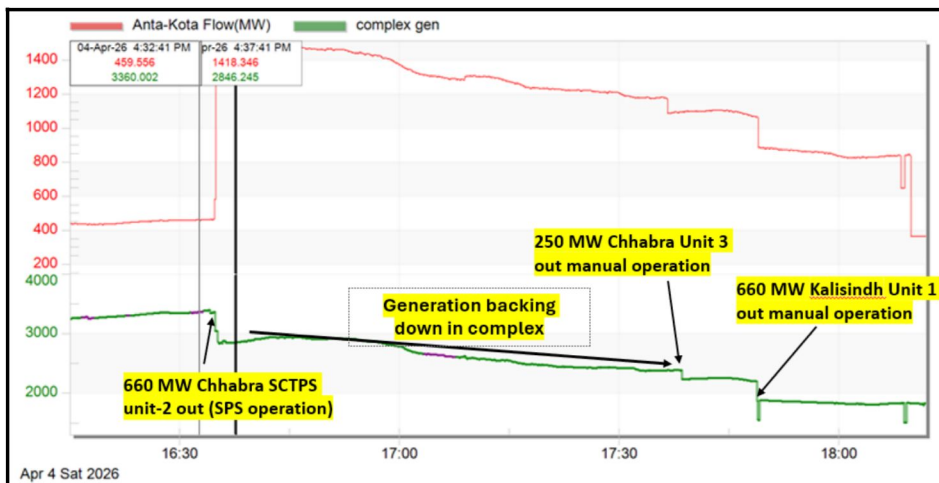
During 242 OCC meeting, it was discussed that a major grid event was observed on 04.04.2026 wherein multiple transmission element tripping was observed in Anta-Chhabra complex. Firstly, 400 KV Hindaun-Chhabra Ckt tripped at 15:42 hrs due to inclement weather as reported by Rajasthan SLDC. Thereafter, 765 KV Anta-Phagi Ckt-1 tripped on B-N fault at 16:29 hrs from Anta end only and 765/400 KV 1500 MVA ICT 1, 2 and 3 at ANTA(RS) tripped at 16:34 hrs. Due to tripping of all 3 ICTs at 765 kV Anta (RS), SPS operated, leading to tripping of 660 MW Chhabra SCTPS unit-2.

Outage of 400 kV Hindaun-Chhabra Ckt and subsequent tripping all ICTs at 765/400 kV Anta led to over-loading of remaining evacuation lines i.e. 400 KV Bhilwara-Chhabra Ckt and 400kV Chhabra-Anta(bypass)-Kota line operating beyond thermal limit.

Following actions were taken by NRLDC and SLDC Rajasthan after the event:

- Backing down generation at Chhabra-Kawai-Kalisindh complex immediately to control over-loading of 400 KV Bhilwara-Chhabra Ckt and 400kV Chhabra-Anta(bypass)-Kota line.
- Subsequently generation of all units operating on-bar in the complex were reduced to technical minimum.
- 250 MW Chhabra U-3 and 660 MW Kalisindh U-1 were taken off bar by Rajasthan at 17:37 hrs and 17:49 hrs respectively.

Plot below shows the line loading of 400kV Chhabra-Anta(bypass)-Kota line after the event, wherein it can be clearly seen that the line loading exceeded its thermal limit for significant duration of time and line was operated at very high loading (loading increased from 450MW to more than 1400MW). Telemetry of 400kV Chhabra-Bhilwara line for the given period is not available at NRLDC end.



Following is the existing SPS logic in the complex:

### Chhabra, Kawai and Kalisindh TPS Complex

#### 1. **Case-1:** N-1-1/N-2 of 765/400 kV Anta ICTs

*Action: Trip one unit of 660 MW at Chhabra SCTPS to limit the flow on the remaining ICT with in safe range*

#### 2. **Case-2:** N-1 of Anta-Phagi 1 & 2

*Action: No action required*

#### 3. **Case-3:** N-1-1/ N-2 of Anta-Phagi 1 & 2

*Action-1: One unit each at **Kawai**, Chhabra, Kalisindh and Chhabra SCTPS shall be tripped through SPS.*

*Action-2: Automatic load shedding of 750 MW in Rajasthan control area (to avoid overloading of WR-NR corridor as well as to avoid over drawl by Rajasthan)*

As per the grid event, 3 no. 765/400kV Anta ICTs have tripped for which system has not been planned nor SPS was enabled. However, given the possibility of such instances in future and the load flow after tripping of 3 no. 765/400kV Anta ICTs being similar to N-2 contingency of 765kV Anta-Phagi D/C line, the condition of N-3 contingency of 765/400kV Anta ICTs may be wired as Case-3 of already existing logic.

Further, SPS with monitoring loading of 400kV lines from Chhabra such as Chhabra-Hindaun/ Chhabra-Anta-Kota/ Chhabra-Bhilwara in real-time and tripping units/necessary backdown till 400kV lines loading is less than 850MW may be designed by RRVPNL and Rajasthan SLDC.

During last OCC meeting, RRVPNL representative stated that:

- Suggestion from NRLDC side shall be included in revised SPS for complex. Further, with LILO of 400kV Kalisindh-Anta one line at 400kV Sangod, few other changes are also to be done in existing SPS scheme.
- Complete revised scheme shall be discussed with Rajasthan SLDC and shall be put up for approval of OCC forum in next OCC meeting.

Adani representative submitted that after tripping of 765/400kV Anta all three ICTs, the flow on 765kV Anta-Phagi D/C lines would have reduced to zero. RRVPNL can also monitor loading of these two lines, and extend signal for SPS operation in case of tripping of 2no. Anta-Phagi lines or 3no.s 765/400kV Anta ICTs.

**RRVPNL and Rajasthan SLDC were asked to submit the revised SPS scheme. May please provide update.**

#### **b) Large deviation by Rajasthan state control area**

As per IEGC clause 44.3(c), State Load Despatch Centre in discharge of its functions under the Act and for stable, smooth and secure operation of the integrated grid, shall be responsible for balancing demand and supply to minimize Area Control Error (ACE) for the State. NRLDC has also been asking constituents to maintain load generation balance and messages are also regularly issued from Real time operators to the under-drawing/ over-drawing constituents. Further, NRLDC has been pro-actively carrying out hydro moderation of ISGS plants in addition to TRAS down support from NLDC to arrest high frequency.

However, it is being observed that Rajasthan state due to less state demand in March-April 2026 is heavily under drawing during the day-time when solar generation is high. Such large deviations from schedule and high-frequency operation of grid are a threat to the system security. There is need for further improvement in load generation balancing and maintaining drawl close to schedule by Rajasthan SLDC.

During 242 OCC meeting, NRLDC representative stated that Rajasthan state needs to carry out study for adopting a balanced energy mix strategy—combining renewable and conventional sources—to meet rising power demand and ensuring grid stability.

Rajasthan SLDC representative informed that:

- During high solar hours 10-15 hrs, even after backing down intrastate thermal generators to 55%, state is not able to utilise the solar and wind generation within the state.
- Power is being sold in DAM/RTM also, which is why state is getting negative schedule, still managing state portfolio is becoming very challenging.

NRLDC representative stated that:

- As can be seen from the plot attached here, Rajasthan is selling power in DAM/RTM and in case the power is not cleared, schedule of Rajasthan state shows sudden jerk as is visible at 11:30hrs and 12:00hrs of 29<sup>th</sup> March 2026.
- Bidding by Rajasthan in market should be such that there are no sudden jerks in schedule of state and state is able to manage their drawl close to the schedule.
- Rajasthan SLDC needs to expedite to develop a compensation mechanism similar to ISGS RE plants so that in case there is excess power in the grid, solar generators may be asked to back down with suitable compensation or variable charges as per existing PPA rate be provided to them making backing down financially viable.
- Through this way state can also save on the DSM charges payable by state to the pool. Immediate actions are required from Rajasthan side as the issuance of implementation of this mechanism shall take time.

MS NRPC also expressed concern and asked Rajasthan SLDC to take necessary actions to manage their drawl from the grid.

OCC forum asked Rajasthan SLDC to take necessary actions to manage their drawl from the grid including mechanisms for intrastate ancillary services.

However, even in the month of April 2026, continuous underdrawl by Rajasthan state especially during the day-time was being observed.

### **Rajasthan Deviation and grid frequency for April 2026**

Date	Deviation/UI [Overdrawl (+) Under drawl (-)] MUs	Max Under-drawl (in MW) during 09-15 hrs of day
01-04-2026	-9.34	1788
02-04-2026	-10.3	2139
06-04-2026	-7.10	3389
07-04-2026	-12.7	3633
08-04-2026	-10.6	3800
09-04-2026	-10.14	4279
11-04-2026	-4.3	3263
12-04-2026	-8.24	2602
13-04-2026	-7.12	4365
14-04-2026	-6.05	3421
15-04-2026	-3.5	3352
19-04-2026	-9.89	2647
30-04-2026	-10.15	978

***Rajasthan SLDC may please share actions being taken at their end.***

### **B.5. SPS for Champa-Kurukshetra HVDC**

B.5.1 There have been unplanned load loss that has taken place in two events related to simultaneous all poles outage of HVDC Champa-Kurukshetra namely,

- 16.5GW load loss event on 17.06.2024 due to tripping of Champa-Kurukshetra all poles carrying 4000MW with NR total load as 89.4GW
- 0.9GW load loss event on 09.06.2025 due to tripping of Champa-Kurukshetra all poles carrying 4300MW with NR total load as 82.6GW

B.5.2 The recommendations of Committee formed under Member (GO&D), CEA] to analyse 17<sup>th</sup> June 2024 are attached as **Annexure-B.III**. NRLDC has been continuously pursuing with NR states to take measures for reactive power support at local level so that reactive power exchange from ISTS is minimal. However, as per discussions held in OCC meetings, no major progress is being reported. There is huge MVAR drawl by NR states during May-Sep months.

B.5.3 Accordingly, in 233 OCC meeting it was agreed to implement a SPS scheme which can shed loads in case of simultaneous outage of all poles of HVDC Champa-

Kurukshetra. Since, identification and wiring of new load groups may be difficult for implementation in short time frame and further utilities have also expressed concerns in identifying further new feeders for UFR or other load shedding schemes, it was suggested to utilise the wired loads of existing Agra-Gwalior SPS scheme. Signal of multiple HVDC pole outage can be extended from Kurukshetra station to Agra SPS scheme and some load relief can be obtained. The automatic disconnection of wired loads post outage of multiple HVDC Poles at Kurukshetra may provide some relief and may help in containing the voltages till suitable static and dynamic compensation devices are commissioned.

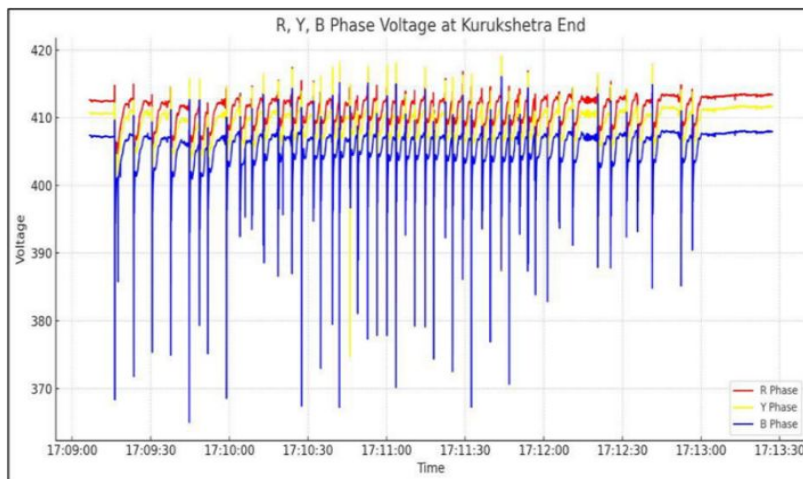
B.5.4 Based on discussion in 240 OCC meeting, following tentative logics for SPS were agreed:

- Voltage in all 3-phases at Kurukshetra fall below 380kV and more than 50kV for 250ms: Shed load in Groups C and D
- Voltage in all 3-phases at Kurukshetra fall below 360kV and more than 50kV for 250ms: Shed load in all Groups

(Time delay increased considering LBB protection timing)

Voltage >50kV is being proposed so that SPS does not operate in case of any CVT data error.

Moreover, it was observed that bus voltages at Kurukshetra were reaching below 380kV during frequent commutation failures observed on 21.05.2025.



B.5.5 Accordingly, it is important that SPS logic resets immediately, so that in case of multiple voltage dip and recovery events, any maloperation of SPS may be avoided.

B.5.6 During 241 OCC meeting, OCC forum asked all utilities to provide actions taken at their end in compliance to recommendations of MoP Committee constituted under Member (GO&D), CEA to analyse 17th June 2024. OCC forum approved the proposed SPS logic and asked POWERGRID to implement it at the earliest.

B.5.7 During 242 OCC meeting,

- POWERGRID representative stated that DTPC cards of old make are not available, and it is being arranged as the signal needs to be transferred from Kurukshetra to Dadri for implementation of SPS.
- NRLDC representative stated that POWERGRID may arrange the DTPC cards and check for its availability across other regions such as SR, WR, ER, NER also considering the importance of SPS implementation.

***POWERGRID to provide present implementation status of SPS. OCC members may discuss on carrying out mock testing exercise of SPS. NR states may share their preparedness for avoiding low voltage issued during Jun-Jul months.***

## **B.6. Minimising emergency shutdown for hotspot and other maintenance works during high demand period**

B.6.1 With the onset of the summer season, power demand in the Northern Region has increased significantly and is expected to rise further in the coming months. During this period, it has been observed that several utilities are availing frequent emergency shutdowns of transmission elements due to hotspot issues. A summary of such shutdowns during April 2026 is enclosed as **Annexure-B.IV**.

B.6.2 These unplanned outages, particularly during peak demand conditions, are adversely impacting the reliability and security of the grid and may lead to generation backing down and load curtailment.

B.6.3 In view of the above, the following points are proposed for discussion and necessary action by the constituents:

- a. Identification of Vulnerable Elements: Utilities may identify transmission lines and corridors prone to overloading or hotspot formation during high-demand summer conditions.
- b. Thermal Monitoring and Preventive Maintenance: Regular thermovision/thermal scanning of critical transmission elements may be carried out to detect potential hotspots in advance, followed by timely corrective actions.
- c. Maximizing System Availability: Utilities may ensure maximum availability of transmission elements by minimizing forced as well as planned outages during peak demand periods as due to high demand; system is already heavily loaded and providing shutdowns may require generation/load backing down or compromise with system reliability.
- d. Contingency Planning: Adequate contingency plans may be kept in place at control rooms to effectively manage sudden demand surges, equipment failures, and other unforeseen conditions.

***Members may deliberate and confirm the preparedness measures being undertaken in their respective systems to ensure reliable grid operation during the summer season.***

## **B.7. Update of Documents and List of feeders for physical regulations in line with IEGC:**

B.7.1 In line with Chapter 6 section 29.2.(b) of IEGC 2023, list of important grid elements in Northern region has to be compiled by NRLDC. Such elements shall be opened/closed only on instructions from NRLDC. It is requested to submit the list of all elements with details charged under their jurisdiction from 1.4.2025 till date including those expected to be commissioned till May 2026 so that the same could be included in the list.

B.7.2 It is requested to provide details before 20th May 2026. Same has also been requested vide email dated 06.05.2026 from NRLDC side.

Last updated document is available at following link:  
<https://nrlcdc.in/documents/Documents>

Any other feedback related to inclusion/deletion of elements may also be provided.

B.7.3 In compliance with Regulation 28.4 of Indian Electricity Grid Code-2023, Operating Procedure document would also be updated by NRLDC in mid-July 2026. Latest available document is available at  
<https://nrlcdc.in/documents/Documents>

B.7.4 Utilities are requested to provide their inputs/comments for any suggested changes in the document. It is requested that inputs/comments may be provided by 30th June 2026.

***Utilities may provide update.***

B.7.5 In the month of April, all India demand crossed 256GW during the day-time. It was observed that there was low frequency operation of grid during evening and night period due to the non-availability of sufficient generation on bar. To avoid this low frequency operation, measures are desired from SLDC side. Even after repeated messages if no action is observed from SLDC side and grid frequency is declining, NRLDC shall exercise the power and open radial feeders as per information available with NRLDC.

B.7.6 Utilities were requested in 240<sup>th</sup> OCC meeting in Feb 2026 also to update list of radial feeders which can be opened on the directions of NRLDC to regulate the demand. List of such radial feeders has been provided by respective utilities and is part of 'Operating Procedure of Northern Region'. Latest list of radial feeders is also attached as **Annexure-B.V**. Following are the attributes for such feeders:

- Feeders shall be radial in nature
- They should usually have substantial load flow so that reduction of drawl can be prominently noticed on opening of such lines.

B.7.7 The opening of feeders is generally an extreme step which shall be required in case of threat to grid security and non-adherence to RLDC instructions to manage over drawl by SLDCs/ DISCOMs. In such a case, every utility needs to take actions to support RLDC by following their instructions including opening of feeders.

B.7.8 SLDCs are once again requested to verify that

- List of feeders are actually radial in nature and are likely to provide the expected relief
- such feeders are not part of any other scheme such as any SPS, UFR or df/dt actuated shedding

B.7.9 Telemetry is to be ensured for all such feeders for monitoring in real time by SLDC/ NRLDC. States are also advised to take remedial measures for minimizing sustained over drawl at low frequencies as per the IEGC.

***Members may like to discuss.***

## **B.8. State-wise transmission constraints anticipated during high demand season of 2026**

B.8.1 Most of the NR states especially those lying in plain areas such as UP, Rajasthan, Punjab, Haryana, Delhi, Chandigarh U/T record their maximum demand met and maximum energy consumption during summer/monsoon months every year. With the increase in temperature and humidity, demand of Northern Region starts increasing. This year also it is expected that maximum demand met and energy consumption of Northern region and NR states will break many previous records.

B.8.2 During the high demand season, the transmission system in Northern region remains heavily loaded. Transmission constraints observed in the grid during high demand period are regularly being highlighted in OCC meetings. Same is also being submitted to CTUIL and CEA through quarterly operational feedback.

B.8.3 Even after several follow-ups, it is observed that progress of several transmission elements are not up to the mark and expeditious actions from transmission utilities are required so that minimal issues are observed at transmission level during the high demand season.

B.8.4 State-wise issues and measures required thereof are listed below.

### **a. Punjab:**

ATC/TTC limits of Punjab shall be enhanced from 10700/11200MW to 10950/11450MW upon commissioning of certain transmission elements.

During last meeting, Punjab Representative provided the estimated timelines for each element as follows:

- LILO of one circuit of 220kV Mansa- Bathinda Refinery at 400kV Behman Jassa: end of April 2026
- Commissioning of 400/220kV 4<sup>th</sup> 500MVA ICT at 400kV Rajpura (PSTCL) : end of May 2026
- Conductor augmentation of 220kV Patran- Patran (PTCL) D/C from Zebra to HTLS: end of May 2026
- Commissioning of additional 2 no. 220kV inter-connecting circuits from 400kV Ropar to 220kV GGSSTP/Ropar: end of April 2026
- Connectivity of 220kV Dhandari Kalan-Sherpur: Physical work has been completed. CTU approval pending for bay interchange at Sherpur substation. MS, NRPC enquired the reason for the delay in approval from CTU end. CTU

representative informed that it is a unique case and they will resolve it at the earliest.

***PSTCL and Punjab SLDC may provide update.***

**b. Haryana:**

Haryana State ATC/TTC has been enhanced by 800MW considering commissioning of certain transmission elements at both interstate as well as intrastate level. It may increase by approximately 700 MW to around 11,900/12,200 MW with commissioning of additional transmission elements. Accordingly,

POWERGRID may expedite commissioning of:

1. 400/220 kV, 500 MVA ICT-4 at Hisar (PG)
2. Reconductoring of 220kV Hissar(PG)-Hissar(IA) D/C

As interim measure SPS was planned for ICTs at Hisar (PG) which was not commissioned due to apprehension from Punjab end.

Forum has suggested PGCIL to take all necessary measures to commission ICT at Hisar (PG) which will further remove the need of the SPS.

***POWERGRID and HVPNL may provide update.***

**c. Delhi:**

DTL and Delhi SLDC to take necessary steps to ensure availability of gas generation at Pragati and Delhi GT plant. Further, to expedite commissioning of:

- 400/220kV 315MVA ICT-3 at Bamnoli (provided on loan from Bawana, POWERGRID owned ICT)

To suggest and implement measures for managing:

- Loading of 400kV Jhatikara-Bamnauli (loading beyond N-1 limit). ***Interim relief proposal has already been shared from NRLDC side, DTL may provide comments.***
- Loading of 400kV Jhatikara-Mundka D/C (loading beyond N-1 limit)
- Low voltages in Bamnauli/Tughlakabad/Dwarka area during high demand. Reviewing the healthiness of existing under-voltage relays at Bamnoli and Bawana substations.

POWERGRID to take necessary steps:

To expedite commissioning of:

- 765/400kV 1500MVA ICT-5 at Jhatikara

To ensure healthiness of SPS and review SPS settings in consultation with DTL, NRLDC & NRPC for:

- 400/220kV Mandola ICTs
- 400/220kV Maharaniabagh ICTs

***POWERGRID and DTL to provide update.***

**d. Uttar Pradesh:**

UPPTCL to expedite commissioning of:

- ICTs under prolonged outage at Obra (out since almost one year).
- SPS logic at 400/220kV Bareilly, Panki, Sahupuri and Jehta ICTs.

POWERGRID to expedite commissioning of

- New 500MVA ICT at Agra(PG) and Lucknow(PG)
- SPS healthiness at Agra(PG) and Lucknow(PG) till ICT commissioning.

***POWERGRID and UPPTCL to provide update.***

**e. Rajasthan:**

Following was informed from Rajasthan side in last meeting in March 2026 related to transmission planning and transmission related works under progress:

- 19 no. of 400/220kV ICTs were planned by RRVPNL to ensure N-1 non-compliance at 400/220kV level of which 6 nos. have been commissioned in recent past.
- 7 no. ICT are expected in short time frame. 400/220 kV, 500MVA ICT expected with timelines:
  - Bikaner and Ajmer: March 2026
  - Jodhpur and Merta: April 2026
  - Bhadla: May 2026
  - Ramgarh: June 2026

Of the above, 500MVA ICT-3 at Bikaner only has been commissioned

- For 2 no. ICTs, one each at 400/220kV Ratangarh and Chittorgarh, bidding is under progress
- New ICT at 400/220kV Deedwana is expected to be awarded to Adani as the S/s is implemented under PPP model
- Terminal equipment upgradation award work is under slow progress due to small nature of work.
- There is 12000 MVAR requirement of capacitors in Rajasthan network. RRVPNL is taking measures to ensure 6000MVA capacitors at transmission level. But the DISCOMs are not progressing to install balance 6000MVA capacitors at distribution level. Timelines for plan by RRVPNL to be shared in due course.

***RRVPNL to provide update on above points.***

## f. Uttarakhand:

As per discussions in OCC meetings, SPS design is not possible for 400/220kV Rishikesh ICTs due to cyclic nature and may operate on daily basis when intrastate hydro generation is not running. 400kV Koteshwar-Rishikesh D/C line was approved in 2015-16 and the demand of Uttarakhand was much lower during that period. When studies were done back then, no constraint at 400/220kV Rishikesh ICTs was envisaged.

In the last meetings it was discussed that CTUIL and PTCUL planning team may study loadings of line and ICTs in Rishikesh area in 2028-29-time frame and suggest temporary as well as permanent relief measures in consultation with CEA-PSPA - I and NRLDC.

**CTUIL and PTCUL may provide update.**

### B.8.5 Sharing of basecase data with NRLDC

As discussed in previous OCC meetings, most of the NR states except Ladakh and Chandigarh U/Ts are sharing basecase and ATC/TTC assessment with NRLDC.

OCC has advised all states to timely declare TTC/ATC for prospective months and revise the figures as per requirement. To encourage participation from SLDCs regarding basecase preparation and ATC/TTC assessment, two workshops have been conducted from Grid-India/NRLDC side. One workshop was conducted 31.08.2023 before the finalization of the procedure and another on 10.01.2024 to involve further participation from SLDCs. Subsequently, workshop was organized on 9-11 December 2024 at NRLDC for all SLDCs under initiative by FOLD.

Although all SLDCs are now involved in preparation of basecase & ATC/TTC assessment, it is seen that the timelines as per CERC approved procedure are not being followed and number of times basecases are not received from SLDC side.

Still, it is being observed that response from some SLDCs is not as per desired levels. Latest status till April 2026 is shown below:

December 2025 Mails							January 2026 Mails							February 2026 Mails						
ATC/TTC Declaration		Data Values		Basecases		Interconnection Studies	ATC/TTC Declaration		Data Values		Basecases		Interconnection Studies	ATC/TTC Declaration		Data Values		Basecases		Interconnection Studies
M-1 (Jan-26)	M-12 (Dec-25)	M-12 (Dec-25)	M-6 (June-26)	M-1 (Jan-26)	M-12 (Jan-27)	M-6 (July-26)	M-1 (Mar-26)	M-12 (Feb-27)	M-6 (August-26)											
CHD	No	No	No	No	No	No	CHD	No	No	No	No	No	CHD	No	No	No	No	No	No	
DEL	No	No	Yes	Yes	No	No	DEL	No	No	Yes	Yes	No	No	DEL	No	No	No	No	No	
HAR	Yes	Yes	Yes	Yes	No	No	HAR	Yes	Yes	Yes	Yes	No	No	HAR	Yes	Yes	Yes	Yes	Yes	
HP	No	No	No	No	No	No	HP	No	No	No	No	No	No	HP	Yes	Yes	Yes	Yes	Yes	
J&K	Yes	Yes	Yes	Yes	Yes	Yes	J&K	Yes	Yes	Yes	Yes	Yes	Yes	J&K	Yes	Yes	Yes	Yes	Yes	
PUN	Yes	Yes	Yes	Yes	Yes	Yes	PUN	Yes	Yes	Yes	Yes	Yes	Yes	PUN	Yes	Yes	Yes	Yes	Yes	
RAJ	Yes	Yes	No	No	No	No	RAJ	Submitted only Solar peak case	Submitted only Solar peak case	No	No	No	No	RAJ	No	No	No	No	No	
UP	Yes	Yes	Yes	Yes	Yes	Yes	UP	Yes	Yes	Yes	Yes	Yes	Yes	UP	Yes	Yes	Yes	Yes	Yes	
UTT	No	No	No	No	No	No	UTT	No	No	No	No	No	No	UTT	No	No	No	No	No	

March 2026 Mails							April 2026 Mails							May 2026 Mails						
ATC/TTC Declaration		Data Values		Basecases		Interconnection Studies	ATC/TTC Declaration		Data Values		Basecases		Interconnection Studies	ATC/TTC Declaration		Data Values		Basecases		Interconnection Studies
M-1 (Apr-26)	M-12 (Mar-27)	M-12 (Mar-27)	M-6 (Sep-26)	M-1 (May-26)	M-12 (Apr-27)	M-6 (Oct-26)	M-1 (June-26)	M-12 (May-27)	M-6 (Nov-26)											
CHD	No	No	No	No	No	No	CHD	No	No	No	No	No	CHD	No	No	No	No	No	No	
DEL	No	No	No	No	No	No	DEL	No	No	Yes	Yes	No	DEL	No	No	No	No	No	No	
HAR	Yes	Yes	Yes	Yes	Yes	Yes	HAR	Yes	Yes	Yes	Yes	Yes	HAR	Yes	Yes	Yes	Yes	Yes	Yes	
HP	No	No	No	No	No	No	HP	Yes	No	Yes	No	Yes	HP	Yes	Yes	Yes	Yes	Yes	Yes	
J&K	Yes	Yes	Yes	Yes	Yes	Yes	J&K	Yes	Yes	Yes	Yes	Yes	J&K	Yes	Yes	Yes	Yes	Yes	Yes	
PUN	Yes	Yes	Yes	Yes	Yes	Yes	PUN	Yes	Yes	Yes	Yes	Yes	PUN	Yes	Yes	Yes	Yes	Yes	Yes	
RAJ	Yes	Yes	No	No	No	No	RAJ	Yes	Yes	Yes	Yes	Yes	RAJ	Yes	Yes	Yes	Yes	Yes	Yes	
UP	Yes	Yes	Yes	Yes	Yes	Yes	UP	Yes	Yes	Yes	Yes	Yes	UP	Yes	Yes	Yes	Yes	Yes	Yes	
UTT	No	No	No	No	No	No	UTT	No	No	No	No	No	UTT	No	No	No	No	No	No	

Submitted after 8th of current month

Submitted in next month

As can be seen from the above table:

- HP, Delhi and Uttarakhand SLDCs are not regularly submitting PSSe basecases and need to regularly share the updated basecases

- Other states such as J&K, Punjab, Rajasthan and UP are regularly sharing the basecases but are submitting after the mandated timeline dates on few occasions.

**ATC/TTC limits of states for the month of June 2026 are attached as Annexure-B.VI. Utilities are requested to go through these limits and provide comments. All SLDCs are requested to share basecase as well as ATC/TTC assessment as per CERC approved procedure timelines. Members may please discuss.**

## B.9. Maximising availability of ERS in summer 2026

B.9.1 Several important transmission lines in the Northern Region remain under prolonged outage due to tower collapse in Apr-Jun months during windstorm events reported during the summer season. The extended non-availability of these transmission lines impacts grid reliability, load transfer capability, and in some cases RE evacuation.

B.9.2 As per the CERC order dated 3.7.20214 in Petition No. 174/MP/2013

Restoration Type	Condition	Timeline
ERS	< 3 towers damaged per line	12 days
	>=3 towers damaged per line	20 days
Permanent Tower	Plain terrain (with foundation damage)	60 days
	River bed location	Up to 8 months

B.9.3 Further, as per information available with NRLDC, following transmission lines are in service through ERS since long time. Accordingly, it is requested that concerned transmission utilities may plan for revival of transmission lines on normal towers so that ERS set is available for other contingencies that may happen in near future.

SL No	Name of the Transmission Line	Revival Date/Time through ERS	Expected Restoration to Permanent tower as per 242 OCC meeting
1	765 KV BAREILLY_2- LUCKNOW_2 (PG) CKT 1 (ERS tower at location 566)	21:13/20.09.25	10 <sup>th</sup> May 2026
2	765 KV KOTESHWAR-MEERUT (PG) CKT 1	19:38/03.09.25	15 <sup>th</sup> May 2026
	(ERS tower at location 142)		
3	400 KV RAMPUR HEP(SJ)- NALLAGARH(PG) (PG) CKT 1 & 2 (ERS tower at location number	19:48/15.09.25	10 <sup>th</sup> May 2026

	343)		
4	400 KV CHAMERA_2(NH)- KISHENPUR(PG) (PG) CKT.1 (ERS tower at location number 238)	22:10/18.09.25	30 <sup>th</sup> April 2026
5	220 KV SALAL(NH)- JAMMU(PDD) (PG) CKT 2 (ERS tower at location 48)	22:23/11.09.25	30 <sup>th</sup> April 2026
6	400 KV JALANDHAR(PG)- SAMBA(PG) (NRSS XXIX) CKT 1 (04 Nos ERS at tower location 235 to 238)	18:40/30.09.25	31 <sup>st</sup> May 2026
7	400 KV JALANDHAR(PG)- SAMBA(PG) (NRSS XXIX) CKT 2 (02 Nos ERS at tower location 236)	17:20/16.10.25	31 <sup>st</sup> May 2026
8	400 KV KOLDAM(NT)-PARBATI POOLING BANALA(PG) (PKTCL) CKT-1 (01 Nos ERS at tower location 42)	23:37/22.11.25	31 <sup>st</sup> May 2026
9	220 KV KISHENPUR(PG)- RAMBAN(PDD) (PDD) CKT-1 (03 Nos of ERS Towers (01 Nos ERS towers between KP-61 and KP-63, 02 Nos ERS towers between KP- 75 and KP-82))	10:03/19.12.25	30 <sup>th</sup> June 2026

B.9.4 To ensure timely revival of critical transmission infrastructure, immediate restoration plans should be finalized and shared by the respective transmission licensees. The use of ERS should be prioritized wherever feasible to enable interim restoration and minimize prolonged outages. Additionally, transmission licensees must focus on strengthening tower foundation designs, particularly in regions vulnerable to shifting sand dunes or weak soil conditions. Enhanced patrolling and preventive maintenance practices must also be adopted to proactively identify and address structural vulnerabilities.

B.9.5 Further, NRLDC has also analysed the outage of lines due to tower collapse during last 4 years and accordingly following locations are being suggested for ERS placement in NR:

Area where ERS can be located based on space availability	Justification	Name of substation	Line tower collapse instances involving the substation in last 4 years
Jammu area	Frequent landslide events requiring temporary or long duration TL outage	Kishenpur	11
		Mirbazar	4
		New Wanpoh	3
Western Rajasthan RE complex	Frequent outage of intrastate T/L in Western Rajasthan especially during dust storms	Bhadla(RRVPNL)	8
		Barmer	8
		Jaisalmer	6
		Bikaner	4
		Jodhpur	3
		Merta	3
Pooling substation in HP, Uttarakhand planned for hydro	Tower collapse events of AD Hydro lines as well as PGCIL lines from NJPC complex especially after heavy rains	Nallagarh	5
		Panchkula	3
NCR area considering important load center (especially in Haryana area)	High wind speed and tower collapse events of ATIL and NRSSXXXVI lines	SohnaRoad	4
		Bhiwani	4
	Many tower collapse events of Dadri-Harshvihar line of NTPC.	Dadri	3
		HarshVihar	3
Two locations across UP to cover major portion of state	Towe collapse of many intrastate T/L in past. Moreover due to central location, mobilisation of resources across UP state easier	Lucknow	4
		Many transmission lines near Agra, strategic location for keeping ERS.	Agra

**Members may share details of present locations where ERS are placed at both intrastate as well as interstate level. Concerned transmission utilities are requested to share plan for revival of transmission lines on normal towers so that ERS set is available for other contingencies that may happen in next few months due to dust storms/ wind storms.**

#### **B.10. Ensure implementation of code for Reactor/Line for opening/closing with due diligence**

- B.10.1 A number of switching operations are carried out in Western Rajasthan during morning hours when solar generation starts increasing, including switching of bus reactors. It was observed that on 01.05.26 at around 08:10 hrs, 765kV Bhadla(PG)-Bikaner(PG) Ckt-1 was opened without code, On enquiring, it was observed that Line Breaker was opened inadvertently instead of Breaker of Bus reactor, and line was charged immediately.
- B.10.2 POWERGRID had submitted that the operation was purely due to human error and was not intentional.
- B.10.3 In view of high demand period during Jun-Sep months, it is requested that all utilities ensure the implementation of NRLDC operational codes with due diligence for reliable and secure grid operation.
- B.10.4 Further, in view of increasing number of daily switching operations especially in Western Rajasthan area with growing RE generation and transmission network, POWERGRID and Rajasthan SLDC may plan to increase manpower in their control rooms over next few years.

**Members may please discuss.**

#### **B.11. DC declaration and no under-injection during peak hours by ISGS thermal plants**

B.11.1 Although the all-India peak demand of around 256 GW was successfully met on 25 April 2026 during solar hours owing to substantial contribution from renewable generation, significant operational challenges are being observed during non-solar/evening peak hours. With the sharp reduction in solar generation after sunset, the grid becomes increasingly dependent on thermal and hydro resources to meet the residual demand also leading to low frequency operation of grid on certain occasions. During these hours, market prices in the Day Ahead Market (DAM) and Real Time Market (RTM) are witnessing sharp spikes (constantly @10 rupees with very small ratio of cleared volume to bid volume, indicating tight supply conditions and scarcity of flexible generation reserves).

B.11.2 Generation by power generating stations in accordance with the declared capacity and adherence to the issued schedule is essential for ensuring secure and reliable grid operation. It has been observed that on several occasions, especially during peak demand periods, when stations were fully scheduled, there was continuous reduction in power generation/injection from certain stations [e.g., KTPS-2, Tanda (units 1 and 2), Rihand (units 1 and 2), etc.]. Details of these stations are enclosed as **Annexure-B.VII**.

B.11.3 During peak demand periods, the inability to supply power as per the schedule despite the declared capacity (DC) being available has an adverse impact on grid security and may create operational difficulties in grid management.

B.11.4 The same has also been communicated from NRLDC side to respective thermal plants vide letters dated

- 15 January 2026
- 12 February 2026
- 17 April 2026

B.11.5 Further, it has also been observed that on several occasions, the declared capacity (DC) during peak demand periods has been lower compared to off-peak demand periods.

B.11.6 Therefore, it is requested that all thermal plants may ensure power generation as per schedule especially during non-solar hours and may declare peak hour DC not less than off peak hour DC.

***Members may please discuss.***

## **B.12. Frequent tripping of 800kV HVDC Champa-Kurukshetra inter-regional link:**

B.12.1 During 242<sup>nd</sup> OCC meeting, NRLDC agenda point regarding frequent tripping of **800kV HVDC Champa-Kurukshetra inter-regional link** was discussed. NRLDC highlighted the frequent tripping of the link and requested POWERGRID to share the details of remedial action taken to avoid such tripping in future. In this regard, NRLDC also sent a letter communication dated 07.04.2026.

B.12.2 In reply to the NRLDC communication, POWERGRID submitted the details of remedial action taken / planned to be taken to avoid frequent tripping of **800kV HVDC Champa-Kurukshetra**. Details received from POWERGRID is attached as **Annexure-B.VIII**. Major points related to actions plan are as follows:

- a) Isolation of SAS network ring of bipoles from TCR ring to prevent hanging of BCUs related to associated with filter banks.
- b) To review the RPC functioning for auto switching of filters by M/s GE.

B.12.3 POWERGRID may share the status of above actions points.

B.12.4 Since 04.04.2026, four (10) numbers of additional tripping of **800kV HVDC Champa-Kurukshetra** have been reported. The list of the tripping is as follows:

S. No	Element Name	Outage		Reason / Remarks
		Date	Time	
1	800 KV HVDC Kurukshetra(PG) Pole-1	06-04-2026	19:07	transient CNAP protection latched
2	800 KV HVDC Kurukshetra(PG) Pole-4	11-04-2026	17:22	tripped due to commutation failure at Kurukshetra
3	800 KV HVDC Kurukshetra(PG) Pole-2	30-04-2026	08:34	DC line fault
4	800 KV HVDC Kurukshetra(PG) Pole-4	30-04-2026	08:34	DC line fault
5	800 KV HVDC Kurukshetra(PG) Pole-2	30-04-2026	18:36	DC line fault
6	800 KV HVDC Kurukshetra(PG) Pole-4	30-04-2026	18:36	DC line fault
7	800 KV HVDC Kurukshetra(PG) Pole-1	02-05-2026	16:31	Pole-1 & Pole-3 blocked at 16:31 hrs due to CLD operated at Champa end.
8	800 KV HVDC Kurukshetra(PG) Pole-3	02-05-2026	16:31	
9	800 KV HVDC Kurukshetra(PG) Pole-2	02-05-2026	16:51	due to issuance of CAT-B from parallel pole (i.e. Pole-4).
10	800 KV HVDC Kurukshetra(PG) Pole-4	02-05-2026	16:51	due to Over-current protection at Kurukshetra end

DR/EL & tripping details of trippings have not been received yet from POWERGRID.

Further, it is pertinent to mention that In view of this contingency, the Northern Regional import Available Transfer Capability (ATC) had to be reduced by 6600 MW on 30.04.2026 and 5800 MW on 02.05.2026.

B.12.5 It is also well known that, paddy season is going to start in Haryana & Punjab and in this context,  $\pm 800$  kV Champa–Kurukshetra HVDC (2 $\times$ 3000 MW Bipole) is the most critical inter-regional link to facilitate the transfer of power from the Western Region to the Northern Region. Hence, healthiness and availability of this link is very

important for ensuring the secure and stable grid operation, as well as for meeting the projected northern regional demand without transmission constraints during the upcoming months.

**POWERGRID(NR-1) is requested to elaborate on the issues and status of remedial measures taken/to be taken to avoid frequent tripping of this inter-regional link and also to share the status of “Short Term Measures” recommended by Technical Committee under CEA on “addressing Trippings of HVDC Champa-Kurukshetra link” (Report published on 23.02.2026)**

*Member may like to discuss.*

### **B.13. Multiple elements tripping at 765/400kV Agra(PG) on 30.04.2026:**

B.13.1 On 30.04.2026 at 06:28 hrs, multiple 765kV transmission elements tripped at 765/400kV Agra(PG). Details of the trippings are as follows:

<b>S. No</b>	<b>Name of Elements</b>	<b>Outage Time</b>	<b>Revival Time</b>	<b>Reason of tripping</b>
1.	765 KV Agra-Jhatikara (PG) Ckt-1	06:28 hrs	18:53 hrs	B-N fault in reclaim time
2.	765 KV Agra-Fatehpur (PG) Ckt-1		11:57 hrs	R-N fault with NO A/R operation
3.	765 KV Agra-Gwalior (PG) Ckt-1		11:36 hrs	R-N fault with NO A/R operation
4.	765 KV Agra-Gwalior (PG) Ckt-2		19:14 hrs	R-N fault in reclaim time
5.	765/400 kV 1500 MVA ICT 1 at Agra(PG)		10:16 hrs	B-N fault, differential protection operated
6.	240 MVAR Bus Reactor No 1 at 765KV Agra(PG)		15:10 hrs	Tripped along with 765 KV Agra-Gwalior (PG) Ckt-1, TEED protection
7.	240 MVAR Bus Reactor No 2 at 765KV Agra(PG)		09:44 hrs	Tripped along with 765 KV Agra-Jhatikara (PG) Ckt-1, TEED protection

B.13.2 As reported, multiple faults occurred due to lightning / thunderstorms during inclement weather conditions. During analysis of the event using PMU and DR, it was observed that A/R didn't operate in 765 KV Agra-Fatehpur (PG) Ckt-1 and 765 KV Agra-Gwalior (PG) Ckt-1 on R-N fault. Tripping report prepared at NRLDC is attached as **Annexure-B.IX**.

B.13.3 Being an important 765kV station connecting NR-WR through 765 KV Agra-Gwalior (PG) D/C, proper operation of protection system and its healthiness is crucial. On 30.04.2026, in view of contingency at

B.13.4 In view of above, POWERGRID is requested to share the following details:

- i. Reason of non-operation of A/R in 765 KV Agra-Fatehpur (PG) Ckt-1 and 765 KV Agra-Gwalior (PG) Ckt-1.
- ii. Remedial action taken to avoid such tripping event in future.

*Member may like to discuss.*

**B.14. Multiple element tripping events in Northern region in the month of April 2026:**

B.14.1 A total of **26** grid events occurred in the month of **April 2026** of which **15** are of GD-1 category, **08** are of GI-2 Category and **03** are of GI-1 Category. The tripping report of all the events has been issued from NRLDC. A list of all these events is attached as **Annexure-B.X**.

B.14.2 Maximum delayed clearance of fault observed in multiple element tripping event at 400/220kV Nakodar(PS) at 12:00 hrs on 16<sup>th</sup> April 2026 (As per PMU at Moga(PG), Y-N phase to earth fault converted into 3-ph fault with fault clearing time of 2520 ms (delayed).

B.14.3 Delayed clearance of fault (more than 100ms for 400kV and 160ms for 220kV system) observed in total **11** events out of **24** grid events occurred in the month. In **03** (no.) of grid events, there was no fault in the grid.

***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.***

B.14.4 It is observed that DR/EL & tripping report of most of the grid events are not being submitted as per timeline specified in IEGC 2023. Non availability to tripping details further hampers the grid event analysis at RLDC level.

**Members may take necessary preventive measures to avoid such grid incidents / disturbances in future and share the report of actions taken by respective utilities. Moreover, utilities may impress upon all concerned for providing the Preliminary Report, DR/EL & Detailed Report of the events to RLDC in line with the IEGC clause 37.2 (c) & (e).**

*Members may like to discuss.*

**B.15. Status of submission of DR/EL and tripping report of utilities for the month of April 2026:**

B.15.1 The status of receipt of DR/EL and tripping report of utilities for the month of **April 2026** is attached at **Annexure-B.XI**. It is to be noted that as per the IEGC provision under clause 37.2 (c), the tripping report along with DR/EL has to be furnished within 24 hrs of the occurrence of the event. However, it is evident from the submitted data that reporting status of RE stations, SLDC-HR, SLDC-PS, SLDC-J&K, SLDC-Delhi, INDIGRID, STERLITE, BBMB, POWERGRID, NTPC and RAPS is not satisfactory and needs improvement.

B.15.2 Members may please note and advise the concerned for timely submission of the information. It is requested that DR/EL of all the trippings shall be **uploaded on Web Based Tripping Monitoring System “<https://postda.nrlc.in/Default.aspx>”** within 24 hours of the events as per IEGC clause 37.2(c) and clause 15.3 of CEA grid standard. Apart from prints of DR outputs, the corresponding COMTRADE files (.cfg/.dat) may please also be submitted in tripping portal.

**Members may like to discuss.**

### **B.16. Frequency response performance for the reportable events of month of April 2026:**

B.16.1 During the month of **April 2026, 1 reportable event** was notified by NLDC for which FRC/ FRP need to be calculated. Description of the event is as given in the Table below:

S. No.	Event Date	Time (In hrs.)	Event Description	Starting Frequency (in Hz)	Nadir Frequency (in Hz)	End Frequency (in Hz)	$\Delta f(\text{Hz})$	NR FRP during the event
1	13-Apr-26	11:00 hrs	As reported, at 11:00 hrs on 13.04.2026, an event of RE generation loss of 1270 MW occurred in NR RE generation complex. Hence generation loss of 1270 MW has been considered for FRC/FRP Calculation.	50.145	49.978	50.086	-0.059	0.57

As per IEGC 2023 Clause 30.8, "The primary response of the generating units shall be verified by the Load Despatch Centres (LDCs) during grid events. The concerned generating station shall furnish the requisite data to the LDCs within two days of notification of reportable event by the NLDC."

B.16.2 As per IEGC 2023 Clause 30.10.(n), "Each control area shall assess its frequency response characteristics and share the assessment with the concerned RLDC

along with high resolution data of at least 1 (one) second for regional entity generating stations and energy storage systems and 10 (ten) seconds for the state control area."

B.16.3 As per sub-clause (a(v)) of clause (9) of IEGC 2023 Annexure-2, "All the SLDCs shall work out FRC for all the intra-state entities (for events indicated by the Regional Load Despatch Centres) based on the HDR available at their respective SLDCs and submit the same to respective RLDC within six (6) working days after the event. (Format as per Table-B)."

B.16.4 As per sub-clause (a(vi)) of clause (9) of IEGC 2023 Annexure-2, "All regional entity generating stations shall also assess the FRC for their respective stations and submit the same to respective RLDC within six (6) working days. (Format as per Table-B). The high-resolution data (1 second or better resolution) of active power generation and frequency shall also be shared with RLDC."

**Members are requested to share the FRC/FRP computation of their respective control area as per the timeline specified in IEGC 2023.**

B.16.5 Frequency Response Performance (FRP) of generating stations for each reportable event are calculated based on the submitted high resolution data from generating stations. However, the generating stations for which data is not received **till 08<sup>th</sup> May 2026**, FRC/FRP as per NRLDC HDR data is used for computation of Average Monthly Frequency Response Performance, Beta 'β' for Generating Stations.

**From the FRP data, it is observed that FRP of many of the control areas are not satisfactory. Therefore, it is requested to review the FRC/FRP, governor actions of your respective control area, necessary actions may be taken for improvement in the FRC/FRP.**

B.16.6 Status of details received from constituents and FRP values as considered for the event of **April 2026** are attached as **Annexure-B.XII**.

B.16.7 ISGS were requested to confirm whether FGMO as per IEGC 2023 has been implemented at their respective stations or not. Updated list on the basis of details received is as follows:

Sl. No.	Entity	Governor Mode (FGMO as per IEGC 2023) Yes or No	Droop setting (%)	Remarks (if any)
1	Dadri -1 (TH)	Yes	6%	
2	Dadri -2 (TH)	Yes	6%	
3	Jhajjar (TH)	Yes	5%	
4	Rihand-1 (TH)	Yes	5%	
5	Rihand-2 (TH)	Yes	5%	
6	Rihand-3 (TH)	Yes	5%	
7	Shree Cement (TH)			
8	Singrauli (TH)	Yes	5%	
9	Tanda-2 (TH)	Yes	6%	
10	Unchahar-I (TH)	Yes	5%	
11	Unchahar-II (TH)	Yes	5%	
12	Unchahar-III (TH)	Yes	5%	

13	Unchahar-IV (TH)	Yes	5%	
14	Anta (G)			
15	Auraiya (G)			
16	Dadri (G)			
17	AD Hydro (H)	Yes	4%	
18	Bairasiul (H)	Yes	4%	
19	Bhakra (H)			
20	Budhil (H)			
21	Chamera-1 (H)	Yes	5%	
22	Chamera-2 (H)	Yes	5%	
23	Chamera-3 (H)	Yes	4%	
24	Dehar (H)			
25	Dhauliganga (H)	Yes	5%	
26	Dulhasti (H)	Yes	5%	
27	Karcham (H)	Yes	5%	
28	Kishenganga	Yes	4%	
29	Koldam (H)	Yes	9%	
30	Koteshwar (H)			
31	Malana-2 (H)			
32	Nathpa Jhakri (H)	Yes	9%	
33	Parbati-2 (H)	Yes	4%	
34	Parbati-3 (H)	Yes	4%	
35	Pong (H)			
36	Rampur (H)			
37	Sainj (H)			
38	Salal (H)	Yes	5%	
39	Sewa-II (H)	Yes	4%	
40	Singoli Bhatwari (H)			
41	Sorang (H)	No	4%	ROR, no storage
42	Tanakpur (H)	Yes	4%	
43	Tehri (H)	Yes	4%	
44	Uri-1 (H)	Yes	6%	
45	Uri-2 (H)	Yes	5%	

B.16.8 During 242<sup>nd</sup> OCC meeting, N.Jhakri was requested to keep droop in the range of 4-6% so that primary frequency response (governor response) is fast during any grid event. N.Jhakri HEP is requested to apprise the forum about the present status in this regard.

B.16.9 Constituents are requested to share the details of the droop w.r.t. their generating stations.

**Members are requested to analyse the frequency response of their respective control area and share the FRC/FRP analysis of generating stations along with unit wise 01 sec data as per timeline for ensuring IEGC compliance.**

**Members may like to discuss.**

## **B.17. Mock trial run and testing of black start facilities at generating stations in Northern Region**

कार्यसूची: उ.क्षे. वि. स. की प्रचालन समन्वय उप-समिति की 243<sup>वीं</sup> बैठक

B.17.1 As per Indian Electricity Grid Code (IEGC) clause 34.3

*“Detailed procedures for restoration post partial and total blackout of each user system within a region shall be prepared by the concerned user in coordination with the concerned SLDC, RLDC or NLDC, as the case may be. The concerned user shall review the procedure every year and update the same. **The user shall carry out a mock trial run of the procedure for different sub-systems including black-start of generating units along with grid forming capability of inverter based generating station and VSC based HVDC black-start support at least once a year under intimation to the concerned SLDC and RLDC.** Diesel generator sets and other standalone auxiliary supply source to be used for black start shall be tested on a weekly basis and the user shall send the test reports to the concerned SLDC, RLDC and NLDC on a quarterly basis”.*

B.17.2 Hydro and gas-based plants are capable of self-black-start. Conducting periodic mock black start exercises are extremely important to ensure the healthiness of black start facilities and also to build awareness as well as confidence among the system operators.

B.17.3 In view of above, regional entity generating stations shall conduct the dead bus charging of their units on rotation basis as per availability of schedule under intimation to the NRLDC. Testing of Diesel generator sets and other standalone auxiliary supply source to be used for black start shall also be done on a weekly basis. SLDC shall also ensure the same in their respective control area. This will ensure the healthiness of black start facility at generating stations. Further, NRLDC shall coordinate with the ISGS and states to conduct the mock black start exercise of subsystems.

B.17.4 Therefore, regional entity generating stations and SLDCs are requested to share the annual schedule plan for conducting dead bus charging / mock black start exercise of generating stations /sub-systems during 2026-27. The present status of mock black start of generating units is attached as **Annexure-B.XIII**.

B.17.5 In view of above, ISGS and SLDCs are requested to take following actions:

- **To share the tentative schedule of mock black start exercise of generating stations in their respective control area for year 2026-27.**
- **To conduct dead bus charging after self-starting the generating station if schedule with load is not available.**
- **To share the test report of mock black start exercise conducted along with weekly DG testing on monthly/quarterly basis.**

***Members may like to discuss.***

Status of action taken on decision of 242<sup>nd</sup> OCC meeting of NRPC

S.N.	Agenda	Decision of 242 <sup>nd</sup> OCC meeting of NRPC	Status of action taken
1.	A.13. Requirement of 240MVAR line reactor (Non Switchable) at Phagi end after LILO of 765kV Phagi-Gwalior D/c line at Dausa S/s (Agenda by CTUIL)	OCC forum requested RVPNL to confirm the status of space availability for converting the 765 kV, 240 MVAR line reactor at the 765 kV Phagi Substation from "non-switchable" to "switchable."  Further, the feasibility of relocating the line reactor for use as a bus reactor at Phagi Substation may also be explored.	RVPNL to update status.
2.	A.21. Augmentation of Transformation capacity at 400 KV Sikar-1 substation by 400/220 KV 500 MVA 4th ICT along with associated bay (Agenda by PGCIL)	OCC forum directed PGCIL to confirm the ownership of the bays so that the matter may be deliberated in the next OCC meeting.	PGCIL to update status.
3.	A.22. High loading on 400 kV Jhatikara–Bamnauli line during the peak demand period in the summer months (Agenda by NRPC Secretariat)	OCC forum requested PGCIL and Delhi SLDC to inform the loading limits of the lines to NRLDC so that NRLDC could review its study, and the matter could be further deliberated to arrive at possible solutions.	PGCIL and Delhi SLDC to update status.
4.	A.24. Proposal for Installation of STATCOM / Filter Bank for Voltage Control at Kurukshetra Substation or Nearby Station (Agenda by PGCIL)	OCC forum requested CTUIL to carry out a study for voltage control at HVDC Kurukshetra substation and suggest a feasible solution in the next OCC meeting for further deliberations.	CTUIL to update status.
5.	A.25. Proposal for suitable Rated Dynamic Reactive Power Compensation at 400 kV Bhiwadi Substation (Agenda by PGCIL)	OCC forum requested CTUIL to carry out a study for voltage control at all three HVDC substations i.e. Kurukshetra, Bhiwadi and Bhadla-III and suggest a feasible solution in the next OCC meeting for further deliberations.	CTUIL to update status.

**Follow up issues from previous OCC meetings**

Annexure-A. II

1	Down Stream network by State utilities from ISTS Station	Augmentation of transformation capacity in various existing substations, addition of new substations along with line bays as well as requirement of line bays by STUs for downstream network are under implementation at various locations in Northern Region. Further, 220kV bays have already been commissioned at various substations in NR. For its utilization, downstream 220kV system needs to be commissioned.	List of downstream networks is enclosed in <b>Annexure-A. II. I</b> .																																								
2	Progress of installing new capacitors and repair of defective capacitors	Information regarding installation of new capacitors and repair of defective capacitors is to be submitted to NRPC Secretariat.	<p>Data upto following months, received from various states / UTs:</p> <table border="1" data-bbox="889 766 1437 1024"> <tr><td>⊙ CHANDIGARH</td><td>Sep-2019</td></tr> <tr><td>⊙ DELHI</td><td>Feb-2026</td></tr> <tr><td>⊙ HARYANA</td><td>Jan-2026</td></tr> <tr><td>⊙ HP</td><td>Mar-2026</td></tr> <tr><td>⊙ J&amp;K and LADAKH</td><td>Not Available</td></tr> <tr><td>⊙ PUNJAB</td><td>Mar-2026</td></tr> <tr><td>⊙ RAJASTHAN</td><td>Dec-2025</td></tr> <tr><td>⊙ UP</td><td>May-2026</td></tr> <tr><td>⊙ UTTARAKHAND</td><td>Apr-2026</td></tr> </table> <p>All States/UTs are requested to update status on monthly basis.</p>	⊙ CHANDIGARH	Sep-2019	⊙ DELHI	Feb-2026	⊙ HARYANA	Jan-2026	⊙ HP	Mar-2026	⊙ J&K and LADAKH	Not Available	⊙ PUNJAB	Mar-2026	⊙ RAJASTHAN	Dec-2025	⊙ UP	May-2026	⊙ UTTARAKHAND	Apr-2026																						
⊙ CHANDIGARH	Sep-2019																																										
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3	Healthiness of defence mechanism: Self-certification	<p>Report of mock exercise for healthiness of UFRs carried out by utilities themselves on quarterly basis is to be submitted to NRPC Secretariat and NRLDC. All utilities were advised to certify specifically, in the report that “All the UFRs are checked and found functional”.</p> <p>In compliance of NPC decision, NR states/constituents agreed to raise the AUFR settings by 0.2 Hz in 47th TCC/49th NRPC meetings.</p>	<p>Data upto following months, received from various states / UTs:</p> <table border="1" data-bbox="889 1165 1437 1444"> <tr><td>⊙ CHANDIGARH</td><td>Not Available</td></tr> <tr><td>⊙ DELHI</td><td>Mar-2026</td></tr> <tr><td>⊙ HARYANA</td><td>Mar-2026</td></tr> <tr><td>⊙ HP</td><td>Jan-2026</td></tr> <tr><td>⊙ J&amp;K and LADAKH</td><td>Not Available</td></tr> <tr><td>⊙ PUNJAB</td><td>Dec-2025</td></tr> <tr><td>⊙ RAJASTHAN</td><td>Dec-2025</td></tr> <tr><td>⊙ UP</td><td>Mar-2026</td></tr> <tr><td>⊙ UTTARAKHAND</td><td>Mar-2026</td></tr> <tr><td>⊙ BBMB</td><td>Dec-2025</td></tr> </table> <p>All States/UTs are requested to update status for healthiness of UFRs on monthly basis for islanding schemes and on quarterly basis for the rest.</p> <p>Status:</p> <table border="1" data-bbox="889 1606 1437 1900"> <tr><td>⊙ CHANDIGARH</td><td>Not Available</td></tr> <tr><td>⊙ DELHI</td><td>Increased</td></tr> <tr><td>⊙ HARYANA</td><td>Increased</td></tr> <tr><td>⊙ HP</td><td>Increased</td></tr> <tr><td>⊙ J&amp;K and LADAKH</td><td>Increased</td></tr> <tr><td>⊙ PUNJAB</td><td>Increased</td></tr> <tr><td>⊙ RAJASTHAN</td><td>Increased</td></tr> <tr><td>⊙ UP</td><td>Increased</td></tr> <tr><td>⊙ UTTARAKHAND</td><td>Increased</td></tr> <tr><td>⊙ BBMB</td><td>Increased</td></tr> </table>	⊙ CHANDIGARH	Not Available	⊙ DELHI	Mar-2026	⊙ HARYANA	Mar-2026	⊙ HP	Jan-2026	⊙ J&K and LADAKH	Not Available	⊙ PUNJAB	Dec-2025	⊙ RAJASTHAN	Dec-2025	⊙ UP	Mar-2026	⊙ UTTARAKHAND	Mar-2026	⊙ BBMB	Dec-2025	⊙ CHANDIGARH	Not Available	⊙ DELHI	Increased	⊙ HARYANA	Increased	⊙ HP	Increased	⊙ J&K and LADAKH	Increased	⊙ PUNJAB	Increased	⊙ RAJASTHAN	Increased	⊙ UP	Increased	⊙ UTTARAKHAND	Increased	⊙ BBMB	Increased
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4	Status of Automatic Demand Management System in NR states/UT's	The status of ADMS implementation in NR, which is mandated in clause 5.4.2 (d) of IEGC by SLDC/SEB/DISCOMs is presented in the following table:	<p>The status of ADMS implementation in NR is enclosed in <b>Annexure-A.II.II.</b></p> <table border="1"> <tr> <td>⊙ DELHI</td> <td>Scheme Implemented but operated in manual mode.</td> </tr> <tr> <td>⊙ HARYANA</td> <td>Scheme not implemented</td> </tr> <tr> <td>⊙ HP</td> <td>Scheme not implemented</td> </tr> <tr> <td>⊙ PUNJAB</td> <td>Scheme not implemented</td> </tr> <tr> <td>⊙ RAJASTHAN</td> <td>Under implementation.</td> </tr> <tr> <td>⊙ UP</td> <td>Scheme implemented by NPCIL only</td> </tr> <tr> <td>⊙ UTTARAKHAND</td> <td>Scheme not implemented</td> </tr> </table>	⊙ DELHI	Scheme Implemented but operated in manual mode.	⊙ HARYANA	Scheme not implemented	⊙ HP	Scheme not implemented	⊙ PUNJAB	Scheme not implemented	⊙ RAJASTHAN	Under implementation.	⊙ UP	Scheme implemented by NPCIL only	⊙ UTTARAKHAND	Scheme not implemented																				
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5	Status of availability of ERS towers in NR	As per the decision of 68th NRPC and 211th OCC meeting, ERS availability monitoring is being taken as rolling/follow-up agenda in OCC meetings for regular monitoring of ERS under different utilities in Northern region.	As per the information received from different utilities in Northern region, updated status of availability of ERS towers in Northern Region attached as <b>Annexure-A.II.III.</b>																																		
6	Submission of breakup of Energy Consumption by the states	<p>All states/UTs are requested to submit the requisite data as per the billed data information in the format given as under:</p> <table border="1"> <thead> <tr> <th>Category→</th> <th>Consumption by Domestic Loads</th> <th>Consumption by Commercial Loads</th> <th>Consumption by Agricultural Loads</th> <th>Consumption by Industrial Loads</th> <th>Traction supply load</th> <th>Miscellaneous / Others</th> </tr> </thead> <tbody> <tr> <td>&lt;Month&gt;</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Category→	Consumption by Domestic Loads	Consumption by Commercial Loads	Consumption by Agricultural Loads	Consumption by Industrial Loads	Traction supply load	Miscellaneous / Others	<Month>							<p>Status of the information submission (month) from states / utilities is as under:</p> <table border="1"> <thead> <tr> <th>State / UT</th> <th>Upto</th> </tr> </thead> <tbody> <tr> <td>⊙ CHANDIGARH</td> <td>Not Submitted</td> </tr> <tr> <td>⊙ DELHI</td> <td>Oct-25</td> </tr> <tr> <td>⊙ HARYANA</td> <td>Feb-26</td> </tr> <tr> <td>⊙ HP</td> <td>Jan-26</td> </tr> <tr> <td>⊙ J&amp;K and LADAKH</td> <td>JPDCI- Mar' 24 KPDCL- Not Submitted</td> </tr> <tr> <td>⊙ PUNJAB</td> <td>Jan-26</td> </tr> <tr> <td>⊙ RAJASTHAN</td> <td>Aug-25</td> </tr> <tr> <td>⊙ UP</td> <td>Jan-26</td> </tr> <tr> <td>⊙ UTTARAKHAND</td> <td>Oct-25</td> </tr> </tbody> </table> <p>Chandigarh is requested to submit the requisite data w.e.f. April 2018 as per the billed data information in the given format</p>	State / UT	Upto	⊙ CHANDIGARH	Not Submitted	⊙ DELHI	Oct-25	⊙ HARYANA	Feb-26	⊙ HP	Jan-26	⊙ J&K and LADAKH	JPDCI- Mar' 24 KPDCL- Not Submitted	⊙ PUNJAB	Jan-26	⊙ RAJASTHAN	Aug-25	⊙ UP	Jan-26	⊙ UTTARAKHAND	Oct-25
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9	Reactive compensation at 220 kV/ 400 kV level at 5 substations			
	State / Utility	Substation	Reactor	Status
i	DTL	Mundka	1x125 MVAR at 400 kV & 1x25 MVAR at 220 kV	Bay work completed on 25.03.2023. Reactor part tender is dropped and at present same is under revision.
ii	DTL	Bamnauli	2x25 MVAR at 220 kV	Bay work completed on 25.03.2023. Reactor part tender is dropped and at present same is under revision.
iii	DTL	Indraprastha	2x25 MVAR at 220 kV	Bay work completed on 07.11.2023. Reactor part tender is dropped and at present same is under revision.
iv	DTL	Electric Lane	1x50 MVAR at 220 kV	Under Re-tendering due to Single Bid
v	PTCUL	Kashipur	1x125 MVAR at 400 kV	The Letter of Award for "Procurement of 125 MVAR Reactor, Online DGA, ODS, NIFPS along with its accessories at 400 KV Sub-station Kashipur" against Tender Specification no. PTCUL/E-Tender/C&P-II/SS-12/2024-25 has been issued to M/s Bharat Heavy Electricals Limited, New Delhi on 26.06.2025.

## 1. Down Stream network by State utilities from ISTS Station:

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
1	400/220kV, 3x315 MVA Samba	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• Network to be planned for 2 bays.	-	02 No. of bays shall be utilized for LILO-II of 220kV Jatwal-Bishnah Transmission Line, the work of which is expected to begin on 16th July 2025. Updated in 233rd OCC by JKPTCL.
2	400/220kV, 2x315 MVA New Wanpoh	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• 220 kV New Wanpoh - Alusteng D/c Line	Mar'25	02 No. of bays are to be utilized for connecting 220kV New Wanpoh-Alusteng D/c Line. RoW issues persisting; At present new-wanpoh-mirbazar 5km and harwan-alstung 16km have been completed, expected date of completion is Mar 2025 subject to availability of funds and resolving of RoW issues), Updated in 214th OCC by JKPTCL.
				• 220 kV New Wanpoh - Mattan D/c Line	End of 2024	02 No. of bays are to be utilized for connecting 220kV New Wanpoh-Mattan D/c Line. The funding source for the project is being identified and the project is expected to be completed by ending 2024. Updated in 204th OCC by JKPTCL.
3	400/220kV, 2x315 MVA Amargarh	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• 220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri	End of 2024	02 No. of bays are proposed to be utilized for connecting 220/132 kV GSS Loolipora. The funding source for the project is being identified and the project is expected to be completed by ending 2024. Updated in 204th OCC by JKPTCL.
4	400/220kV, 2x500 MVA Kurukshetra (GIS)	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• 220kV Bhadson (Kurukshetra) – Ramana Ramani D/c line	Commissioned	Updated by HVPNL in 235th OCC.
5	400/220 kV, 2x315 MVA Dehradun	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• Network to be planned for 4 bays	-	PTCUL to update the status.
6	Shahjahanpur, 2x315 MVA 400/220 kV	Commissioned: 6 Approved/Under Implementation:1	Utilized: 7	• 220 kV D/C Shahjahanpur (PG) - Gola line	Commissioned	Energization date: 26.10.2023 updated by UPPTCL in 215th OCC
				• LILO of Sitapur – Shahjahanpur 220 kV SC line at Shahjahanpur (PG)	Commissioned	Energization date: 25.02.2022 updated by UPPTCL in 196th OCC
7	Hamirpur 400/220 kV Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• 220 kV Hamirpur-Dehan D/c line	Commissioned	HPPTCL has commissioned the Planned 220kV Dehan-Hamirpur TL utilizing 2 No. 220kV Bays.Commissioned date: 09.06.2022. Updated in 198th OCC by HPPTCL
				• Network to be planned for 4 bays	-	HPPTCL to update the status.
8	Sikar 400/220kV, 1x 315 MVA S/s	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• LILO of 220 kV Sikar (220 kV GSS)-Dhod S/c line at Sikar (PG)	Commissioned	LILO of 220 kV S/C Sikar-Dhod line at 400 kV GSS PGCIL, Sikar has been charged on dt. 31.03.2022
				• Network to be planned for 2 bays.	-	Against the 3rd ICT at 400 kV GSS Sikar, only 2 bays were constructed and same has been utilized by RVPN by constructing LILO of 220 kV S/C Sikar – Dhod line as updated by RVPNL in 195th OCC
9	Bhiwani 400/220kV S/s	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• 220 kV D/C line Bhiwani (PG) – Bhiwani (HVPNL) line	Commissioned	Updated in 202nd OCC by HVPNL
				• 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line.	Commissioned	Ckt-1 charged at 22:48 hrs dated 30.03.26 Ckt-2 charged at 18:45 hrs dated 29.03.26
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	Dec'26	The work is in progress after resolution of RoW. The status of work is as under:- Foundation=76/129 Nos. Erection=56/129 Stringing = 0/29 Km
10	Jind 400/220kV S/s	Commissioned: 4 Approved:4 Total: 8	Utilized: 4 Unutilized: 0	• LILO of both circuits of 220 kV Jind HVPNL to PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind) with 0.5 sq inch ACSR conductor	Mar'26	220kV Jind PG - Jind D/C line commissioned. Further, 220kV Jind PG - Nain (HVPNL) D/C will be commissioned after completion of new 220kV Substation Nain (HVPNL) which is under construction. And likely to be commissioned by 30.06.2026.
11	400/220kV Tughlakabad GIS	Commissioned: 6 Under Implementation: 4	Utilized: 6 Unutilized: 0	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line – March 2023.	Commissioned	Updated in 216th OCC by DTL
				• Masjid Mor – Tughlakabad 220kV D/c line.	Commissioned	Updated in 216th OCC by DTL
12	400/220kV Kala Amb GIS (TBCB)	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 2 Under Implementation:2	• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Kala Amb S/s	Commissioned	Energization date: 31.05.2024 updated by HPPTCL in 220th OCC
				• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Giri S/s	-	Tendering process is yet to be started.Updated in 219th OCC by HPPTCL
				• Network to be planned for 2 bays	-	HPPTCL to update the status.
13	400/220kV Kadarpur Sub-station	Commissioned: 8 Total: 8	Utilized: 0 Unutilized: 8	• D/C line Kadarpur - Pali D/C line Kadarpur - Sec-65	Commissioned	Updated in 232nd OCC by HVPNL Status:- A-formats for FTC of line submitted on FTC portal of NRLDC on dated 09.04.25.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
14	400/220kV Sohna Road Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• LILO of both circuits of 220kV D/c Sohna-Rangla Rajpur at Roj Ka Meo line at 400kV Sohna Road	Oct'26	Line work completed, Substation is under construction
				• LILO of both circuits of 220kV D/c Badshahpur-Sec77 line at 400kV Sohna Road	-	The matter is subjudice in Hon'ble Punjab & Haryana High court, Chandigarh Updated in 228th OCC by HVPNL. <b>Status:-</b> Earlier 02 nos 220 kV line bays were to be utilized for the 220 kV GIS S/Stn. Sec-77, Gurugram but due to denotification of land of the 220 kV GIS S/Stn. Sec-77 the said substation is now going to be dismantled and a new substation is proposed at Sec-75A, Gurugram. Now, these 02 no. 220 kV line bays may be utilized at 220 kV GIS S/Stn Sec-75A, Gurugram.
15	400/220kV Prithla Sub-station	Commissioned: 8 Approved: 2 Total: 10	Utilized: 4 Unutilized: 4 Under Implementation:2	• 220kV D/C line from Prithla to Harfali with LILO of one circuit at 220kV Meerpur Kurali	Sep'26	Contract awarded on 8.08.23 to M/s Skipper with completion in December 25.  220 KV D/C Prithla - Harfali line: Foundation: 80 / 83 Erection: 46/83 Stringing of conductor: 0 / 13.724 Km.  LILO at 220 KV S/Stn Meerpur Kurali: Foundation: 137 / 143 Erection: 74/143 Stringing of conductor: 0 / 30.896 Km
				• LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line	Commissioned	Energization date: 31.12.2021. Updated in 198th OCC by HVPNL
				• 220kV D/C for Sector78, Faridabad	Jul'26	Work awarded on 03-Aug-2021 to M/s Skipper Limited Contractual completion date: 01.03.2023 Foundation: 168/169 Nos. Erection: 168/169 Nos. Stringing: 20.083/31.358 KM.  Stringing work is in progress
				• Prithla - Sector 89 Faridabad 220kV D/c line	Jul'26	Foundation- 20/23 Erection-18/23 Stringing-1.500/3.89 KM
16	400/220kV Sonapat Sub-station	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 2 Unutilized: 4 Under Implementation:2	• LILO of both circuits of 220kV Samalkha - Mohana line at Sonapat	Commissioned	Commissioned as updated by HVPNL in 233rd OCC
				• Sonapat - HSIISC Rai 220kV D/c line	Commissioned	Energization date: 31.05.2024 updated by HVPNL in 220th OCC
				• Sonapat - Kharkhoda Pocket A 220kV D/c line	Commissioned	Commissioned on dated 02.12.2025
17	400/220kV Neemrana Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• LILO of Bhiwadi - Neemrana 220kV S/c line at Neemrana (PG)	-	Work is under progres. Stub Setting: 14/2017. Permission for Highway is awaited from concerned department as updated in 218th OCC by RVPNL.
18	400/220kV Kotputli Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Kotputli - Pathreda 220kV D/c line	-	Date of bid opening has been extended up to 30.04.2024 as updated in 218th OCC by RVPNL.
19	400/220kV Jalandhar Sub-station	Commissioned: 10 Total: 10	Utilized: 8 Unutilized: 2	• LILO of 220 kV BBMB Jalandhar - Butari line at 400 kV PGCIL Jalandhar	-	LILO of 220 kV BBMB Jalandhar - Butari line at 400 kV PGCIL Jalandhar is under consideration with upcoming CMETS-NR as updated by PSTCL in 238th OCC
20	400/220kV Roorkee Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Roorkee (PG)-Pirankaliyar 220kV D/c line	Commissioned	Roorkee (PG)-Pirankaliyar 220kV D/c line commissioned in 2020 as intimated by PTCUL in 197th OCC
21	400/220kV Lucknow Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• Network to be planned for 2 bays	Commissioned	• Lucknow -Kanduni, 220 kV D/C line work energized on 05.10.2023. Updated in 212th OCC by UPPTCL. • No planning for 2 no. of bays upated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.
22	400/220kV Gorakhpur Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Network to be planned for 2 bays	Commissioned	• Gorakhpur(PG)- Maharajanj, 220 kV D/C line energized on 27.09.2023 updated by UPPTCL in 212th OCC
23	400/220kV Fatehpur Sub-station	Commissioned: 8 Under Implementation:2 Total: 10	Utilized: 6 Unutilized: 2 Under Implementation:2	• Network to be planned for 2 bays	-	• UPPTCL intimated that 02 no. of bays under finalization stage. In 201st OCC, UPPTCL intimated that it is finalized that Khaga s/s will be connected (tentative time 1.5 years). • No planning for 2 no. of bays updated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.
24	400/220kV Abdullapur Sub-station	Commissioned: 10 Under Implementation:2 Total: 12	Utilized: 10 Unutilized: 0 Under Implementation:2	• Abdullapur – Rajokheri 220kV D/c line	Commissioned	Ckt-1 commissioned at 16:13hrs on dated 06.08.24 & Ckt-2 commissioned at 20:10 hrs on dated 05.08.24. Updated in 223rd OCC by HVPNL
25	400/220kV Pachkula Sub-station	Commissioned: 8 Under tender:2 Total: 10 Out of these 10 nos. 220kV	Utilized: 2 Unutilized: 4 Under Implementation:2	• Panchkula – Pinjore 220kV D/c line	Commissioned	Updated in 218th OCC by HVPNL
				• Panchkula – Sector-32 220kV D/c line	Commissioned	Energization date: 24.05.2024 updated by HVPNL in 220th OCC
				• Panchkula – Raiwali 220kV D/c line	Commissioned	Updated in 194th OCC by HVPNL
				• Panchkula – Sadhaura 220kV D/c line: Sep'23	May'26	Foundation:- 163/163 Erection :-161/161, Stringing-25.7/36.2

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
26	400/220kV Amritsar S/s	Commissioned:7	Utilized: 6 Under Implementation:2	• Amritsar – Patti 220kV S/c line	31.01.2026	Commissioning of 220kV S/C Amritsar -Patti S/c and 220kV Amritsar – Rashiana S/c may be done by 31.01.2026. Updated in 238th OCC by PSTCL.
		Approved in 50th NRPC- 1 no. Total: 8		• Amritsar – Rashiana 220kV S/c line (2 bays shall be required for above lines. However, 1 unutilized bay shall be used for Patti and requirement of one additional bay approved for Rashiana by NRPC)	31.01.2026	Draft connectivity agreements for 220kV Rashiana- Amritsar & 220kV Patti-Amritsar lines are under consideration by CTU. CTU is processing the agreement and PSTCL has provided with the requisite inputs/data to CTU. Updated in 238th OCC by PSTCL.
27	400/220kV Bagpat S/s	Commissioned: 8 Total: 8	Utilized:6 Unutilized: 2	• Bagpat - Modipuram 220kV D/c line	Commissioned	Updated in 201st OCC by UPPTCL
28	400/220kV Bahadurgarh S/s	Commissioned: 4 Approved: 4 Total: 8	Utilized:2 Unutilized: 2	• LILO of 220 kV Nunamajra- Daultabad S/c line at 400 kV Bahadurgarh PGCIL	-	Proposal turned down by CEA.Updated in 230th OCC by HVPNL.
				• Bahadurgarh - METL 220kV D/c line (Deposit work of M/s METL)	15.06.2026	The work stands awarded to the M/s KRR and the execution work has been started at site. Partial route stands approved by the competent authority of the HVPNL.Foundation - 47/91 Nos. Erection – 26 / 91 Nos. Stringing – 0 / 19.8 Km
				• Bahadurgarh - Kharkhoda Pocket B 220kV D/c line	28.02.2027	Updated in 234th OCC by HVPNL. <b>Status:</b> RoW issues due to demand of higher land rate compenation.
29	400/220kV Jaipur (South) S/s	Commissioned: 4 Total: 4	Utilized:2 Unutilized: 2	• LILO of 220 kV S/C Dausa – Sawai Madhopur line at 400 kV GSS Jaipur South (PG)	06.10.2025	Work order has been issued on 06.10.2023, work under progress as updated by RVPNL in 215th OCC
30	400/220kV Sohawal S/s	Commissioned: 8 Total: 8	Utilized: 8	• Sohawal - Barabanki 220kV D/c line	Commissioned	Energization date: 14.04.2018 updated by UPPTCL in 196th OCC
				• Sohawal - New Tanda 220kV D/c line	Commissioned	Energization date: 28.05.2019 updated by UPPTCL in 196th OCC
				• Network to be planned for 2 bays	Commissioned	• Sohawal - Gonda 220kV S/c line (Energization date: 27.04.2020) updated by UPPTCL in 196th OCC • Sohawal - Bahraich 220kV S/c line (Energization date: 15.02.2021) updated by UPPTCL in 196th OCC
31	400/220kV, Kankroli	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• 220 kV D/C Kankroli(PG) - Nathdwara line	-	Standard bid document has been finalized on 13.08.2024 and bid is under preparation as updated by RVPN in 222nd OCC.
32	400/220kV, Manesar	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• Network to be planned for 2 bays	-	Status:- A proposal is being prepared for the creation of another 220kV D/C line from the 400kV substation Panchgaon (PG) to the 220kV substation Panchgaon (HVPNL), along with the LILO of one circuit of the 220kV D/C Panchgaon (PG) – Mau line at the 220kV substation Panchgaon to utilize two bays at the 400kV substation Panchgaon. The load flow study for this has already been completed.
33	400/220kV, Saharanpur	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 6 Unutilized: 0 Under Implementation:2	• Network to be planned for 2 bays	Commissioned	Saharanpur(PG)-Devband D/c line (Energization date: 20.04.2023) updated by UPPTCL in 207th OCC
34	400/220kV, Wagoora	Commissioned: 10 Total: 10	Utilized: 6 Unutilized: 4	• Network to be planned for 4 bays	-	PDD, J&K to update the status.
35	400/220kV, Ludhiana	Commissioned: 9 Total: 9	Utilized: 8 Unutilized: 1	• Network to be planned for 1 bay	Commissioned	Direct circuit from 220 kV Lalton Kalan to Dhandari Kalan to be diverted to 400 kV PGCIL Ludhiana. Work completed , final agrrement is expected to be signed by May'24. Updated in 218th OCC by PSTCL.
36	400/220kV, Chamba (Chamera Pool)	Commissioned: 3 Under tender:1 Total: 4	Utilized:3 Unutilized: 0 Under tender:1	• Stringing of 2nd ckt of Chamera Pool – Karian 220kV D/c line	Commissioned	Stringing of 2nd Circuit of Chamera Pool-Karian Tansmission line has been completed & terminal bay at 400/220 kV chamera pooling substation (PGCIL) is commissioned on 20.01.2024. Updated in 217th OCC by HPPTCL.
37	400/220kV, Mainpuri	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 6 Unutilized: 0 Under Implementation:2	• Network to be planned for 2 bays	-	• 02 no. of bays under finalization stage updated by UPPTCL in 196th OCC. Mainpuri S/s planned. Land is not finalized, therefore timeline not available as intimated by UPPTCL in 201st OCC.
38	400/220kV, Patiala	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• 400 kV PGCIL Patiala - 220 kV Bhadson (D/C)	-	2 Nos. bays for 400 kV PGCIL Patiala - 220 kV Bhadson (D/C) line being planned. Construction of boundary wall has started at 220 kv ss bhadson.yard work could not be started as approval for dismantaling existing 517 no tress is pending at district level committee which is competent for giving approval of dismantaling of trees. Chairman of committee is DC pataiala.. as updated by PSTCL in 233th OCC meeting

## Status of ADMS implementation in NR:

Sl. No.	State / UT	Status	Remarks
1	DELHI	Scheme Implemented but operated in manual mode.	In 236th OCC meeting, Delhi SLDC representative stated that as informed by BRPL and BYPL, SCADA upgradation work of would be completed by Mar'26. Further, SCADA upgradation work of TPDDL would be completed by Dec'26.
2	HARYANA	Scheme not implemented	Haryana SLDC intimated that ADMS software has already been taken under project work of upgradation of SCADA-EMS in Haryana. As per already decided methodology, the current status of ADMS Project is as under: - i. Part-1 i.e. Control with HVPNL Any hindrances/delay in execution of PART-I which is covered under upgradation of SCADA-EMS system (ULDC Phase-III of Northern Region) being delivered by M/s GE Vernova, completion timelines etc. ii. PART-II: Control with Distribution Utility Communication with DISCOMs, identification of feeders, status of retrofitting of 33kV & 11kV substations of DISCOMs to handle the automation, hiring of consultant on the pattern of Rajasthan etc. In this regard, the matter has already been taken up with Discoms to provide the lists of 11kV & 33kV feeders to prepare the DPR of the same.
3	HP	Scheme not implemented	In 242nd OCC meeting, HPSLDC representative informed that they have identified the feeders and submitted the same vide mail dated 19.03.2026.
4	PUNJAB	Scheme not implemented	In 238th OCC meeting, Punjab SLDC representative informed that testing of SCADA upgradation under ULDC phase III is underway. All the material may be commissioned by March-26 and implementation of logic of ADMS may be executed by Sept-26. Punjab has submitted list of feeders vide mail dated 16.01.2026
5	RAJASTHAN	Under implementation	RVPN has pilot tested the logic of ADMS which is to be implemented for Rajasthan. In 232th OCC meeting, RVPN informed that 351 nos. of circuit breakers have been mapped to ADMS, all 351 circuit breakers tested upto yard individually. Total 650CBs are to be mapped in phased manner. In 241st OCC Meeting, RVPN representative informed that 400 no. of feeders have been identified and the logic needs to be reviewed before ADMS implementation.
6	UP	Scheme implemented by NPCIL only	In 236th OCC meeting, UP SLDC representative stated that 300 No. of 132 KV Substations have been integrated with SCADA. SCADA upgradation under ULDC phase III is likely to be completed in the next 3 to 4 months. List of 33kV feeders to be mapped under ADMS is required from the Discoms. In the meeting held in Aug'25, UPSLDC had requested Discoms to provide the feeders list. Reminders were also sent to Discoms. However, 33 kV feeder list is still pending from the Discoms.  MS, NRPC asked UPSLDC to have meeting with Discoms in its control areas and finalize of feeder list before next OCC meeting. In the 241st OCC Meeting, UPSLDC representative informed that 466 feeders have been identified and that the same would be updated to the NRPC after receiving consent from the DISCOMs and parallel testing of feeders at SLDC level is being carried out.
7	UTTARAKHAND	Scheme not implemented	i. UPCL has prepared a system architecture in which all the non-monitored sub-stations have been selected and 11kV feeders have been considered for ADMS operation. For the scheme, discom has also done group-wise selection of feeders and quantum of MW relief to be given for automatic demand response at 11kV level has also been decided. UPCL has awarded the tender for implementation of the aforementioned scheme to M/s Metergy Pvt.Ltd. ii. As per the status report submitted by M/s Metergy Pvt.Ltd, the survey work of 30 nos. incomer sites have been completed and order has been placed by UPCL for hardware equipments. iii. Uttarakhand SLDC informed that feeder list at 11kV level has been finalized and logic of ADMS implementation is under finalization. iv. Uttarakhand has intimated that It is bring to your notice that installation MFT( Multi Function Transducers) at various interstate points at PTCUL Substations under ADRS Project of UPCL is in progress. v. First Phase- Data Acquisition of 32 interstate points completed. vi. Second Phase-95 distribution side Substation work is on progress. vii In 230th OCC meeting Uttarakhand SLDC representative informed that Harbour installation and communication establishment has been done on 35 11kV feeders out of total 195 11kV feeders. The work is expected to be completed by December, 2025.

## Status of availability of ERS towers in NR

Sl. No.	Transmission Utility	Voltage Level (220kV/400kV/765kV/ 500 kV HVDC etc.)	Length of the transmission lines owned by the Utility (Ckt. Kms.)	Number of ERS Sets (towers) available (Nos.)	ERS Set ( towers) required as per the Govt. norms.	Location	Remarks
1	Delhi (DTL)	220kV	915.498	NIL	1	400kV Bamnauli Sub station	2 ERS tower available.
		400kV	249.19	02 Sets (32 towers)	1		
2	Himachal Pradesh (HPPTCL)	220 kV	659	NIL	1		
		400 kV	75.7	NIL	1		
3	Haryana (HVPNL)						ERS towers (6 nos tension and 6 nos suspension type 400kv level) in Haryana have been procured and already dispatched to 220kv Substation karnal and DD store Hisar.
4	Punjab (PSTCL)	400 kV	1666.43	2	3		
		220 kV	7921.991				
5	Rajasthan (RVPN)	132 kV	20706.876	1	4	01 No. ERS available at 220 kV GSS Heerapura, Jaipur	1 ERS set is available and work order has been placed for 3 more Sets.
		220 kV	16429.022		3		
		400 kV	8416.434		2		
		765 kV	425.498		1		
6	UPPTCL 1- Meerut	132kV	27508.321	24 Nos(15 Running+9 Angle)		400 kV S/s Gr. Noida	ERS will be also be used in other voltage level lines.
		220kV	14973.453				
		400kV	6922.828				
	UPPTCL 2-Prayagraj	765kV	839.37	24 Towers		220 kv S/s phulpur	ERS will also be used in other voltage lines.
		400kV	1804.257				
		220kV	2578.932				
		132kV	4714.768				
7	Uttarakand (PTCUL)	400kV	418.394	NIL	1		Tender has been scraped due to single bidder.
		220kV	1045.135	NIL	1		
8	JKPTCL	132 kV	1040.63	8		Z Mohr, Kanispora Pathla T141 D/C, Kalanpora Delina Railway station T 3 & T4, Bagh-i Wahpoh	1 No. LILO USHP-I Kangan Line, 2 No. In Sheerl LJHP Line, 2 No. Delina Baramulla Railway Line, 1 No. Bagh-i Wanpoh (KPTL) and 2 No. Lying at the stores
		220 kV	419.34				
9	Powergrid NR-1	220 KV	1540.21	NIL	1		
		400 KV	13348.828	10 Towers	3	Ballabgarh 4 (Make Lindsey ) Meerut 4(Make SBB) Roorkee 2(Make SBB)	
		765 KV	8977.947	15 Towers	1	Bhadla-I SS(11 Set, SBB make) & Bikaner-I SS (4 set, Lindsey make)	11 Sets were diverted from Meerut to Bhadla-I ; 04 Sets were diverted from Ballabgarh to Bikaner-I
		500 KV HVDC	653.88	NIL	1		
		800 KV HVDC	416.54	NIL	1		

Sl. No.	Transmission Utility	Voltage Level (220kV/400kV/765kV/ 500 kV HVDC etc.)	Length of the transmission lines owned by the Utility (Ckt. Kms.)	Number of ERS Sets ( towers) available (Nos.)	ERS Set ( towers) required as per the Govt. norms.	Location	Remarks
10	Powergrid NR-2	66 KV	37.04	Nil	1		ERS tower available for 400KV rating can be used in place of lower as well as higher voltage Towers. In case used for 765KV Line, No of towers can be erected will reduce due to increase in Tower Height.
		132 KV	262.33	Nil	1		
		220 KV	2157.67	Nil	1		
		400 KV	7326.39	03 Set (48 Towers)	2	Kishenpur, Leh & Jalandhar	
		765 KV	1319.95	Nil	1		
11	Powergrid NR-3	800KV HVDC	2205	NIL	1		400KV ERS will be also be used in other voltage level lines
		500KV HVDC	2566	NIL	1		
		765KV	4396	NIL	1		
		400KV	12254	26 Towers	3	Kanpur	
		220KV	1541	NIL	1		
		132KV	207	NIL	1		
12	PARBATI KOLDAM TRANSMISSION COMPANY LIMITED	400kV	457	NIL	1		Procurement under process.
13	PATRAN TRANSMISSION COMPANY LTD	400kV	0.4	NIL	1	It is kept in Bhopal and on need basis is moved across region	Not available, will tie up based on the requirements in future. However the parent company IndiGrid owns one set of ERS for all five regions.
14	NRSS-XXIX TRANSMISSION LTD	400kV	853	NIL	1		
15	GURGAON PALWAL TRANSMISSION LTD	400kV	272	NIL	1		
16	RAPP Transmission Company Limited.	400kV	402	NIL	1		
17	NRSS XXXVI Transmission Limited	400kV	301.924/225.004	NIL	1		Element I - Operational comprising of 3 kms. Element II - Work Under Progress comprising of 221.924 kms. Element II - Work Under Progress comprising of 77 kms.
18	POWERLINKS TRANSMISSIONLIMITED (PTL)	400 kV	1485				
19	POWERGRID HIMACHAL TRANSMISSION LTD	400 kV	454				
20	Powergrid Ajmer Phagi Transmission Limited	765 KV	269				
21	Powergrid Fatehgarh Transmission Limited	765 KV	372				
22	POWERGRID KALA AMB TRANSMISSION LTD	400 kV	2.38				
23	Powergrid Unchahar Transmission Ltd	400 kV	106.744				
24	Powergrid Khetri Transmission Limited	765 KV	292				
		400 kV	156.16				
25	POWERGRID VARANASI TRANSMISSION SYSTEM LTD	765 KV	379				
26	POWERGRID ALIGARH SIKAR TRANSMISSION LIMITED	765 KV	514				
27	ADANI TRANSMISSION INDIA LIMITED	400 kV	110				
28	Bikaner Khetri Transmission Limited (Adani)	765 KV	482				
29	Fatehgarh Bhadla Trasmision Limited (Adani)	765 kV HVAC	282	1 Set (12 towers)	1 set (12 towers)	Sami (Gujarat)	Make-Lindsey ERS set available for 400KV & 500KV rating can be used for lower as well as higher voltage Towers. In case used for 765KV Line, No of towers can reduce due to increase in Tower Height & nos of conductors.
		400 kV HVAC	10				
30	NRSS-XXXI(B) TRANSMISSION LTD	400 kV	577.74	Not Available	Not Available		Tied up with M/s INDIGRID for providing ERS on need basis.
31	AD Hydro Power Limited (Renew)	400 kV	360				
32	ARAVALI POWER COMPANY PVT LTD	400 kV	132				
33	POWEGRID BHADLA TRANSMISSION LIMITED	765 KV	405				
34	POWERGRID BIKANER TRANSMISSION SYSTEM LIMITED	400 kV	1353				
35	POWERGRID RAMGARH TRANSMISSION LIMITED	400 kV	188				
36	POWERGRID SIKAR TRANSMISSION LIMITED	765 KV	619				
37	POWERGRID SIKAR TRANSMISSION LIMITED	400 kV	267				

\*The transmission Utility with line length less than 500 ckt kms (of 400 KV lines) may be given option either to procure ERS or have agreement with other transmission utilities for providing ERS on mutually agreed terms, when need arises. (As per MoP directions)













# HVDC Links

S. No	Name of Link	Type (LCC/VSC/Bac k-to-Back)	HVDC_Voltage (kV)	Converter-1		Converter-2		Master Converter Station	Pole_number	Length (km)	Capacity (MW)	Owner	Forward Direction			Reverse Direction			Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC.				
				Station Name	Region	Station Name	Region						Maximum Capacity	Minimum Capacity	Ground_return_capacity	Maximum Capacity	Minimum Capacity	Ground_return_capacity	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date		
1			500	APL-Mundra	WR	Mohindargarh	NR		1	989	1,250	ATIL	150	500	1250					Due						
2			500	APL-Mundra		Mohindargarh			2	989	1,250	ATIL	150	500	1250					Due						
3		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	1	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025			Due		
4		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	2	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025			Due		
5		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	3	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025			Due		
6		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	4	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025			Due		

Revised Simulation Models

Whether Revised Models Submitted? Remarks

# STATCOMs/SVCs

S.No	Station	Statcom	Capacity (MVAR)	Owner	Make	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.		
						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	Kurukshetra	TCR	500	POWERGRID	GE Vernova T&D	NA	NA	NA	NA	NA	NA	Nov-2023	No	Sep-2028
2	Fatehgarh-2	STATCOM	-+/-600	POWERGRID	SIEMENS	Oct-2023	No	Sep-2028	NA	NA	NA	Oct-2023	No	Sep-2028
3	Bhadla-2	STATCOM	-+/-600	POWERGRID	SIEMENS	Jun-2023	No	May-2028	NA	NA	NA	Jun-2023	No	May-2028
4	Bikaner-2	STATCOM	-+/-300	POWERGRID	SIEMENS	Jul-2023	No	Jun-2028	NA	NA	NA	Jul-2023	No	Jun-2028

Revised Simulation Models

Whether Revised Models Submitted?    Remarks



# Series Reactor

S.No	End 1	End 2	Line No.	End	Capacity	Make	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.				
							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																	

Revised Simulation Models

Whether Revised Models Submitted?    Remarks









57	Dadri Thermal	5	490						Coal	NTPC Limited	Central	NRLDC	Thermal			3/31/2026			3/31/2026			3/31/2026			3/31/2026
58	Dadri Thermal	6	490						Coal	NTPC Limited	Central	NRLDC	Thermal			12/30/2026			12/30/2026			12/30/2026			12/30/2026
59	APCPL-shajjar	1	500	S88	BHEL	05.03.2011	409.5/21	3X200	409.5/21KV, 9	Non Pit Head	APCPL	Central	NRLDC	Thermal	Yes	31/01/2026		Yes	31/01/2026		Yes	31/01/2026		3/27/2028	3/27/2028
60	APCPL-shajjar	2	500	S88	BHEL	21.04.2012	409.5/21	3X200	409.5/21KV, 9	Non Pit Head	APCPL	Central	NRLDC	Thermal	31/10/2025	No		31/10/2025	No		31/10/2025	No		3/29/2028	3/29/2028
61	APCPL-shajjar	3	500	S88	BHEL	26.04.2013	409.5/21	3X200	409.5/21KV, 9	Non Pit Head	APCPL	Central	NRLDC	Thermal	Yes	31/01/2026		Yes	31/01/2026		Yes	31/01/2026		3/31/2028	3/31/2028





Annexure-1

Renewable Energy Plants

S. No.	Name of Plant	Pooling Station Name	Installed Capacity	Type (Solar/Wind)	COD	Owner	Sector	Control Area	Inverter/ WTS Make	Inverter/ WTS 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			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			Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date
1	Clean Solar Power Bhaadl_R-1 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	15-02-20	Clean Solar Power Bhaadl_R-1 Pvt Ltd	MNRE		Haawei	SG2000-95KTL	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 Bhaadl_R-2 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	28-02-20	Clean Solar Power Bhaadl_R-2 Pvt Ltd	MNRE		Haawei	SG2000-95KTL	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 Bhaadl_R-3 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	10-12-19	Clean Solar Power Bhaadl_R-3 Pvt Ltd	MNRE		Haawei	SG2000-95KTL	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	SG2000-IN & SG2000HV	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 OSS	100		8/2/2024							NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029						
6	GBIAN	220 KV Bikaner-2 OSS	100		6/2/2024							NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029						
7	Onevolt	220 KV Bikaner-2 OSS	100		2/2/2024							NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029						
8	Avadaa Sunce Energy Pvt. Ltd.	PGCIL, Bikaner 1	350 MW	Solar	8-Apr-22	Avadaa Energy Private Limited	Power	MCR / PPC	Sinerg Electric	EP-3125-HA-UD	Adaptive Engineering Pvt. Ltd.	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027					
9	Avadaa Sustainable RJ Project Pvt. Ltd.	PGCIL, Bikaner 1	300 MW	Solar	11-May-22	Avadaa Energy Private Limited	Power	MCR / PPC	Sinerg Electric	EP-3125-HA-UD	Adaptive Engineering Pvt. Ltd.	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027					
10	Avadaa RHNW Pvt. Ltd.	PGCIL, Bikaner 1	240 MW	Solar	11-May-22	Avadaa Energy Private Limited	Power	MCR / PPC	Sinerg Electric	EP-3125-HA-UD-137.5 MW SP-250K-INH-102.5 MW	Adaptive Engineering Pvt. Ltd.	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027					
11	Avadaa Sunraya Energy Private Limited	Bhaadla-II (PG)	120 MW	Solar	10-Dec-22	Avadaa Energy Private Limited	Power	MCR / PPC	Sinerg Electric	SP-250K-INH	Armax Automation	23-May	No	1/17/2028	23-May	No	1/17/2028	23-May	No	1/17/2028	23-May	No	1/17/2028	23-May	No	1/17/2028					
12	Singrauli Solar		15	Solar											12/22/2028			12/22/2028			12/22/2028			12/22/2028							
13	Unchahar Solar		10	Solar											12/23/2028			12/23/2028			12/23/2028			12/23/2028							
14	Badih Solar		5	Solar											12/24/2028			12/24/2028			12/24/2028			12/24/2028							
15	Auranga Solar		20	Solar											12/25/2028			12/25/2028			12/25/2028			12/25/2028							
16	Auranga Floating Solar		20	Solar											12/26/2028			12/26/2028			12/26/2028			12/26/2028							
17	Fardidabad Solar		5	Solar											12/27/2028			12/27/2028			12/27/2028			12/27/2028							
18	Anta Solar		40	Solar											12/28/2028			12/28/2028			12/28/2028			12/28/2028							
19	Nekhi Solar-1		167	Solar											12/29/2028			12/29/2028			12/29/2028			12/29/2028							
20	Nekhi Solar-2		245	Solar											12/30/2028			12/30/2028			12/30/2028			12/30/2028							
21	Nekhi Solar-3		245	Solar											12/31/2028			12/31/2028			12/31/2028			12/31/2028							
22	TPREL (Chhayam)	PGCIL Bhaadla-1	300	Solar	8/24/2021	TPREL	Power		TIMEIC (TVH-L2500EQ-2)/Sungrow (SGS125SHV-20)	TIMEIC (TVH-L2500EQ-2)/Sungrow (SGS125SHV-20)	ABB/Schneider	Yes	Aug-26	Yes	Aug-26	9/10/2025	No	Aug-26	Yes	Aug-26	Yes	Aug-26	Yes	Aug-26	Yes	Aug-26					
23	TATA POWER GREEN ENERGY	PGCIL Bikaner-1	225	Solar	8/2/2022	TPREL	Power		Sungrow (SGS135HV-32)	Sungrow (SGS135HV-32)	Schneider	Yes	Jul-27	Yes	Jul-27	9/3/2025	No	Jul-27	Yes	Jul-27	Yes	Jul-27	Yes	Jul-27	Yes	Jul-27					
24	TP Suraya Limited	PGCIL Bikaner-1	110	Solar	16/1/2023	TPREL	Power		Sungrow (SGS135HV-32)	Sungrow (SGS135HV-32)	Schneider	Dec-23	No	Mar-28	Dec-23	No	Mar-28	4/9/2025	No	Mar-28	Dec-23	No	Mar-28	Dec-23	No	Mar-28					
25	Bandrawada TP Suraya Limited	PGCIL Bikaner-1	300	Solar	10/31/2024	TPREL	Power		Sungrow (SG6400UD-20)	Sungrow (SG6400UD-20)	Schneider	Sep-25	No	Sep-30	Sep-25	No	Sep-30	Sep-25	No	Sep-30	Sep-25	No	Sep-30	Sep-25	No	Sep-30					
26	ReNew Solar Power Private Limited	Bhaadla	50												Oct-26			Oct-26			Oct-26			Oct-26							
27	ReNew Solar Power Private Limited	Bikaner	250												Nov-26			Nov-26			Nov-26			Nov-26							
28	ReNew Solar Energy Jharbandh 3 Pvt Ltd	SECI-VI Karada	300												Dec-26			Dec-26			Dec-26			Dec-26							
29	ReNew Surya Ravi Private Limited	Bikaner B2B	300												Apr-28			Apr-28			Apr-28			Apr-28							
30	ReNew Surya Vhaan Pvt Ltd - Renew Surya Pratap Private Limited	SECI-VI 100MW + B2B Amaon	200MW												May-29			May-29			May-29			May-29							
31	ReNew Surya Raahat Pvt Ltd	ETC 400MW	400												May-29			May-29			May-29			May-29							
32	Neerba ReNew Surya Vhaan Pvt Ltd	SECI-VII 200 MW	200												May-30			May-30			May-30			May-30							
33	ReNew Surya Jyoti Pvt. Ltd	D-2 210 MW	210												May-30			May-30			May-30			May-30							

### STATCOMs/SVCs

S.No	Station	Statcom	Capacity (MVAR)	Owner	Make	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.		
						Last tested on (dd/mm/yy yy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yy yy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yy yy)	Whether due?	Tentative Schedule date
1	Bhadla-2	STATCOM-1&2	./- 600 MVar, 400kV	POWERGRID	SIEMENS	July-2023.	NO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	July-2023.	NO	NOT APPLICABLE
2	Fatehgarh-2	STATCOM-1&2	./- 600 MVar, 400kV	POWERGRID	SIEMENS	Oct-2023.	NO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Oct-2023.	NO	NOT APPLICABLE
3	Bikaner-2	STATCOM	./- 300 MVar, 400kV	POWERGRID	SIEMENS	Aug-2023.	NO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Aug-2023.	NO	NOT APPLICABLE
4	KANKROLI	SVC	./+400 MVar, -300MVar, 400kV	POWERGRID	SIEMENS	Dec-2016.	YES	Nov-2025.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Dec-2016.	YES	Nov-2025.
5	Nalagarh	STATCOM											YES	Oct-25
6	Ludhiana	SVC											YES	Oct-25
7	New Wanpoh	SVC											YES	Oct-25
8	Lucknow	STATCOM											YES	26-Apr

## List of generators who have not furnished the testing schedule for FY 2026-2027

Operator	Generating Unit	Installed Capacity	Tests for which schedule is to be furnished
ADANI POWER LTD.	KAWAI TPS (ADANI POWER) Unit 1	660	No schedule given
ADANI POWER LTD.	KAWAI TPS (ADANI POWER) Unit 2	660	No schedule given
ADPCL	ALLAIN DUHANGAN HPS Unit 1	96	No schedule given
ADPCL	ALLAIN DUHANGAN HPS Unit 2	96	No schedule given
AHPCL	ALAKNANDA HPS Unit 1	82.5	No schedule given
AHPCL	ALAKNANDA HPS Unit 2	82.5	No schedule given
AHPCL	ALAKNANDA HPS Unit 3	82.5	No schedule given
AHPCL	ALAKNANDA HPS Unit 4	82.5	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-1	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-2	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-3	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-4	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-5	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-1	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-2	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-3	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-4	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-5	157	No schedule given
BBMB	GANGUWAL HPS Unit 1	27.99	No schedule given
BBMB	GANGUWAL HPS Unit 2	24.2	No schedule given
BBMB	GANGUWAL HPS Unit 3	24.2	No schedule given
BBMB	KOTLA HPS Unit 1	28.94	No schedule given
BBMB	KOTLA HPS Unit 2	24.2	No schedule given
BBMB	KOTLA HPS Unit 3	24.2	No schedule given
BBMB	DEHAR HPS Unit 1	165	No schedule given
BBMB	DEHAR HPS Unit 2	165	No schedule given
BBMB	DEHAR HPS Unit 3	165	No schedule given
BBMB	DEHAR HPS Unit 4	165	No schedule given
BBMB	DEHAR HPS Unit 5	165	No schedule given
BBMB	DEHAR HPS Unit 6	165	No schedule given
BBMB	PONG HPS Unit 1	66	No schedule given
BBMB	PONG HPS Unit 2	66	No schedule given
BBMB	PONG HPS Unit 3	66	No schedule given
BBMB	PONG HPS Unit 4	66	No schedule given
BBMB	PONG HPS Unit 5	66	No schedule given
BBMB	PONG HPS Unit 6	66	No schedule given
CLP India	MAHATMA GANDHI TPS (CLP JHAJJAR) Unit 1	660	Periodic testing is scheduled tentatively in Oct'28
CLP India	MAHATMA GANDHI TPS (CLP JHAJJAR) Unit 2	660	Periodic testing is scheduled tentatively in Oct'28
GAMA INFRAPROP PVT.	GAMA CAPP Unit GT-1	75	No schedule given
GAMA INFRAPROP PVT.	GAMA CAPP Unit GT-2	75	No schedule given
GAMA INFRAPROP PVT.	GAMA CAPP Unit ST	75	No schedule given
Greenko	BUDHIL HPS Unit 1	35	No schedule given
Greenko	BUDHIL HPS Unit 2	35	No schedule given
HP Sorang	HP SORANG HPS Unit 1	100	No schedule given
HPGCL	PANIPAT TPS Unit 6	210	No schedule given
HPGCL	PANIPAT TPS Unit 7	250	No schedule given
HPGCL	PANIPAT TPS Unit 8	250	No schedule given
HPGCL	RAJIV GANDHI TPS HISAR Unit 1	600	No schedule given
HPGCL	RAJIV GANDHI TPS HISAR Unit 2	600	No schedule given
HPGCL	DCR TPS YAMUNA NAGAR Unit 1	300	No schedule given
HPGCL	DCR TPS YAMUNA NAGAR Unit 2	300	No schedule given
HPPCL	SAINJ HPS Unit 1	50	No schedule given
HPPCL	SAINJ HPS Unit 2	50	No schedule given
JAYPEE	CHURK TPS (JAYPEE) Unit NA	90	No schedule given
JKSPDC	BAGLIHAR HPS Unit 1	150	No schedule given

JKSPDC	BAGLIHAR HPS Unit 2	150	No schedule given
JKSPDC	BAGLIHAR HPS Unit 3	150	No schedule given
JKSPDC	BAGLIHAR II HPS Unit 1	150	No schedule given
JKSPDC	BAGLIHAR II HPS Unit 2	150	No schedule given
JKSPDC	BAGLIHAR II HPS Unit 3	150	No schedule given
JKSPDC	LOWER JHELUM HPS Unit 1	35	No schedule given
JKSPDC	LOWER JHELUM HPS Unit 2	35	No schedule given
JKSPDC	LOWER JHELUM HPS Unit 3	35	No schedule given
JKSPDC	UPPER SINDH-II HPS Unit 1	35	No schedule given
JKSPDC	UPPER SINDH-II HPS Unit 2	35	No schedule given
JKSPDC	UPPER SINDH-II HPS Unit 3	35	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 1	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 2	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 3	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 4	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 5	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 6	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 7	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 8	135	No schedule given
MEIL	ANPARA C TPS (LANCO) Unit 1	600	No schedule given
MEIL	ANPARA C TPS (LANCO) Unit 2	600	No schedule given
NLC+UPRVUNL	GHATAMPUR TPP Unit 1	660	No schedule given
NLC+UPRVUNL	GHATAMPUR TPP Unit 2	660	No schedule given
NLC+UPRVUNL	GHATAMPUR TPP Unit 3	660	No schedule given
NTPC	MEJA STPP Unit 1	660	No schedule given
NTPC	MEJA STPP Unit 2	660	No schedule given
NTPC	TANDA TPS Unit 1	110	No schedule given
NTPC	TANDA TPS Unit 2	110	No schedule given
NTPC	TANDA TPS Unit 3	110	No schedule given
NTPC	TANDA TPS Unit 4	110	No schedule given
PPCL	PPS-III BAWANA Unit GT-1	216	No schedule given
PPCL	PPS-III BAWANA Unit GT-2	216	No schedule given
PPCL	PPS-III BAWANA Unit GT-3	216	No schedule given
PPCL	PPS-III BAWANA Unit GT-4	216	No schedule given
PPCL	PPS-III BAWANA Unit ST-1	253.6	No schedule given
PPCL	PPS-III BAWANA Unit ST-2	253.6	No schedule given
PPCL	PPS-I PPCL Unit GT-1	104	No schedule given
PPCL	PPS-I PPCL Unit GT-2	104	No schedule given
PPCL	PPS-I PPCL Unit ST	122	No schedule given
PSPCL	ANANDPUR SAHIB-I HPS Unit 1	33.5	No schedule given
PSPCL	ANANDPUR SAHIB-II HPS Unit 2	33.5	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 1	210	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 2	210	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 3	250	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 4	250	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 1	150	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 2	150	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 3	150	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 4	150	No schedule given
PSPCL	GGSTP ROPAR Unit 3	210	No schedule given
PSPCL	GGSTP ROPAR Unit 4	210	No schedule given
PSPCL	GGSTP ROPAR Unit 5	210	No schedule given
PSPCL	GGSTP ROPAR Unit 6	210	No schedule given
RRVUNL	CTPP CHHABRA Unit 1	250	No schedule given
RRVUNL	CTPP CHHABRA Unit 2	250	No schedule given
RRVUNL	CTPP CHHABRA Unit 3	250	No schedule given
RRVUNL	CTPP CHHABRA Unit 4	250	No schedule given
RRVUNL	CSCTPP CHHABRA Unit 5	660	No schedule given
RRVUNL	CSCTPP CHHABRA Unit 6	660	No schedule given
RRVUNL	DHOLPUR CCPP (DCCPP) Unit GT-1	110	No schedule given
RRVUNL	DHOLPUR CCPP (DCCPP) Unit GT-2	110	No schedule given
RRVUNL	DHOLPUR CCPP (DCCPP) Unit ST	110	No schedule given
RRVUNL	JAWAHAR SAGAR HPS Unit 1	33	No schedule given
RRVUNL	JAWAHAR SAGAR HPS Unit 2	33	No schedule given
RRVUNL	JAWAHAR SAGAR HPS Unit 3	33	No schedule given
RRVUNL	KALISINDH TPS (KATPP) Unit 1	600	No schedule given

RRVUNL	KALISINDH TPS (KATPP) Unit 2	600	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 1	110	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 2	110	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 3	210	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 4	210	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 5	210	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 6	195	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 7	195	No schedule given
RRVUNL	MAHI-I HPS BANSWARA Unit 1	25	No schedule given
RRVUNL	MAHI-I HPS BANSWARA Unit 2	25	No schedule given
RRVUNL	MAHI-II HPS BANSWARA Unit 1	45	No schedule given
RRVUNL	MAHI-II HPS BANSWARA Unit 2	45	No schedule given
RRVUNL	R P SAGAR HPS Unit 1	43	No schedule given
RRVUNL	R P SAGAR HPS Unit 2	43	No schedule given
RRVUNL	R P SAGAR HPS Unit 3	43	No schedule given
RRVUNL	R P SAGAR HPS Unit 4	43	No schedule given
RRVUNL	RAMGARH CCPP Unit GT-1	35.5	No schedule given
RRVUNL	RAMGARH CCPP Unit GT-2	37.5	No schedule given
RRVUNL	RAMGARH CCPP Unit ST-1	37.5	No schedule given
RRVUNL	RAMGARH CCPP Unit GT-3	110	No schedule given
RRVUNL	RAMGARH CCPP Unit ST-2	50	No schedule given
RRVUNL	SSTPS SURATGARH Unit 1	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 2	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 3	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 4	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 5	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 6	250	No schedule given
RRVUNL	SSCTPP SURATGARH Unit 7	660	No schedule given
RRVUNL	SSCTPP SURATGARH Unit 8	660	No schedule given
SRAVANTHI ENERGY	KASHIPUR CCPP (SRAVANTHI ENERGY) Unit GT-1	75	No schedule given
SRAVANTHI ENERGY	KASHIPUR CCPP (SRAVANTHI ENERGY) Unit GT-2	75	No schedule given
SRAVANTHI ENERGY	KASHIPUR CCPP (SRAVANTHI ENERGY) Unit ST	75	No schedule given
THDC	KOTESHWAR HPS Unit 1	100	No schedule given
THDC	KOTESHWAR HPS Unit 2	100	No schedule given
THDC	KOTESHWAR HPS Unit 3	100	No schedule given
THDC	KOTESHWAR HPS Unit 4	100	No schedule given
THDC	KHURJA TPP Unit 1	660	No schedule given
THDC	KHURJA TPP Unit 2	660	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 1	60	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 2	60	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 3	60	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 4	60	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 1	36	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 2	36	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 3	36	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 4	36	No schedule given
UJVNL	KHODRI HPS Unit 1	30	No schedule given
UJVNL	KHODRI HPS Unit 2	30	No schedule given
UJVNL	KHODRI HPS Unit 3	30	No schedule given
UJVNL	KHODRI HPS Unit 4	30	No schedule given
UJVNL	MANERI BHALI-I HPS TILOTH Unit 1	30	No schedule given
UJVNL	MANERI BHALI-I HPS TILOTH Unit 2	30	No schedule given
UJVNL	MANERI BHALI-I HPS TILOTH Unit 3	30	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 1	76	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 2	76	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 3	76	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 4	76	No schedule given
UJVNL	RAMGANGA POWER HOUSE Unit 1	66	No schedule given
UJVNL	RAMGANGA POWER HOUSE Unit 2	66	No schedule given
UJVNL	RAMGANGA POWER HOUSE Unit 3	66	No schedule given
UJVNL	VYASI HEP Unit 1	60	No schedule given
UJVNL	VYASI HEP Unit 2	60	No schedule given
UPJVNL	OBRA HPS Unit 1	33	No schedule given
UPJVNL	OBRA HPS Unit 2	33	No schedule given
UPJVNL	OBRA HPS Unit 3	33	No schedule given
UPJVNL	RIHAND HPS Unit 1	50	No schedule given

UPJVNL	RIHAND HPS Unit 2	50	No schedule given
UPJVNL	RIHAND HPS Unit 3	50	No schedule given
UPJVNL	RIHAND HPS Unit 4	50	No schedule given
UPJVNL	RIHAND HPS Unit 5	50	No schedule given
UPJVNL	RIHAND HPS Unit 6	50	No schedule given
UPRVUNL	ANPARA TPS Unit 6	500	No schedule given
UPRVUNL	ANPARA TPS Unit 7	500	No schedule given
UPRVUNL	HARDUAGANJ TPS Unit 7	110	No schedule given
UPRVUNL	HARDUAGANJ TPS Unit 8	250	No schedule given
UPRVUNL	HARDUAGANJ TPS Unit 9	250	No schedule given
UPRVUNL	OBRA TPS Unit 9	200	No schedule given
UPRVUNL	OBRA TPS Unit 10	200	No schedule given
UPRVUNL	OBRA TPS Unit 11	200	No schedule given
UPRVUNL	OBRA TPS Unit 12	200	No schedule given
UPRVUNL	OBRA TPS Unit 13	200	No schedule given
UPRVUNL	OBRA-C STPP Unit 1	660	No schedule given
UPRVUNL	OBRA-C STPP Unit 2	660	No schedule given
UPRVUNL	PARICHHA TPS Unit 3	210	No schedule given
UPRVUNL	PARICHHA TPS Unit 4	210	No schedule given
UPRVUNL	PARICHHA TPS Unit 5	250	No schedule given
UPRVUNL	PARICHHA TPS Unit 6	250	No schedule given
UPRVUNL	HARDUAGANJ EXT-II TPS Unit 10	660	No schedule given
UPRVUNL	PANKI TPS EXTENSION Unit 1	660	No schedule given

Plant in partial outage due to technical reasons					
S.No	Station Name	Avg outage in MW	Rated capacity	% of outage wrt rated capacity	Outage reason as stated by the station to NRLDC
1	OBRA TPS (5 * 200 )	299.31	1000	29.93	Unit 9 and 10 low PA header, unit 12 feeding restrictions due to low mill performance, unit 13 ID fan margin low and low PA header
2	PARICHA-B TPS (2 * 210)	158.1	420	37.64	DC reduced due to Retro fitting work of ESP.
3	ANPARA-A TPS (3*210)	85.63	630	13.59	Due to Fault in APH. (Unit 1 & 2)
4	ANPARA-B TPS (2 * 500)	82.73	1000	8.27	DC reduce due to turbine rotor problem.
5	GHATAMPUR TPS (1 * 660)	128.92	1320	9.77	Unit # 2 Ash Handling Problem
6	GOINDWAL(GVK)( 2 * 270 )	43.88	540	8.13	DC revised due to Service air compressor not available
7	TALWANDI SABO TPS( 3 * 660 )	133.23	1980	6.73	Due to poor coal quality and Technical issue in unit

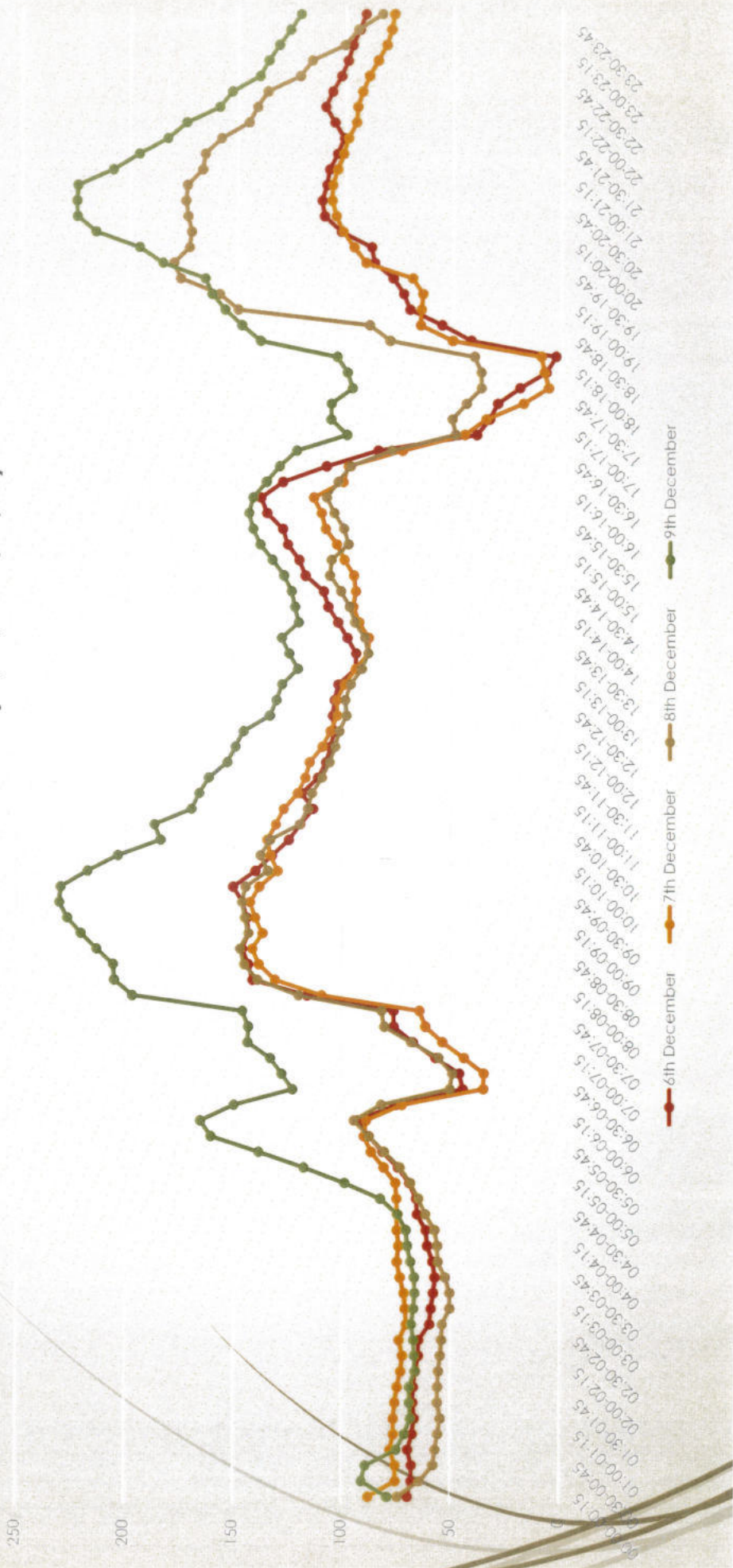
Plant in partial outage due to Fuel quality issues					
S.No	Station Name	Avg outage in MW	Rated capacity	% of outage wrt rated capacity	Outage reason as stated by the station to NRLDC
1	RGTPP( KHEDAR)( 2 * 600 )	114.87	1200	9.57	Due to poor coal quality
2	GURU GOBIND SINGH TPS (ROPAR)( 4 * 210 )	133.86	840	15.94	Due to poor coal quality
3	HARDUAGANJ TPS (1 * 110)	11.1	110	10.09	Due to poor coal quality
4	HARDUAGANJ-D TPS (2 * 250)	33.37	500	6.67	Due to poor coal quality
5	PARICHA-C TPS (2 * 250)	32.2	500	6.44	Due to poor coal quality

Plant in partial outage due to scheduling reasons					
S.No	Station Name	Avg outage in MW	Rated capacity	% of outage wrt rated capacity	Outage reason as stated by the station to NRLDC
1	KALISINDH TPS( 2 * 600 )	96.48	1200	8.04	As per demand and schedule.
2	BARA PPGCL TPS( 3 * 660 )	59.64	1980	3.01	As per demand and schedule.
3	DADRI-II TPS( 2 * 490 )	39.28	980	4.01	As per demand and schedule.
4	DADRI-I TPS( 4 * 210 )	68.95	840	8.21	As per demand and schedule.
5	UNCHAHAH III TPS( 1 * 210 )	7.4	210	3.52	As per demand and schedule.
6	UNCHAHAH II TPS( 2 * 210 )	12.57	420	2.99	As per demand and schedule.
7	UNCHAHAH I( 2 * 210 )	15.84	420	3.77	As per demand and schedule.
8	GURU HARGOBIND SINGH TPS (LEHRA MOHABBA)	71.41	920	7.76	As per demand and schedule.
9	CHHABRA TPS( 2 * 660 + 4 * 250 )	150.45	2320	6.48	As per demand and schedule.
10	KOTA TPS( 2 * 110 + 2 * 195 + 3 * 210 )	64.19	1240	5.18	As per demand and schedule.
11	RAJWEST (IPP) LTPS( 8 * 135 )	100.36	1080	9.29	As per demand and schedule.
12	BARSINGSAR (IPP) LTPS( 2 * 125 )	12.5	250	5	As per demand and schedule.
13	PANKI TPS (1*660)	37.52	660	5.68	As per demand and schedule.
14	HARDUAGANJ-E TPS (1 * 660)	29.65	660	4.49	As per demand and schedule.
15	VSLPP (IPP)( 1 * 135 )	100.65	135	74.56	As per demand and schedule.

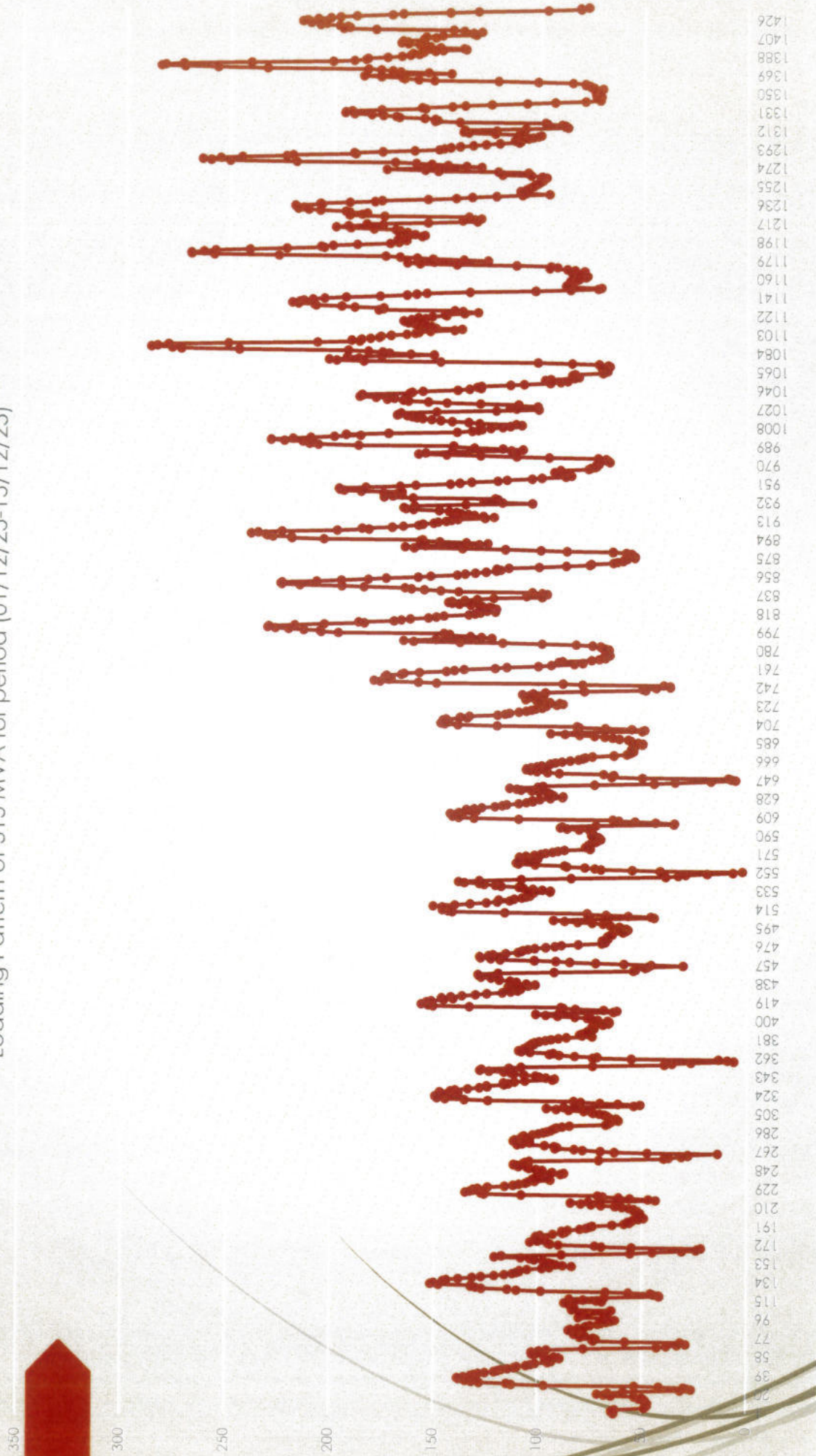
# Impact on Loading on ICTs at Rishikesh before & after energization of 400 KV Rishikesh-Koteshwar Lines )

Energization date of 400 KV Rishikesh-Koteshwar line : 08/12/25 (18:46 & 19:03 hrs.)

Loading pattern of 315 MVA ICT at Rishikesh on dated (06/12/25-09/12/25)



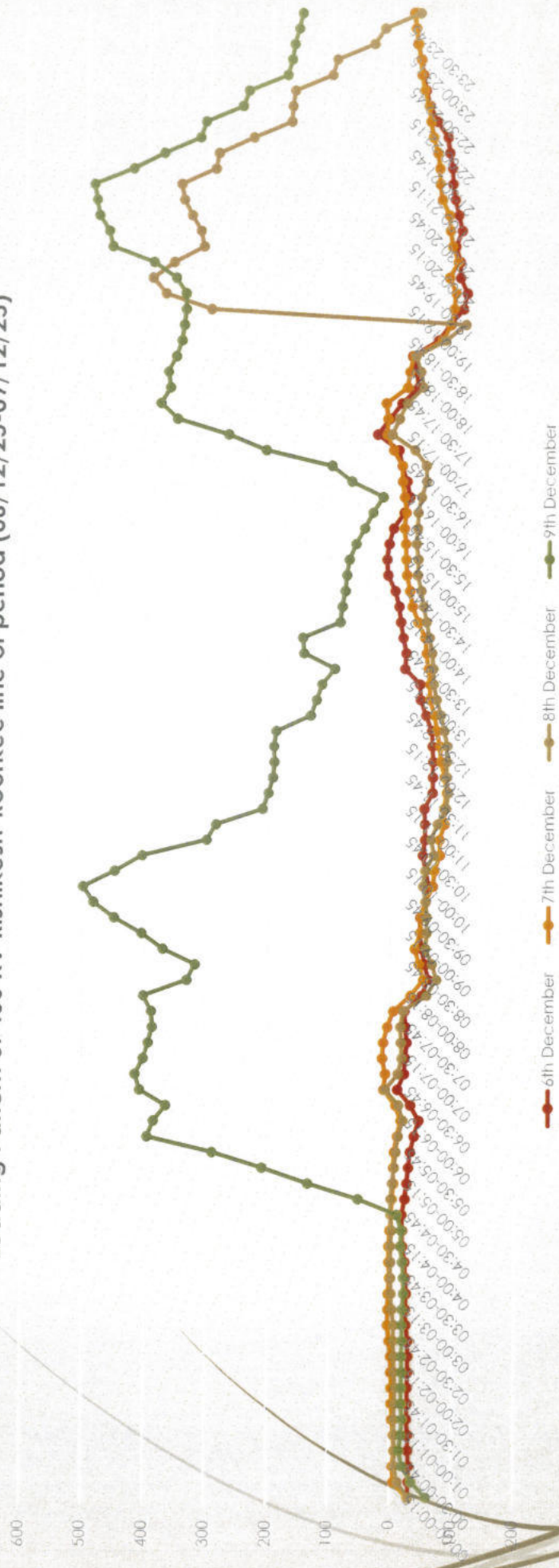
Loading Pattern of 315 MVA for period (01/12/25-15/12/25)



# Impact on Loading on 400 KV Rishikesh-Roorkee line before & after energization of 400 KV Rishikesh-Koteshwar Lines )

Energization date of 400 KV Rishikesh-Koteshwar line : 8/12/25 (18:46 & 19:03 hrs.)

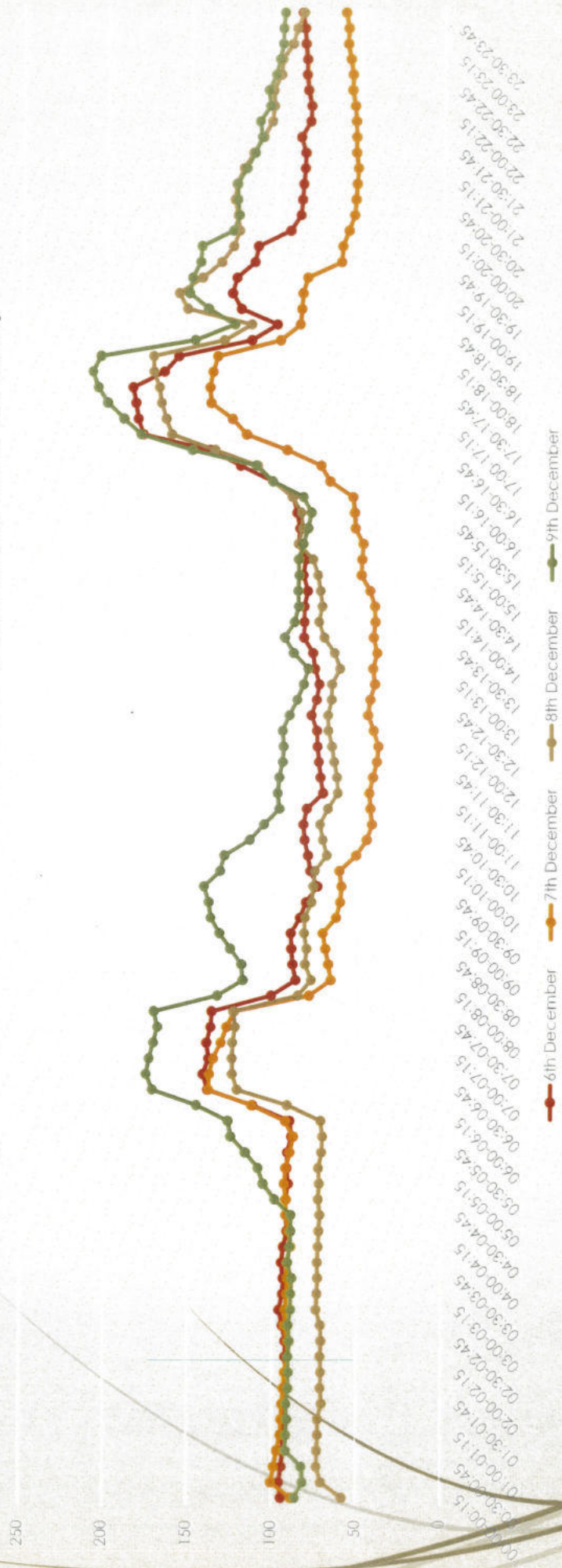
Loading Pattern of 400 KV Rishikesh-Roorkee line of period (06/12/25-09/12/25)



# Impact on Loading on 220 KV Rishikesh-Sidcul Haridwar line before & after energization of 400 KV Rishikesh-Koteshwar Lines )

Energization date of 400 KV Rishikesh-Koteshwar line : 8/12/25 (18:46 & 19:03 hrs.)

Loading Pattern of 220 KV Rishikesh-Sidcul line for period (06/12/25-09/12/25)



## Annexure1: Details of strung section and power line crossing

Sr. no .	Sections	Section Length (km)	Location No. (Proposed Tapping)	Ready Strung Section	Strung Section Length (km)	Powerline Crossing Owner	Ownership Type	Line name (with Voltage level)
1	AP1 - AP22A	41	AP10-AP11	AP3-AP19	28.3	RVPN Jaisalmer	Government	132 kV S/C Sheo-Jhinhiliyali TL
2	AP62 - AP118	56	AP67-AP68	AP65-AP72	5.4	RVPN Jaisalmer	Government	132 kV S/C Dechu to Pokhran TL
			AP111-AP112	AP106-AP113	9	Adani	Private	132 kV S/C Phalodi-Bengti Kalan TL
3	AP118 - AP153	50	AP139-AP140	AP137-AP140B	4.2	RVPN Bhadla	Government	132 kV S/C PS2 - PS-3 TL
			AP133-AP134	AP127-AP135	8.2	RVPN Bhadla	Government	132 kV D/C PS2 - Kanasar TL
			AP124-AP125	AP120-AP125	10.2	Hinduja	Private	132 kV D/C Rawra solar plant to Bap TL
<b>Total</b>		<b>147</b>			<b>65.3</b>			



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## Revised SPS logic for safe evacuation of power from Lalitpur and Ghatampur TPS

SPS Case	SPS Logic/SPS Condition	Existing Logic	New Logic
Case 1	<b>Export &lt; 1400 MW</b> Both 1500MVA ICTs at Fatehabad (UP) tripped <b>OR</b> One of the two 765 KV Lalitpur -Fatehabad line tripped	Load raise command block	Generation at Lalitpur TPS available machines should not exceed 1400MW and 'Generation Raise Command' be blocked at 1400MW <b>AND Manual thermal backing at Ghatampur TPS as per requirement.</b>
Case 3	<b>Export &gt; 1400 MW</b> Both 1500MVA ICTs at Fatehabad (UP) tripped <b>OR</b> One of the two 765 KV Lalitpur -Fatehabad line tripped	Load Limiter will bring Unit#3 at 460 MW and load raise command block and 200 MW load to be reduced manually to bring Fatehabad line loading maximum up to 1400 MW	In this condition if three machines are in operation at Lalitpur TPS, SPS command must be initiated to Lalitpur TPS to bring down generation by 200 MW automatically. Further backing down of generation of 200MW shall be done manually to reduce the total generation at Lalitpur TPS below 1400MW . In this case 'Generation Raise Command' shall be blocked at 1400MW. <b>AND manual thermal backing at Ghatampur TPS as per requirement.</b>
Case 4	Both 765kV Lalitpur TPS-Fatehabad (UP) circuit -I & II get tripped <b>OR</b> If both 1500MVA ICTs at Fatehabad (UP) <b>AND</b> 765 KV Fatehabad- Gr Noida line get tripped	Two selected Unit for turbine trip (old) will trip and one selected unit comes on speed control and 220 kV Jhansi , 220 kV Babina and 220 kV Lalitpur 1&2 circuit trip	<b>LPGCL Submission for revision in Logics:</b> If all four 220 KV Lines connected to LPGCL are in service . To prevent a complete station islanding condition (i.e., house load operation) at LPGCL, it is proposed to retain the tripping of two units as per the existing logic and reduce the generation of the third unit by 200 MW automatically (i.e. From 660MW to 460 MW ) Further manual backing by 100MW . <b>Proposed action :</b> 1.) Tripping of 02 Selected Units of LPGCL and 3rd Selected Unit 200MW automatic Generation backing and additional 100 MW Generation backing down manually . 2.) 132KV Breaker Opening of each 50 MW Solar at Dunara & Babina of Adani green and Fourth Partners (I.e. Total 100 MW) . Additionally , 30MW Dukhwan Hydro connected 132KV breaker may also be opened at Babina substation will added advantage to sustain the grid operation. This action will improve the restoration of LPGCL all Units with short time duration (Once 765KV Line restoration) and remaining 02 Units will synchronize within 2-3 hours to support grid stability .However , Presently , It takes 3-4 Hours to reconnect unit running on house load to grid .Further , additional 4-5 Hrs. is required to restore remaining 02 Units. It will also help to prevent blackout of Lalitpur city and critical power supplies to Railway & Hospitals
Case 5	If load on any 400kV line emanating from 765kV substation Fatehabad (UP) exceeds 850MW.	Unit#3 Load Limiter will bring down generation by 200 MW automatically. Rest of the backing down at Lalitpur shall be done manually.	a)SPS command must be initiated to Lalitpur TPS to bring down generation by 200MW automatically at one of the selected units. Rest of the backing down at Lalitpur TPS shall be done manually. b)200MW automatic thermal backing at Ghatampur TPS. Rest of the backing shall be done manually. <b>c)Also in this case Generation Raise Command be blocked at both the Plants.</b>
Case-6	L-F + G-F < 1700MW	765 KV Fatehabad- Gr Noida line AND Any one of two 1500MVA ICTs at Fatehabad (UP) tripped	'Generation Raise Command' be blocked at Lalitpur and Ghatampur TPS and manual thermal backdown at Lalitpur and Ghatampur TPS as per requirement.
Case-7	1700MW < L-F + G-F < 2100MW		Alternatively, One unit operating at Full load at Lalitpur or Ghatampur TPS shall be tripped intantaneously.
Case-8	L-F + G-F > 2100MW		One unit at Lalitpur and Ghatampur TPS each shall be tripped intantaneously.
<b>Note:</b>			
1. In the table above, 'Export' means total load on 765kV Lalitpur –Fatehabad (Agra) (UP) circuit – I & II and 'L-F + G-F' means sum of power flow towards 765kV Fatehabad on 765kV Lalitpur Fatehabad (Agra) (UP) circuit – I & II and 765kV Ghatampur –Fatehabad (Agra) (UP) line.			
2. Case 1(b) and case 2 of old Logic has been replaced with case 6,7 & 8 in new logic.			

<b>NAPS Islanding scheme Load details_ Revised</b>						
S.No.	Name of the Substation/ Feeder	220/66 & 220/33kV Power Transformer	Load in MW as on 11.06.2025 at 01:00 Hrs (Summer Peak 2025-26)	Load in MW as on 12.04.2025 at 04:00 Hrs (Summer Off Peak 2025- 26)	Load in MW as on 07.01.2026 at 20:00 Hrs (Winter Peak 2025-26)	Load in MW as on 28.01.2026 at 03:00 Hrs (Winter Off Peak 2025- 26)
		Installed Capacity (MVA)				
1	3 nos. of 132kV/33kV Xmer at Simbholi S/s	40	10	8	8	1
		63	12	0	10	2
		63	16	14	12	6
2	132 kV Simbholi - BB Nagar		15	1	9	3
3	132 kV Simbholi - Naglikithore		50	11	37	14
4	3 nos. of 132kV/33kV Xmer at Khurja S/s	63	32	15.2	23	17.2
		63	32	15.2	23	10.7
		63	36.3	7	20.2	13.6
5	132 Khurja(220KV)- Khurja-II		37.5	8	24.7	15
			<b>240.8</b>	<b>79.4</b>	<b>166.9</b>	<b>82.5</b>

**NOTE: If there was shutdown of feeder/element at the time given above, kindly provide data when element was most recently in service for the same time. For example, a feeder is under shutdown on 11.06.2025 at 01:00 Hrs, then data may be provided for 10.06.2025 or 12.06.2025 at 01:00 Hrs.**

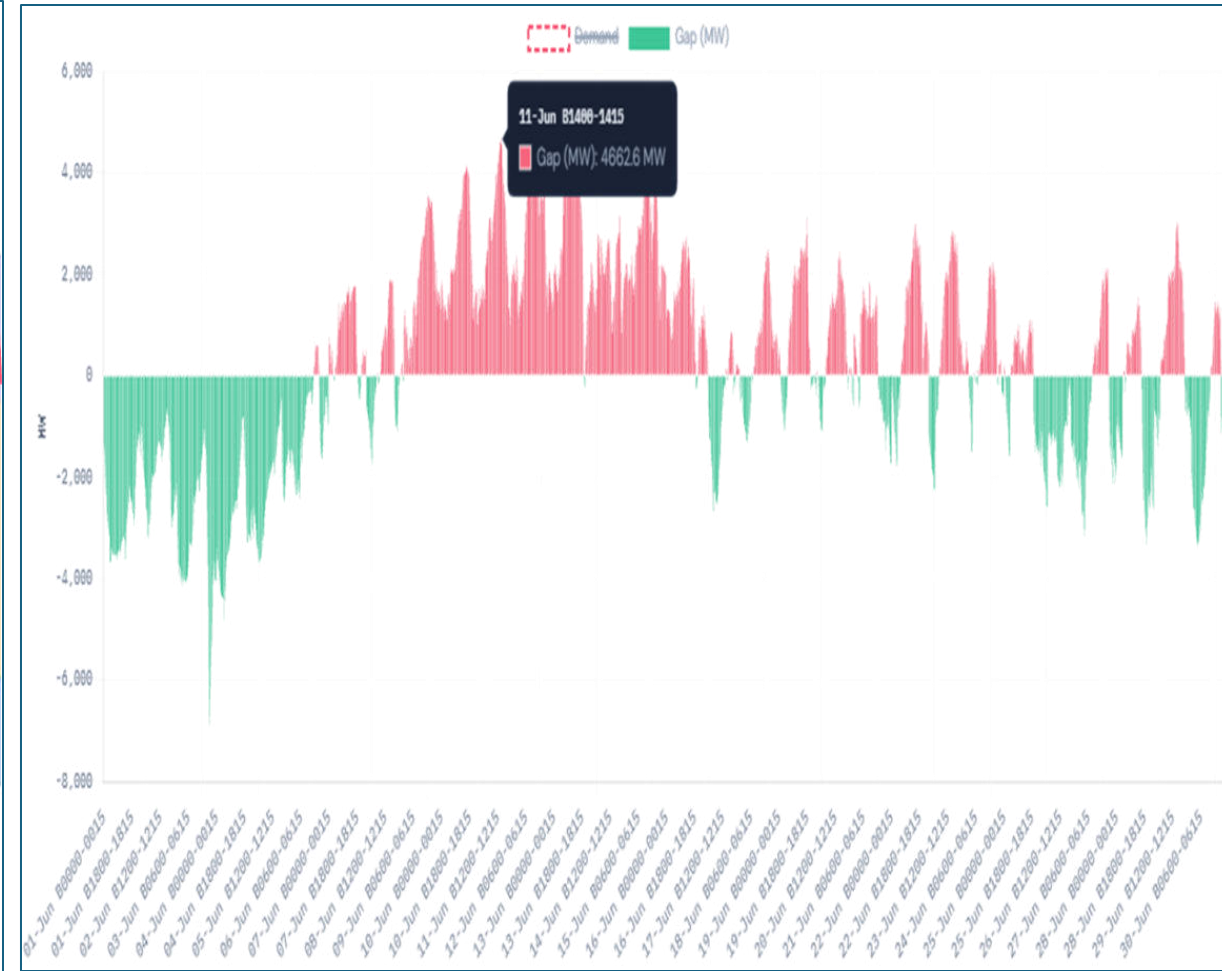
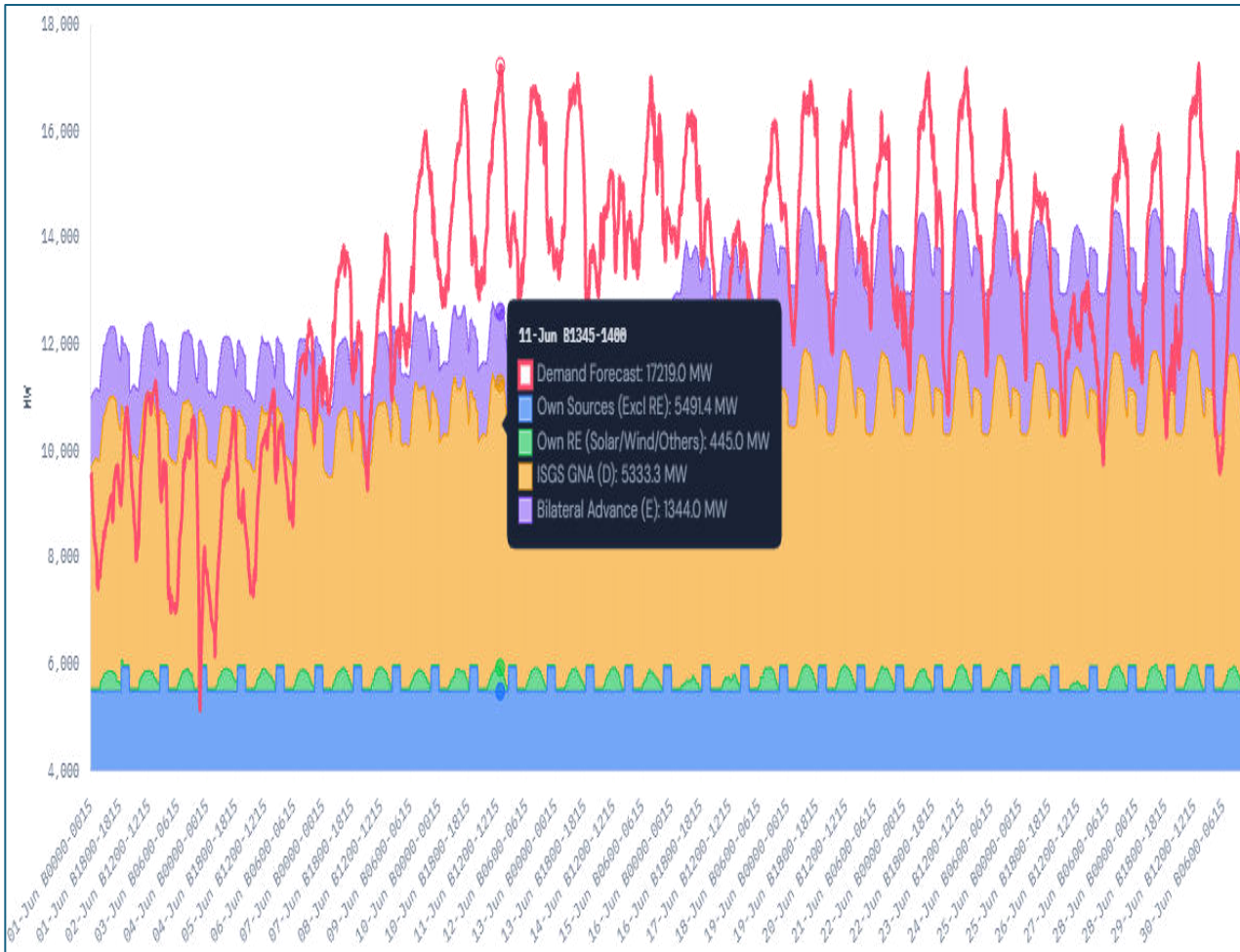
# Month Ahead RA Analysis

June-2026

(As per data submitted by States)

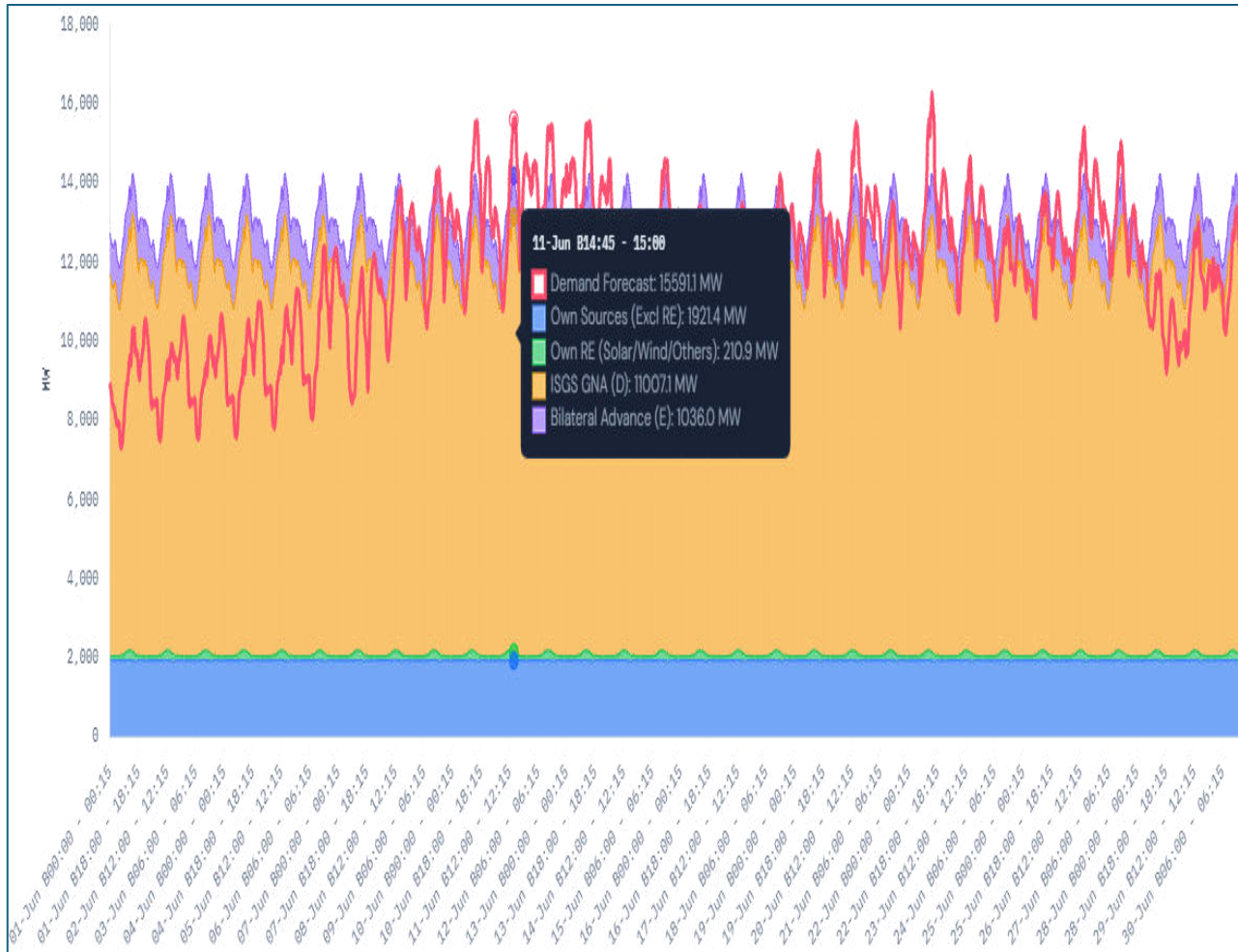
## Punjab-Resource Availability Stack vs. Demand Forecast

## Punjab- Daily Gap Trend - Surplus/Deficit (MW)

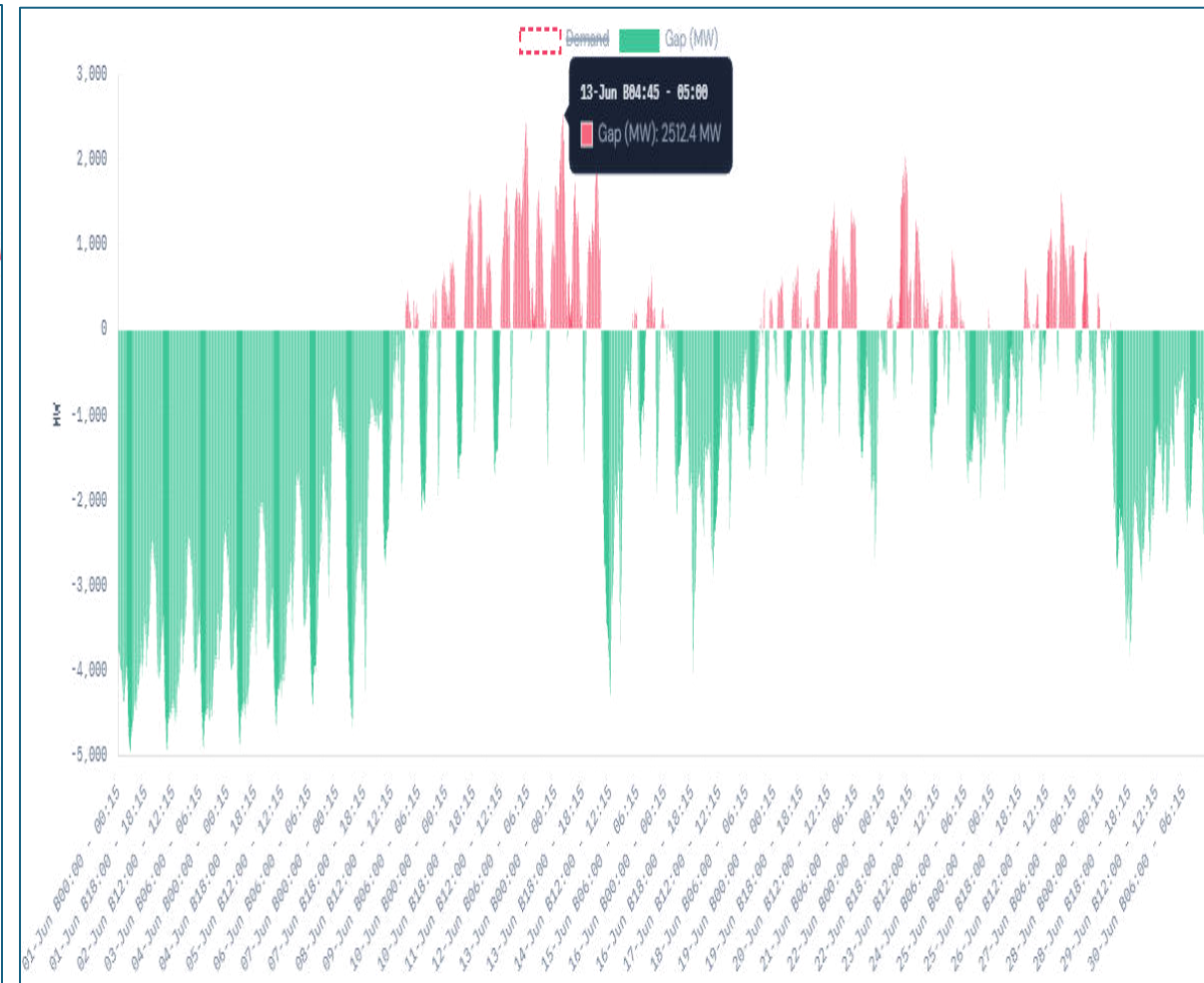


As per the data submitted by SLDC, Punjab faces the highest non-solar hour deficit of ~4,663 MW peak. While bilateral advance (~1,988 MW) is planned, the quantum remains significantly short. Dependence on short-term market during non-solar hours at this scale is a critical concern and requires proactive advance bilateral contracting is advised.

## Haryana-Resource Availability Stack vs. Demand Forecast

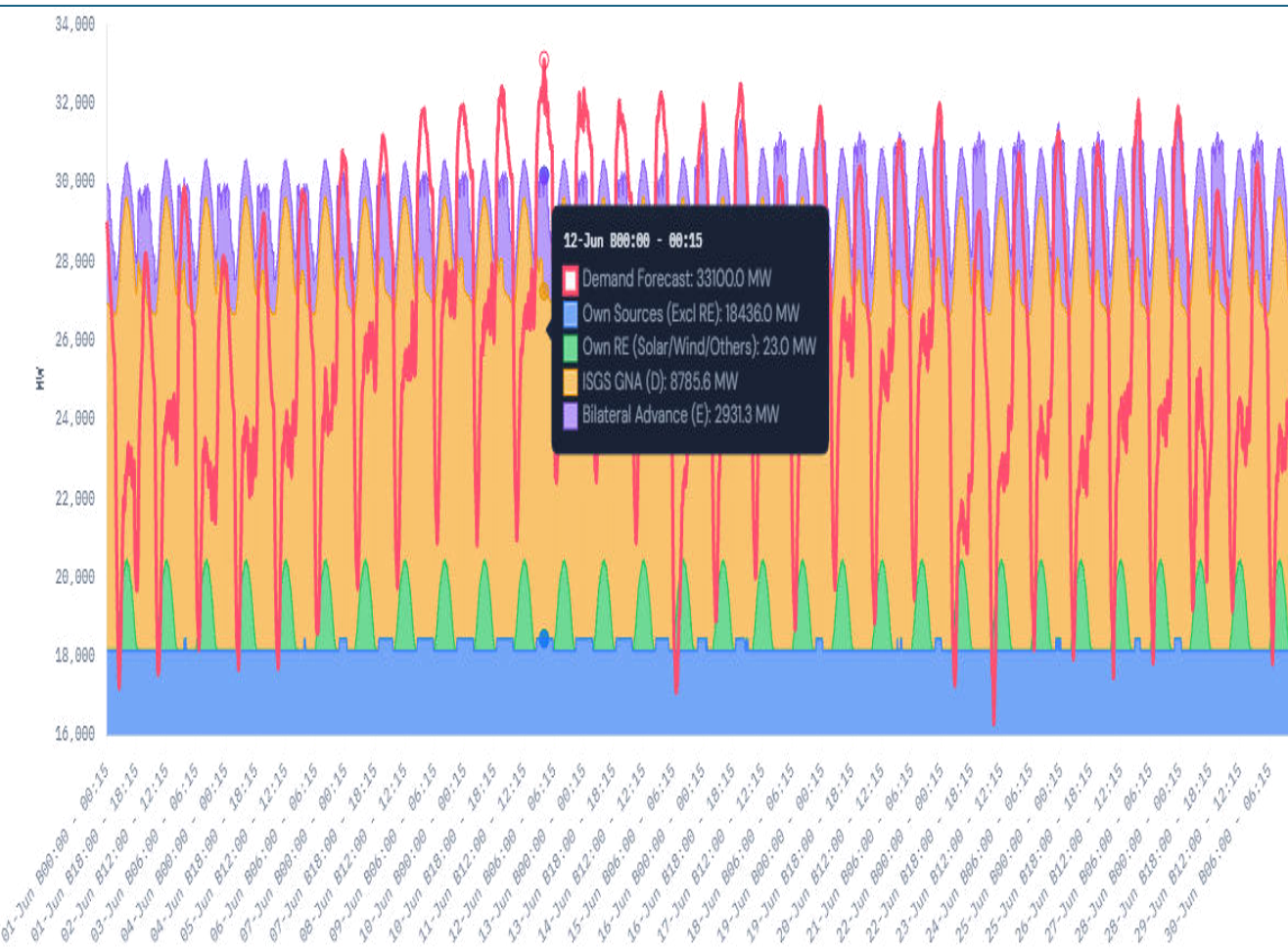


## Haryana- Daily Gap Trend - Surplus/Deficit (MW)



Haryana has bilateral advance contracts (~1,036 MW avg.) partially covering its requirement, yet a peak non-solar deficit of ~2,512 MW persists. Advance bilateral contracting for the deficit blocks, particularly in evening and night periods, needs to be firmed up to avoid short-term market reliance.

## Uttar Pradesh-Resource Availability Stack vs. Demand Forecast

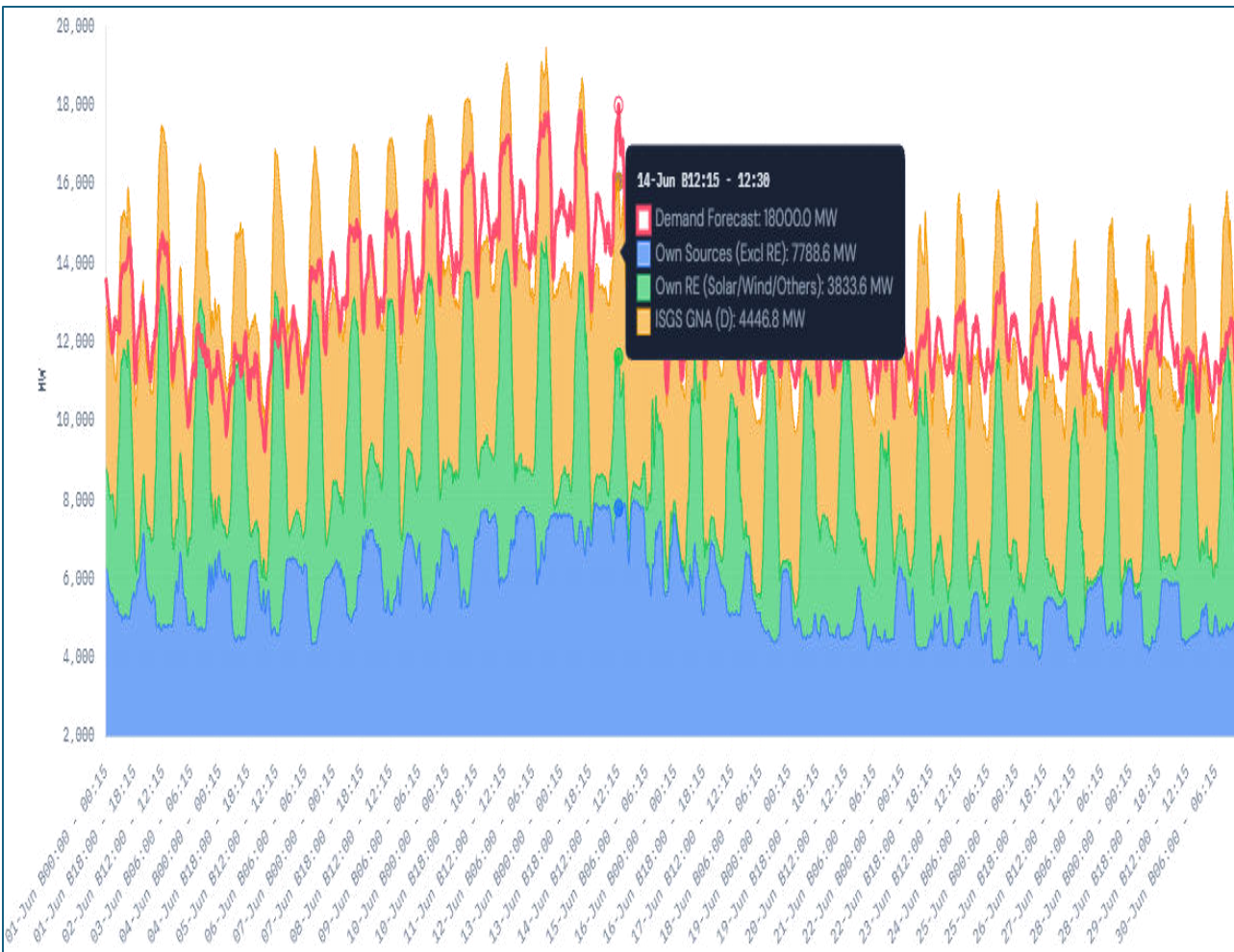


## Uttar Pradesh- Daily Gap Trend - Surplus/Deficit (MW)

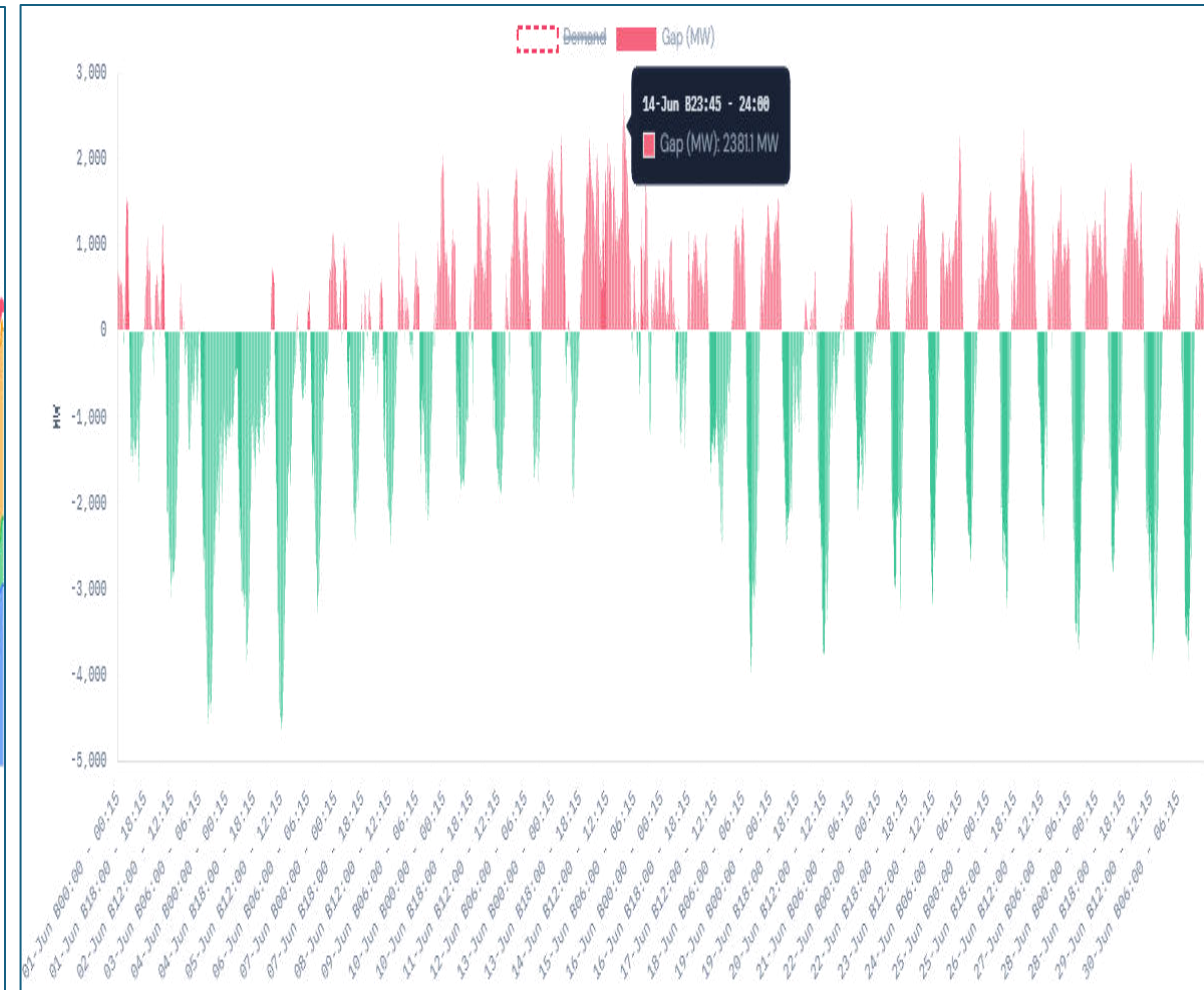


The projected deficit visible prominently during non-solar hours is proposed to be managed entirely through short-term market procurement. As per the data submitted by SLDC, a peak deficit of ~3,181 MW is observed during non-solar hours and it is proposed to be met through short term market, given that bid clearance in the Power Exchange during non-solar hours is minimal, proactive advance bilateral contracting is advised.

## Rajasthan -Resource Availability Stack vs. Demand Forecast



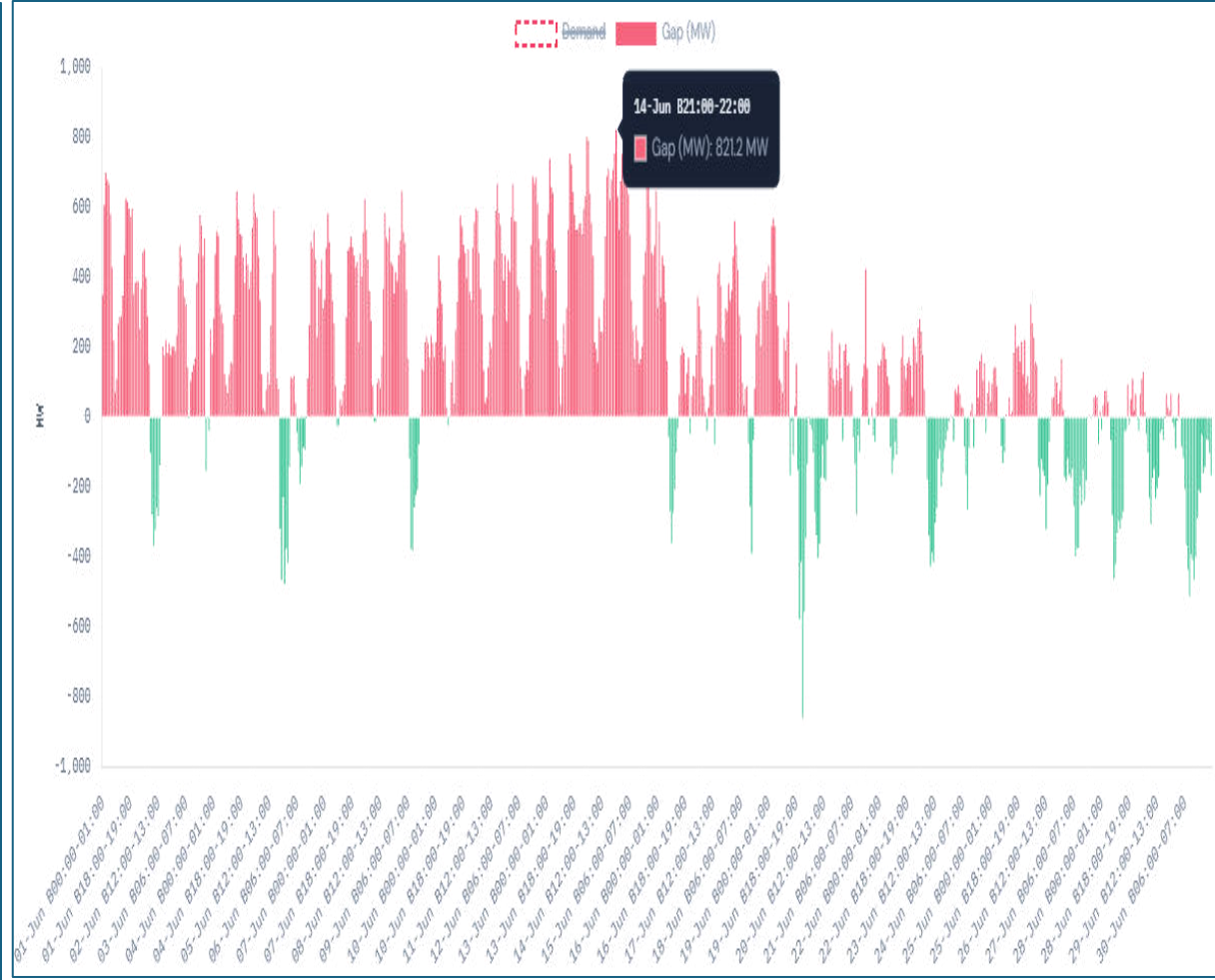
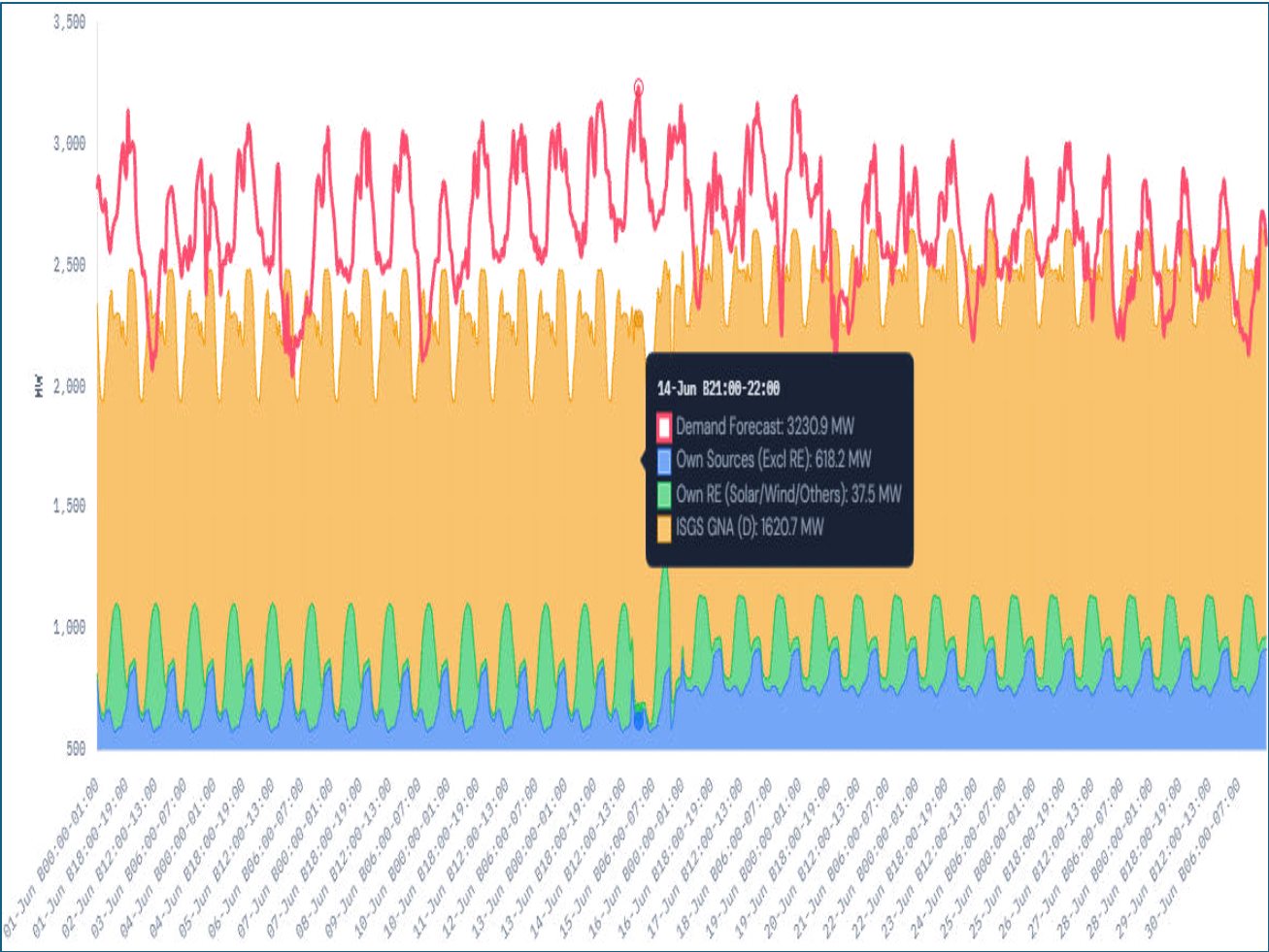
## Rajasthan- Daily Gap Trend - Surplus/Deficit (MW)



As per the data submitted by SLDC, a peak deficit of ~2500 MW is observed during non-solar hours and it is proposed to be met through short term market, given that bid clearance in the RTM/DAM during non-solar hours is minimal, proactive advance bilateral contracting is advised.

## Uttarakhand-Resource Availability Stack vs. Demand Forecast

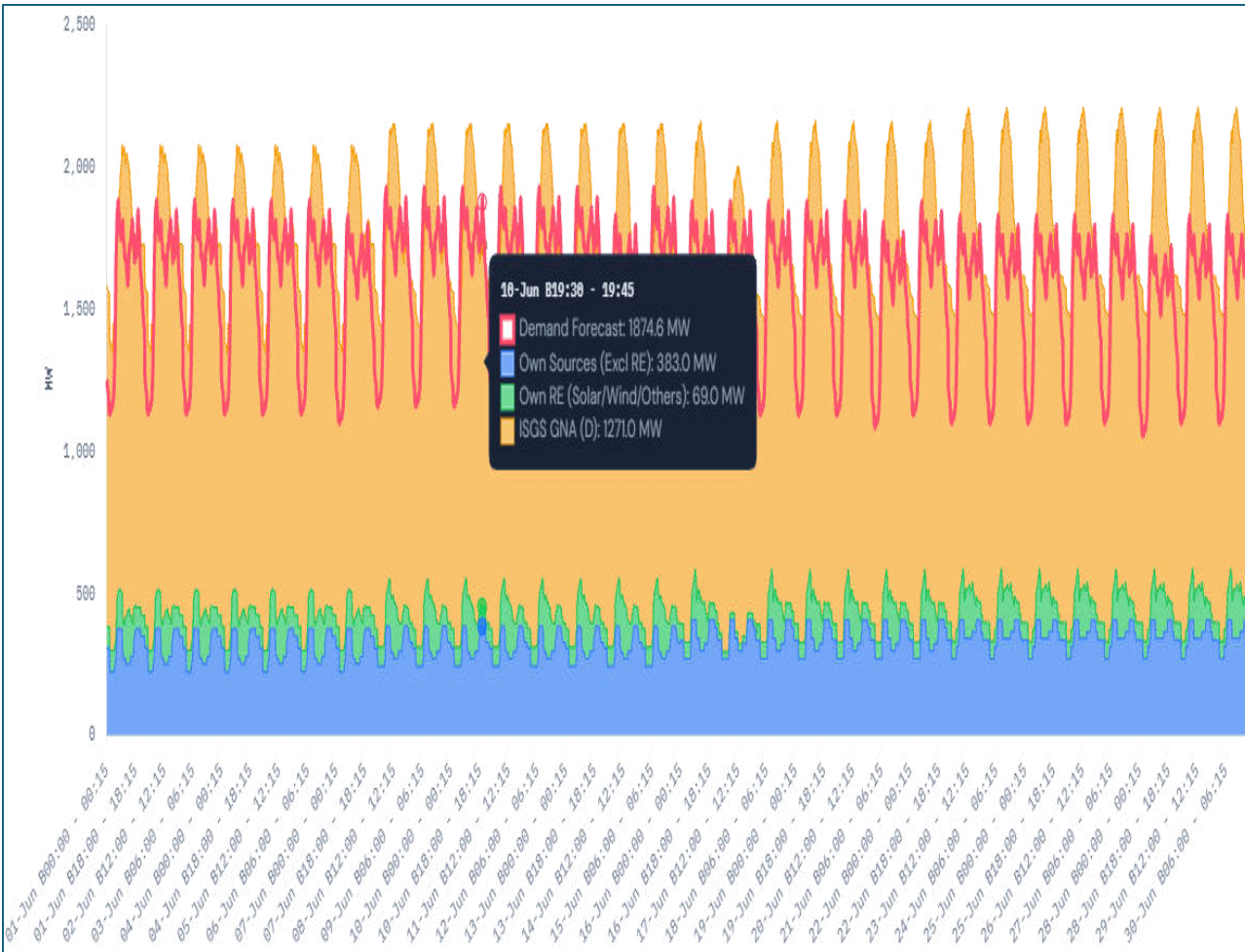
## Uttarakhand- Daily Gap Trend - Surplus/Deficit (MW)



No bilateral advance contract details have been submitted by Uttarakhand for June 2026. With a peak gap of ~821 MW, the entire non-solar shortfall is proposed to be met through Power Exchange. Given that bid clearance in the Power Exchange during non-solar hours is minimal, proactive advance bilateral contracting is advised.

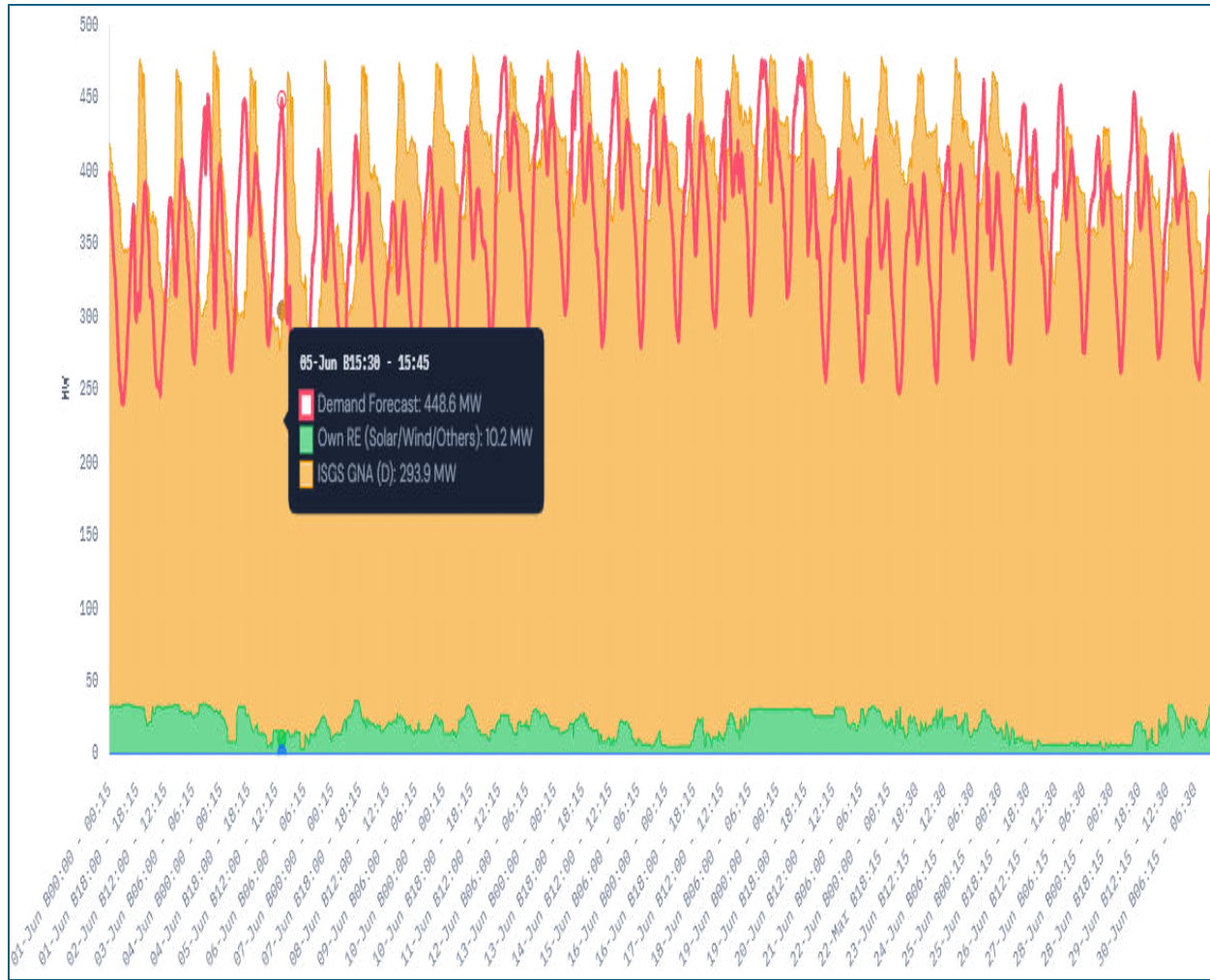
## Himachal Pradesh-Resource Availability Stack vs. Demand Forecast

## Himachal Pradesh- Daily Gap Trend - Surplus/Deficit (MW)



As per the data submitted by SLDC, HP is largely a surplus state for June 2026, with availability exceeding demand for most of the month. However, 318 MW peak deficit is observed during non-solar hours across some blocks, where no bilateral advance or DA procurement is scheduled. This residual gap is proposed to be managed through the short-term market during non-solar periods.

## Chandigarh-Resource Availability Stack vs. Demand Forecast



## Chandigarh- Daily Gap Trend - Surplus/Deficit (MW)



140 MW peak deficit is observed during non-solar hours across some blocks, where no bilateral advance procurement is scheduled. This gap is proposed to be managed through the short-term market during non-solar periods.

- 7.8 In this regard, CEA stated that since timelines for Bursar, Kirthai-I and Kirthai-II are not yet confirmed, therefore as of now, Kishtwar S/s is being planned only for about 2400 MW (considering 10% overload). POSOCO added that in near future, with the coming up of new upstream generations, a new substation could be planned in that area.
- 7.9 After deliberations, the following was agreed:
- i) Implementation of of Kiru-Kwar- Pakaldul- Kishtwar 400 kV D/C Triple HTLS connectivity line to be implemented by M/s CVPPL. M/s CVPPL to phase the implementation of the dedicated line as per the implementation timelines of the three HEPs ie. Kiru, Kwar & Pakaldul
  - ii) One and a half breaker switching scheme at 400kV Generation switchyard.
  - iii) 2 bays at each end of Kishwar and Pakaldul - under the scope of generator.
  - iv) 420 kV, 125 MVAR Bus Reactor at PakalDul HEP -under scope of generation developer
  - v) Establishment of 400 kV switching station at Kishtwar (GIS) by LILO one circuit of Kishenpur – Dulhasti 400kV D/c (Quad) line (Single Circuit Strung) –under ISTS

#### 8.0 Establishment of 400 kV switching station at Kishtwar(GIS) under ISTS:

- 8.1 CEA stated that in the 2<sup>nd</sup> meeting of NRSCT, transmission system was agreed for grant of Connectivity/LTA to PakalDul HEP (1000 MW) which included establishment of Kishtwar GIS 400 kV switching station by LILO one circuit of Kishenpur – Dulhasti 400kV D/c (Quad) line (Single Circuit Strung) and Stringing of second circuit from Kishtwar to Dulhasti on Kishenpur – Dulhasti 400kV D/c line(single circuit strung)
- 8.2 CEA enquired about the finalization of location for Kishtwar S/s. In this regard, CVPPL replied that POWERGRID is Consultant for preparation of DPR of the scheme and POWERGRID has identified a tentative location and for the finalization of location, a committee needs to be formed.
- 8.3 CTU opined that future provisions needs to be taken up adequately for Kishtwar S/s at both 765 kV and 400 kV end. After deliberations, it was decided that a committee will be formed consisting of CEA, CTU, JKPDD and CVPPL for finalizing the location of Kishtwar Pooling station and accordingly, the proposal would be deliberated in the next NRPCTP meeting.

#### 9.0 RVPN's proposal regarding uprating, updating and strengthening intra-State transmission schemes for Renewable Energy Evacuation in Western Rajasthan to be implemented by RVPN:

- 9.1 Director CEA stated that RVPN vide letter no. RVPN/SE(P&P)/XEN-2(P&P)/AE-2/F/D/974 dated 22.10.2019 has submitted a proposal for the Transmission System regarding Uprating, Upgrading and Strengthening of Intra-State Transmission Schemes for

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Renewable Energy Evacuation in Western Rajasthan to be implemented by RVPN. The proposal includes (i) 765 kV Up-gradation of GSS Jodhpur, (ii) A new 400 kV GSS at Pokaran along with associated transmission lines, (iii) Four nos. of 220 kV GSS, (iv) Three no. of new Transmission lines, (v) Transformer augmentation at 3 locations, (vi) Up-rating of 8 nos. of 200 kV and 13 nos. of 132 kV lines, (vii) Addition of shunt reactors at 8 locations, (viii) TCR at 4 locations and (ix) Power Flow Control Device for 2 transmission lines.

CEA also stated that with the above proposal of RVPN, total 6311 MW of renewable capacity will be added by the end of 2022-23, and the total installed capacity would become 15052 MW. RVPN has also carried out the studies, considering 75% of the RE generation capacity. The following transmission schemes were proposed for renewable energy evacuation from Western Rajasthan:

#### **PART-A**

##### **9.1.1 Proposed 765 kV GSS Kankani (Jodhpur) (Up-gradation)**

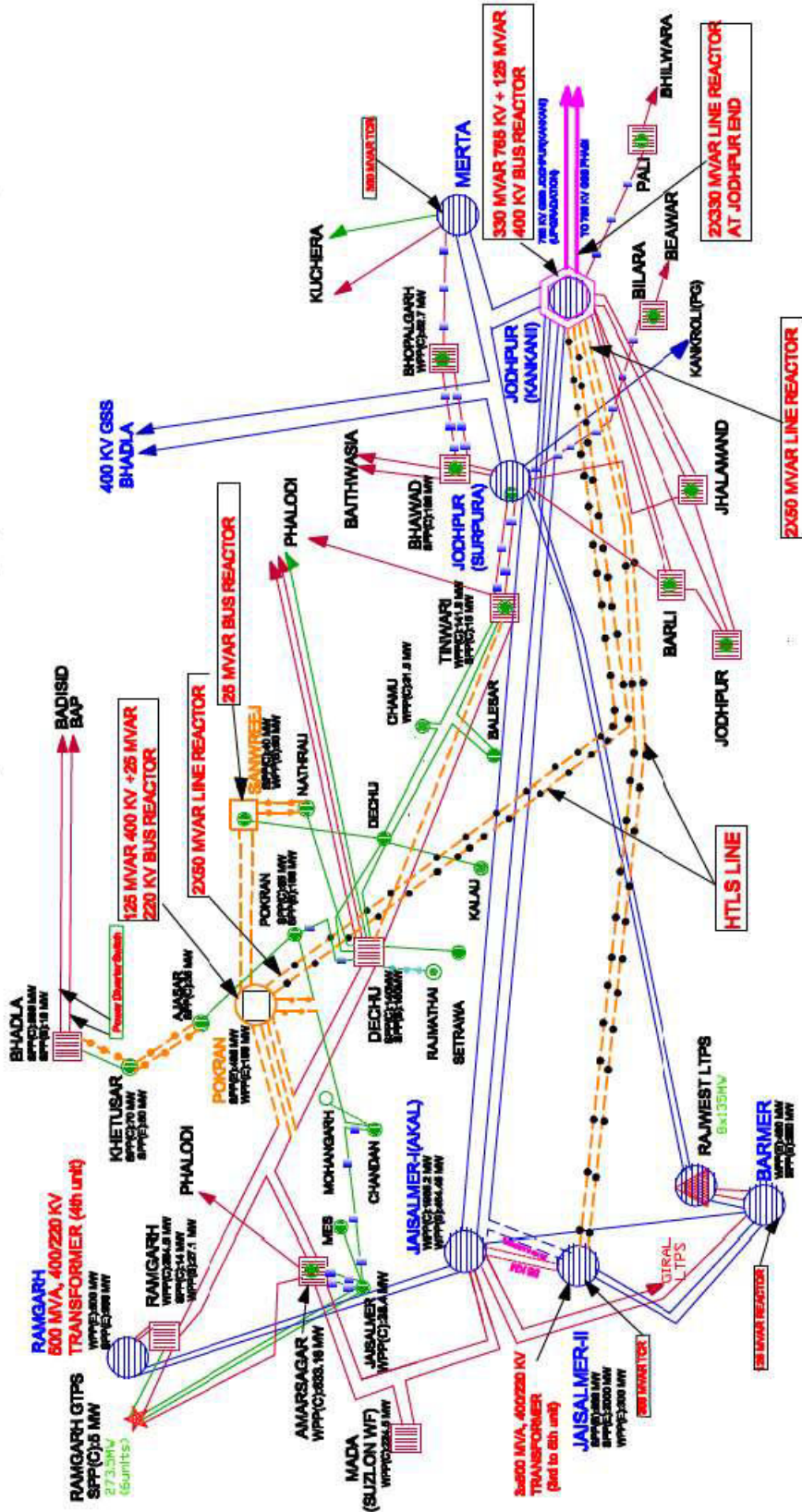
- 3x1500 MVA, 765/400 kV Substation by upgrading 400 kV GSS Kankani(Jodhpur) with 1 x 330 MVAR 765 kV Bus Reactor.
- 300 km, 765 kV D/C Kankani (Jodhpur) - Phagi line with 2x330 MVAR switchable reactors at Kankani (Jodhpur) end and 2x240 MVAR switchable reactors at Phagi end of the line.
- 200 km 400 kV D/C Kankani (Jodhpur)-Jaisalmer-II twin HTLS line with 2x50 MVAR, 420 kV switchable reactors at Kankani (Jodhpur) end of the line.

#### **PART-B**

##### **9.1.2 400 kV GSS Pokaran and associated transmission lines**

- 2x500 MVA, 400/220 kV and 2x160 MVA, 220/132 kV Power Transformers at 400 kV GSS Pokaran (Proposed) with 125 MVAR, 420 kV Shunt Bus Reactor and 25 MVAR, 245 kV Shunt Bus Reactor.
- 150 km 400 kV D/C Twin HTLS line from 400 kV GSS Pokaran to 765 kV GSS Kankani (Jodhpur) with 2x50 MVAR, 420 kV switchable reactors at Pokaran end of the line.
- 25 km LILO of 220 kV S/C Ramgarh-Dechu line at 400 kV GSS Pokaran (Proposed)
- 25 km LILO of 220 kV S/C Amarsagar-Dechu line at 400 kV GSS Pokaran (Proposed)
- 30 km LILO of 132 kV S/C Chandan-Pokaran (132 kV GSS) line at 400 kV GSS Pokaran (Proposed)

Fig: Proposed 765 kV GSS Kankani (Jodhpur) (Up-gradation) and 400 kV GSS Pokaran with associated transmission lines



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### 9.1.3 220 kV GSS at Sawa and associated transmission lines

- 1x160 MVA, 220/132 kV Power Transformer and 1x20/25 MVA, 132/33 kV Power Transformer and 25 MVAR, 245 kV Bus Reactor at 220 kV GSS Sawa (Proposed)
- 100 km 220 kV D/C line from 400 kV GSS Barmer to 220 kV GSS Sawa(Proposed)
- 50 km LILO of 220kV S/C Dhorimanna-Sanchore line at 220 kV GSS Sawa (Proposed)
- 5 km LILO of existing 132 kV S/C Sawa (132 kV GSS)-Chouhtan line at 220 kV GSS Sawa (Proposed)
- 5 km LILO of existing 132 kV S/C Sawa (132 kV GSS)-Ranasar line at 220 kV GSS Sawa (Proposed)

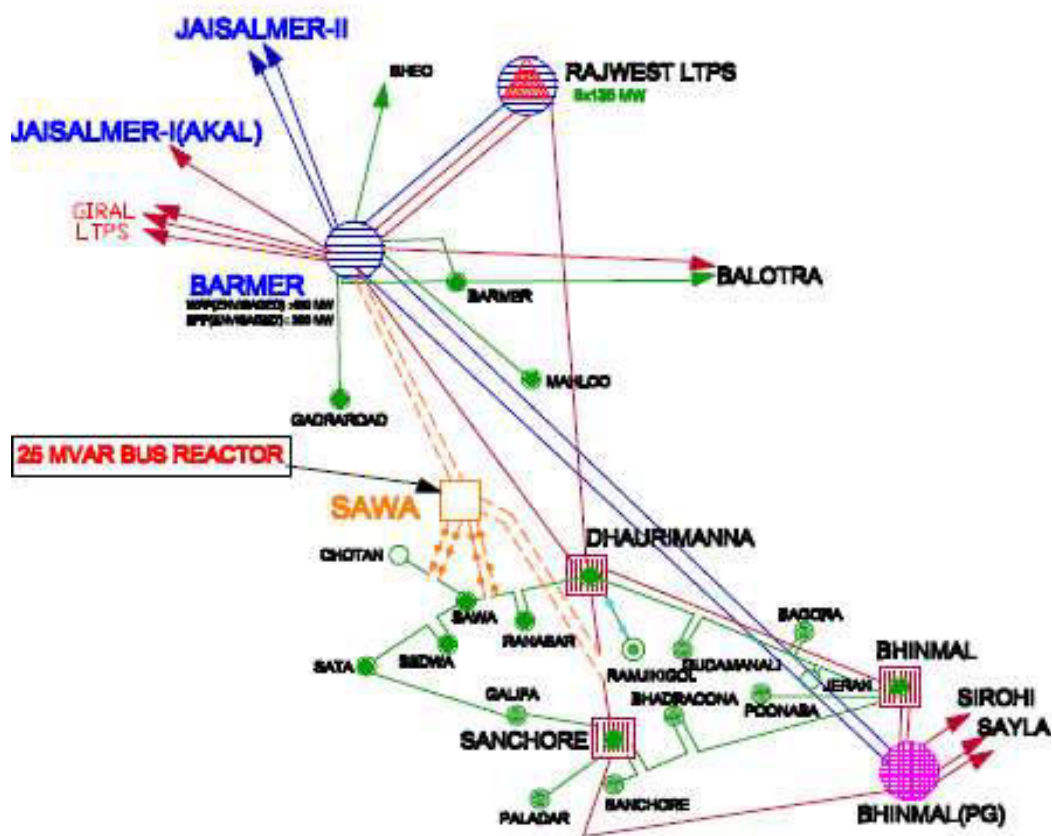


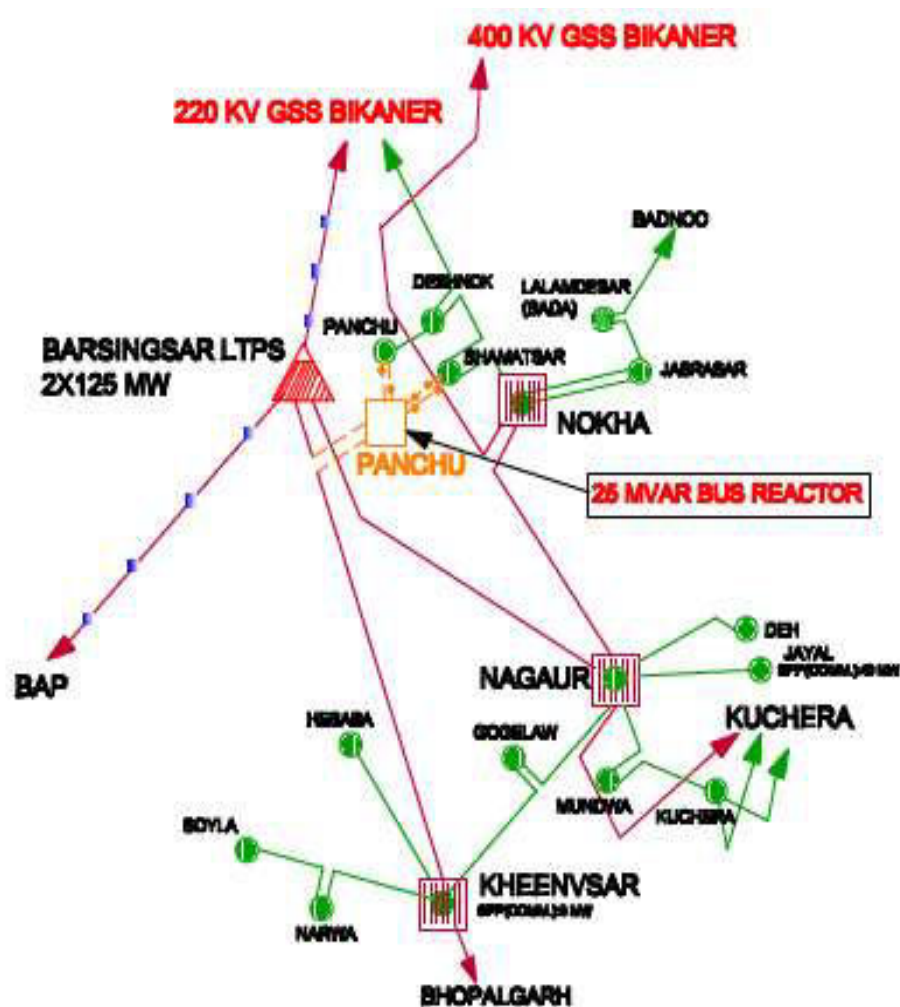
Fig: 220 kV GSS at Sawa and associated transmission lines

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#### 9.1.4 220 kV GSS Panchu and associated transmission lines

- 1x160 MVA, 220/132 kV Power Transformer and 1x20/25 MVA, 132/33 kV Power Transformer and 25 MVAR, 245 kV Bus Reactor at 220 kV GSS Panchu (Proposed)
- 3 km LILO of existing 220 kV S/C BLTPS-Khinvsar line at 220 kV GSS Panchu(Proposed)
- 0.6 km 132 kV D/C line from 220 kV GSS Panchu (Proposed) to 132 kV GSS Panchu (Existing)
- 28 km 132 kV D/C Panchu (220 kV GSS)-Bhamatsar line

Fig: 220 kV GSS Panchu and associated transmission lines



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### 9.1.5 220 kV GSS Lohawat and associated transmission lines

- 1x160 MVA, 220/132 kV Power Transformer and 1x40/50 MVA, 132/33 kV Power Transformer and 25 MVAR, 245 kV Bus Reactor at 220 kV GSS Lohawat (Proposed)
- 70 km 220 kV D/C HTLS Transmission line from 220 kV GSS Badisid to 220 kV GSS Lohawat(Proposed)
- 5 km LILO of 220 kV Phalodi-Tinwari line at 220 kV GSS Lohawat(Proposed).
- 10 km 132 kV D/C line from 220 kV GSS Lohawat (Proposed) to 132 kV GSS Lohawat (Existing)
- 35 km 132 kV D/C line from 220 kV GSS Lohawat (Proposed) to 132 kV GSS Matora

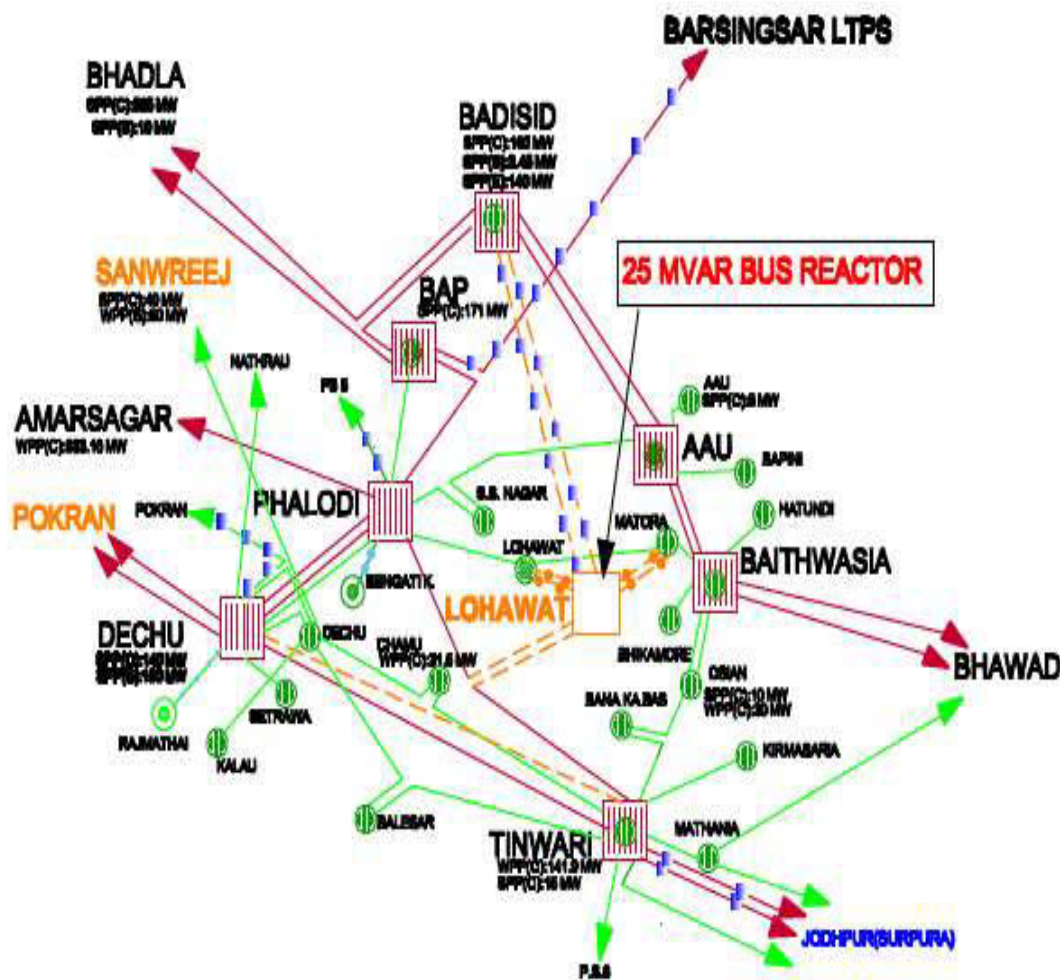


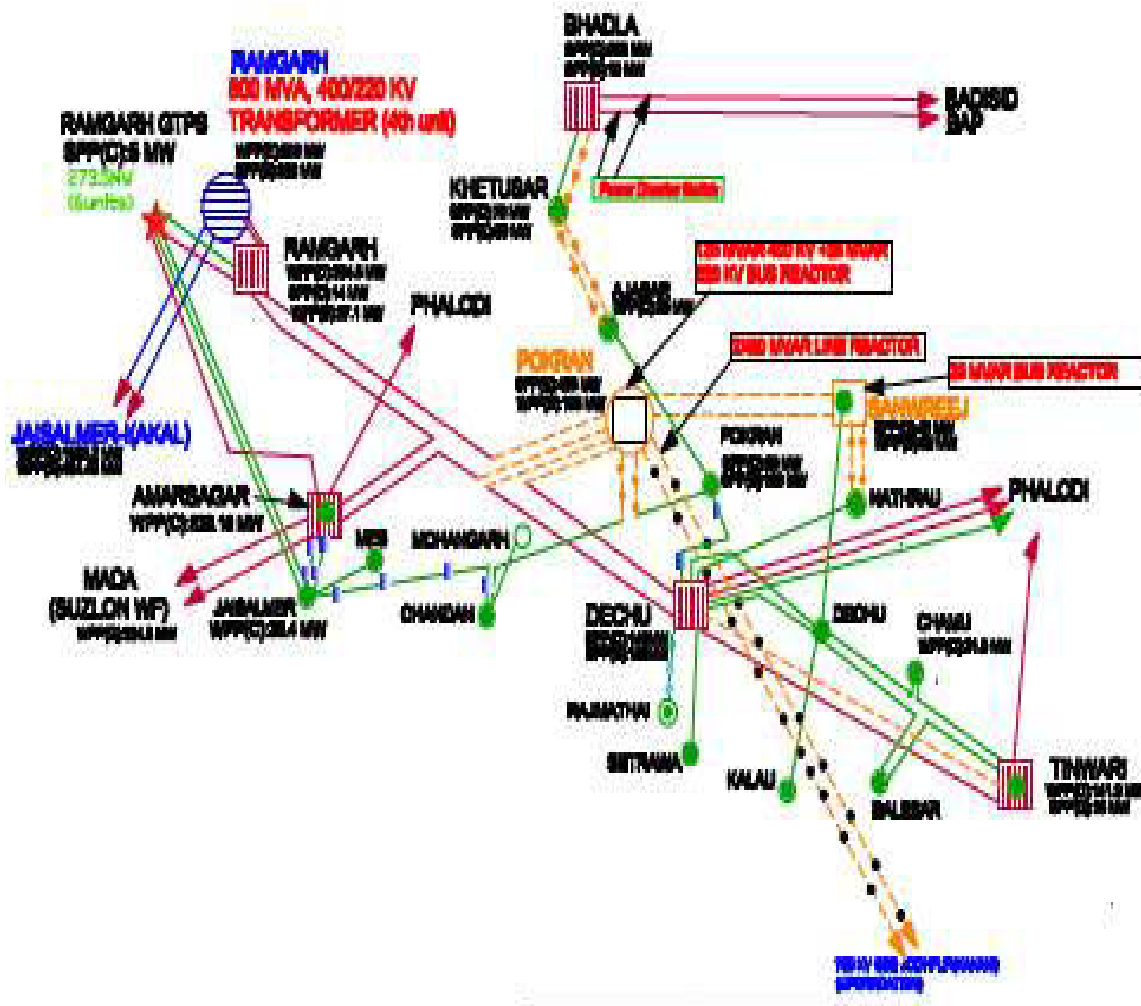
Fig: 220 kV GSS Lohawat and associated transmission lines

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### 9.1.6 220 kV GSS Sawareej (Upgradation) and associated transmission lines

- 1x160 MVA, 220/132 kV Power Transformer and 25 MVAR, 245 kV Bus Reactor at 220 kV GSS Sanwreej (Proposed)
- 30 km 220 kV D/C line from 400 kV GSS Pokaran to 220 kV GSS Sanwreej(Proposed)
- 38 km 132 kV D/C line from 132 kV GSS Sanwreej to Nathrau

Fig: 220 kV GSS Sawareej (Upgradation) and associated transmission lines



### 9.1.7 New EHV Lines/ Circuits

- 72 km 220 kV S/C line from 220 kV GSS Dechu to 220 kV GSS Tinwari
- 38 km 132 kV D/C Khetusar-Ajasar line
- 28 km stringing of second circuit of existing 132 kV S/C Bhadla-Khetusar line on D/C towers

### 9.1.8 New Transformer Additions-

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- 1x500 MVA, 400/220 kV ICT at Bhadla
- 1x500 MVA, 400/220 kV ICT at Ramgarh
- 3x500 MVA, 400/220 kV ICTs at Jaisalmer-II

### 9.1.9 Up-rating of Existing Transmission Corridors

#### A. 220 kV LINES

1. 46.6 km, 220 kV D/C Bhawad-Bhopalgarh Line
2. 56.89 km, 220 kV S/C Bhopalgarh- Merta(400 kV) Line
3. 38.21 km, 220 kV S/C Tinwari-Jodhpur(400 kV) Line (First Circuit)
4. 28.947 km, 220 kV S/C Tinwari-Jodhpur(400 kV) Line (Second Circuit)
5. 142.2 km, 220 kV S/C Bap-Barsinghsar LTPS Line
6. 36 km, 220KV S/C Barsingsar-Bikaner line
7. 61.8 km, 220KV S/C Jodhpur(New)- Pali line
8. 81.18 km, 220KV S/C Jodhpur (Surpura)-Bilara line

#### B. 132 kV LINES

1. 8 km, 132 kV S/C Phalodi(220 kV) -PS(5) Line
2. 22 km, 132 kV S/C PS(5) -PS(4) Line
3. 12 km, 132 kV S/C PS(4) -PS(3) Line
4. 12 km, 132 kV S/C PS(2) -PS(1) Line
5. 58 km, 132 kV S/C PS(1) -Bajju Line
6. 45.845 km, 132 kV S/C Bajju-Kolayat Line
7. 21.815 km, 132 kV S/C Kolayat - Gajner Line
8. 39.97 km, 132 kV S/C Gajner-Bhinasar Line
9. 21.815 km, 132 kV S/C Gajner-Pugal Road Line
10. 19.25 km, 132 kV S/C Pugal Road-Bikaner(220 kV) Line
11. 9.61 km, 132 kV D/C Amarsagar-Jaisalmer Line
12. 43.9 km, 132 kV S/C Jaisalmer- Chandan Line
13. 41.754 km, 132 kV S/C Pokran-Dechu(220 kV) Line

### 9.1.10 Reactive Power Compensation

#### Proposed Static Reactors:

S. no.	Name of GSS	Voltage level	Capacity of Shunt Reactor in MVAR
1	765 kV GSS Anta	765 kV	240
		420 kV	125
2	400 kV GSS Heerapura	420 kV	125
3	400 kV GSS Ajmer	420 kV	125
4	400 kV GSS Bhilwara	420 kV	125
5	400 kV GSS Babai	420 kV	125
6	400 kV GSS Chhitorgarh	420 kV	125
7	400 kV GSS Jodhpur(Kankani)	420 kV	125
8	400 kV GSS Barmer	420 kV	125

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	Total (765 kV)		240 MVAR (1 no.)
	Total (400 kV)		1000 MVAR (8x125 MVAR)

**Proposed Dynamic Reactors:**

S. No.	Name of 400 kV GSS	Voltage level	Capacity of TCR in MVAR
1	400 kV GSS Merta	420	300
2	400 kV GSS Bikaner	420	300
3	400 kV GSS Bhadla	420	300
4	400 kV GSS Jaisalmer-2	420	300
	Total		1200 MVR (4x300)

**9.1.11 Power flow Control Device/ Solution**

Power flow control devices with degree of compensation for each device/solution equal to 45MVAR (at 245 kV) are proposed on the following transmission lines:

- 220 kV S/C Bhadla-Bap line
- 220 kV S/C Bhadla-Badisid line

**9.2** Director CEA further stated that to discuss the above proposal, a meeting was held on 13.11.2019 in New Delhi with participation from CEA, CTU and RVPNL, wherein, it was pointed out that the load flow studies for RE power evacuation from Rajasthan has already been done by CTU and CEA incorporating the proposed transmission system of RVPN and it has been found that the system is adequate for evacuation of RE power from western Rajasthan and would supplement the ISTS system already been agreed for RE power evacuation. In the meeting, RVPN informed that the Transmission schemes are divided in two parts. Part-A includes the transmission schemes which are proposed to be funded from domestic financial institutions such as PFC, REC etc. or through TBCB and Part-B includes the Transmission schemes which are proposed to be funded through ADB .The proposal submitted by RVPN was agreed in principle, subject to ratification in the next NRSCT/ Northern Region Power Committee (Transmission Planning).

**9.3** CEA requested Rajasthan to present the studies of the proposed intra-state transmission system.

**9.4** RVPN stated that as the Govt. of India had set a target for establishing 175 GW renewable capacity by 2022 and accordingly 20 GW of RE Potential have been identified in Rajasthan, wherein 17 GW has already been planned under ISTS and the balance 3 GW needs to be planned by RVPN.

**9.5** RVPN further stated that they have carried out the studies for 2022-23 considering the total installed capacity by 2022-23 will be of 15000 MW. They informed that the existing transmission system is capable of evacuating 10000 MW, therefore, they have planned a transmission system for the remaining 5000 MW.

With respect to the above proposal, Rajasthan informed the following:

1. In compliance to RERC Order dated 11.01.2019, Rajasthan Discoms have proposed following year wise trajectory for RE bids for Solar & Wind capacity addition to meet RPO upto FY 2023-24:

Particulars	2020-21	2021-22	2022-23	Total
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Proposed Solar Capacity addition	1500 MW	1600 MW	1785 MW	4885 MW
Proposed Non-Solar /Wind Capacity addition	500 MW	500 MW	426 MW	1426 MW
<b>Total</b>	<b>2000 MW</b>	<b>2100 MW</b>	<b>2211 MW</b>	<b>6311 MW</b>

2. Based on above trajectory, following Solar & Wind capacity has been considered for load flow study for condition corresponding to FY 2022-23:

RE Projects	Installed Capacity (as on 31.3.2019)	Balance approved capacity to be commissioned	Envisaged RE Projects	Total Installed capacity	Generation Schedule @75% considered in LFS
<b>Solar</b>	3074 MW*	864 MW	4885 MW	8823 MW	6618 MW
<b>Wind</b>	4310 MW	492 MW	1426 MW	6228 MW	4671 MW
<b>Total</b>	<b>7385 MW</b>	<b>1356 MW</b>	<b>6311 MW</b>	<b>15052 MW</b>	<b>11289 MW</b>

\*Excluding Captive Solar Projects

- 9.6 RVPN also expressed the concern that in Rajasthan, Generation is mainly confined in the Western part whereas Load is present at the other end. Hence, there is a problem of high voltage and overloading for lines which are directly connected to the pooling S/s near to solar and wind generators. In this regard, uprating and upgrading of lines with HTLS conductor are proposed, utilizing the existing Right of Way. Also, in order to control the voltage profile, static and dynamic reactors are planned for the system. Further, Power from Bhadla tends to flow more towards the 220 kV side rather than 400 kV side, therefore two Power flow Control Devices are proposed.
- 9.7 CEA enquired about the location and capacity of upcoming generation expected by 2022-23. Accordingly, RVPN has informed the following:

<b>Jaisalmer District</b>	
Ramgarh	900 MW
Jaisalmer 2	2000 MW
Pokaran	485 MW
<b>Jodhpur District</b>	
Bhadla	400 MW
Kanasar	250 MW
Badisid	150 MW
Ketesar	80 MW
<b>Bikaner District</b>	
Gajner	250 MW
Koliat	3 MW
<b>Barmer district</b>	
Barmer	200 MW
<b>Sriganganagar district</b>	
Srivijay Nagar	80 MW
Raisingnagar	80 MW

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- 9.8 POSOCO raised the issue whether the system is planned for n-1 complaint. In this regard, RVPN explained that the RE generation considered is mix of solar and wind generation and in Rajasthan both wind and solar are complementary in nature, therefore, the proposed system would be capable of evacuating the power without any overloading concern.
- 9.9 POSOCO suggested to check the wind profile for the period from 11 AM to 1 PM. In this regard, RVPN stated that as per the load curves, wind is at its peak for 1 hour from 8 AM-9 AM. Also, till date such condition has not been observed when both solar and wind generation are at their peak.
- 9.10 CTU enquired about the details regarding Power Flow Control Devices proposed for two lines. For this, RVPN stated that they are 245 kV power electronics devices capable of controlling 45MVAR reactance of the line. Further, this device contains 9 sections of 5 MVAR each and according to the requirement; the reactance of the line can be changed by injecting the requisite voltage in series with the line.
- 9.11 CTU raised the concern regarding the effect of this device on protection system, as to how the distance protection would work. Also, as the device would be the first to be implemented in the country, therefore, CTU suggested RVPN to further study and analyse the design specifications of this device and may explore any other possibility.
- 9.12 POSOCO and CTU further suggested to implement STATCOM instead of TCR's, as in case of TCR's, filters would be needed to prevent the harmonics entering into the system. In this regard, RVPN stated that STATCOM's are costly and are already been planned in that area by POWERGRID, therefore they are considering a different option at their own Bhadla S/s.
- 9.13 CTU enquired about the total cost of the transmission system proposed. In this regard, RVPN stated that the cost will be around 5200 Cr.
- 9.14 After deliberations, following was decided:
- a) The intra-state transmission schemes mentioned in Para 9.1 above was agreed.
  - b) RVPN has been requested to make a presentation in the next NRPCTP meeting regarding the power flow control devices.

**10.0 Connectivity of 220kV transmission line from 400kV GSS Ajmer to 220/25kV TSS Kishengarh through 2 phase line on double circuit towers and associated bay at 400kV GSS Ajmer**

- 10.1 CEA stated that Indian Railways vide their letter dated 5<sup>th</sup> September, 2019 has requested CEA to issue technical advisory to RVPNL to grant two-phase connectivity for 220 kV transmission line between 400 GSS Ajmer to 220/25 kV TSS Kishengarh. In its letter, Indian Railways have intimated that Rajasthan has conveyed its unwillingness in providing the two-phase connectivity to the TSS of Railways at 220 kV voltage level on account of the unbalance created by 2-phase load. This meeting has been convened to deliberate upon this issue.
- 10.2 To deliberate on the issue, a meeting was held on 8.11.2019 in CEA. In the meeting, RVPNL opined that with rapid growth in Railway electrification, traction load is increasing

## Chapter 10: Recommendations

The following remedial measures are recommended to avoid recurrence of such grid events:

### 10.1 Reactive Power Management (Dynamic/Static):

In order to maintain voltage stability, reactive power support is desired from all grid connected utilities without leaning over each other so as to ensure minimum reactive exchange at different voltage levels.

#### a. Generators

- The generating units including those near load centre stations shall keep their PSS/AVR in service for dynamic reactive power support and stability during contingencies.
- The generating stations, both conventional as well as renewable, shall provide their P-Q capability curve for 0.95 per unit and 1.05 per unit voltage along with the curve based on 1 (one) p.u. terminal voltage. The voltage-dependent reactive support shall be assessed based on the submitted voltage-dependent capability curves.

#### b. Transmission

- The transmission system shall be planned and commissioned to ensure reactive power balance at all voltage levels in the grid. For this, different operating scenarios shall be studied to identify the reactive power requirement. Any deficit so identified shall be followed by augmenting the dynamic/static reactive power sources by transmission system planners (CEA/CTU/STUs).
- The placement and sizing of STATCOM/SVC shall be planned in such a way that the dynamic reactive support from STATCOM/SVC are not utilized in steady-state. It will ensure that in case of grid contingencies, full dynamic range is available for the grid support.
- Also, the design philosophy of future STATCOMs may be adopted so as to ensure the availability of dynamic reactive reserve for any contingency.
- State-wise reactive power compensation requirement (Dynamic & Static) may be studied in a holistic manner so that states do not lean over the ISTS system for reactive power support.

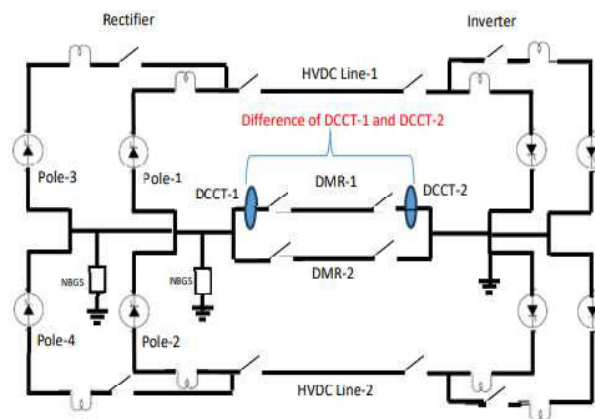
#### c. Load Centres

- Adequate static/dynamic reactive devices may be planned at the distribution level near loads so that there is minimum drawl from reactive sources at the transmission (STU) level. States may explore the deployment of capacitor banks at lower voltage levels for meeting the reactive support required by loads having poor power factor.
- The dynamic reactive power sources shall be commissioned near load centre stations based on the composition and quantum of individual load type.
- System studies for appropriate locations and suitable size of switchable capacitor banks, STATCOM/SVC etc. may be carried out. Early action on deployment and installation is needed.
- As shown in the study results, the behaviour of the system is entirely different with different load models viz. composite and ZIP load model. Hence, accurate load modelling is very important to properly capture the right behaviour of the system in the operational planning phase. Same may be considered in the planning stage studies as well as while assessing the TTC/ATC of control areas.
- It is recommended that a suitable SPS scheme may be planned which shall operate after outage of HVDC Champa – Kurukshetra Bipole to obtain relief in the voltage.

- The load centres (non-pit head locations) usually experience low voltage-related issues during peak demand periods. The presence of thermal generators near the load centres may significantly improve the voltage profile and can provide dynamic reactive power support in case of contingencies improving the stability.

## 10.2 Reliable operation of HVDC Champa - Kurukshetra:

- Between January to June 2024, there have been more than 30 instances of tripping of HVDC Champa-Kurukshetra poles (list enclosed as **Annexure – 13**). Detailed fault analysis of the 800 kV HVDC Champa-Kurukshetra link and other affected components is essential to understand the root cause of the event. Implementing remedial measures based on this analysis can prevent recurrence and enhance the reliability of this critical interregional link.
- All trippings have been analyzed by POWERGRID in consultation with OEM and it has been concluded that trippings have occurred mainly due to mal-operation of DCCT, T-zone protection mal-operation, 5005/5008 card failure, system failure issue and de-paralleling failure issue. Based on the identification of issues, necessary modification of software and hardware is already in process and under trial. POWERGRID to expedite the implementation of measures at the earliest.
- HVDC Champa-Kurukshetra tripping took place due to a transmission line fault at location 1805 (falling under Village - Chamarra, Block -Panwari, Distt- Mahoba, Uttar Pradesh) caused by flashover between jumper conductor and tower body under localised storm/heavy wind condition. Even though this is the only line fault that took place during the last one year in this line and no record of fault at this location since commissioning, it is very important that further improvements in O&M of the transmission line may be done in view of the criticality of HVDC line. In order to control the jumper swing use of additional pilot insulators, addition of counterweight and insulation sleeve on the jumper conductor and DMR wherever required may also be deployed. Increased line patrolling during summer and at vulnerable locations need to be ensured to check infringements and foreign materials.
- As per existing configuration, both DMR-1 & DMR-2 is connected together electrically at both terminals of HVDC through disconnectors. Online isolation of DMR during power flow or fault condition is not possible. To improve the reliability of system under DMR fault condition auto-isolation of DMRs and NBGS after discussion with OEM of HVDC may be explored in consultation with HVDC OEMs.



*Figure 94: DMR current differential protection*

- As DMR-1 was available, an assessment is needed to determine if Pole-1 & 3 could have remained operational with DMR-1, given the power order was not excessively high (~1100 MW total). The periodic review of healthiness of DMR is important to assess the healthiness

of HVDC lines. Protocol for periodic healthiness checking of DMR may be formulated by the utility.

- f. Standard DMR line fault protection philosophy may be incorporated in RfP Document for future HVDC projects in consultation with OEM i.e. The closing of NBGS may be reviewed (in consultation with OEMs) for DMR line protection sequence during Bipolar operation for future HVDC projects.
- g. HVDC systems have huge number of filter banks which provides MVAR support in addition to serve the basic purpose of harmonics filtration. It may be beneficial to get benefit of filter banks for MVAR support during low voltage condition subject to technical feasibility without compromising the safety of HVDC system as such.
- h. A SPS scheme can be explored where filter banks of HVDC are tripped in succession after blocking of HVDC poles, this would help in limiting the dip in voltage after blocking of HVDC poles.
- i. However, the immediate protective removal of filters is highly required in existing LCC HVDC during blocking of bipoles to avoid sudden voltage overshoot at connected AC BUS. In order to mitigate abrupt voltage rise/fall during filter switching, the filter switching scheme of HVDC in case of protective pole tripping should be based on antecedent AC bus voltage. If the voltage is lower/higher than a set value, the switching of filter bank/ part of filter bank may be avoided until the voltage recovers to that level.

### 10.3 Implementation of Overvoltage protection setting:

It was also observed that better over-voltage protection settings are required specially when there is sharp rise in voltage. In such cases voltage based time grading need to be carried out on different lines based on various factors. A review of overvoltage stage-1 protection settings on all 765KV lines emanating from northern region substations was carried out. Based on the deliberations, following is recommended for implementing overvoltage Stage-I protection settings:

- a. Pick up voltage & time delay setting of Antitheft lines to be kept low with sufficient time gap from other lines at S/s
- b. Parallel lines grading to be done such that one line should trip early by setting at low voltage and other line should trip last by keeping setting at high voltage.
- c. Highly loaded lines should be given last priority in tripping.
- d. Net MVAR relief (based on line charging MVAR & MVAR compensation in line) based on the simulation to be considered for arriving at the priority of line tripping. Lines providing high net MVAR relief to be tripped early.
- e. Grading to be done in such a manner that one major incoming and outgoing line shall remain connected after tripping of lines at any node.
- f. Protection setting of remote end station of a line need to be coordinated so as to avoid tripping of line from other end.
- g. Drop-off to pick-up ratio of Relays implemented for overvoltage protection shall be more than 99.5%.

### 10.4 Frequency Response by Generating Units

- a. The performance of primary response by generating units in this event underscores significant concerns regarding the inadequate governor response being provided by generators.

- b. It is recommended that the performance of generating units where inadequate primary response was observed shall be discussed at RPC level. The remedial measures shall be explored including carrying out of onsite primary response testing.

## 10.5 Compliance of CEA Standards by Renewable Generating Plants:

- a. Protection settings of inverters/WTG shall be coordinated in such a way that it accounts for the voltage rise/drop between inverter/WTG terminal & Point of interconnection (POI). Overvoltage /undervoltage trip settings should be configured accordingly.
- b. The reactive power controller settings (droop, deadband, power factor, operating modes) in inverters/WTGs should be configurable and shall be set in consultation with the respective load dispatch centre.
- c. The protection settings of elements in collector system viz. transformers, cables etc. shall such that it allows RE plants to ensure the compliance of CEA standards at POI.
- d. RE plants shall ensure that the event records shall be shared with SLDC/RLDC within the stipulated time for event analysis. All such data shall be retained in a retrievable format in a suitable archival system.

## 10.6 Compliance of Standards by Load Serving Machines

- a. The motors serving load shall be compliant with IS/IEC, this shall ensure following:
  - i. Limiting MVAR drawl during low voltage period.
  - ii. Avoiding unwanted tripping due to voltage fluctuations.
  - iii. Improved power factor
- b. It is suggested that the protection settings of 1-ph AC compressors, 3-ph HVAC compressors in large commercial complexes, mall etc., agricultural motors etc. may be reviewed and suitable standard for the same may be notified.

## 10.7 Amendments in Existing Regulations

With the envisaged large-scale addition of different emerging types of loads i.e. electrolyzers, data centres and other power electronic interfaced loads, it is important that the suitable provisions for ensuring reliable operation may be added in the existing CEA standards.

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## Annexure

## Details of Transmission Elements under Emergency Shutdown to attend Hotspot:-

S.No	Element Name	Owner	Outage		Revival		Reason / Remarks
			Date	Time	Date	Time	
1	220 KV Pirankaliyar(UK)-Roorkee(PG) (PTCUL) Ckt-3	PTCUL	01-04-2026	11:20	01-04-2026	14:51	To attend hotspot on tower No. 10 (Y-phase)
2	220 KV Manesar(PG)-Mau(HV) (HVPNL) Ckt-1	HVPNL	01-04-2026	13:09	01-04-2026	17:33	to attend Hotspot in bottom of Yph Wavetrap
3	220 KV Faridabad Sec-58 (HV)-Faridabad(NT) (HVPNL) Ckt-1	POWERGRID,HVPNL	03-04-2026	01:07	03-04-2026	02:10	to attend hotspot on R-Phase Cable Clamp.
4	220 KV Faridabad Sec-58 (HV)-Faridabad(NT) (PG) Ckt-2	POWERGRID	03-04-2026	13:15	03-04-2026	18:56	To attend Hotspot For attending RED HOT on LINE Isolator Y phase.
5	220 KV Bassi(PG)-Bagru(RS) (PG) Ckt-1	POWERGRID,RRVPNL	04-04-2026	09:48	04-04-2026	15:11	
6	400 KV Tanda(NT)-Azamgarh(UP) (UP) Ckt-1	UPPTCL	05-04-2026	10:15	05-04-2026	13:02	To attend Red hot on Jaw of Y phase line side isolator
7	400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1	RRVPNL	06-04-2026	18:27	07-04-2026	01:53	To attend red hot
8	220 KV Patiala(PG)-Nabha(PS) (PSTCL) Ckt-2	PSTCL	06-04-2026	18:46	06-04-2026	22:52	To attend red hot
9	400 KV Sarnath(UP)-Varanasi(PG) (PG) Ckt-1	POWERGRID	08-04-2026	16:06	08-04-2026	19:24	To attend Hotspot Y phase 29 C Pantograph clamp
10	220 KV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-2	DTL	09-04-2026	10:30	09-04-2026	16:12	To attend Hotspot hotspot on ct
11	400 KV Sarnath-Azamgarh (UP) Ckt-1	UPPTCL	09-04-2026	13:22	09-04-2026	18:36	Hotspot in attending Y phase wave trap clamp
12	220 KV Fatehgarh_III(PG)-RSRPL_Hyb_FTHG3_PG (RENEW SURYA ROSHNI PRIVATE LIMITED) Ckt-1		09-04-2026	22:22	10-04-2026	04:36	To attend Hotspot in 220 kV Bus-2 above 220 kV RSRPL Line at Bay No. 202
13	400 KV Jhatikara(PG)-Mundka(DV) (PG) Ckt-2	POWERGRID,DTL	10-04-2026	17:22	10-04-2026	20:31	to attend hotspot in Isolator 417?89B (B-Ph).
14	220 KV Kurukshetra(PG)-Ramana Ramani (HVPNL) (HVPNL) Ckt-2	HVPNL	10-04-2026	21:56	11-04-2026	01:14	To attend the hot spot tower no. 31
15	220 KV Badarpur(NT)-Alwar MIA(RS) (RS) Ckt-1	RRVPNL	11-04-2026	12:43	11-04-2026	18:18	To Attend the Red hot sparking At TL No. 46 in Faridabad to attend Hotpoint on Y Phase Wave trap clamp at 400 KV Sub-Station, Sarojini Nagar, Lucknow.
16	400 KV Singrauli(NT)-Lucknow(UP) (PG) Ckt-1	POWERGRID	13-04-2026	13:35	13-04-2026	19:38	to attend the red hot point on WAVE TRAP
17	220 KV Bhiwani(PG)-Isherwal(HR) (HVPNL) Ckt-1	HVPNL	15-04-2026	15:20	15-04-2026	17:43	Hotspot Red hot point R phase Line side Isolator clamp
18	220 KV Saharanpur(PG)-Saharanpur(UP) (UP) Ckt-1	UPPTCL	15-04-2026	17:16	15-04-2026	19:42	To attend hotspot observed in Conductor connector at Bay-210 near wave trap Work at PGCIL End.
19	220 KV Fatehgarh_III(PG)-RSAPL_SL_FTHG3_PG (RENEW SURYA AAYAN PRIVATE LIMITED) Ckt-1		15-04-2026	21:23	16-04-2026	06:00	Hotspot at near wave trap Work at PGCIL End.
20	220 KV Fatehgarh_III(PG)-RSAPL_SL_FTHG3_PG (RENEW SURYA AAYAN PRIVATE LIMITED) Ckt-1		15-04-2026	21:23	16-04-2026	06:00	Hotspot at near wave trap Work at PGCIL End.
21	220 KV Barnala(PS)-Sangrur(BB) (BBMB) Ckt-1	BBMB	16-04-2026	09:54	16-04-2026	17:48	To attend the Critical hot point To attend Hotspot as the temperature at one clamp in Y phase LA has become at abnormal stage.
22	400 KV Anpara_B(UPUN)-Mau(UP) (UP) Ckt-1	UPPTCL	16-04-2026	09:55	16-04-2026	13:10	
23	765 KV Mainpuri-Unnao (UP) Ckt-1	UPPTCL	16-04-2026	10:33	16-04-2026	16:12	for hotspot attending in transmission tower jumper to attend hot spot at Y phase jumper at Tower no 207 under Fatehpur TLM.
24	220 KV Kanpur(PG)-Unchahar(NT) (PG) Ckt-3	POWERGRID	16-04-2026	12:39	16-04-2026	16:22	To attend Hotspot in Isolator 401 89L Y-Phase (Towards Line Side)
25	400 KV Fatehgarh_III(PG)-Fatehgarh_III(PG) (PRTL) Ckt-1		17-04-2026	20:27	18-04-2026	02:44	To Attend Hotspot On 220 KV Balachak - patti line on T.No. 77. Please refer email.
26	220 KV Amritsar(PG)-Patti(PS) (PSTCL) Ckt-1	PSTCL	17-04-2026	21:14	18-04-2026	20:45	to attend hotspot in line side B Ph dropper between 405 and 406 Bay
27	400 KV Mainpuri(UP)-Mainpuri(PG) (UP) Ckt-1	UPPTCL,UPPTCL	18-04-2026	13:57	18-04-2026	17:50	To Attend Hotspot in 206 89L Rph connector pad
28	220 KV Bhiwani(PG)-Bhiwani(HV) (HVPNL) Ckt-2	HVPNL	18-04-2026	16:24	18-04-2026	18:05	to attend hotspot observed on the B-phase wave trap.
29	765 KV Meerut(PG)-Narela(PNTL) (PNTL) Ckt-1	POWERGRID	20-04-2026	16:55	20-04-2026	19:21	To Attend Hotspot in the R phase CT
30	220 KV Sohawal(PG)-Sohawal(UP) (UP) Ckt-2	UPPTCL	21-04-2026	09:47	21-04-2026	13:10	For attending hot point Y Phase ct
31	132 KV Khatima(UK)-Pilibhiti(UP) (PTCUL) Ckt-1	PTCUL	21-04-2026	11:02	21-04-2026	12:58	To attend the hot point at wave trap ( B-phase)
32	400 KV Rajpura-Dhuri (PS) Ckt-1	PSTCL	21-04-2026	11:28	21-04-2026	18:52	to attend hotspot in B-Ph of line isolator 208-89C
33	220 KV Gorakhpur(PG)-Anand Nagar(UP) (UP) Ckt-1	UPPTCL	21-04-2026	11:33	21-04-2026	14:38	to attend hot spot at the Y-phase CT connector of the 220 kV Raebareilly
34	220 KV Raebareilly(PG)-CG City(UP) (PG) Ckt-1	POWERGRID	22-04-2026	15:55	22-04-2026	17:57	Hotspot For attending red hot point in CT clamp bolt
35	220 KV Shahjahanpur(PG)-Gola(UP) (UP) Ckt-1	UPPTCL	23-04-2026	14:26	23-04-2026	17:53	Hotspot .for attending critical hot points.
36	220 KV Ballabgarh-Samaypur (BB) Ckt-2	BBMB	24-04-2026	06:48	24-04-2026	15:57	Hotspot B Phase hotspot emergency shut down
37	220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-3	POWERGRID	25-04-2026	10:31	25-04-2026	12:38	Hotspot To attend Red hot on R-ph T-point isolator clamp
38	220 KV Anta(NT)-Sakatpura(RS) (RS) Ckt-1	RRVPNL	25-04-2026	10:46	25-04-2026	14:01	Hotspot For attending hot point on R phase CB connector
39	220 KV Sitarganj(PG)-CBGanj(UP) (PG) Ckt-1	POWERGRID	27-04-2026	11:30	27-04-2026	17:45	Hotspot CT Y Phase hot spot emergency shut down
40	220 KV Unchahar(NT)-Fatehpur(UP) (UP) Ckt-1	UPPTCL	28-04-2026	15:28	28-04-2026	18:03	Hotspot for attending hotspot (175 degrees) at location 33 and 38.
41	400 KV Bawana CCGTB(DTL)-Bhiwani(PG) (PG) Ckt-1	POWERGRID	28-04-2026	17:19	29-04-2026	03:50	To attend the clamps Hotspot and chattering issue at line bay 210.
42	220 KV B3SGVPL_SL_BDL3-Bhadla_3(PB3TL) (B3SGVPL) Ckt-1		28-04-2026	20:40	29-04-2026	01:18	Hotspot Hotspot observed in isolator
43	220 KV Kishenpur(PG)-Udhampur(PDD) (PG) Ckt-2	POWERGRID	28-04-2026	23:00	29-04-2026	00:11	hotspot observed in Y phase isolator contacts at PGCIL end side
44	220 KV ASSPL_SL_BKN2-Bikaner_2 (PBTS) (ASSPL_BKN2) Ckt-1		29-04-2026	00:00	29-04-2026	04:47	Hotspot to attend the hot point
45	220 KV Panipat(BB)-Chajpur(HV) (HVPNL) Ckt-2	HVPNL	29-04-2026	10:05	29-04-2026	15:50	hotspot on R-ph 4100989 isolator connector (1260 C)& Y-ph jumper dropper at T-point (95o C)
46	400 KV Meerut(PG)-Muzaffarnagar(UP) (PG) Ckt-1	POWERGRID	29-04-2026	11:42	29-04-2026	16:06	Hotspot red hot point on 400kV bus -1 ( Bay -410-89A ) Y phase.
47	400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-1	HVPNL	29-04-2026	12:43	29-04-2026	14:04	Hotspot to attend the hotspot at L/R R-PH Isolator at Bikaner s/s.
48	765 KV Bhadla-Bikaner (PG) Ckt-1	POWERGRID	29-04-2026	17:40	29-04-2026	22:08	Hotspot for attending the red hot points on line isolator 413-89L ( red phase).
49	400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-2	HVPNL	29-04-2026	18:08	29-04-2026	20:08	Hotspot on Y phase 403-89L line isolator dropper quad clamp.
50	400 KV Jhatikara(PG)-Mundka(DV) (PG) Ckt-2	POWERGRID,DTL	29-04-2026	19:16	29-04-2026	22:47	
51	220 KV Sonipat(PG)-Rai (Sonipat)_GIS(HV) (HVPNL) Ckt-2	HVPNL	29-04-2026	22:07	30-04-2026	11:40	To attend Hot point observed on R phase, TL No-112
52	220 KV Gurgaon(PG)-GurgaonSec72(HV) (HVPNL) Ckt-3	HVPNL	30-04-2026	06:18	30-04-2026	09:25	For attend the red hot point on Line isolator -Y phase
53	400 KV Allahabad-Fatehpur (PG) Ckt-2	POWERGRID	30-04-2026	11:14	*	*	to attend a critical hotspot on the R Phase line dropper

**Annex-VII**

<b>List of feeders for physical regulation in Supply</b>				
<b>Uttar Pradesh</b>				
S No	Name of Feeder	Affected area	Approx Load relief (MW)	Remarks
1	220kV Meerut-Gajraula	Gajraula	100	Not Radial
2	220kV Baghpat(PG)-Baghpat D/C	Baghpat	60	Radial
3	220kV Allahabad(PG)-Jhusi	Jhusi	200	Not Radial
4	220kV Sohawal(PG)-Barabanki D/C	Barabanki	120	Not Radial
5	220kV Mainpuri(PG)-Neemkarori D/C	Farukhabad	120	Not Radial
6	220kV Gorakhpur(PG)-Gola D/C	Gorakhpur	80	Radial
7	132kV Ballia(PG)-Bansdeeh	Ballia	15	Radial
8	132kV Ballia(PG)-Sikandarpur	Ballia	30	Radial
50 no.s 132kV feeders can also be opened from SLDC and testing was also carried out few days back at SLDC level				
<b>Punjab</b>				
S No	Name of Feeder	Affected area	Approx Load relief (MW)	Remarks
1	132kV Jamalpur-Ghulal D/C	Ghulal	91	High loading during paddy
2	66kV Jamalpur-Chandigarh Road	Chandigarh Road	37	To be preferred
3	66kV Jamalpur-Sherpur	Ludhiana	13	-
4	220/132kV Sangrur ICT 1,2, 3	Shamsabad	166	High loading during paddy
5	220kV Amritsar-Naraingarh D/C	Amritsar adjoining area	100	To be preferred
6	220kV Patiala-Nabha D/C	Nabha	190	To be opened after discussion with SLDC
7	220kV Jalandhar-Kanjli D/C	Kapurthala	64	To be preferred
120 no.s 66kV feeders may be tripped from SLDC control room to control over drawl (usually when freq below 49.8Hz)				

## Annex-VII

<b>Rajasthan</b>				
S. No.	Transmission line / Transformers to be opened	Power supply interruption	Approx load relief (MW)	Remark
1	220kV Anta-Lalsot	Lalsot	130	The load of 220 kV GSS Lalsot is normally fed from Anta radially. However If ring of 220kV Anta-Lalsot-Dausa is closed then SLDC will open 220 kV Dausa – Lalsot line immediately after physical regulation message received from NRLDC.
2	220 kV Bhinmal (PG) –Sayla Ckt-I & II	Sayla	40	However 220 kV GSS Saylais also fed from 220 kV GSS Jalore. SLDC will open 220 kV Sayla – Jalore line immediately after physical regulation message received from NRLDC.
3	220 kV Bassi(PG) - Bagru line	Bagru	80	However 220 kV GSS Bagruis also fed from 220 kV GSS Phulera. SLDC will open 220kV Bagru – Phulera line immediately after physical regulation message received from NRLDC.
4	220kV Bhiwadi(PG) -Khushkera 220kV Neemrana(PG)-Khushkera	Khushkhera & Kishangarh Bas	170	Limited alternate supply may be available. 220kV Alwar-K.G.Bas - Khushkhera linemay get overloaded.
5	220/132 kV, 160 MVA Transformer at 220kV GSS Behror	Behror	80	SLDC will open 220/132kV transformer of 220kV GSS Behror immediately after physical regulation message received from NRLDC.
<b>J&amp;K</b>				
S No	Name of Feeder	Affected area	Approx Loadrelief (MW)	Remarks
1	220kV Kishenpur-Baran D/C	Baran	200	Radial feeder
2	220kV New Wampoh-Mirbazar	Mirbazar	200	Radial feeder
3	132kV Gladni-Kalakote S/C	Jammu	80	Priority 1
4	Kashmir Bemina	Kashmir	50	
5	132kV Barn-KalakoteD/C	Jammu	80	Priority 2
6	132kV Zainakote - Pattan D/C	Kashmir	70	
220kV Samba-Hiranagar may not be opened as it also supplies to Railways				

## Annex-VII

<b>Uttarakhand</b>				
S N o	Name of Feeder	Affected area	Approx Loadrelief (MW)	Remarks
1	132kV Pithoragarh(PG)- Pithoragarh	Pithoragarh	50	Radial feeder
2	220kV Sitarganj- Eldeco	Eldeco	40-60	Industrial load (only in case of extreme situations)
<p>No control available from SLDC control room for physical regulation. It was discussed that such feeders may be identified which are fed from two resources and will provide relief. Compiled list of such feeders after discussion at state level needs to be shared with NRLDC at the earliest. In case it is difficult to identify such feeders, contingency plan needsto be developed at SLDC level and shared with NRLDC.</p>				
<b>Himachal Pradesh</b>				
S N o	Name of Feeder	Affected area	Approx Loadrelief (MW)	Remarks
1	66kV Bhakra-Rakkar	Rakkar/ Una	10-18	Area being fed from 66kV Rakkar (Una)
2	66kV Pong-Sansarpur	Sansarpur	2-5	Radial feeder
3	132kV Dehar-Kangoo	Kunihar/Shimla	80-140	Priority 1. 400/220kV DeharICT may overload
4	220kV Dehar-Kangoo			
5	220kV Nallagarh- Upernangal D/C	Baddi/ Nallagarh	180-315	Industrial load (only in case of extreme situations)
6	220kV Khodri-Majri D/C	Kala Amb/ Paonta Sahib/ Nahan	80-190	Limited supply may be available from Kunihar.Many essential loads, Oxygen plants, administrative buildings
7	132kV Kulhal-Giri			
8	66kV Parwanoo- Pinjore	Parwanoo	-	Generally kept open
9	33kV Ganguwal- Bilaspur	Bilaspur	6-8	-
<b>Delhi</b>				
S N o	Name of Feeder	Affected area	Approx Loadrelief (MW)	Remarks
1	220kV Mundka- Peeragarhi D/C	Peeragarhi	100-150	Radial feeder
2	220kV BTPS-Okhla D/C	Okhla	200-350	Radial feeder
3	33kV Delhi ckts 1,2,3,4feeders from Rohtak road (BBMB)	Rohtak Road	20-30	Radial feeder
4	220kV MaharaniBagh- Lodhi Road D/C	Lodi Road	200-300	May not be opened as VIP area
5	220kV MaharaniBagh- Masjid Moth D/C	Masjid Moth		Radial feeder

## Annex-VII

<b>Haryana</b>				
<b>S.No.</b>	<b>Transmission element to be opened</b>	<b>Power supply Interruption in</b>	<b>Approx Relief (MW)</b>	<b>Remarks</b>
1	<b>Feeders in schedule A</b> Panipat: a) 33kV Panipat-Sewah b) 33kV Panipat-Untla c) 33kV Panipat-Israna d) 33kV Panipat-Narayana e) 33kV Panipat-Sanoli road Kurukshetra: a) 33kV Kurukshetra-Mathana b) 33kV Kurukshetra-Ajrana c) 33kV Kurukshetra-Kirmich d) 33KV KuruKshetra-REC d) 11kV Kurukshetra-Bahadurpura e) 11kV Kurukshetra-Pipli -2 Dhulkote: a) 66kV Dhulkote-Barnala b) 66kV Dhulkote-Babyal c) 66kV Dhulkote-Sadopur d) Narela: a) 132kV Kundli line emanating from Narela BBMB	Panipat , Kurukshetra, Dhulkote, Kundli (Sonipat)	200 MW (Approx.)	Radial Lines or fed radially (These feeders were already Included In schedule A&B)
2	<b>Feeders in Schedule B</b> a) 220kV Sector-72 PG - Sector-33 ckt-1&2 b) 220kV Kaithal PG- Neemwala ckt-1&2	Kaithal, Gurugram,	180 MW (approx.)	Radial Lines (Additional one feeder included in Schedule-B now to achieve desired load relief)

**National Load Despatch Centre**  
**Import Capability of Punjab for June 2026**

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 Issue Date: -

Issue Time: 1600

Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 June 2026 to 30 June2026	00-24	10900	500	10400	5497	4903		<a href="https://www.punjab.sldc.org/ATC_TTC.aspx">https://www.punjab.sldc.org/ATC_TTC.aspx</a>
<b>Limiting Constraints</b>		N-1 contingency of 400/220KV ICT at Rajpura, Ludhiana, Jalandhar, Muktsar Loading close to N-1 contingency limits of 400/220kV Malerkotla and Patiala ICTs 220 kV underlying network at Jalandhar, Ludhiana and Amritsar						

**National Load Despatch Centre**  
**Import Capability of Uttar Pradesh for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

<b>Date</b>	<b>Time Period in IST (hrs)</b>	<b>Total Transfer Capability (TTC) (MW)</b>	<b>Reliability Margin (MW)</b>	<b>Available Transfer Capability (ATC) (MW)</b>	<b>Approved General Network Access (MW)</b>	<b>Margin Available for Temporary General Network Access(MW)</b>	<b>Changes in TTC w.r.t. Last Revision</b>	<b>Comments</b>
1 June 2026 to 30 June2026	00-24	17700	600	17100	10165	6935		<a href="https://www.upsldc.org/documents/20182/0/ttc_atc_24-11-16/4c79978e-35f2-4aef-8c0f-7f30d878dbde">https://www.upsldc.org/documents/20182/0/ttc_atc_24-11-16/4c79978e-35f2-4aef-8c0f-7f30d878dbde</a>
<b>Limiting Constraints</b>		N-1 contingency of 400/220kV Panki, Agra(PG), Lucknow (PG), Sohawal(PG) ICTs						

**National Load Despatch Centre**  
**Import Capability of Haryana for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

<b>Date</b>	<b>Time Period in IST (hrs)</b>	<b>Total Transfer Capability (TTC) (MW)</b>	<b>Reliability Margin (MW)</b>	<b>Available Transfer Capability (ATC) (MW)</b>	<b>Approved General Network Access (MW)</b>	<b>Margin Available for Temporary General Network Access(MW)</b>	<b>Changes in TTC w.r.t. Last Revision</b>	<b>Comments</b>
1 June 2026 to 30 June2026	00-24	11500	300	11200	5418	5782		<a href="https://hvpn.org.in/#/atcttc">https://hvpn.org.in/#/atcttc</a>
<b>Limiting Constraints</b>		N-1 contingency of 400/220kV ICT at Deepalpur, Hisar, Kabulpur and Panipat(BBMB)						

**National Load Despatch Centre  
Import Capability of Rajasthan for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

<b>Date</b>	<b>Time Period in IST (hrs)</b>	<b>Total Transfer Capability (TTC) (MW)</b>	<b>Reliability Margin (MW)</b>	<b>Available Transfer Capability (ATC) (MW)</b>	<b>Approved General Network Access (MW)</b>	<b>Margin Available for Temporary General Network Access(MW)</b>	<b>Changes in TTC w.r.t. Last Revision</b>	<b>Comments</b>
1 June 2026 to 30 June2026	00-24	7600	600	7000	5755	1245		<a href="https://sldc.rajasthan.gov.in/rrvpnl/scheduling/downloads">https://sldc.rajasthan.gov.in/rrvpnl/scheduling/downloads</a>
<b>Limiting Constraints</b>		N-1 contingency of 400/220kV Jodhpur, Ajmer, Merta, Hindaun and Ratangarh ICTs						

**National Load Despatch Centre**  
**Import Capability of Delhi for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

<b>Date</b>	<b>Time Period in IST (hrs)</b>	<b>Total Transfer Capability (TTC) (MW)</b>	<b>Reliability Margin (MW)</b>	<b>Available Transfer Capability (ATC) (MW)</b>	<b>Approved General Network Access (MW)</b>	<b>Margin Available for Temporary General Network Access(MW)</b>	<b>Changes in TTC w.r.t. Last Revision</b>	<b>Comments</b>
1 June 2026 to 30 June2026	00-24	7600	300	7300	4810	2490		<a href="https://www.delhisldc.org/resources/atcttcreport.pdf">https://www.delhisldc.org/resources/atcttcreport.pdf</a>
<b>Limiting Constraints</b>		N-1 contingency of 400/220kV HarshVihar and Mandola ICTs.						

**National Load Despatch Centre**  
**Import Capability of Uttarakhand for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

<b>Date</b>	<b>Time Period in IST (hrs)</b>	<b>Total Transfer Capability (TTC) (MW)</b>	<b>Reliability Margin (MW)</b>	<b>Available Transfer Capability (ATC) (MW)</b>	<b>Approved General Network Access (MW)</b>	<b>Margin Available for Temporary General Network Access(MW)</b>	<b>Changes in TTC w.r.t. Last Revision</b>	<b>Comments</b>
1 June 2026 to 30 June2026	00-24	1990	100	1890	1402	488		<a href="https://uksldc.in/ttc-atc">https://uksldc.in/ttc-atc</a>
<b>Limiting Constraints</b>		N-1 contingency of 400/220kV Rishikesh and Kashipur ICTs. High loading of 220kV Roorkee-Roorkee and 220kV CBGanj-Pantnagar lines						

**National Load Despatch Centre**  
**Import Capability of HP for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 June 2026 to 30 June2026	00-24	2386	100	2286	1181	1105		<a href="https://hpsldc.com/mrm_category/ttc-atc-report/">https://hpsldc.com/mrm_category/ttc-atc-report/</a>
<b>Limiting Constraints</b>		Overloading of 2*100MVA Giri transformers High loading of 220kV Nallagarh-Upernangal D/C						

**National Load Despatch Centre  
Import Capability of J&K for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 June 2026 to 30 June2026	00-24	2800	100	2700	1977	723		
<b>Limiting Constraints</b>		N-1 contingency of 400/220KV ICTs at Amargarh, Kishenpur 220 kV underlying network at Amargarh, Wagoora Low voltages in J&K control area due to high MVAR drawl						

**National Load Despatch Centre**  
**Import Capability of Chandigarh for June 2026**

Issue Date: -

Issue Time: 1600

Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 June 2026 to 30 June2026	00-24	480	20	460	342	118		
<b>Limiting Constraints</b>		N-1 contingency of 220kV Nallagarh-Kishengarh						



ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड  
भारत सरकार का उद्यम  
GRID CONTROLLER OF INDIA LIMITED  
(A Government of India Enterprise)



[formerly Power System Operation Corporation Limited (POSOCO)]

उत्तर क्षेत्रीय भार प्रेषण केन्द्र / Northern Regional Load Despatch Centre

कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016

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संदर्भः:: NRLDC\ISO\2026-27\01 | 144,

दिनांक: 17 अप्रैल 2026

प्रति,

वितरण सूची के अनुसार

**Subject:** पीक आवर्स के दौरान तापीय विद्युत उत्पादन केंद्रों द्वारा निर्धारित शेड्यूल से विचलन के तथा ऑफ-पीक आवर्स की तुलना में पीक आवर्स में कम DC घोषित किए जाने के संबंध में।

संदर्भः

(i) पत्र संख्या: NRLDC/SO/2025-26/04 दिनांक 12 फरवरी 2026

(ii) पत्र संख्या: NRLDC/SO/2025-26/04 दिनांक 15 जनवरी 2026

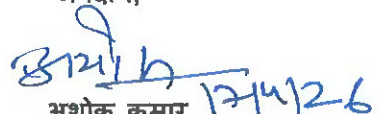
महोदया/महोदय,

- विद्युत उत्पादन स्टेशनों द्वारा घोषित क्षमता के अनुरूप उत्पादन करना तथा जारी शेड्यूल का पालन करना सुरक्षित एवं विश्वसनीय ग्रिड संचालन के लिए अत्यंत आवश्यक है।
- यह देखा गया है कि कई अवसरों पर, विशेषकर पीक आवर्स के दौरान, जब स्टेशन पूर्ण रूप से शेड्यूल थे, तब झज्जर, उंचाहार (इकाई-2, 3 एवं 4), टांडा-2, रिहंद (इकाई-1, 2 एवं 3) तथा दादरी (इकाई-1 एवं 2) से लगातार कम विद्युत इंजेक्शन हुआ है। इन घटनाओं को दर्शाने वाले चार्ट अनुबंध-1 (Annexure-1) के रूप में संलग्न हैं।
- पीक आवर्स में शेड्यूल के अनुसार विद्युत आपूर्ति न कर पाने की स्थिति को घोषित क्षमता (Declared Capacity - DC) में स्पष्ट रूप से दर्शाया जाना चाहिए। पीक आवर्स के दौरान इस प्रकार के विचलन से प्रणाली की आवृत्ति पर प्रतिकूल प्रभाव पड़ता है तथा ग्रिड संचालन में कठिनाई उत्पन्न होती है।
- उपर्युक्त संदर्भित पत्रों (दिनांक 15 जनवरी 2026 एवं 12 फरवरी 2026) के संदर्भ में यह अवगत कराया जाता है कि अब तक संबंधित जनरेटर्स से कोई उत्तर प्राप्त नहीं हुआ है।
- साथ ही, यह भी अवलोकित किया गया है कि कई अवसरों पर पीक आवर्स में घोषित क्षमता (DC) ऑफ-पीक आवर्स की तुलना में कम रही है।

अतः अनुरोध है कि:

- पीक आवर्स के दौरान कम विद्युत उत्पादन/इंजेक्शन के कारणों का विस्तृत स्पष्टीकरण उपलब्ध कराया जाए।

- पीक आवर्स में ऑफ-पीक की तुलना में कम DC घोषित किए जाने के कारणों से भी अवगत कराया जाए।
  - भविष्य में CERC आदेश संख्या 9/SM/2025 एवं RLDC/NLDC द्वारा जारी निर्देशों के अनुरूप वास्तविक उत्पादन क्षमता के आधार पर ही DC घोषित करते हुए शेड्यूल का पूर्णतः पालन सुनिश्चित किया जाए।
- धन्यवाद।

भवदीय,  
  
अशोक कुमार 12/11/26  
मुख्य महाप्रबंधक (प्रणाली संचालन)  
उत्तरी क्षेत्र भार प्रेषण केंद्र, नई दिल्ली

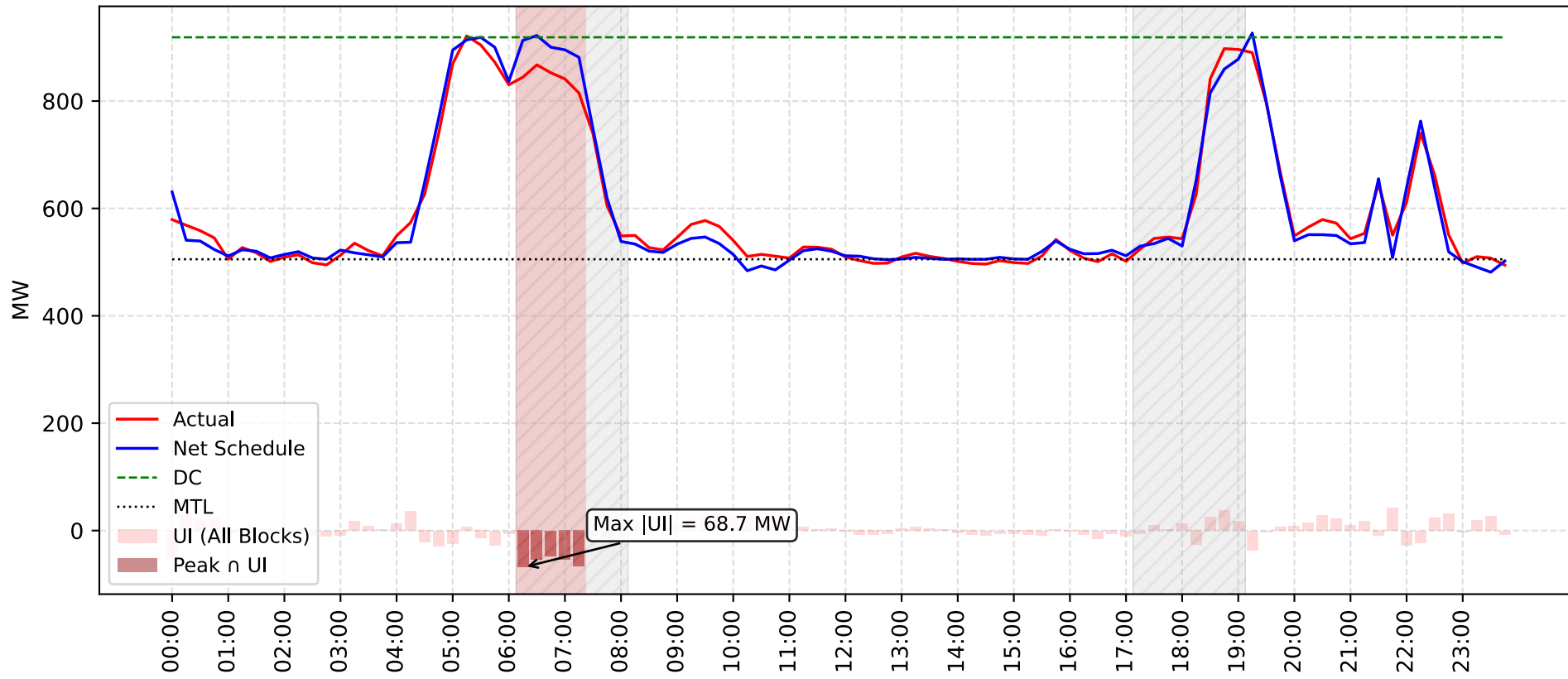
**प्रतिलिपि विनम सूचनार्थः**

1. सदस्य सचिव, NRPC
2. कार्यकारी निदेशक, NRLDC
3. कार्यकारी निदेशक, NLDC

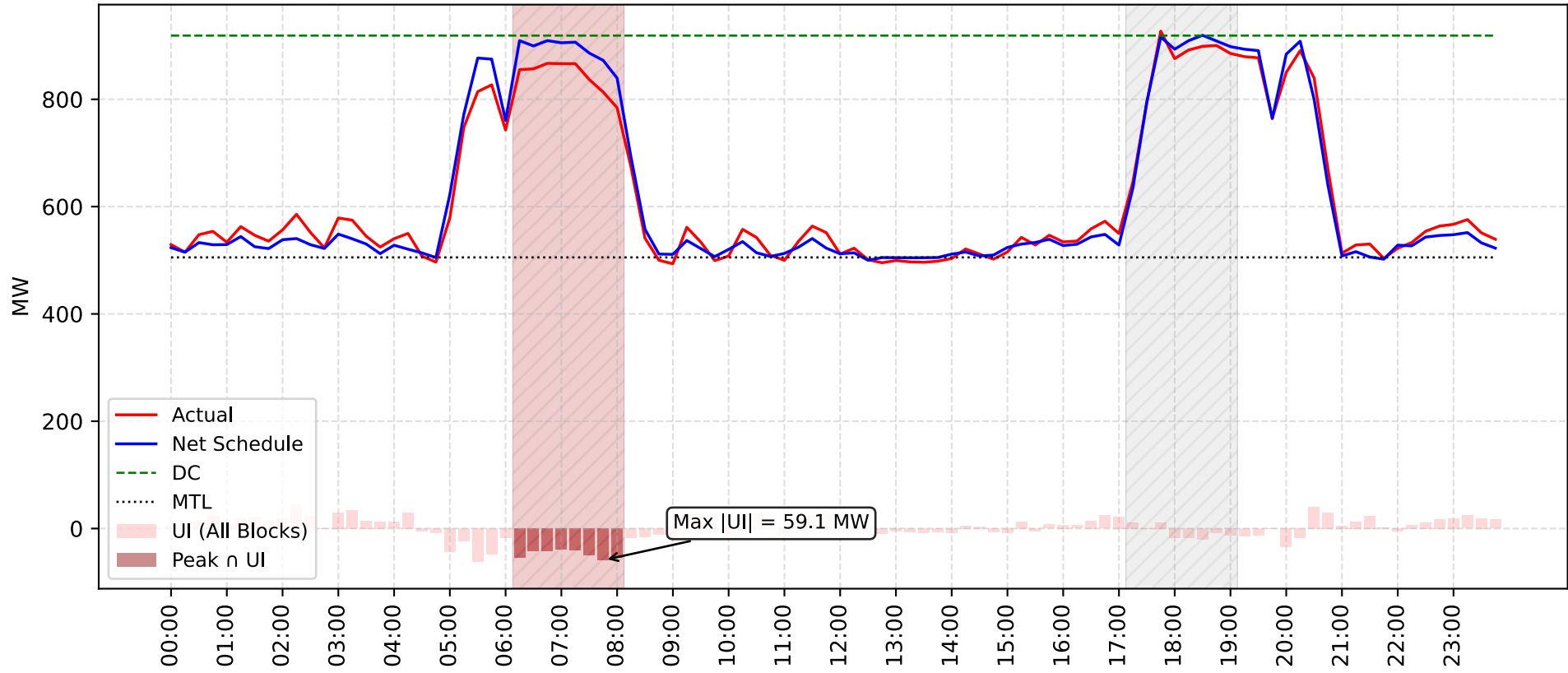
**वितरण सूची:**

1. कार्यकारी निदेशक (वाणिज्य), NRHQ, NTPC लिमिटेड, TC-33/V-1, विभूति खंड, गोमती नगर, लखनऊ-201301
2. मुख्य कार्यकारी अधिकारी, इंदिरा गांधी सुपर थर्मल पावर प्रोजेक्ट (IGSTPP), झरली, जिला झज्जर, हरियाणा-124141
3. हेड ऑफ प्लांट, प्रशासनिक भवन, नेशनल कैपिटल पावर स्टेशन, दादरी, विद्युत नगर जिला: गौतम बुद्ध नगर, उत्तर प्रदेश, पिन कोड: 201008
4. अपर महाप्रबंधक (संचालन एवं अनुरक्षण), रिहंद- II, NRHQ, NTPC लिमिटेड, TC-33/V-1, विभूति खंड, गोमती नगर, लखनऊ-201301
5. महाप्रबंधक (संचालन एवं अनुरक्षण), टांडा स्टेज-II, NTPC लिमिटेड, टांडा स्टेज-II, डाकघर: विद्युत नगर, जिला अंबेडकरनगर, उत्तर प्रदेश-224238
6. मुख्य महाप्रबंधक (प्लांट हैड), बीयूएच कार्यालय, प्रशासनिक भवन, फिरोज गांधी ऊंचाहार सुपर थर्मल पावर स्टेशन, ऊंचाहार, जिला: रायबरेली, उत्तर प्रदेश, पिन कोड: 229406

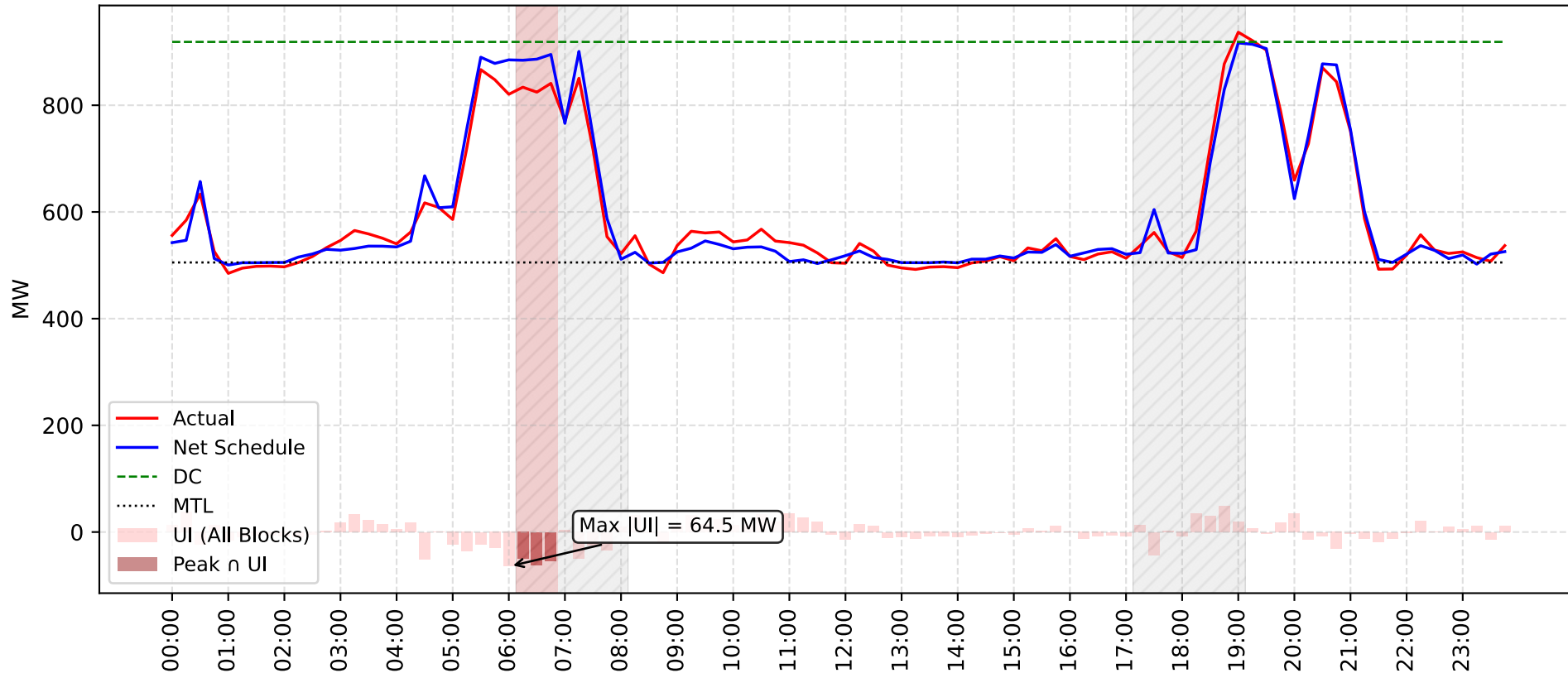
DADRT2 Sch vs Act - for Date: 01-03-2026



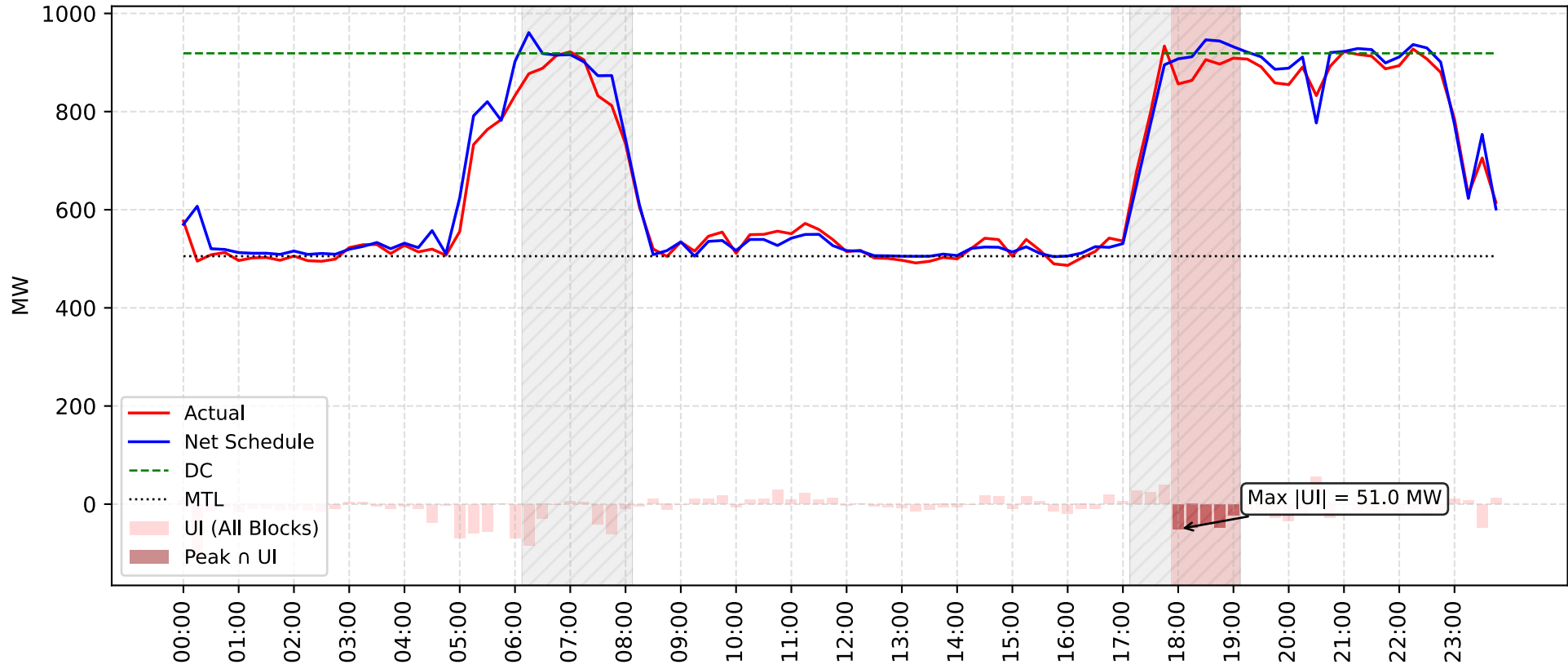
DADRT2 Sch vs Act - for Date: 02-03-2026



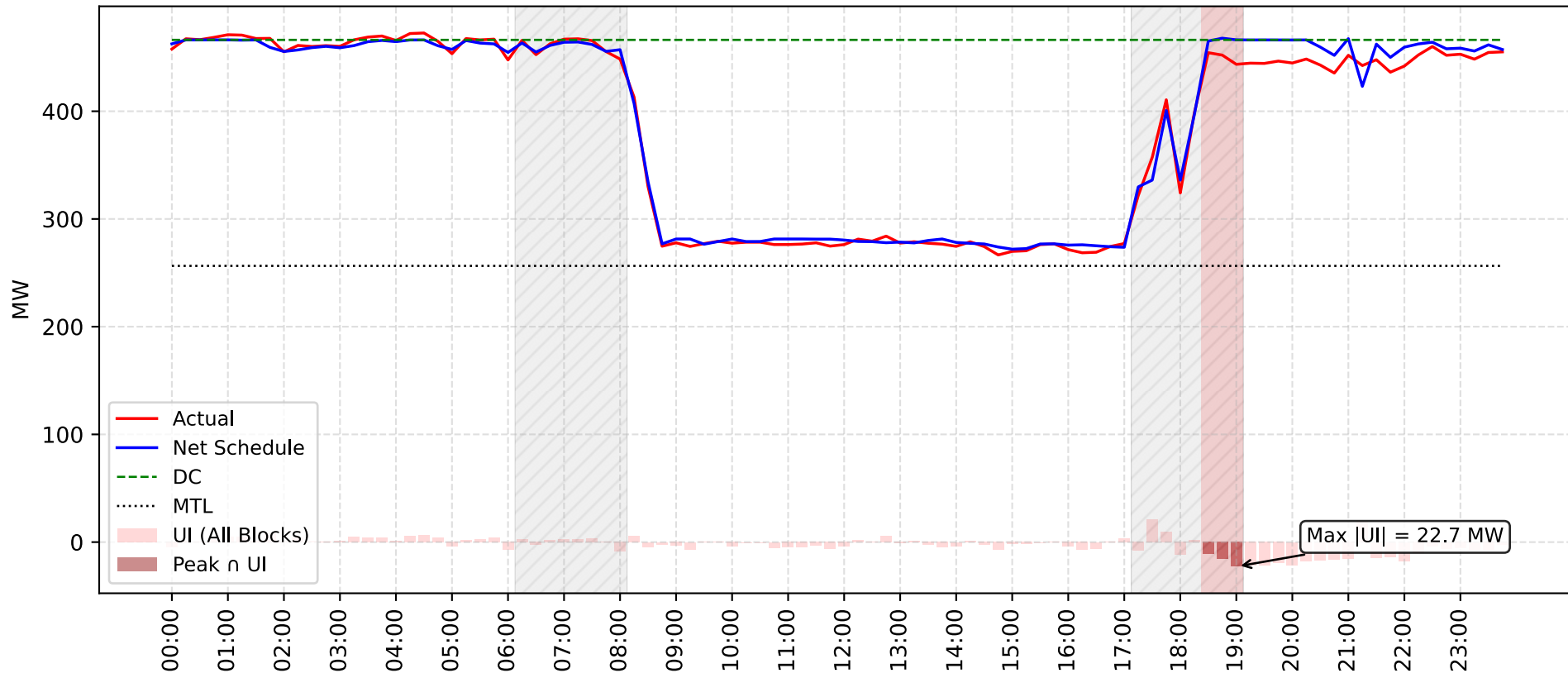
DADRT2 Sch vs Act - for Date: 03-03-2026



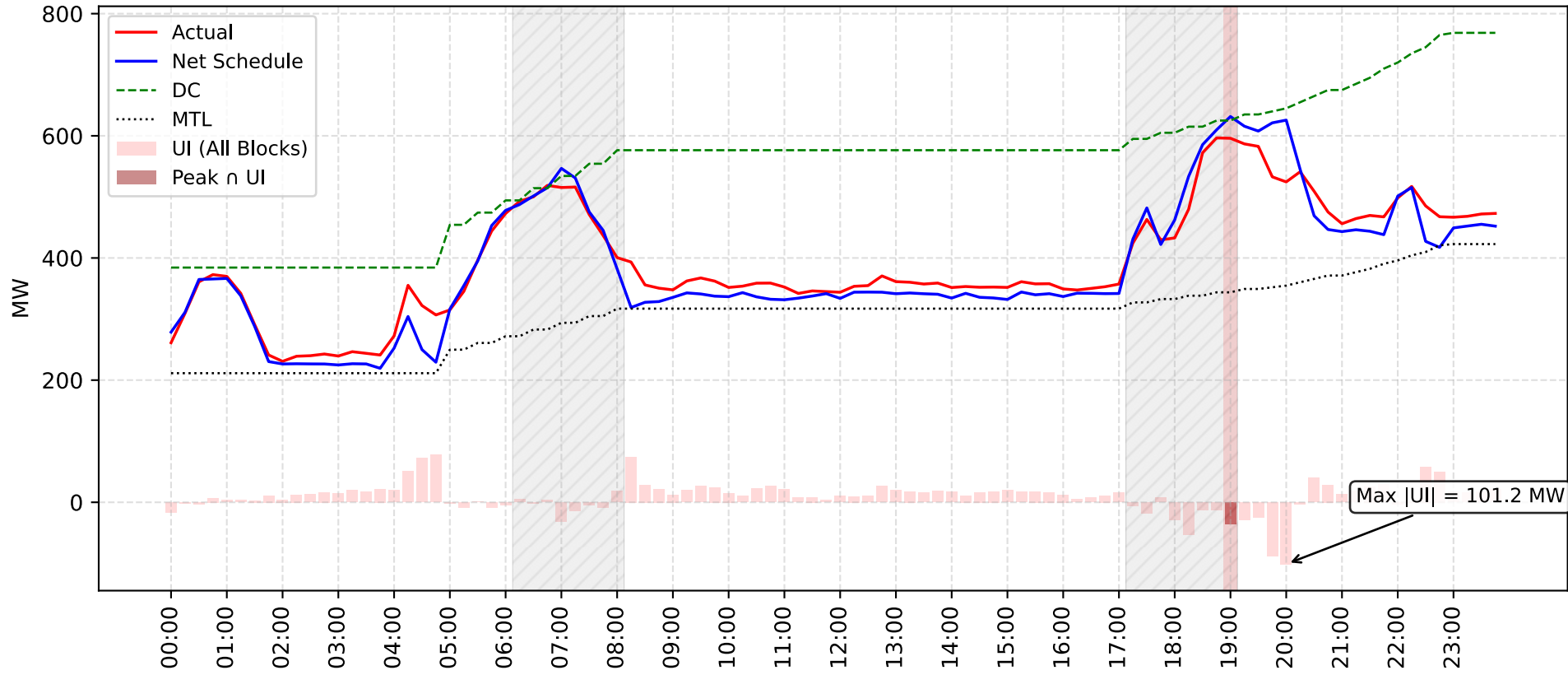
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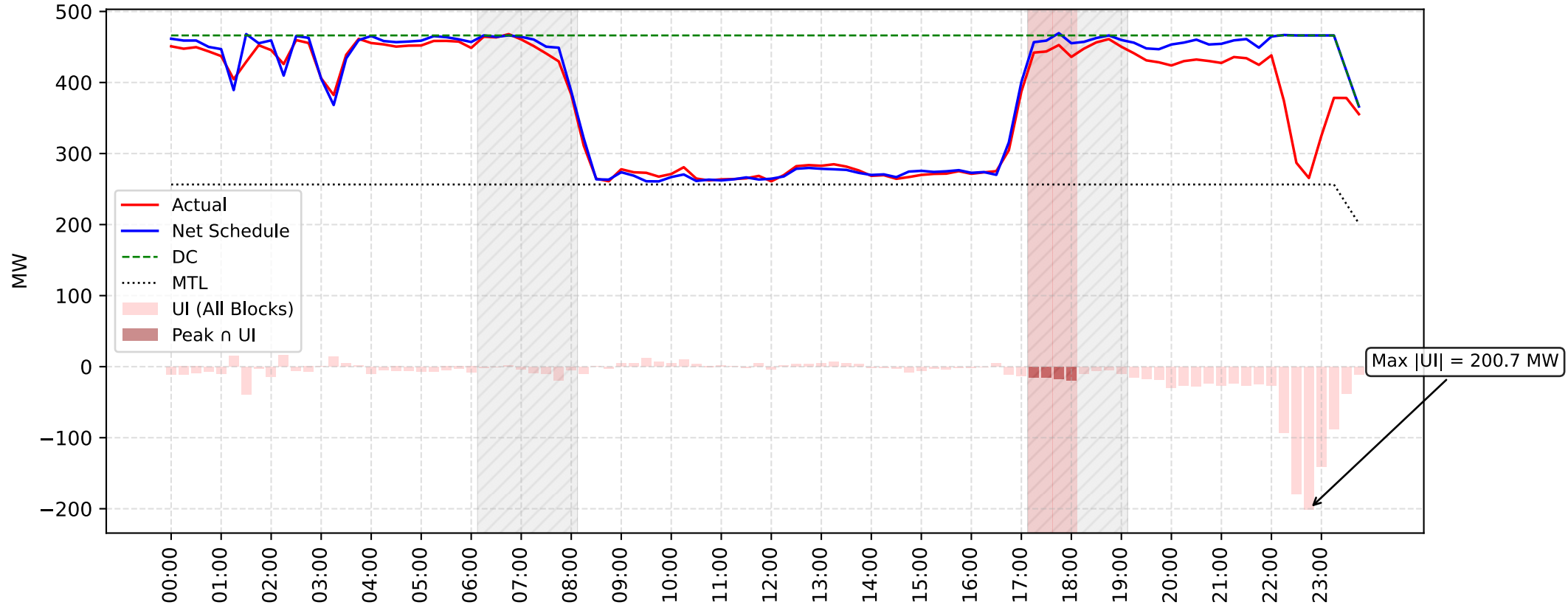
UNCHAAR4 Sch vs Act - for Date: 08-03-2026



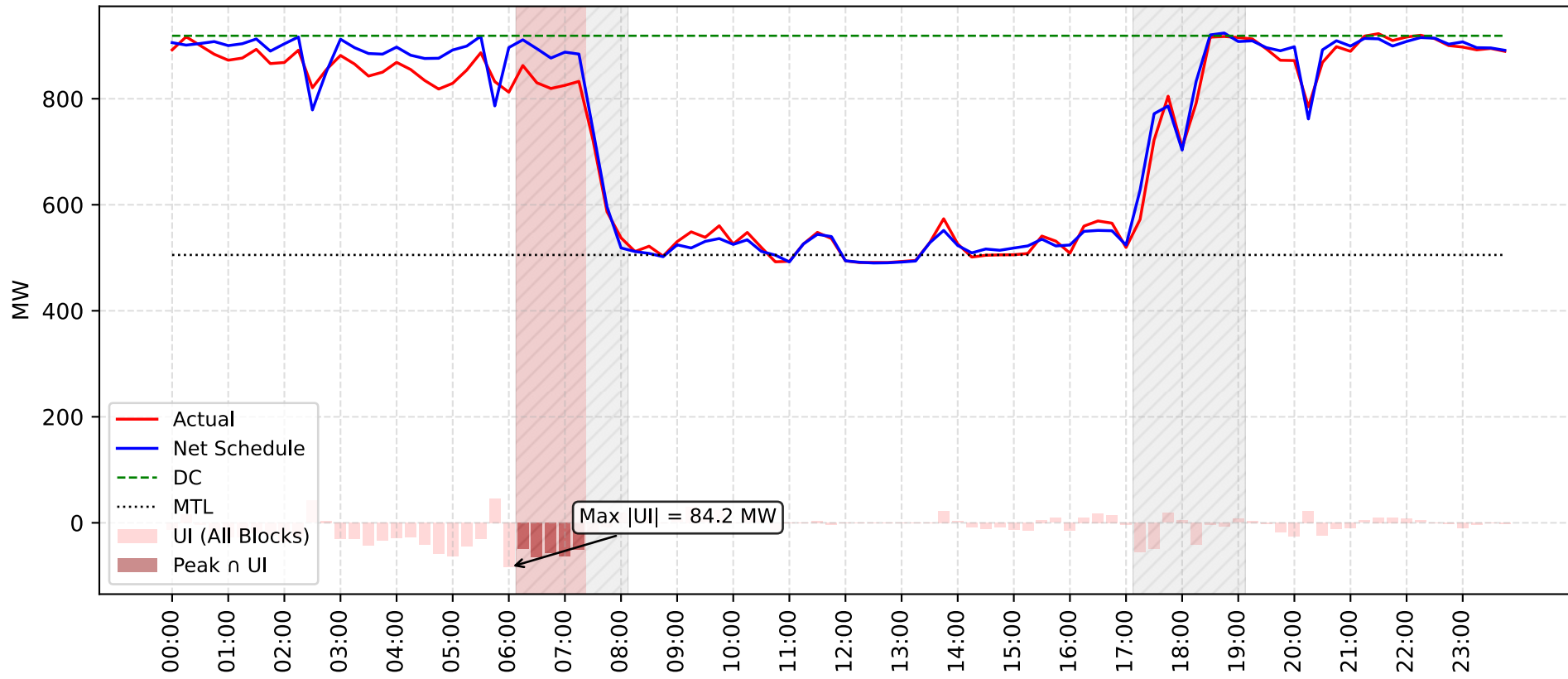
DADRIT Sch vs Act - for Date: 09-03-2026



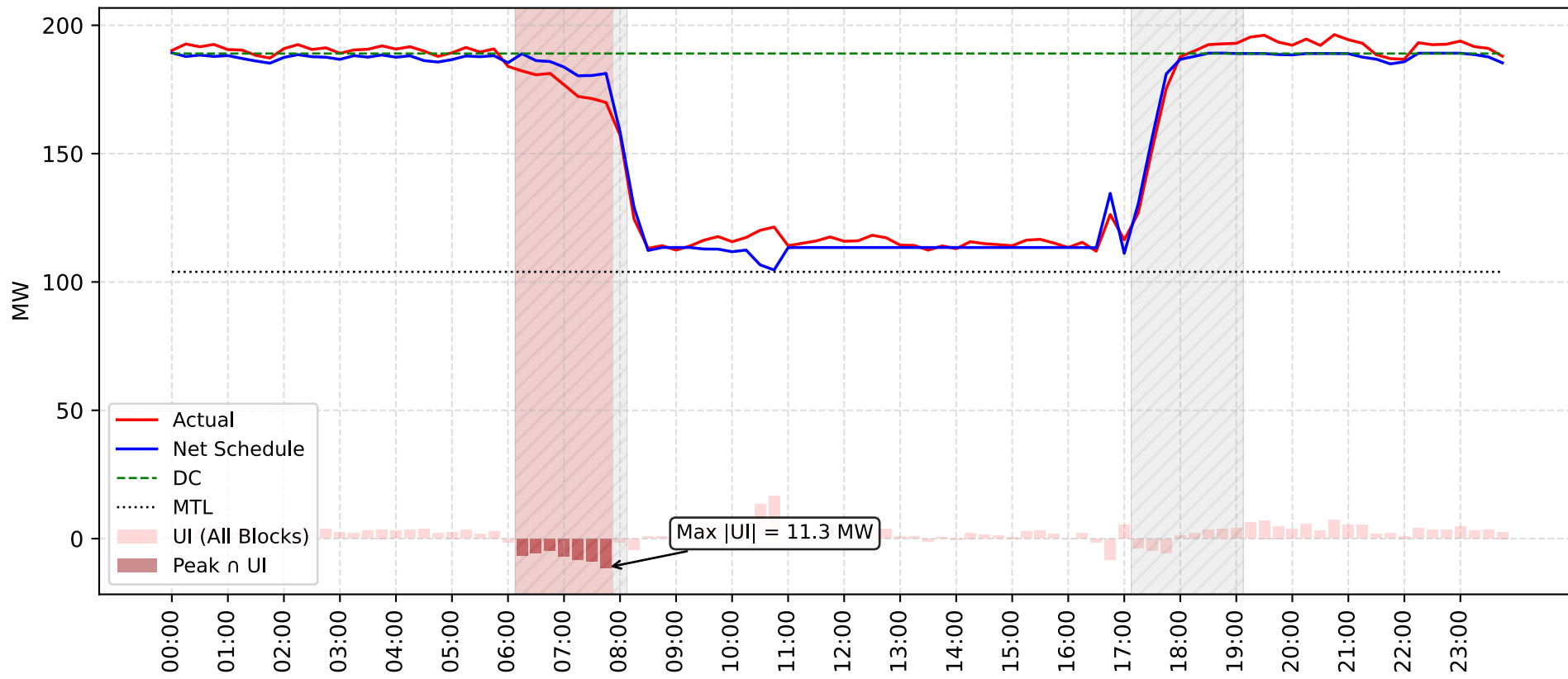
UNCHAR4 Sch vs Act - for Date: 09-03-2026



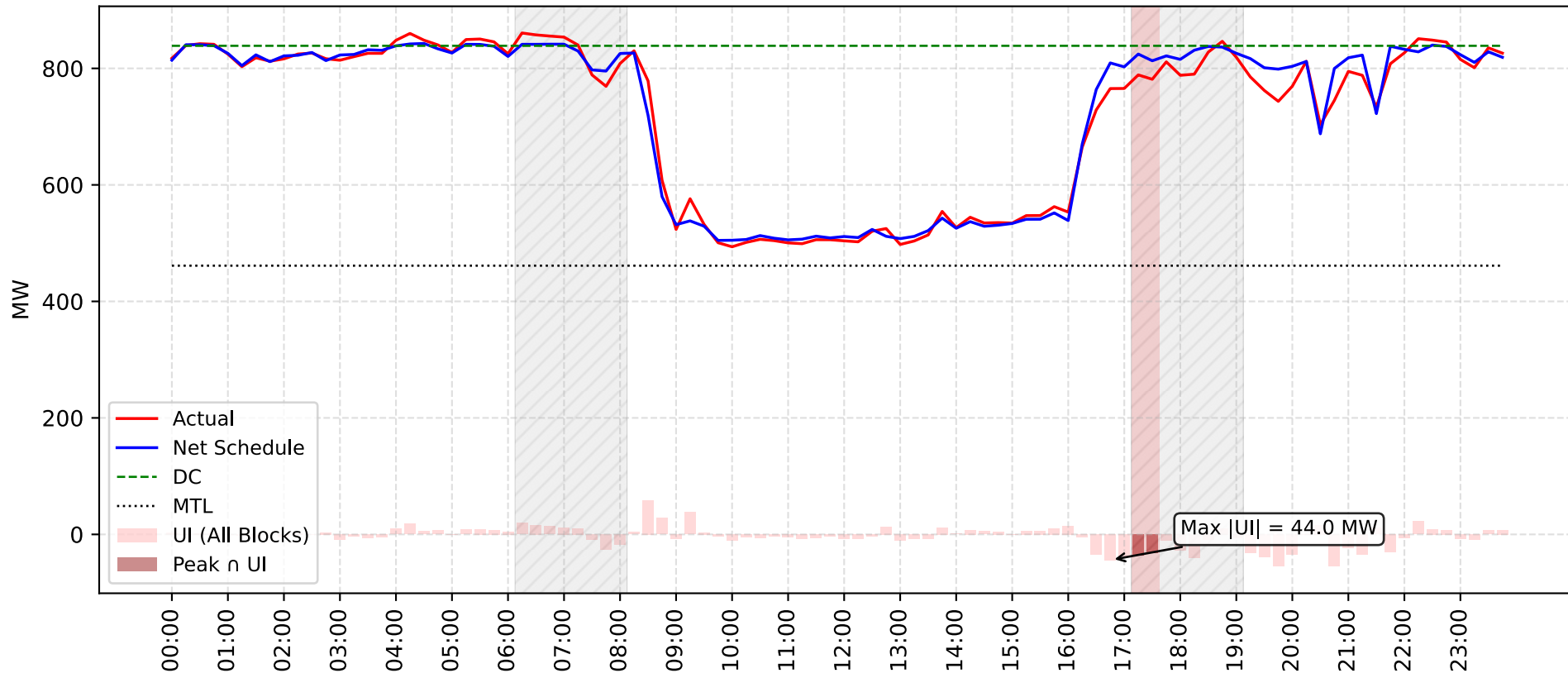
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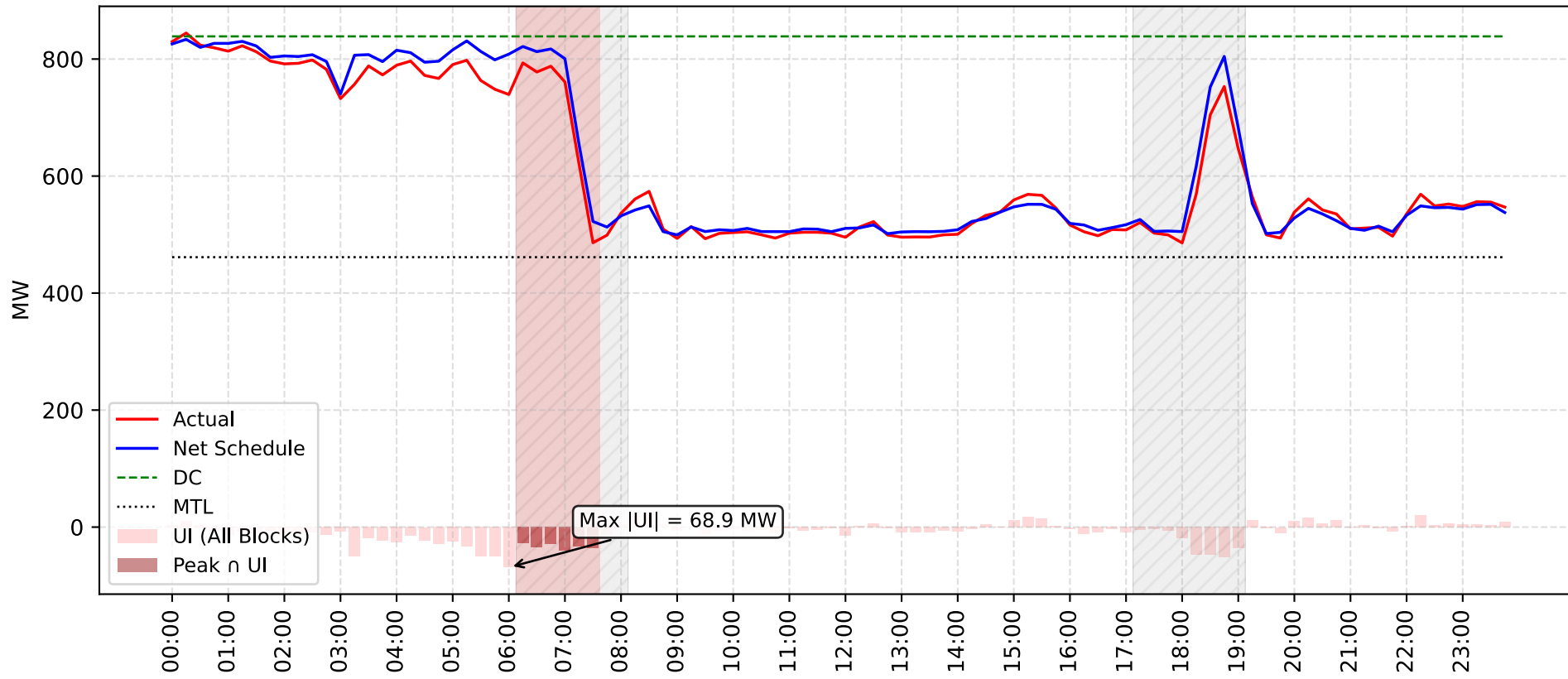
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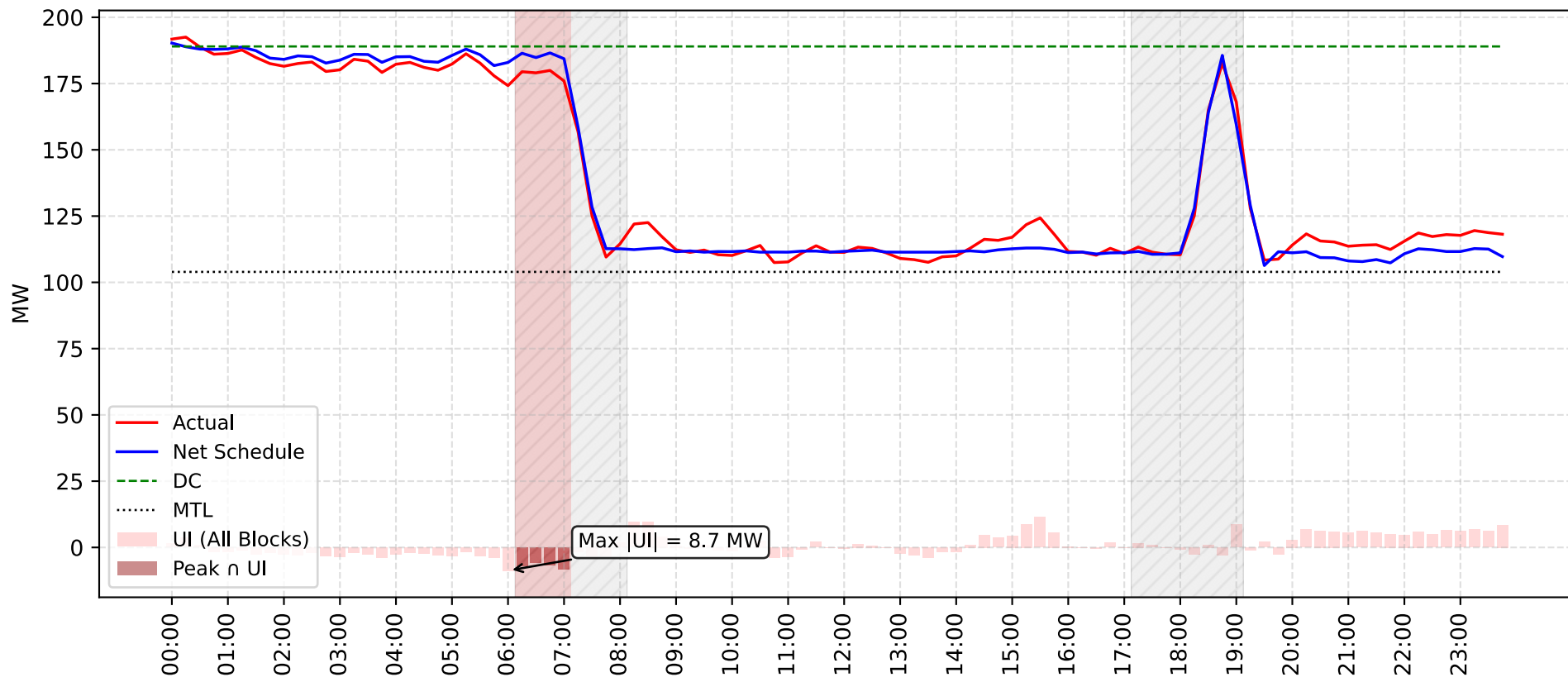
DADRT2 Sch vs Act - for Date: 14-03-2026



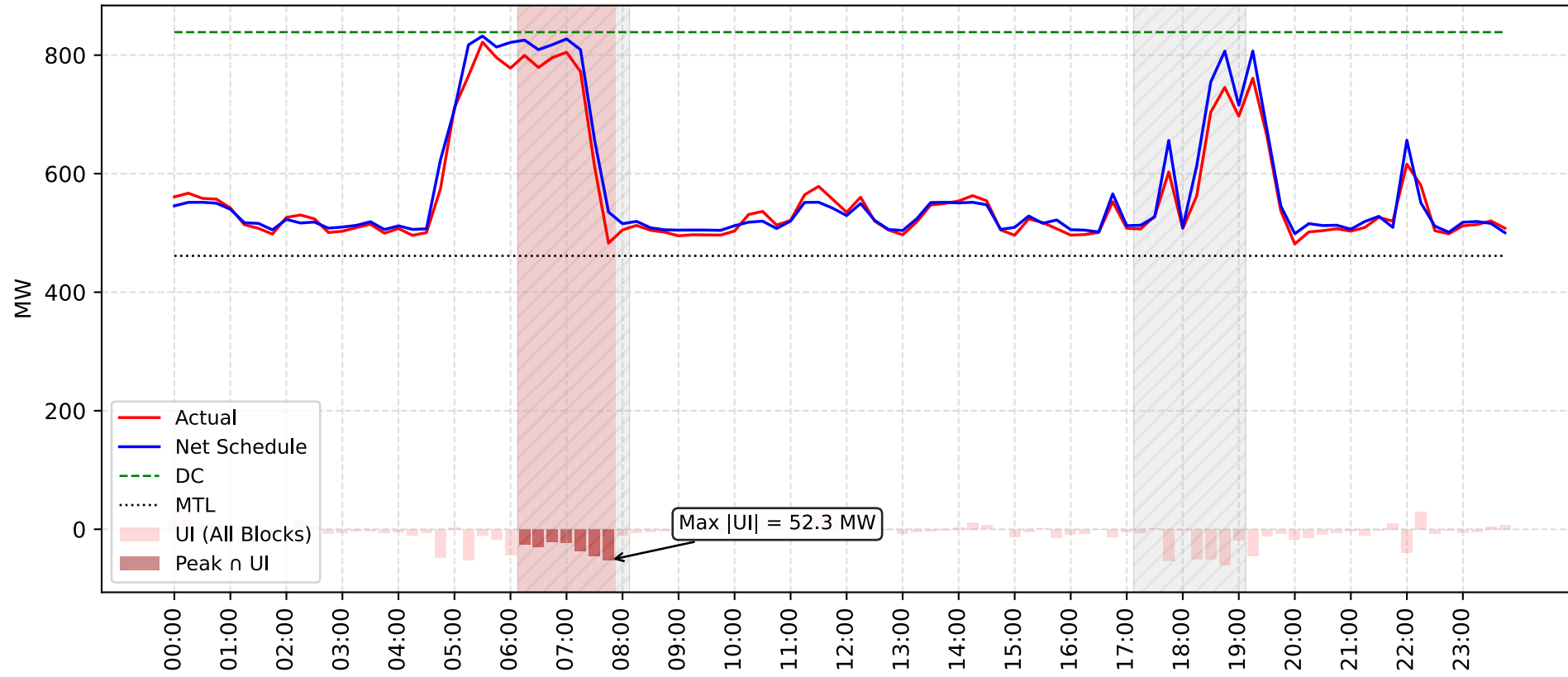
DADRT2 Sch vs Act - for Date: 15-03-2026



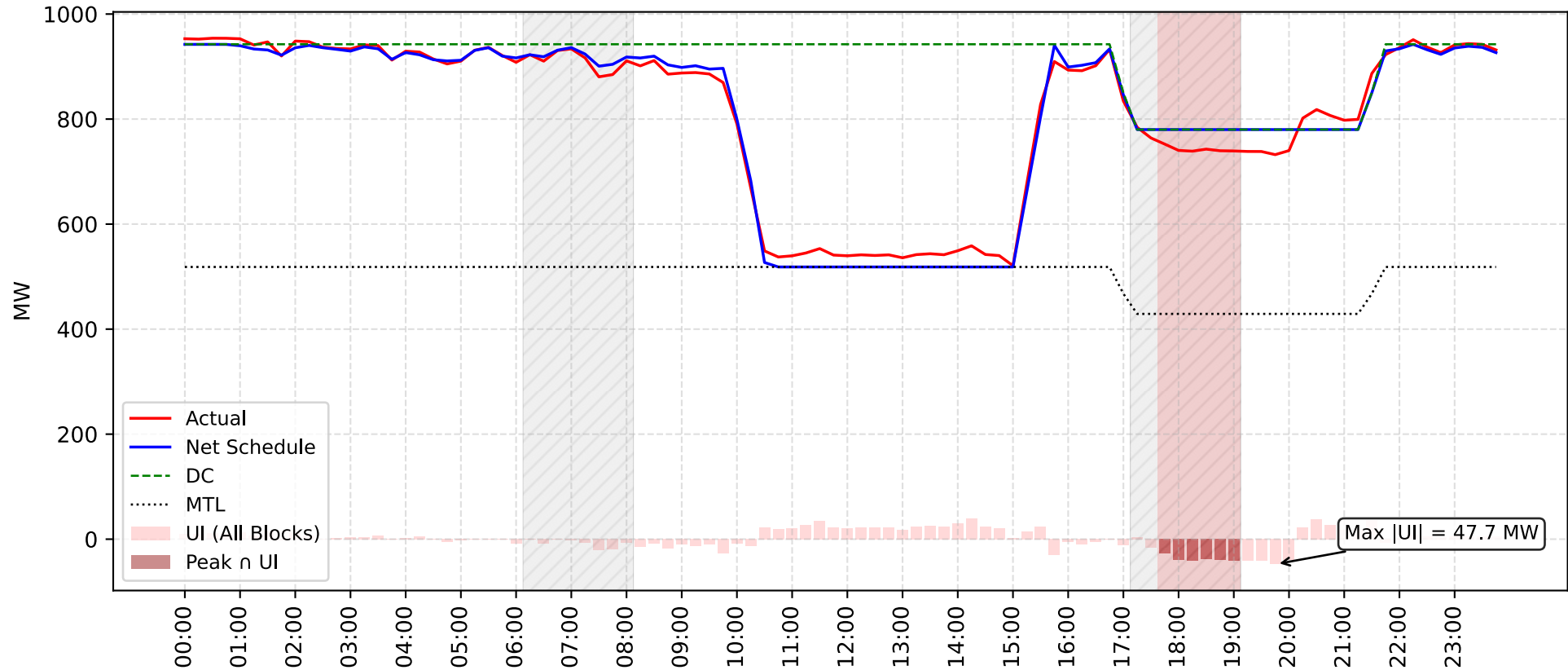
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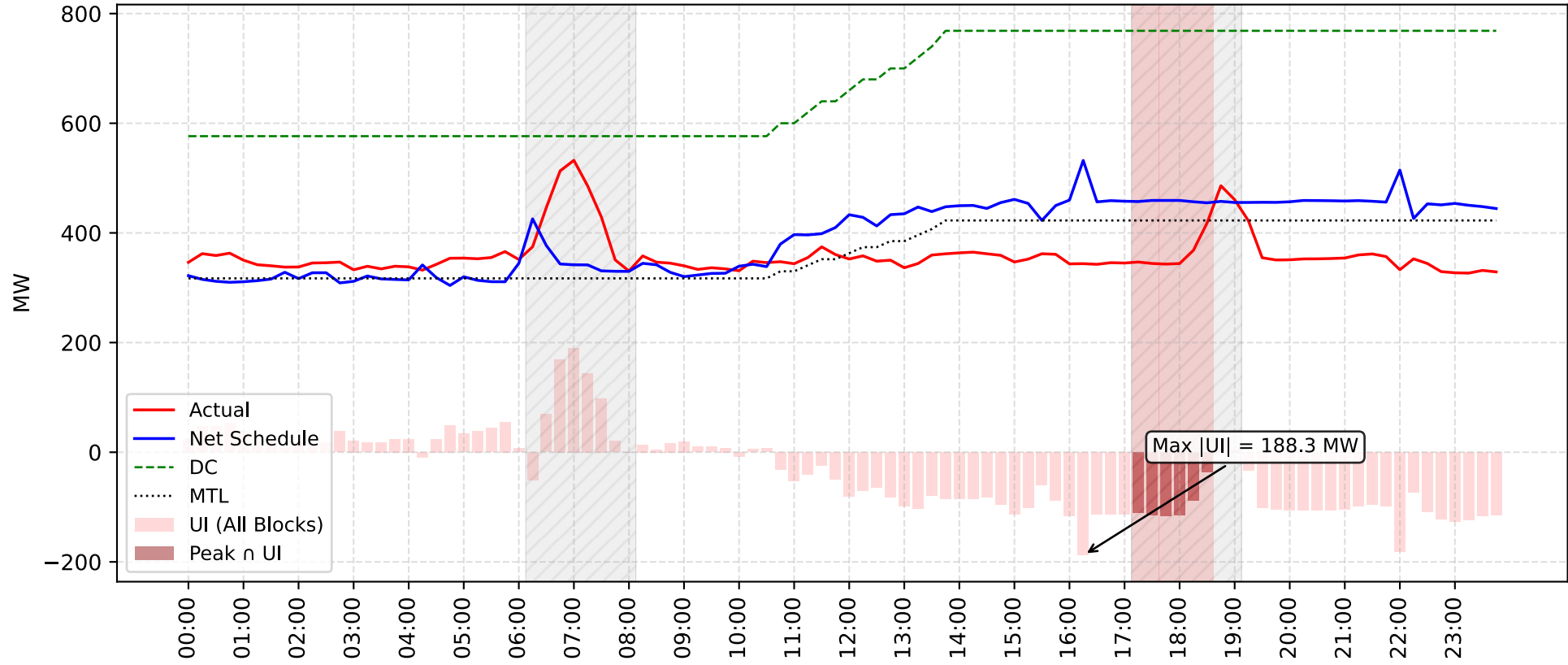
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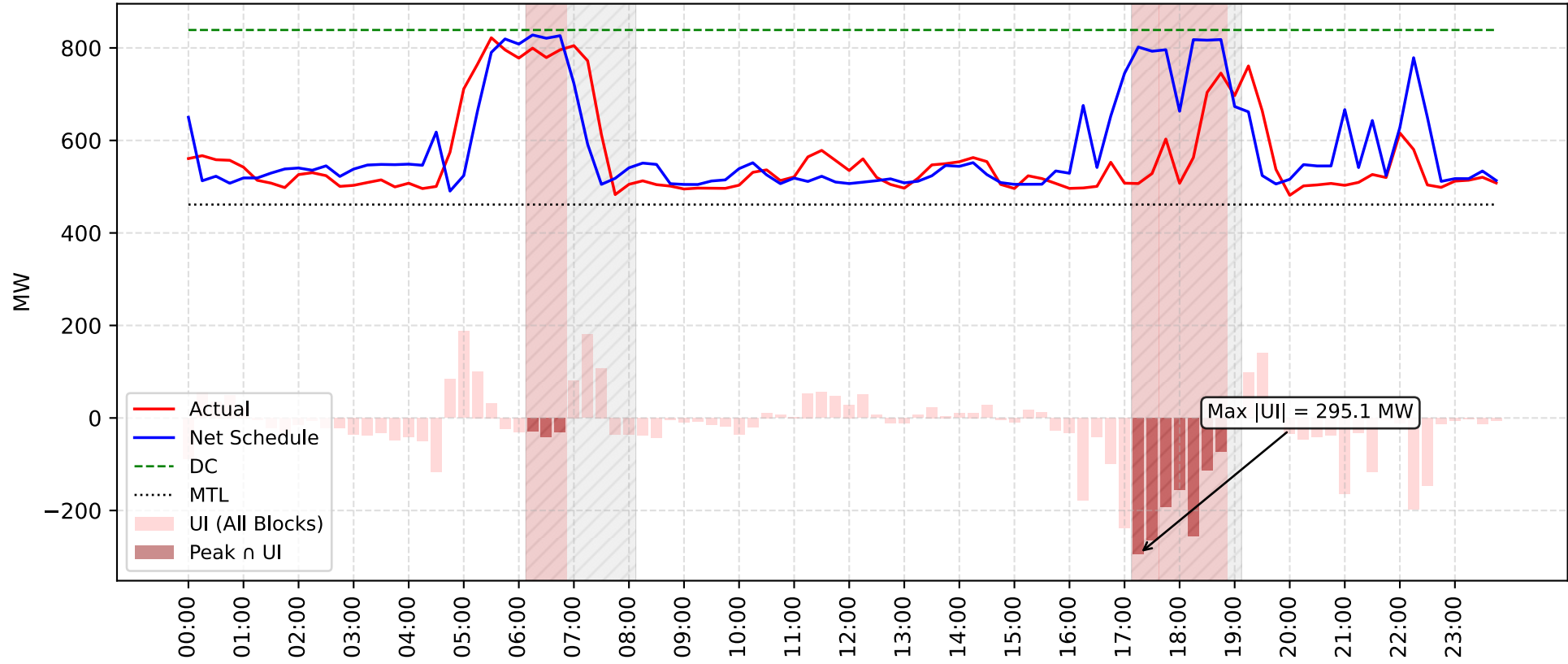
RIHAND2 Sch vs Act - for Date: 16-03-2026



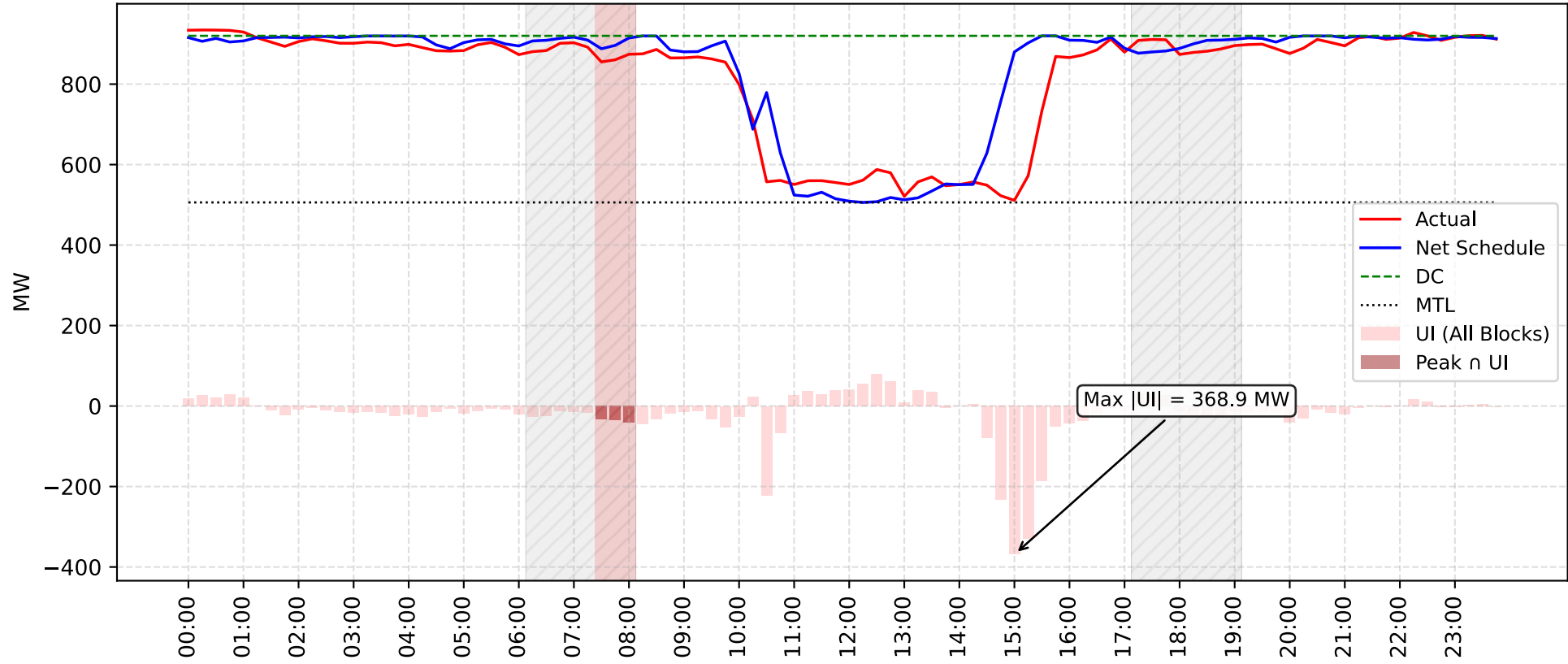
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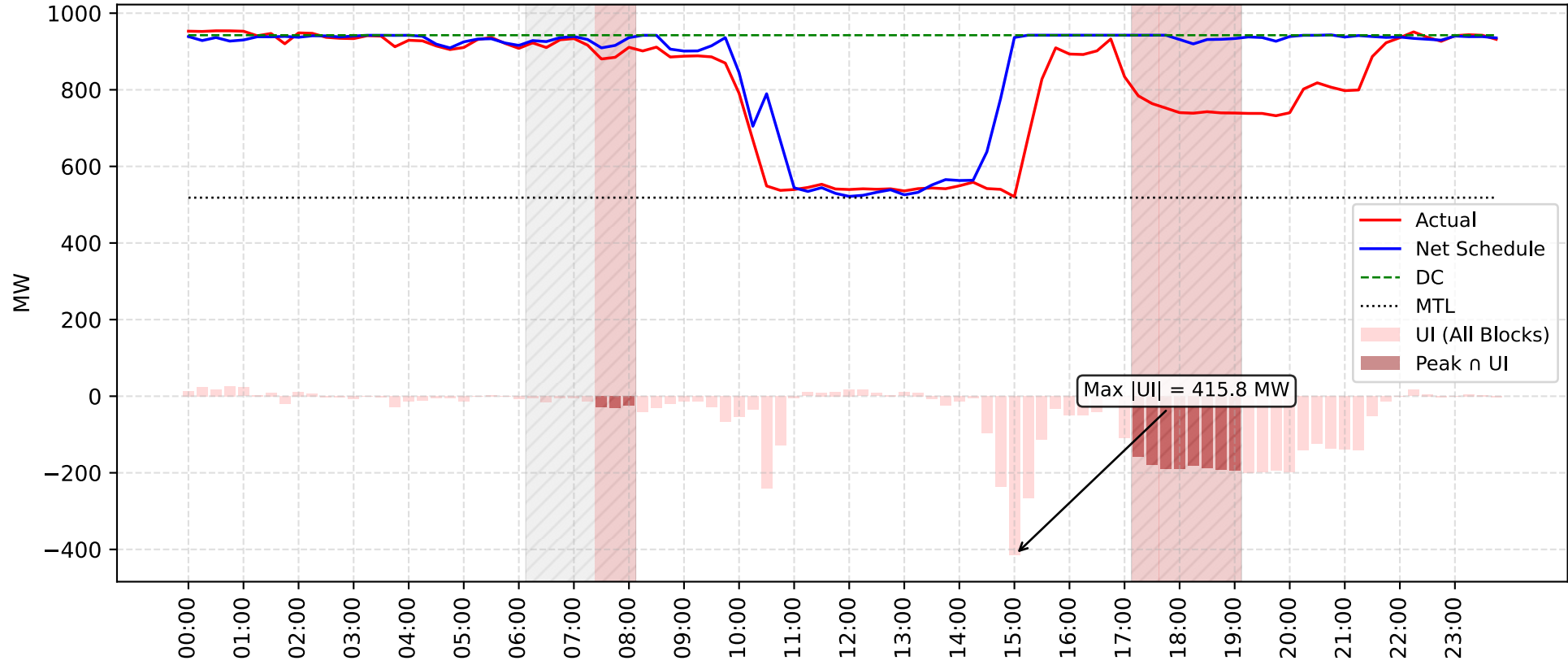
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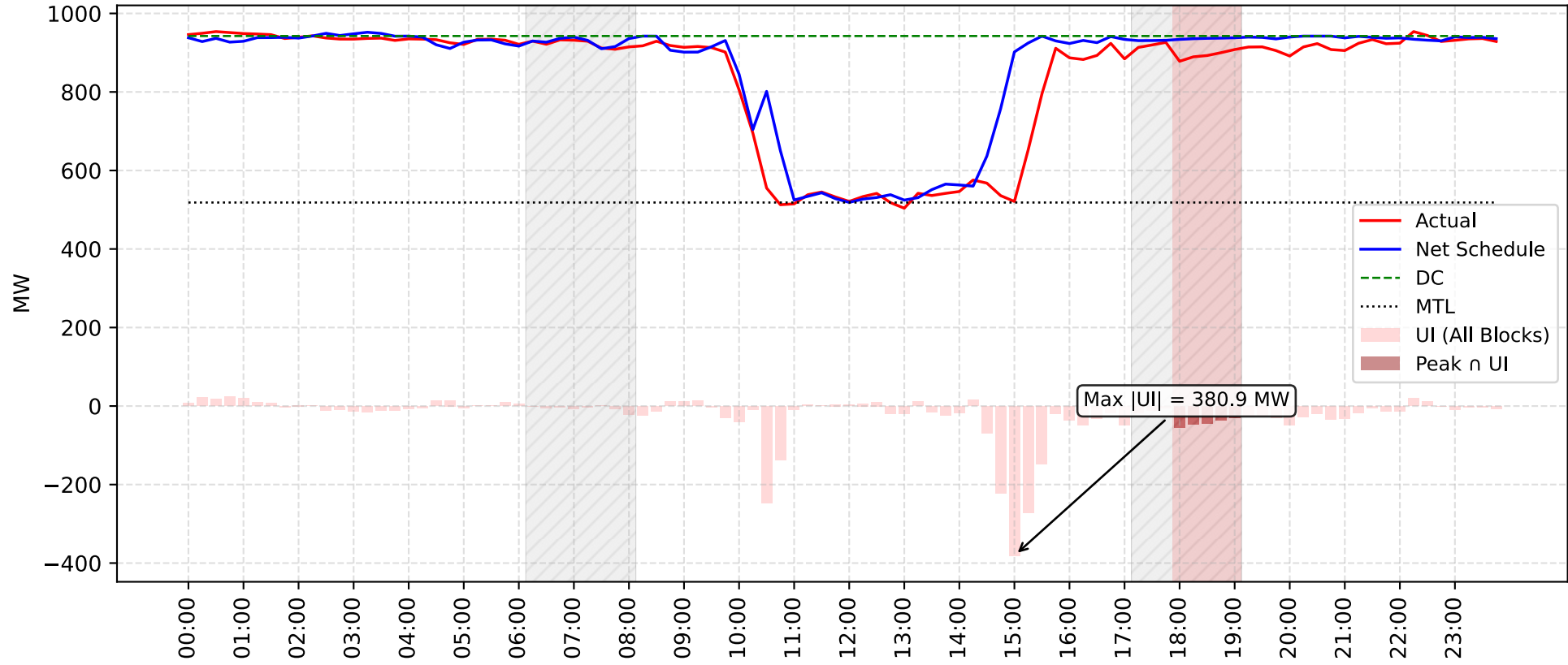
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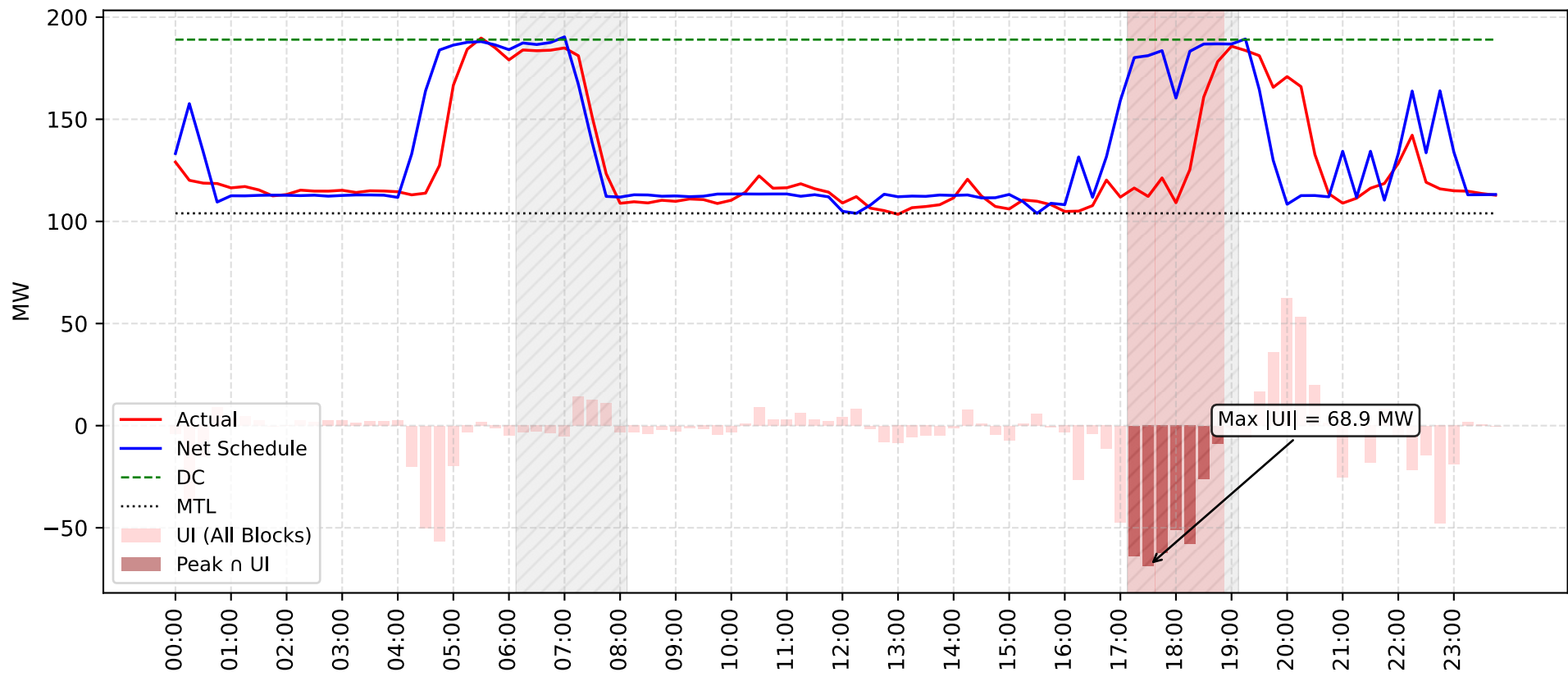
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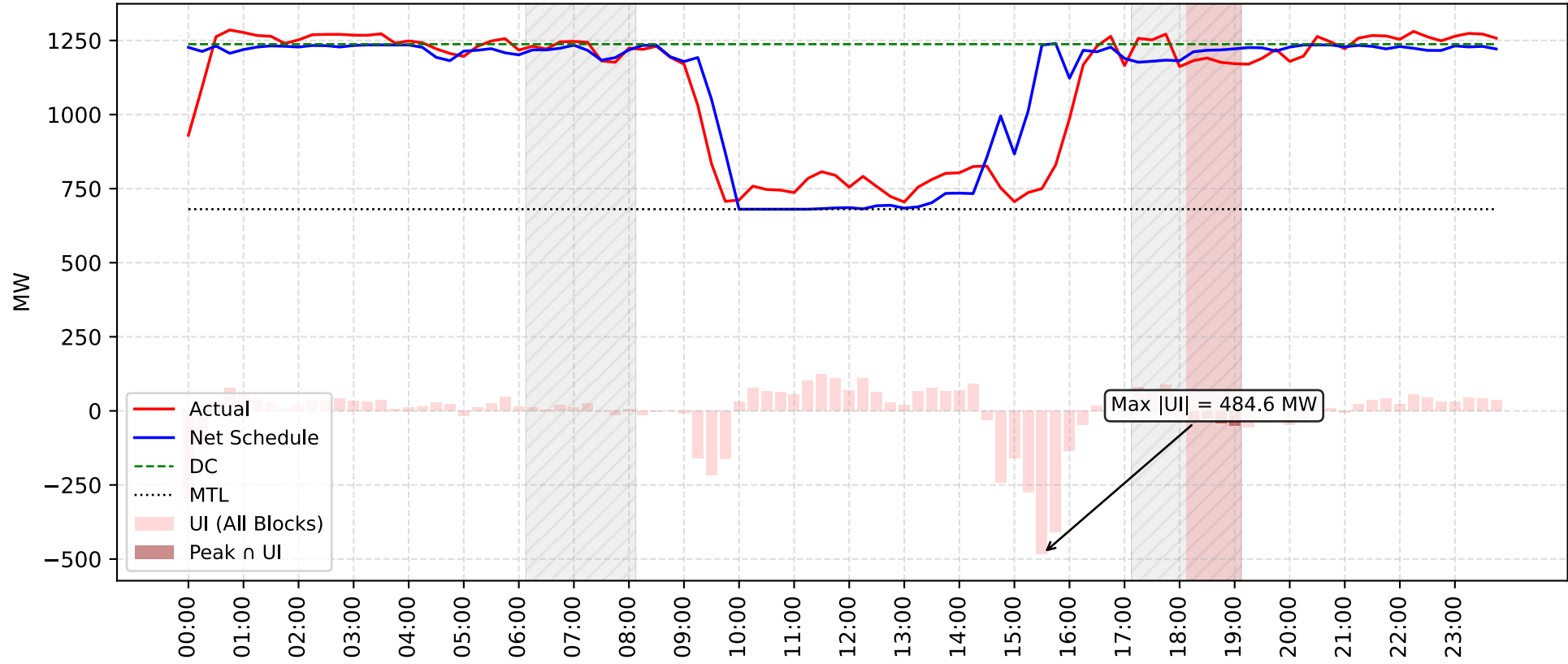
RIHAND3 Sch vs Act - for Date: 17-03-2026



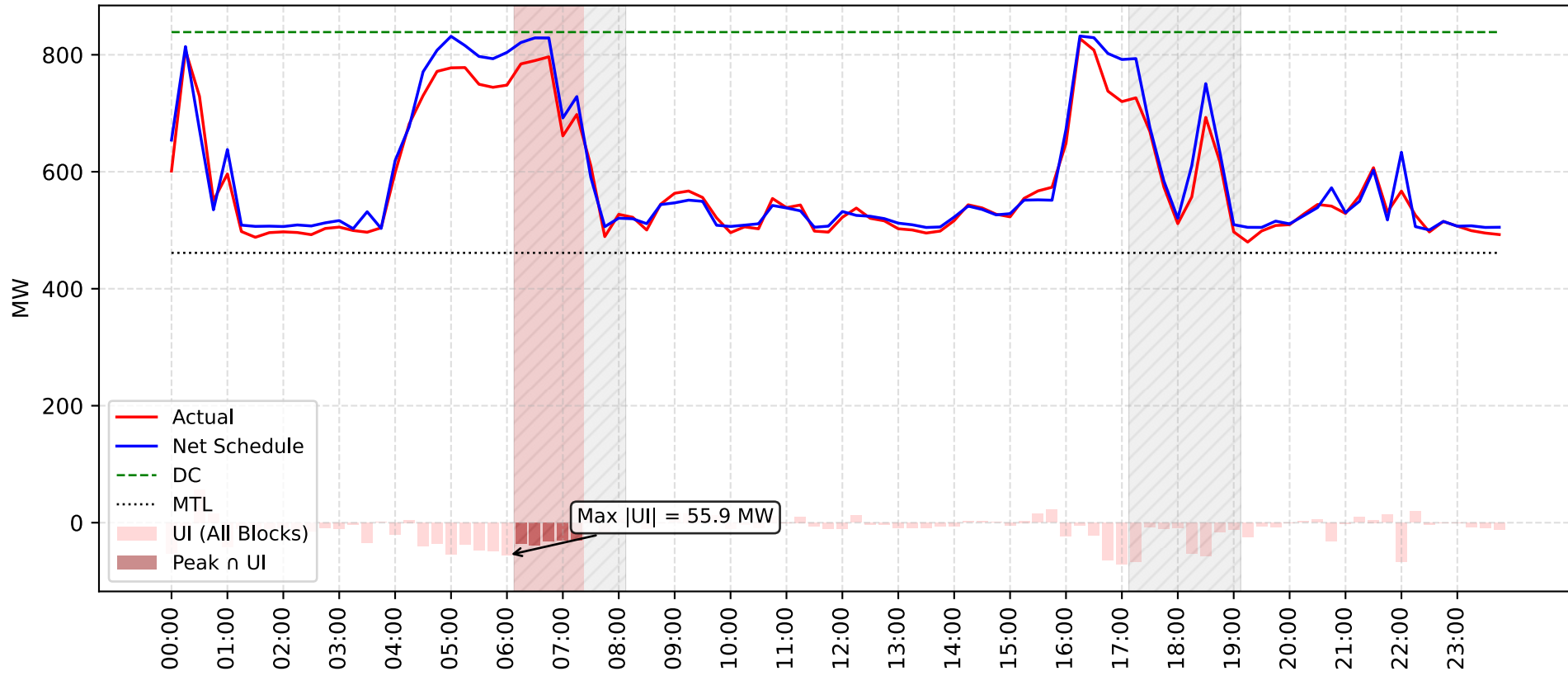
UNCHAAR3 Sch vs Act - for Date: 17-03-2026



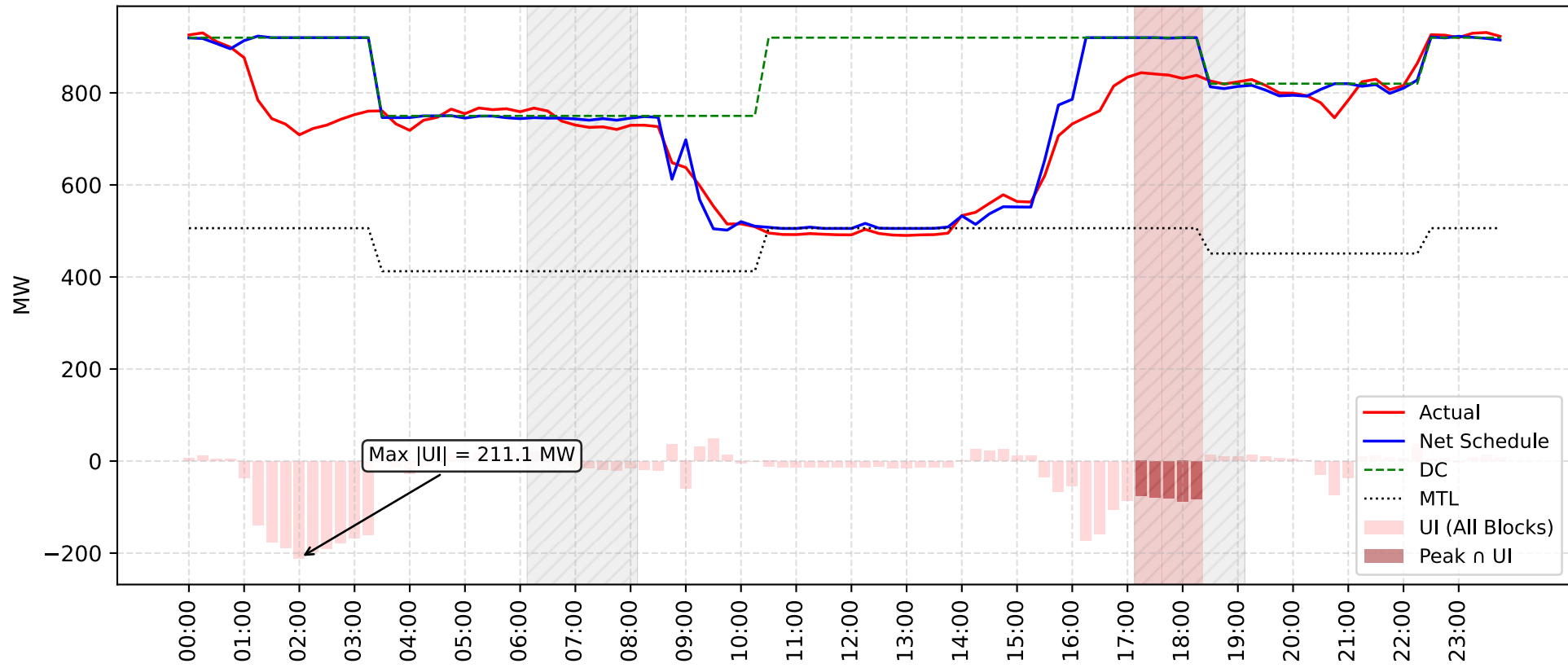
TANDA2 Sch vs Act - for Date: 17-03-2026



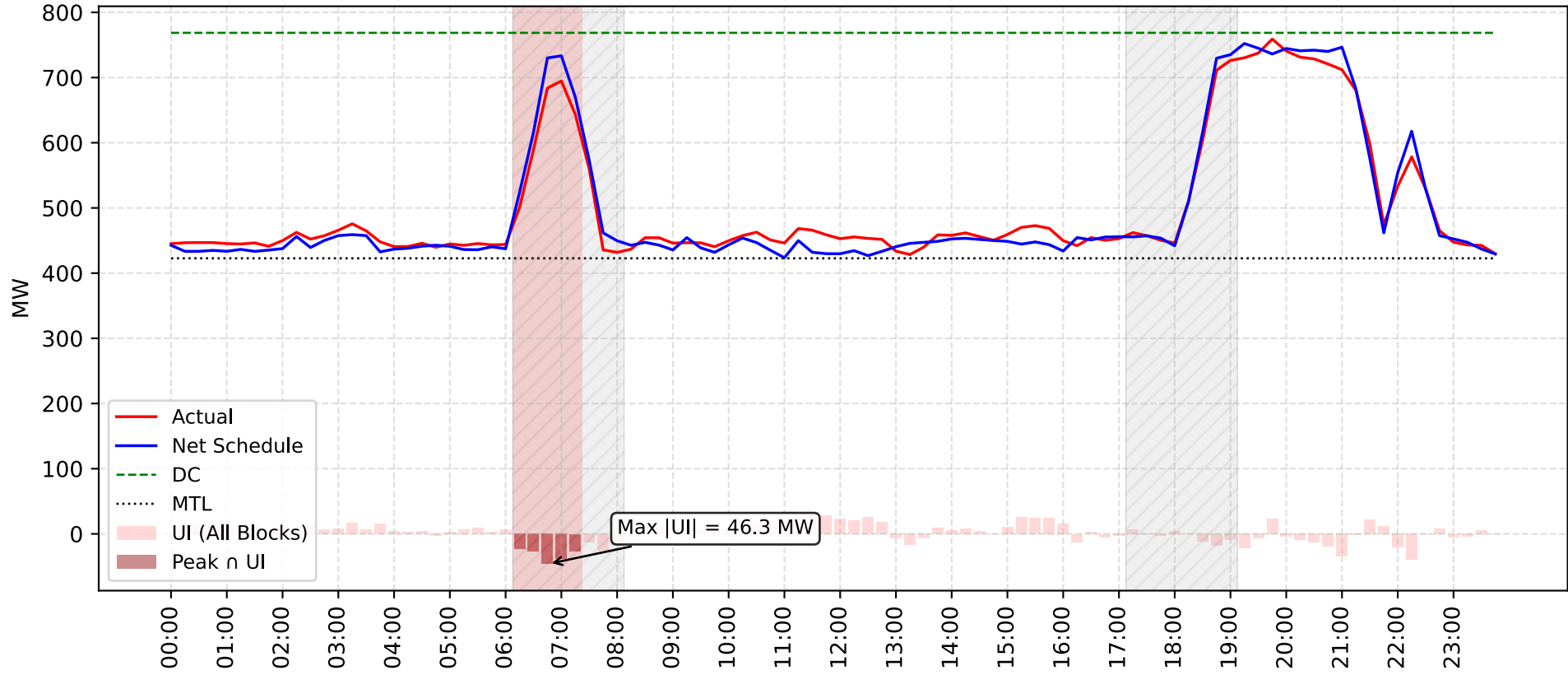
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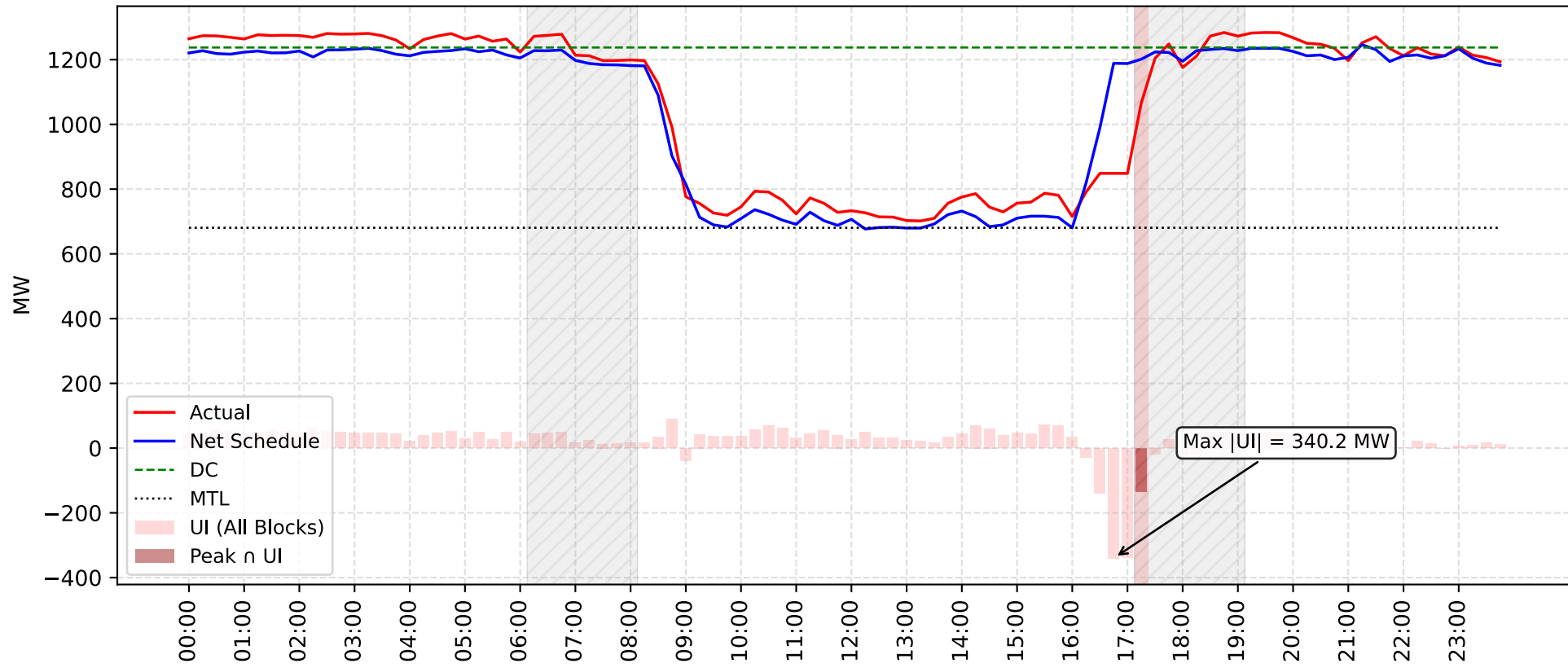
RIHAND1 Sch vs Act - for Date: 21-03-2026



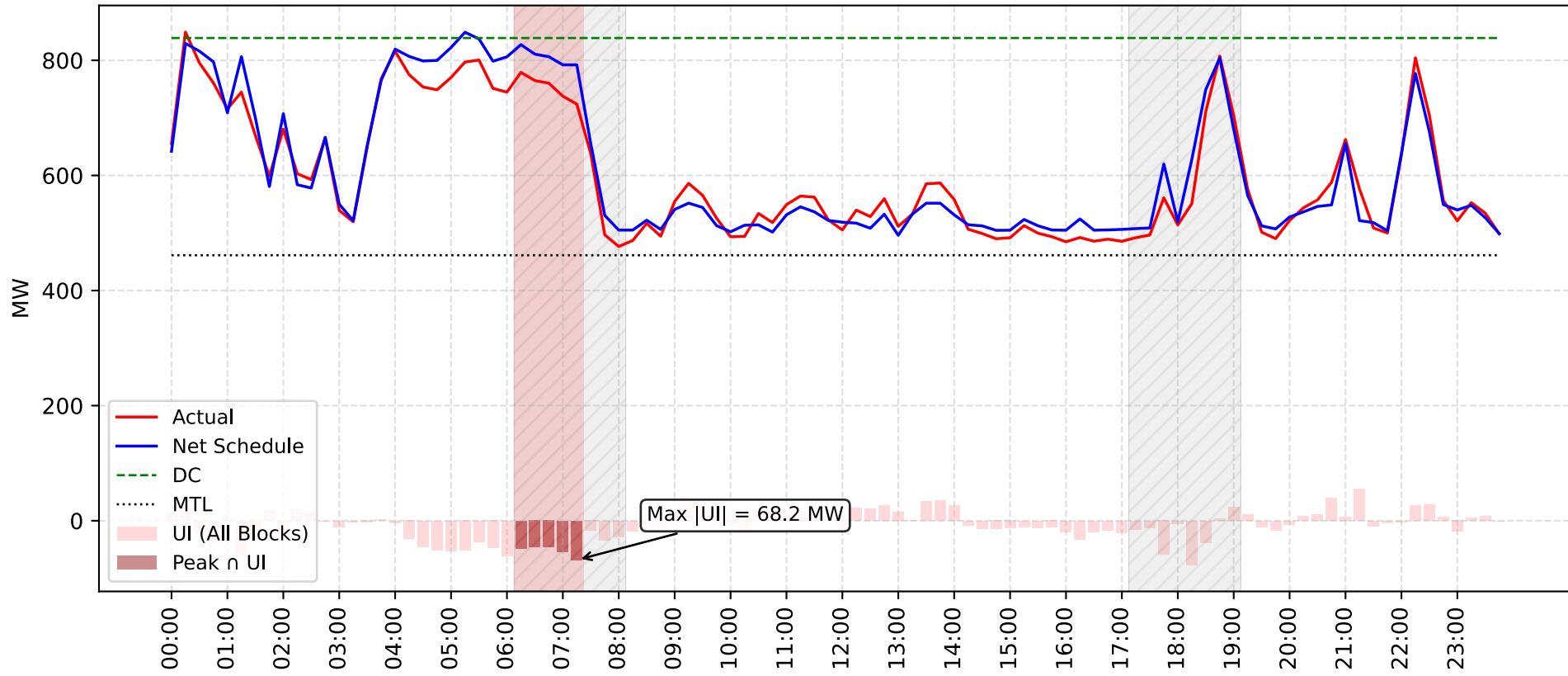
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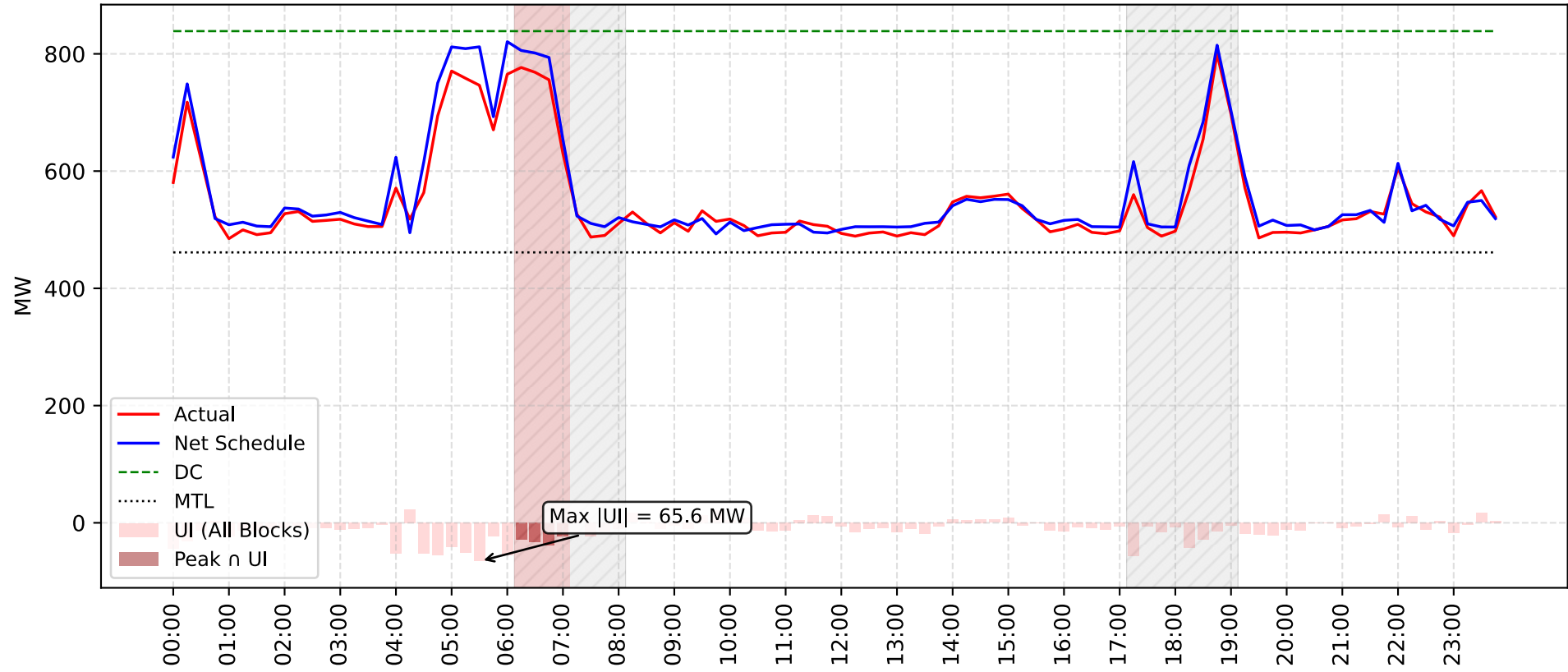
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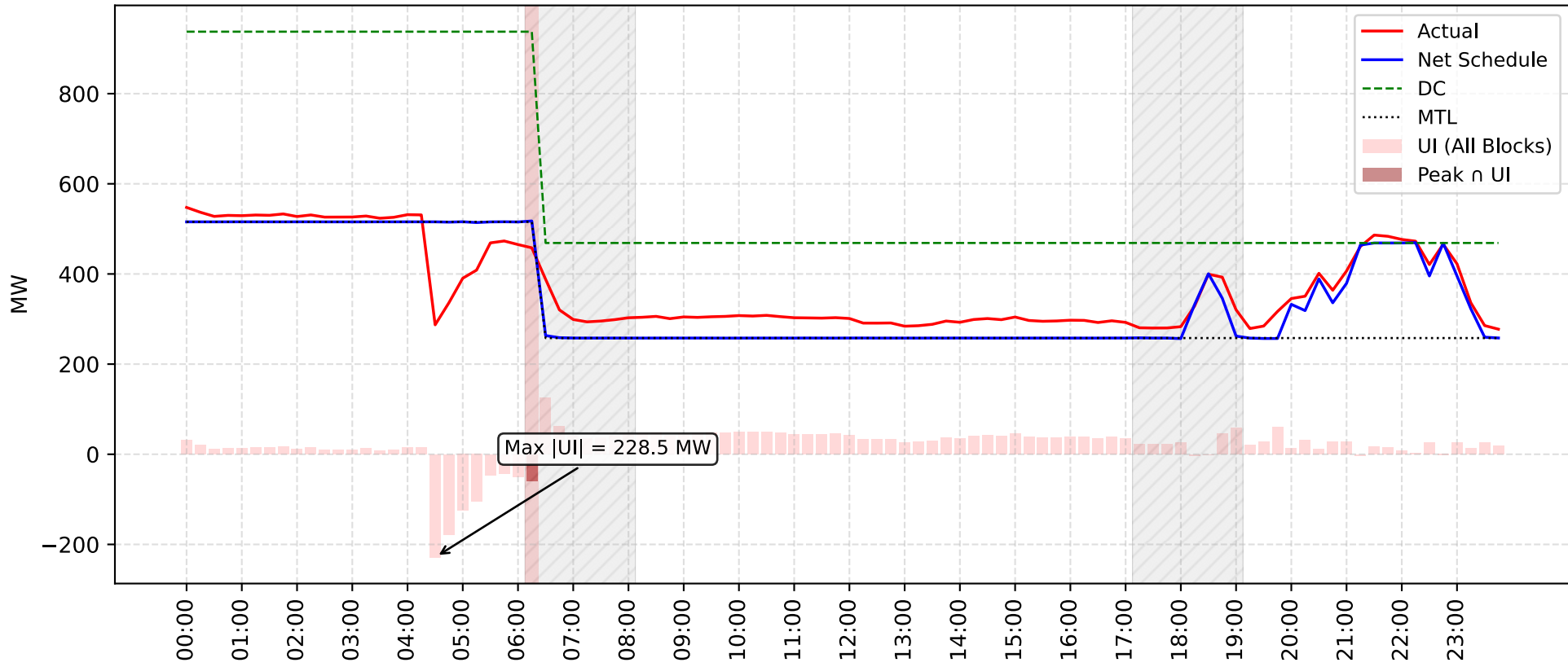
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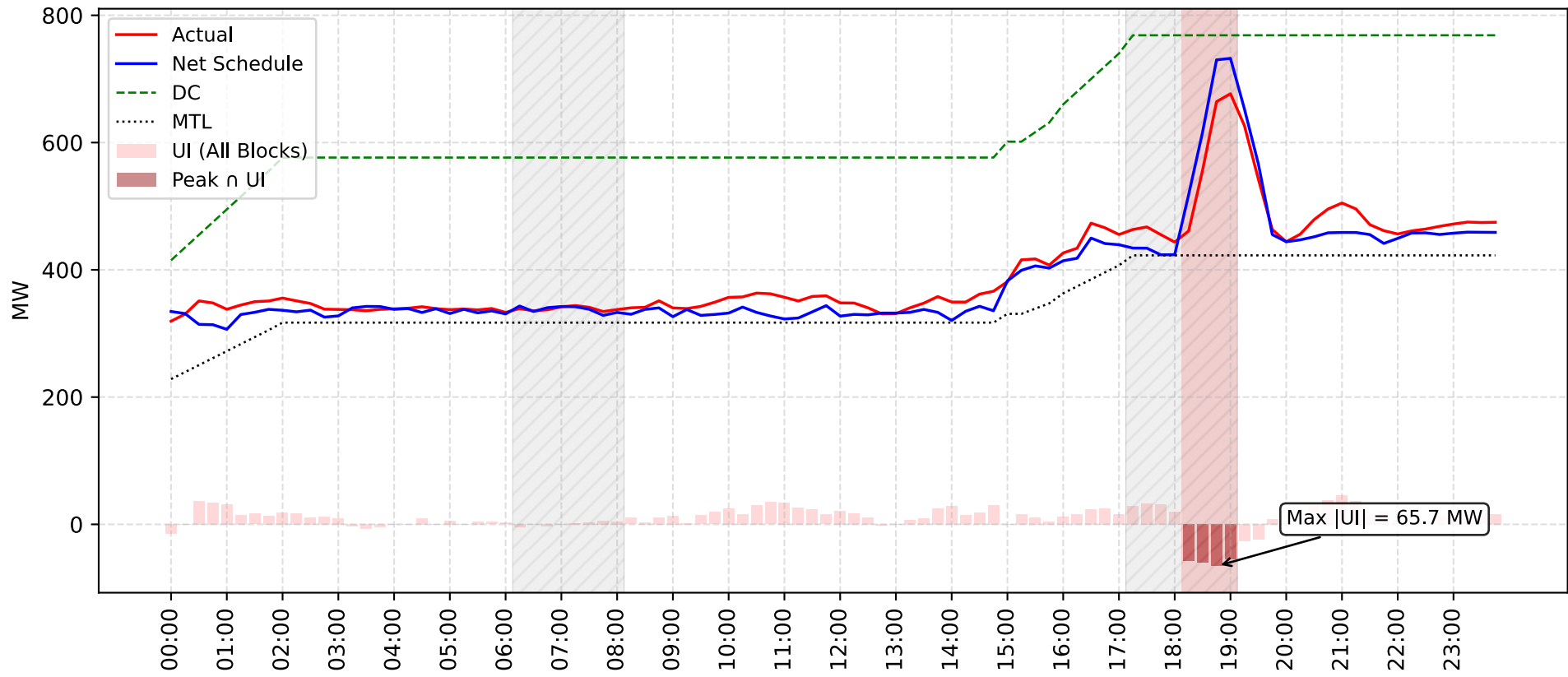
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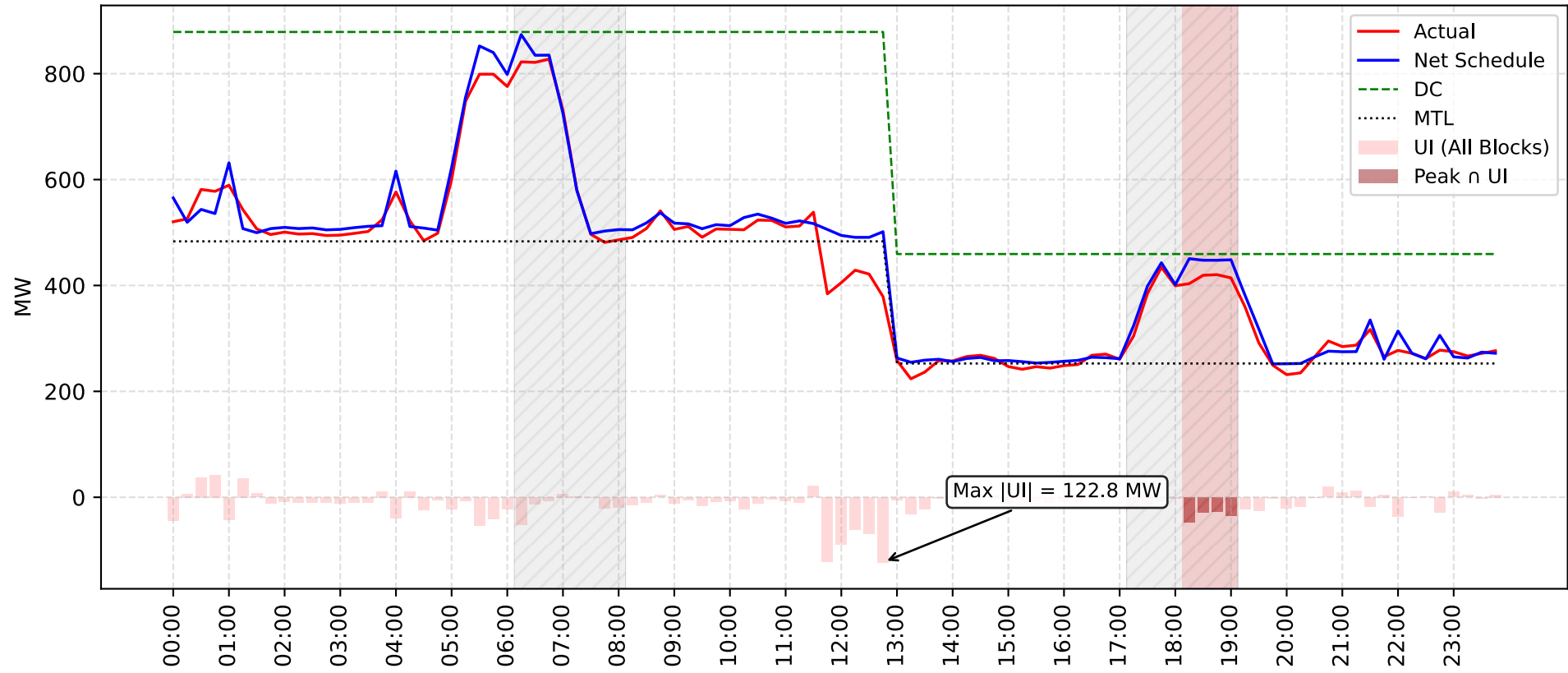
JHAJJAR Sch vs Act - for Date: 28-03-2026



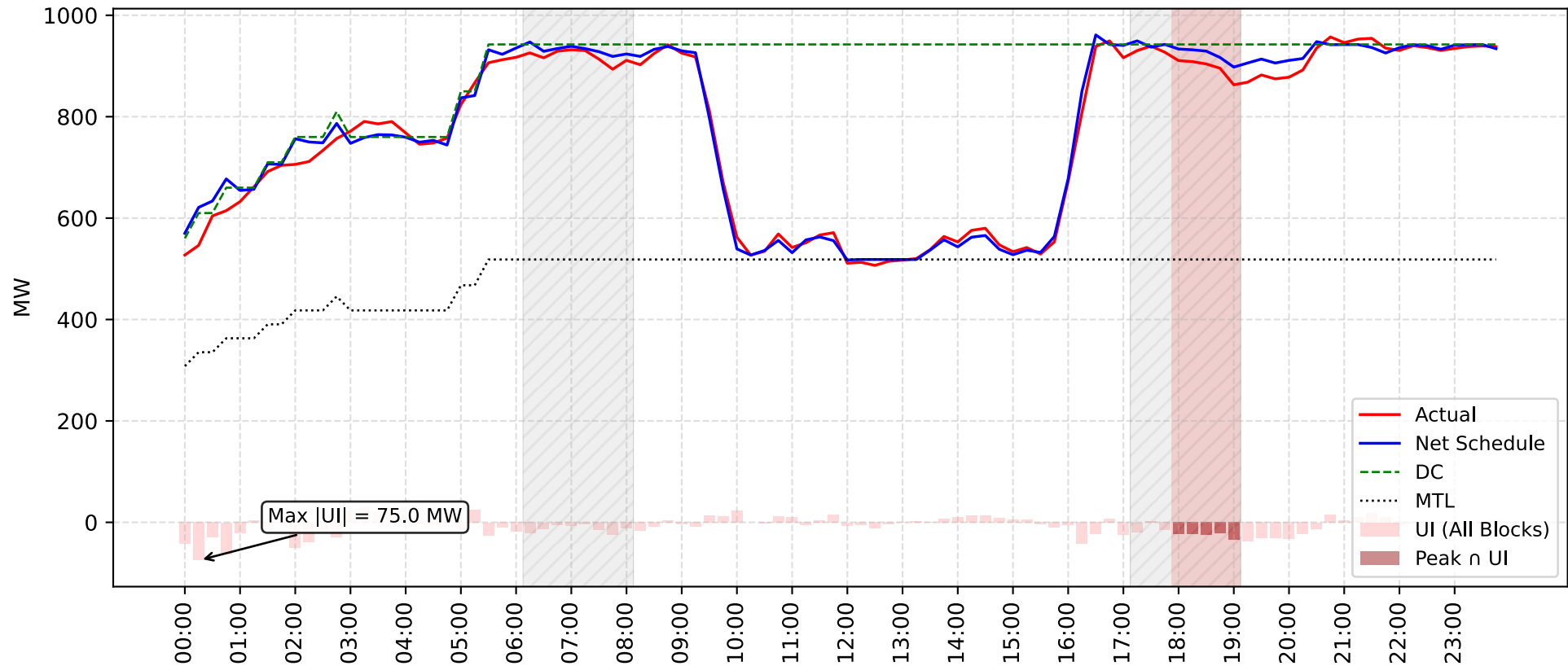
DADRIT Sch vs Act - for Date: 31-03-2026



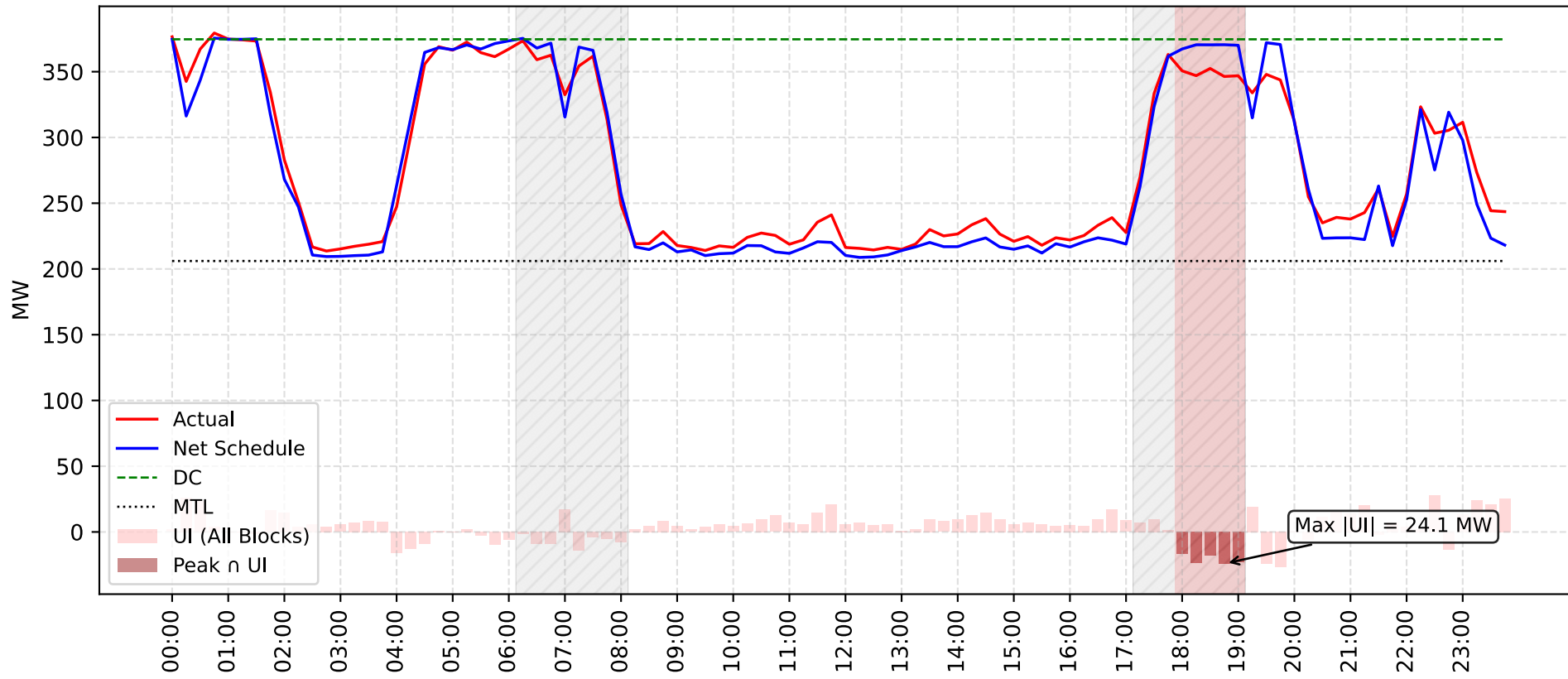
DADRT2 Sch vs Act - for Date: 31-03-2026



RIHAND3 Sch vs Act - for Date: 31-03-2026



UNCHAAR2 Sch vs Act - for Date: 31-03-2026





ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड  
भारत सरकार का उद्यम  
GRID CONTROLLER OF INDIA LIMITED  
(A Government of India Enterprise)



[formerly Power System Operation Corporation Limited (POSOCO)]

उत्तर क्षेत्रीय भार प्रेषण केंद्र / Northern Regional Load Despatch Centre

कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016

Office : 18-A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110016

CIN : U40105DL2009GOI188682, Website : www.nrlcdc.in, E-mail : nrlcdc@grid-india.in, Tel: 011 26519406, 26523869, Fax: 011 26852747

संदर्भः:: NRLDC\SO\2025-26\04

दिनांक: 15 जनवरी 2026

प्रति,

वितरण सूची के अनुसार

Subject: थर्मल उत्पादन स्टेशनों द्वारा अनुसूची से विचलन के संबंध में।

महोदया/महोदय,

1. विद्युत उत्पादन स्टेशनों द्वारा घोषित क्षमता के अनुसार विद्युत का उत्पादन करना तथा जारी शेड्यूल का पालन करना सुरक्षित और विश्वसनीय ग्रिड संचालन के लिए अत्यंत आवश्यक है।
2. यह देखा गया है कि कई दिनों में, विशेषकर पीक आवर्स के दौरान, जब स्टेशन पूर्ण रूप से शेड्यूल थे, तब झज्जर, ऊंचाहार इकाई-1, 3 एवं 4, टांडा-2, रिहंद-2 तथा दादरी-2 से लगातार कम विद्युत इंजेक्शन हुआ है। इन घटनाओं को दर्शाने वाले चार्ट अनुबंध-1 (Annexure-1) के रूप में संलग्न हैं।
3. पीक आवर्स में शेड्यूल के अनुसार विद्युत आपूर्ति न कर पाने की स्थिति को घोषित क्षमता में स्पष्ट रूप से दर्शाया जाना चाहिए। पीक आवर्स के दौरान इस प्रकार के विचलन से प्रणाली की आवृत्ति पर प्रतिकूल प्रभाव पड़ता है तथा ग्रिड संचालन में कठिनाई उत्पन्न होती है।
4. अतः सभी संबंधित विद्युत उत्पादन स्टेशनों से अनुरोध है कि वे अपनी वास्तविक उत्पादन क्षमता के अनुसार ही क्षमता की घोषणा करें तथा RLDC/NLDC द्वारा जारी निर्देशों के अनुसार शेड्यूल का पूर्णरूप से पालन सुनिश्चित करें जो कि सुरक्षित एवं विश्वसनीय ग्रिड संचालन के लिए आवश्यक है।

धन्यवाद।

भैवदीय,

अशोक कुमार

मुख्य महाप्रबंधक (प्रणाली संचालन)  
उत्तरी क्षेत्र भार प्रेषण केंद्र, नई दिल्ली

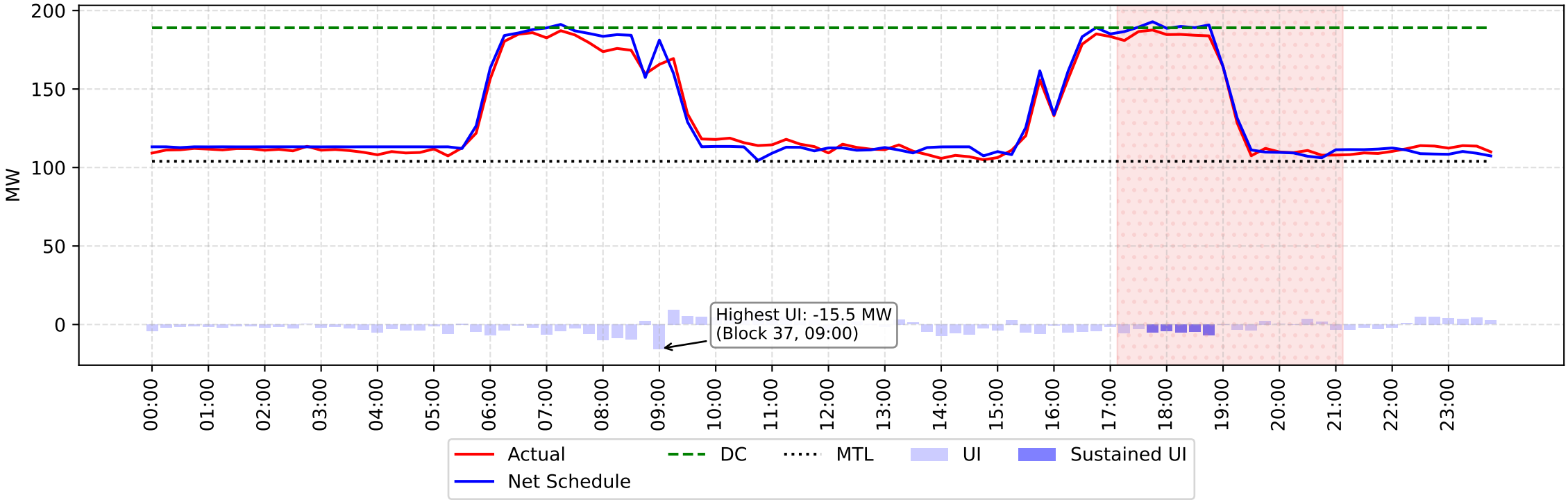
**प्रतिलिपि विनम सूचनार्थः**

1. सदस्य सचिव, NRPC
2. कार्यकारी निदेशक, NRLDC
3. कार्यकारी निदेशक, NLDC

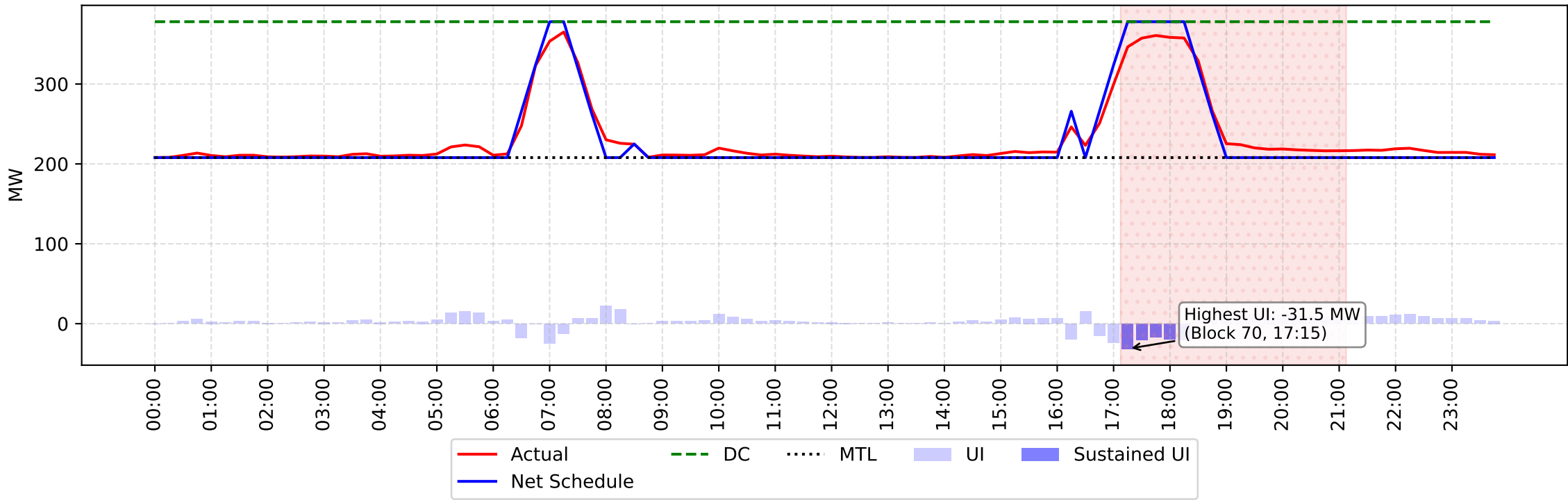
**वितरण सूची:**

1. कार्यकारी निदेशक (वाणिज्य), NRHQ, NTPC लिमिटेड, TC-33/V-1, विभूति खंड, गोमती नगर, लखनऊ-201301
2. महाप्रबंधक (संचालन एवं अनुरक्षण), इंदिरा गांधी सुपर थर्मल पावर प्रोजेक्ट (IGSTPP), झरली, जिला झज्जर, हरियाणा-124141
3. महाप्रबंधक (संचालन एवं अनुरक्षण), दादरी स्टेज-II NCTPS, NCR मुख्यालय, NTPC, कक्ष संख्या-39, R&D भवन, प्लॉट संख्या-8A, सेक्टर-24, नोएडा
4. अपर महाप्रबंधक (संचालन एवं अनुरक्षण), रिहंद- II, NRHQ, NTPC लिमिटेड, TC-33/V-1, विभूति खंड, गोमती नगर, लखनऊ-201301
5. महाप्रबंधक (संचालन एवं अनुरक्षण), टांडा स्टेज-II, NTPC लिमिटेड, टांडा स्टेज-II, डाकघर: विद्युत नगर, जिला अंबेडकरनगर, उत्तर प्रदेश-224238
6. अपर महाप्रबंधक (वाणिज्य), ऊंचाहार-I, III, IV TPS, NRHQ, NTPC लिमिटेड, TC-33/V-1, विभूति खंड, गोमती नगर, लखनऊ-201301

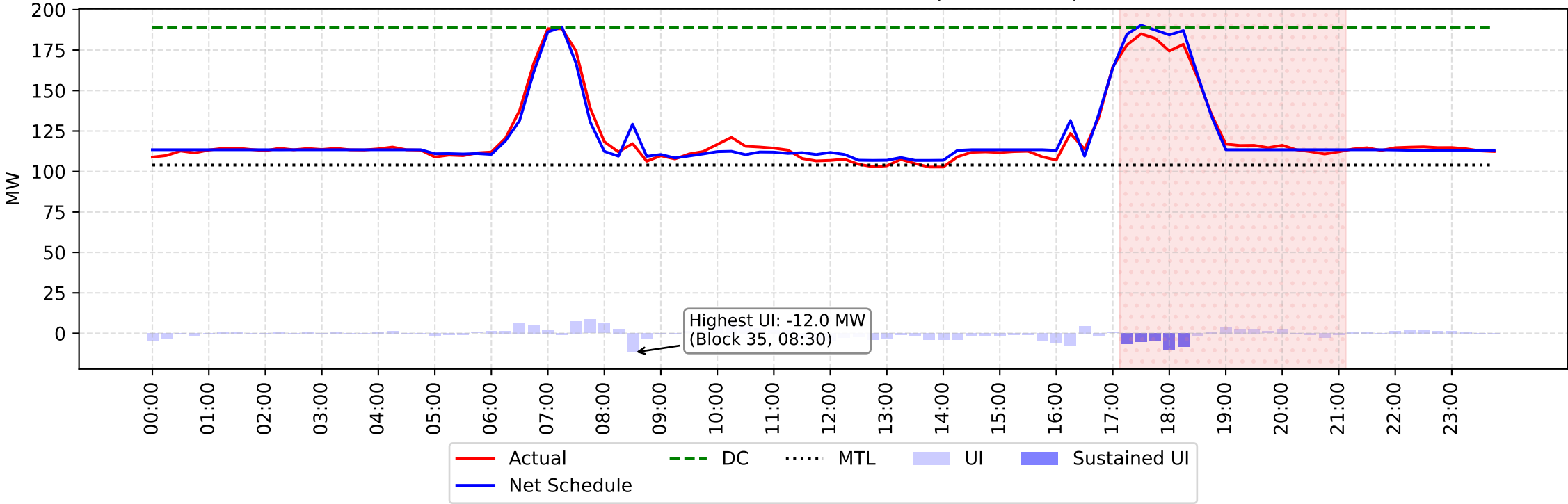
UNCHAAR3 Schedule vs Actual (05-12-2025)



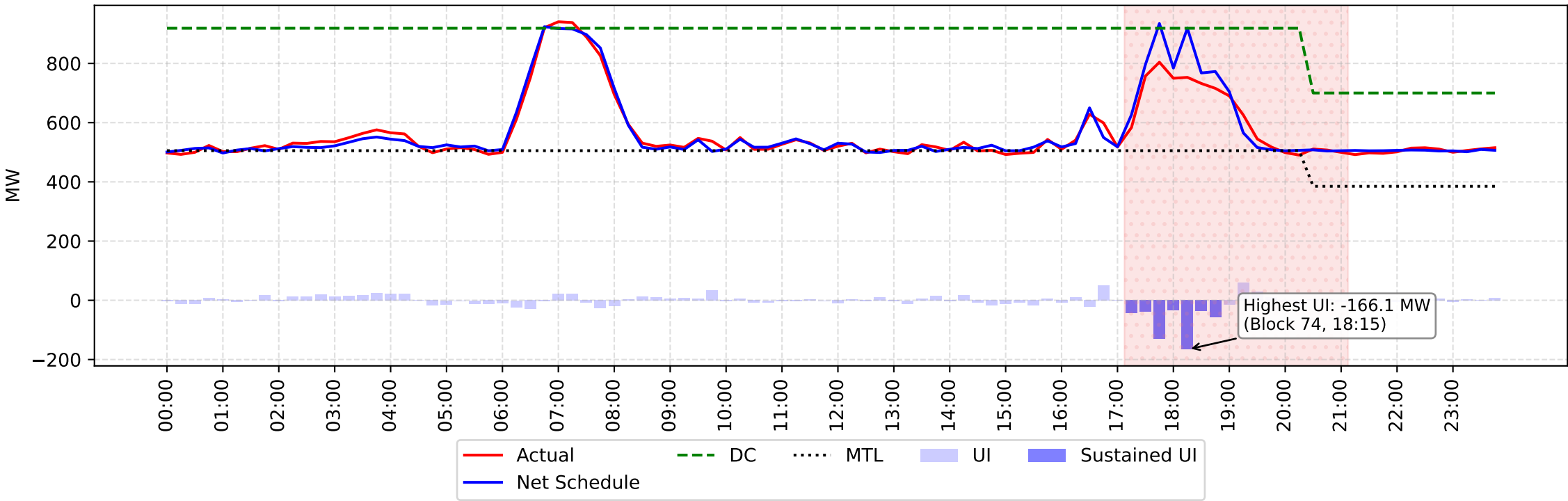
UNCHAHAR1 Schedule vs Actual (07-12-2025)



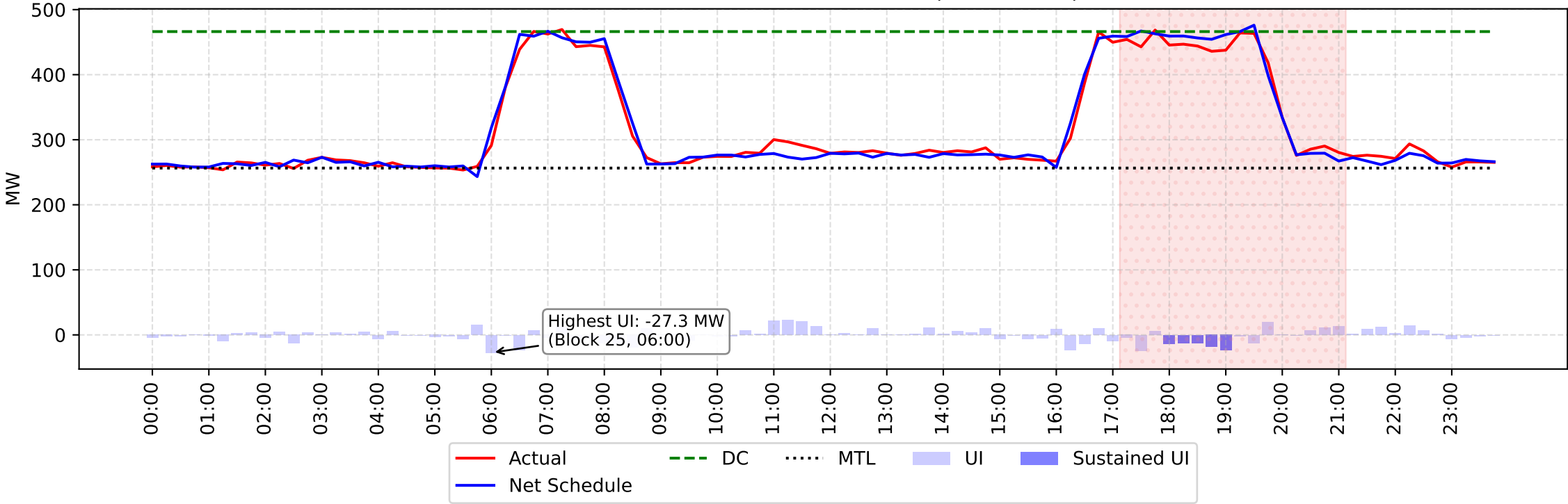
UNCHAAR3 Schedule vs Actual (07-12-2025)



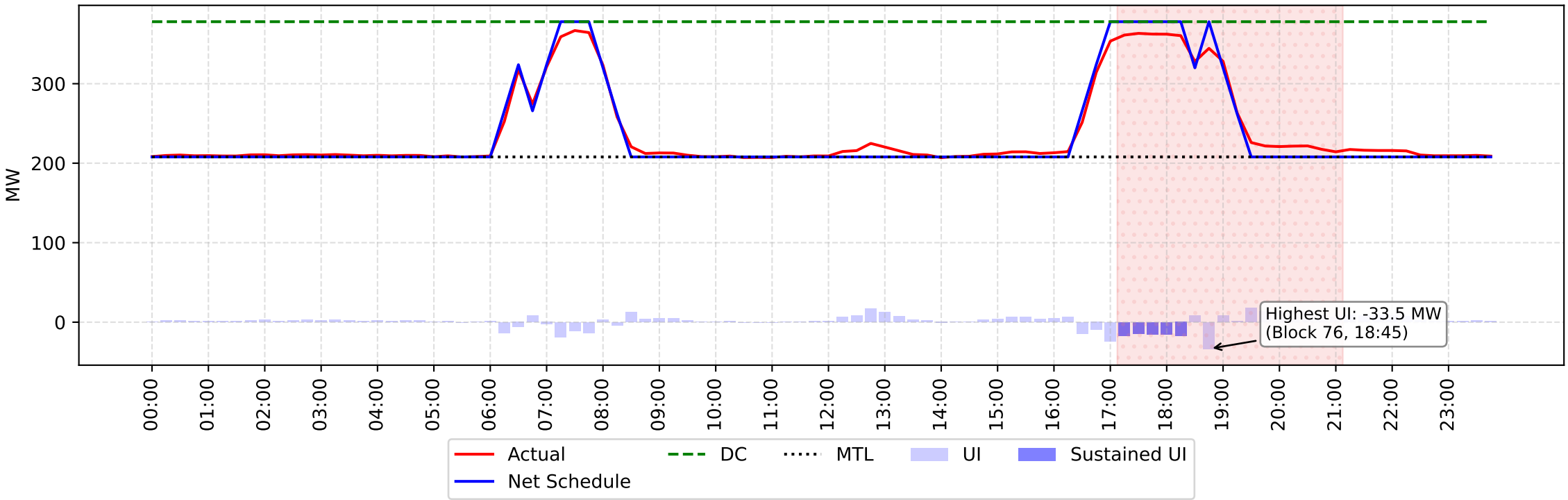
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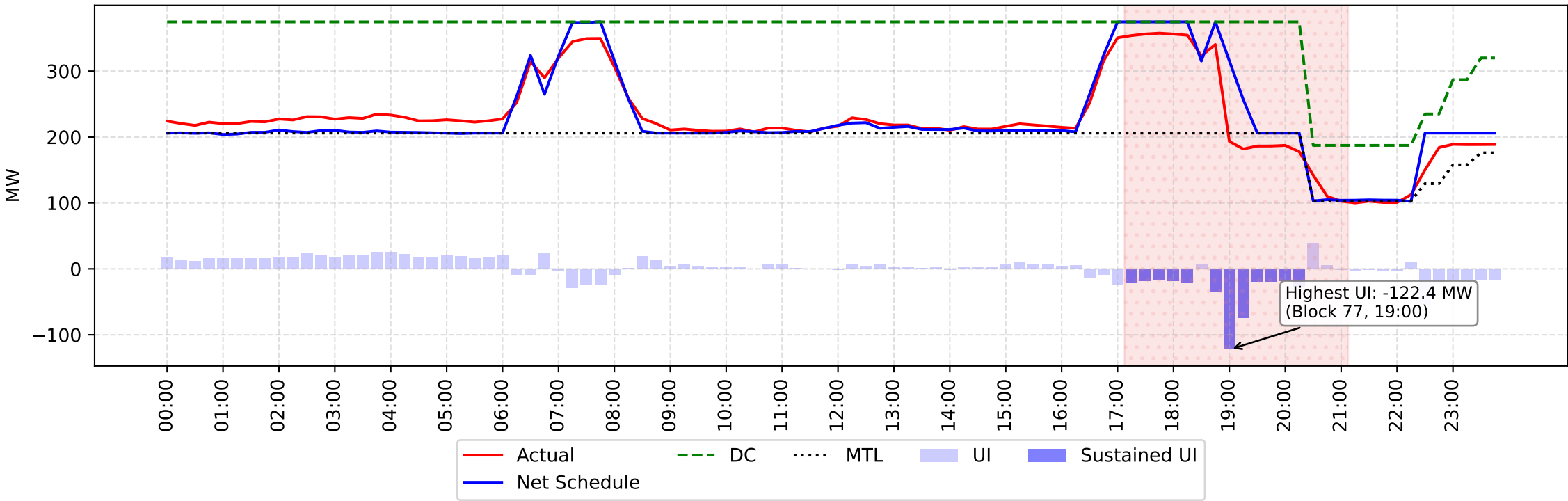
UNCHAAR4 Schedule vs Actual (11-12-2025)



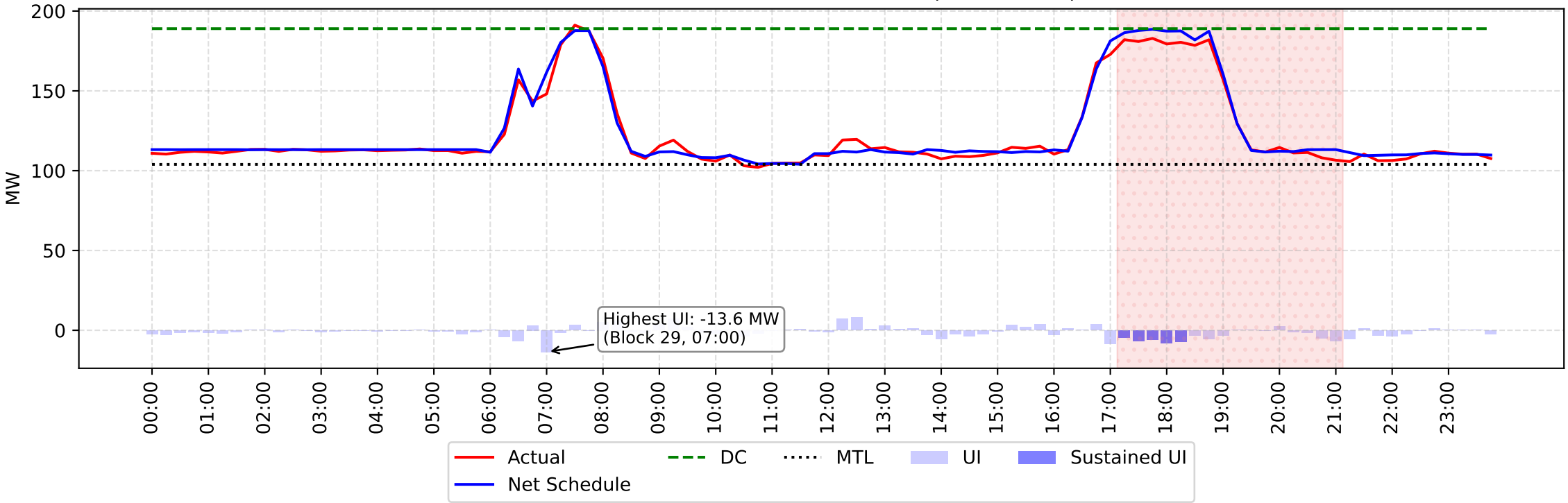
UNCHAAR1 Schedule vs Actual (14-12-2025)



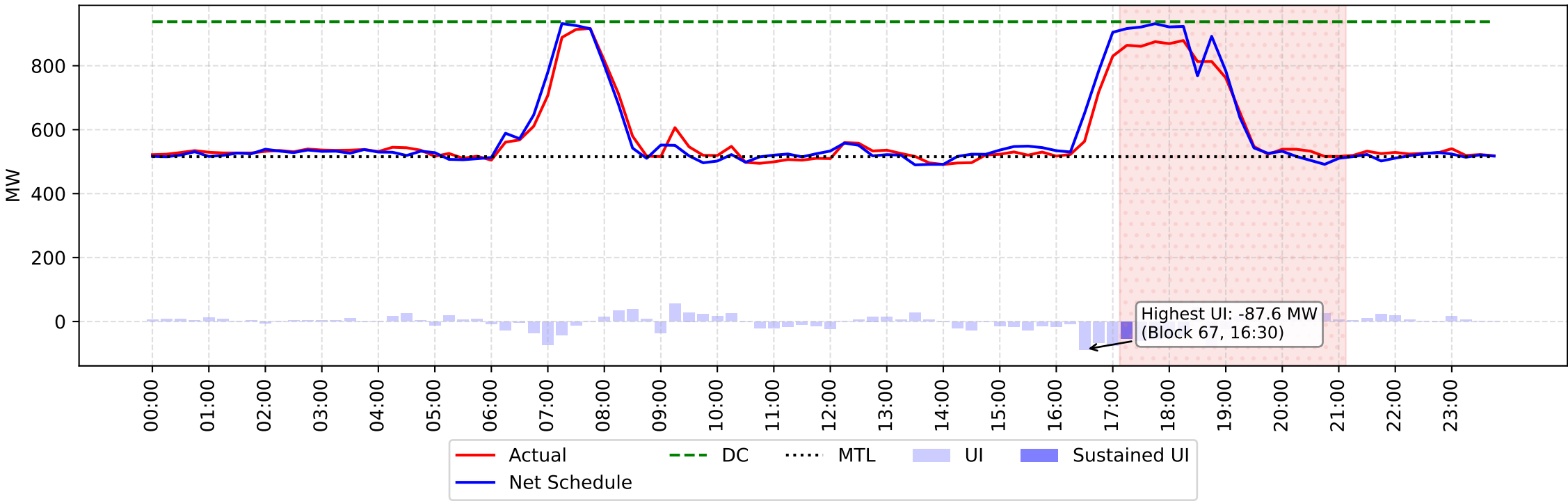
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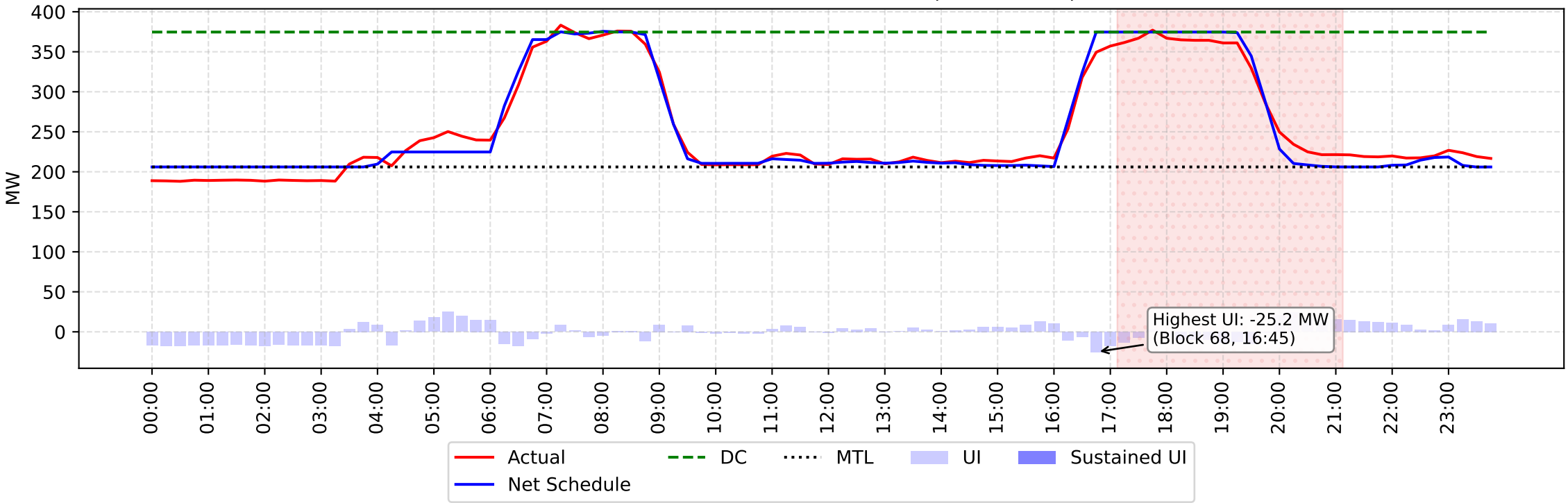
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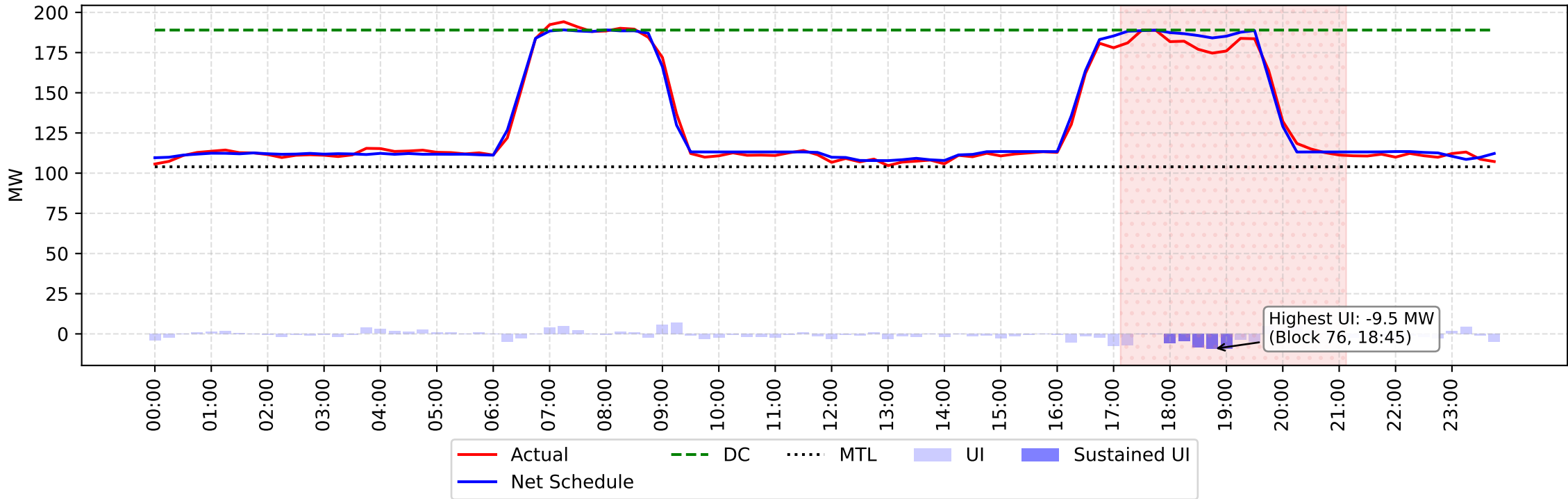
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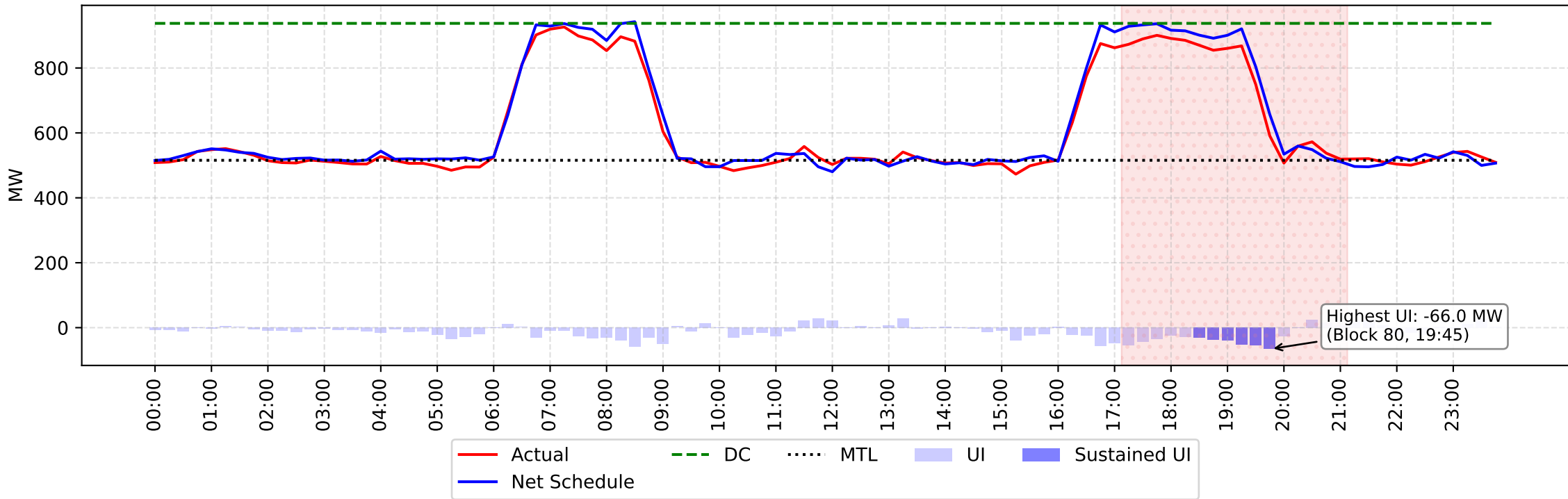
UNCHAAR2 Schedule vs Actual (15-12-2025)



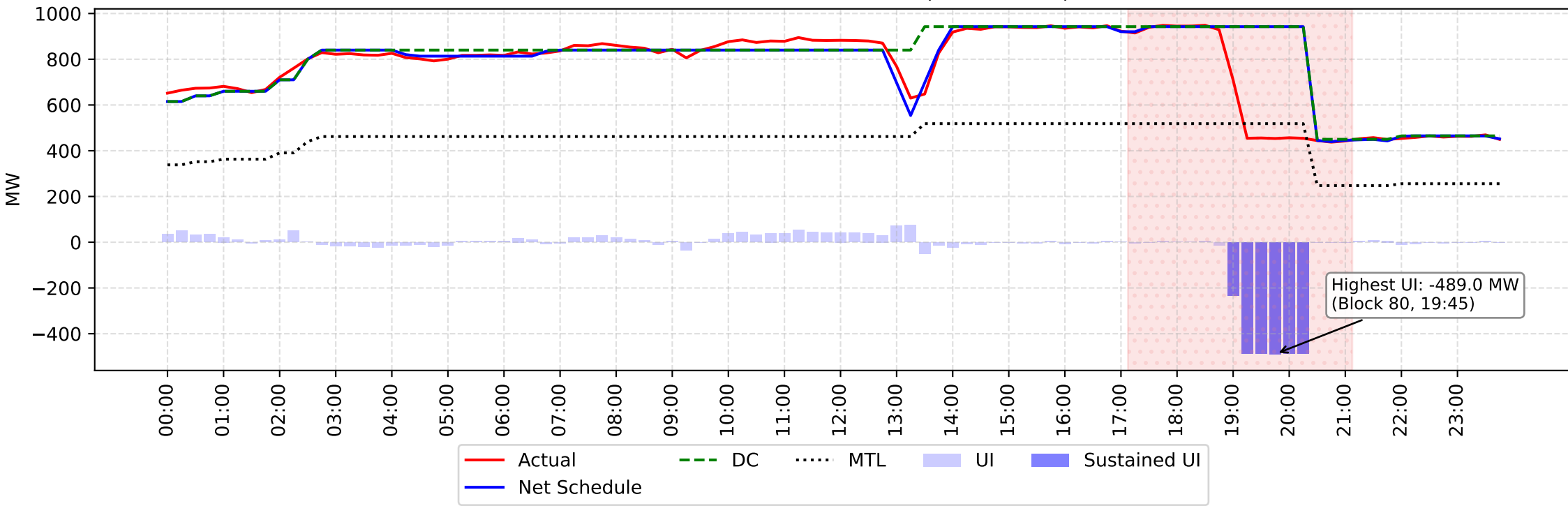
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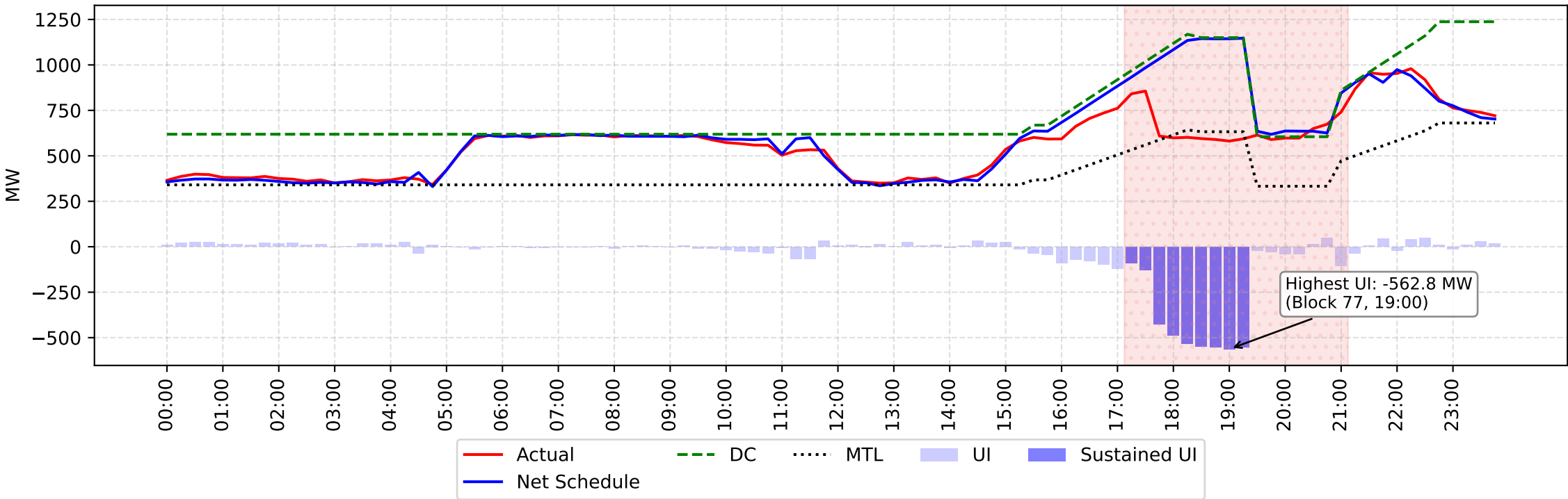
JHAJJAR Schedule vs Actual (15-12-2025)



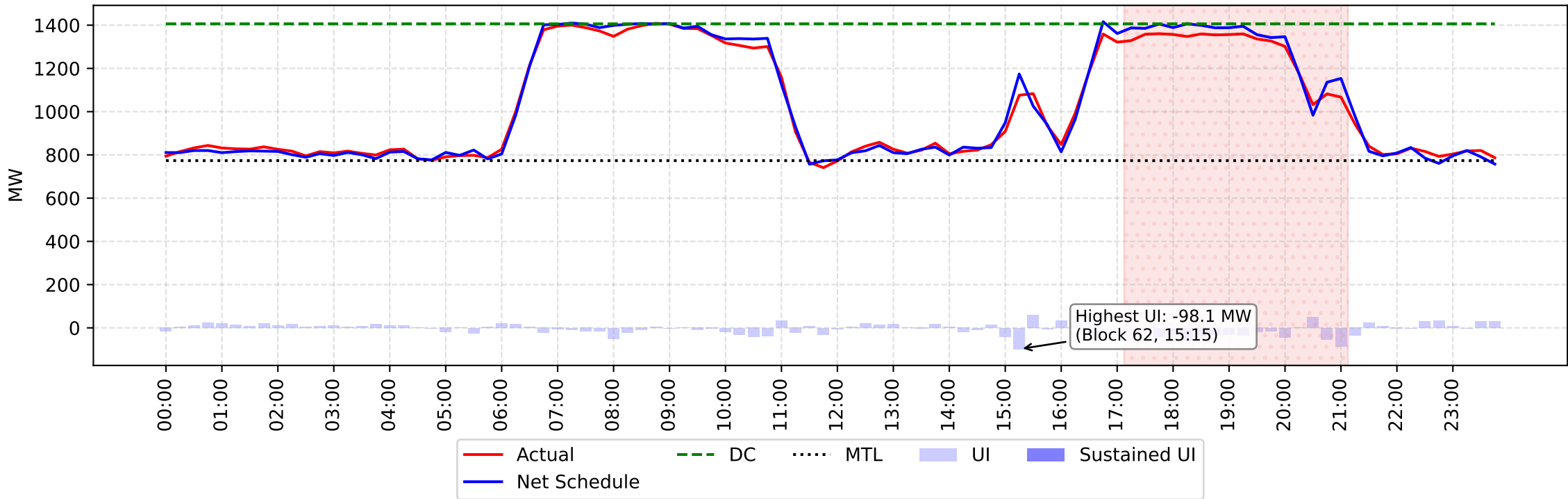
# RIHAND2 Schedule vs Actual (19-12-2025)



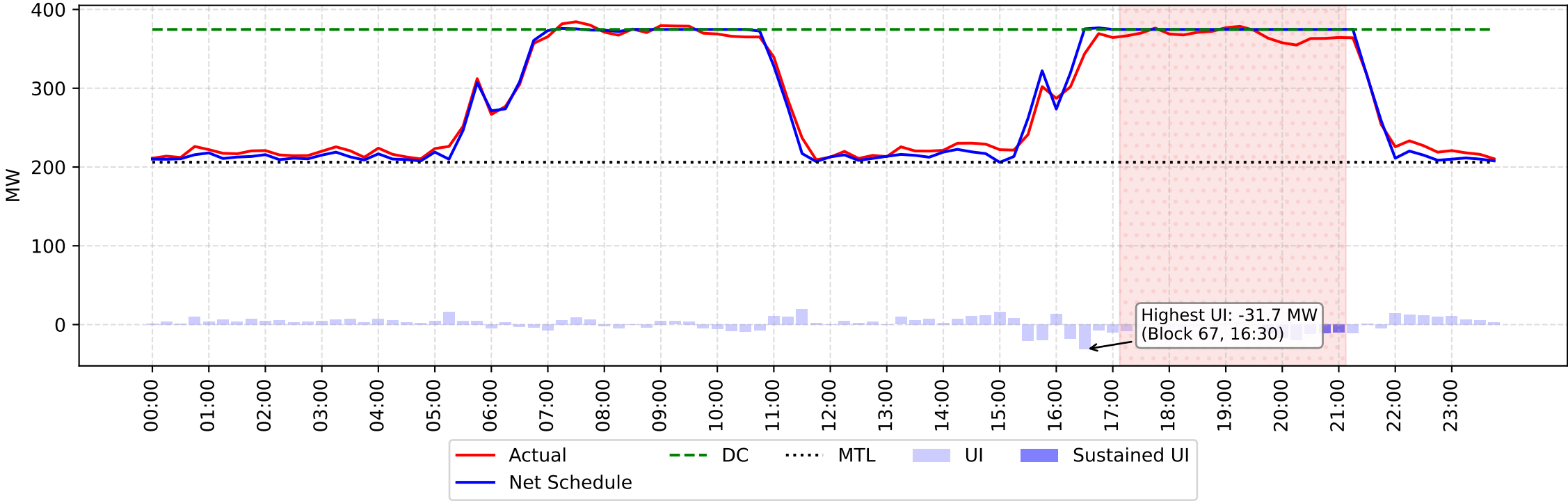
TANDA2 Schedule vs Actual (22-12-2025)



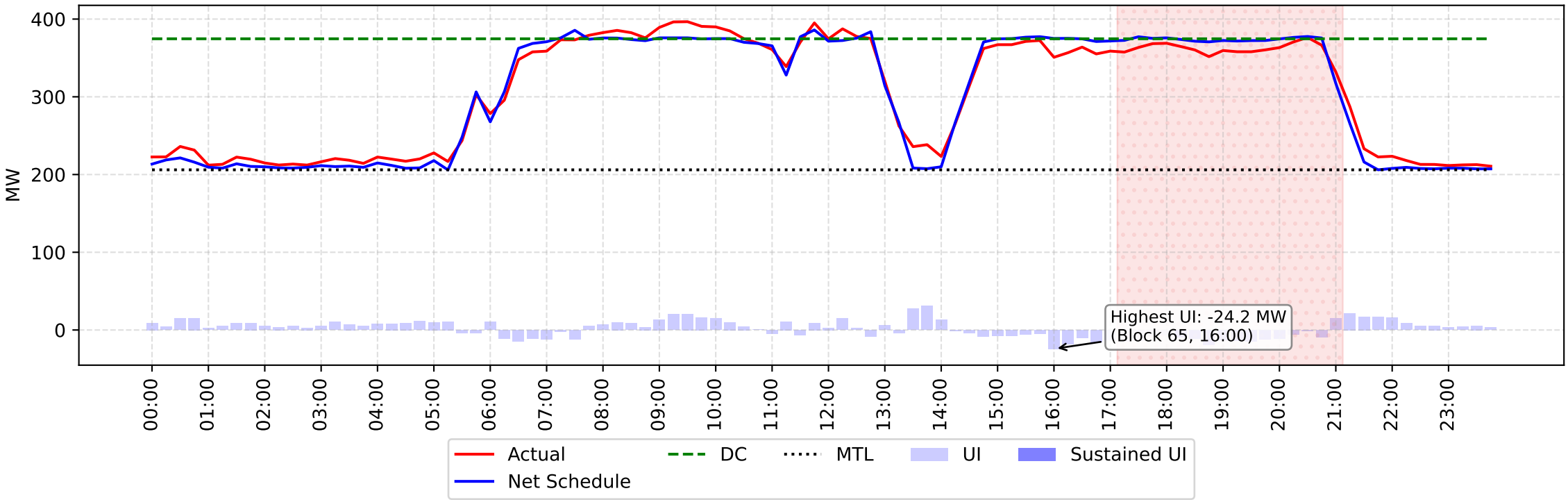
JHAJJAR Schedule vs Actual (22-12-2025)



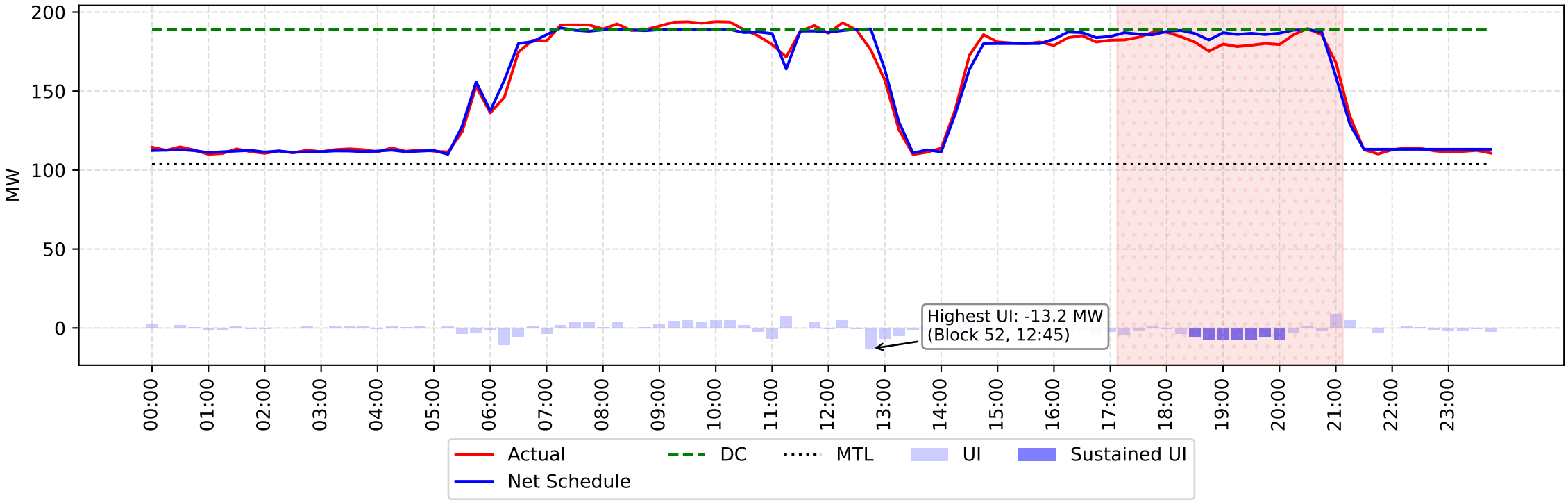
UNCHAAR2 Schedule vs Actual (23-12-2025)



UNCHAAR2 Schedule vs Actual (31-12-2025)



UNCHAAR3 Schedule vs Actual (31-12-2025)





Ref: N1/AM/25-26/NRLDC

Date: 15.04.2026

To,

General Manager (System Operation)  
Northern Regional Load Dispatch Centre, New Delhi

**Subject: Action taken from POWERGRID for frequent tripping of  $\pm 800$  kV HVDC Champa-Kurukshetra inter-regional link**

**Reference: Letter No. NRLDC/SO/2026/133 dated 07.04.2026**

Sir

This is in reference to the above-mentioned letter regarding frequent tripping of the  $\pm 800$  kV HVDC Champa-Kurukshetra link. It is submitted that eleven tripping incidents have occurred since March 2026 majorly due to operation of VESDA-based fire detection at Champa end, filter bank communication issues, and DC line fault due to lightning.

Corrective and preventive actions have been promptly taken in all the tripping incidences, including rectification of VESDA system as per OEM recommendations, rectification of SAS network rings to avoid communication disturbances, coordination with OEM for improvement in RPC logic, and strengthening of tower earthing at the affected DC line location. The details of rectification action taken by POWERGRID for above mentioned trippings is provided as Annexure-I

It is assured that POWERGRID is continuously monitoring the trippings and taking all necessary measures to ensure reliable operation during the forthcoming high-demand summer period.

Thanking you.

Yours faithfully,

जी.एस.आर.राव  
15/4/26  
(G S R Rao)

CGM (NR-I, AM)

Annexure-I

S. No	Element Name	Outage		Revival		Reason / Remarks	Action taken from POWERGRID
		Date	Time	Date	Time		
1	800 KV HVDC Kurukshetra(PG) Pole-2	1/3/2026	8:11	1/3/2026	15:43	Blocked by operation of VESDA due to valve hall fire detection at Champa end.	OEM of VESDA (Xtralis ) visited the site. As per their recommendations pipelines of detectors of all poles have been vacuumed with high power vacuum machine and filters of all detector units of all poles have been changed with new one. Additionally suspected detectors were changed with new detectors  Disturbance in the SAS ring caused multiple BCUs connected in the ring— including those associated with the filter banks and GIS—to enter a hung state. As a result, the control system generated DBI (Data Bit Invalid) alarms due to loss of status updates. This triggered a "Minimum Filter Unavailable" alarm on both Bi-poles, causing their subsequent blocking.  Shutdown of both the bipoles has been scheduled on 11.04.2026 for isolation of
2	800 KV HVDC Kurukshetra(PG) Pole-1	18-03-26	9:57	18-03-26	14:10	Tripped from Champa end due to VESDA (Smoke detection) protection operated	
3	800 KV HVDC Kurukshetra(PG) Pole-2	18-03-26	14:42	18-03-26	15:53	Tripped due to Filter bank communication issue.	
4	800 KV HVDC Kurukshetra(PG) Pole-1	18-03-26	14:42	18-03-26	16:03	Tripped due to Filter bank communication issue.	
5	800 KV HVDC Kurukshetra(PG) Pole-3	18-03-26	14:47	18-03-26	16:16	Tripped due to Filter bank communication issue.	

*illegible signature*

डेटा वर्गीकरण : प्रतिबंधित/RESTRICTED

6	800 KV HVDC Kurukshetra(PG) Pole-4	18-03-26	14:47	18-03-26	16:25	Tripped due to Filter bank communication issue.	SAS network ring of bipoles from TCR ring to prevent such type of disturbances in future.
7	800 KV HVDC Kurukshetra(PG) Pole-1	18-03-26	18:39	18-03-26	20:06	Tripped due to non availability of minimum filters	Communication has been sent to M/s GEV to review and implement the RPC functioning for Auto switching of essential filters even though the essential filter and RPC were in AUTO mode.
8	800 KV HVDC Kurukshetra(PG) Pole-2	18-03-26	18:39	18-03-26	20:24	Tripped due to non availability of minimum filters	
9	800 KV HVDC Kurukshetra(PG) Pole-1	30-03-26	15:11	30-03-26	21:58	Blocked due to VESDA alarm from Champa end.	OEM of VESDA (Xtralis ) visited the site. As per their recommendations pipelines of detectors of all poles have been vacuumed with high power vacuum machine and filters of all detector units of all poles have been changed with new one. Additionally suspected detectors were changed with new detectors
10	800 KV HVDC Kurukshetra(PG) Pole-2	4/4/2026	19:21	4/4/2026	23:31	DC Line Fault. FLR- Kurukshetra: 362.1kM, Champa: 925.1kM. Tower no.- 2483	On emergency patrolling actual fault was found at Loc No 2482. Flashover mark noticed on Dead end and CC Ring at Loc 2482. As a corrective course of action Additional AI Bonds ( 2 Nos) have been provided of Tower Peak and moreover Additional Rod Type Earthing has also been provided for faster dissipation of lightning current into earth and to improve TFR of the Location.
11	800 KV HVDC Kurukshetra(PG) Pole-4	4/4/2026	19:21	5/4/2026	0:14	DC Line Fault. FLR- Kurukshetra: 362.1kM, Champa: 925.1kM. Tower no.- 2483	

*Ulleri*

## (Report on Multiple Element tripping at 765/400kV Agra(PG))

1. **Date & Time of event:** 06:28 hrs on 30.04.2026
2. **Location/Control Area:** Uttar Pradesh
3. **Plant/Substation Name:** 765/400kV Agra(PG)
4. **GD/GI Category:** GI-2
5. **Antecedent Condition:**
  - NR Load : 58319 MW
  - Affected state load (UP) : 16670 MW
  - Frequency : 50.04 Hz
  - weather condition : Thunderstorm / heavy wind
  - IR exchange : 9702 MW
6. **Generation loss/Load loss:** No change in demand of UP control area (as per SCADA).
7. **Duration of interruption:** ~03:16 (hh:mm) (Restoration time: 09:44 hrs)

### 8. Tripped elements:

S. No	Name of Elements	Outage Time	Revival Time	Reason of tripping
1.	765 KV Agra-Jhatikara (PG) Ckt-1	06:28 hrs	18:53 hrs	B-N fault in reclaim time
2.	765 KV Agra-Fatehpur (PG) Ckt-1		11:57 hrs	R-N fault with NO A/R operation
3.	765 KV Agra-Gwalior (PG) Ckt-1		11:36 hrs	R-N fault with NO A/R operation
4.	765 KV Agra-Gwalior (PG) Ckt-2		19:14 hrs	R-N fault in reclaim time
5.	765/400 kV 1500 MVA ICT 1 at Agra(PG)		10:16 hrs	B-N fault

6.	240 MVAR Bus Reactor No 1 at 765KV Agra(PG)		15:10 hrs	Tripped along with 765 KV Agra-Gwalior (PG) Ckt-1
7.	240 MVAR Bus Reactor No 2 at 765KV Agra(PG)		09:44 hrs	Tripped along with 765 KV Agra-Jhatikara (PG) Ckt-

### 9. Details of fault (if any):

- i) Nature of fault: Multiple B-N and R-N fault
- ii) Fault clearing time: 80 msec each

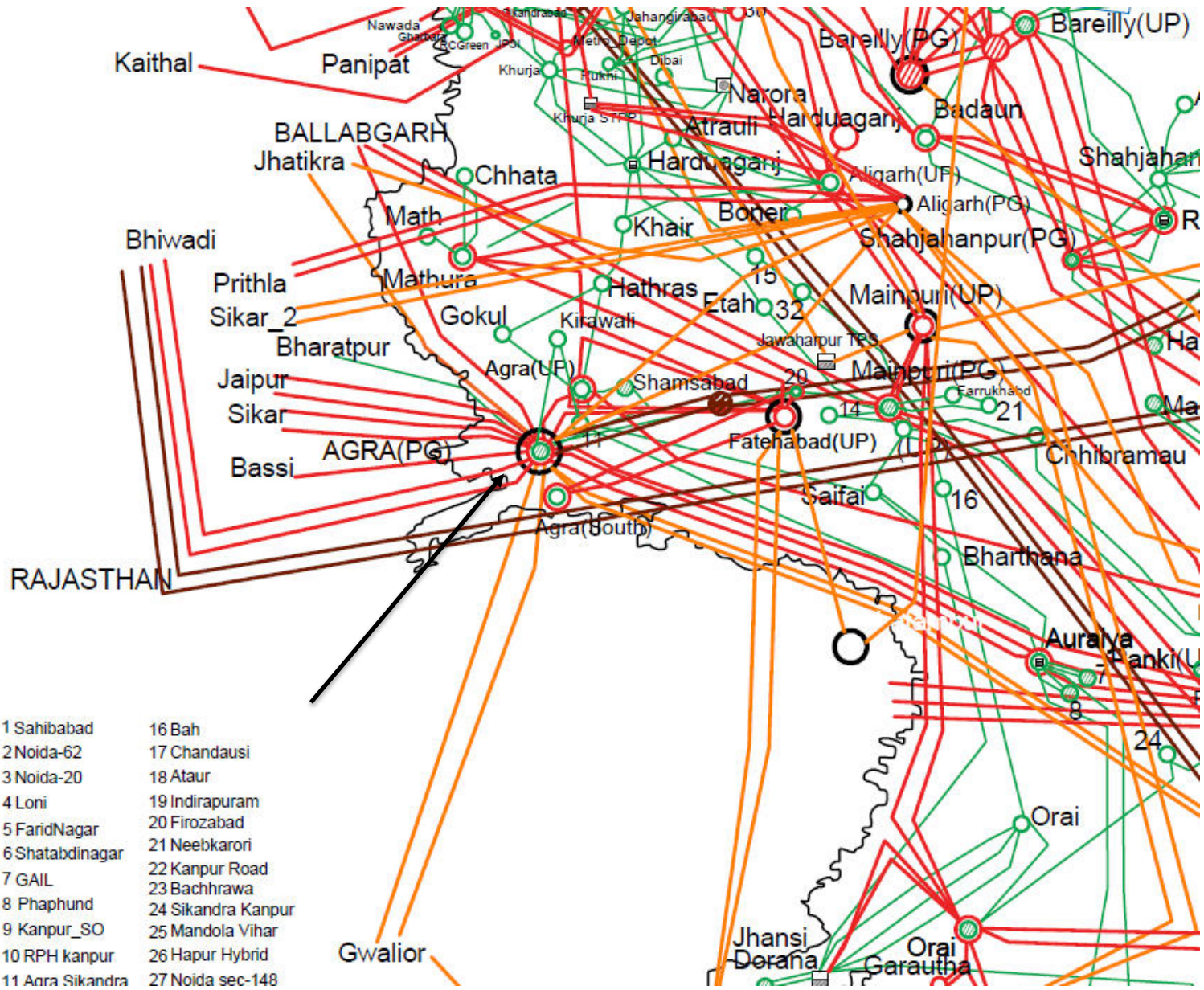
### 10. Brief description of event:

- i) 765/400kV Agra(PG) have one and half breaker bus scheme at both 765 & 400kV level.
- ii) During antecedent condition, 765 KV Agra-Gwalior (PG) ckt-1 & 2 were carrying ~47 MW each. As reported, there was inclement weather condition (thunderstorm / lightning).
- iii) As reported, at 06:28 hrs, 765 KV Agra-Jhatikara (PG) Ckt-1, 765 KV Agra-Fatehpur (PG) Ckt-1, 765 KV Agra-Gwalior (PG) Ckt-1 & 2, 765/400 kV 1500 MVA ICT 1 at Agra(PG) and 240 MVAR Bus Reactor No 1 & 2 at 765KV Agra(PG) tripped. Tripping occurred due to phase to earth faults in lines due to thunderstorm / lightning during inclement weather conditions.
- iv) As per PMU plot of phase voltage and currents of all the tripped lines at Agra(PG), it was observed that at first instance i.e., 06:28 29 hrs, B-N fault occurred on 765 KV Agra-Jhatikara (PG) Ckt-1. On this fault line successfully autoreclosed however tripped on B-N fault in reclaim time. Further, at 06:28:34hrs, 765 KV Agra-Fatehpur (PG) Ckt-1 tripped on R-N fault without A/R operation. Further at 06:28:41 hrs, 765 KV Agra-Gwalior (PG) Ckt-1 tripped on R-N fault without A/R operation. Further at 06:28:40 hrs, 765 KV Agra-Gwalior (PG) Ckt-2 tripped on R-N fault in reclaim time after successful A/R operation. 240 MVA bus reactor-1 & 2 also tripped along with the 765 KV Agra-Gwalior (PG) Ckt-1 & 765 KV Agra-Jhatikara (PG) Ckt-1 respectively (bus reactor and both the lines were on the same dia). Further at 06:28:44 hrs, 765/400 kV 1500 MVA ICT 1 at Agra(PG) tripped on B-N fault. Exact nature and location of fault and details of protection operation (DR/EL) not received yet from POWERGRID(NR-III). All the faults cleared within 80 msec.
- v) As per SCADA, no change in demand of UP control area is observed.

## **11. Preliminary Observations:**

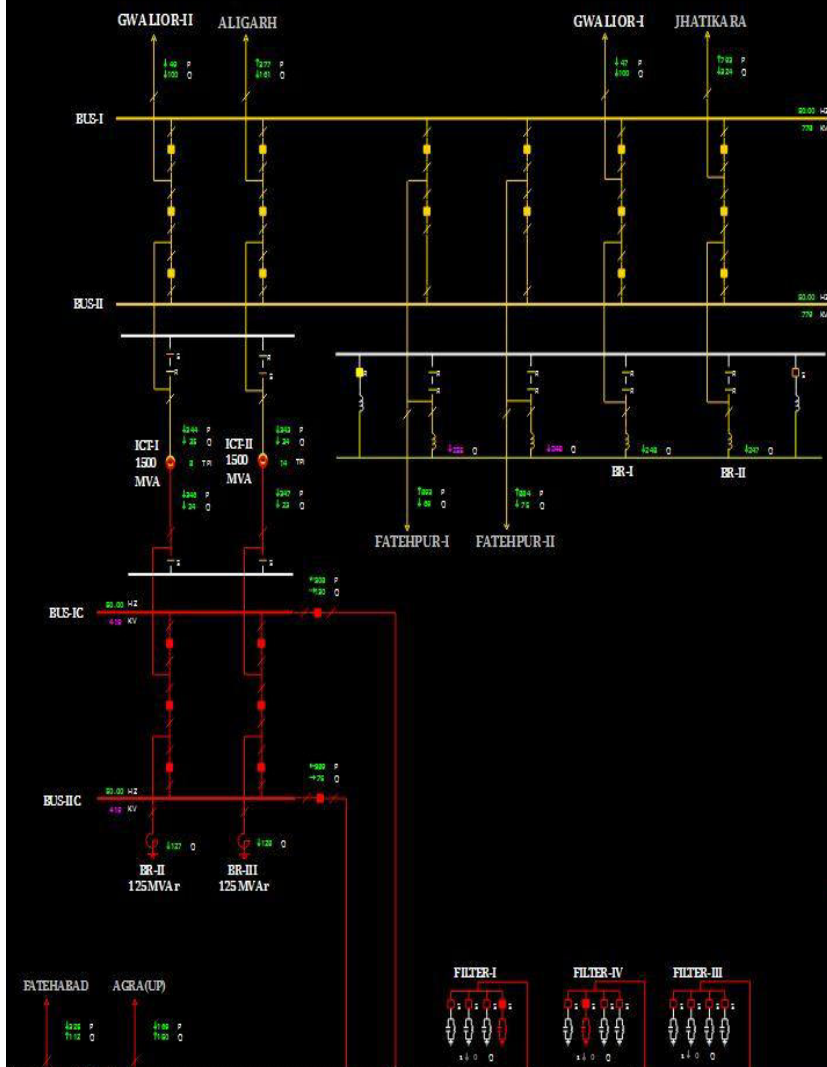
- i) As per PMU data, A/R operation is not observed in 765 KV Agra-Fatehpur (PG) Ckt-1 and 765 KV Agra-Gwalior (PG) Ckt-1 on R-N fault. Whether A/R is ON in the line at both ends? Reason for non-operation of A/R needs to be shared.
- ii) Exact location and nature of fault need to be shared.
- iii) DR/EL and tripping details of all the tripped elements need to be shared.
- iv) Remedial action taken report needs to be shared.

# Network connectivity diagram



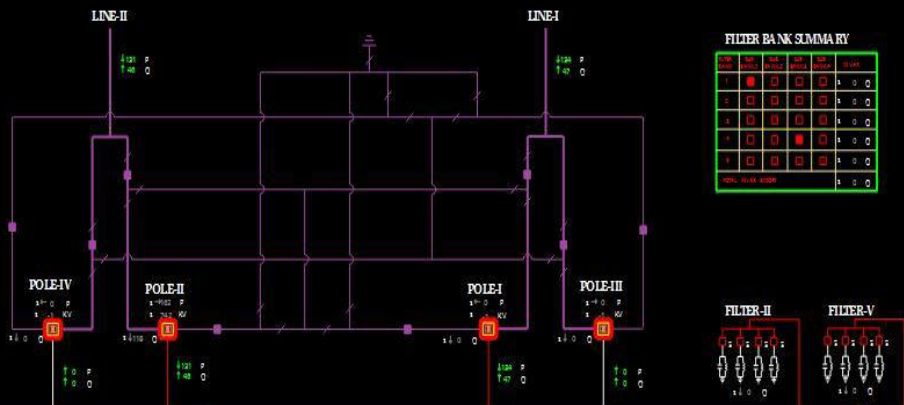
# SLD of 765/400kV Agra(PG) before the event

From(765 kV) - 01  
 From(400 kV) - 02  
 From(220 kV) - 01  
**AGRA**  
 Stat Exp | Gen Sum | Company  
 30.4.26 6:25:59  
 To sum(765 kV) - 01  
 To sum(400 kV) - 02



A GRA END	MW	KV
AGRA POLE-I	4100 P	400 KV
AGRA POLE-II	4100 P	400 KV
AGRA POLE-III	4100 P	400 KV
AGRA POLE-IV	4100 P	400 KV

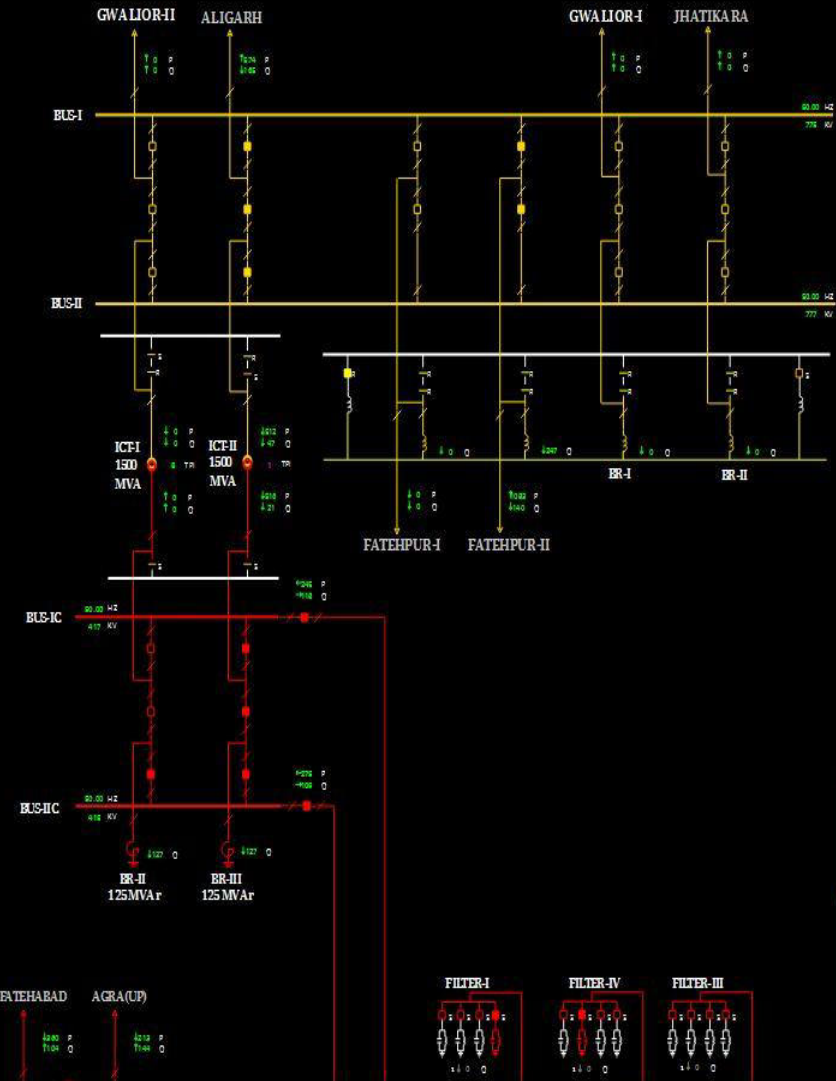
OTHER END	MW	kV
ENC POLE-I	4100 P	400 KV
ENC POLE-II	4100 P	400 KV
ALIPUR POLE-I	4100 P	400 KV
ALIPUR POLE-II	4100 P	400 KV



FILTER BANK SUMMARY					
LINE	POLE	FILTER	STATUS	REMARKS	STATUS
1	1	1	0		0
2	1	2	0		0
3	1	3	0		0
4	1	4	0		0
5	1	5	0		0
6	2	1	0		0
7	2	2	0		0
8	2	3	0		0
9	2	4	0		0
10	2	5	0		0
TOTAL FILTERS: 0/0/0/0/0					

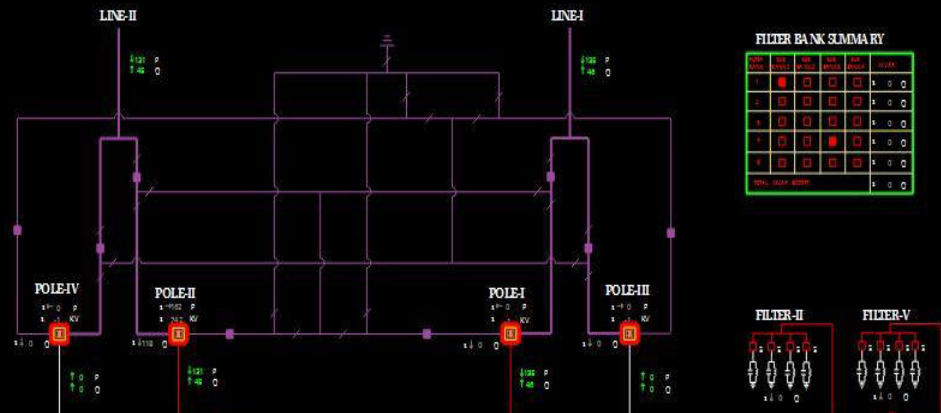
# SLD of 765/400kV Agra(PG) after the event

AGRA  
 Stat Expl Gen Sum Company  
 30.4.26 6:29:59



A GRA END	MW	KV
AGRA POLE-I	1100 P	1100 KV
AGRA POLE-II	1100 P	1100 KV
AGRA POLE-III	1100 P	1100 KV
AGRA POLE-IV	1100 P	1100 KV

OTHER END	MW	kV
ENC POLE-I	1100 P	1100 KV
ENC POLE-II	1100 P	1100 KV
ALIPUR POLE-I	1100 P	1100 KV
ALIPUR POLE-II	1100 P	1100 KV



FILTER BANK SUMMARY

NO	TYPE	NO	NO	NO	NO
1	1	1	1	1	1
2	1	1	1	1	1
3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1
6	1	1	1	1	1
7	1	1	1	1	1
8	1	1	1	1	1
9	1	1	1	1	1
10	1	1	1	1	1
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93	1	1	1	1	1
94	1	1	1	1	1
95	1	1	1	1	1
96	1	1	1	1	1
97	1	1	1	1	1
98	1	1	1	1	1
99	1	1	1	1	1
100	1	1	1	1	1

# SLD of 765/400kV Jhatikara(PG) before the event

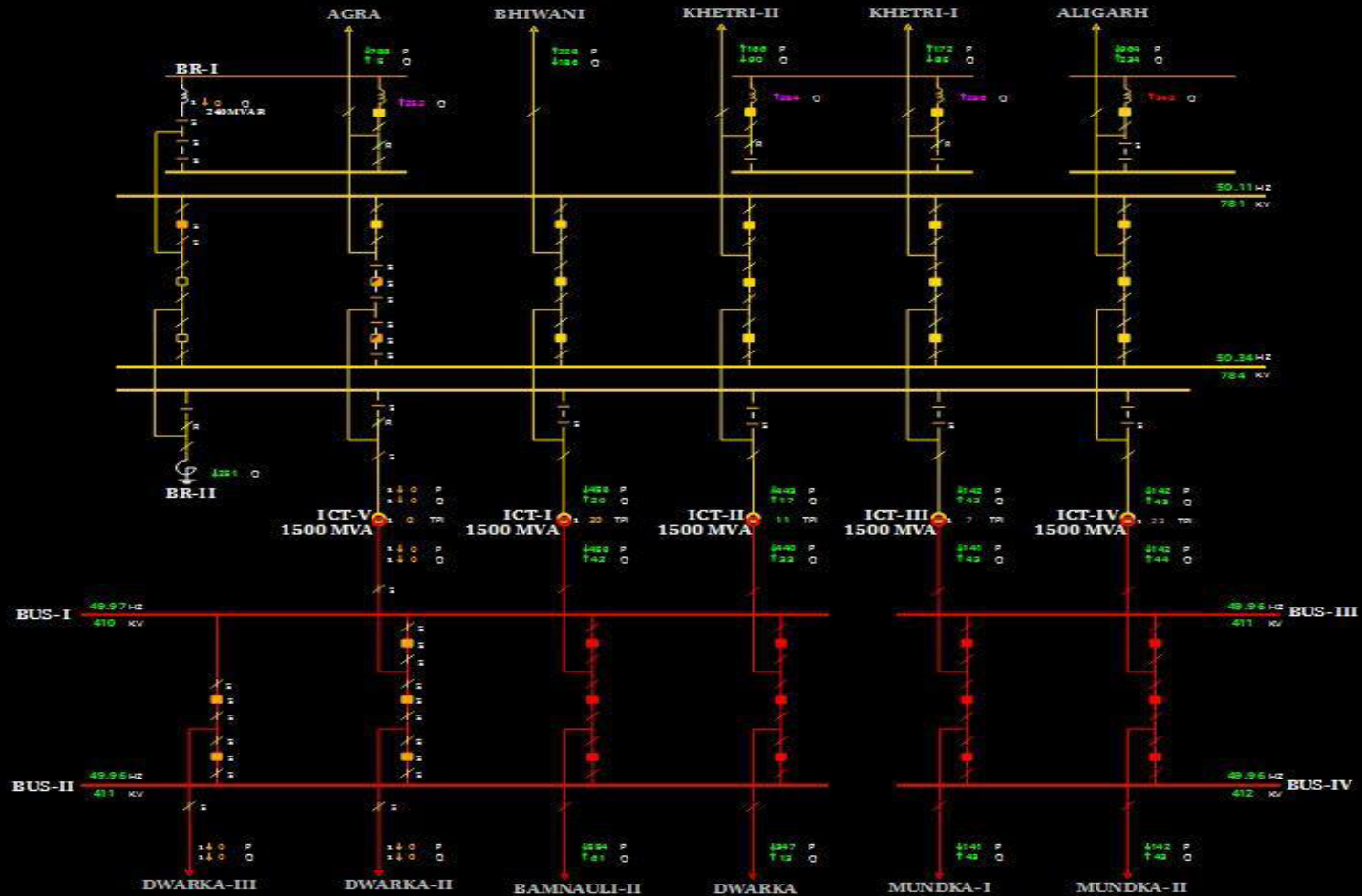
CONTACT DETAILS	
EMAIL	jk.r@powergrid.co.in
MOBILE	8750913000
HOTLINE	20112360 / 20112174

P sum(76 500) - -350  
P sum(400kV) - -4

Stat Expl GenSum Company

Q sum(76 500) - 142  
Q sum(400 kV) - 2

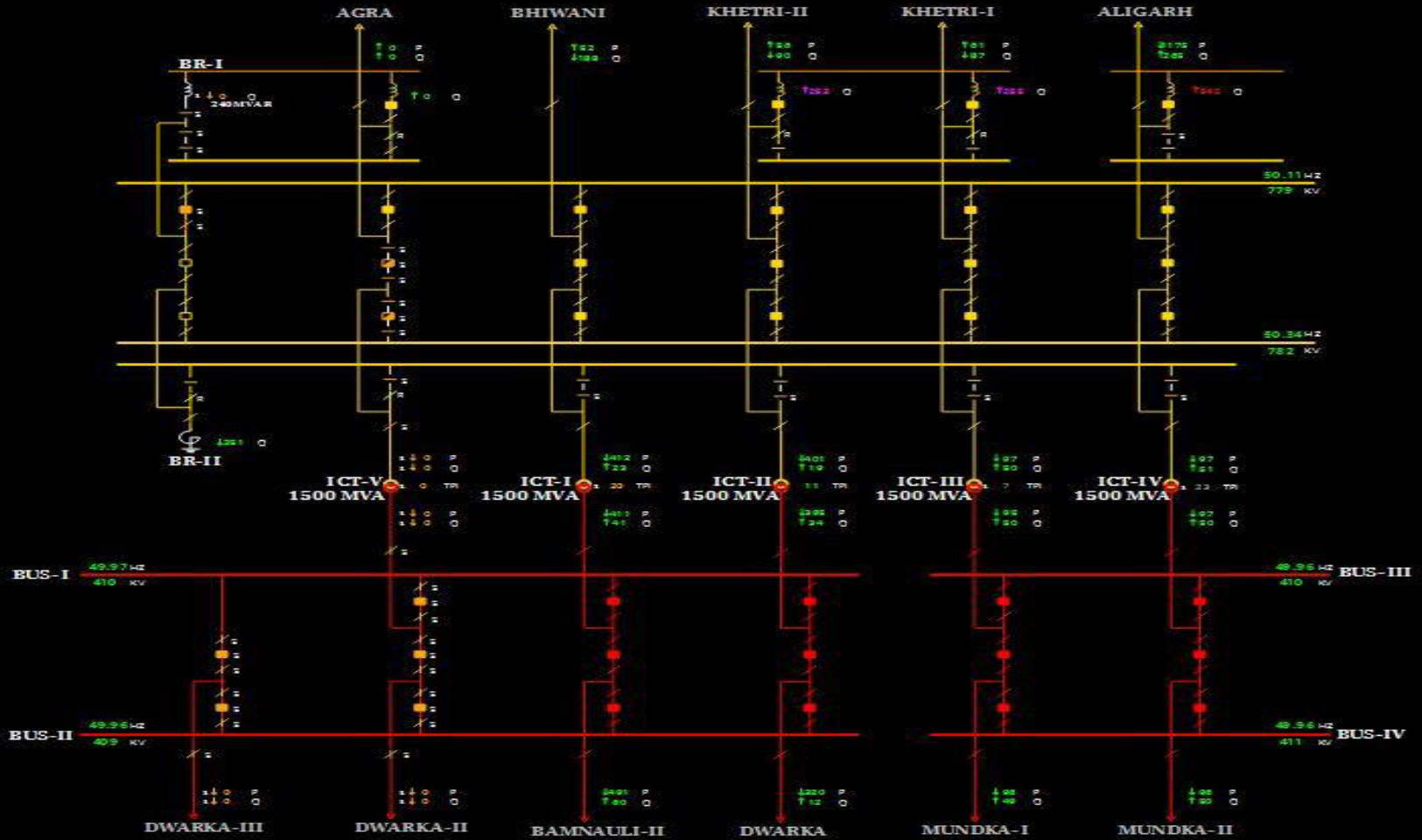
30 4 .26 6 :25:59



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

CONTACT DETAILS	
EMAIL	jtkr@powergrid.co.in
MOBILE	8750913000
HOTLINE	20112360 / 20112174

**JHATIKARA**  
 Stat Expl | GenSum | Company  
 30 4 .26 6 :29 :59



# SLD of 765/400kV Fatehpur(PG) before the event

CONTACT DETAILS	
EMAIL	fatehpur765k.v@po.wa.rgrid.co.in
MOBILE	948596334
HOTLINE	20112306 / 20112189

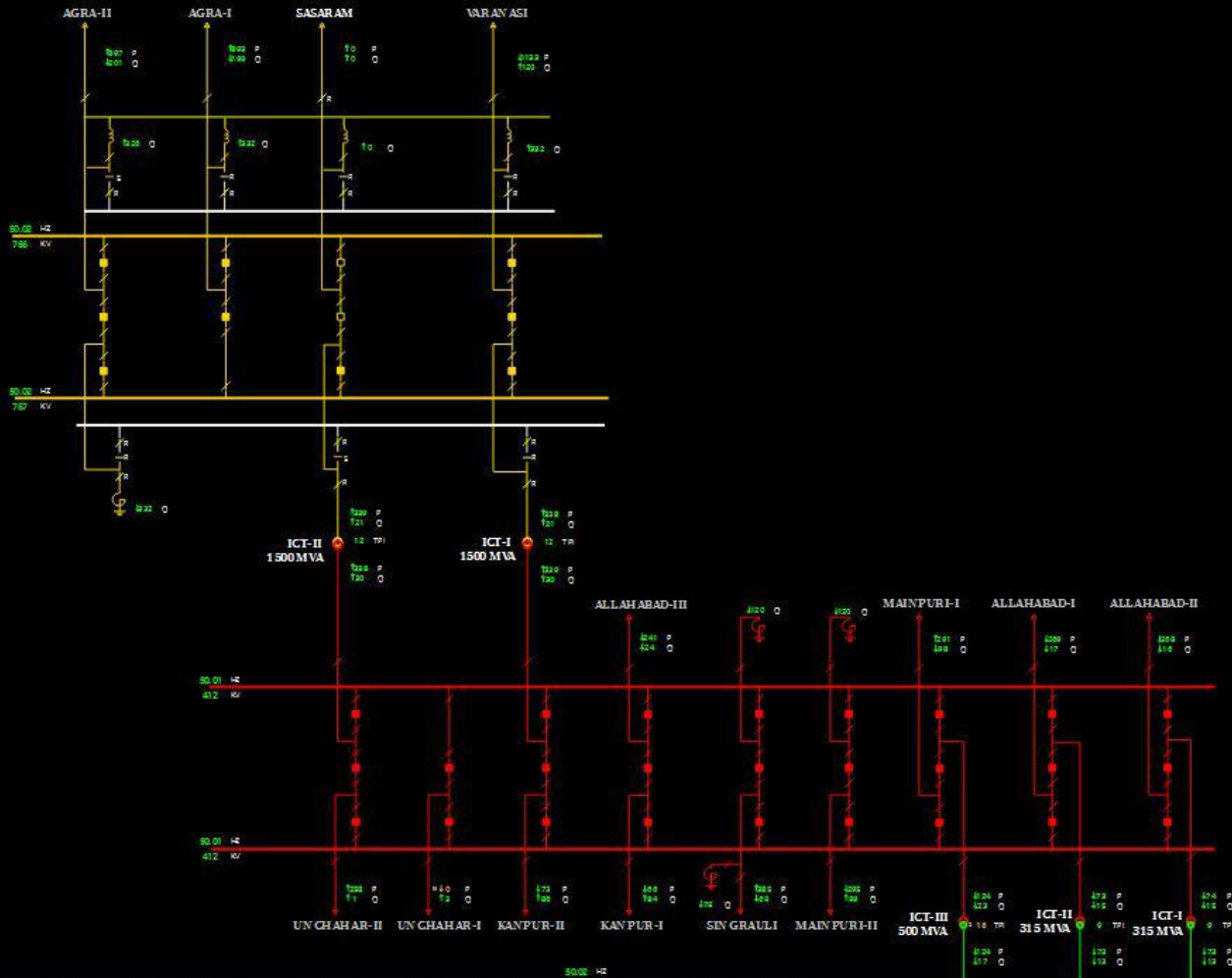
F sum(0+g107) - 1200  
 F sum(0+g100) - 1 - 12.17  
 F sum(0+g101) - 456

## FATEHPUR

Stat Expl GenSum Company

30.4.26 6:25:59

Q sum(0+g107) - 113  
 Q sum(0+g100) - 74  
 Q sum(0+g101) - 1 - 204



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

CONTACT DETAILS	
EMAIL	fatehpur765k-v@powergrid.co.in
MOBILE	9415306334
HOTLINE	20112305 / 20112189

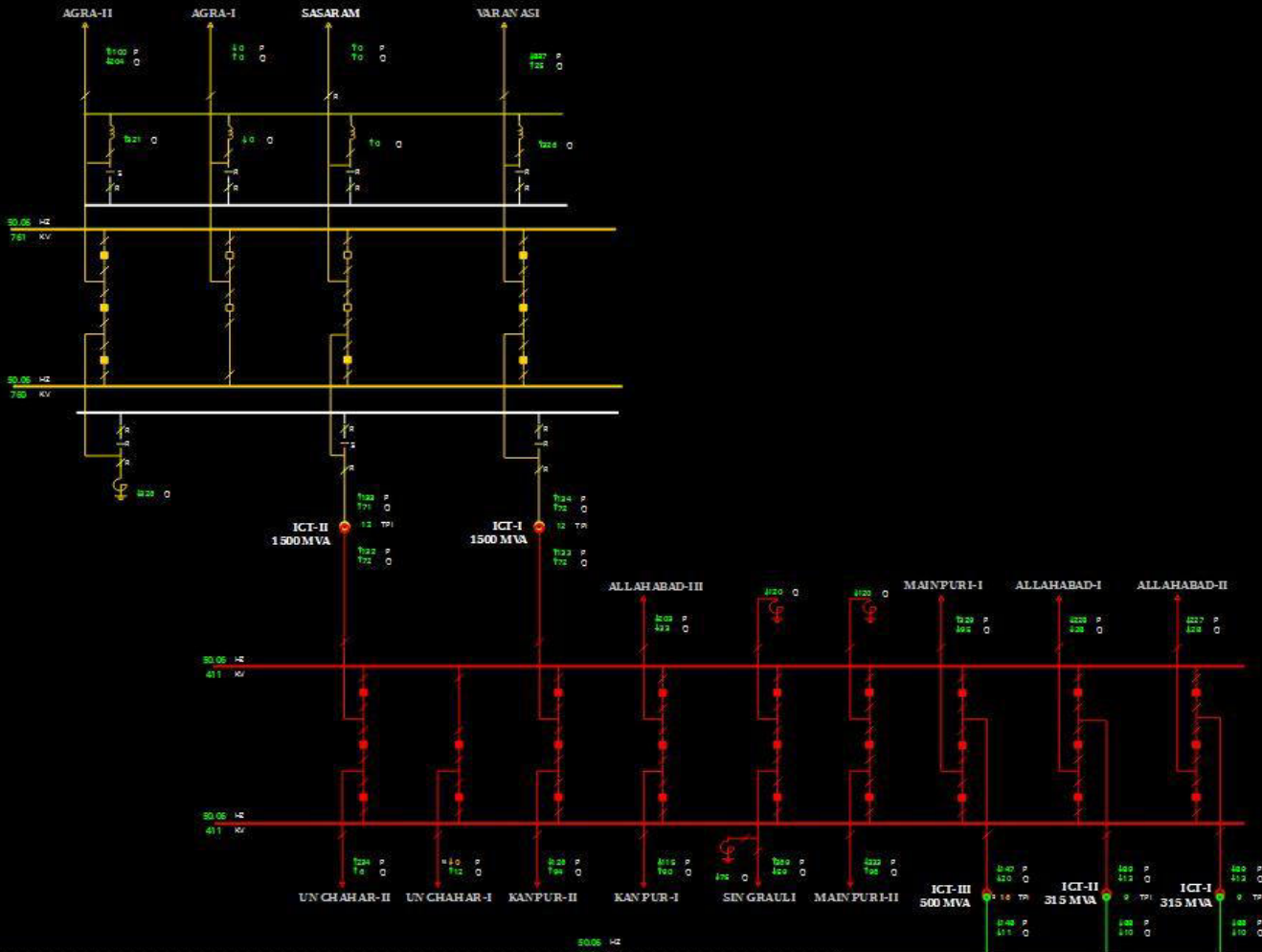
F sum(765kV) = 539  
 F sum(400kV) = 10010  
 F sum(220kV) = 497

**FATEHPUR**

StatExp | GenSum | Company

30.4.26 6:29:59

Q sum(765kV) = 291  
 Q sum(400kV) = 58  
 Q sum(220kV) = -348



Thu April 30 2026 06:30:00

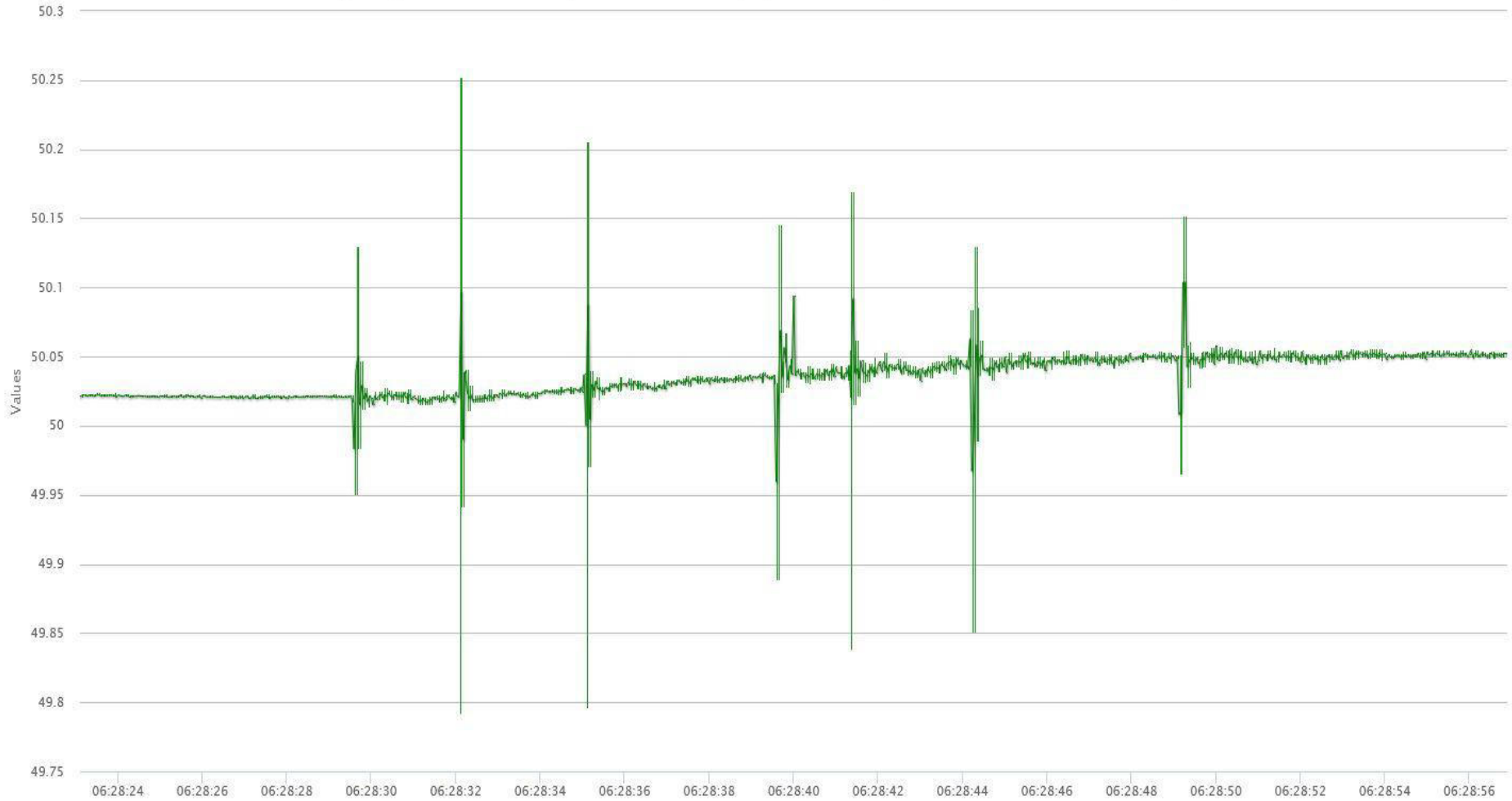
# PMU Plot of frequency at Aligarh(PG)

06:28hrs/30-Apr-26

30/04/2026 06:28:23.120 To 30/04/2026 06:28:56.880

HZ

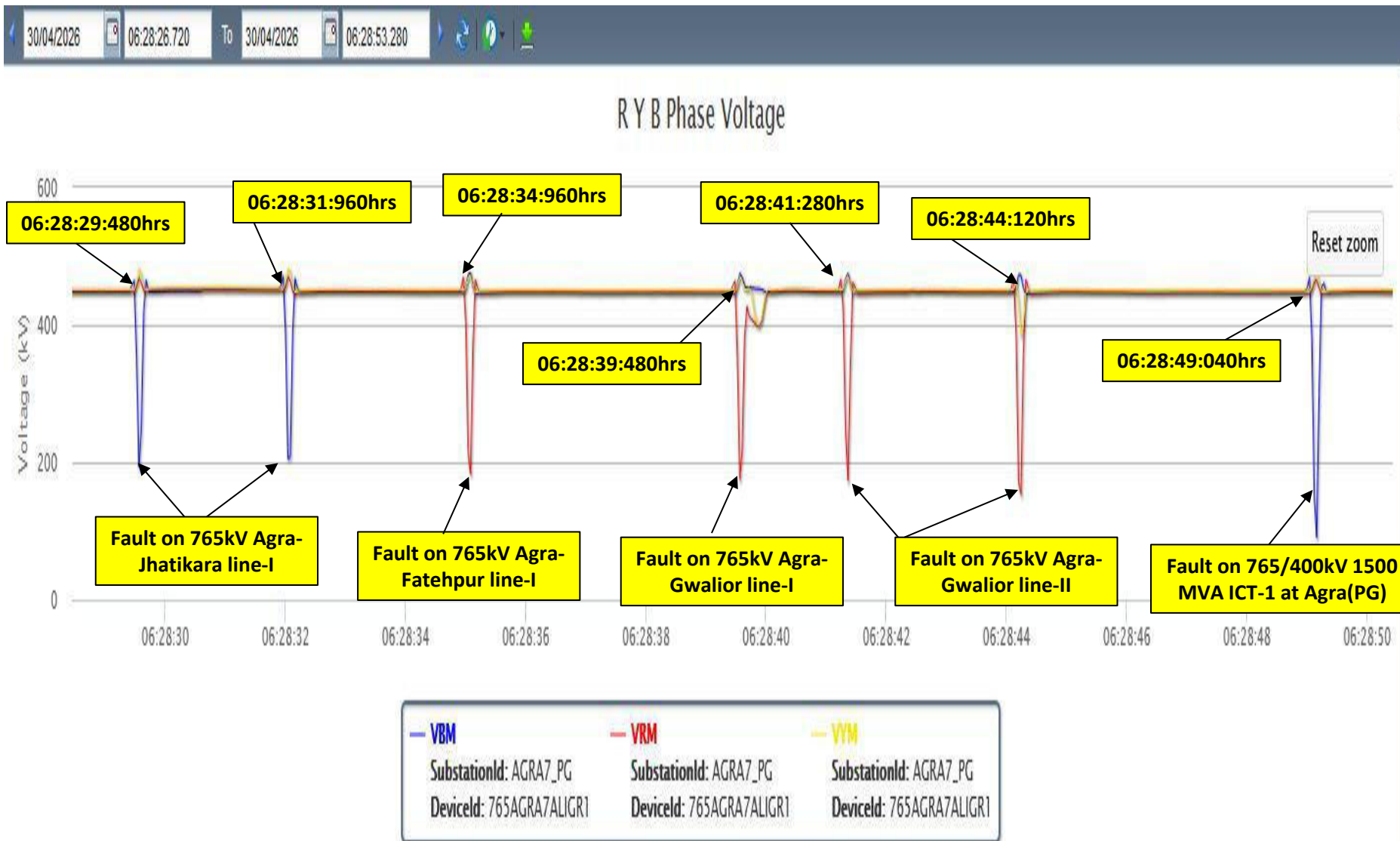
DeviceType == L, SubstationId == ALIGR\_PG, DeviceId == 400ALIGRKHRJA1, PointName == HZ, MeasurementId == ALIGR\_PG.L.400ALIGRKHRJA1.HZ



— HZ  
MeasurementId: ALIGR\_PG.L.400ALIGRKHRJA1.HZ

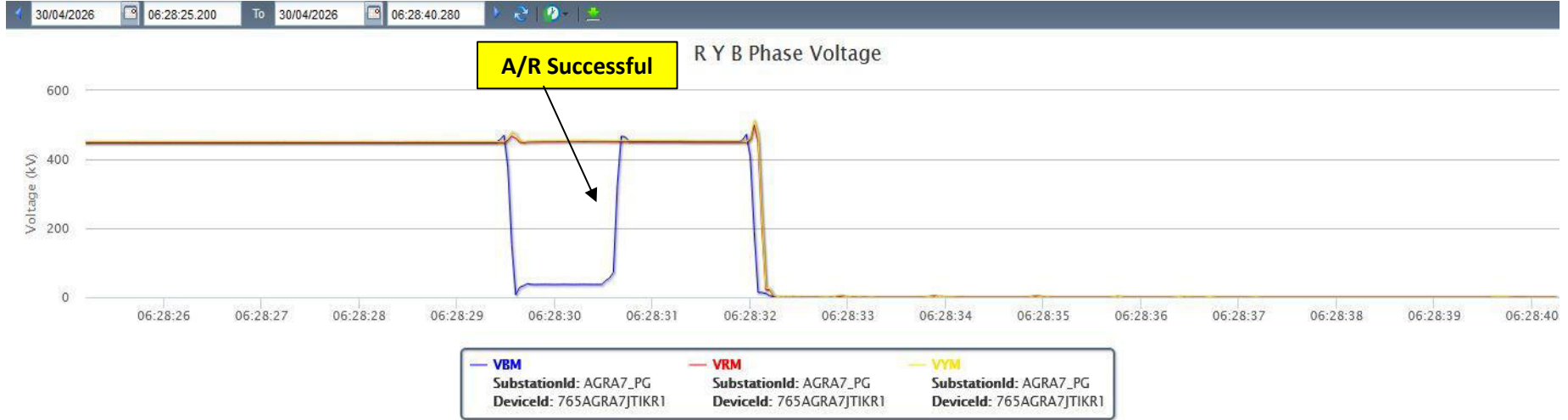
# PMU Plot of Phase Voltage Magnitude of 765kV Agra-Aligarh(PG)

## line-I at Agra(PG) 06:28hrs/30-Apr-26

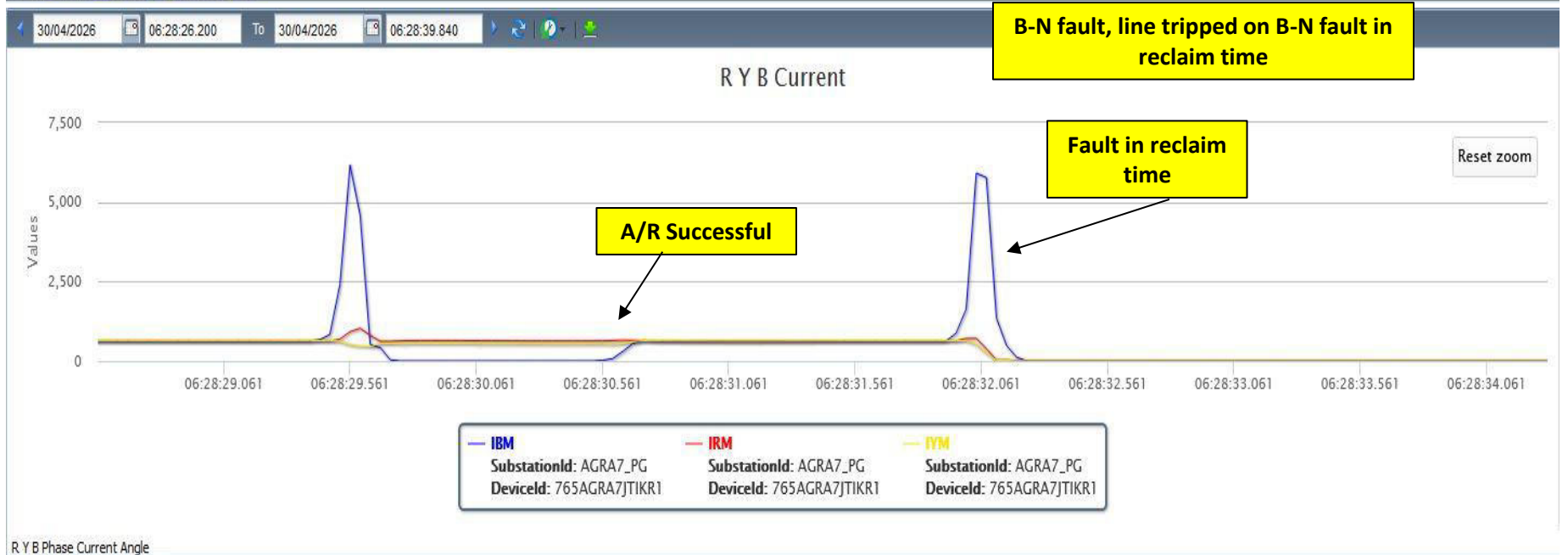


# PMU Plot of Phase current Magnitude of 765kV Agra-Jhatikara line-I at

## Agra(PG) 06:28:32hrs/30-Apr-26

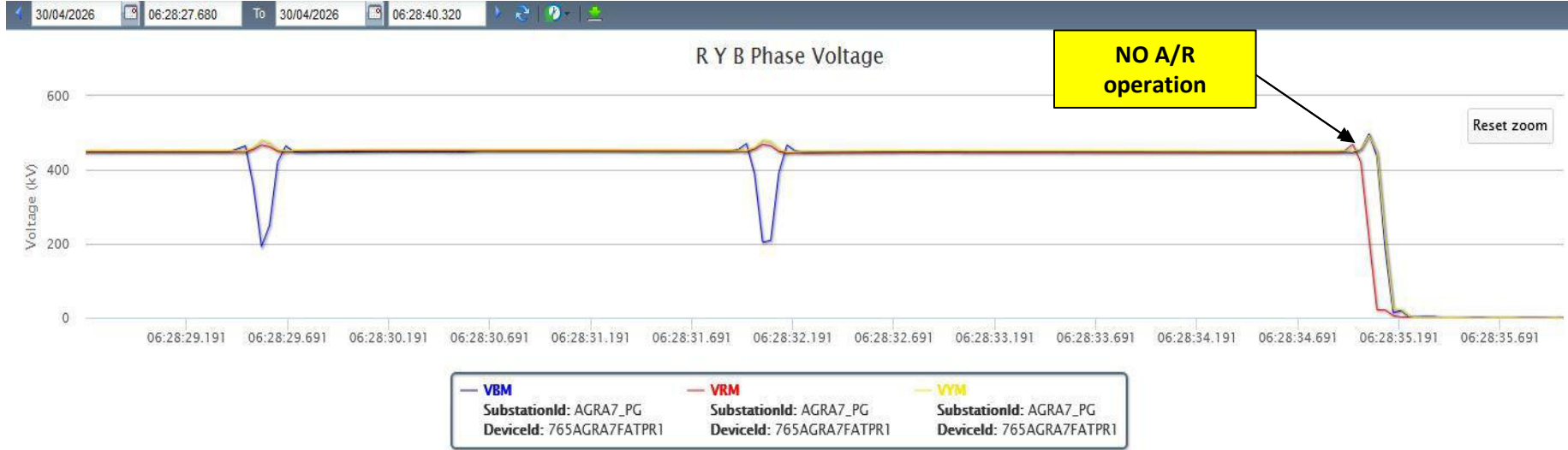


### R Y B Phase Voltages Angles

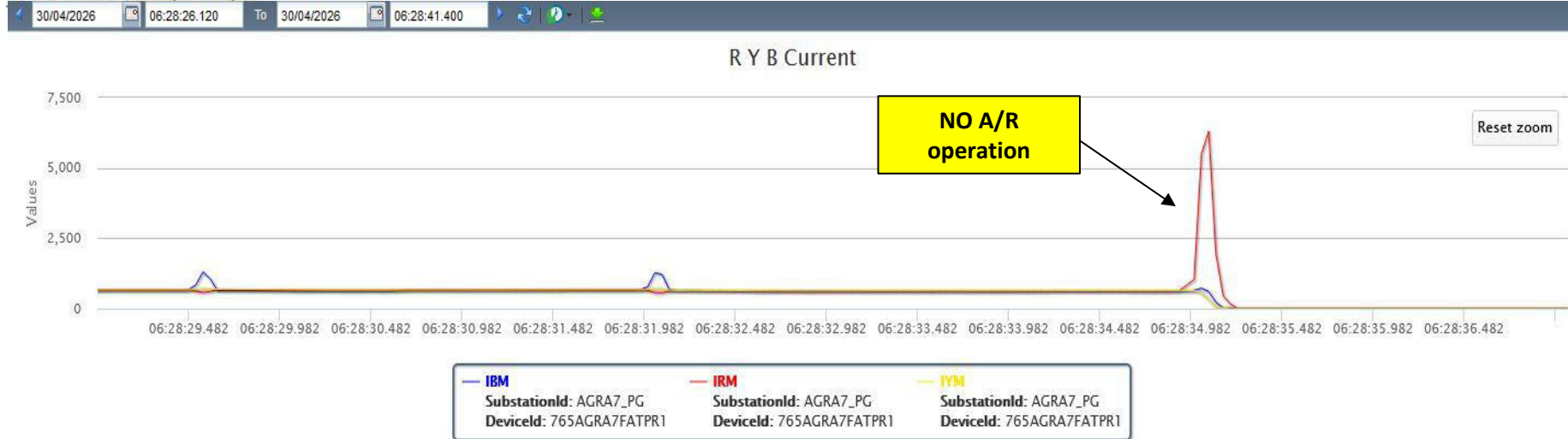


R, Y B Phase Current Angle

# PMU Plot of Phase voltage & current Magnitude of 765kV Agra-Fatehpur line-I at Agra(PG) 06:28:35hrs/30-Apr-26

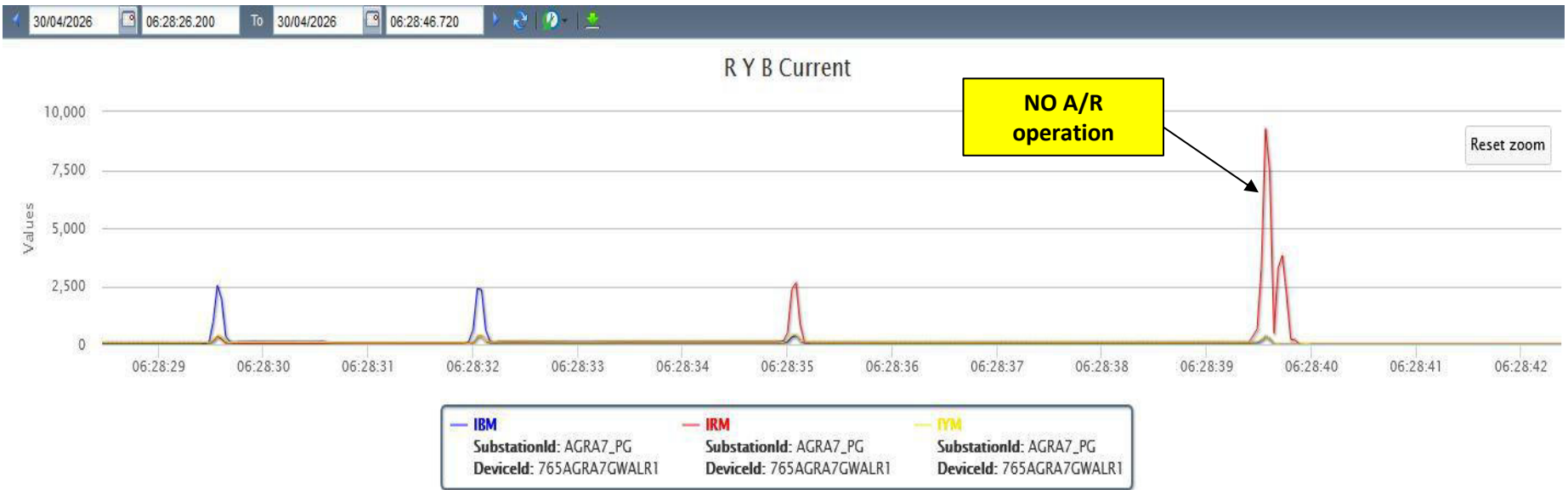
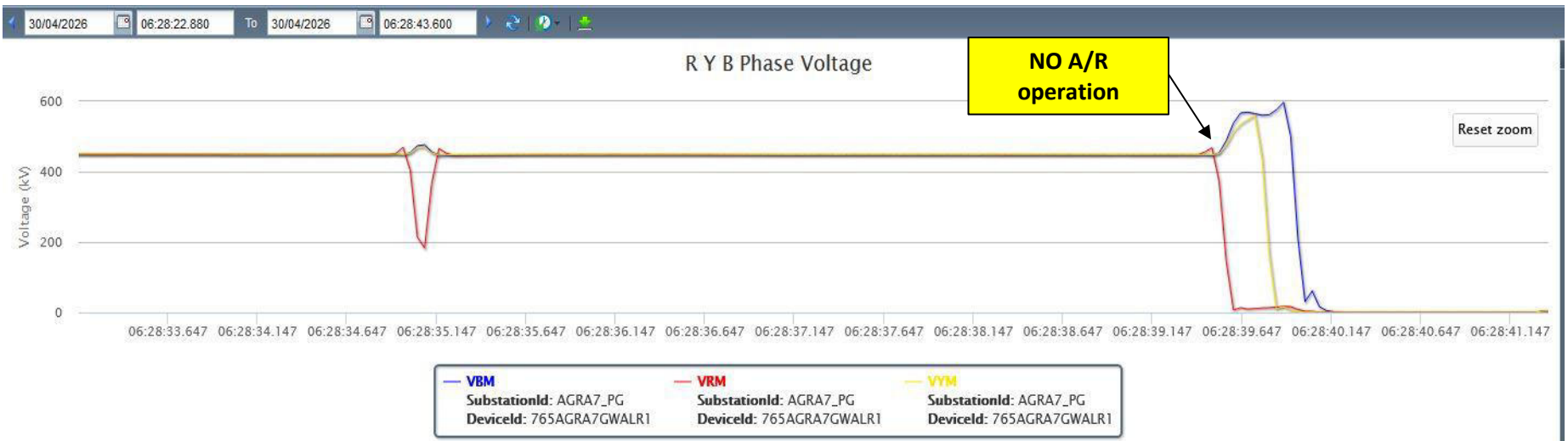


### R Y B Phase Voltages Angles



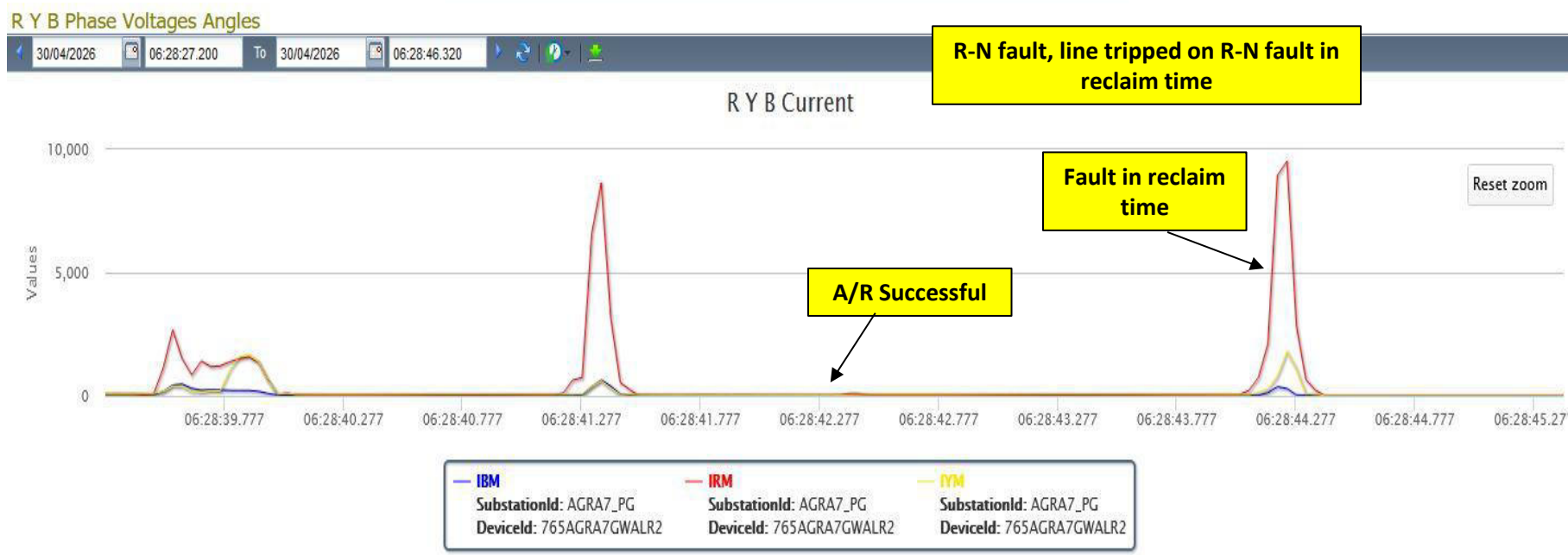
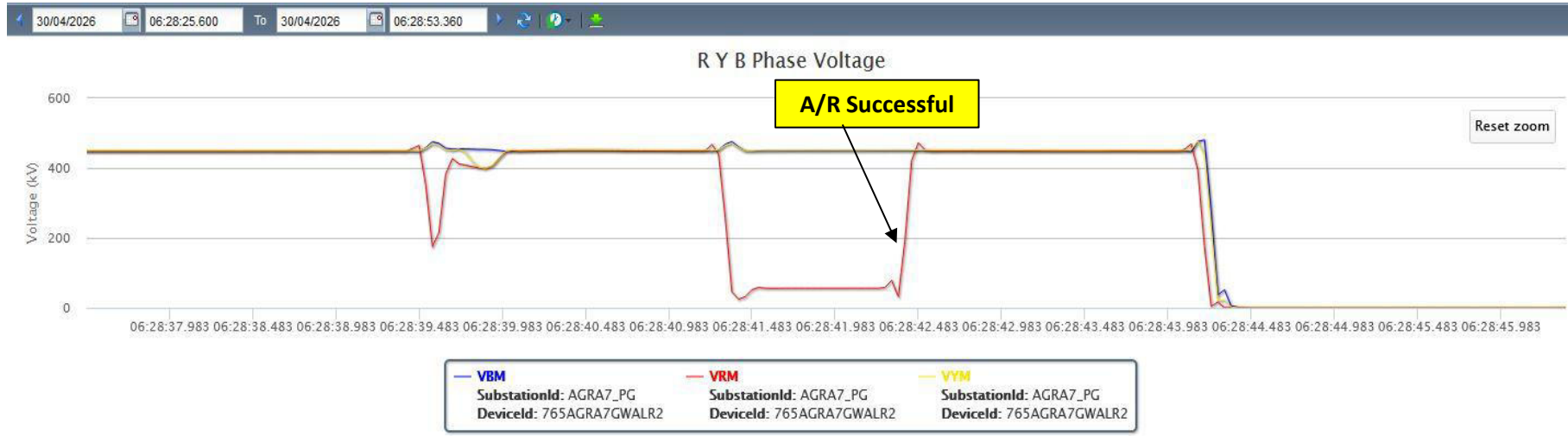
# PMU Plot of Phase voltage & current Magnitude of 765kV Agra-Gwalior

## line-I at Agra(PG) 06:28:40hrs/30-Apr-26



R Y B Phase Current Angle

# PMU Plot of Phase voltage & current Magnitude of 765kV Agra-Gwalior line-II at Agra(PG) 06:28:44hrs/30-Apr-26



# SCADA SOE

Time	Station Name	Voltage	Element Name	Element Type	Element Status	Remarks
06:28:29,601	AGRA	765kV	16JTIKR1	Circuit Breaker	disturbe	
06:28:29,650	AGRA	765kV	18R2	Circuit Breaker	Open	Main CB of 240 MVAR Bus Reactor No 2 at 765KV Agra(PG) opened
06:28:29,652	AGRA	765kV	17JT1R2	Circuit Breaker	Open	Tie CB at Agra(PG) end of 765 KV AGRA - JHATIKARA (PG) CKT-1 opened
06:28:30,642	AGRA	765kV	16JTIKR1	Circuit Breaker	Close	Main CB at Agra(PG) end of 765 KV AGRA - JHATIKARA (PG) CKT-1 closed
06:28:32,127	AGRA	765kV	16JTIKR1	Circuit Breaker	Open	Main CB at Agra(PG) end of 765 KV AGRA - JHATIKARA (PG) CKT-1 opened
06:28:35,106	AGRA	765kV	7FATPR1	Circuit Breaker	Open	Main CB at Agra(PG) end of 765 KV AGRA - FATEHPUR (PG) CKT-1 opened
06:28:35,108	AGRA	765kV	8FAT1TIE	Circuit Breaker	Open	Tie CB at Agra(PG) end of 765 KV AGRA - FATEHPUR (PG) CKT-1 opened
06:28:35,317	FATEHPUR	765kV	8AGR1TIE	Circuit Breaker	Open	Tie CB at Fatehpur(PG) end of 765 KV AGRA - FATEHPUR (PG) CKT-1 opened
06:28:37,106	FATEHPUR	765kV	7AGRA_1	Circuit Breaker	Open	Main CB at Fatehpur(PG) end of 765 KV AGRA - FATEHPUR (PG) CKT-1 opened
06:28:39,604	AGRA	765kV	13GWLIR1	Circuit Breaker	Open	Main CB at Agra(PG) end of 765 KV AGRA - GWALIOR (PG) CKT-1 opened
06:28:39,604	AGRA	765kV	14GW1R1	Circuit Breaker	Open	Tie CB at Agra(PG) end of 765 KV AGRA - GWALIOR (PG) CKT-1 opened
06:28:39,613	AGRA	765kV	15R1	Circuit Breaker	Open	Main CB of 240 MVAR Bus Reactor No 1 at 765KV Agra(PG) opened
06:28:41,380	AGRA	765kV	2T1GW2	Circuit Breaker	disturbe	A/R operation of 765KV AGRA - GWALIOR (PG) CKT-2
06:28:41,381	AGRA	765kV	1GWLIR2	Circuit Breaker	disturbe	
06:28:42,420	AGRA	765kV	1GWLIR2	Circuit Breaker	Close	
06:28:43,446	AGRA	765kV	2T1GW2	Circuit Breaker	Close	
06:28:44,249	AGRA	765kV	2T1GW2	Circuit Breaker	Open	Tie CB at Agra(PG) end of 765 KV AGRA - GWALIOR (PG) CKT-2 opened
06:28:44,250	AGRA	765kV	1GWLIR2	Circuit Breaker	Open	Main CB at Agra(PG) end of 765 KV AGRA - GWALIOR (PG) CKT-2 opened
06:28:49,193	AGRA	400kV	31T1R2	Circuit Breaker	Open	Tie CB at 400kV side of 765/400kV 1500 MVA ICT-1 at Agra(PG) openend
06:28:49,206	AGRA	400kV	30T1	Circuit Breaker	Open	Main CB at 400kV side of 765/400kV 1500 MVA ICT-1 at Agra(PG) openend
06:28:49,221	AGRA	765kV	3T1	Circuit Breaker	Open	Main CB at 765kV side of 765/400kV 1500 MVA ICT-1 at Agra(PG) openend

## Grid Event summary for April 2026

S.No.	Category of Grid Incident/ Disturbance	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration (h:mm)	Event (As reported)	Energy Unreserved due to Generation loss (MU)	Energy Unreserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance		Antecedent Generation/Load in the Regional Grid		Fault Clearance time (in ms)	
					Date	Time	Date	Time					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
																				(GI-1 to GI-V)
1	GI-2	1) 765 KV Anta-Phagi (RS) Ckt-1 2) 765/400 kv 1500 MVA ICT 1 at Anta(RS) 3) 765/400 kv 1500 MVA ICT 2 at Anta(RS) 4) 765/400 kv 1500 MVA ICT 3 at Anta(RS)	Rajasthan	RVPNL	4-Apr-26	16:34	4-Apr-26	18:09	01:35	i)765/400KV Anta(RS) has one and half breaker scheme at both 765KV level and 400KV level. ii)During antecedent condition, 765 KV Anta-Phagi (RS) Ckt-1 was carrying 1039 MW from Anta to Phagi and total generation of Chhabra SCTPS was 1030 MW. iii)As reported, at 16:34 hrs, 765 KV Anta-Phagi (RS) Ckt-1 tripped only from Anta end on B-N phase to earth fault with fault current of 9.846 kA from Anta and 4.316 kA from Phagi (as per DR) due to bad weather. As per DR, fault sensed in zone-2 and carrier received at Phagi end; A/R successfully operated at Phagi end, however no A/R operation observed at Anta end and line tripped from Anta end on zone-1 distance protection operation. iv)During the same time, 765/400 KV 1500 MVA ICT 1, 2 and 3 at Anta(RS) also tripped on differential protection operation on consecutive B-N phase to earth faults followed by Y-N phase to earth fault respectively (exact reason of fault yet to be shared). v)Due to tripping of all 3 ICTs at 765/400 kv Anta (RS), "SPS related to Safe evacuation of generation of Chhabra/ Chhabra Super Critical/ Kawai/ Kalsindh Complex" operated (case-1 of Chhabra, Kawai and Kalsindh TPS Complex) leading to tripping of 660 MW Chhabra SCTPS unit-2. vi)As per PMU at Bhiwani(PG), B-N phase to earth fault followed by B-N phase to earth fault with unsuccessful A/R again followed by Y-N phase to earth fault was observed with fault clearing time of 80 ms each. vii)As per SCADA, generation loss of approx. 540 MW was observed at Chhabra SCTPS.	0	0	540	0	1.036	0.000	52132	47355	80	
2	GD-1	1) 220 KV Charor (HP)-Parbati Pooling Banala(PG) (HPPTCL) Ckt-1 2) 220 KV Charor (HP)-Parbati Pooling Banala(PG) (HPPTCL) Ckt-2	Himachal Pradesh	HPPTCL, PGCIL	4-Apr-26	13:44	4-Apr-26	22:48	09:04	i)220/132/33kV Charor(HP) has double main bus scheme at 220kV level, 132kV level and 33kV level. 400/220kV Banala(HP) has Double main bus scheme at both 400kV level and 220kV level. ii)During antecedent condition, 220 KV Charor(HP)-Parbati Pooling Banala(PG) (HPPTCL) Ckt-1 & 2 were carrying 10 MW each from Charor to Banala. iii)As reported, at 13:44 hrs, 220 KV Charor(HP)-Parbati Pooling Banala(PG) (HPPTCL) Ckt-1 tripped on R-Y-N double phase to earth fault with fault distance of 1.6 km from Charor end. iv)During the same time, 220 KV Charor(HP)-Parbati Pooling Banala(PG) (HPPTCL) Ckt-2 also tripped on R-Y-N double phase to earth fault with fault distance of 4.2 km from Charor end. v)As per SCADA SOE, 220/33 kv ICT-1 at Charor (HP) also tripped during the same time (exact reason and nature of protection operation yet to be shared). vi)As per PMU at Nallagarh(PG), R-Y-N phase to phase to earth fault was followed by fault clearing time of 80 msec. vii)As per SCADA, generation loss of approx. 22 MW was observed at Himachal Pradesh control area.	0	0	22	0	0.041	0.000	53938	42387	80	
3	GI-2	1) 400/220 kv 315 MVA ICT 1 at Daulatabad (HV) 400/220 kv 315 MVA ICT 2 at Daulatabad (HV) 400/220 kv 315 MVA ICT 3 at Daulatabad (HV) 400/220 kv 315 MVA ICT 4 at Daulatabad (HV)	2) 3) 4)	Haryana	HVPNL	4-Apr-26	01:31	4-Apr-26	04:03	02:32	i)400/220kV Daulatabad(HV) has double main bus scheme at 220kV level and one and half breaker scheme at 400kV level. ii)During antecedent condition, 400/220 kv 315 MVA ICTs 1, 2, 3 and 4 at Daulatabad (HV) were carrying 100 MW, 86 MW, 101 MW and 86 MW respectively from 400kV side to 220kV side (as per SCADA). iii)As reported, at 01:31 hrs, 220kV side B-phase CT of 400/220 kv 315 MVA ICT 1 at Daulatabad(HV) got damaged. iv)During the same time, all four 400/220 kv 315 MVA ICTs at Daulatabad(HV) tripped on over current earth fault relay operation (exact reason of tripping yet to be shared). v)As per PMU at Gurgaon(PG), B-N fault followed by B-N fault converted to Y-B-N fault again followed by R-Y-B fault converted to R-Y-B fault were observed with fault clearing time of 80 ms, 640 ms (delayed) and 800 ms (delayed) respectively. vi)As per SCADA, Change in Demand of approx. 423 MW at Haryana Control area.	0	1.072	0	423	0.000	0.931	39918	45458	800
4	GI-2	1) 800 KV HVDC Kurukshetra(PG) Pole-2 2) 800 KV HVDC Kurukshetra(PG) Pole-4	Haryana	PGCIL	4-Apr-26	19:21	4-Apr-26	23:31	04:10	i)During antecedent condition, 800kV HVDC Champa-Kurukshetra was carrying total 2000 MW power from Champa to Kurukshetra (500 MW on each Pole as per SCADA). ii)As reported, at 19:20:50.946 hrs, a DC line fault was detected at 363.35 km from Kurukshetra (Tower No. 2483, 2482 & 2481). Control started a restart attempt to mitigate the fault, and the fault was successfully cleared. iii)Subsequently, at 19:20:57.363 hrs, the DC line fault reoccurred. The restart sequence was again started and the fault was cleared. iv)However, at 19:21:08.788 hrs, the DC line fault occurred for the third time. Control once again attempted the restart sequence, but due to the persistent nature of the fault and exhaustion of all restart attempts, 800 KV HVDC Kurukshetra(PG) Pole-2 & 4 were eventually blocked. During line patrolling, no abnormality was seen on the line. v)As per PMU at Kurukshetra (PG), two consecutive R-Y-B-N three phase to earth faults were observed with fault clearing time of 120 msec. vi)As per SCADA, no change in demand in Haryana control area and no change in power order was observed. The power order of Pole-1 & 3 ramped up to compensate the Power of Pole 2 & 4.	0	0	0	0	0.000	0.000	49166	56823	120	
5	GD-1	1) 400 KV Dadri(NT)-Loni Harsh Vihar(DV) (NT) Ckt-1 2)400 KV Dadri(NT)-Loni Harsh Vihar(DV) (NT) Ckt-2	Delhi	DTL, NTPC	9-Apr-26	14:30	10-Apr-26	13:40	23:10	i)400/220/66kV Harsh Vihar(DV) has double main Bus scheme at both 400kV and 220kV side. ii)During antecedent condition, 400 KV Dadri(NT)-Loni Harsh Vihar(DV) (NT) Ckt-1 & 2 were connected to 400kV Harsh Vihar and the supply was further extended to 220kV Preet Vihar, Patparganj, I.P. Stn, Rajghat, Pragati and GTPS. iii)As reported, at 14:30hrs, 400 KV Dadri(NT)-Loni Harsh Vihar(DV) (end) (NT) Ckt-1 tripped on B-N phase to earth fault with fault current of ~5.623 kA (as per DR) from Loni Harsh Vihar end. As per DR, fault sensed in zone-1 at Loni Harsh Vihar end, A/R operated but was unsuccessful as fault was of permanent nature. iv)During the same time, 400 KV Dadri(NT)-Loni Harsh Vihar(DV) (end) (NT) Ckt-2 also tripped sensing this fault (as per DR, fault current sensed ~4.773kA from Loni Harsh Vihar end) from Dadri(NT) end only, no tripping occurred at Harsh Vihar(DV) end (exact nature of protection operation yet to be shared). v)Due to tripping of both 400 KV Dadri(NT)-Loni Harsh Vihar(DV) (NT) Ckt-1 & 2, supply failed at 220kV level and complete blackout occurred at 400/220/66kV Harsh Vihar(DV) S/s. vi)As per PMU at Dadri(NT), B-N phase to earth fault with unsuccessful A/R was observed with fault clearing time of 80 ms. vii)As per SCADA, change in demand of ~330 MW in Delhi control area is observed. However, as reported by SLDC Delhi load loss of ~216 MW occurred in Delhi control area. Load of 220kV Harsh Vihar, Preet Vihar, I.P. Stn, Rajghat and GTPS were affected and load was normalised by 14:54 hrs.	0	0.086	0	216	0.000	0.557	52436	38802	80	
6	GD-1	1) 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt 2) 220 KV Tanakpur(NH)-Sitarganj(PG) (PG) Ckt-1 3) 132 KV Mahendra Nagar(NP)-Tanakpur(NH) (PG) Ckt 31.4 MW Tanakpur(NH) Unit-1 5) 31.4 MW Tanakpur(NH) Unit-3	4)	Uttarakhand	NHPC, UPPTCL, PGCIL	9-Apr-26	02:13	9-Apr-26	03:23	01:10	i)During antecedent condition, 31.4 MW Tanakpur(NH) Unit-1 & 3 were only in running condition and generating approx. 13 MW and 10 MW respectively. ii)As reported, at 02:13hrs, 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt tripped on R-N phase to earth fault (exact reason, nature and location of fault yet to be shared). iii)During the same time, busbar differential (zone-A) protection operated due to improper feedback status of the Bus isolator for 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt and tripped all elements connected to 220kV Bus-1 at Tanakpur(NH). iv)Due to the non-availability of power evacuation path, 31.4 MW Tanakpur(NH) Unit-3 connected to Bus-2 also tripped because of sudden load throw-off and complete blackout occurred at 220/132kV Tanakpur HEP(NH) S/s. v)As per DR, Busbar differential current of ~122 A was present before the event (persisting Id alarm) which matched the load current of 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt. vi)After investigation, it was found that "Switch Alarm" and "ZA ID Alarm" signals were active prior to the incident and feedback status of the Bus isolator for 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt was improper. vii)As a result, when R-N phase to earth fault occurred on 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt, R-phase current increased to 816 A, which was reflected as differential current in the R-phase of ZA busbar relay as per existing relay configuration. viii)This exceeded the permissible pickup threshold of the busbar protection relay (set at 360 A) and busbar protection operated at 220kV Bus-1 at Tanakpur(NH). ix)As per PMU at CB Ganj(UP), R-N phase to earth fault with unsuccessful A/R was observed with fault clearing time of 80 ms. x)As per SCADA, generation loss of approx. 23 MW was observed at Tanakpur HEP(NH). xi)As remedial action taken, the feedback status of bus isolators of 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt has been rectified.	0	0	23	0	0.064	0.000	35820	39271	80
7	GI-2	1) 400/220 kv 315 MVA ICT 2 at Loni Harsh Vihar(DV) 400/220 kv 315 MVA ICT 3 at Loni Harsh Vihar(DV)	2)	Delhi	DTL	13-Apr-26	15:14	13-Apr-26	16:22	01:08	i)400/220/66kV Harsh Vihar(DV) has double main Bus scheme at both 400kV and 220kV side. ii)During antecedent condition, 400/220 kv 315 MVA ICT 2 & 3 at Loni Harsh Vihar(DV) were in service and carrying approx. 175 MW each (as per SCADA) feeding the load of 220kV Harsh Vihar, Preet Vihar, I.P. Stn, Rajghat and GTPS. iii)As reported, as per the instructions received vide MoM dated 24.02.2026 of 11th Delhi OCC Meeting, the work of installation of System Protection Scheme (SPS) is under progress for past 20 days at 400/220/66kV Harsh Vihar(DV) S/s. iv)As per DR, at 15:14 hrs, 400/220 kv 315 MVA ICT 2 & 3 at Loni Harsh Vihar(DV) tripped on Directional O/C protection operation; however no increase in phase currents was observed (suspected maloperation). v)As per PMU at Dadri(NT), no fault was observed in the system; however voltage dip was observed in all 3 phases. vi)As per SCADA, change in demand of ~79 MW in Delhi control area is observed. However, as reported by SLDC Delhi load loss of ~143 MW occurred in Delhi control area. As reported, at 15:21hrs, 220kV Bus Coupler was made ON at 220kV Pragati Stn and total load was normalised.	0	0.017	0	143	0.000	0.350	53155	40821	NA
8	GD-1	1) 220kV Kashipur-Jafarpur Ckt 2) 220kV Kashipur-Pantnagar Ckt 3) 220 KV Pantnagar(UK)-Bareilly(UP) (UP) Ckt-1 4) 400/220kV 315 MVA ICT-1 at Kashipur(UK) 5) 400/220kV 315 MVA ICT-2 at Kashipur(UK) 6) 132kV Kashipur-Jaspur Ckt 7) 132kV Rudrapur-Kichha Ckt	Uttarakhand	PTCL, UPPTCL	13-Apr-26	12:49	13-Apr-26	13:35	00:46	i)400/220kV Kashipur(UK) has one and half bus scheme at 400kV level and double main transfer bus scheme at 220kV level. There are 2*315 MVA ICTs at Kashipur and SPS has also been in service at Kashipur in view of N-1 non-complaint ICTs. ii)During antecedent condition, 400/220kV 2*315 MVA ICTs at Kashipur were in service and carrying approx. 129 MW each (as per SCADA). iii)As reported, at 12:49 hrs, Y-B phase to phase fault occurred on 220kV Kashipur-Jafarpur Ckt. Fault occurred due to conductor snapping at Tower No. 12 (~6 km from Kashipur and ~49.24 km from Jafarpur end). fault was detected in zone-1 by the distance relays at both ends. At the Jafarpur end, the breaker tripped successfully. However, at the Kashipur end, although the Main-2 distance relay detected the fault and issued a trip command, the breaker failed to operate, resulting in non-clearance of the fault from Kashipur end. Main-1 relay was already out of service prior to the incident. iv)Further, as fault was still persisting, after approximately 640 ms (as per PMU), the fault converted to 3-phase fault due to involvement of the remaining phase (R-ph) at Tower No. 17 and Tower No. 18 (as reported). v)The fault continued till another 1280 ms (as per PMU) and 220kV Kashipur-Pantnagar Ckt and 220 KV Pantnagar(UK)-Bareilly(UP) (UP) Ckt tripped from Pantnagar and Bareilly end respectively in zone-3 and 400/220kV 315 MVA ICT-1 & 2 at Kashipur(UK) tripped on overcurrent protection operation. vi)At the same time, case-2 of SPS for ICTs at Kashipur also operated. This further led to tripping of 220kV Kashipur-Jafarpur Ckt CB at Kashipur end and 132kV Kashipur-Jaspur Ckt & 132kV Rudrapur-Kichha Ckt. vii)The disturbance resulted in interruption of supply to multiple substations including 220kV Pantnagar(UK), 220kV Mahaukherganj(UK), 220kV Jafarpur(UK), 220kV Haldwani(UK), 220 KV Kamalaganja, 132 KV Rudrapur, 132 KV Bhowali, 132 KV Kathgodam, 132 KV Kashipur and 132 KV Bazpur S/s. viii)As per PMU at Bareilly(PG), Y-B phase to phase fault converted to 3-phase fault was observed with delayed fault clearing time of ~1920 ms. ix)As per SCADA, change in demand of approx. 380 MW was observed in Uttarakhand control area. x)As remedial action taken, the faulty Main-2 relay at Kashipur end of 220kV Kashipur-Jafarpur Ckt has been replaced and its correct operation has been verified through testing.	0	0.291	0	380	0.000	0.918	54095	41385	1920	
9	GD-1	1) 220 KV Neemrana(PG)-Kushkhera(RS) (RS) ckt 2) 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt 3) 220 KV Kushkhera(RS)-Karoli ckt 4) 220 KV Kushkhera(RS) -K.G Bass Ckt 5) 220/132kV 160 MVA ICT-1 at Kushkhera(RS) 6) 220/132kV 160 MVA ICT-2 at Kushkhera(RS)	Rajasthan	RVPNL, PGCIL	15-Apr-26	18:52	15-Apr-26	19:36	00:44	i)220/132kV Kushkhera(RS) has double main bus scheme at 220kV level. ii)During antecedent condition, 220kV Neemrana(PG)-Kushkhera(RS) (RS) Ckt and 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt were carrying 125 MW & 197 MW respectively. iii)As reported, at 18:42 hrs, R-N fault occurred on 220 KV Neemrana (PG)-Kushkhera(RS) (RS) Ckt due to burnt/ damaged CT at Kushkhera end with fault distance of 58.8 km from Neemrana(PG) end; fault sensed in zone-2 at Neemrana end. iv)As per DR, 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt sensed this fault in zone-4 at Kushkhera(RS) end with fault current of ~12.388kA from Kushkhera(RS) end. 220 KV Neemrana(PG)-Kushkhera(RS) (RS) ckt sensed this fault in zone-1 first, however after some time zone-4 picked up at Kushkhera(RS) end with fault current of ~16.916kA from Kushkhera(RS) end. v)On this fault, bus bar protection operated at both 220kV buses of Kushkhera(RS) which led to tripping of all the elements connected at 220kV Kushkhera(RS) and complete blackout occurred at i)220/132kV Kushkhera(RS) S/s. (Reason of tripping of both the 220kV buses yet to be received). vi)As per PMU at Bhiwadi(PG), R-N phase to earth fault was observed with fault clearing time of 80ms. vii)As per SCADA, change in demand of ~320 MW in Rajasthan control area is observed.	0	0.288	0	320	0.000	0.526	50724	60802	80	
10	GD-1	1) 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-1 2) 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-2 3) 220 KV Chowadhik(JK)-Jammu(PDD) (JK) Ckt	Jammu and Kashmir	PDD JK, NHPC, PGCIL	16-Apr-26	22:02	17-Apr-26	00:21	02:19	i)220/132/33kV Jammu/Gladni(J&K) S/s have double main bus arrangement at 220kV side. ii)During antecedent condition, 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-1 & 2 and 220 KV Chowadhik(JK)-Jammu(PDD) (JK) Ckt were carrying 32 MW, 28 MW and 20 MW respectively (as per SCADA). iii)As reported, at 22:02 hrs, 220kV R-ph CT of Bus coupler bay at Jammu/ Gladni(JK) blasted. During the same time, 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-1 & 2 and 220 KV Chowadhik(JK)-Jammu(PDD) (JK) Ckt tripped and complete blackout occurred at 220/132/33kV Jammu/Gladni(J&K) S/s (exact nature and location of fault yet to be shared). iv)As per DR at Jammu/Gladni(JK) end, R-N phase to earth fault converted to 3-phase to earth fault occurred. Fault current was I <sub>r</sub> =2.946kA, I <sub>y</sub> =3.026kA, I <sub>b</sub> =2.642kA from Jammu end for 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-1 and I <sub>r</sub> =2.678kA, I <sub>y</sub> =2.821kA, I <sub>b</sub> =2.504kA from Jammu end for 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-2. Fault sensed in zone-4 at Jammu end. Fault clearing time was ~720 ms and ~540 ms for 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-1 & 2 respectively. v)As per PMU at Kishenpur(PG), R-N phase to earth fault converted to 3-phase to earth fault with delayed fault clearing time of 720ms. vi)As per SCADA, change in demand of approx. 72 MW was observed in J&K control area.	0	0.167	0	72	0.000	0.115	54370	62581	720	

S.No.	Category of Grid Incident/ Disturbance	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration (hh:mm)	Event (As reported)	Energy Unreserved due to Generation loss (MU)	Energy Unreserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance		Antecedent Generation/Load in the Regional Grid		Fault Clearance time (in ms)
					Date	Time	Date	Time					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)	
11	GI-2	1) 400/220 kv 315 MVA ICT 1 at Nakodar(PS) 2) 400/220 kv 315 MVA ICT 2 at Nakodar(PS) 3) 400/220 kv 500 MVA ICT 3 at Nakodar(PS) 4) 220 kv Nakodar-Kartarpur Ckt-1 5) 220 kv Nakodar-Kartarpur Ckt-2 6) 220 kv Nakodar-Hoshiarpur Ckt 7) 220 kv Nakodar-Rihana Jatts Ckt 8) 220 kv Nakodar-Nurmahal Ckt-1 9) 220 kv Nakodar-Nurmahal Ckt-2 10) 220kv Nakodar-Ladawal Ckt-1 11) 220kv Nakodar-Ladawal Ckt-2	Punjab	PSTCL	16-Apr-26	12:00	16-Apr-26	13:57	01:57	i)400/220kv Nakodar(PS) has one and half breaker scheme at 400kv level and double main and transfer bus scheme at 220kv level. ii)As reported, at 12:00 hrs, bus fault occurred due to bus isolator sparking at Nakodar end of 220kv Nakodar-Ladawal Ckt-2 during shutdown work (exact nature and location of fault yet to be shared). On this bus fault, bus bar protection at 220kv Nakodar(PS) failed to operate. iii)Due to non-clearance of fault, all 220kv lines connected at Nakodar(PS) tripped from remote end on zone-2 distance protection operation and 400/220 kv 315 MVA ICT 1 & 2 and 500 MVA ICT 3 at Nakodar(PS) tripped on directional over-current protection operation. iv)As per PMU at Mogi(PG), Y-N Phase to earth fault converted to 3 phase to earth fault was observed with delayed fault clearing time of 2520ms. v)As per SCADA, change in demand of approx. 96 MW was observed in Punjab control area.	0	0.187	0	96	0.000	0.193	58954	49837	2520
12	GI-2	1)400/220kv 315 MVA ICT-1 at Daulatabad(HR) 2)400/220kv 315 MVA ICT-3 at Daulatabad(HR) 3)400/220kv 315 MVA ICT-4 at Daulatabad(HR) 4)220 kv Daulatabad(HR)-Majra Ckt-1 5)220 kv Daulatabad(HR)-Majra Ckt-2 6)220 kv Daulatabad(HR)-Manes Ckt 7)220 kv Daulatabad(HR)-Gurgaon Sec95 Ckt-1 8)220 kv Daulatabad(HR)-Gurgaon Sec95 Ckt-2 9)220 kv Daulatabad(HR)-Gurgaon Sec85 Ckt 10)220/66kv 100 MVA ICT-1 at Daulatabad(HR) 11)220/66kv 100 MVA ICT-2 at Daulatabad(HR) 12)220/66kv 100 MVA ICT-3 at Daulatabad(HR) 13)220/66kv 100 MVA ICT-4 at Daulatabad(HR)	Haryana	HVPNL	17-Apr-26	05:08	17-Apr-26	05:58	00:50	i)400/220kv Daulatabad(HR) has one & half breaker scheme at 400kv level and double main bus scheme at 220kv level. ii)During antecedent condition, 400/220kv 315 MVA ICT-1, 3 & 4 at Daulatabad(HR) were carrying 139 MW, 140 MW & 137 MW respectively. 400/220kv 315 MVA ICT-2 at Daulatabad(HR) was out of service. iii)As reported, at 05:08 hrs, 220kv B-ph CT and B-ph CB pole of 220/66kv 100 MVA ICT-2 at Daulatabad(HR) got damaged resulting into 220kv bus fault. iv)As bus bar protection was out of circuit at that time due to internal fault of Sifang relay, bus bar protection didn't operate and fault cleared with the tripping of all three 400/220kv 315 MVA ICTs in service at Daulatabad(HR). v)All 220kv lines connected at Daulatabad(HR) tripped on either zone-4 from Daulatabad end or zone-2 from remote end (details yet to be confirmed). vi)As per PMU at Gurgaon(PG), B-N Phase to earth fault followed by another B-N Phase to earth fault converted to Y-B-N double phase to earth fault with fault clearing time of 80 ms and 640 ms (delayed) was observed. vii)As per SCADA change in demand of approx. 550 MW in Haryana control area is observed. viii)As reported, Bus bar protection [Sifang] at 220kv Daulatabad(HR) was made healthy after replacement of defective CPU-2 card on 18.03.26.	0	0.458	0	550	0.000	0.959	46400	57336	640
13	GI-1	1)220KV Bus 1 at Jamalpur(BB) 2)220 KV Jamalpur(BB)-Sangru(BB) (BBMB) Ckt-1 3)220 KV Bhakra_R-Jamalpur (BB) Ckt-1 4)220 KV Jalandhar-Jamalpur (BB) Ckt-1 5)220 KV Jalandhar-Jamalpur (BB) Ckt-2 6)220 KV Jamalpur(BB)-Dandharikalan(PS) (PSTCL) Ckt-2 7)220 KV Ganguwal-Jamalpur (BB) Ckt-1 8)220 KV Jamalpur(BB)-Sherpur GIS (PS) (PSTCL) Ckt-1	Punjab	BBMB, PSTCL	17-Apr-26	04:25	17-Apr-26	06:24	01:59	i)220/132/66kv Jamalpur(BB) has double main Bus arrangement at 220kv side. 220kv Bus 2 at Jamalpur(BB) have two sections Bus-2A and 2B connected through Bus sectionalizer. ii)As reported, at 04:25 hrs, B-ph Coupling capacitor of 220 KV Jalandhar-Jamalpur (BB) Ckt-1 got damaged which eventually led to bus bar protection operation at 220kv Bus-1 at Jamalpur(BB) (exact reason of busbar protection operation yet to be shared). iii)Due to this, all the elements connected to 220kv Bus-1 at Jamalpur(BB) tripped and Bus-1 became dead. iv)As per DR, R-N phase to earth fault occurred on 220 KV Jalandhar-Jamalpur (BB) Ckt-2 and fault sensed in zone-2 at Jalandhar end and carrier received from Jamalpur end indicating line fault on which A/R operated however became unsuccessful due to permanent nature of fault (exact reason, nature and location of fault yet to be shared). v)As per PMU at Bhakra(BB), B-N phase to earth fault immediately followed by Y-N phase to earth fault followed by R-N phase to earth fault with unsuccessful A/R again followed by Y-N phase to earth was observed with fault clearance time of 80ms, 120ms, 80ms, 120ms & 120ms respectively. vi)As per SCADA, change in demand of approx. 310 MW was observed in Punjab control area.	0	0.615	0	310	0.000	0.544	46620	56935	120
14	GD-1	1)220kv Nara(UP)-Meerut(PMSTL) Ckt 2)220kv Nara(UP)-Meerut(PG) (PG) Ckt 3)220kv Nara(UP)-Roohies(UK) (UP) Ckt-1 4)220kv Nara(UP)-Muzaffarnagar (UP) Ckt 5)220/132 kv 160 MVA ICT-1 at Nara(UP) 6)220/132 kv 200 MVA ICT-2 at Nara(UP)	Uttar Pradesh	UPPTCL, PGCIL, PTCUL	17-Apr-26	05:23	17-Apr-26	07:15	01:52	i)220/132kv Nara(UP) has single main and transfer Bus arrangement at both 220kv and 132 kv level. ii)During antecedent condition, 220kv Nara(UP)-Muzaffarnagar (UP) Ckt was charged through transfer bus at Nara(UP) end. iii)As reported, at 05:23 hrs, B-ph CT of 220 KV Jansath-Meerut (PMSTL) Ckt at Jansath end damaged got damaged. As per DR, B-N phase to earth fault (Ib=-10.78kA) followed by Y-N phase to earth fault (Iy=-4.025kA) after ~564 ms was observed at Jansath end of 220 KV Jansath-Meerut (PMSTL) Ckt; reverse zone picked up at Jansath end. iv)As per DR of 220KV Jansath-Muzaffarnagar Ckt, B-N phase to earth fault (Ib=-7.14kA) followed by R-N phase to earth fault (Iy=-7.22kA) was observed at Jansath end; reverse zone picked up at Jansath end; B-phase pole of CB auto-reclosed at Muzaffarnagar end. v)As per DR of 220kv Nara(UP)-Muzaffarnagar (UP) Ckt, B-N phase to earth fault (Ib=-821A) followed by R-N phase to earth fault (Iy=-1.67kA) after ~564 ms was observed at Nara end. Zone-3 picked up at Nara end on R-N fault and later backup directional O/C E/F (IN-2) protection operated. However due to damaged tripping wiring of transfer bus-coupler bay and delayed opening of CBs, LBB protection operated after 200 ms at Nara end. vi)Due to LBB operation at Nara(UP) end, all 220kv lines connected at Nara(UP) along with 220/132kv ICTs at Nara(UP) tripped and complete blackout occurred at 220/132kv Nara(UP). vii)As per PMU at Meerut(PG), B-N phase to earth fault followed by R-N phase to earth fault was observed with fault clearing time of 80ms and 560ms respectively. viii)As per SCADA, change in demand of approx. 70 MW was observed in UP control area. ix)As reported by SLDC UP, as remedial actions taken, damaged tripping wiring of transfer bus-coupler bay at 220kv Nara(UP) was corrected.	0	0.13	0	70	0.000	0.124	46504	56307	560
15	GD-1	1)220 kv Barsingsar(NLC)-Nagaur (RS) Ckt 2)220 kv Barsingsar(NLC)-Bikaner Ckt 3)220 kv Barsingsar(NLC)-Khinwar (RS) Ckt 4)220 kv Barsingsar(NLC)-Baap (RS) Ckt 5)125 MW Barsingsar(NLC) - Unit 1 6)125 MW Barsingsar(NLC) - Unit 2 7)220 kv Phalodi-Baap (RS) Ckt	Rajasthan	NLC, RVPNL	18-Apr-26	11:23	18-Apr-26	11:30	00:07	i)220kv Barsingsar(NLC) has double main and transfer bus scheme at 220kv level. ii)During antecedent condition, 125 MW Barsingsar(NLC) - Unit 1 & 2 were generating approx. 122 MW each. iii)As reported, at 11:23 hrs, 220 kv Barsingsar(NLC)-Nagaur (RS) Ckt tripped on Y-N phase to earth fault with fault distance of 54.6 km and fault current of 1.47kA from Nagaur end; fault sensed in zone-1 at Nagaur end. iv)During the same time, 220 kv Barsingsar-Bikaner(RS) Ckt, 220 kv Barsingsar(NLC)-Khinwar (RS) Ckt, 220 kv Barsingsar(NLC)-Baap (RS) Ckt and 125 MW Barsingsar(NLC) - Unit 1 & 2 also tripped (exact reason of tripping along with nature of protection operation yet to be shared). v)As further reported, 220 kv Phalodi-Baap (RS) Ckt also tripped at the same time on 3-phase to earth fault (exact reason, nature and location of fault yet to be shared). vi)Due to this, complete blackout occurred at 220 kv Barsingsar(NLC) and 220/132/33kv Baap(RS) S/s. vii)As per PMU at Bhadla(PG), no fault was observed in the system; however fluctuation in voltage was present. viii)As per SCADA, generation loss of approx. 244 MW occurred at Barsingsar(NLC) and change in Rajasthan solar generation of approx. 260 MW was observed.	0	0	244	0	0.545	0.000	44776	52540	NA
16	GI-1	1)220 KV Wagoora(PG)-Pampore(PDD) (PG) Ckt-1 2)220 KV Wagoora(PG)-Pampore(PDD) (PG) Ckt-2	Jammu and Kashmir	PDD JK, PGCIL	18-Apr-26	00:16	18-Apr-26	01:55	01:39	i)400/220kv Wagoora(PG) has double main and transfer Bus arrangement at both 400kv and 220kv side. 220/132kv Pampore(J&K) has double bus scheme at 220kv level however SCADA data is not healthy there. ii)During antecedent condition, power flow from Wagoora(PG) S/s to Pampore(PDD) S/s was approx. 170 MW (85 MW each) through 220 kv Wagoora(PG)-Pampore(PDD) (PG) D/C. Load of 220/132kv Pampore(J&K) was being fed from Wagoora only. iii)As reported at 00:16 hrs, 220kv Wagoora(PG)-Pampore(PDD) (PG) Ckt-1 & 2 tripped from Wagoora end on B-N phase to earth fault in Z-2. Fault distance was ~11km from Wagoora end and fault current was ~6kA. iv)As per PMU at Amargarh(INDGRID), B-N phase to earth fault clearing time of 160ms is observed. v)Due to tripping of both the lines, load of 220/132kv Pampore(J&K) affected. As per SCADA, change in demand of approx. 158 MW is observed in J&K control area.	0	0.26	0	158	0.000	0.270	50155	58548	160
17	GI-1	1)220kv Tanakpur(NH)- Sitarganj(PG) (PG) Ckt-1 2)220/132kv 100 MVA ICT-1 at Sitarganj (PG) 3)220/132kv 100 MVA ICT-2 at Sitarganj (PG) 4)220/132kv 100 MVA ICT-3 at Sitarganj (PG) 5)132kv Sitarganj(PG)- Sitarganj(PTCUL) (PTCUL) Ckt-1 6)132kv Sitarganj(PG)- Sitarganj(PTCUL) (PTCUL) Ckt-2 7)132kv Pilibhit(UP)- Sitarganj(PTCUL) (PTCUL) Ckt-1 8)132kv Sitarganj -Khatima (PTCUL) Ckt	Uttarakhand	NHPC, PTCUL, PGCIL	18-Apr-26	16:43	18-Apr-26	17:09	00:26	i)132/33kv Sitarganj(UK) S/s has main & transfer bus scheme and is connected with 220/132kv Sitarganj(PG) through 132kv Sitarganj(PG)-Sitarganj(UK) D/C. Both these lines having differential protection as main protection and O/C E/F as back up protection at both the ends. ii)During antecedent condition, 132kv Sitarganj-Kichha (PTCUL) Ckt was already opened from Kichha end for rostering Purpose. iii)As reported, at 16:43hrs, Y-ph CT of 132kv Sitarganj(PG)-Sitarganj(UK) line-II at Sitarganj(UK) end damaged. 132kv Sitarganj(PG)-Sitarganj(UK) line-II tripped from both the ends on differential protection operation. iv)As the CT was on bus side, the fault came under bus fault zone and didn't clear after tripping of 132kv Sitarganj(PG)-Sitarganj(UK) line-II. Within ~200msec of fault, Y-N fault converted into three phase fault. v)132kv Sitarganj(UK)-Pilibhit(UP) line and 132kv Sitarganj-Khatima(UK) line also tripped with delay of ~400msec on Z-2 distance protection operation. vi)Back up O/C E/F protection at Sitarganj(PG) end of 132kv Sitarganj(PG)-Sitarganj(UK) line-I didn't operate and thus fault cleared after tripping of 220/132kv 100 MVA ICT-1, 2 & 3 on backup overcurrent protection operation within ~1.3sec. vii)220kv Tanakpur-Sitarganj line also tripped during the event. As reported, line tripped instantaneously after detecting fault in Z-3. viii)As per PMU at Bareilly(PG), Y-N fault converted into three phase fault with delayed clearance of ~1600 msec is observed. ix)As per SCADA, change in demand of ~42 MW in Uttarakhand control area is observed. x)All three phase CT of 132kv Sitarganj(PG)-Sitarganj(UK) line-II at Sitarganj(UK) have been replaced with new 400/1 A Cts. Z-4 time delay setting of 132kv lines at Sitarganj(UK) end has been revised from 900 msec to 160 msec (as bus bar protection is not in service at 132kv Sitarganj(UK)). xi)TMS of overcurrent protection of ICT and 132kv Sitarganj(PG)-Sitarganj(UK) D/C have been reviewed and corrected to ensure the proper coordination.	0	0.018	0	42	0.000	0.076	52842	55416	1600
18	GD-1	1)220kv Phulpur(UP)-Pratapgarh Ckt 2)220 kv Allahabad(PG)-Phulpur(UP) (UP) Ckt-1 3)220 kv Phulpur(UP)-Jaunpur Ckt 4)220/132 kv 160 MVA ICT-1 at Phulpur (UP) 5)220/132 kv 160 MVA ICT-2 at Phulpur (UP)	Uttar Pradesh	UPPTCL, PGCIL	20-Apr-26	01:29	20-Apr-26	02:12	00:43	i)220/132kv Phulpur(UP) has single main and transfer Bus arrangement at both 220kv and 132 kv level (220kv Phulpur(UP)-Aurai Ckt is yet to be commissioned). ii)As reported, at 01:29 hrs, B-ph CT of 220kv Phulpur(UP)-Pratapgarh Ckt at Phulpur end got damaged. Fault was sensed in zone-1 at Phulpur end. iii)During the same time, bus bar protection operated at 220kv Bus at Phulpur(UP) and all the elements connected to the bus tripped. This led to complete blackout at 220/132kv Phulpur(UP). iv)As per PMU at Allahabad(PG), B-N phase to earth fault was observed with fault clearing time of 120ms. v)As per SCADA, change in demand of approx. 110 MW was observed in UP control area. vi)As reported by SLDC UP, supply at 220kv Phulpur(UP) was normalised at 02:12 hrs via charging of 220kv Phulpur(UP)-Jaunpur Ckt.	0	0.079	0	110	0.000	0.180	50547	61276	120
19	GD-1	1)220 KV Harduaganj(UP) - Khair(UP) Ckt-1 2)220 KV Harduaganj(UP) - Khair(UP) Ckt-2 3)220 KV Harduaganj(UP) - Sikandrarao(UP) Ckt 4)220 KV Harduaganj(UP) - Etah(UP) Ckt 5)220 KV Harduaganj(UP) - Atrauli(UP) Ckt 6)220 KV Harduaganj(UP) - Boner(UP) Ckt 7)220 KV Harduaganj(UP) - Rukhi(UP) Ckt 8)220 KV Harduaganj(UP) Bus Coupler 9)400/220 kv 315 MVA ICT 2 at Harduaganj (UP) 10)110 MW Harduaganj-C TPS - UNIT 7 11)250 MW Harduaganj-D TPS - UNIT 8 12)250 MW Harduaganj-D TPS - UNIT 9	Uttar Pradesh	UPPTCL	21-Apr-26	19:29	22-Apr-26	00:17	04:48	i)220/132kv Harduaganj (UP) has double main and transfer Bus arrangement at 220kv and single main and transfer Bus arrangement at 132 kv level. ii)During antecedent condition, total Generation of Harduaganj(UP) was approx. 460 MW. iii)As reported, at 19:29 hrs, R-ph CT of 220kv Harduaganj(UP)-Khair(UP) Ckt-2 at Harduaganj end got damaged. Fault was sensed in zone-4 at Harduaganj end. iv)During the same time, the circuit breaker of 220 kv Harduaganj(UP) - Khair(UP) Ckt-2 failed to operate. Bus-bar protection was not operational at 220 kv Harduaganj. v)This led to tripping of Unit 8 and other elements connected to 220 kv Main Bus-II, and also Units 7 and 9 connected to Main Bus-I. This led to complete blackout at 220/132kv Harduaganj(UP). vi)As per PMU at Aligarh(PG), R-N phase to earth fault was observed with fault clearing time of 600ms. vii)As per SCADA, change in demand of approx. 100 MW was observed in UP control area and generation loss of approx. 460 MW occurred at Harduaganj(UP).	0	0.48	0	100	0.000	0.143	61422	70083	600
20	GD-1	1)220 kv Bikaner_2 (PBTSL)-KHIDRAT_REPL_SL_BKN2 (KHIDRAT_REPL) Ckt	Rajasthan	PGCIL, KREPL	25-Apr-26	12:32	25-Apr-26	17:07	04:35	i)220kv Khidrat(IP) is connected at Bikaner2(PG) at 220kv level and its generation evacuates through 220 kv Bikaner_2 (PBTSL)-KHIDRAT_REPL_SL_BKN2 (KHIDRAT_REPL) Ckt. ii)During antecedent condition, 220kv Khidrat(IP) was generating approx. 21 MW (as per SCADA). iii)As reported at 12:32 hrs, 220 kv Bikaner_2 (PBTSL)-KHIDRAT_REPL_SL_BKN2 (KHIDRAT_REPL) Ckt tripped on B-N phase to earth fault (exact reason, nature and location of fault yet to be shared). iv)Due to tripping of this evacuating line, complete blackout occurred at 220kv Khidrat(IP). v)As per PMU at Bikaner2(PG), B-N phase to earth fault was observed with fault clearing time of 80ms. vi)As per SCADA, change in solar generation of approx. 21 MW was observed at Khidrat(IP).	0	0	21	0	0.031	0.000	67497	65142	80
21	GD-1	1)220 KV Sawaimadhopur(RS)-Dausa(RS) (PG) Ckt 2)220 KV Anta(NT)-Sawaimadhopur(RS) (PG) Ckt 3)220/132kv 160 MVA ICT-1 at Sawaimadhopur(RS) 4)220/132kv 100 MVA ICT-2 at Sawaimadhopur(RS)	Rajasthan	NTPC, RVPNL	25-Apr-26	20:19	25-Apr-26	21:40	01:21	i)220/132kv Sawaimadhopur(RS) has double main and transfer bus scheme at both 220kv and 132kv level. ii)During antecedent condition, 220/132kv 160 MVA ICT-1 and 100 MVA ICT-2 at Sawaimadhopur(RS) were carrying approx. 103 MW and 91 MW (as per SCADA). iii)As reported, at 20:19 hrs, B-ph CT of 220 KV Anta(NT)-Sawaimadhopur(RS) (PG) Ckt got damaged at Sawaimadhopur(RS) end creating B-N phase to earth fault with fault distance of 104km from Anta end. iv)As per DR of 220 KV Anta(NT)-Sawaimadhopur(RS) (PG) Ckt, fault current was ~3.85kA from Sawaimadhopur(RS) end; fault sensed in zone-1 at Sawaimadhopur(RS) end. After approx. 280 ms, another B-N phase to earth fault sensed in zone-4 at Sawaimadhopur(RS) end. v)As per DR of 220 KV Sawaimadhopur(RS)-Dausa(RS) (PG) Ckt, fault current was ~1.76kA from Sawaimadhopur(RS) end; fault sensed in zone-4 at Sawaimadhopur(RS) end and line tripped from Sawaimadhopur(RS) end only. vi)During the same time, bus bar protection operated at 220kv Bus-2 at Sawaimadhopur(RS) (exact reason of busbar protection operation yet to be shared). Due to this, complete blackout occurred at 220/132kv Sawaimadhopur(RS). vii)As per PMU at Dausa(PG), B-N phase to earth fault was observed with fault clearing time of 120 ms . viii)As per SCADA, change in demand of approx. 250 MW was observed in Rajasthan control area.	0	0.3375	0	250	0.000	0.354	60703	70604	120

S.No.	Category of Grid Incident/ Disturbance ( GI-I to GD-V)	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration (hh:mm)	Event (As reported)	Energy Unreserved due to Generation loss (MU)	Energy Unreserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance		Antecedent Generation/Load in the Regional Grid		Fault Clearance time (in ms)
					Date	Time	Date	Time					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)	
22	GD-1	1)220 KV Bikaner(RS)-Bikaner400(RS) Ckt-3 2)220 KV Bikaner(RS)-Bikaner400(RS) Ckt-1 3)220 KV Bikaner(RS)-Bikaner400(RS) Ckt-2 4)220 KV Bikaner(RS)-Barsingsar Ckt 5)220 KV Bikaner(RS)-VSLPP Ckt 6)220 KV Bikaner(RS)-Suratgarh Ckt 7)220 KV Bikaner(RS)-Badnu Ckt 8)135 MW VSLPP (IPP) - UNIT 1	Rajasthan	RVPNL, VSLPP	26-Apr-26	14:49	26-Apr-26	15:04	00:15	i)220/132kV Bikaner(RS) has double main and transfer bus scheme and 220kV VSLPP(RS) has double main bus scheme at 220kV level. ii)During antecedent condition, 135 MW VSLPP (IPP) - UNIT 1 was generating approx. 68 MW (as per SCADA). iii)As reported, at 14:48 hrs, 220 KV Bikaner(RS)-Bikaner400(RS) Ckt-3 tripped from Bikaner400(RS) end only on R-Y phase to phase fault with fault distance of 2.984km from Bikaner400(RS) end; zone-1 distance protection operated at Bikaner400(RS) end. iv)Further, as reported, at 14:49 hrs, 220 KV Bikaner(RS)-Bikaner400(RS) Ckt-1 tripped from Bikaner220(RS) end only on R-Y-B 3 phase fault with fault distance of 3.33km from Bikaner220(RS) end; zone-1 distance protection operated at Bikaner220(RS) end. v)During this fault, all other 220kV lines connected at Bikaner(RS) tripped from remote ends only on zone-3 distance protection operation. Due to this, complete blackout occurred at 220/132kV Bikaner(RS). vi)Further, due to tripping of 220 KV Bikaner(RS)-VSLPP Ckt (only available evacuating line), 135 MW VSLPP (IPP) - UNIT 1 also tripped due to loss of evacuation path and complete blackout occurred at 220kV VSLPP(RS). vii)As per PMU at Bikaner(IP), Y-N phase to earth fault followed by R-N phase to earth fault was observed with fault clearing time of 80 ms each; however voltage dip observed in all 3-phases in both the cases. viii)As per SCADA, change in Solar generation of approx. 210 MW was observed in Rajasthan control area. Generation loss of approx. 68 MW occurred at VSLPP(RS).	0	0	278	0	0.449	0.000	61920	62067	80
23	GD-1	1)220kV Panipat TPS-Bastra (HR) Ckt 2)220kV Panipat TPS-Safidon (HR) Ckt-1 3)220kV Panipat TPS-Safidon (HR) Ckt-2 4)220kV Panipat TPS-Safidon (HR) Ckt-3 5)250 MW Panipat TPS - UNIT 7 6)250 MW Panipat TPS - UNIT 8 7)220kV Bastra-Kaul1 (HR) Ckt 8)220kV Bastra-Kurukshetra HVDC Ckt 9)220kV Bastra-Safidon (HR) Ckt	Haryana	HVPNL, HVUNL	27-Apr-26	06:33	27-Apr-26	11:16	04:43	i)220/132kV Bastra(HR) has double main bus scheme at 220kV level. ii)During antecedent condition, 250 MW Panipat TPS - UNIT 7 & 8 were generating approx. 204 MW and 192 MW respectively. iii)As reported, at 06:33 hrs, R and Y-ph CTs of 220kV Bastra-Safidon (HR) Ckt and B-ph CT of 220kV Panipat TPS-Bastra (HR) Ckt got damaged at Bastra end and all 220kV lines connected at Bastra(HR) tripped (exact reason, nature and location of fault and nature of protection operation yet to be shared). Due to this, complete blackout occurred at 220/132kV Bastra(HR). iv)During the same time, 220kV Panipat TPS-Safidon (HR) Ckt-1, 2 & 3 and 250 MW Panipat TPS - UNIT 7 & 8 also tripped (exact reason and nature of protection operation yet to be shared). v)As per PMU at Panipat(BB), 3 Phase to earth fault with delayed fault clearing time of 400 ms was observed. vi)As per SCADA change in demand of approx. 300 MW in Haryana control area was observed. Generation loss of approx. 396 MW occurred at Panipat TPS.	0	1.415	0	300	0.000	0.465	53626	64547	400
24	GD-1	1)400 KV Varanasi(PG)-Sahupuri(UP) (PG) Ckt-1 2)220 KV Bheulpur-Sahupuri(UP) Ckt 3)400 KV Varanasi(PG)-Sahupuri(UP) (PG) Ckt-2 4)400 KV Sahupuri(UP)-Biharshariff(PG) (PG) Ckt-2 5)400 KV Sahupuri(UP)-Biharshariff(PG) (PG) Ckt-1 6)220KV Sahupuri220- Sahupuri(UP) Ckt-1 7)220KV Sahupuri220- Sahupuri(UP) Ckt-2	Uttar Pradesh	UPPTCL, PGCIL	29-Apr-26	16:15	29-Apr-26	17:32	01:17	i)400/220kV Sahupuri(UP) has double main Bus arrangement at both 400kV and 220kV level. ii)As reported, during 16:03 hrs-16:15 hrs, all 400kV and 220kV lines connected from 400/220kV Sahupuri(UP) tripped on multiple faults due to heavy rain and storm accompanied by gusty winds gusting to 70kmph at isolated places. Due to this, at 16:15 hrs, complete blackout occurred at 400/220kV Sahupuri(UP) S/s. iii)Sequence of the event as per DR, PMU and SCADA SOE is as follows: At 16:03 hrs: First a transient B-N phase to earth fault (Ib=860A from Sahupuri) appeared on 400 KV Varanasi(PG)-Sahupuri(UP) (PG) Ckt-1 and A/R successfully operated from both the ends. However after ~5s, Y-B-N double phase to earth fault (fault distance: 1.876km and Iy=10.596kA, Ib=10.192kA from Sahupuri) occurred on 400 KV Varanasi(PG)-Sahupuri(UP) (PG) Ckt-1 and zone-1 distance protection operated at Sahupuri end and the line tripped. At 16:06 hrs: 220 KV Bheulpur-Sahupuri(UP) Ckt tripped on Y-B phase to phase fault as per PMU (exact nature and location of fault & DR yet to be shared). At 16:07 hrs: First a transient B-N phase to earth fault (Ib=5.493kA from Sahupuri) appeared on 400 KV Varanasi(PG)-Sahupuri(UP) (PG) Ckt-2 and A/R successfully operated from both the ends. However after ~5s, Y-N phase to earth fault (fault distance: 2.314km and Iy=5.405kA, from Sahupuri) occurred within reclaim time on 400 KV Varanasi(PG)-Sahupuri(UP) (PG) Ckt-2 and zone-1 distance protection operated at Sahupuri end and the line tripped. At 16:11 hrs: 400 KV Sahupuri(UP)-Biharshariff(PG) (PG) Ckt-2 tripped on R-N phase to earth fault (fault distance: 97.29km and Ir=1.868kA from Sahupuri); zone-1 distance protection operated at Sahupuri end. During patrolling, earth wire was found broken at fault location 97.29km from Sahupuri end. At 16:14 hrs: 400 KV Sahupuri(UP)-Biharshariff(PG) (PG) Ckt-1 tripped on R-N phase to earth fault (fault distance: 96.04km from Sahupuri); as per DR, voltage reduced in R-ph and fault sensed in zone-1. At 16:15 hrs: 220KV Sahupuri220- Sahupuri(UP) Ckt-1 & 2 tripped on Y-N phase to earth fault as per PMU (exact nature and location of fault & DR yet to be shared). With tripping of these lines complete blackout occurred at 400/220kV Sahupuri(UP) S/s. iv)As per PMU at Varanasi(PG), following faults were observed during the event (with their fault clearing time):B-N phase to earth fault at 16:03 hrs (80ms), Y-B phase to phase fault at 16:06 hrs (80ms), B-N fault followed by Y-N fault at 16:07 hrs (80ms each), R-N fault with unsuccessful A/R at 16:11 hrs (80ms), R-B fault followed by B-N fault at 16:14hrs (520ms delayed and 80ms respectively), Y-N phase to earth fault at 16:15 hrs (80ms) v)As per SCADA, change in demand of approx. 25 MW was observed in UP control area at 16:15 hrs. However, as reported by SLDC UP, load loss of approx. 50 MW occurred. vi)As reported by SLDC UP, as remedial actions taken, the damaged earth wire of 400 KV Sahupuri(UP)-Biharshariff(PG) (PG) Ckt-2 has been repaired.	0	0.064	0	50	0.000	0.077	60491	64547	520
25	GI-2	1)765 KV Agra-Jhatikara (PG) Ckt-1 2)765 KV Agra-Fatehpur (PG) Ckt-1 3)765 KV Agra-Gwalior (PG) Ckt-1 4)765 KV Agra-Gwalior (PG) Ckt-2 5)765/400 kv 1500 MVA ICT 1 at Agra(PG) 6)240 MVAR Bus Reactor No 1 at 765KV Agra(PG) 7)240 MVAR Bus Reactor No 2 at 765KV Agra(PG)	Uttar Pradesh	PGCIL	30-Apr-26	06:28	30-Apr-26	09:44	03:16	i)765/400kV Agra(PG) have one and half breaker bus scheme at both 765 & 400kV level. ii)During antecedent condition, 765 KV Agra-Gwalior (PG) ckt-1 & 2 were carrying ~47 MW each. As reported, there was inclement weather condition (thunderstorm / lightning). iii)As reported, at 06:28 hrs, 765 KV Agra-Jhatikara (PG) Ckt-1, 765 KV Agra-Fatehpur (PG) Ckt-1, 765 KV Agra-Gwalior (PG) Ckt-1 & 2, 765/400 kv 1500 MVA ICT 1 at Agra(PG) and 240 MVAR Bus Reactor No 1 & 2 at 765KV Agra(PG) tripped. Tripping occurred due to phase to earth faults in lines due to thunderstorm / lightning during inclement weather conditions. iv)As per PMU plot of phase voltage and currents of all the tripped lines at Agra(PG), it was observed that at first instance i.e., 06:28 29 hrs, B-N fault occurred on 765 KV Agra-Jhatikara (PG) Ckt-1. On this fault line successfully autoreclosed however tripped on B-N fault in reclaim time. Further, at 06:28:34hrs, 765 KV Agra-Fatehpur (PG) Ckt-1 tripped on R-N fault without A/R operation. Further at 06:28:41 hrs, 765 KV Agra-Gwalior (PG) Ckt-1 tripped on R-N fault without A/R operation. Further at 06:28:44 hrs, 765 KV Agra-Gwalior (PG) Ckt-2 tripped on R-N fault in reclaim time after successful A/R operation. 240 MVAR bus reactor-1 & 2 also tripped along with the 765 KV Agra-Gwalior (PG) Ckt-1 & 765 KV Agra-Jhatikara (PG) Ckt-1 respectively (bus reactor and both the lines were on the same dia). Further at 06:28:44 hrs, 765/400 kv 1500 MVA ICT 1 at Agra(PG) tripped on B-N fault. Exact nature and location of fault and details of protection operation (DR/EL) not received yet from POWERGRID(NR-II). All the faults cleared within 80 msec. v)As per SCADA, no change in demand of UP control area is observed.	0	0	0	0	0.000	0.000	48617	58319	80
26	GI-2	1) 800 KV HVDC Kurukshetra(PG) Pole-2 2) 800 KV HVDC Kurukshetra(PG) Pole-4	Haryana	PGCIL	30-Apr-26	18:36	30-Apr-26	20:19	01:43	i)During antecedent condition, 800kV HVDC Champa-Kurukshetra was carrying total 1000 MW power from Champa to Kurukshetra (250 MW on each Pole as per SCADA). ii)As reported, at 18:36 hrs, 800 KV HVDC Kurukshetra(PG) Pole-2 tripped on DC line fault due to jumper swing at Tower location no. 2482. iii)During the same time, 800 KV HVDC Kurukshetra (PG) pole 4 also tripped (exact reason of tripping and nature of protection operated yet to be shared). iv)As per PMU at Kurukshetra (PG), no fault was observed in the system. v)As per SCADA, no change in demand in Haryana control area and no change in power order was observed. The power order of Pole-1 & 3 ramped up to compensate the Power of Pole 2 & 4. vi)As remedial action taken, insulation tape was applied on tower legs and step bolts were opened which are in reach of jumper swing.	0	0	0	0	0.000	0.000	49088	56303	NA

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

**Time Period: 1st April 2026 - 30th April 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	ADANI GREEN ENERGY TWENTY FIVE LIMITED	2	0	0	0	0	0	0	2	0	0	0	0	Details received
3	ADANI SOLAR ENERGY BARMER ONE LIMITED(ASEB1L)	1	0	0	0	1	0	1	0	100	0	1	0	
4	AHEJ2L	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
5	ALTRA XERGI POWER PVT LTD	1	1	100	1	0	100	1	0	100	1	0	100	
6	ANTA-NT	4	3	75	4	0	100	4	0	100	4	0	100	
7	AP43L	1	1	100	1	0	100	1	0	100	1	0	100	
8	APTFI	1	1	100	1	0	100	1	0	100	1	0	100	
9	AURAIYA-NT	1	1	100	1	0	100	1	0	100	1	0	100	
10	BAIRASUIL-NH	3	2	67	2	0	67	2	0	67	2	0	67	
11	BBMB	69	36	52	37	10	63	40	5	63	37	1	54	
12	CHAMERA-II-NH	2	2	100	2	0	100	2	0	100	2	0	100	
13	CPCC1	98	32	33	43	7	47	49	6	53	55	0	56	
14	CPCC2	30	15	50	15	4	58	15	4	58	15	2	54	
15	CPCC3	66	25	38	24	6	40	27	11	49	25	3	40	
16	DADRI-NT	6	6	100	6	0	100	5	0	83	5	0	83	
17	DULHASTI-NH	1	1	100	1	0	100	1	0	100	1	0	100	
18	FATEHGARH IV TRANSMISSION LIMITED(F4TL)	1	1	100	1	0	100	1	0	100	1	0	100	
19	INDIGRID	3	3	100	3	0	100	3	0	100	3	0	100	
20	JHAJJAR	2	0	0	0	0	0	0	0	0	0	0	0	Details received

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

**Time Period: 1st April 2026 - 30th April 2026**

S. No.	Utility	Total No. of tripping	First Information Report (Not Received)		Disturbance Recorder (Not Received)		Disturbance Recorder (NA) as informed by utility		Event Logger (Not Received)		Event Logger (NA) as informed by utility		Tripping Report (Not Received)		Tripping Report (NA) as informed by utility		Tripping Report (Not Received)	Remark
			Value	%	Value	%	Value	%	Value	%	Value	%	Value	%				
21	JUNIPER GREEN STELLAR PRIVATE LIMITED	1	1	100	1	0	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted	
22	KARINSAR SOLAR PLANT NHPC LTD(KSP_NHPC)	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	Details received	
23	KHIDRAT RENEWABLE ENERGY PRIVATE LIMITED(KREPL)	1	1	100	1	0	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted	
24	KHURJA STPP	2	2	100	2	0	100	2	0	100	2	0	100	2	0	100		
25	NAPP	5	1	20	5	0	100	5	0	100	1	0	20	1	0	20		
26	PARBATI-III-NH	3	3	100	3	0	100	3	0	100	3	0	100	3	0	100		
27	RAPPA	8	1	13	3	3	60	3	0	38	3	0	38	3	0	38		
28	RAPPB	4	1	25	4	0	100	4	0	100	4	0	100	4	0	100		
29	RENEW DINKAR URJA PRIVATE LIMITED (RDUPL)	3	3	100	3	0	100	3	0	100	3	0	100	3	0	100		
30	RENEW SURYA ROSHNI PRIVATE LIMITED	2	2	100	2	0	100	2	0	100	2	0	100	2	0	100	Details received	
31	SALAL-NH	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	Details received	
32	SEWA-2-NH	8	1	13	1	5	33	1	5	33	1	0	13	1	0	13	DR, EL & Tripping report not submitted	
33	SINGOLI	4	1	25	3	1	100	4	0	100	3	0	75	3	0	75		
34	SINGRAULI-NT	4	4	100	3	0	75	3	0	75	3	0	75	3	0	75		
35	SLDC-DV	30	7	23	13	0	43	12	0	40	14	0	47	14	0	47		
36	SLDC-HP	10	0	0	3	0	30	3	0	30	2	0	20	2	0	20	DR, EL & Tripping report not submitted	
37	SLDC-HR	24	18	75	18	0	75	18	0	75	20	0	83	20	0	83	DR, EL & Tripping report not submitted	
38	SLDC-JK	16	0	0	13	0	81	13	0	81	13	0	81	13	0	81		
39	SLDC-PS	46	18	39	23	8	61	22	4	52	35	0	76	35	0	76		
40	SLDC-RS	134	7	5	28	0	21	28	0	21	33	0	25	33	0	25		
41	SLDC-UK	26	1	4	3	11	20	3	9	18	2	0	8	2	0	8		
42	SLDC-UP	192	55	29	55	8	30	56	16	32	62	3	33	62	3	33		
43	STERLITE	8	3	38	4	0	50	4	0	50	7	0	88	7	0	88	Details received	
44	TANAKPUR-NH	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Details received	
45	TEHRI	14	0	0	0	14	0	0	5	0	2	0	14	2	0	14	DR, EL & Tripping report not submitted	
46	UNCHAHAAR-NT	1	0	0	1	0	100	1	0	100	1	0	100	1	0	100		

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

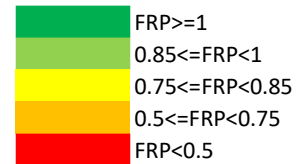
**Time Period: 1st April 2026 - 30th April 2026**

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		%	
47	URI-I-NH	2	2	100	2	0	100	2	0	100	2	0	100	
<b>Total in NR Region</b>		<b>853</b>	<b>264</b>	<b>31</b>	<b>338</b>	<b>79</b>	<b>44</b>	<b>350</b>	<b>70</b>	<b>45</b>	<b>376</b>	<b>10</b>	<b>45</b>	
<i>As per the IEGC provision under clause 37.2 (c), detailed tripping report along with DR &amp; EL has to be furnished within 24 hrs of the occurrence of the event</i>														

FRC computation and data submission status		
S. No	Control Area	Event Date
		13-04-2026
1	Punjab	Received
2	Haryana	Received
3	Rajasthan	Not Received
4	Delhi	Received
5	Uttar Pradesh	Received
6	Uttarakhand	Not Received
7	Chandigarh*	NA
8	Himachal Pradesh	Not Received
9	J&K(UT) and Ladakh(UT)	Not Received
10	Dadri -1 (TH)	Received
11	Dadri -2 (TH)	Received
12	Jhajjar (TH)	Received
13	Rihand-1 (TH)	Received
14	Rihand-2 (TH)	Received
15	Rihand-3 (TH)	Received
16	Singrauli (TH)	Not Received
17	Tanda-2 (TH)	Received
18	Unchahar-I (TH)	Received
19	Unchahar-II (TH)	Not Received
20	Unchahar-III (TH)	Received
21	Unchahar stg-4 (TH)	Received
22	Anta (G)	Not Received
23	Auraiya (G)	Received
24	Dadri (G)	Not Received
25	AD Hydro (H)	Received
26	Bairasiul (H)	Received
27	Bhakra (H)	Not Received
28	Budhil (H)	Not Received
29	Chamera-1 (H)	Received
30	Chamera-2 (H)	Received
31	Chamera-3 (H)	Received
32	Dehar (H)	Not Received
33	Dhauliganga (H)	Received
34	Dulhasti (H)	Received
35	Karcham (H)	Received
36	Kishenganga	Received
37	Koldam (H)	Received
38	Koteswar (H)	Received
39	Nathpa Jhakri (H)	Received
40	Parbati-2 (H)	Received
41	Parbati-3 (H)	Received
42	Pong (H)	Not Received
43	Rampur (H)	Received
44	Sainj (H)	Not Received

45	Salal (H)	Received
46	Sewa-II (H)	Received
47	Singoli Bhatwari (H)	Received
48	Sorang (H)	Not Received
49	Tanakpur (H)	Received
50	Tehri (H)	Received
51	Tehri (PSP)	Not Received
52	Uri-1 (H)	Received
53	Uri-2 (H)	Not Received

Frequency response Performance		
S. No	Control Area	Event Date
		13-04-2026
1	Punjab	1.32
2	Haryana	0.07
3	Rajasthan	-0.57
4	Delhi	-3.90
5	Uttar Pradesh	1.03
6	Uttarakhand	-1.63
7	Chandigarh*	NA
8	Himachal Pradesh	-0.07
9	J&K(UT) and Ladakh(UT)	4.53
10	Dadri -1 (TH)	2.00
11	Dadri -2 (TH)	0.92
12	Jhajjar (TH)	7.03
13	Rihand-1 (TH)	-1.17
14	Rihand-2 (TH)	0.00
15	Rihand-3 (TH)	-1.59
16	Singrauli (TH)	-0.22
17	Tanda-2 (TH)	1.81
18	Unchahar-I (TH)	2.71
19	Unchahar-II (TH)	0.03
20	Unchahar-III (TH)	3.84
21	Unchahar stg-4 (TH)	No Gen
22	Anta (G)	No Gen
23	Auraiya (G)	No Gen
24	Dadri (G)	No Gen
25	AD Hydro (H)	No Gen
26	Bairasiul (H)	-33.34
27	Bhakra (H)	0.29
28	Budhil (H)	No Gen
29	Chamera-1 (H)	No Gen
30	Chamera-2 (H)	No Gen
31	Chamera-3 (H)	No Gen
32	Dehar (H)	-0.31
33	Dhauliganga (H)	No Gen
34	Dulhasti (H)	No Gen
35	Karcham (H)	No Gen
36	Kishenganga	No Gen
37	Koldam (H)	No Gen
38	Koteswar (H)	5.46
39	Nathpa Jhakri (H)	No Gen
40	Parbati-2 (H)	No Gen
41	Parbati-3 (H)	No Gen
42	Pong (H)	No Gen
43	Rampur (H)	No Gen
44	Sainj (H)	No Gen
45	Salal (H)	0.27
46	Sewa-II (H)	-0.56
47	Singoli Bhatwari (H)	No Gen
48	Sorang (H)	0.03
49	Tanakpur (H)	0.56
50	Tehri (H)	No Gen
51	Tehri (PSP)	No Gen
52	Uri-1 (H)	-1.12
53	Uri-2 (H)	0.00



S.No.	Power Station	Sector	Ownership	Fuel Type	Black Start Source	Capacity of Black Start Source	Date of last mock drill before FY 25-26	Schedule of mock drill during FY 2026-27	Remarks
1	Bhakra (L)	Central	BBMB	Hydro	DG Set	500kVA	22-12-2025		
2	Bhakra (R)	Central	BBMB	Hydro	DG Set	500kVA	19-12-2025		
3	Pong	Central	BBMB	Hydro	DG Set	500kVA, 380kVA	14-03-2026		
4	Bairasuil	Central	NHPC	Hydro	DG Set	2X1010 KVA	30-01-2026		
5	Chamera HPS-I	Central	NHPC	Hydro	DG Set	1X1010 KVA & 2x1000 KVA	30-01-2026		
6	Chamera HPS-II	Central	NHPC	Hydro	DG Set	2x1250 KVA	06-02-2026		
7	Chamera HPS-III	Central	NHPC	Hydro	DG Set	2x725 KVA	04-12-2017		
8	Dhauliganga	Central	NHPC	Hydro	DG Set	2x625 KVA	05-02-2026		
9	Kishanganga	Central	NHPC	Hydro	DG Set	2x1010 KVA	31-01-2026		
10	Parbati-2	Central	NHPC	Hydro	DG Set	2x1000 KVA	26-05-2025		
11	Parbati-3	Central	NHPC	Hydro	DG Set	2x1010 KVA	17-05-2025		
12	Salal Stage-I	Central	NHPC	Hydro	DG Set	2X875 KVA	16-12-2024		
13	Salal Stage-II	Central	NHPC	Hydro	DG Set	3X1020 KVA	16-12-2024		
14	Sewa-II	Central	NHPC	Hydro	DG Set	2x500 KVA	16-05-2025, 30-01-2026		
15	Tanakpur HPS	Central	NHPC	Hydro	DG Set	2X625 KVA & 1X312.5 KVA	28-01-2026		
16	URI-I	Central	NHPC	Hydro	DG Set	2x1000 KVA	24-01-2026		
17	URI-II	Central	NHPC	Hydro	DG Set	2x1010 KVA	26-01-2026		
18	Anta GPS	Central	NTPC	Gas	DG Set	2.968 MW	29-02-2024		
19	Auraiya GPS	Central	NTPC	Gas	DG Set	2900 kVA	Not conducted		
20	Dadri GPS	Central	NTPC	Gas	DG Set	2.4 MW	15-12-2023		
21	Faridabad GPS	Central	NTPC	Gas	DG Set	3.3 MW / 4.125 MVA	25-11-2024		
22	Koldam HEP	Central	NTPC	Hydro	DG Set	2X1250 KVA	14-03-2024		
23	Nathpa-Jhakri	Central	SJVNL	Hydro	DG Set	2*750kVA	11-03-2026		
24	Rampur	Central	SJVNL	Hydro	DG Set	2*1010kVA	11-03-2026		
25	Tehri	Central	THDC	Hydro	DG Set	2*1000kVA	11-11-2025		
26	Koteshwar	Central	THDC	Hydro	DG Set	2*1010kVA	25-03-2026		
27	AD Hydro	IPP	AD Hydro Power Ltd.	Hydro	DG Set	2*750kVA	27-01-2023		
28	Malana-II	IPP	Everest Power Company Ltd.	Hydro	DG Set	725kVA	27-01-2023		
29	Budhil	IPP	Greenco	Hydro	DG Set	2*800kVA	Not conducted		
30	Alaknanda IPP	IPP	GVK (UP)	Hydro	DG Set		Not conducted		
31	Karcham Wangtoo	IPP	JSW	Hydro	DG Set	2*1500kVA	29-12-2021		
32	Baspa	IPP	JSW	Hydro	DG Set	2*625kVA	29-12-2021		
33	Singoli Bhatwari	IPP	L&T	Hydro	DG set	2*500kVA	Not conducted		
34	Vishnu Prayag IPP	IPP	Jaiprakash power Venture Ltd. (UP)	Hydro	DG Set		Not conducted		
35	I.P. Gas Turbine (IPGCL G.T.)	State	IPPGCL/Delhi Gencos	Gas	DG Set	500kVA	10-04-2024		
36	Baghlihar-I	State	Jammu & Kashmir	Hydro	DG Set		Not conducted		No update received from SLDC-J&K
37	Baghlihar-II	State	Jammu & Kashmir	Hydro	DG Set		Not conducted		No update received from SLDC-J&K
38	Lower Jhelum	State	Jammu & Kashmir	Hydro	DG Set		20-12-2016		No update received from SLDC-J&K
39	Upper Sindh	State	Jammu & Kashmir	Hydro	DG Set		20-12-2016		No update received from SLDC-J&K
40	Ranjit Sagar (Thein Dam)	State	Punjab	Hydro	DG Set	2*500kVA	01-12-2025		
41	Ramgarh GPS	State	Rajasthan	Gas	DG Set	625kVA	11-05-2025		
42	Mahi Bajaj Sagar I	State	Rajasthan	Hydro	DG Set	200kVA	20-03-2025		
43	Mahi Bajaj Sagar II	State	Rajasthan	Hydro	DG Set	2*200kVA	21-03-2025		
44	Rana Pratap Sagar(RPS)	State	Rajasthan	Hydro	DG Set	250kVA	16-01-2011		All 4 Units got submerged in 2019. Units were restored in phases. Last unit revived in March 2025. Remainig 3 units revived by 2022 however, AVR systme is not there. Mock testing of 4th unit may be performed during 2025-26.
45	Rihand (H) or Pipri	State	Uttar Pradesh	Hydro	DG Set	2*320kVA	11-02-2026		
46	Obra(H)	State	Uttar Pradesh	Hydro	DG Set	1*320kVA & 1*250kVA	11-02-2026		
47	Khara HEP	State	Uttar Pradesh	Hydro	DG Set		Not conducted		
48	Matatila	State	Uttar Pradesh	Hydro	DG Set	2*190kVA	Not conducted		
49	Khodri	State	Uttrakhand	Hydro	DG Set	2*500kVA	Not conducted		Due to issue in governing system(old units, R&M work is proposed).
50	Chibro	State	Uttrakhand	Hydro	DG Set	2*500kVA	Not conducted		