



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

विषय: उ.क्षे.वि.स. की नवीकरणीय ऊर्जा उप-समिति की 6^{वीं} बैठक की अतिरिक्त कार्यसूची।
Subject: Additional Agenda of the 6th meeting of Renewable Energy Sub-committee of NRPC.

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

कृपया बैठक में उपस्थित होने की सुविधा प्रदान करें।

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

Kindly make it convenient to attend the meeting.

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

सेवा में : उ.क्षे.वि.स. की नवीकरणीय ऊर्जा उप समिति के सभी सदस्य।
To : All Members of Renewable Energy Sub-committee of NRPC

List of addressee (via mail)

List of Members of Renewable Energy Sub-committee

S. No	Members of RE Sub-committee	Representative Email ID
1	Ministry of New and Renewable Energy	anindya.parira@nic.in;
2	National Load Despatch Center	suhasd@grid-india.in;
3	Northern Regional Load Despatch Center	ashokkr@grid-india.in;
4	Central Transmission Utility	sandeepk@powergrid.in;
5	Powergrid Corporation of India Ltd.	r.k.dash@powergrid.in; yashpal@powergrid.in;
6	Rajasthan Rajya Vidyut Prasaran Nigam Ltd.	se.pp@rvpn.co.in;
7	Rajasthan State Load Despatch Center	se.ldrvpl@rvpn.co.in;
8	Solar Energy Corporation of India	sanjaysharma@seci.co.in; vkumar@seci.co.in;
9	National Solar Energy Federation of India	ankur.kumar@nsefi.in; ceooffice@nsefi.in;
10	Indian Wind Power Association	ceo@indianwindpower.com;
ISTS connected RE generators		
11	ABC Renewable Pvt. Ltd	Aman.chaturvedi@petronas.com;
12	ABC Renewable Energy (RJ-02) Pvt. Ltd.	Aman.chaturvedi@petronas.com;
13	ACME Heeragarh powertech Pvt. Ltd	prachi.chauhan@acme.in; planthead.badisidd.solar@acme.in; ashutosh.singh@acme.in;
14	ACME Chittorgarh Solar Energy Pvt Ltd	sandeepk@ayanapower.com; yogesh@ayanapower.com;
15	ACME DEOGHAR SOLAR POWER PRIVATE LIMITED	deepak1.singh@acme.in;
16	ACME PHALODI SOLAR POWER PRIVATE LIMITED	dhruba.chhetri@acme.in;
17	ACME RAISAR SOLAR POWER PRIVATE LIMITED	dhruba.chhetri@acme.in;
18	ACME DHAULPUR SOLAR POWER PRIVATE LIMITED	balaji.r@acme.in;
19	ACME Sikar Solar Pvt. Ltd.	nitish.kumar@acme.in ;
20	Adani Hybrid Energy Jaisalmer One Ltd.	kailash.nagora@adani.com ; sanjay.bhatt@adani.com ;
21	Adani Hybrid Energy Jaisalmer Two Ltd.	
22	Adani Hybrid Energy Jaisalmer Three Ltd.	
23	Adani Hybrid Energy Jaisalmer Four Ltd.	
24	Adani Renewable Energy (RJ) limited Rawara	
25	Adani Solar Energy Jaisalmer One Pvt. Ltd. 450MW (Solar)	
26	Adani Solar Energy Four Private Limited	
27	Adani Solar Energy Jaisalmer	

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

	Two Private Limited	
28	Adani Solar Energy Jaisalmer Two Private Limited Project Two	
29	SB ENERGY FOUR PRIVATE LIMITED, Bhadla	
30	SB Energy Six Private Limited, Bhadla	
31	Adani Solar Energy Jodhpur Two Limited, Rawara	
32	Adani Solar Energy RJ Two Pvt. Ltd. (Devikot)	
33	Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi)	
35	Adani Green Energy Twenty Four Limited	
36	ADANI GREEN ENERGY TWENTY FIVE LIMITED	
37	Adani Solar Energy Jodhpur Six Pvt. Ltd.	
38	Ambuja Cements Limited 300MW	
39	Altra Xergi Pvt. Ltd.	mahendra.kumar@O2power.in;
40	XL Xergi Power Pvt. Ltd.	yudhister@o2power.in; ka.vishwanath@o2power.in;
41	AMP Energy Green Five Pvt. Ltd.	
42	AMP Energy Green Six Pvt. Ltd.	vbhattacharya@ampenergyindia.com;
43	AMP Energy Green Four Pvt. Ltd.	
44	Amplus Ages Private Limited	manish.tak@amplussolar.com;
45	Avaada RJHN 240MW	
46	Avaada sunce energy Pvt limited	
47	Avaada Sunrays Pvt. Ltd.	alpesh.prajapati@avaada.com;
48	Avaada Sustainable RJ Pvt. Ltd.	
49	Ayana Renewable Power Three Private Limited	Venkatraman@ayanapower.com;
50	Ayaana Renewable Power One Pvt. Ltd.	rajeshshukla@ayanapower.com;
51	Azure Power Forty One Pvt limited	sourin.nandi@azurepower.com;
52	Azure Power Forty Three Pvt. Ltd. PSS	manohar.reddy@azurepower.com;
53	Azure Power Forty Three Pvt. Ltd. RSS	manohar.reddy@azurepower.com;
54	Azure Maple Pvt. Ltd.	sourin.nandi@azurepower.com;
55	AZURE POWER INDIA Pvt. Ltd., Bhadla	yogesh.kumar@adani.com;
56	Azure Power Thirty Four Pvt. Ltd.	manohar.reddy@azurepower.com;
57	Clean Solar Power (Jodhpur) Pvt. Ltd.	seetaram.kumhar@herofutureenergies.com; dejendra.sharma@herofutureenergies.com;
58	Clean Solar Power (Bhadla) Pvt. Ltd	atul.tomar@herofutureenergies.com; sushant.sinha@herofutureenergies.com;
59	Eden Renewable Cite Private Limited	operation.ERCPL@eden-re.com;
60	Eden Renewable Alma Pvt. Ltd.	dejendra.Sharma@eden-re.com;
61	Energizent Power Private Limited	Bhawya.chauhan@o2power.in;

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

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

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Additional Agenda for 6th RE sub-committee meeting of NRPC

AA.1. Discussion on audit reports submitted by utilities and compliance of recommendations of protection audit (agenda by NRPC Secretariat)

AA.1.1 As per clause 15 (1) of IEGC 2023;

- *All users shall conduct internal audit of their protection systems annually, and any shortcomings identified shall be rectified and informed to their respective RPC. The audit report along with action plan for rectification of deficiencies detected, if any, shall be shared with respective RPC for users connected at 220 kV and above (132 kV and above in NER).*

AA.1.2 As per clause 15 (4) of IEGC 2023;

The third-party protection audit report shall contain information sought in the format enclosed as Annexure–1 (IEGC). The protection audit reports, along with **action plan for rectification of deficiencies detected, if any, shall be submitted to the respective RPC and RLDC or SLDC, as the case may be, within a month of submission of third-party audit report.** The necessary compliance to such protection audit report shall be followed up regularly in the respective RPC.

AA.1.3 Following utility has submitted the internal audit report based on the audit done at their substations:

S.N.	FY (Audit Date)	Utility	Stations
1	2025-26	AGEL	2 plants (Adani Solar Energy RJ Two Private Limited Adani Green Twenty-Five Limited)
2	2025-26	ReNew	3 Plants (Renew Solar Power Pvt Ltd Renew Surya Ravi Pvt Ltd Renew Solar Energy Jharkhand 3 Pvt Ltd)

3	2025-26	Tata Power	3 Plants (TPGEL Noorsar TPREL Chhayan (300MW) TPTCL Bhanipura (300MW))
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AA.1.4 AGEL has submitted that 220 kV Switchyard and 33 kV SWGR of Adani Solar Energy RJ One Pvt. Ltd. (SB Energy Six Pvt. Ltd.- Bhadla) is owned by M/S ESUCRL and Solar Blocks are owned by ADANI. Various data has been asked from M/S ESUCRL for Internal Protection Audit. Audit is yet to be done.

The above submitted reports and action plan are available at NRPC website: <https://nrpc.gov.in/meetings/prsub.html>

Decision required from Forum:

Forum may discuss audit report as well as action taken by utilities on recommendations of audit. Further, other utilities may be directed to submit the protection audit report (for audited S/s as per submitted plan) to NRPC Secretariat and may update the compliance status regularly.

AA.2. Installation of Special Protection Scheme (SPS) at 400 kV GSS Bikaner in power step-up condition and modification in already implemented SPS in step down condition (agenda by RRVPNL)

AA.2.1 RRVPNL has submitted that:

1. The 400 kV transformers at 400 kV GSS Bikaner are fully loaded/overloaded during the morning and evening peak hours (non-solar generation period) under power step-down condition.
2. The 400 kV transformers at 400 kV GSS Bikaner are also fully loaded/overloaded during the solar generation period under power step-up condition.

AA.2.2 Following Special Protection Scheme (SPS) was approved in 60th NRPC meeting held on 30.11.2022 to avoid tripping of the 400 kV transformers at 400kV GSS, Bikaner in power step-down over load condition: -

- I. SPS logic : SPS signal is generated in the condition of 110% overloading of the ICTs in all three phases simultaneously for 3 seconds continuously
- II. Tripping of following 220 kV lines on SPS Signal :
 - 220 kV Bikaner (400 kV GSS)-Nokha line
 - 220 kV Bikaner (400 kV GSS)-Sri Dungargarh line

AA.2.3 The aforesaid SPS has been implemented as per NRPC approval and is presently in operation. However, it requires modification to make it directional, in view of the tripping incident that occurred on 11.03.2026 at 11:41 hrs under power step-up conditions. On 11.03.2026, the 400/220 kV transformers at 400 kV GSS Bikaner were overloaded. Consequently, the SPS operated and tripped the 220 kV Bikaner (400 kV GSS)–Nokha and 220 kV Bikaner (400 kV GSS)–Sri Dungargarh lines. These lines were evacuating approximately 350 MW of solar power injected at the 220 kV bus of 400 kV GSS Bikaner through the 220 kV D/C Gajner–Bikaner (400 kV GSS) line and two 220 kV interconnecting lines between 220 kV GSS Bikaner and 400 kV GSS Bikaner.

AA.2.4 The tripping of these lines resulted in further overloading of the 400/220 kV transformers, ultimately leading to tripping of both transformers. This caused a total loss of approximately 1097 MW of solar generation connected to 220 kV GSS Gajner (441.63 MW), 220 kV GSS Chhattargarh(350 MW), 132 kV GSS Kolayat(89.37 MW), 132 kV GSS Nokha Daiya(16 MW) and 220 kV GSS Badnu(200 MW) . Further, it is observed that during solar generation hours, significant overloading (power step-up condition) is occurring daily on the 400/220 kV transformers at 400 kV GSS Bikaner. The 220 kV transmission lines/GSS and solar projects in the vicinity of 400 kV GSS Bikaner are depicted in Figure-1 below.

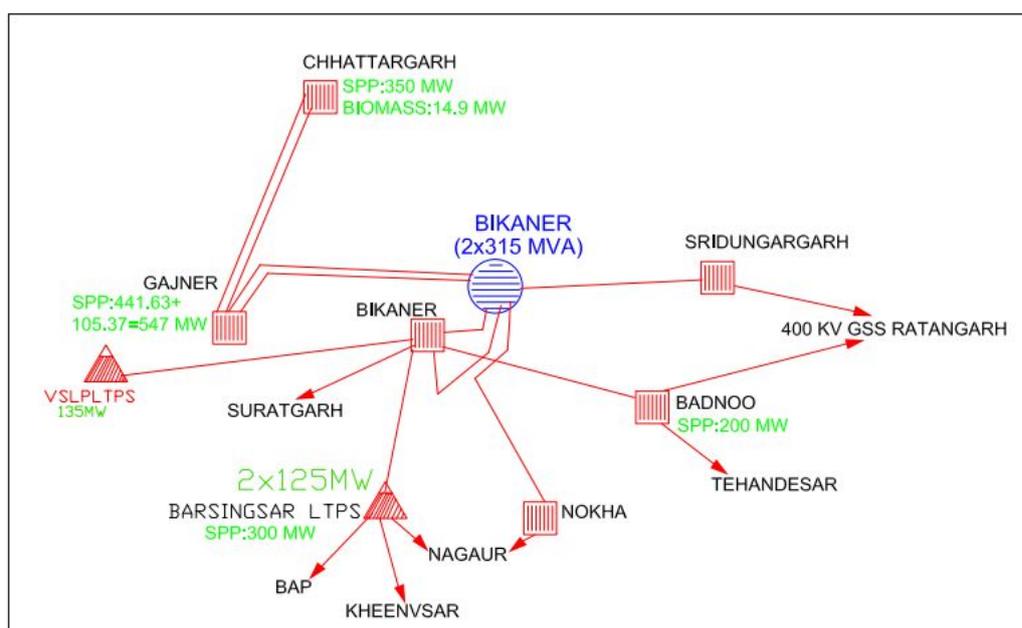


Fig-1 : 220 kV transmission lines/GSS and solar projects in the vicinity of 400 kV GSS Bikaner

AA.2.5 In view of the above, the existing approved and implemented SPS needs to be reviewed. Additionally, an SPS scheme for power step-up condition is required to be implemented.

AA.2.6 In order to avoid tripping of 400 kV transformers at 400 kV GSS Bikaner due to overloading under step-up condition, the following SPS scheme is proposed based on PSSE load flow studies:

Table-1: SPS Solar Feeders

Stage-1 SPS feeder	Stage-2 SPS feeder	Stage-3 SPS feeder	PSSE LFS Plot reference
Tripping of 220 kV S/C Gajner-Mahindra Susten line at 220 kV GSS Gajner end (200 MW solar feeder)	Tripping of 132 kV S/C Chhattargarh-NTPC line at 220 kV GSS Chhattargarh end (150 MW solar feeder)	Tripping of 220 kV S/C Chhattargarh-Mahindra Solren line at 220 kV GSS Chhattargarh end (200 MW solar feeder)	Base Case:Exhibit-1 Stage-1 : Exhibit-2 Stage-2 : Exhibit-3 Stage-3 : Exhibit-4

Load flow study results in Base Case and after SPS operation of Stage-1, Stage-2 and Stage-3 are placed at respective Exhibits and tabulated hereunder :-

Table-2 : Load on 400/220 kV transformers(MW) after SPS operation

Base Case	After Stage1 SPS operation	After Stage2 SPS operation	After Stage3 SPS operation	PSSE Load Flow results reference
2x240 MW	2x183 MW	2x145 MW	2x89 MW	Base Case:Exhibit-1 Stage-1 : Exhibit-2 Stage-2 : Exhibit-3 Stage-3 : Exhibit-4

AA.2.7 **Proposed SPS Logic :**

- i. **Stage-1 Operation** : Trip commands for Stage-1 SPS shall be generated with a **time delay of 5 seconds (DT) when all three phases** of any one of the 400/220 kV ICT/transformers at 400 kV GSS Bikaner is overloaded beyond **110% (only in step-up condition)**.
- ii. **Stage-2 Operation**: Trip commands for Stage-2 SPS shall be generated with a **time delay of 8 seconds (DT) when all three phases** of any one of the 400/220 kV ICT/transformers at 400 kV GSS Bikaner is overloaded beyond **110% (only in step-up condition)**.
- iii. **Stage-3 Operation**: Trip commands for Stage-3 SPS shall be generated with a **time delay of 10 seconds (DT)** when all three phases of any one of the 400/220 kV ICT/ transformers at 400 kV GSS Bikaner is overloaded beyond **110% (only in step-up condition)**.

AA.2.8 **Modification in Implemented SPS under Power Step-Down Condition**

- i. The implemented SPS at 400 kV GSS Bikaner needs to be made directional in view of the tripping incident that occurred on 11.03.2026 at 11:41 hrs under step-up condition.
- ii. Following the above incident, and upon request of SLDC Rajasthan, RVPN has made the SPS directional on 13.03.2026.

iii. The forum is requested to ratify the aforesaid modification carried out by RVPN on 13.03.2026 based on the recommendation of SLDC Rajasthan.

AA.2.9 Request to RESC Forum

- i. The forum is requested to consider and approve the following SPS scheme under power step-up condition at 400 kV GSS Bikaner for 2 × 315 MVA, 400/220 kV transformers:

Table-3 : SPS solar feeders and logic

S. No.	SPS particulars	SPS feeder	SPS logic
1	Stage-1 of the SPS	Tripping of 220 kV S/C Gajner-Mahindra Susten line at 220 kV GSS Gajner end (200 MW solar feeder)	Trip commands for Stage-1 SPS shall be generated with a time delay of 5 seconds (DT) when all three phases of any one of the 400/220 kV ICT/transformers at 400 kV GSS Bikaner is overloaded beyond 110% (only in step-up condition) .
2	Stage-2 of the SPS	Tripping of 132 kV S/C Chhattargarh-NTPC line at 220 kV GSS Chhattargarh end (150 MW solar feeder)	Trip commands for Stage-2 SPS shall be generated with a time delay of 8 seconds (DT) when all three phases of any one of the 400/220 kV ICT/transformers at 400 kV GSS Bikaner is overloaded beyond 110% (only in step-up condition).
3	Stage-3 of the SPS	Tripping of 220 kV S/C Chhattargarh-Mahindra Solren line at 220 kV GSS Chhattargarh end (200 MW solar feeder)	Trip commands for Stage-3 SPS shall be generated with a time delay of 10 seconds (DT) when all three phases of any one of the 400/220 kV ICT/transformers at 400 kV GSS Bikaner is overloaded beyond 110% (only in step-up condition).

- ii. The implemented SPS at 400 kV GSS Bikaner has already been made directional (i.e., SPS signals are generated only when overloading occurs under power step-down condition). The forum is requested to consider and ratify the aforesaid modification carried out by RVPN on 13.03.2026.

Members may kindly deliberate.