



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

उत्तर क्षेत्रीय विद्युत समिति

Northern Regional Power Committee

सं: उ.क्षे.वि.स./प्रचालन/106/01/2021/8721-8762

दिनांक: 16.09.2021

**विषय: प्रचालन समन्वय उप-समिति की 187<sup>वीं</sup> बैठक की अतिरिक्त कार्यसूची।**  
**Subject: Additional Agenda of 187<sup>th</sup> OCC meeting.**

प्रचालन समन्वय उप-समिति की 187<sup>वीं</sup> बैठक का आयोजन वीडियो कॉन्फ्रेंसिंग के माध्यम से दिनांक **21.09.2021** को **11:00** बजे से किया जायेगा। उक्त बैठक की अतिरिक्त कार्यसूची उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट <http://164.100.60.165/> पर उपलब्ध है।

187<sup>th</sup> meeting of the Operation Co-ordination sub-committee will be conducted through Video Conferencing on **21.09.2021** from **11:00 Hrs.** The additional agenda of this meeting has been uploaded on the NRPC web-site <http://164.100.60.165/>.

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(सौमित्र मजूमदार)

अधीक्षण अभियंता (प्रचालन)

सेवामें : प्रचालन समन्वय उप समिति के सभी सदस्य।

To : All Members of OCC

## A.1. NR Islanding Schemes

A.1.1 Based on the decisions taken in the meeting taken by Hon'ble Minister of State (IC) for Power and New & Renewable Energy on 28.12.2020, Islanding Schemes for NR have been continuously reviewed/discussed in various forums during Apr'21 – Aug'21. In the 186<sup>th</sup> OCC meeting (agenda no. 10), schemes and their status were discussed at length. Moreover, the implemented as well as proposed Islanding Schemes of NR have been categorized in following manner:

Islanding Scheme	SLDC	Status	Category	Remarks
Delhi IS	Delhi	Implemented	Category-I	Major City
NAPS IS	UP	Implemented	Category-I	Sensitive Generation
RAPS IS	Rajasthan	Implemented	Category-I	Sensitive Generation
Agra IS	UP	Newly Proposed	Category-I	Strategic Load
Jodhpur-Barmer-Rajwest IS	Rajasthan	Newly Proposed	Category-I	Strategic Load
Patiala-Nabha Power Rajpura IS	Punjab	Newly Proposed	Category-I	Strategic Load
Pathankot-RSD IS	Punjab	Newly Proposed	Category-I	Strategic Load
Talwandi Sabo IS	Punjab	Newly Proposed	Category-II	Others
Dehradun IS	Uttarakhand	Newly Proposed	Category-I	Strategic Load
Jammu-Salal IS	J & K	Under Discussion	Category-II	Others
Suratgarh IS	Rajasthan	Under Discussion	Category-I	Strategic Load
Chamba-Chamera IS	HP	Under Discussion	Category-II	Others
Kangra-Chamba-Bairasuil IS	HP	Under Discussion	Category-II	Others
Kullu-Dehar IS	HP	Under Discussion	Category-II	Others
Butari-Jamsher-Verpal IS	Punjab	Under Discussion	Category-II	Others
Kargil-Ladakh IS	Ladakh	Under Discussion	Category-I	Strategic Load
Lucknow-Unchahar IS	UP	Under Implementation	Category-I	Major City

A.1.2 The current status of Islanding Schemes in NR is attached as **Annexure- AA.I**.

***Members from respective SLDCs are requested to update the status required for Annexure-AA.I.***

## B.1. Cyber security in Power system operation:

Cyber security has been a very important aspect of power system operation. Cybercriminals are trying to exploit the vulnerabilities present in IT and OT systems of important organizations. In view of above, Ministry of Power (MOP) is continuously taking measures to ensure cyber security of the power sector and following up with all

the organizations under its umbrella. All the RLDCs and NLDC are critical assets of the power system operation and to take up the issues relating to cyber security, CERT-GO (grid operation) was formed by MOP and responsibility was entrusted upon POSOCO. CERT-GO ensure the uniformity in confidentiality, integrity and availability of information and resources to tackle the cyber threats before they can do any harm to the system.

In the same line, onboarding with agencies like CSK, NCIIPC, CERT-In has played a vital role in getting information about the threat actors and remediation of threats. All the RLDCs and states under respective RLDCs were directed to onboard with these agencies.

NRLDC has been rigorously following up with northern regional SLDCs to ensure cyber security best practices. In this regard, preparation of CCMP, CII and ISO 27001 documents have been the basis to ensure the cyber security of the system. Ministry is continuously monitoring each SLDCs progress. In the latest meeting held on Sep 14 2021, the ministry has advised each SLDC to complete CCMP and CII documents by 30<sup>th</sup> September 2021 strictly so that, each SLDC can adhere to cyber security best practices.

The latest status of CCMP, CII and ISO 27001 implementation is given below:

SLDCs	CCMP	CII	ISO 27001	Latest status of First VAPT of IT system (2021-2022)	Latest status of First VAPT of OT system (2021-2022)
<b>BBMB</b>	Approved	Proposal was sent to NCIIPC vide Email dated 05.08.2021 on which it has been asked to resubmit the proposal as per a template specific to SLDCs. Revised proposal will be sent shortly.	Under Process	Conducted on 14th July 2021	Conducted on 14th July 2021
<b>Delhi</b>	Received a reply to restructure CCMP as per new format, and the same will be resubmitted in the next week as per new format (As reported on 20th August by CISO).	Submitted to NCIIPC	Under Process	VAPT is in process	
<b>Haryana</b>	Draft CCMP plan prepared and submitted to CERT-GO for their comments. Now, CERT-IN share the revised template of CCMP plan. Accordingly, changes are being done in draft CCMP	All prerequisite documentation is being done. Under Process	Under Process	Tentatively will be done in December	The tentative schedule of VAPT of OT System is Sep-Oct 2021

SLDCs	CCMP	CII	ISO 27001	Latest status of First VAPT of IT system (2021-2022)	Latest status of First VAPT of OT system (2021-2022)
	plan and will be submitted in one week (as reported on 20th August by CISO).  Under Process				
UP	Comment/Feedback Sent to UP on 2nd Sept 2021	UPSLDC's first draft CII Report was submitted to NCIIPC on 03.05.2021 and thereafter the revised reports were also submitted to NCIIPC on 07.05.2021, 19.05.2021, 04.06.2021, 15.07.2021 (revised with POSOCO's comments) and 18.08.2021 after incorporating the suggestions of NCIIPC.	As proposal has been taken from CDAC for appointing them as consultant for obtaining ISO certification which is under process.	Conducted on 18th August 2021	
Rajasthan	Under Process	Under Process	Under Process	Tendering bid will open on 24th Sept for VAPT	
J&K	Draft Stage	Draft Stage	The ISO27001 process has not started	Planning for IT Infra Setup and necessary approval from upper management	
HP	HPSLDC is in progress of preparing CCMP on revised format as received from NRLDC on dated 09 Aug,2021.	HPSLDC has prepared CII on revised format received from NCIIPC and re-submitted to NCIIPC on 16 Aug,2021 for approval.	Pre-assessment exercise for implementation of ISO-27001 is in progress.	Will be conducted by end of October	
Uttarakhand	Comment/Feedback Sent to Uttarakhand on 7th Sept 2021	In process	N/A as system is very old	Pending for financial	

SLDCs	CCMP	CII	ISO 27001	Latest status of First VAPT of IT system (2021-2022)	Latest status of First VAPT of OT system (2021-2022)
				approval from MD	
<b>Punjab</b>	Comment/Feedback Sent to Punjab on 2nd Sept 2021	Matter taken up with C-DAC	Matter taken up with C-DAC	Conducted on 16th July 2021	

## B.2. Radial feeders list for physical regulation

During Aug'2021, continuous low frequency operation was observed on several days. The list of radial feeders become very important in this case for system operators. Utilities have been requested number of times to update list of radial feeders which can be opened on the directions of NRLDC/SLDCs to regulate the demand in case of threat to grid security. List of such radial feeders has been provided by respective utilities and is part of 'Operating Procedure of Northern Region'. Latest available list with NRLDC is attached as **Annexure-AB.I**.

In case of low frequency operation of grid at 49.7 Hz and over drawl more than 150 MW for non-renewable state/250 MW for renewable rich state by respective state control area, SLDC/Transmission Licensee may be directed (As per Clause 5.4.2 of IEGC/section 29 of Electricity Act, 2003) to open these radial feeders on the direction of NRLDC/SLDCs. The lines would be opened on rotational basis.

Since the list is part of Operating Procedure document of Northern region, it is requested that utilities may review the list timely and share any update required with NRLDC/ NRPC.

## B.3. Expediting commissioning of 765kV Anpara D – Unnao

765kV Anpara-D - Unnao line was planned to facilitate evacuation from Anpara-D generation and also relieving constraints in Singrauli-Anpara-Rihand complex. The line was scheduled to be commissioned in January 2012. However, the line is yet to be first time charged.

The line loadings in Anpara-Singrauli complex remain high, and there is always risk of any major multiple elements tripping in the complex. The loadings of 400kV lines from Anpara such as Anpara-Sarnath D/C, Anpara-Obra, Anpara-Mau are exceeding their N-1 safe limits on several occasions.

Since the lines in the complex are heavily loaded, providing shutdown to utilities and ensuring N-1 compliance remains a big challenge for RLDC as well as SLDC. Any prolonged shutdown/ outage of major element from the complex such as Rihand-Dadri pole or 765kV AnparaC-Unnao is always difficult.

POSOCO has been regularly flagging the issue in the complex in quarterly operational feedback. Same has also been raised by NRLDC in several OCC/TCC/NRPC meetings.

Present status as per CEA's monthly progress report (June 2021):

- Line Length: 426.149 Ckm
- Tower Locations: 1225 nos.
- Foundation completed: 1225 nos.
- Tower Erection: 1225 nos.
- Stringing: 423.671 Ckm

UPPTCL may kindly update the status of commissioning of already planned 765kV Anpara D – Unnao S/C and expedite its commissioning.

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## Annexure

### FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN UTTAR PRADESH

Sl. No	Transmission element to be opened	Affected Area	Approx load relief (MW)	Remarks
1	220kV Meerut- Gajraula	Gajraula	100	Radial feeder, Alternate supply available from 220kV Sambhal, MW loading limited to 25MW.
2	220kV Baghat (PG)- Baghat (UP) D/C	Baghat	60	Radial feeder, Alternate supply available from 132kV Source
3	220kV Allahabad (PG)- Jhusi	Jhusi	200	Radial feeder, Alternate supply available from 220kV Phoolpur
4	220kV Sohawal (PG)- Barabanki D/C	Barabanki	120	Radial feeder
5	220KV Mainpuri (PG)- Neemkarori D/C	Farrukhabad	120	--do--
6	220kV Gorakhpur (PG)- Gola D/C	Gorakhpur	80	--do--
7	132kV Balia (PG)- Bansdeeh	Balia	15	--do--
8	132kV Balia (PG)- Sikandrapur	Balia	30	--do--

### FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN PUNJAB

S No.	Transmission element to be opened	Power supply interruption in	Approx Relief (MW)	Remarks
1	132 kV Jamalpur- Ghulal D/C	Ghulal	91	No alternate supply available
2	66 kV Jamalpur – Chandigarh Road, Ludhiana	Chandigarh Road, Ludhiana	37	These feeders are replacement of Jamalpur- Miliarganj D/C as reported by PSTCL by Memo No. 1162/T-257 dated 23-11-12. In review, it was found that df/dt and UFR was already installed on Jamalpur-Miliarganj D/C
	66 kV Jamalpur- Sherpur, Ludhiana	Sherpur, Ludhiana	13	
3	220/66 kV ICT1, 2 & 3 at Sangrur	Sangrur and adjoining areas	166	No alternate supply available
4	132 kV Amritsar- Naraingarh D/C	Amritsar and Adjoining areas	100	No alternate supply available
5	220 kV Jalandhar- Kanjli D/C	Kapoorthala	64	No alternate supply available



### FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN JAMMU & KASHMIR

S No.	Transmission element to be opened	Power supply interruption in	Approx Relief (MW)	Remarks
1	220 kV Kishenpur-Udhampur D/C	Udhampur	100-150	Limited alternate feed may be available from 132 kV. Generation at Chenani HEP may be affected.
	220 kV Sarna-Udhampur			
2	220 kV Kishenpur-Barn D/C	Jammu	100	Limited alternate feed may be available from Jammu
3	220 kV Sarna-Hiranagar	Jammu & Hiranagar	300-400	Entire Jammu region could be affected. Alternate feed may be available from Barn and Udhampur. Generation at Sewa HEP may get affected
	220 kV Salal-Jammu D/C			
4	220 kV Wagoora-Ziankote D/C	Kashmir valley	200-300	Limited alternate feed may be available from Pampore. Generation at Lower Jhelum could get affected
5	220 kV Wagoora-Ziankote D/C	Kashmir valley	400-500	Though Uri generation may be evacuated through 400 kV Wagoora-Kishenpur D/C but the security would be affected.
	220 kV Wagoora-Pampore D/C			
	220 kV Kishenpur-Mir Bazar			
	220 kV Kishenpur-Ramban			

### FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN RAJASTHAN

S No.	Transmission element to be opened	Power supply interruption in	Approx Relief (MW)	Remarks
1	220 kV Bhiwadi (PG)-Kushkhera	Kushkhera and Kishangarh Bas	170	Limited alternate supply may be available. 220 kV Alwar-K. G. Bas-Kushkhera line may get overloaded
	220 kV Neemrana (PG)-Kushkhera			
2	220 kV Neemrana (PG)-Neemrana	Neemrana	180	Limited alternate supply may be available from Kotputli & Behror.
	220 kV Bhiwadi (PG)-Neemrana			
3	220 kV Khelna (PG)-Manoharpur	Manoharpur	100	Limited alternate supply of Manoharpur may be available from Kotputli
4	220 kV Anta-Lalsot	Lalsot Sawaimadhapur	180	Limited alternate supply may be available from Dausa
	220 kV Anta-Sawai Madhopur			
5	220 kV Dadri-Khetri-I	Khetri Chirawa	120	Limited alternate supply of Khetri and Chirawa may be available from other station
	220 kV Dadri-Khetri-II			
	220 kV Hissar-Chirawa			

## FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN HARYANA

S No.	Transmission element to be opened	Power supply interruption in	Approx Relief (MW)	Remarks
1	Feeders in Schedule A Panipat: a) 33kV Panipat-Swah(Chhajpur) b) 33kV Panipat-Untla c) 33kV Panipat-Israna d) 33kV Panipat-Narayana e) 33kV Panipat-Sanoli road	Panipat	150 (Approximately)	Radial Lines
2	Feeders in Schedule B Kurukshetra: a) 33kV Kurukshetra-Mathana b) 33kV Kurukshetra-Ajrana c) 33kV Kurukshetra-Kirmich	Kurukshetra, Dhulkote,	150 (approximately)	Radial Lines
	d) 11kV Kurukshetra-Bahadurpura e) 11kV Kurukshetra-Pipli Dhulkote: a) 66kV Dhulkote-Ambala b) 66kV Dhulkote-Babyl			
3	132kV Kundli line emanating from Narela BBMB	Rai-Sonepat	55	No alternate supply to Kundli
4	220/132kV, 220/66 kV ICTs at BBMB stations such Hissar, Ch. Dadri, Kurukshetra, Jagadri. Dhulkote, can be opened. However, many 132kV, 66 kV and below feeder are covered under Schedule A & B			

## FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN HIMACHAL PRADESH

S.No.	Transmission element to be opened	Power supply interruption in	Approx. Relief (MW)	Remarks
1	66kV Bhakra-Rakkar	Rakkar/Una	10-18	Details awaited
2	66kV Pong- Sansarpur	Sansarpur Terrace	2-5	Details awaited
3	220kV Dehar-Kangoo	Kunihar/Shimla	80-140	Limited alternate supply available from 132kV Hamirpur. 400/220kV Dehar ICT may be overloaded.
	132kV Dehar-Kangoo			
4	220kV Khodri-Majri	Giri/Solan	80-140	Limited Alternate supply may be available from 132kV Kunihar. Essential load at Majri: Oxygen plant, administrative offices etc.
	132kV Kulhal-Giri			
5	220kV Nallagarh-Nangal D/C	Nangal/Nallagarh/Baddi	180-315	Industrial load of Nangal may be affected.
6	66kV Pinjore-Parwanoo	Parwanoo	5-13	Alternate supply from Solan.

### FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN UT CHANDIGARH

S No.	Transmission element to be opened	Power supply interruption in	Approx Relief (MW)	Remarks
1	220 kV Nalagarh-Kishengarh-D/C	Chandigarh	100-200	No alternate supply available
2	66 kV Mohali- Sector 39 D/C	Chandigarh	30-60	No alternate supply available
3	66 kV Mohali- Sector 56 Ckt-1	Chandigarh	20-50	No alternate supply available

### FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN UTTARAKHAND

S No.	Transmission element to be opened	Power supply interruption in	Approx Relief (MW)	Remarks
1	220 kV Bareilly- Pantnagar	Pant Nagar/ Haldwani	200	Limited alternate supply may be available from 132 kV Kashipur to Haldwani
2	132 kV Nazibad-Kotdwar	Kotdwar	20-50	Generation of Chilla P/H may be interrupted
3	220/132 kV Sitarganj ICTs	Sitarganj, Kichha	50-100	Generation of Khatima will interrupt
	132 kV Dohna-Sitarganj			
	132 kV Dohna -Kichha			
4	400/220 kV Roorkee ICTs	Roorkee	100-200	Grid disturbance may occur due to overloading of 220kV Rishikesh-Sidkul & 240MVA ICT at 400kV Rishikesh
	220 kV Nara-Roorkee			

# FEEDERS FOR PHYSICAL REGULATION OF SUPPLY IN BBMB PREMISES

## SCHEDULE A LINES

1. PANIPAT

1) 132 KV PANIPAT - ISRANA

2) 132 KV PANIPAT - KARNAL

3) 132 KV PANIPAT - SAMALAKHA

33 4) ~~132~~ KV PANIPAT - UNTLA

5) 33 KV PANIPAT - SEWAH (CHHAJPUR) ✓

6) 33 KV PANIPAT - ISRANA ✓

7) 33 KV PANIPAT - SEC-29 (CHANDOLI) ✓

8) 33 KV PANIPAT - NARAYANA ✓

9) 33 KV PANIPAT - SANOLI ROAD ✓

NORMAL

33KV

5 feeders  
Radial

2. KURUKSHETRA

1) 132 KV KURUKSHETRA - PEHOWA

Normal

3. AGADHARI

1) 66 KV SADHAURA-I

2) 66 KV SADHAURA-II

Talakaw

NORMAL

4. HISSAR

1) 33 KV HISSAR TEXTILE MILLS

NORMAL

## SCHEDULE B LINES

1. PANIPAT

1) 132 KV PANIPAT - SONEPAT ✓

2. KURUKSHETRA

1) 33 KV KURUKSHETRA - MATHANA

2) 33 KV KURUKSHETRA - AJRANA

3) 33 KV KURUKSHETRA - KIRMICH

4) 11 KV KURUKSHETRA - BAHADURPURA (HSEB)

5) 11 KV KURUKSHETRA - PIPLI

5 NO  
Radial

3. GULKOTE

1) 66 KV AMBALA-II ✓

2) 66 KV BABYAL

Radial

4. ELHI-NARELA

1) 11 KV NARELA - NANGAL KALAN

2) 11 KV NARELA - KUNDLI

NORMAL

3) 132KV BAHADURGARH (LINE PERMANENTLY EXCLUDED FROM SCHEDULE BE AS INTIMATED BY NRLDC ON DATED 19.09.2013)

4) 132 KV SONEPAT