



सत्यमेव जयते

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

सं. उक्षेविस/ वाणिज्यिक/ 209/ आर पी सी (66वीं)/2023/5861-5908

दिनांक: 13, जून, 2023

सेवा में / To,

उ.क्षे.वि.स. के सभी सदस्य (संलग्न सूचीनुसार)
Members of NRPC (As per List)

विषय: उत्तर क्षेत्रीय विद्युत समिति की 66^{वीं} बैठक का कार्यवृत्त ।
Subject: 66th meeting of Northern Regional Power Committee – Minutes.

महोदय / Sir,

उत्तर क्षेत्रीय विद्युत समिति की 66^{वीं} बैठक दिनांक 30th May, 2023 को 11:30 बजे विडियो कॉन्फ्रेंसिंग के माध्यम से आयोजित की गयी थी। बैठक का कार्यवृत्त संलग्न है। यह उ.क्षे.वि.स. की वेबसाइट (<http://164.100.60.165/>) पर भी उपलब्ध है।

The 66th meeting of Northern Regional Power Committee (NRPC) was held at 11:30 Hrs. on 30th May, 2023 via video conferencing. MoM of the same is attached herewith. The same is also available on NRPC Sectt. website (<http://164.100.60.165/>).

भवदीय

Yours faithfully,

(वी. के. सिंह)

(V. K. Singh)

सदस्य सचिव

Member Secretary

प्रतिलिपि:

मोहम्मद शायिन, अध्यक्ष, एनआरपीसी एवं एमडी, एचवीपीएनएल (md@hvpn.org.in)

NRPC Members for FY 2023-24

S. No.	NRPC Member	Category	Nominated Member	E-mail
1	Member (GO&D), CEA	-	-	member.god.cea@gov.in
2	CTUIL	Central Transmission Utility	Chief Operating Officer	pcgarg@powergrid.in
3	PGCIL	Central Government owned Transmission Company	Director (Operations)	tyagir@powergrid.in
4	NLDC	National Load Despatch Centre	Executive Director	scsaxena@grid-india.in
5	NRLDC	Northern Regional Load Despatch	Executive Director	rk.porwal@grid-india.in
6	NTPC	Central Generating Company	Director (Finance)	jaikumar@ntpc.co.in
7	BBMB		Chairman	cman@bbmb.nic.in
8	THDC		ED (PSP&APP)	ljoshi@thdc.co.in
9	SJVN		CMD	sectt.cmd@sjvn.nic.in
10	NHPC		Director (Technical)	ykchaubey@nhpc.nic.in
11	NPCIL		Director (Finance)	df@npcil.co.in
12	Delhi SLDC	State Load Despatch Centre	General Manager	gmsldc@delhisldc.org
13	Haryana SLDC		Chief Engineer (SO&C)	cesocomm@hvpn.org.in
14	Rajasthan SLDC		Chief Engineer (LD)	ce.ld@rvpn.co.in
15	Uttar Pradesh SLDC		Director	directorsldc@upsldc.org
16	Uttarakhand SLDC		Chief Engineer	anupam_singh@ptcul.org
17	Punjab SLDC		Chief Engineer	ce-sldc@punjabsldc.org
18	Himachal Pradesh SLDC	Chief Engineer	cehpsldc@gmail.com	
19	DTL	State Transmission Utility	CMD	cmd@dtl.gov.in
20	HVPNL		Managing Director	md@hvpn.org.in
21	RRVNL		CMD	cmd.rvpn@rvpn.co.in
22	UPPTCL		Managing Director	md@upptcl.org
23	PTCUL		Managing Director	md@ptcul.org
24	PSTCL		CMD	cmd@pstcl.org
25	HPPTCL	State Generating Company	Managing Director	md.tcl@hpmail.in
26	IPGCL		Managing Director	md.ipgpp@nic.in
27	HPGCL		Managing Director	md@hpgcl.org.in
28	RRVUNL		CMD	cmd@rrvun.com
29	UPRVUNL		Managing Director	md@uprvunl.org
30	UJVNL		Managing Director	md@ujvnl.com
31	HPPCL	Managing Director	md@hppcl.in	
32	PSPCL	State Generating Company & State owned Distribution Company	CMD	cmd-pspcl@pspcl.in
33	DHBVN	State owned Distribution Company (alphabetical rotational basis/nominated by state govt.)	Director (Projects)	directorprojects@dhbvn.org.in
34	Jaipur Vidyut Vitran Nigam Ltd.		Managing Director	md@jvnl.org
35	Madhyanchal Vidyut Vitaran Nigam Ltd.		Managing Director	mdmvnl@gmail.com
36	UPCL		Managing Director	md@upcl.org
37	HPSEB		Managing Director	md@hpseb.in
38	Prayagraj Power Generation Co. Ltd.	IPP having more than 1000 MW installed capacity	Head (Commercial & Regulatory)	sanjay.bhargava@tatapower.com
39	Aravali Power Company Pvt. Ltd.		CEO	SRBODANKI@NTPC.CO.IN
40	CLP Jhajar Power Ltd.,		CEO	rajneesh.setia@apraava.com
41	Talwandi Sabo Power Ltd.		COO	Vibhav.Agarwal@vedanta.co.in
42	Nabha Power Limited		CEO	sk.narang@larsentoubro.com
43	Lanco Anpara Power Ltd		President	sudheer.kothapalli@lancogroup.com
44	Rosa Power Supply Company Ltd		Station Director	Hriday.tomar@relianceada.com
45	Lalitpur Power Generation Company Ltd		Managing Director	yksbankoti@bajajenergy.com
46	MEJA Urja Nigam Ltd.		CEO	hopmeja@ntpc.co.in
47	Adani Power Rajasthan Limited		COO, Thermal, O&M	jayadeb.nanda@adani.com
48	JSW Energy Ltd. (KWHEP)	Head Regulatory & Power Sales	jyotiprakash.panda@jsw.in	
49	RENEW POWER	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)	CEO	sumant@renew.com
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.	Chief Engineer, JKPTCL	sojpd@gmail.com
51	UT of Ladakh		Chief Engineer, LPDD	cepladakh@gmail.com
52	UT of Chandigarh		Executive Engineer, EWEDC	elop2-chd@nic.in
53	BYPL	Private Distribution Company in region (alphabetical rotational basis)	CEO	Amarjeet.Sheoran@relianceada.com
54	Bikaner Khetri Transmission Limited	Private transmission licensee (nominated by central govt.)	Vice-President	nihar.raj@adani.com
55	Adani Enterprises	Electricity Trader (nominated by central govt.)	Head Power Sales & Trading	anshul.garg@adani.com
56	Ajmer Vidyut Vitran Nigam Ltd.	Special Invitee	Managing Director	md@avvnl.org

Special Invitees: RE Generators in NR (willing utilities may ask meeting link from NRPC Sectt.)

Contents

A.1	Approval of MoM of 65 th NRPC meeting.....	2
A.2	Recommendation for PSDF fund for replacement of ACSR Panther conductor in 132KV Sitarganj (PGCIL)- ELDECO Sitarganj single circuit line (22.0 Kms) and 132 KV Sitarganj –Kichha line (31.5Kms) with HTLS conductor (Agenda by PTCUL).....	2
A.3	Replacement of existing 220/132kV 100 MVA ICT at Sitarganj with Regional Spare 220/132kV 160MVA ICT with provision of the LT Auxiliary supply from the tertiary (Agenda by POWERGRID).....	3
A.4	System Protection Scheme (SPS) for BARA TPS (Agenda by UPSLDC).....	4
A.5	System Protection Scheme (SPS) for Jawaharpur TPS (Agenda by UPSLDC).....	5
A.6	Clarifications on schemes viz. OPGW on 400kV Agra – Ballabgarh & 400kV Kishenpur – Wagoora line recommended in the 58th NRPC and approved by NCT (Agenda by CTU).....	5
A.7	Low voltage related issues in Rajasthan during high wind scenario (during solar hours) (Agenda by NRLDC).....	6
A.8	PMU Data of RVPN substations (Agenda by NRLDC).....	8
A.9	Multiple element tripping event in Rajasthan RE Complex (Agenda by NRLDC).....	8
A.10	Revival of 400kV Bhadla (RVPN)-Bikaner(RVPN) and 400kV Bhadla(RVPN)-Bikaner(PG) (Agenda by NRLDC).....	10
A.11	Despatching of Intra state Gas plants Under RRAS (Agenda by NRLDC).....	11
A.12	Minimising demand connection/ disconnection at hourly boundaries (Agenda by NRLDC).....	11
A.13	State-wise transmission constraints anticipated during high demand season (Agenda by NRLDC).....	12
A.14	Regarding procurement of additional SEMs in Northern region (Agenda by NRLDC).....	13
A.15	Budgetary provisions of RPCs (Agenda by NRPC Sectt.).....	14
A.16	Replacement of 02 Nos. lifts installed at NRPC office building with new lifts and comprehensive maintenance of two Nos. lifts for a period of five years through CPWD (Agenda by NRPC Sectt.).....	15
A.17	Status of contribution fee of FY 2022-23 (Agenda by NRPC Sectt.).....	15
A.18	Standardization of the terms and condition as well as technical specification of the equipment's in the bidding documents for the transmission Power utilities of Northern Region to adopt best Procurement practices. (Agenda by HVPN).....	16
A.19	Differences in awarding land/crop compensation for RoW of under construction lines and mitigation thereof, by the utilities of the Northern region. (Agenda by HVPN).....	17
A.20	Inclusion of Workstation Console in UNMS Project scope including AMC for NR UNMS systems at NRLDC/Grid India & CTUIL HQ reg. (Agenda by NRLDC).....	18

उत्तरी क्षेत्रीय विद्युत समिति की 66^{वीं} बैठक

66th MEETING OF NORTHERN REGIONAL POWER COMMITTEE

Time & Date of NRPC meeting: 11:30 HRS; 30th May 2023

Venue: Video Conferencing

Member Secretary, NRPC welcomed the Chairperson, NRPC and MD, HVPN and participants to the 66th NRPC meeting. He requested Chairperson, NRPC for opening remarks.

Chairperson, NRPC stated that NRPC is a good platform for knowledge sharing and resolution of issues related to NR power system. He requested for proactive participation in the deliberation, which will facilitate safe, reliable and economic operation of NR grid. He extended his good wishes to all the members for fruitful discussion and resolution of issues during the meeting.

Minutes of Meeting

A.1 Approval of MoM of 65thNRPC meeting

A.1.1 AEE(O), NRPC apprised the forum that minutes of 65thNRPC meeting, held on 21.04.2023, has been issued vide letter dtd.18.05.2023. No comments have been received till the date.

A.1.2 Hence, forum approved the minutes of 65th NRPC meeting as issued.

A.2 Recommendation for PSDF fund for replacement of ACSR Panther conductor in 132KV Sitarganj (PGCIL)- ELDECO Sitarganj single circuit line (22.0 Kms) and 132 KV Sitarganj –Kichha line (31.5Kms) with HTLS conductor (Agenda by PTCUL)

A.2.1 AEE(O), NRPC apprised forum that the cited matter was also deliberated in the 64th NRPC meeting (held on 24.03.2023) and accordingly it was decided that the study done by PTCUL need to be examined by CEA and CTU.

A.2.2 He stated that study of PTCUL has been examined by CEA in congruence with CTU and has been found in order as informed by CEA vide letter dtd. 09.05.2023 (copy attached as Annexure-I of Agenda).

A.2.3 Representative from CTU mentioned that the current proposal of re-conductoring is a temporary solution to reduce the over loading of existing line. However, in future to improve the reliability of the evacuation of power to cater the increased load demand in Kichha, ELDECO and nearby area, there is a need to plan new transmission network in

this region but the new transmission network is not able to come to fruition due to ROW issues in that area. Therefore, some parallel supply of power to feed Kichha and Rudrapur may be planned to reduce dependency on the existing network in that region.

A.2.4 Further, he also asked PTCUL to share with them the rating of HTLS conductor they are planning for replacement and advised PTCUL to plan it in consultation with Powergrid after taking into consideration the rating of bay equipment's.

A.2.5 MS, NRPC asked PTCUL to share with CTU the complete proposal along with the complete ratings of bays equipment's at both ends in consultation with Powergrid.

A.2.6 Executive Director, NRLDC stated that PTCUL should also explore and plan for reliability in power supply by planning additional lines apart from re-conductoring works. Further, regarding funding of scheme, PTCUL can execute project themselves or through PSDF funding. PTCUL should also plan for comprehensive study for conductor replacement and new transmission requirement in their network.

A.2.7 Decisions of the Forum:

- *Forum recommended the proposal of replacement of ACSR Panther conductor in 132KV Sitarganj (PGCIL)- ELDECO Sitarganj single circuit line (22.0 Kms) and 132 KV Sitarganj – Kichha line (31.5Kms) with HTLS conductor.*
- *Further, PTCUL was asked to submit to CTU the complete ratings of bays equipment's at both ends along with comprehensive proposal after consultation with POWERGRID.*
- *Considering increased demand in future, forum also advised PTCUL to plan remedial measures to make the transmission system 'N-1' compliant.*

A.3 Replacement of existing 220/132kV 100 MVA ICT at Sitarganj with Regional Spare 220/132kV 160MVA ICT with provision of the LT Auxiliary supply from the tertiary (Agenda by POWERGRID)

A.3.1 Representative from Powergrid apprised forum that there are 03 Nos. 100MVA 220/132kV ICTs commissioned at 220/132kV Sitarganj substation and none of them has tertiary winding therefore auxiliary supply of Sitarganj substation is catered through 02 Nos. 11kV UPCL LT Supply Feeder sources available at Sitarganj Substation.

A.3.2 Further, he submitted that both these LT Supply Feeder sources of UPCL are not reliable in operation and there are frequent interruptions of supply(especially during the summer season) due to fault in the 11kV feeders which causes frequent switching of the auxiliary supply at Sitarganj substation.

A.3.3 Powergrid also mentioned that in July 2022, 01 No. 160 MVA 220/132kV ICT(having the provision of the LT Auxiliary Supply from the tertiary)has been commissioned as

Regional Spare ICT at Sitarganj Substation of NR-3 under the project “Provision for Spare ICTs in Northern Region”.

A.3.4 Therefore, to mitigate the above problem Powergrid requested for Replacement of existing 01 no. 100MVA 220/132kV ICT at Sitarganj with Regional Spare 160MVA 220/132kV ICT (having the provision of the LT Auxiliary Supply from the tertiary) and keeping the replaced 100 MVA 220/132 kV ICT as regional spare.

A.3.5 CTU mentioned that for system strengthening/reliability regional spare ICT can be used as replacement. He further stated that generally, in practice for auxiliary supply at sub-station one source of supply is through state discom and other supply is through tertiary winding of ICT.

A.3.6 Powergrid highlighted that since this being an ISTS project expenditure will be through ADCAP.

A.3.7 Executive Director, NRLDC stated that UPCL may further intimate about the actions being taken at their end to minimise outages of auxiliary supply. As per CERC (Sharing of inter-State Transmission Charges and Losses) Regulations, 2020, cost for transformer component is to be borne by the concerned State.

A.3.8 NRLDC representative stated that as decided in 63rd NRPC meeting, POWERGRID can share list of regional spare availability with NRPC and it can be uploaded on NRPC website for benefit of all stakeholders. MS NRPC also asked POWERGRID to provide the aforesaid list.

A.3.9 **Decisions of the Forum**

- *For system strengthening/reliability, Forum agreed to the Replacement of existing 01 no. 100MVA 220/132kV ICT at Sitarganj with Regional Spare 160MVA 220/132kV ICT (having the provision of the LT Auxiliary Supply from the tertiary) and keeping the replaced 100 MVA 220/132 ICT as regional spare.*
- *As per CERC (Sharing of inter-State Transmission Charges and Losses) Regulations, 2020, cost for transformer component is to be borne by the concerned State.*
- *Decision on deemed availability would be dealt separately by NRPC Sectt. after examination of the cited matter as per CERC(Terms and Conditions of Tariff) Regulations, 2019 (as applicable).*

A.4 System Protection Scheme (SPS) for BARA TPS (Agenda by UPSLDC)

A.4.1 SE(O), NRPC apprised forum that SPS for Bara TPS has been deliberated in detail in 206th and 207th OCC meeting and the revised logic has been finalized in 207th OCC meeting (held on 19.05.2023).

A.4.2 AEE(O), NRPC highlighted that in 207th OCC meeting UPSLDC was asked to submit the plan for complete communication network/infrastructure in the Bara complex with NRPC Sectt.and NRLDC before implementation of the SPS scheme.

A.4.3 **Decision of the Forum:**

- *Forum approved the SPS scheme (attached as Annexure-I) for Bara TPS and asked UPSLDC to submit the plan for complete communication network/infrastructure in the Bara complex with NRPC Sectt. and NRLDC before implementation of the SPS scheme.*

A.5 System Protection Scheme (SPS) for Jawaharpur TPS (Agenda by UPSLDC)

A.5.1 SE(O), NRPC apprised forum that SPS for Jawaharpur TPS has been deliberated in detail in meeting held on 23.05.2023 (minutes attached as Annexure-III of Agenda).

A.5.2 Executive Director, NRLDC asked UPSLDC to apprise forum about the commissioning of two 1500 MVA ICTs at Jawaharpur, second 1000 MVA ICT at Mainpuri S/s and second circuit of 765kV Jawaharpur-Mainpuri line.

A.5.3 Representative from UPSLDC mentioned that two 1500 MVA ICTs at Jawaharpur is expected to be commissioned by December 2023. Further, he also intimated that timeline for second 1000 MVA ICT at Mainpuri S/s is 1.5 years and timeline for second circuit of 765kV Jawaharpur-Mainpuri line is around 2 years.

A.5.4 Executive Director, NRLDC asked UPSLDC to prepare a contingency plan for automatic load shedding of quantum matching with the tripping of generator depending on SPS operation so that frequency drop can be arrested. In addition to this, along with communication plan of SPS, execution time of different SPS logics may be mentioned for record purpose and verification in future.

A.5.5 **Decision of the Forum:**

- *Forum approved the SPS scheme (attached as Annexure-II) for Jawaharpur TPS and asked UPSLDC to submit to NRLDC a contingency plan for automatic load shedding of quantum matching with the tripping of generator depending on SPS operation so that frequency drop can be arrested.*

A.6 Clarifications on schemes viz. OPGW on 400kV Agra – Ballabhgarh & 400kV Kishenpur – Wagoora line recommended in the 58th NRPC and approved by NCT (Agenda by CTU)

A.6.1 SE(O), NRPC apprised forum that schemes regarding the OPGW replacement work on 400kV Agra – Ballabhgarh & 400kV Kishenpur – Wagoora line was initially deliberated in 20th TEST meeting of NRPC. After approval in the 20th TEST meeting, the matter

was taken up for discussion in the 58th NRPC meeting, wherein both the schemes were recommended by the board.

A.6.2 In the 11th NCT (National Committee on Transmission), the aforesaid schemes were approved under RTM mode to Powergrid.

A.6.3 CTU has submitted that above two no. of OPWG links awarded to Powergrid for replacement work were not originally implemented under ISTS schemes but by PowerTel and moreover, these links are partially being used in sharing mode for ISTS purpose.

A.6.4 Accordingly, CTU has requested that these schemes need to be modified as follows:

(a) Supply & Installation of OPGW on 400kV Agra – Ballabgarh (Length:181km)

(b) Supply & Installation of OPGW on 400kV Kishenpur – Wagooraine (Length:183km)

A.6.5 Further, CTU has also submitted that after implementation of the above schemes, the shared usage of the existing PowerTel links for ISTS purpose shall be discontinued and PowerTel usage for the new ISTS OPGW links, if any, shall be governed by CERC norms.

A.6.6 Representative from Powergrid mentioned that presently six fibres for each line are being shared for ISTS purpose.

A.6.7 Decision of the Forum:

- *Forum approved the following schemes mentioned below and opined that usage of the existing PowerTel links for ISTS purpose shall be discontinued and PowerTel usage for the new ISTS OPGW links, if any, shall be governed by CERC norms:*

(a) *Supply & Installation of OPGW on 400kV Agra – Ballabgarh (Length:181km)*

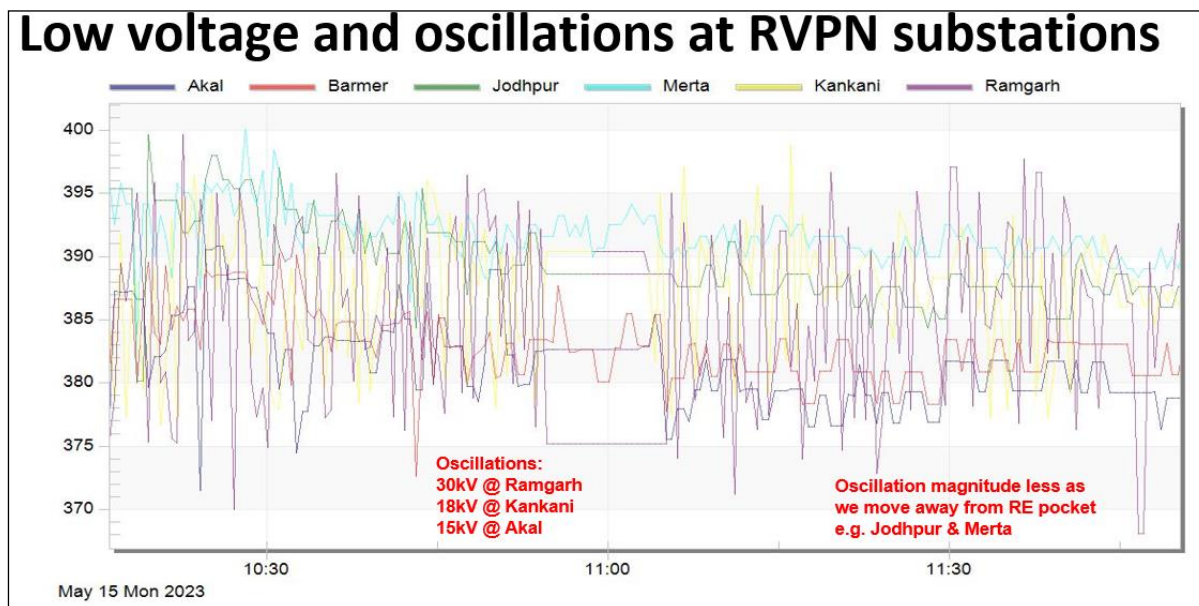
(b) *Supply & Installation of OPGW on 400kV Kishenpur – Wagoora line (Length:183km)*

A.7 Low voltage related issues in Rajasthan during high wind scenario (during solar hours) (Agenda by NRLDC)

A.7.1 NRLDC representative stated that recently, on 15th May 2023, both Solar and Rajasthan wind generation were high during solar hours. Due to high solar & wind generation in this pocket, low voltage were observed at RE pooling stations especially at Intra-state pool stations. Consequently, frequent oscillation (large voltage fluctuation) were observed at all RE pooling & nearby station in Rajasthan from 1000 hrs onwards.

A.7.2 He mentioned that voltage was fluctuating in range of 25-40kV at RE & nearby pooling stations. During the oscillations, bus voltages of RRVPN sub-stations near RE pockets

were low and fluctuating a lot. High MVAR drawl by RRVPN substations such as 400/220kV Kankani, Akal, Ramgarh, Jodhpur, Barmer etc. was observed during this scenario. SCADA & PMU Plots attached at Annexure-IV of agenda.



A.7.3 Further, he also stated that analysis of above events is being carried out based on PMU data available at NRLDC and performance of RE plants at ISTS is being studied. SLDC, Rajasthan was asked to:

- Study such events and share the report to NRPC/NRLDC along with the mitigation measures to curb such voltage fluctuations/low voltage/high MVAr drawal during peak solar hours.
- Expedite installation of reactive power resources in this area including capacitors & STATCOMs.
- Ensure compliance check of upcoming RE plants in RRVPN control area based on present CEA connectivity standards.
- Expedite commissioning of planned transmission system including upgradation of 400kV Jodhpur S/s to 765kV.
- Explore possibility of running old machines such as Giral TPS as synchronous condenser.

A.7.4 RRVPN representative informed the following:

- Proposal for capacitor bank installation was approved and is presently with PSDF. Few queries have been received from PSDF, reply for which would be submitted shortly.
- Approval from CEA has been received regarding STATCOMs, however internal approvals are pending.
- For other transmission schemes, approvals have been received but implementation is under progress.

A.7.5 MS, NRPC added that RRVPN was asked to assess capacitor bank requirement comprehensively at DISCOM and transmission level, so that surplus planning of capacitor can be avoided. The same may be expedited.

A.7.6 **Chairman, NRPC stated that RRVPN should immediately take actions for expediting works so as to resolve the issues highlighted by NRLDC. A letter shall be sent from NRPC sect. to RRVPN highlighting various operation issues being faced and expediting necessary actions as discussed.**

A.8 PMU Data of RVPN substations (Agenda by NRLDC)

A.8.1 Representative from NRLDC informed that Integration of PMU installed under Smart Transmission Network & Asset Management System (STNAMS) was discussed in detail in 64th NRPC Meeting (held on 24th March 2023) wherein it was recorded that work would be completed by 30th April 2023.

A.8.2 He highlighted that PMU data is very important to analyse transient/dynamic behaviour on fault/switching. Moreover, it is also important to analyse the recent oscillations observed in RE complex. However, data of PMUs installed in RRVPN stations is still not reporting to Rajasthan SLDC/ NRLDC control room.

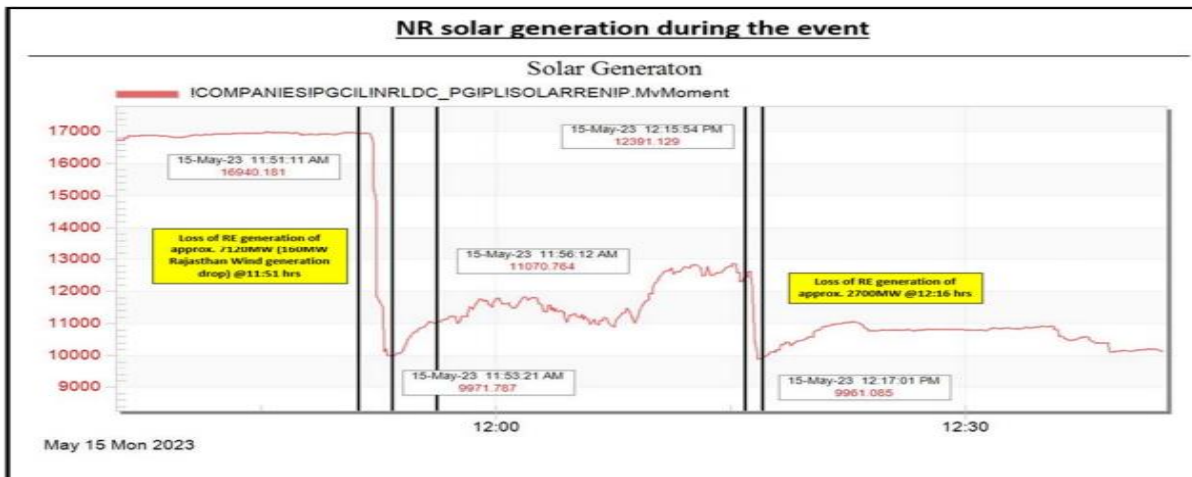
A.8.3 **RRVPN representative stated that the work would be completed by 15th June 2023.**

A.9 Multiple element tripping event in Rajasthan RE Complex (Agenda by NRLDC)

A.9.1 NRLDC representative briefed the forum about the event.

A.9.2 On 15th May 2023, at 11:51:55 hrs, 765kV Bhadla-Bikaner ckt-1 tripped on Y-B phase to phase fault during inclement weather condition (wind/dust storm). On this fault, during voltage dip, significant dip in RE generation was observed. Due to significant dip in RE generation and de-loading of 765kV EHV lines (as RE generation failed to recover 90% of pre-fault active power within 1 sec), over voltage (>1.1pu at 765kV & 400kV level at RE Pooling stations) scenario was triggered immediately after the fault that led to multiple element tripping in the RE complex.

A.9.3 NRLDC apprised that as per PMU & SCADA data, total drop in RE generation was approx. 7120MW (~6410MW ISTS RE generation and ~710MW Rajasthan RE generation). Due to significant dip in RE generation, frequency dropped by 0.58Hz (from 49.98Hz to 49.4Hz). As frequency touched 49.40Hz, load relief of approx. 1500MW (NR) and 4000MW (All India) was observed on UFR operation.



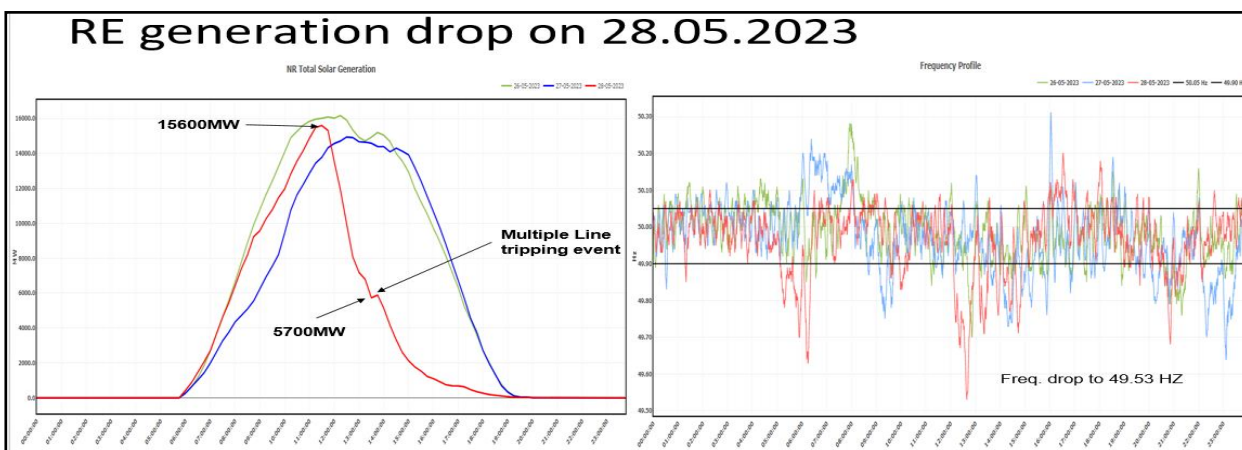
From the PMU data available at NRLDC, it is seen that only 9 out of 45 plants were LVRT/ HVRT compliant w.r.t active power recovery after fault (Annexure-V of agenda). All RE generators have been enquired to submit plant/inverter level high resolution data to analyse the event in detail vide NRLDC email dated 15.05.2023 & letter dated 18.05.2023.

A.9.4 ***NRLDC representative stated that issues such as gateway failure, SCADA data non-availability, slightly higher time taken for execution of instructions issued by NRLDC were observed during the restoration process. It was requested that utilities may take necessary actions to avoid such situations in future.***

Further, utilities having remote operation facilities may also ensure some minimal manpower at site (especially RE pooling substations) to ensure faster execution of commands issued from NRLDC during restoration process.

A.9.5 ***NRPC forum agreed that RE plants should carry out analysis at their end of the respective plant performance during the event and submit the data as required by NRLDC so that detailed analysis is carried out at NRLDC end. Further, NRLDC may share findings after discussions with RE developers at NRPC forum.***

A.9.6 NRLDC representative further shared the event of 28th May 2023, when due to cloud cover, there was sudden reduction in RE generation in Western Rajasthan and low frequency was observed.



A.9.7 NRPC forum asked RE plants to take actions to improve their forecasts and also revise their schedule accordingly even for intraday forecasts. This will become increasingly important with increase in share of RE generation in the grid.

A.10 Revival of 400kV Bhadla (RVPN)-Bikaner(RVPN) and 400kV Bhadla(RVPN)-Bikaner(PG) (Agenda by NRLDC)

A.10.1 Representative from NRLDC informed that as agreed in 202ndOCC meeting held in Dec 2022, an interim arrangement was done wherein both ckts. of 400kV Bhadla(RRVPN)-Bikaner(RRVPN) D/C lines were connected as 400kV Bikaner(PG)-Bikaner(RRVPN) till commissioning of Bikaner-II substation.

Recently, POWERGRID has informed that 400kV Bikaner-II S/s is expected to be commissioned shortly. For the commissioning works of the substation, 400kV Bikaner(PG)-Bikaner(RRVPN) both ckts need to be disconnected and extended from Bikaner(PG) to Bikaner-II S/s so as to form 400kV Bikaner(PG)-Bikaner II D/C lines whereas 400kV Bhadla(RRVPN)-Bikaner(RRVPN) D/C lines would be restored back.

The above proposal from POWERGRID was discussed in 65th NRPC meeting held on 21.04.2023 & then in separate meeting between NRLDC, POWERGRID, NRPC & CTUIL held on 25.04.2023.

As informed by RRVPN on 16.05.2023, 4 nos. of tower (309-312) in 400kV Bhadla-Bikaner (PG) & Bhadla-Bikaner (RRVPN) lines which were antitheft charged have collapsed.

A.10.2 NRLDC also stated that with present ISTS network arrangement in Rajasthan, commissioning of 400kV Bikaner-II S/s is required for allowing further RE generation evacuation from ISTS RE complex. Moreover, as informed by POWERGRID, for commissioning of 400kV Bikaner-II S/s, shutdown of 400kV Bikaner(PG)-Bikaner(RRVPN) both ckts. would be required. With present RE generation capacity, if these two lines are taken under shutdown and 400kV Bhadla(RRVPN)-Bikaner(RRVPN) D/C lines are not available, then nearly 1700-1800MW of ISTS RE curtailment would be required in view of grid safety & security. Further, additional RE generation is also expected to be commissioned in next 1-2 months.

Therefore, availability of 400kV Bhadla(RRVPN)-Bikaner(RRVPN) D/C lines is very important considering safe and secure RE evacuation from the grid.

A.10.3 RRVPN representative stated that work was expected to be completed by 15th Jun'23, but it will take more time and could be completed by 30th Jun'23.

A.10.4 Chairman NRPC asked RRVPN to expedite revival of these lines given the importance of these lines in RE complex and for facilitating shutdown of lines for rearrangement works.

A.10.5 NRLDC representative stated that in addition to these lines, towers have also collapsed in few other lines as mentioned below:

- 400kV Bhadla-Merta
- 400kV Bhadla-Jodhpur
- 765kV Phagi-Bhiwani ckt-1
- 400kV Jaisalmer-Barmerckt 1
- 400 KV Kankani-Jaisalmer
- 765kV Bikaner-Khetrickt 1

A.10.6 It was requested that utilities may timely plan for tower strengthening activities and availability of ERS as discussed in summer preparedness agenda in NRPC & OCC meeting. Further there is need to review tower design for such wind zone & terrain and requirement of additional measures by transmission utilities for tower strengthening.

A.10.7 ***MS NRPC also expressed concern on frequent outage of transmission lines due to tower collapse in the area and suggested to form a subgroup at NRPC level to analyse the reasons for tower collapse and recommendations.***

A.10.8 ***NRPC forum agreed to form subgroup to analyse the reasons for tower collapse and recommendations.***

A.11 Despatching of Intra state Gas plants Under RRAS (Agenda by NRLDC)

A.11.1 Representative from NRLDC informed that CERC vide order dated 23rd April, 2023 in Petition No. 06/SM/2023 has expanded the ambit of RRAS Regulation and all regional entity and intra state entity were made eligible to participate in RRAS whose tariff is determined or adopted by respective State Commission or whose tariffs are discovered through a competitive bidding process.

A.11.2 Gas based generation from GAMA in NR has been tied up through NVVN to harness the gas based generation for meeting the demand during crunch days. NTPC Faridabad in NR is intra state generator whose tariff is determined by CERC and is also eligible to participate in RRAS as per above CERC order.

A.11.3 He also mentioned that GAMA and NTPC Faridabad have extended their support for despatch under RRAS.

A.11.4 ***NRPC forum noted the same.***

A.12 Minimising demand connection/ disconnection at hourly boundaries (Agenda by NRLDC)

A.12.1 NRLDC representative stated that as per IEGC Regulation 5.2(j), no User / SEB shall cause a sudden variation in its load by more than one hundred (100 MW) without prior

intimation to and consent of the RLDC. Such large sudden load changes may lead to frequency excursions and voltage fluctuations. Due to scheduled / unscheduled power restrictions to groups of loads on rotational basis during the day, these frequency excursions may be seen especially at hourly boundaries. To avoid these excursions, following have been suggested in NRPC OCC meetings:

- a. Avoiding large load changes at hourly boundaries by
 - Creating large number of supply groups (of smaller quantum)
 - Staggering the supply hours (even to sub hourly and 15-minute time blocks).
- b. Flexing the generation adequately during these hours:
 - Taking care of generation in scheduling itself.
 - Ensuring adequate primary frequency response from generating stations under Governor action.

A.12.2 However, it is being observed that demand of some of the states is changing by significant quantum at hourly boundaries. Sample plots for Haryana (disconnection by 1000MW @ 1800hrs), UP (ramp up of 6000MW in 1 hour from 1900hrs to 2000hrs) and Punjab (demand connection of 2000MW @ 0800hrs) were presented in the meeting.

A.12.3 NRPC forum asked all states to take proactive measures for avoiding sudden connection/disconnection of demand especially at hourly boundaries and provide support in ensuring operation of grid frequency within the IEGC band.

A.13 State-wise transmission constraints anticipated during high demand season (Agenda by NRLDC)

A.13.1 NRLDC briefed that the statewise transmission constraints were discussed in detail in 66th NRPC meeting held in March 2023 wherein utilities were asked to take proactive steps to ensure that minimal transmission constraints are observed during the high demand season. State wise issues that need quick actions are listed below:

Commissioning of new elements for Haryana:

- 500MVA ICT at 400/220kV Deepalpur
- 500MVA ICT at 400/220kV Kurukshetra
- 220kV Sec 32 Panchkula and 220kV lines to Panchkula (PG) (expected by Jun 2023 end)
- 220kV lines from Panchkula(PG) to Pinjore (expected by Jun 2023 end)

A.13.2 MD, HVPNL stated that all these transmission elements would be available by June 2023 end.

Commissioning of new elements for Punjab:

- 315MVA to 500MVA ICT at Nakodar (expected by mid Jun 2023)
- 400/220kV Dhanansu S/s with lines at both 220kV & 400kV level
- Capacity augmentation at 400/220kV Nallagarh

A.13.3 PSTCL representative stated that new ICT at Nakodar is expected by 10th June 2023.

Commissioning of new elements for Delhi:

- 315MVA ICT replacement at Mundka

A.13.4 DTL representative stated that ICT replacement work at Mundka is expected to be completed by 15th June 2023.

Commissioning of new elements for UP:

- 500MVA ICT at Sohawal(PG) (**expected by 15th June 2023**)
- Shifting more load onto the recently commissioned substations to relieve loading n-1 non-compliant such as Azamgarh, Obra, Sarnath, Nehtaur, and Gorakhpur

Punjab, Haryana, HP, Uttarakhand & UP are communicating with NRLDC regularly regarding ATC/TTC assessment for summer/monsoon 2023. However, other states such as Delhi, Rajasthan and J&K are yet to provide their ATC/TTC assessments for summer/monsoon 2023. Punjab, Haryana and UP have shared their ATC/TTC assessment considering number of transmission elements that were anticipated to be commissioned. Based on actually commissioned transmission elements, these states are requested to review and submit their ATC/TTC for summer/monsoon 2023 at the earliest.

A.13.5 NRPC forum asked SLDCs to ensure that loading of ICTs and lines are below their N-1 contingency limits. Utilities were asked to take proactive steps to ensure that minimal transmission constraints are observed during the high demand season.

A.14 Regarding procurement of additional SEMs in Northern region (Agenda by NRLDC)

A.14.1 NRLDC representative mentioned that in line with Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and subsequent amendment thereof, Interface Energy Meter (IEM) is used for accounting and billing of electricity, connected at the point of interconnection between electrical systems of generating

company, licensee and consumers, directly connected to the Inter-State Transmission System (ISTS).

A.14.2 He also stated that delay in replacement of i.) Faulty meters and ii.) Meters with high time drift is a matter of concern as it creates issue in data validation and account preparation as well as error in Pool Loss calculation. Presently there are approx. 2700 SEMs installed in NR region. To ensure timely replacement of faulty meters and replacement of old meters where calibration has not been done for a long time, it is required to maintain sufficient reserve of meters around 10% of total available meters i.e. 270.

A.14.3 Additionally, considering the upcoming projects within the next one year, as per data obtained from CTUIL website, it is anticipated that additional 300 SEMs (Annexure-VI of agenda) may be required for installation. Adequate number of Data Collecting Devices (DCDs) alongside the SEMs also may be procured.

A.14.4 ***It was discussed & agreed to procure 500 SEMs and 50 DCDs so as to ensure seamless data validation and account preparation after review at CTUIL end.***

CTUIL representative stated that presently 74 spare SEMs are available in stock for total 2700 SEMs. Requirement as attached in annexure VI of agenda can be bifurcated in two lots and can be procured accordingly.

POWERGRID representative stated that 260 SEMs have been received as per LOA issued in Jan'22. New LOA issued for 378 SEMs in Dec'22 for Northern Region and supply is expected in Jun'23.

Procurement for requirements as attached in annexure VI of agenda may be planned accordingly.

Forum agreed for the same.

A.15 Budgetary provisions of RPCs (Agenda by NRPC Sectt.)

A.15.1 MS, NRPC apprised the forum that MoP vide letter dated 03.04.2006 has mandated RPC's to be self-financing.

A.15.2 Further, he briefed forum about the Standard Operating Procedure (SOP) (copy attached as Annexure-VII of agenda) issued by CEA for streamlining the process of fund utilization/budgetary provisions of all RPCs.

A.15.3 As per above SOP, all expenditure of Salary shall be met by budget provided by CEA. The same shall be reimbursed from RPC fund to CEA quarterly. All expenditure from other head shall be met by RPC fund.

A.15.4 ***Members took note of the information.***

A.16 Replacement of 02 Nos. lifts installed at NRPC office building with new lifts and comprehensive maintenance of two Nos. lifts for a period of five years through CPWD (Agenda by NRPC Sectt.)

A.16.1 MS, NRPC apprised the forum that CPWD carried out the inspection of both the lifts presently installed at NRPC Sectt. and has mentioned that the existing two Nos. lifts (OTIS and UT make) have completed its useful life as per CPWD specification. Currently these lifts are not in working condition since one year and in this condition the maintenance cost becomes high. Therefore, it is suggested by CPWD to replace both these lifts for smooth running.

A.16.2 Further, CPWD has submitted initial cost estimate amounting to Rs 66,93,398/- (vide letter dated 27.04.2023 (attached as Annexure-VIII of agenda) for replacement of two Nos. lifts and comprehensive AMC of these lifts for a period of five years.

A.16.3 As per SOP for RPCs issued vide CEA letter dtd. 01.05.2023, non-recurring expenditure of more than Rs. 25 Lac can be done after approval in RPC meeting. Accordingly, proposal is put up for approval of forum.

A.16.4 Decision of the forum

- *Forum approved the proposal for replacement of 02 Nos. lifts installed at NRPC office building with new lifts and comprehensive maintenance of two Nos. lifts for a period of five years through CPWD at an estimated cost amounting to Rs 66,93,398/- submitted by the CPWD.*

A.17 Status of contribution fee of FY 2022-23 (Agenda by NRPC Sectt.)

A.17.1 MS, NRPC apprised forum that during 63rd meeting of NRPC (held on 24.02.2023), NRPC members agreed to contribute a sum of Rs.10 Lakh per member as contribution towards annual expenditure of NRPC secretariat for F.Y. 2022-23. It was also decided that in case of payment beyond 31.03.2023, 1% simple interest per month on late payment shall be levied.

A.17.2 03 Nos. constituents have not paid contribution amount till the date, namely, Dakshinanchal Vidyut Vitran Nigam Limited, HPSEB, and Ajmer VVNL who have been issued reminder- II vide letter dated 10.05.2023 for the revised contribution amount of Rs 10,20,000/- in lieu of late payment. Forum asked Dakshinanchal Vidyut Vitran Nigam Limited and HPSEB. Ltd. to pay the membership fee along with due penalty as decided in 63rd meeting of NRPC.

A.17.3 NRPC Sectt. informed that UPPTCL has not paid due penalty amount of Rs 10,000/-. Further, APCPL and NHPC have requested for waiver of INR 10,000/- (1% penalty).

Forum asked UPPTCL to pay the due penalty amount. Request for waiver of penalty amount by NHPC and APCL was not considered.

A.17.4 SE(O), NRPC informed forum that NRPC vide letter dated 25th March, 2022 addressed to Managing Director, Ajmer VVNL sought representation in the NRPC & its sub-committees for FY 2022-23. Due to an inadvertent typographical error in the aforementioned NRPC letter, Jaipur VVNL was erroneously mentioned for representation in the NRPC for the year 2022-23 in place of Ajmer VVNL.

A.17.5 NRPC Sectt. proposed that since Ajmer VVNL could not represent itself as NRPC member for FY 2022-23 due to aforesaid communication error, Ajmer VVNL may be nominated as NRPC member for FY 2023-24 on ad-hoc basis, in lieu of FY2022-23 membership, without any liability of payment towards NRPC fund for FY 2023-24. However, Ajmer VVNL has to pay membership fee for FY 2022-23 without penalty amount.

A.17.6 **Decisions of the Forum:**

- *Forum agreed that since Ajmer VVNL could not represent itself as NRPC member for FY 2022-23 due to communication error, Ajmer VVNL is nominated as NRPC member for FY 2023-24 on ad-hoc basis, in lieu of FY2022-23 membership, without any liability of payment towards NRPC fund for FY 2023-24. However, Ajmer VVNL has to pay membership fee for FY 2022-23 without penalty amount. Therefore, for FY 2023-24, Ajmer VVNL and Jaipur VVNL both shall be members. Jaipur VVNL has to pay membership fee for FY 2023-24.*
- *Forum asked Dakshinanchal Vidyut Vitran Nigam Limited and HPSEB. Ltd. to pay the membership fee along with due penalty as decided in 63rd meeting of NRPC.*
- *Forum asked UPPTCL to pay the due penalty amount as the membership fee paid by it was received on 27.04.2023.*
- *Request for waiver of penalty amount by NHPC and APCL was not considered. Accordingly, both may deposit the same without any delay.*

A.18 Standardization of the terms and condition as well as technical specification of the equipment's in the bidding documents for the transmission Power utilities of Northern Region to adopt best Procurement practices. (Agenda by HVPN)

A.18.1 Chairperson, NRPC mentioned that that terms and condition as well as technical specification of the equipment's being adopted by the various Power utilities of the Northern Region during procurement process are different in spite of having almost similar weather/Terrain condition.

A.18.2 He opined that all the Power utilities of the Northern Region may share their terms and condition as well as technical specification of the equipment's available in their bidding

documents with each other for making a standard document by short listing the best practices being followed by different utilities.

A.18.3 The above exercise will result into following:-

- Number of qualified contractor/Manufacturer shall be increased which may lead to better participation in the bidding process.
- Monopoly of the contractor/Manufacturer shall be reduced substantially.
- Quoted price of the Contracts shall be reduced as more supplier available with increase in demand of similar nature.
- In case of any emergency the equipment or T&P etc. can be shared between the utilities.
- Standardization of technical specification of Major Transmission System equipment's.

A.18.4 Forum agreed with the views of Chairperson, NRPC and MS, NRPC opined that the same would be addressed in separate meeting with Power utilities of Northern Region.

A.18.5 **Decision of the Forum:**

A separate meeting with power utilities may be scheduled.

A.19 Differences in awarding land/crop compensation for RoW of under construction lines and mitigation thereof, by the utilities of the Northern region. (Agenda by HVPN)

A.19.1 Chairperson, NRPC highlighted that land/ crop compensation for the Right of Way (RoW) of under-construction lines paid by the Power utilities in the Northern Region is different in spite of having almost similar weather/Terrain conditions.

A.19.2 Sometimes two different licensees construct transmission lines in the same area but the compensation paid by them differs due to their state/centre policies. Peculiar situations have been faced when a higher payer got clearance for RoW and a lower payer unable to clear its RoW. Resentment in farmers can be seen due to different compensation paid in the same area.

A.19.3 He stated that there is a need to maintain uniformity in the policies for paying crop and land compensation. Therefore, he suggested that there should be uniform policies for crop and land compensation for all the Power utilities of the Northern Region or the Policy of the State be followed by all licensees in the same State.

A.19.4 Forum agreed with the views of Chairperson, NRPC and MS, NRPC opined that since awarding land/crop compensation for RoW of under construction lines is a state subject the same needs to be deliberated with CEA in separate meeting.

A.19.5 **Decision of the Forum:**

A separate meeting with CEA and states may be scheduled.

A.20 Inclusion of Workstation Console in UNMS Project scope including AMC for NR UNMS systems at NRLDC/Grid India & CTUIL HQ reg. (Agenda by NRLDC)

A.20.1 NRLDC representative stated that as approved in 22ndTeST meeting, Workstation consoles may be included at NRLDC and CTUIL under NR - UNMS project.

A.20.2 Accordingly, following additional scope may be included in the UNMS Project cost & AMC for NR UNMS scheme for amendment in the existing contracts:

- a. The BOQ of Workstation Console along with other associated software and hardware such as firewall, router, switch, furniture etc.
- b. Bandwidth connectivity & its recurring charges for CTUIL HQ Office.

A.20.3 In view of the above, it is proposed to consider the additional scope for the above-mentioned requirement as an amendment to the NR UNMS project.

A.20.4 The tentative BOQ and the cost (Supply & Service) of the additional scope shall be as below-

Sl. No.	Description#	CTUIL (Qty)	Cost (Supply & Service)	RLDC (Qty)	Cost (Supply & Service)
1	WORKSTATION CONSOLE with one monitor along with Furniture.	1 set	2.5 lac	1 set	2.5 lac

#

1. Associated HW/ SW; As applicable- WAN ROUTERS, Internal Firewall & L3 Lan Switch (1 Set)- 42 Lacs (approx.)
2. This cost is Excluding AMC Charges, Bandwidth Charges and Applicable Taxes.

Forum approved the above requirements for inclusion in NR-UMS. POWERGRID was requested to amend the project scope.

Meeting ended with vote of thanks to the Chair.

उत्तर प्रदेश राज्य मार प्रषण कन्द्र

उ०प्र०पॉवर ट्रांसमिशन कारपोरेशन लि०

(उत्तर प्रदेश सरकार का उपक्रम)

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U.P. State Load Despatch Centre

U.P. Power Transmission Corporation Ltd.

(A U.P. Govt. Undertaking)

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Annexure-I

No: - 2063 /SE(R&A)/EE-II/SPS

Dated: - 16/05/2023

Member Secretary, NRPC,

18 – A, SJSS Marg, Katwaria Sarai,

New Delhi, 110016.

Subject - Regarding revision of System Protection Scheme (SPS) at Bara TPS.

It is to inform you that 1500MVA, 765/400kV ICT-II has been commissioned on 31.03.2023 at Bara TPS. Following the commissioning of aforementioned ICT, SPS installed at Bara TPS needs to be revised. Discussion on revised SPS scheme at Bara TPS was held in 206th OCC meeting of NRPC and the special meeting held on subject issue on dated 12.05.2023. Based on discussion in the aforesaid meetings the revised logic has been finalized by UPSLDC which is enclosed herewith.

It is requested to kindly include this proposal as agenda in 207th OCC meeting of NRPC so that the same may be discussed and approved.

Encl: - As above

Arshad Jamal Siddiqui
Superintending Engineer (R&A)

No: - 2063 /SE(R&A)/EE-II/SPS

Dated: - 16/05/2023

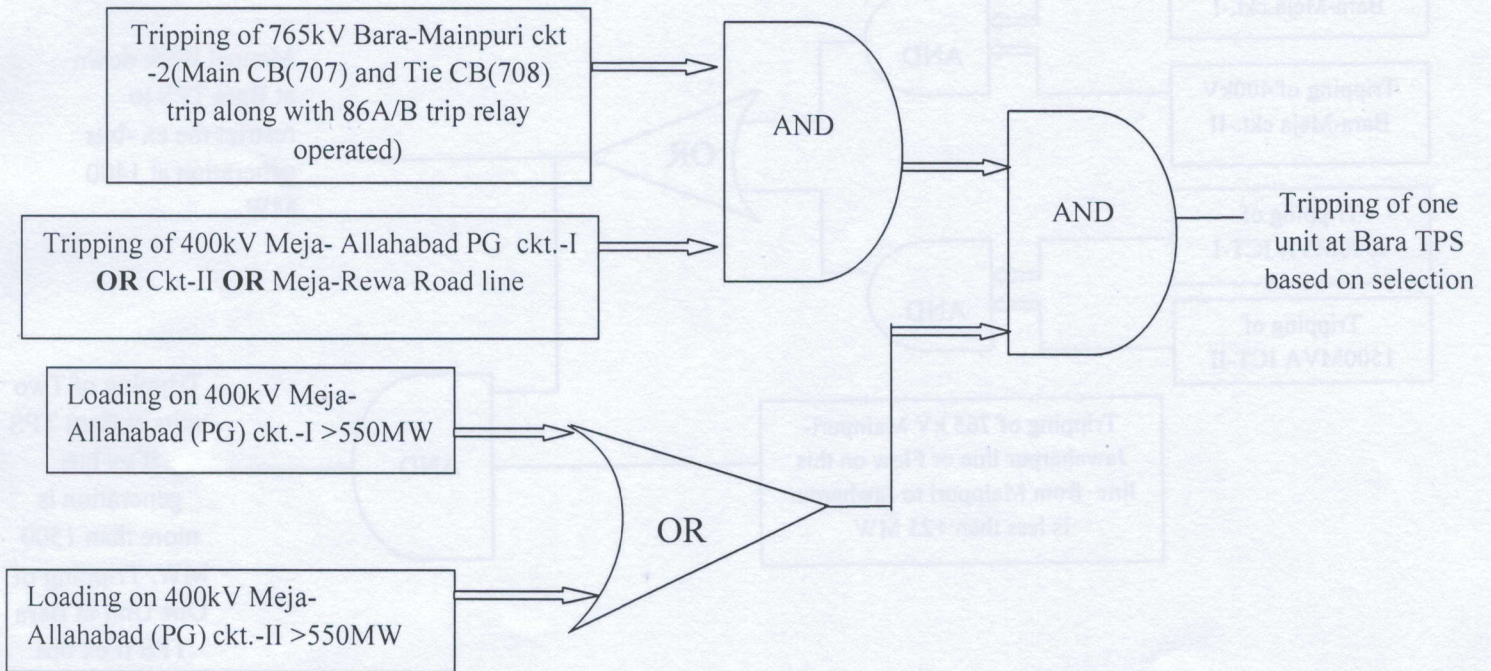
Copy forwarded to following for kind information and necessary action:-

1. Director, UPSLDC, Vibhuti Khand – II, Gomti Nagar, Lucknow.
2. Director (Operation), UPPTCL, 11th Floor, Shakti Bhawan Extn., Lucknow.
3. Chief Engineer (PSO), UPSLDC Vibhuti Khand – II, Gomti Nagar, Lucknow.
4. General Manager, NRLDC18-A, SJSS Marg, Katwaria Sarai, New Delhi – 110016.
5. President, M/s Prayag Raj Thermal Power Plant, Village-Khansemra, PO-Lohgara, Tehsil-Bara, Distt-Allahabad 212107.

(Arshad Jamal Siddiqui)
Superintending Engineer (R&A)

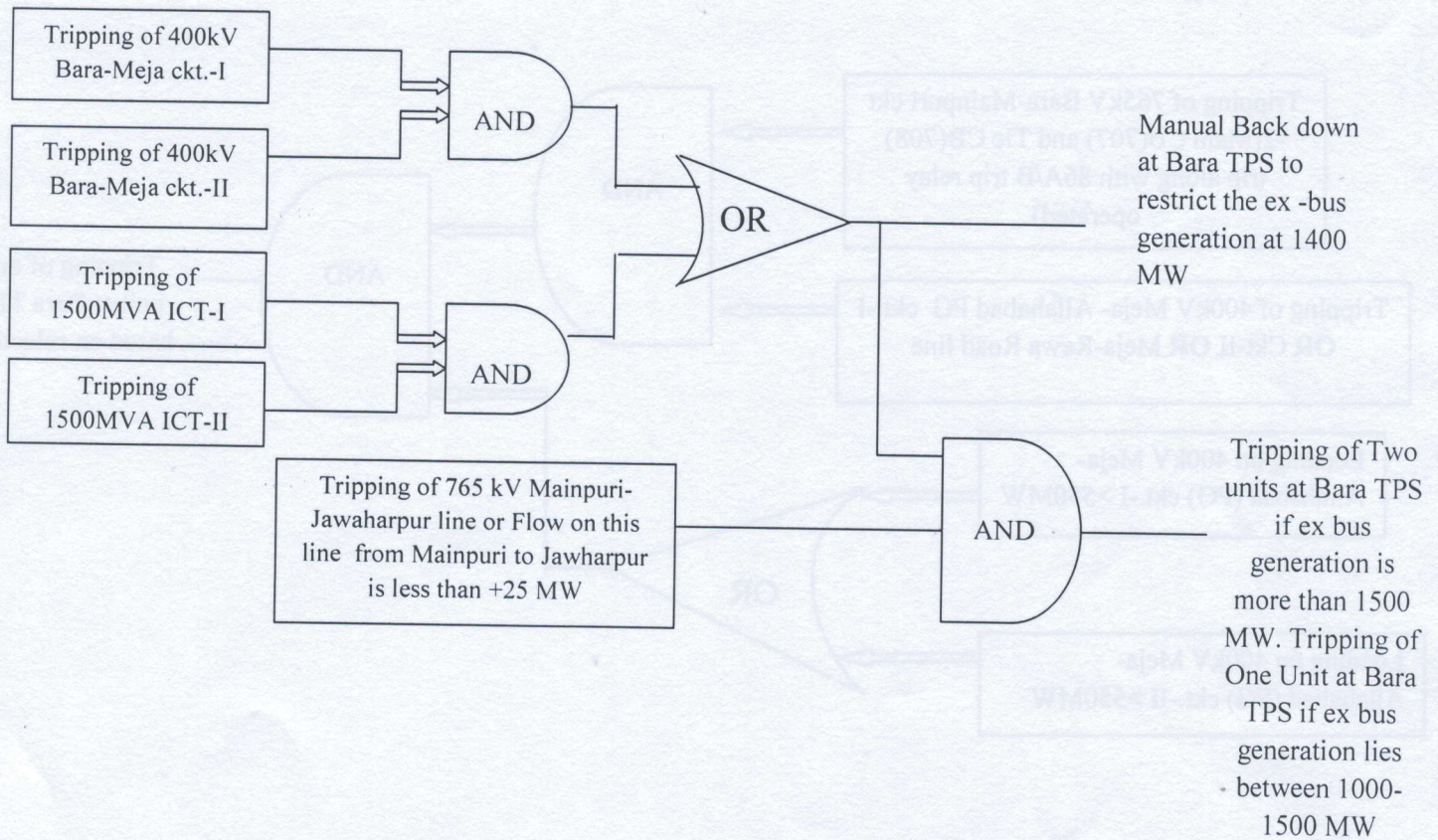
Revised logic for SPS at Bara TPS

Logic-1



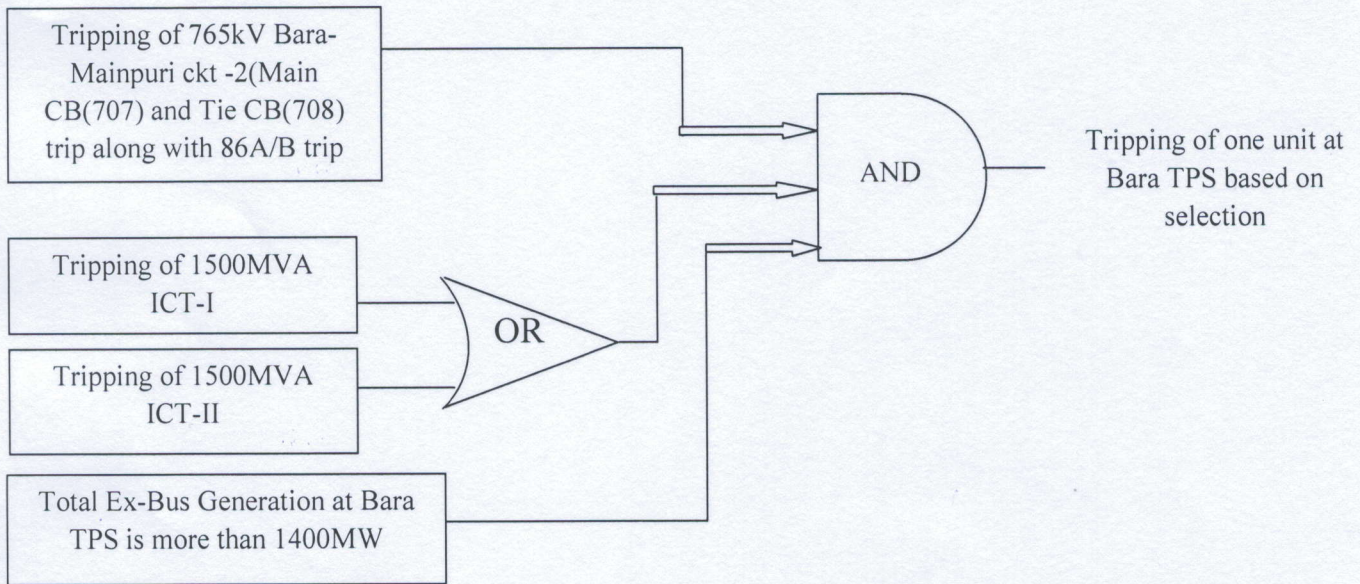
Note- To avoid the loading on 400kV Meja- Allahabad PG ckt.-I &II to go beyond 650 MW following the tripping of 765 kV Bara-Mainpuri Ckt -II ,as a Standard Operating Procedure, control room operator shall take action to bring down generation at Bara TPS to restrict the loading on 400kV Meja- Allahabad PG ckt.- I &II below 550 MW

Logic-2



Note- As a SOP, Bara TPS shall ensure that selection of Unit for tripping is done in such a way that Unit with highest generation gets tripped.

Logic-3



उत्तर प्रदेश राज्य भार प्रेषण केन्द्र

उ०प्र०पॉवर ट्रांसमिशन कारपोरेशन लि०

(उत्तर प्रदेश सरकार का उपक्रम)

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Annexure-II

No: - 2182/SE(R&A)/EE-II/SPS/ Jawaharpur

Dated: - 23.05. 2023

Member Secretary, NRPC,

18 – A, SJSS Marg, Katwaria Sarai,

New Delhi, 110016.

Subject – Agenda for 66th NRPC meeting regarding System Protection Scheme at Jawaharpur TPS.

A meeting to discuss SPS scheme for safe evacuation of power from Jawaharpur TPS was held on 23.05.2023 with representative from NRPC, NRLDC and Jawaharpur TPS (Minutes of Meeting is enclosed). Based on the discussion in the said meeting, the logic for SPS has been finalised by UPSLDC which is enclosed.

It is requested to kindly include the logic for SPS at Jawaharpur TPS as an agenda in the 66th NRPC meeting scheduled on 30.05.2023 for the discussion and approval.

Encl: - As above

Rsingh
Superintending Engineer (R&A)

No: - /SE(R&A)/EE-II/SPS/ Jawaharpur

Dated: - 2023

Copy forwarded to following for kind information and necessary action:-

1. Director, UPSLDC, Vibhuti Khand – II, Gomti Nagar, Lucknow.
2. Director (Operation), UPPTCL, 11th Floor, Shakti Bhawan Extn., Lucknow.
3. Director (Technical), UPRVUNL, 8thFloor, Shakti Bhawan Extn., Lucknow.
4. Chief Engineer (PSO), UPSLDC Vibhuti Khand – II, Gomti Nagar, Lucknow.
5. Chief Engineer, Jawaharpur Power Station Malawan village, Distt- Etah, Uttar Pradesh.
(gm.jawaharpur1@uprvunl.org).
6. General Manager, NRLDC18-A, SJSS Marg, Katwaria Sarai, New Delhi – 110016.

Superintending Engineer (R&A)

उत्तर प्रदेश राज्य भार प्रेषण केन्द्र

उ०प्र०पॉवर ट्रांसमिशन कारपोरेशन लि०

(उत्तर प्रदेश सरकार का उपक्रम)

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Gomti Nagar, Lucknow- 226010

E-mail: cepso@upslc.org

sera@upslc.org

No: - 2181 / SE(R&A)/EE-II/Meeting

Dated: - 23.05.2023

To,

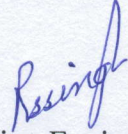
As per distribution list.

(Through E-mail)

Subject:- Minutes of Meeting regarding System Protection Scheme at Jawaharpur TPS.

A meeting to discuss System Protection Scheme at Jawaharpur TPS held on 23.05.2023. vide letter no. 2154/SE(R&A)/EE-II/SPS dated 20.05.2023. Copy of the Minutes of Meeting is enclosed for further necessary action.

Encl: As above.


Superintending Engineer (R&A)

No: - / SE(R&A)/EE-II/Meeting

Dated: -

2023

Copy forwarded for kind information and necessary action to the following:-

1. Director, UPSLDC, Vibhuti Khand – II, Gomti Nagar, Lucknow.
2. Director (Operation), UPPTCL, 11th Floor, Shakti Bhawan Extn., Lucknow.
3. Director (Technical), UPRVUNL, 8th Floor, Shakti Bhawan Extension, Lucknow.
4. Chief Engineer (PSO), UPSLDC, Vibhuti Khand – II, Gomti Nagar, Lucknow.

Superintending Engineer (R&A)

Distribution List

1. Member Secretary, NRPC, 18 – A, SJSS Marg, Katwaria Sarai, New Delhi, 110016.
2. Chief Engineer, (Commercial), UPRVUNL, Shakti Bhawan, Lucknow.
3. Chief Engineer, Jawaharpur Power Station Malawan village, Distt- Etah, Uttar Pradesh.
(gm.jawaharpur1@uprvunl.org).
4. SE (Operations), 18 – A SJSS Marg, Katwaria Sarai, New Delhi, 110016.(seo-nrpc@nic.in)
5. General Manager, NRLDC18-A, SJSS Marg, Katwaria Sarai, New Delhi – 110016.
6. Superintending Engineer (System Control), UPSLDC, Vibhuti Khand – II, Gomti Nagar,
Lucknow.
7. Superintending Engineer, Jawaharpur Power Station, Distt- Etah, Uttar Pradesh.

Minutes of Coordination Meeting held on 23.05.2023

A meeting to discuss proposed SPS scheme for Jawaharpur TPS was held via Google Meet on 23.05.2023. The list of the participants are as follows:-

NRPC Secretariat

1. Shri V.K Singh, Member Secretary, NRPC.
2. Shri Santosh Kumar, Superintending Engineer (Operation), NRPC.

NRLDC

1. Shri Gaurav Malviya, Manager, NRLDC.

UPSLDC

1. Shri A.J. Siddiqui, Superintending Engineer, (R&A), UPSLDC.
2. Shri Ram Sharan Singh, Executive Engineer, (R&A), UPSLDC.
3. Shri Mohsin Khan, Assistant Engineer, (R&A), UPSLDC.

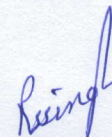
Jawaharpur TPS & UPRVUNL

1. Shri Atul Kumar, Chief Engineer (Commercial), UPRVUNL.
2. Shri Shyam ji Mishra, Superintending Engineer, Jawaharpur TPS, UPRVUNL.
3. Shri Abu Zar, Executive Engineer, Jawaharpur TPS, UPRVUNL.
4. Shri Gyanesh Sharma, Executive Engineer, Jawaharpur TPS, UPRVUNL.
5. Shri, B. Benerji, M/s Doosan.

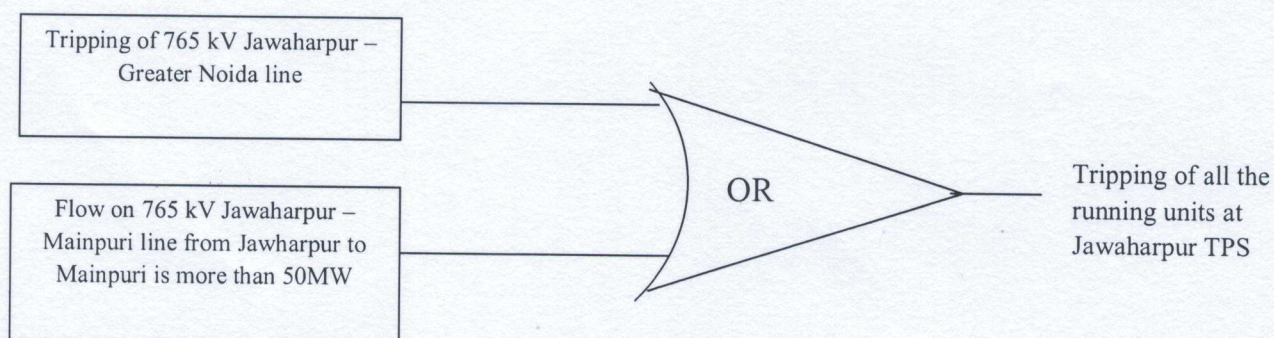
During discussion in the meeting UPSLDC representative informed that evacuation of power from Jawaharpur TPS is to be done through 765kV Jawaharpur-Gr. Noida line, 765kV Jawaharpur-Mainpuri line and 2*1500 MVA ICT at Jawaharpur. At present only 765kV Jawaharpur-Gr. Noida line and 765kV Jawaharpur-Mainpuri line are commissioned. UPSLDC representative also briefed about the logic of SPS at Jawaharpur TPS (enclosed). Discussion during the meeting may be summarized in following points:-

1. Due to availability of Single ICT of 1000MVA at 765kV S/S Mainpuri, power from Jawaharpur TPS can not be evacuated if 765kV Jawaharpur-Gr. Noida line is not available.
2. Therefore, SPS has to be planned for safe evacuation of power from Jawaharpur TPS. The logic for SPS is as follows:-
“With the tripping of 765kV Jawaharpur TPS- Gr.Noida line OR flow on 765kV Jawaharpur-Mainpuri line from Jawaharpur to Mainpuri is more than 50MW, all the running unit at Jawaharpur TPS shall trip”.
3. All the participants in the meeting expressed their consent over the logic. Member Secretary, NRPC directed UPSLDC to submit the SPS logic for Jawaharpur TPS as an agenda in the 66th NRPC meeting to be held on 30.05.2023.
4. Study and SPS logic is attached as Annexure.

Encl: As above.


Superintending Engineer (R&A)

Logic for SPS at Jawaharpur TPS



Study and Logic for SPS at Jawaharpur

In case of tripping of 765 kV Jawaharpur-Gr Noida line, there would be transmission constraint in evacuation of power from Jawaharpur TPS as there is single ICT of 1000 MVA capacity at 765 kV substation Mainpuri.

