



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 (50वीं)/2022/783-830 -

दिनांक : 22 फ़रवरी, 2022

सेवा में / To,

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

विषय: उत्तर क्षेत्रीय विद्युत समिति की 51^{वीं} बैठक की दिनांक एवं कार्यसूची ।

Subject: 51st meeting of Northern Regional Power Committee – Meeting Date and Agenda

महोदय / Sir,

उत्तर क्षेत्रीय विद्युत समिति की 51^{वीं} बैठक दिनांक 25 फ़रवरी, 2022 को 1100 बजे विडियो कॉन्फ्रेंसिंग के माध्यम से आयोजित की जाएगी । बैठक की कार्यसूची संलग्न है। बैठक का लिंक एवं पासवर्ड नियत समय पर ईमेल द्वारा उपलब्ध करा दिया जायेगा ।

The 51st meeting of Northern Regional Power Committee (NRPC) will be held at 1100 Hrs on 25th February, 2022 via video conferencing. Agenda for the same is attached. The link and password for joining the meeting would be send in due course of time to the respective email-IDs.

भवदीय
Yours faithfully,

न. भंडारी

(नरेश भंडारी)
(Naresh Bhandari)

सदस्य सचिव
Member Secretary

22/2/22

List of NRPC Members

1. Managing Director, PTCUL, Dehradun-248001, (Fax- 0135-2764496)
2. MD, UPPTCL, Lucknow-226001, (Fax-0522-2287792)
3. CMD, RRVNPL, Jaipur-302005, (Fax -01412740168)
4. Member (GO&D), CEA, New Delhi, (Fax-011-26108834)
5. CMD, PSTCL, Patiala-147001, (Fax-0175-2307779)
6. Commissioner/Secretary, PDD, J&K, Jammu, (Fax-0191- 2545447/ 01942452352)
7. Managing Director, HVPN Ltd, Panchkula -134109 (Fax-0172-2560640)
8. Chairman, BBMB, Chandigarh-160019, (Fax-0172-2549857/2652820)
9. Chief Engineer, UT of Chandigarh, Chandigarh-160066, (Fax-0172-2637880)
10. Managing Director, DTL, New Delhi-110002, (Fax-011-23234640)
11. General Manager, SLDC, DTL, New Delhi-110002, (Fax-011-23221069)
12. Managing Director, IPGCL, New Delhi-110002, (Fax-011-23275039)
13. Chief Engineer (SO&C), SLDC, HVPN, Panipat , (Fax-0172-2560622/2585266)
14. Managing Director, HPGCL, Panchkula-134109, (Fax-0172-5022400)
15. Representative of DHBVNL (Haryana Discom)
16. Managing Director, HPSEB Ltd, Shimla -171004 (Fax-0177-2658984)
17. Managing Director, HPPTC Ltd, Himfed Bhawan, Shimla-171005, (Fax-0177-2832384)
18. Managing Director, HPSLDC, HP State Load Despatch Authority, Totu, Shimla, (Fax-0177-2837649)
19. Managing Director, J&K State Power Dev. Corp., Srinagar, J&K, (Fax-0194-2500145)
20. Chairman and Managing Director, PSPCL, Patiala-147001, (Fax-0175-2213199)
21. Chief Engineer (LD), SLDC, Heerapur, Jaipur-302024, (Fax-0141-2740920)
22. CMD, RRVUNL, Jaipur-302005, (Fax-0141-2740633)
23. Representative of JVVNL (Rajasthan Discom)
24. Managing Director, SLDC, UPPTCL, Lucknow-226001, (Fax-0522-2287792)
25. Managing Director, UPRVUNL, Lucknow-226001, (Fax-0522-2288410)
26. Representative of MVVNL (UP Discom)
27. Managing Director, SLDC, PTCUL , Rishikesh, (Fax-0135-2451160)
28. Managing Director, UJVNL, Dehradun-248001, (Fax-0135-2763507)
29. Managing Director, UPCL, Dehradun-248001, (Fax-0135-2768867/2768895)
30. Director (Technical), NHPC, Faridabad-121003, (Fax-0129-2258025)
31. Director (Finance), NPCIL, Mumbai-400094, (Fax-022-25563350)
32. Director (Commercial), NTPC, New Delhi-110003, (Fax-011-24368417)
33. Representative of CTUIL, Gurgaon-122001
34. CMD, SJVNL, New Delhi, (Fax-011-41659218/0177-2660011)
35. Director (Technical), THDC, Rishikesh-249201, (Fax-0135-2431519)
36. Director (Commercial), POSOCO, New Delhi-110016, (Fax-011-26560190)
37. ED, NRLDC, New Delhi-110016, (Fax-011-26853082)
38. CEO, Aravali Power Company Pvt. Ltd., NOIDA, (Fax-0120-2591936)
39. CEO, Jhajjar Power Ltd., Haryana, (Fax-01251-270105)
40. Representative of Lanco Anpara Power Ltd., (Fax-124-4741024)
41. Station Director, Rosa Power Supply Company Ltd., (Fax-05842-300003)
42. Director and head regulatory and POWER Sale, JSW Energy Ltd., New Delhi (Fax- 48178740)
43. COO, Adani Power Rajasthan Ltd., Ahmedabad-380006 (Fax No- 07925557176)
44. COO, Talwandi Sabo Power Ltd. Distt: Mansa, Punjab-151302(Fax: 01659248083)
45. MD, Lalitpur Power Generation Company Ltd., Noida-201301(Fax: 01204045100/555, 2543939/40)
46. Director (Commercial & Operations), PTC India Ltd., New Delhi (Fax- 01141659144,41659145)
47. CEO, Nabha Power Limited, (Fax: 01762277251 / 01724646802)
48. Representative of Prayagraj Power Generation Co. Ltd.
49. Representative of Greenko Budhil Hydro Power Private Limited (Member IPP<1000 MW)
50. Representative of TPDDL (Delhi Private Discom)

Special Invitee:

- i. Member Secretary, WRPC, Mumbai-400 093.
- ii. Member Secretary, SRPC, Bangalore-560 009
- iii. Member Secretary, ERPC, Kolkata-700 033.
- iv. Member Secretary, NERPC, Shillong-793 003.

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उत्तरी क्षेत्रीय विद्युत समिति की 51^{वीं} बैठक

51st MEETING OF NORTHERN REGIONAL POWER COMMITTEE

Time & Date of NRPC meeting: 11.00 Hrs. on 25.02.2022

Venue: Video Conferencing

AGENDA

A.1 Approval of MoM of 50th NRPC meeting

A.1.1 Minutes of 50th NRPC meeting was issued on 16.02.2022. In respect of point no. 4.1 of the Minutes of Meeting, POWERGRID has proposed following correction:

“It is also apprised in above context that PGCIL have been requested to utilize 500 MVA ICT lying spare at 400 KV Malerakotla...”

To

*“It is also apprised in above context that PGCIL have been requested to utilize 500 MVA ICT (**without OLTC**) lying spare at 400 KV Malerakotla...”*

Members may kindly approve the Minutes of the Meeting with above correction.

B.1 Export Capability in NR-WR corridor (agenda by POSOCO)

B.1.1 POSOCO has requested to CTU vide letter dtd. 21.02.2022 (attached as **Annexure-I**) for expediting envisaged network strengthening in the corridor in view of limiting constraints in corridor.

Members may kindly deliberate.

B.2 Strengthening intra-state network for catering additional load (agenda by UPPTCL)

B.2.1 UPPTCL has proposed following intra-state work vide letter dtd. 21.02.2022 (attached as **Annexure-II**) for strengthening network for catering additional load: -

- i. Increasing capacity of 400/220 kV Moradabad from 2x500+1x240 MVA to 2x500+1x315 MVA
- ii. Increasing capacity of 400/220 kV Orai from 2x315 MVA to 2x315+1x240 MVA

Members may kindly deliberate and approve.

C.1 Default in release of outstanding dues by THDCIL’s beneficiary (agenda by THDCIL)

C.1.1 As on 17.02.2022, an overdue amount including LPS of approx. Rs. 304.11Cr. is due for payment. THDCIL has been vigorously pursuing with JKPCIL (J&K DISCOM) for expeditious payment. Despite vigorous follow up, JKPCIL (J&K DISCOM) has still to liquidate its old outstanding due. The details of the overdue amount on JKPCIL (J&K DISCOM), as on 17.02.2022, is as under:

DISCOMs	Principal Outstanding (Rs. in Cr.)	Late Payment Surcharge (Rs. in Cr.)	Overdue amount including LPS (Rs. in Cr.)
1	2	3	4=2+3
PDD & JKPCIL, J&K	284.82	19.29	304.11

C.1.2 Long pending dues are to be liquidated by the JKPCIL (J&K DISCOM). The amount is quite substantial and crucial. Due to scarce availability of funds with us, THDCIL is compelled to avail borrowings to meet day to day working capital needs, for servicing its long-term debts and adversely affecting its ongoing works. Thus, immediate payment is very much crucial for sustenance of THDCIL.

C.1.3 JKPCIL (J&K DISCOM) is requested to liquidate its above outstanding dues immediately.

Members may kindly deliberate.

C.2 Request for opening of Letter of Credit (agenda by THDCIL)

C.2.1 Despite various requests and reminders, J&K has not opened Letter of Credit for Financial Year 2021-22 till date. Therefore, it is requested to open the LC amounting to Rs. 16.34 Cr. on priority. Further, it is also requested to J&K that Letter of Credit amounting to Rs.14.45 Cr. for Financial Year 2022-23 shall also be opened by 31.03.2022.

Members may kindly deliberate.

C.3 Northern Region OPGW Strengthening Scheme (agenda by POWERGRID)

C.3.1 In 48th NRPC meeting, implementation of Northern Region OPGW Strengthening Scheme (798 Km) was approved. Estimated cost of Rs. 26.5 Cr was indicated which was based on contracts awarded in 2018-19.

C.3.2 Contract for the above project has been placed, however the DPR cost is revised due to the following reasons:

- a. Tender for OPGW based communication packages being carried out through Domestic Competitive Bidding for the first time, in line with guidelines on public procurement.
- b. Restriction of participation of OPGW manufacturers who have beneficial owners in countries land bordering India in public procurements, in line with section 144 of GFR (General Financial Rules) guidelines issued by Department of Expenditure, GOI in July'20. Qualified bidders in these tenders were reduced to 3 from 5.

- c. There is an increase in price of raw materials also like Aluminium and steel over the last 5 years.

C.3.3 Revised estimated DPR cost of the said project is approximately Rs. 41 Cr.

Members may kindly note.

C.4 Replacement of reactors of Singrauli Transmission System under Add-Cap 2019-2024 (agenda by POWERGRID)

C.4.1 420kV 50MVAR Agra Line Reactor at Kanpur substation and 420kV 50MVAR Lucknow Line Reactor at Bareilly substation are installed in Singrauli Transmission System. The conditions of these reactors are not good as they have already completed 40 years and 36 years in service respectively. The petition was filed in CERC to replace these reactors under ADDCAP 2019-2024. Hon'ble CERC has directed POWERGRID to approach RPC for its approval. The details of reactors to be replaced under Add-cap-2019-2024 are given below:

i. 420kV 50 MVAR Agra L/R at Kanpur, Year of manufacturing: 1981

The 420kV 50MVAR Agra Line Reactor at Kanpur has completed 40 years of service. During Condition Based Maintenance of above Reactor, it has been observed that there was increasing trend of Furan content, moisture and DGA.

M/s CPRI (Third party) was approached to analyse the test results and to assess the condition of the equipment. Based on the assessment CPRI has recommended for replacement of the said reactor.

As already mentioned, the said reactor has completed its useful life and chances of failure of the reactor is very high which may lead to forced outage of line due to high voltage. The availability of line reactor is much required for keeping the line into service.

Accordingly, Replacement of 420kV 50 MVAR Agra Line Reactor at Kanpur has been proposed under ADD-CAP 2019-2024.

ii. 420kV 50 MVAR Lucknow L/R at Bareilly, Year of manufacturing: 1985

The 420kV 50MVAR Lucknow Line Reactor at Bareilly has completed 36 years of service. During Condition Based Maintenance of above Reactor, it has been observed that there was increasing trend of Furan content, Low core IR value and DGA.

M/s CPRI (Third party) was approached to analyse the test results and to assess the condition of the equipment. Based on the assessment CPRI has recommended for replacement of the said reactor.

As already mentioned, the said reactor has completed its useful life and chances of failure of the reactor is very high which may lead to forced outage of line due to high voltage. The availability of line reactor is much required for keeping the line into service.

Accordingly, Replacement of 420kV 50 MVAR Lucknow Line Reactor at Bareilly has been proposed under ADD-CAP 2019-2024.

Members may kindly deliberate and approve.

D.1. New Conduct of Business Rules (CoBR) of NRPC

D.1.1 Ministry of Power has re-established NRPC vide gazette notification F. No. 23/21/2021-R&R dated 3rd December 2021. In view of this, there is a need to frame a new Conduct of Business Rules. Therefore, a draft CoBR is attached as **Annexure-III.**

Members may kindly deliberate and approve.

पावर सिस्टम ऑपरेशन कॉरपोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

POWER SYSTEM OPERATION CORPORATION LIMITED

(A wholly owned subsidiary of POWERGRID)



पंजीकृत एवं केन्द्रीय कार्यालय: बी-9, प्रथम तल, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110 016
Registered & Corporate Office : B - 9, 1st Floor, Qutub Institutional Area, Katwaria Sarai, New Delhi - 110 016
Website : www.posoco.in, www.nldc.in, Tel: 011-26536832, 26524522, Fax: 011-26524525, 26536901

संदर्भ: NLDC/SO/NR-WR Export/

दिनांक: 21st February 2022

सेवा मे,

मुख्य परिचालन अधिकारी
सेंट्रल ट्रांसमिशन यूटिलिटी,
पावरग्रिड कारपोरेशन लिमिटेड,
फर्स्ट फ्लोर, सौदामिनी, प्लॉट नंबर - 2, सेक्टर - 29,
इफको चौक मेट्रो के पास
गुडगाँव - 122011

विषय:- Regarding export capability in NR-WR Corridor

Sir,

Your attention is invited towards the power flow pattern in the WR-NR corridor under the prevailing scenario of high RE (Solar) generation in Rajasthan, low demand in Northern Region, high demand in Western and Southern Region coupled with low generation from conventional stations in Gujarat due to various issues and non-availability of HVDC Mundra-Mahendragrh bipole in reverse direction (NR to WR). The pattern of inter-regional flow between WR & NR for the last 6 months is given in Annexure – 1. The diurnal pattern of NR-WR flow for a typical day is provided in Annexure – 2 (a) along with the power flow from Rajasthan to Gujarat.

It may be noted that the power flow on the inter-regional lines viz. 765 kV Gwalior – Agra D/C, 765 kV Vindhyanchal – Varansai D/C, 765 kV Jabalpur – Orai D/C etc, is from WR to NR direction, whereas the flow on AC tie lines between Rajasthan (NR) and Gujarat (WR) viz 765 kV Chittorgarh – Banaskantha D/C & 400 kV Bhinmal – Zerda and 400 kV Kankroli – Zerda is in the NR to WR direction for most of the time.

The loading of 400 kV Bhinmal-Zerda S/C, 765/400 kV ICTs at Vadodara, 400 kV Banaskantha – Veloda D/C, 3x315 MVA, 400/220 kV ICT at Zerda & 400 kV Kala – Kudus D/C are N-1 non-compliant for considerable amount of time (Annexure-3). There have been instances when the export capability (ATC) of NR-WR corridor is breached during peak export hours.

Recent communication from NLDC dated 07th February 2022 regarding high loading in 400 kV inter regional lines between Rajasthan & Gujarat is enclosed for your reference.

The list of LTA/MTOAs granted from the ISTS solar plants in Rajasthan (as on 15.02.22) to other states in same and other regions is provided in Annexure - 4. It is noted that out of the total quantum (4596 MW) of granted LTA from the solar plants in Rajasthan, 1459 MW is allocated to states in Northern Region, 1267 MW to the states in Eastern Region whereas 1730 & 140 MW to states in Western and Southern region respectively.


The current TTC/ATC declared in the NR-WR Corridor is 2500/2000 MW with overloading of 400kV Zerda - Bhinmal on tripping of 400 kV Zerda - Kankroli being the limiting constraint. However, the transfer capability limits in the NR-WR corridor (NR Export) could not be located on the CTU website.

Frequent grid incidents involving loss of Solar generation during transmission element switching are also being experienced in Rajasthan area. While a detailed analysis is still underway, the preliminary information indicates that the incidents appear to be associated with low short circuit ratios, low fault levels at the solar pooling stations and HVRT/LVRT/reactive capability related issues of Solar inverters in Rajasthan.

Therefore, it is suggested that the envisaged network strengthening in this corridor may be expedited and the date of operationalization of additional LTAs being granted from Rajasthan may be aligned with the network augmentation to address the above stated constraints.

धन्यवाद,

भवदीय,


(आर. के. पोरवाल) 21/02/22

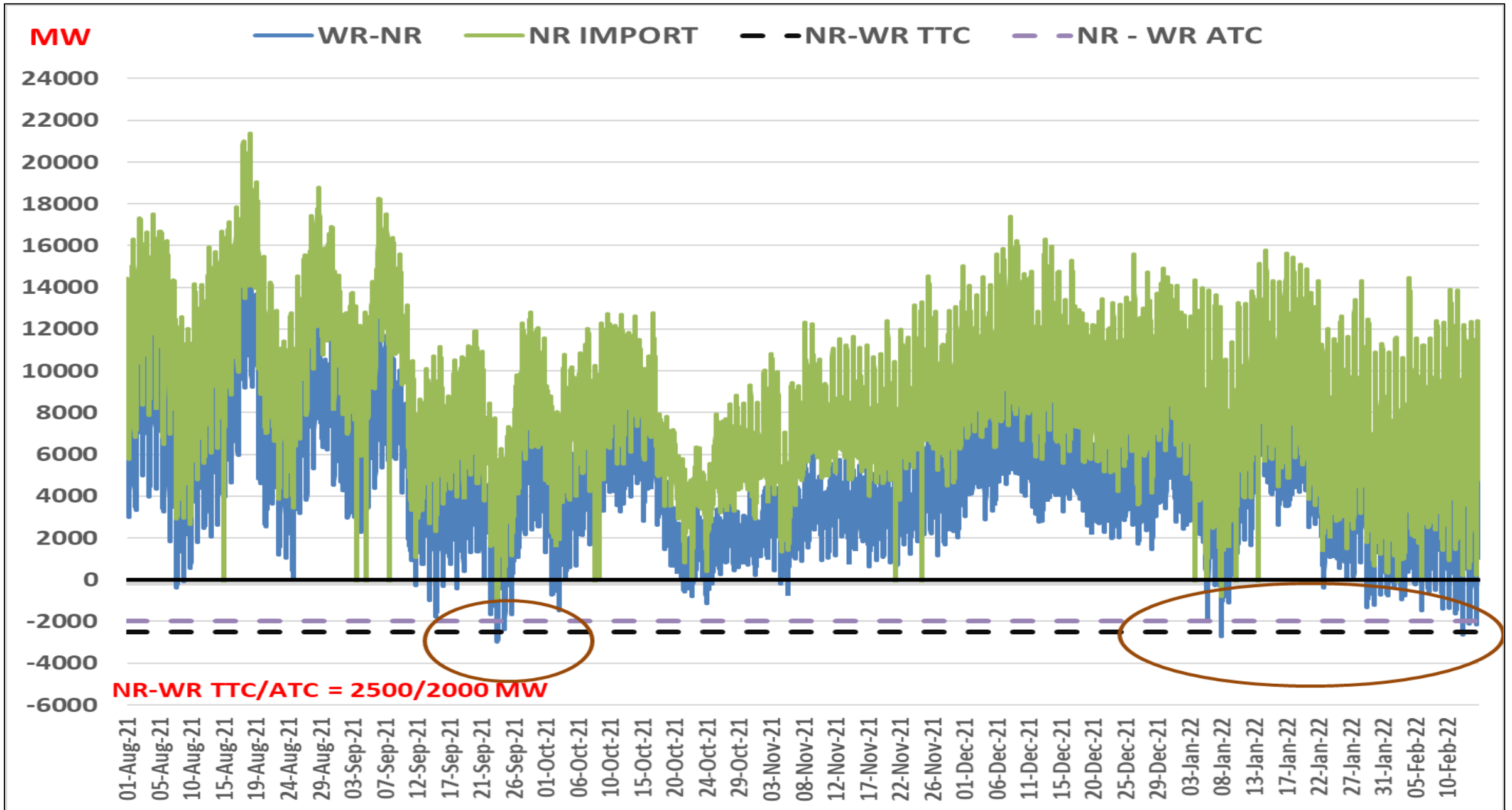
मुख्य महाप्रबंधक, रा भा प्रे के

Encl: As above

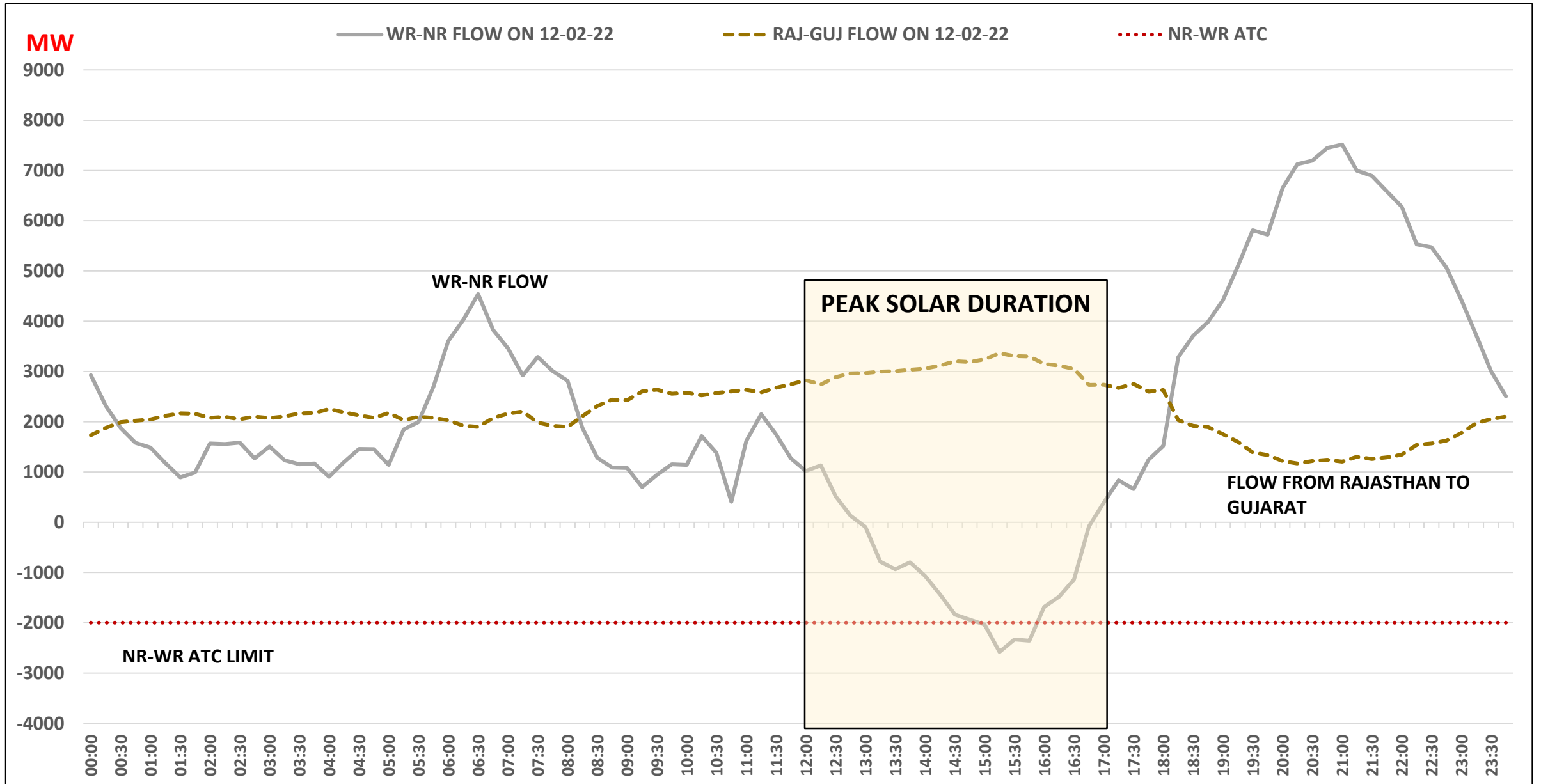
Copy to:

1. सदस्य (पावर सिस्टम), केंद्रीय विद्युत प्राधिकरण, सेवा भवन, आर के पुरम, नई दिल्ली
2. सदस्य सचिव, उत्तरी क्षेत्रीय विद्युत समिति/पश्चिमी क्षेत्रीय विद्युत समिति
3. कार्यकारी निदेशक, उ.क्षे.भा.प्रे.के/प.क्षे.भा.प्रे.के

Annexure – 1 - WR-NR & NR Import Flows from 01-Aug-21 to 15-Feb-22

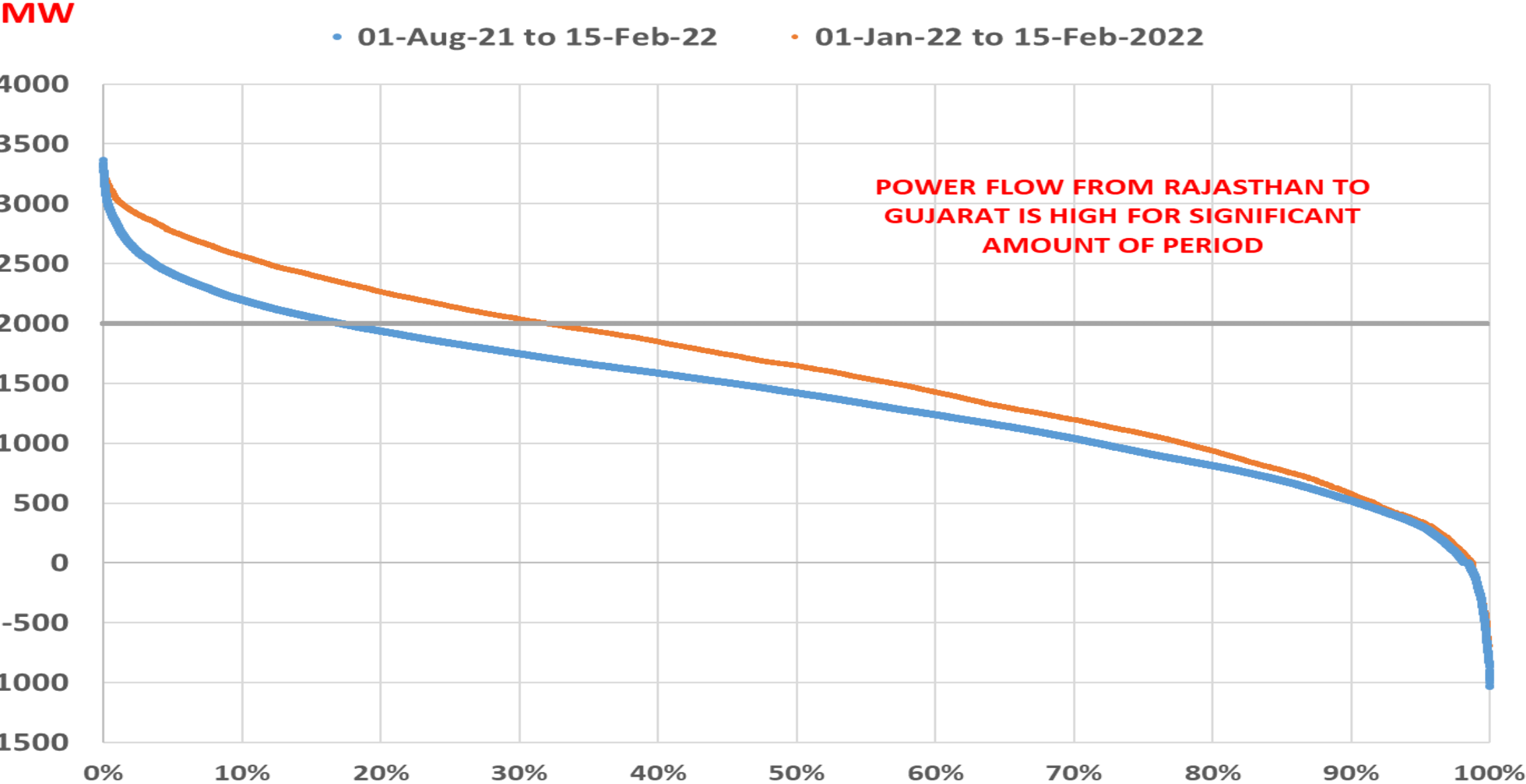


Annexure – 2(a) Pattern of WR-NR & Raj – Guj (Sec Axis) Flow for a Typical Day (12.02.2022)

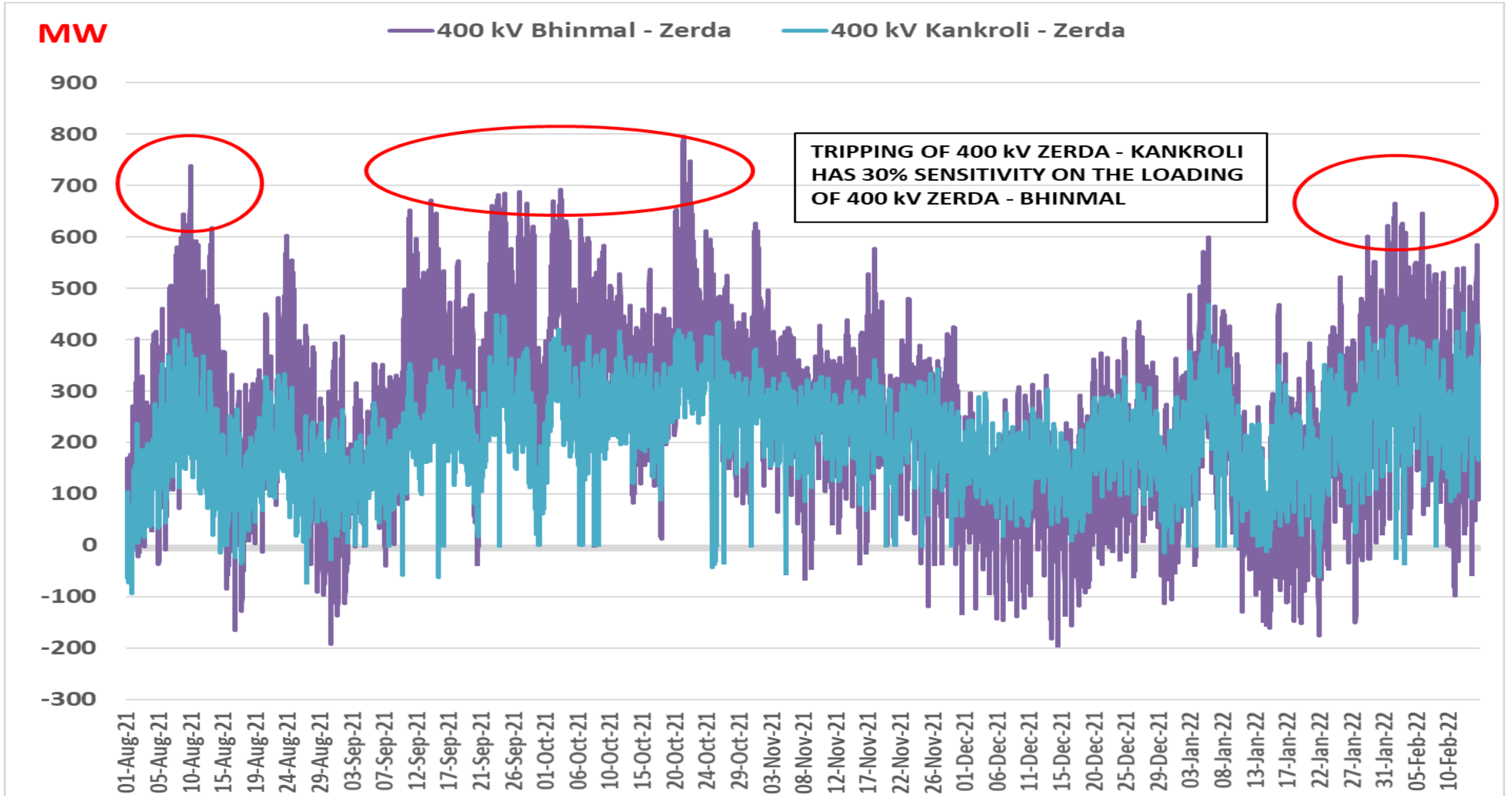


Annexure – 2 (b) Duration Plot of Rajasthan – Gujarat Flow

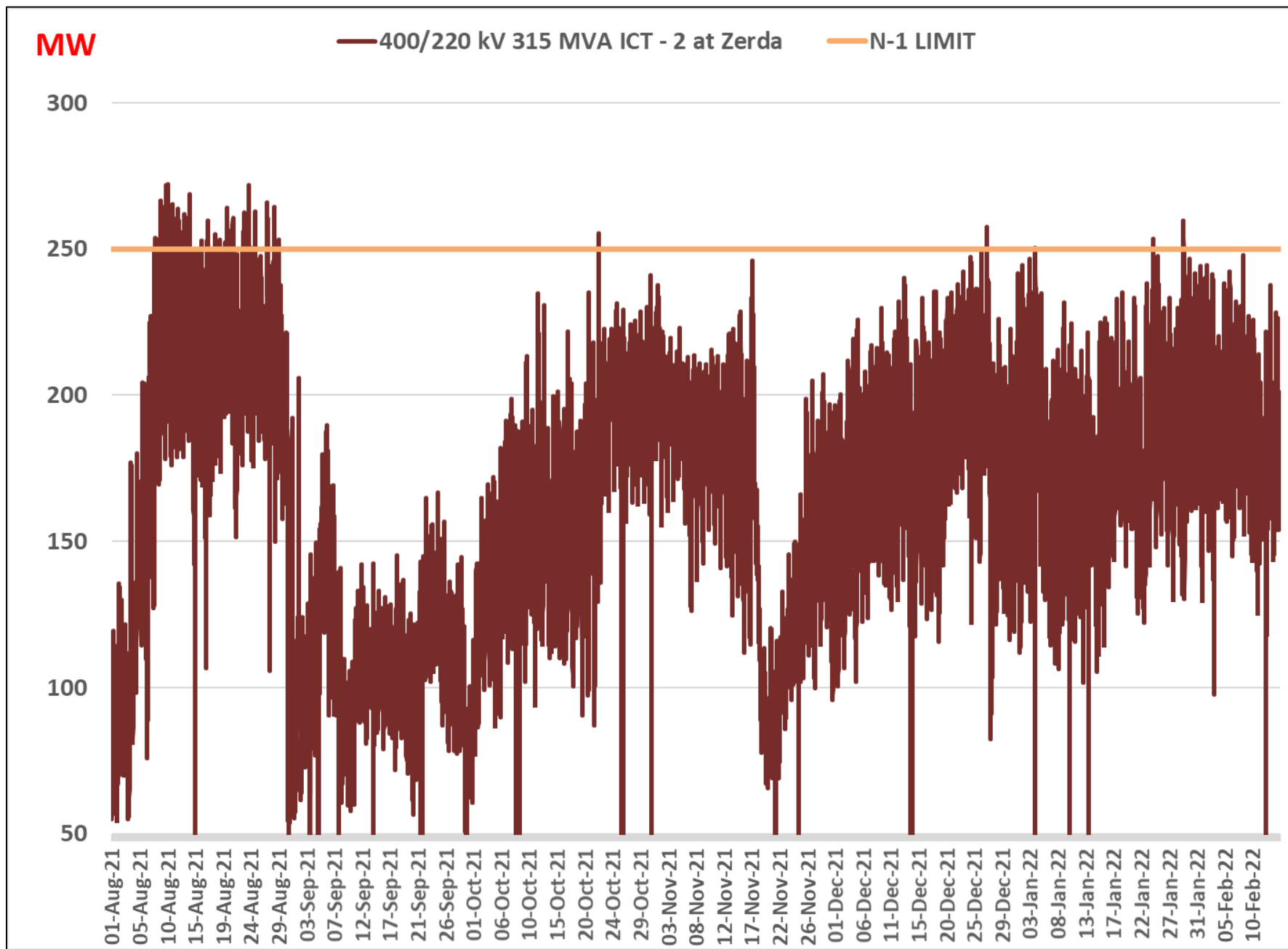
RAJASTHAN - GUJARAT FLOW



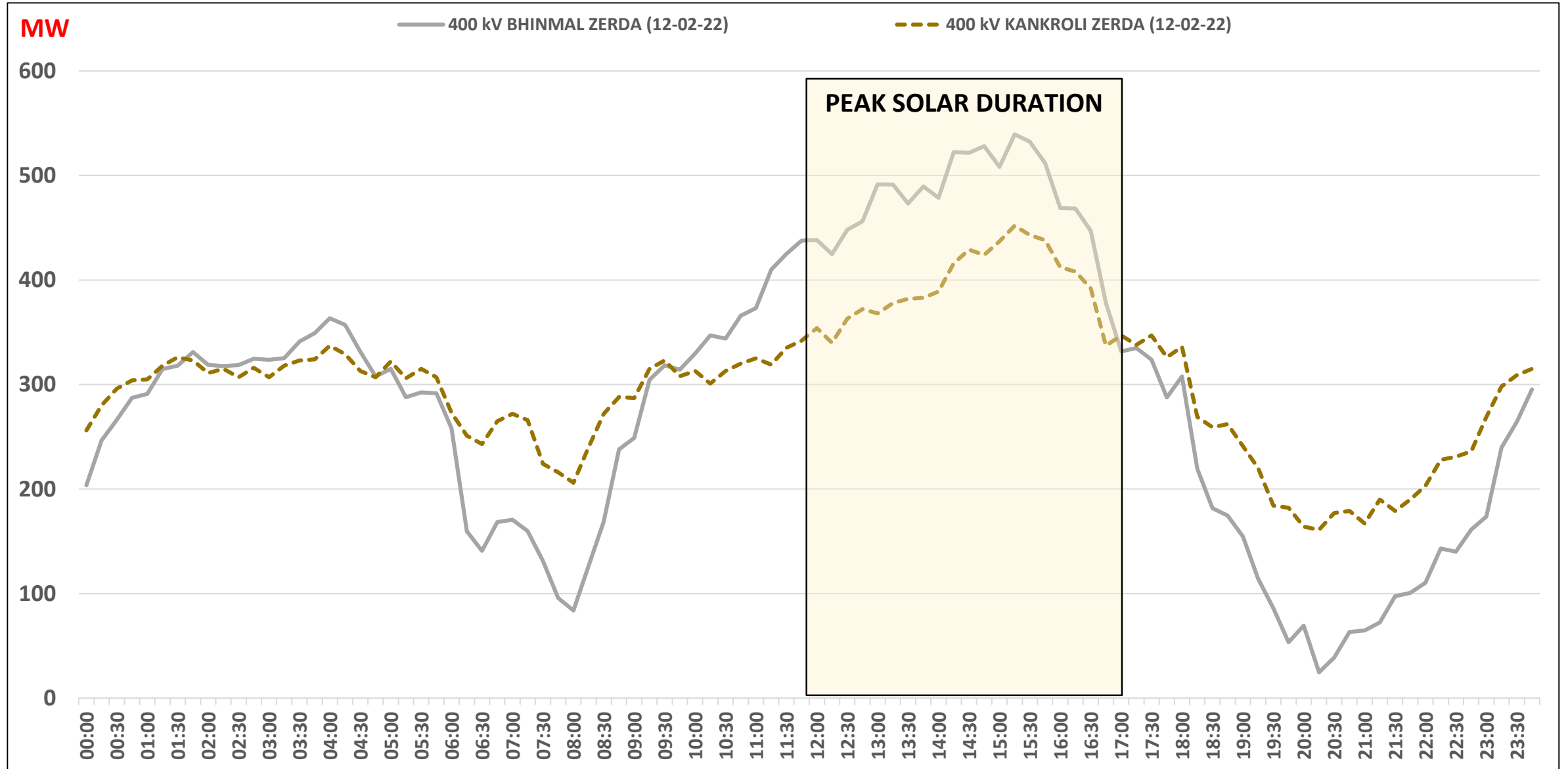
Annexure – 3 (a) – Loadings of 400 kV Zerda – Bhinmal & Zerda – Kankroli from 01-Aug-21 to 15-Feb-22



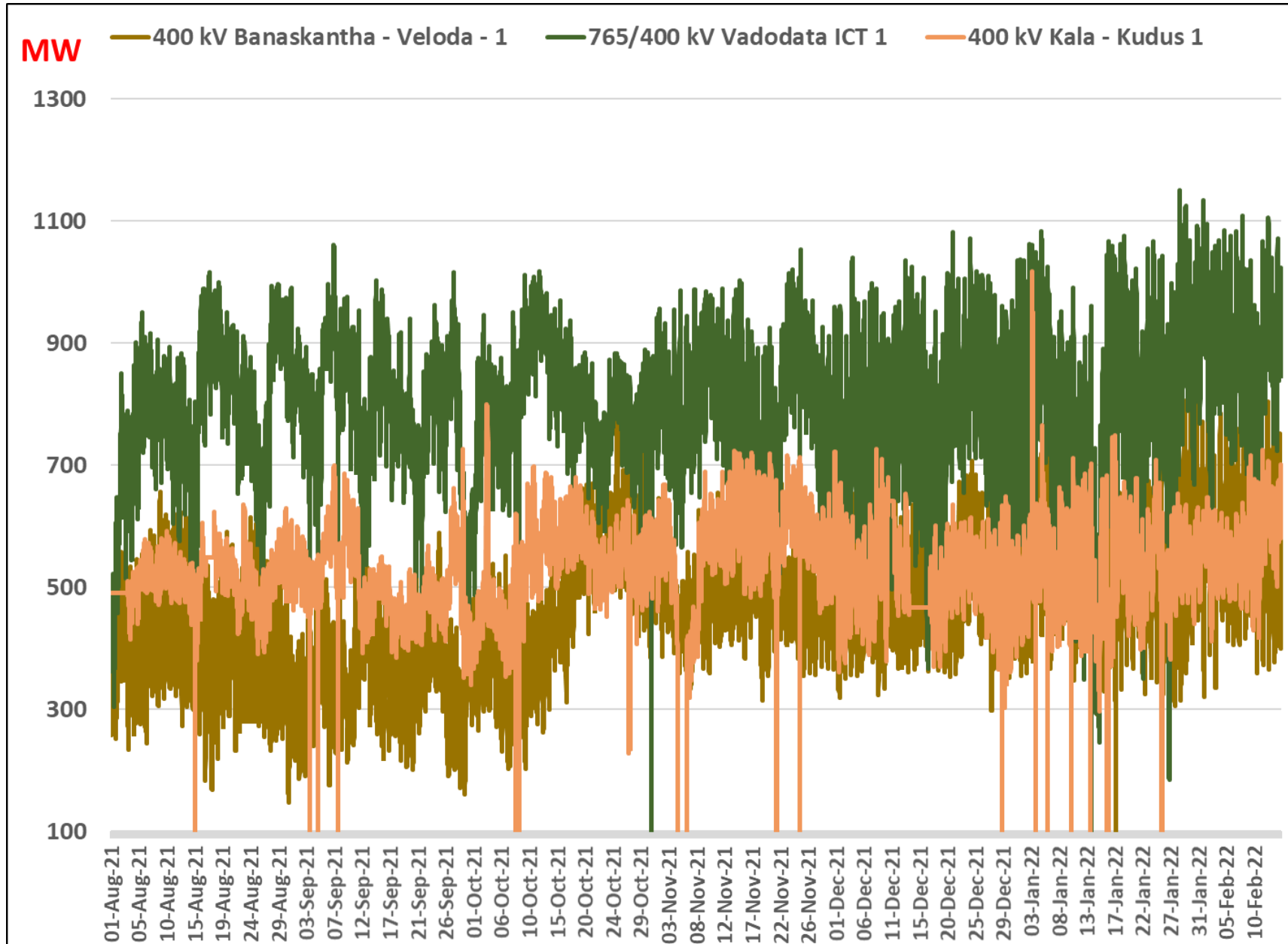
Annexure – 3 (b) – ICT Loading at Zerda from 01-Aug-21 to 15-Feb-22



Annexure – 3 (c) – Loadings of 400 kV Zerda – Bhinmal & Zerda – Kankroli for a Typical Day (12.02.2022)



Annexure – 3 (d) – Loading of Elements Constraining Gujarat Import from 01-Aug-21 to 15-Feb-22



Annexure – 4 - LTA/MTOA GRANTED FROM ISTS SOLAR PLANTS IN RAJASTHAN AS ON 15.02.2022

S.No.	Pooling Station	SPD (Full Name)	Installed Capacity	Commissioned Capacity	SPD (Acronym) Scheduling	LTA/MTOA	Quantum	Beneficiary	Beneficiary Region
1	ADANI (BHADLA)	AZURE POWER INDIA PVT. LTD.	200	200	APIPL	LTA	200	UTTAR PRADESH	NR
2		RENEW SOLAR POWER PVT. LTD.	50	50	RENEW_Bhadla	LTA	50	UTTAR PRADESH	NR
3	SAURYA URJA	CLEAN SOLAR POWER PVT. LTD.	300	300	CSP_Bhadla	LTA	300	UTTAR PRADESH	NR
4		SB ENERGY FOUR PVT. LTD.	200	200	SBEFPL_Bhadla	LTA	200	UTTAR PRADESH	NR
5	TATA POWER	TATA POWER Renewable Energy LTD. (CHHAYAN)	150	150	TPREL	LTA	150	MAHARASHTRA	WR
6	ACME	ACME Chittorgarh Solar Energy Private Limited	250	250	ACSEPL_BHADLA	LTA	250	MAHARASHTRA	WR
7	MAHOBA POWER, RAWARA	Adani Renewable (RJ) Ltd	200	200	ARERJL	LTA	200	MAHARASHTRA	WR
8		Adani Solar Energy Four Private Limited	50	50	ASE4PL	LTA	50	BYPL	NR
9	MRPL	Mahindra Renewables PVT. LTD.	250	250	MRPL	LTA	250	CHATTISGARH	WR
10	AZURE POWER THIRTY FOUR	AZURE POWER THIRTY FOUR PVT. LTD.	130	130	APTFPL_Bhadla	LTA	130	MAHARASHTRA	WR
11	ESSEL IPSS2 & 1 (via MPSS)	SB ENERGY 6 PVT. LTD.	600	300	SBE6PL	LTA	300	BIHAR	ER
12	AZURE 41		100	83.33		LTA	83.33	BRPL	NR
			200	166.67		LTA	166.67	GRIDCO	ER
13	RENEW BIKANER (400)	Renew Solar Power Private Limited Bikaner	250	250	RSPPL_BKN	LTA	250	MAHARASHTRA	WR
14	AZURE 43 (PSS & RSS)	Azure Power Forty Three Private Limited	300	300	AP43PL_BKN	LTA	300	ODISHA	ER
			100	100		LTA	100	HARYANA	NR
			200	200		LTA	200	JHARKHAND	ER
15	SBSRPC11PL_BKN	SBSR Power Cleantech 11Private Ltd. Bikaner	300	50	SBSRPC11PL_BKN	LTA	50	TPDDL and BYPL	NR
16	Avaada	Avaada Sunce Energy Private Limited	350	200	ASunceEPL_BKN	LTA	200	MAHARASHTRA	WR
17	Avaada	Avaada RJHN Private Limited	240	125.75	AvRJHNPL_BKN	MTOA	125.75	Haryana	NR
18	Avaada SustainableRJ pvt ltd	Avaada SustainableRJ pvt ltd	300	150	AvSusRJPPPL_BKN	LTA	140	Telangana (TSSPDCL, TSNPDCL)	SR
19	FATEHGARH-II	Renew Sun wave Pvt. Ltd. Fatehgarh2	300	300	RSWPL3_FTG2	LTA	300	Bihar	ER
		Eden Renewable Cite Private Limited	300	300	ERCPL_FTG2	LTA	300	BRPL and BYPL	NR
		Renew Sun bright Pvt. Ltd. Fatehgarh2	300	300	RSBPL_FTG2	LTA	300	MSEDCL	WR
20	FATEHGARH-I	Nedan Solar NTPC	250	124.8	NSNTPC_FTG1	LTA		TSSPDCL TSNPDCL	SR
						TOTAL	4596 MW		

पावर सिस्टम ऑपरेशन कॉर्पोरेशन लिमिटेड

(भारत सरकार का उद्यम)

POWER SYSTEM OPERATION CORPORATION LIMITED

(A Govt. of India Enterprise)



केन्द्रीय कार्यालय : 61, आई एफ सी आई टावर, 8 एवं 9वीं मंजिल, नेहरु प्लेस, नई दिल्ली -110019
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संदर्भ सं: NLDC/SO/Transmission Constraints/

दिनांक: 07th Feb 2022

सेवा मे,

सदस्य (पावर सिस्टम),
केंद्रीय विद्युत प्राधिकरण,
सेवा भवन, आर के पुरम, नई दिल्ली.

मुख्य परिचालन अधिकारी (के पा कं),
पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड,
गुडगाँव

विषय: High loading in 400 kV inter regional transmission lines between Gujarat in western region and Rajasthan in northern region

महोदय,

400 kV Bhinmal-Zerda and 400 kV Kankroli- Zerda are important lines for power transfer between Rajasthan in Northern region to Gujarat in Western region. 400 kV Bhinmal-Zerda and 400 kV Kankroli- Zerda lines are 143 and 234 ckt km long respectively and have twin moose conductor with thermal rating rated for 2 x 714 Amp. Thus, the thermal capacity of lines would be roughly around 800-900 MVA assuming high ambient temperature in Rajasthan . The power flow pattern of these lines for last one year is enclosed as Annex-I. It may be observed that the direction of flow on these lines is mostly from NR to WR and the loading on 400 kV Bhinmal-Zerda is above 500 MW for 5 % of time which lies mostly during March & April month. The loading is n-1 insecure particularly when the generation within Gujarat is low and demand in Gujarat is high. Similar aggravates when the above coincides with high RE in Rajasthan and low demand in Northern Region. The non-availability of reverse power flow on HVDC Mundra-Mohendergarh Bipole further compounded the problem in operational horizon. In the coming months, the new RE capacity addition in Jaisalmer, Barmer and Ramgarh area of Rajasthan is expected. The incremental RE injection may aggravate the situation causing further increase in line loadings.

The proposals to address the issue of overloading of 400 kV Bhinmal-Zerda like LILO of 2nd ckt of 400 kV Kankroli-Zerda line at Bhinmal (PG) and reconductoring of existing Bhinmal-Zerda section with high capacity (Quad Moose/Twin HTLS) conductor have already been discussed in 3rd and 4th Northern Regional Power Committee (Transmission Planning) but decision on the issue is still under process. The high loadings on these lines are limiting constraint in ATC/TTC calculation between western region and northern region and are likely to be in future also.

Therefore, it is kindly requested to look into the matter and advise all the concerned to take actions to relieve the transmission constraints due to high loadings on these lines.

Thanking you.

भवदीय,

(आर. के. पोरवाल)

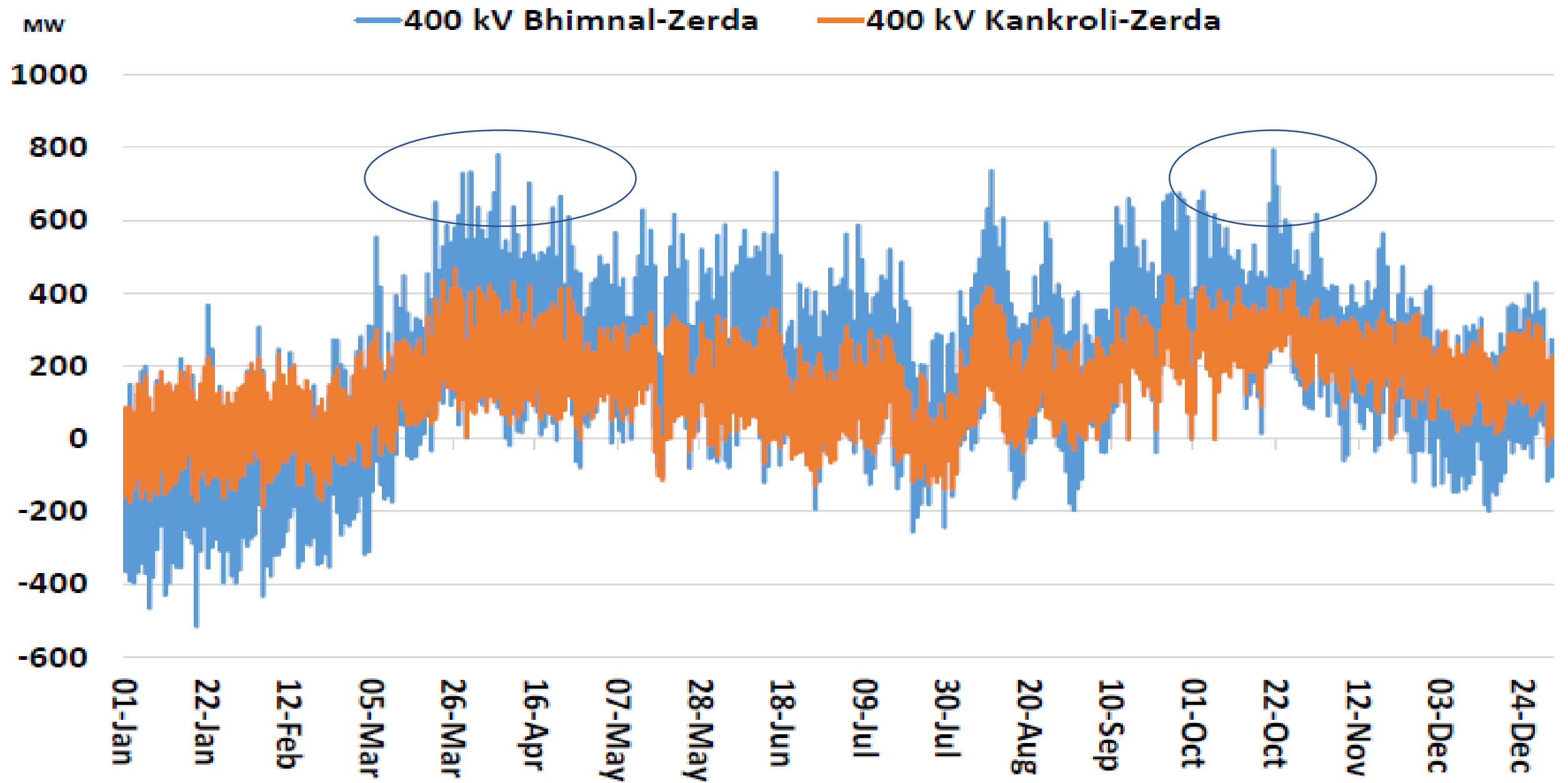
Copy to:

1. Member Secretary, NRPC/WRPC
2. Executive Director, WRLDC/NRLDC

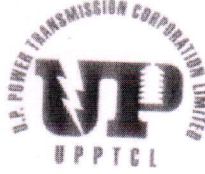
मुख्य- महाप्रबंधक (प्र प्र), रा.भा.प्रे.के.

Power Flow

Annexe-1



Office Of The
Superintending Engineer (TP&PSS))
3rd Floor, Shakti Bhawan Extn.
14-AshokMarg Lucknow-226001
Email I.D. setppssn@gmail.com
Phone : 0522-4108994



कार्यालय:
अधीक्षण अभियन्ता(टी.पी.एवं पीएसएस)
तृतीय तल, शक्ति भवन विस्तार,
14, अशोक मार्ग, लखनऊ-226001
दूरभाष : 0522-4108994

No. 5506 -SE (TP&PSS)/UPPTCL/2022/NRPC

Date: 21 February, 2022

Member Secretary,
Northern Region Power Committee,
18-A, Qutab Institutional Area, Shaheed Jeet Singh Marg
Katwaria Sarai, New Delhi-110 016

Sub: UPPTCL's agenda for 51st Northern Region Power Committee meeting.

Sir,

It is to inform that for strengthening the Intra-State network and for catering the additional load besides reliability of the intra-state grid, UPPTCL proposes the following Intra-State work:-

i. **Increasing capacity of 400/220kV Moradabad from 2x500+1x240 MVA to 2x500+1x315 MVA.**

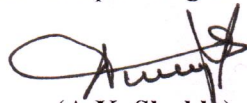
Presently the installed capacity at 400/220 kV S/s Moradabad is 2x500+1x240 MVA. Existing 240 MVA transformer (Mitsubishi make, manufacturing year July/1980) is quite old and due to higher concentration of Hydrogen Gas indicating partial discharge it is presently out of service.

Peak load of 928 MVA was observed during summer peak on 16th August, 2021 and the installed capacity at Moradabad is not N-1 compliance. To cater the upcoming summer peak it is necessary to enhance the capacity at the earliest. As 315 MVA transformer is available with UPPTCL and further in the area 400 kV Sambhal substation (expected CoD April-2022) is under construction which will ease out the loading of 400 kV Moradabad substation hence UPPTCL proposes to increase the capacity from 2x500+1x240 MVA to 2x500+1x315 MVA.

ii. **Increasing capacity of 400/220kV Orai from 2x315 MVA to 2x315+1x240 MVA.**

Presently the installed capacity at 400/220 kV S/s Orai is 2x315 MVA and peak load of 463 MVA was observed during summer peak on August, 2021. The installed capacity at Orai is N-1 non-compliance. To achieve N-1 compliance and for catering the upcoming demand at 400/220 kV Orai, UPPTCL proposes to increase capacity from 2x315 MVA to 2x315+1x240 MVA.

The above agenda items may kindly be considered for discussion in upcoming 51st NRPC meeting (through V.C.) on 24th/25th February, 2022.


(A.K. Shukla)
SE (TP&PSS)

CC:

1. Director (Planning & Commercial), UPPTCL.
2. Chief Engineer, Central Electricity Authority, System Planning & Project Appraisal Division-I, Sewa Bhawan, R.K. Puram, New Delhi-110066
3. COO (CTU CTU), Power Grid, Saudamini, Plot No. 2, Sector-29, Gurgaon-122001.

NORTHERN REGIONAL POWER COMMITTEE



(CONDUCT OF BUSINESS) Rules, 2022

February, 2022

DRAFT
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CHAPTER-I

GENERAL

1. Short title and commencement

- 1.1. Government of India, under the provision of Section 2, Subsection 55 of the Electricity Act 2003 vide resolution F.No. 23/21/2021-R&R dated 3rd December 2021 (copy enclosed) published in the Gazette of India has established the Northern Regional Power Committee herein after referred to as NRPC comprising of states of Delhi, Haryana, Himachal Pradesh, Punjab, Rajasthan, Uttaranchal and Uttar Pradesh and the Union Territories of Chandigarh, Jammu & Kashmir and Ladakh.
- 1.2. As per the clause-9 of the aforesaid resolution dated 3rd December 2021, the NRPC hereby makes the following rules which may be called “**The Northern Regional Power Committee (Conduct of Business) Rules, 2022**”.
- 1.3. These rules shall come into force from the date of its approval by the NRPC and shall remain in force unless otherwise modified.

2. Definitions

- 2.1. In these Rules unless the context otherwise requires:
 - (a) ‘Act’ means the Electricity Act, 2003.
 - (b) ‘Agenda’ means the list of business proposed to be transacted at a meeting of the Committee or Sub-Committee.
 - (c) ‘Authority’ means Central Electricity Authority.
 - (d) ‘Commercial Sub-Committee (CC)’ means a sub-committee constituted by the Committee to consider commercial related issues.
 - (e) ‘Commission’ means Central Electricity Regulatory Commission.
 - (f) ‘Committee’ means the Northern Regional Power Committee constituted by the Central Government under Sub-Section (55) of Section 2 of the Electricity Act, 2003.
 - (g) ‘Government Resolution’ means resolution No. 23/21/2021-R&R dated 3rd December 2021, notified by Government of India and amendment(s) thereon.
 - (h) ‘IEGC’ means the Indian Electricity Grid Code, specified by Central Electricity Regulatory Commission.
 - (i) LGBR Sub-Committee means a sub-committee constituted by the committee to -
 - i. finalise annual outage plan of generating stations
 - ii. prepare anticipated power supply position for next fiscal and

- iii. for periodic review of (i) & (ii).
- (j) 'Meeting' means a meeting of the committee / sub-committee convened by the Member Secretary, NRPC Secretariat or any member authorized to convene a meeting in the absence of the head of Secretariat.
- (k) 'Member' means the member of the as per Resolution of the Government of India on establishment of NRPC dated 3rd December 2021 and as amended from time to time.
- (l) 'NLDC' means National Load Despatch Centre.
- (m) 'NRLDC' means Northern Regional Load Despatch Centre
- (n) 'Operational Coordination Sub-Committee (OCC)' means a sub-committee constituted by the NRPC to consider all issues related to operation of the regional grid.
- (o) 'Protection Sub-Committee (PC)' means a sub-committee constituted by the Committee to consider all power system protection related issues.
- (p) 'Rule' means Northern Regional Power Committee (Conduct of Business) Rules 2022.
- (q) 'SLDC' means State Load Despatch Centre.
- (r) 'Sub-Committee' means the Sub-Committees constituted by NRPC to guide and assist it in conducting the functions assigned to it.
- (s) 'System study Sub-Committee' means a sub-committee constituted by NRPC to carry out the Power System studies.
- (t) 'Technical Coordination Sub-Committee (TCC)' means a sub-committee constituted by the NRPC to assist the NRPC on all technical, commercial and other matters.
- (u) 'TeST Sub-Committee' means a sub-committee constituted by the NRPC to assist the NRPC on all Telecommunication, SCADA & Telemetry related issues.
- (v) 'Year' means Financial Year.

2.2. The words and expressions used and not defined in these Rules shall be construed as having the same meaning as defined in the Act.

2.3. Reference to any Acts, Rules and Regulations shall include amendments or consolidation or re-enactment thereof.

3. Functions of NRPC

3.1. The committee shall carry out following functions:

3.1.1 To undertake Regional Level operation analysis for improving grid performance.

3.1.2 To facilitate inter-state/inter-regional transfer of power.

- 3.1.3 To facilitate all functions of planning relating to inter-state/ intra-state transmission system with CTU/STU.
- 3.1.4 To provide views on the inter-state transmission system planned by CTU within 45 days of receipt of the proposal by the concerned NRPC. The views of NRPC will be considered by National Committee on Transmission for sending their recommendation to Ministry of Power for approval of new inter-state transmission system.
- 3.1.5 To coordinate planning & maintenance of generating machines of various generating companies of the region including those of inter-state generating companies supplying electricity to the Region on an annual basis and also to undertake review of maintenance programme on a monthly basis.
- 3.1.6 To undertake planning of outage of transmission system on a monthly basis.
- 3.1.7 To undertake operational planning studies including protection studies for stable operation of the grid.
- 3.1.8 To undertake planning for maintaining proper voltages through review of reactive compensation requirement through system study committee and monitoring of installed capacitors.
- 3.1.9 To evolve consensus on all issues relating to economy and efficiency in the operation of power system in the region.

4. Secretariat of NRPC

- 4.1. Secretariat, NRPC shall perform the following duties namely;
 - 4.1.1. Keep custody of records of proceedings of the Committee, sub-committees, task force and working groups of the NRPC.
 - 4.1.2. Prepare agenda for the Committee and Sub-Committee meetings.
 - 4.1.3. Prepare minutes of Committee and Sub-Committee meetings.
 - 4.1.4. Take follow-up action on the decision taken in the Committee & Sub-Committee meetings.
 - 4.1.5. Maintain archive of data and information pertaining to commercial accounts, operating parameters, protection system and communication system of the regional power system.
 - 4.1.6. Collect from constituent members or other offices, companies, firms or any other party as may be considered useful for the efficient discharge of functions of NRPC under the Resolution and place the information before the Committee and its sub-committees.
 - 4.1.7. Certification of open cycle generation carried out by central sector gas-based stations.
 - 4.1.8. The operating log books of the generating stations shall be available for review by the Northern Regional Power Committee. The log books of thermal power stations

~~shall keep record of machine operation and maintenance. The books of hydro-electric power stations shall also keep the additional record of reservoir level and spillway gate operation.~~

- 4.2. The duties and responsibility envisaged under Indian Electricity Grid Code (IEGC) Regulations made by CERC, NRPC Resolution and NRPC from time to time shall be carried out by the NRPC Secretariat.
- 4.3. In line with the provisions of IEGC the details of functions are given below:
 - 4.3.1. The Member Secretary, NRPC shall investigate and endeavour to resolve the grievance regarding unfair practices, delays, discrimination, lack of information, supply of wrong information or any other matter related to open access in inter-state transmission system.
 - 4.3.2. The Member Secretary, NRPC shall, for the purpose of payment of transmission charges/ capacity charges and incentives, certify:
 - (i) Availability of Regional AC system and **outage hours** of HVDC transmission system.
 - (ii) Availability and Plant Load Factor for ISGS
 - ~~(iii) Capacity Index for ISGS (Hydro).~~
 - 4.3.3. Member Secretary, NRPC, shall verify and take up the matter regarding persistent non-compliance of IEGC with the defaulting agency for expeditious termination of the non-compliance. NRPC Secretariat shall maintain appropriate records of such violation.
 - 4.3.4. NRPC Secretariat is to carry out periodic inspection of Under Frequency Relays installed by the constituents and investigate cases of non-operation of such relays at set frequency in actual system operation.
 - 4.3.5. The NRPC Secretariat shall review on monthly basis the Annual outage plan prepared by CEA in consultation with all parties concerned.**
 - 4.3.6. The NRPC Secretariat shall be responsible for analyzing the outage schedule given by all Regional Constituents, preparing a draft annual outage schedule and finalization of the annual outage plan for the following financial year by 31st **December** of each year.
 - 4.3.7. Any other responsibilities assigned by CERC/ CEA Regulations/ NRPC Resolution shall also be carried out by secretariat.

4.4. Human Resources

- 4.4.1. Officers and staff to man the Secretariat shall be provided by CEA. As and when CEA is unable to provide requisite number of Group "C" or "D" officials, the vacant posts shall be got outsourced through competitive bidding route for a period up to two (2) years or until CEA provides the manpower. Their remuneration shall be within the ambit of "Minimum Wages Act, 1948".**
- 4.4.2. Member Secretary is also empowered to appoint personnel in case of shortage of staff at other levels on secondment basis.**

4.4.3. For discharging the functions other than those assigned by the Resolution, NRPC may hire adequate number of persons, experts or consultants.

4.4.4. For the purpose of handling NRPC fund, Member Secretary shall appoint one nodal officer from the constituents of NRPC on secondment basis.

4.5. Contribution towards NRPC Fund

4.5.1. An NRPC fund shall be maintained from contributions from members of NRPC for a particular year. A nodal officer shall be appointed as per clause 4.4.4. for the purpose of handling this fund.

4.5.2. The constituents shall deposit their contributions towards NRPC fund, based on the figures approved in the first NRPC meeting held in that financial year. The fund shall be utilized for reimbursement of budgetary allocation from Government of India, expenditure for conducting various meetings/training programs, expenditure for maintenance of NRPC Secretariat, hiring of additional staff/consultants, or any other expenditure as approved by the NRPC forum. Any surplus/ deficits of a particular year shall be adjusted in the subsequent financial year.

4.5.3. All the member constituents of NRPC except CEA, ~~NLDC and NRLDC~~ shall equally share the expenditure of NRPC Secretariat.

4.5.4. Chairperson, NRPC shall appoint a committee of officers belonging to NRPC constituents, as well as external auditors to audit the NRPC fund during each year and reports for the same shall be placed before NRPC forum.

5. Furnishing of data / information to Secretariat of RPC

5.1. NRLDC and the constituents of the region shall make available all data / information required by the Secretariat to discharge its functions or to carry out any other responsibility / function assigned to it by the Authority / Commission / Committee. It shall also be responsibility of the constituents to ensure that any data though not specifically asked for by the Secretariat, but which may be required for the specific responsibility / function assigned to the Secretariat is also made available to the secretariat.

5.2. NRLDC shall provide to Member Secretary, NRPC a computer terminal to have a view of all the parameters in real time frame of Northern Regional grid system.

6. Chairperson of NRPC

The Chairperson of NRPC would be appointed as per 'Government Resolution'.

7. Website of NRPC

The NRPC shall have its own website which shall be maintained by NRPC Secretariat.

CHAPTER-II

PROCEDURE FOR CONDUCTING NRPC MEETINGS

8. Place and date of NRPC Meeting

- 8.1. The place and date of the meeting will be decided by Member Secretary, NRPC in consultation with Chairperson, NRPC. ~~The meeting will generally be held within the region.~~
- 8.2. Meeting will be hosted by the member organizations as per the roster prepared by Member Secretary, NRPC in consultation with the members of the NRPC.
- 8.3. In case the situations are not conducive for physical meetings, the meetings will be conducted through Video Conferencing.

9. Periodicity of meetings

- 9.1. The Committee members shall meet at least once in ~~six months~~ a month, as per para-11 of “Resolution”. However, the Committee may meet to discuss any issue as and when required in consultation with Chairperson, RPC.

10. Notice for the Committee meetings and Agenda

- 10.1. Notice for the Committee meetings shall be issued by Member Secretary, NRPC at least ~~2/~~ 3 weeks in advance in consultation with Chairperson, NRPC. In case of ~~emergency exigency or meeting through video conferencing~~, meetings required to be conducted to carry out urgent business, ~~notice of one week is to be given~~.
- 10.2. The agenda points for the meeting shall be sent to the Member Secretary by the members at least ~~20 days~~ 2 weeks in advance of the meeting. The member Secretary, NRPC shall finalize the agenda and circulate the same to all its members at least ~~10 days~~ 1 week in advance and also be posted on the website.
- 10.3. Normally, NRPC shall meet to discuss the agenda related to transmission planning submitted by CTU on monthly basis. Discussions other than those related to transmission planning shall generally be put up after discussions in Technical Co-ordination Sub-Committee (TCC) which will be held at least once in 6 months.
- 10.4. Member Secretary, NRPC may also put any agenda involving urgent matters / policy issue directly before NRPC in consultation with Chairperson, NRPC.
- 10.5. Member Secretary, NRPC may convene a meeting on short notice on any urgent matter in consultation with Chairperson of the committee.
- 10.6. On receipt of specific request from a member too, Member Secretary, NRPC may convene a meeting in accordance with para 10.5 above.

10.7. In case no agenda is received from CTU regarding transmission planning or other constituents, Member Secretary, NRPC with the approval of Chairperson, NRPC may dispense with the meeting for that month.

11. Effect of Non-receipt of Notice of Meeting by a Member

11.1. The non-receipt of notice by any member of NRPC or sub-committee shall not invalidate the proceeding of the meeting or any decision taken in the meeting.

12. Cancellation / re-scheduling of Meeting

12.1. If a meeting is required to be cancelled or rescheduled the same shall be intimated to the members at the earliest by ~~telephone / fax~~ e-mail and also posted in NRPC website immediately.

13. Quorum of NRPC Meeting

13.1. The Quorum of the meeting shall be 50% of its members.

13.2. All decision in the NRPC shall be taken by consensus.

13.3. The decisions / ratifications made by the Committee during the meeting with the above quorum shall be treated as final.

13.4. The decision of the NRPC arrived at for Operation of the Regional Grid and Scheduling and dispatch of Electricity shall be followed by Northern Regional Load Despatch Centre (NRLDC) subject to the directions or regulations of the ~~Central~~ Commission.

13.5. Only members of NRPC and not more than two representatives of his organization shall participate in the Committee meeting. Other persons may attend the meeting by invitation / permission only. However, voting rights will be available only to the Members of NRPC.

14. Presiding Authority

14.1. The Chairperson, NRPC shall preside over the meeting of NRPC and conduct business. The Member Secretary, NRPC shall assist the Chairperson of NRPC in conducting the meeting. If the Chairperson is unable to be present at the meeting for any reason, ~~other members present in the meeting shall nominate a person among themselves to preside over the meeting~~ the senior member of NRPC from the State utilities present in the meeting shall be nominated by Member Secretary to preside over the meeting.

14.2. In the absence of Member Secretary, NRPC ~~such of the officer as may be designated by Authority shall function as Member Secretary to assist Chairperson, NRPC~~ the next senior most officer of the NRPC Secretariat shall convene the meeting.

15. Recording of the minutes

- 15.1. The minutes of the meeting shall be finalized and circulated to all its members by the Members Secretary, NRPC within 15 working days from the date of the Committee Meeting. The minutes shall also be posted on the website of NRPC.
- 15.2. The discussions during the meeting shall be Audio recorded and the record shall be kept at the secretariat of NRPC till the confirmation of the minutes. The member organization hosting the meeting shall extend all facilities for audio recording of the proceedings of the meeting.

16. Confirmation of the Minutes

- 16.1. Minutes of the NRPC meeting shall be placed in the next meeting for confirmation. However, in case of urgency the minutes may be confirmed by circulation.

CHAPTER-III

SUB-COMMITTEES OF NRPC

17. Constitution of Sub-Committees of NRPC

17.1. Following Sub-Committees will be constituted by NRPC to guide and assist it in conducting the functions assigned to it:

- (a) Technical Co-Ordination Sub-Committee (TCC)
- (b) Operation Co-Ordination Sub-Committee (OCC)
- (c) Commercial Sub-Committee (CC)
- (d) Protection Sub-Committee (PC)
- (e) System Study Sub-Committee
- (f) LGBR Sub-Committee
- (g) Telecommunication, SCADA & Telemetry (TeST) Sub-Committee

17.2. NRPC or Member Secretary, NRPC or any Sub-Committee may constitute task force, core group for specific purpose from among the members and external experts to advice on any specific issue.

18. Technical Co-Ordination Sub-Committee (TCC)

18.1. Functions:

18.1.1. Technical Co-ordination Sub-Committee, shall consider all issues referred by the Operation Co-Ordination Sub-Committee, Commercial Sub-Committee, Protection Sub-Committee, System Study Sub-Committee, LGBR Sub-Committee and TeST Sub-Committee concerning operation of regional grid, commercial aspects, inter-state/ inter-regional transfer of power, grid stability etc. leading to economy and efficiency in the operation of power system in the region.

18.1.2. TCC shall implement the decisions of the NRPC and also provide guidance and assist NRPC in discharge of its functions and formulation of policy matters on regional grid operation, grid security, and commercial matters.

18.2. Composition of Technical Co-ordination Sub-Committee:

18.2.1. TCC shall be represented by the Technical Members of the NRPC constituents dealing with the Generation / transmission / Distribution and representative from Central Electricity Authority. The representation shall be at the level of Technical Heads in State Utilities, Executive Directors / Chief General Managers or equivalent in PSUs / Technical Heads of Distribution company / Traders / IPPs and Chief Engineer in CEA.

18.2.2. ~~Other than members of NRPC, there shall be one representative each of DISCOM, IPPs less than 1000 MW and Electricity Traders in the TCC.~~

18.2.3. Chairperson, NRPC from their concerned State shall appoint the Chairperson of TCC. Chairperson, TCC shall be rotated every year from among the States in the same order as Chairperson of NRPC.

18.3. Meetings:

18.3.1. TCC shall meet ~~at least once in 6 months, before the NRPC meeting~~ and put up its recommendations to the NRPC.

18.3.2. TCC shall meet separately also as and when needed to address urgent issues or specific issues, if any, concerning the operation of regional grid, security of the grid, commercial matters and other issues.

18.3.3. The Chairperson of the TCC shall preside over the meeting. In case Chairperson is unable to be present, ~~Member Secretary NRPC shall nominate a person among TCC members~~ to preside over the meeting.

18.3.4. Member Secretary, NRPC shall assist Chairperson, TCC in conducting TCC Meeting.

19. Operation Co-Ordination Sub-Committee (OCC)

19.1. Functions:

Operation Co-ordination Committee(OCC) shall discuss all issues related to operation of the regional grid viz. ~~reviewing the schedule v/s. actual generation of various power stations drawn up in the previous month;~~ estimating availability of power and energy from each power station and demand of each State for the current and next month; drawing up coordinated maintenance schedule for generating units and major transmission lines; reviewing operational discipline and its norms to be observed by constituents; reviewing the operation of Automatic Under-Frequency Relays; discussing system occurrences, if any, during the previous month and reviewing the status of implementation of the recommendations of the Inquiry Committees; monitoring / reviewing violation of provisions of IEGC related to grid operation; discussing / reviewing measures for ensuring economic grid operation including optimisation of energy transfer with other regions; examining possibility of optimising intra-regional energy exchanges; discussing optimisation of energy transfer with other regions; and any other matter referred by the TCC/NRPC.

19.2. Composition of Operation Co-Ordination Committee:

19.2.1. OCC shall be represented by the representatives of the constituent members of NRPC. ~~Other than members of NRPC constituents, there shall be one representative each of DISCOM, IPPs less than 1000 MW and Electricity Traders in the OCC.~~ The nominated representative shall be at the level of Chief Engineers

in State Utilities/ General Manager in CPSEs or equivalent level conversant with operational issues.

19.2.2. Member Secretary, NRPC shall be Chairperson of the OCC and preside over the meetings. Superintending Engineer of secretariat shall be convener of the OCC.

19.3. Meetings:

The meeting will be held every month generally before **20th day** of that month.

20. Commercial Sub-Committee (CC):

20.1. Functions:

Commercial Sub-Committee(CC) shall discuss all commercial related issues viz. energy accounting, schemes required for inclusion in the Bulk Power Supply Agreements, requirement of power from the new projects, installation of special energy meters and its cost sharing, etc., metering aspects, reviewing of the payments towards ~~UI charges~~ **Regulatory accounts, issues related to transmission charges** ~~treatment of transmission losses, commercial declaration of lines/substation and Generating units~~, commercial issues in inter-state and inter-regional exchange of power, issues concerning settlement of payments among constituents, if any, etc. and any other matter referred by the TCC/NRPC. Commercial Committee shall audit the Regional Energy Accounts and ~~UI~~ **DSM**, Reactive Energy and **other Pool Accounts**.

20.2. Composition of Commercial Sub-Committee (CC):

20.2.1. Commercial sub-committee shall be represented by the representatives of the constituent members of RPC.

20.2.2. **Other than members of RPC constituents, there shall be one representative each of DISCOM, IPPs less than 1000 MW and Electricity Traders in the OCC.**

20.2.3. ~~The nominated representative shall be Commercial Heads in the member organisation.~~ **The nominated representative shall be at the level of Chief Engineers in State Utilities/ General Manager in CPSEs or equivalent level conversant with commercial issues.**

20.2.4. Member Secretary, NRPC shall be Chairperson of the CC and preside over the meetings. Superintending Engineer of secretariat shall be convener of the CC.

20.3. Meetings:

The meeting will be held quarterly or as and when required to address the issues of urgent nature.

21. Protection Sub-Committee (PC)

21.1. Functions:

Protection Sub-Committee (PC) shall discuss all power system protection related issues viz. analysis of system disturbances in the region, review of protective relaying schemes, relay co-ordination islanding schemes, automatic under frequency load shedding schemes, review of the implementation of recommendations made by the Inquiry Committee of the grid disturbance in the region concerning the above matters, etc. and any other matter referred by the TCC/NRPC.

21.2. Composition of Protection Sub-Committee:

21.2.1. Protection Sub-Committee shall be represented by constituent members of NRPC.

21.2.2. ~~Other than members of NRPC constituents, there shall be one representative each of DISCOM, IPPs less than 1000 MW and Electricity Traders in the PC.~~

21.2.3. The nominated representative shall be at the level of Chief Engineers in State Utilities/ **General Manager in CPSEs** or equivalent level and concerns with power system protection / testing in the region.

21.2.4. Member Secretary, NRPC shall be Chairperson of the PC and preside over the meetings. Superintending Engineer of secretariat shall be convener of the PC.

21.3. Meetings:

The meeting will be held quarterly or as and when required to address the issues of urgent nature.

22. System Study Sub-Committee:

22.1. Functions:

System Study Sub-Committee shall carry out following system studies:

- i. Studies for assessment of the quantum of capacitors required in the region taking into account the expected additions in the generation and transmission systems and the low voltage conditions in the system.
- ii. Studies for review of reactive compensation requirement.
- iii. Operational load flow studies, as and when required, for peak conditions off peak conditions etc.
- iv. Short-circuit studies as and when required.
- v. Transient stability studies for major events like grid disturbances or other issues periodically or as and when requested by the constituent(s).
- vi. System studies related to transmission constraints.
- vii. Studies specific to high / low voltage conditions with specific reference to reactors or capacitors operation / requirement.
- viii. Identification of requirement of reactors as and when required

- ix. Co-relation of protection related issues from Studies as and when required.
- x. Any other technical study referred by the NRPC/TCC.

22.2. Composition Of System Study Sub-Committee:

22.2.1. System Study Sub-Committee shall be represented by constituent members of NRPC.

~~24.2.1 System Study Sub-Committee shall be represented by the Members of the NRPC constituents at the level of Superintending Engineer familiar with the subject.~~ The nominated representative shall be at the level of Chief Engineers in State Utilities/ **General Manager in CPSEs** or equivalent level and conversant with issues related to system studies in the region.

24.2.2 Member Secretary, NRPC shall be Chairperson of the SSC and preside over the meetings Superintending Engineer of secretariat shall be convener of this Sub-Committee.

22.3. Meetings:

As and when required, as decided by the convener.

23. LGBR Sub-Committee

23.1. Functions:

LGBR Sub-Committee shall carry out the following functions in accordance with the provisions of Indian Electricity Grid Code:

- i. Finalise annual outage plan of generating stations.
- ii. Prepare anticipated power supply position for the next fiscal year.
- iii. Periodic review of annual outage plan of generating stations and anticipated power supply position.

23.2. Composition of LGBR sub-committee:

23.2.1. LGBR Sub-Committee shall be represented by constituent members of NRPC.

24.2.3 The nominated representative shall be at the level of Chief Engineers in State Utilities/ General Manager in CPSEs or equivalent level and conversant with issues related to system studies in the region.

26.2.1 Member Secretary, NRPC shall be the Chairperson of the LGBR Sub-Committee and preside over the meetings. Superintending Engineer of secretariat shall be convener of the LGBR Sub-Committee.

23.3. Meetings:

Meetings will be held as and when required to be decided by the convener.

24. Telecommunication, Scada & Telemetry (TeST) Sub-Committee

24.1. Functions:

TeST Sub-Committee shall meet to deliberate upon Telecommunication, SCADA and Telemetry schemes of NR and issues thereon in accordance with the provisions of Indian Electricity Grid Code.

24.2. Composition of TeST Sub-Committee:

27.2.1 TeST Sub-Committee shall be represented by constituent members of NRPC.

27.2.2 The nominated representative shall be at the level of Chief Engineers of State Utilities/General Manager of CPSEs or equivalent level and conversant with Telecommunication, SCADA & Telemetry in the region.

27.2.3 Member Secretary, NRPC shall be Chairperson of the TeST Sub-Committee and preside over the meetings. Superintending Engineer of secretariat shall be convener of the TeST Sub-Committee.

24.3. Meetings:

The meeting will be held as and when required to be decided by the convener.

CHAPTER-IV

PROCEDURE FOR CONDUCTING SUB-COMMITTEE MEETINGS OF NRPC

25. Conducting of Sub-Committee Meetings, issue of Notice, Agenda & its Minutes

- 25.1. The notice for the above sub-committee meeting shall be issued at least ~~10~~15 days before the date of meeting and agenda points one week before the meeting by the NRPC Secretariat. However, when the meeting is to be held through video conferencing, this period may be reduced to 10 days and 3 days respectively. The minutes of the meeting shall be finalized by Member Secretary and issued by NRPC Secretariat within 15 working days of the meeting.
- 25.2. The decision of the Committee arrived at for Operation of the Regional Grid and other above functions shall be implemented by the Constituents. In case the Sub-committee recommends the matter to the TCC / NRPC, for further deliberation or decision, the same shall be referred by NRPC secretariat to TCC/ NRPC.
- 25.3. The meetings will be conducted at the place and venue preferably located in the Region to be decided by Member Secretary, NRPC. In case the situations are not conducive for physical meetings, the meetings will be conducted through Video Conferencing.
- 25.4. Meeting may be hosted by the member organizations as decided by Member Secretary, NRPC in consultation with the members of the sub-committee. All the arrangements required for conducting the meeting shall be made by the host member organisation.

CHAPTER-V**REPORTS****26. REPORTS BY NRPC**

The following reports shall be prepared and furnished by NRPC secretariat:

S. No.	Name of the report	Periodicity
1	Monthly Progress Report Northern Regional Grid / Operational Data	Monthly
2	Annual Report of NRPC	Annual

CHAPTER-VI

MISCELLANEOUS

27. Saving of inherent Power of the NRPC

- 27.1. Nothing in these Rules shall bar the NRPC from adopting in conformity with the Act a procedure that is at variance with provisions of these Rules, if the NRPC in view of the special circumstances of a matter or class of matters deem it necessary or expedient to deal with such a matter or class of matters.
- 27.2. Nothing in these Rules shall expressly or by implication, bar the NRPC to deal with any matter or exercise any power under the Act for which no Rules have been framed and NRPC may deal with such matters, and functions in a manner it thinks fit.
