

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम)
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बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 23rd Jan 2020

To,

- 1. कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033 Executive Director, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata, 700033
- 2. कार्यकारी निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए , शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi – 110016
- 3. कार्यकारी निदेशक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. कार्यकारी निदेशक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 22.01.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 22-जनवरी-2020 की अखिल भारतीय प्रणाली की दैनिक ग्रिड निष्पादन रिपोर्ट रा॰भा॰प्रे॰के॰ की वेबसाइट पर उप्लब्ध है ।

As per article 5.5.1 of the Indian Electricity Grid Code, the daily report pertaining power supply position of All India Power System for the date 22^{nd} Jan 2020, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting

A. Power Supply Position at All India and Regional level

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	47466	47951	40671	19092	2422	157602
Peak Shortage (MW)	623	0	0	0	27	650
Energy Met (MU)	965	1150	1013	362	43	3534
Hydro Gen (MU)	130	37	77	34	6	283
Wind Gen (MU)	37	86	73			197
Solar Gen (MU)*	34.40	24.50	89.64	1.39	0.03	150
Energy Shortage (MU)	12.1	0.0	0.0	0.0	0.4	12.5
Maximum Demand Met during the day (MW) & time	49368	55367	47686	19192	2499	168599
(from NLDC SCADA)	09:58	11:01	08:08	18:43	17:37	09:40

B. Frequency Profile (%)

Region	FVI	<49.7	49.7-49.8	49.8-49.9	<49.9	49.9-50.05	> 50.05
All India	0.029	0.00	0.00	0.32	0.32	69.09	30.59

C. Power Supply Position in States

Region	States	Max. Demand Met during the day (MW)	Shortage during maximum Demand (MW)	Energy Met (MU)	Drawal Schedule (MU)	OD(+)/UD(-) (MU)	Max OD (MW)	Energy Shortag (MU)
	Punjab	5701	0	111.2	55.7	-1.1	95	0.0
	Haryana	6617	0	130.3	90.6	0.7	183	0.0
	Rajasthan	13387	0	238.7	52.9	-2.2	570	0.0
NR	Delhi	4604	0	76.6	61.0	-0.6	285	0.0
	UP	15979	235	283.2	121.2	0.4	736	0.0
	Uttarakhand	2179	0	39.6	22.9	-0.5	90	0.0
	HP	1743	0	31.3	24.5	-0.4	197	0.0
	J&K(UT) and Ladakh(UT)	2492	623	49.8	46.0	-1.6	278	12.1
	Chandigarh	274	0	4.2	4.3	-0.1	31	0.0
	Chhattisgarh	3802	0	77.1	41.5	-4.1	261	0.0
	Gujarat	15433	0	329.1	63.6	3.2	634	0.0
	MP	13577	0	242.1	141.0	-3.5	392	0.0
WR	Maharashtra	22404	0	460.2	159.0	-2.2	526	0.0
WK	Goa	498	0	10.3	10.3	-0.4	18	0.0
	DD	337	0	7.5	7.1	0.4	35	0.0
	DNH	809	0	18.8	18.8	0.0	39	0.0
	Essar steel	290	0	5.2	5.6	-0.4	235	0.0
	Andhra Pradesh	9017	0	182.4	68.5	0.9	361	0.0
	Telangana	10989	0	216.3	106.0	0.8	768	0.0
SR	Karnataka	12113	0	234.8	54.7	0.0	576	0.0
311	Kerala	3761	0	74.9	57.7	1.9	207	0.0
	Tamil Nadu	14461	0	297.4	146.7	0.3	418	0.0
	Pondy	352	0	7.0	7.4	-0.3	29	0.0
	Bihar	4662	0	81.6	79.7	0.3	50	0.0
	DVC	3115	0	63.9	-36.7	0.0	150	0.0
ER	Jharkhand	1342	0	25.9	18.4	-1.1	90	0.0
	Odisha	3774	0	70.3	6.4	0.3	280	0.0
	West Bengal	6585	0	118.8	27.1	0.8	200	0.0
	Sikkim	124	0	1.9	1.7	0.2	25	0.0
	Arunachal Pradesh	118	2	2.1	1.8	0.2	56	0.0
	Assam	1367	18	24.1	19.7	2.0	127	0.2
	Manipur	182	1	2.3	3.0	-0.7	30	0.0
NER	Meghalaya	376	2	6.6	5.4	0.1	38	0.3
	Mizoram	108	1	1.6	1.5	-0.3	26	0.0
	Nagaland	126	1	2.1	2.0	0.0	36	0.0
	Tripura	221	7	4.5	1.5	0.6	22	0.0

D. Transnational Exchanges (MU) - Import(+ve)/Export(-ve)

	Bhutan	Nepal	Bangladesh
Actual(MU)	3.1	-10.3	-9.7
Day peak (MW)	571.8	-559.3	-764.0

 $E.\ Import/export\ By\ Regions (in\ MU)\ -\ Import(+ve)/Export(-ve);\ OD(+)/UD(-)$

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	223.1	-237.5	103.0	-94.4	5.7	-0.1
Actual(MU)	204.5	-247.5	119.8	-83.0	9.7	3.4
O/D/U/D(MU)	-18.6	-10.1	16.8	11.4	4.0	3.6

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5250	14568	6722	1360	609	28509
State Sector	11230	16289	6990	4550	11	39070
Total	16480	30857	13712	5910	621	67579

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	470	1157	499	434	10	2570
Lignite	21	13	46	0	0	80
Hydro	130	37	77	34	6	283
Nuclear	24	32	40	0	0	96
Gas, Naptha & Diesel	34	32	17	0	22	105
RES (Wind, Solar, Biomass & Others)	101	130	214	1	0	447
Total	780	1401	893	469	38	3581

Share of RES in total generation (%)	12.90	9.30	23.99	0.30	0.08	12.47
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	32.71	14.21	37.04	7.52	14.83	23.06

H. All India Demand Diversity Factor

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Based on Regional Max Demands	1.033
Based on State Max Demands	1.085

Diversity factor = Sum of regional or state-wise maximum demands / All India maximum demand

23-Jan-20

 $[\]textbf{*Source} : \textbf{RLDCs for solar connected to ISTS; SLDCs for embedded solar. Limited visibility of embedded solar data.}$

		IN	TER-REGI	ONAL EXCH	ANGES	Date of 1	Reporting :	23-Jan-20
								Import=(+ve) /Export =(-ve) for NET (MU)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
	Export of	ER (With NR)						
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	299	0.0	0.0 7.4	0.0 -7.4
1		GAYA-VARANASI	D/C	0	996	0.0	10.8	-10.8
2	765kV	SASARAM-FATEHPUR	S/C	92	391	0.0	2.7	-2.7
3		GAYA-BALIA	S/C	0	482	0.0	7.3	-7.3
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	220 167	0.0	4.5 2.7	-4.5 -2.7
8		MUZAFFARPUR-GORAKHPUR	D/C	0	853	0.0	8.5	-8.5
9	400 kV	PATNA-BALIA	Q/C	0	897	0.0	12.6	-12.6
10		BIHARSHARIFF-BALIA	D/C	0	435	0.0	4.6	-4.6
11		MOTIHARI-GORAKHPUR	D/C	0	4	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	0	365 155	0.0	1.3 2.7	-1.3 -2.7
14	220 11 1	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.8	0.0	0.8
16	132 KV	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17		KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
Import/E	vnort of	ER (With WR)			ER-NR	0.8	57.7	-56.9
-	Aport Of	<u> </u>	0/0	50.60	0	21.0	0.0	21.0
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	5968	0	21.8	0.0	21.8
19 20	1	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	570 999999	91 146	6.2 0.0	0.0	6.2 -0.5
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	110	285	0.0	1.7	-1.7
22	400 KV	RANCHI-SIPAT	D/C	193	51	2.2	0.0	2.2
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	105	0.0	1.4	-1.4
24		BUDHIPADAR-KORBA	D/C	124	0 ER-WR	1.8 32.0	0.0 3.6	1.8 28.4
Import/E	Export of	ER (With SR)			ER-WK	32.0	3.0	20.4
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	535.0	0.0	12.5	-12.5
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	1980.0	0.0	38.7	-38.7
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2503.0	0.0	47.2	-47.2
28	400 kV	TALCHER-I/C	D/C	873.0	396.0	1.3	0.0	1.3
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 98.4	0.0 -98.4
Import/E	Export of	ER (With NER)			DA DA	0.0	70.4	-50.4
30	400 kV	BINAGURI-BONGAIGAON	D/C	140	176	1.1	0.0	1
31	400 KV	ALIPURDUAR-BONGAIGAON	D/C	247	222	2.1	0.0	2
32	220 kV	ALIPURDUAR-SALAKATI	D/C	40	62	0.2	0.0	0
Import/E	vnort of	NER (With NR)			ER-NER	3.3	0.0	3.3
33	HVDC	BISWANATH CHARIALI-AGRA	-	474	0	11.8	0.0	11.8
					NER-NR		0.0	11.8
Import/E	Export of	WR (With NR)						
34								
35		CHAMPA-KURUKSHETRA	D/C	0	1807	0.0	26.2	-26.2
26	HVDC	V'CHAL B/B	D/C	449	102	7.1	0.6	6.5
36 37	HVDC	V'CHAL B/B APL -MHG	D/C D/C	449	102 1924	7.1 0.0	0.6 37.1	6.5 -37.1
36 37 38	HVDC	V'CHAL B/B	D/C	449	102	7.1	0.6	6.5
37		V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 0	102 1924 2732	7.1 0.0 0.0	0.6 37.1 48.2	6.5 -37.1 -48.2
37 38 39 40	HVDC - 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C S/C	449 0 0 56 0 723	102 1924 2732 1716 911	7.1 0.0 0.0 0.0 0.0 0.0 9.8	0.6 37.1 48.2 17.4 28.8 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8
37 38 39 40 41		VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI	D/C D/C D/C D/C D/C S/C S/C	449 0 0 56 0 723	102 1924 2732 1716 911 0	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0	0.6 37.1 48.2 17.4 28.8 0.0 29.2	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2
37 38 39 40 41 42		V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C S/C S/C D/C	449 0 0 56 0 723 0 34	102 1924 2732 1716 911 0 1494	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5
37 38 39 40 41 42 43	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C	449 0 0 56 0 723 0 34 159	102 1924 2732 1716 911 0 1494 1223 200	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2
37 38 39 40 41 42		V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C S/C S/C D/C	449 0 0 56 0 723 0 34	102 1924 2732 1716 911 0 1494	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5
37 38 39 40 41 42 43 44	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C	449 0 0 56 0 723 0 34 159 291	102 1924 2732 1716 911 0 1494 1223 200 310	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2
37 38 39 40 41 42 43 44 45	765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77	7.1 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1
37 38 39 40 41 42 43 44 45 46 47 48	765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106	7.1 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0 0 0.4	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9
37 38 39 40 41 42 43 44 45 46 47 48 49	- 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0	7.1 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.0 0.4 1.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8
37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 765 kV - 400 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28	7.1 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0 0.0 0.0 0.4 1.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49	- 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0	7.1 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.0 0.4 1.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8
37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 765 kV - 400 kV - 220 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8 0.1	0.6 37.1 48.2 17.4 28.8 0.0 9.5 0.2 0.0 0.0 0 0.0 0.0 0.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E	765 kV 400 kV 220 kV 132kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8 0.1	0.6 37.1 48.2 17.4 28.8 0.0 9.5 0.2 0.0 0.0 0 0.0 0.0 0.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	- 765 kV - 400 kV - 220 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8 0.1 0.0 41.4	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.4 1.0 0.0 0.2 0.0 198.7	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 0.1 -157.3
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54	765 kV 400 kV 220 kV 132kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L SILERU SOLAPUR-RAICHUR	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8 0.1 0.0 41.4	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.4 1.0 0.0 0.2 0.0 198.7	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 -157.3
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55	- 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.0 0.1 1.0 0.2 0.0 198.7	6.5 -37.1 -48.2 -17.4 -28.8 -9.8 -29.2 -9.5 -0.2 -0.2 -0.2 -22.6 -0 -0.1 -0.9 -0.8 -0.0 -157.3 -15.2 -0.0 -20.3 -37.9
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASUR-L-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8 0.1 0.0 41.4	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.4 1.0 0.0 0.2 0.0 198.7	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 -157.3
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	- 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0 0 0 725 0 1053	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.0 0.0 0.0 0.2 22.6 0 0.5 0.1 0.8 0.1 0.0 41.4	0.6 37.1 48.2 17.4 28.8 0.0 0.0 29.2 9.5 0.2 0.0 0.0 0 0.4 1.0 0.0 0.2 0.0 198.7 15.2 0.0 21.8 37.9 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 0.0 -157.3 -15.2 0.0 -20.3 -37.9 12.6
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0 0 0 1053	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.0 0.1 1.0 0.2 0.0 198.7	6.5 -37.1 -48.2 -17.4 -28.8 9.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 0.0 -157.3
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RAPUR BHANPURA-WORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANGHAND BHANGHAND BHANGHAND BHANGHANGHANGHANGHANGHANGHANGHANGHANGHANG	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0 0 0 725 0 1053	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.4 1.0 0.2 0.0 198.7 15.2 0.0 21.8 37.9 0.0 0.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 0.0 -157.3 -15.2 0.0 -20.3 -37.9 12.6 0.0 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0 0 0 725 0 1053	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.4 1.0 0.2 0.0 198.7 15.2 0.0 21.8 37.9 0.0 0.0 0.0 0.0 0.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 0.0 -157.3 -15.2 0.0 -20.3 -37.9 12.6 0.0 0.0 1.7
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 56 0 723 0 34 159 291 973 306 48 36 92 43 0 0 725 0 1053 0 1	102 1924 2732 1716 911 0 1494 1223 200 310 0 334 77 106 0 28 0 WR-NR	7.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.6 37.1 48.2 17.4 28.8 0.0 29.2 9.5 0.2 0.0 0.0 0.4 1.0 0.2 0.0 198.7 15.2 0.0 21.8 37.9 0.0 0.0 0.0 0.0 0.0 0.0	6.5 -37.1 -48.2 -17.4 -28.8 9.8 -29.2 -9.5 -0.2 0.2 22.6 0 0.1 -0.9 0.8 0.0 0.0 -157.3 -15.2 0.0 -20.3 -37.9 12.6 0.0 0.0 1.7