

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: 25th 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 24.01.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 24-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 24th Jan 2020, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting 25-Jan-20

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)	47966	49409	40346	18282	2461	158464
Peak Shortage (MW)	620	0	0	0	26	646
Energy Met (MU)	968	1184	1018	364	42	3576
Hydro Gen (MU)	127	49	90	34	6	306
Wind Gen (MU)	6	45	52			102
Solar Gen (MU)*	38.65	26.90	90.83	1.50	0.03	158
Energy Shortage (MU)	11.9	0.0	0.0	0.0	0.7	12.6
Maximum Demand Met during the day (MW) & time	49350	57057	48818	18821	2506	169343
(from NLDC SCADA)	09:17	10:41	07:40	18:59	18:01	07:51

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	0.035	0.00	0.00	7.50	7.50	79.50	13.00

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 Shortage (MU
	Punjab	5878	0	112.9	53.3	-0.6	80	0.0
	Haryana	6746	0	131.6	91.6	0.5	196	0.0
	Rajasthan	13744	0	237.6	65.2	1.5	596	0.0
	Delhi	4613	0	76.0	60.6	-1.1	209	0.0
NR	UP	16290	0	283.9	119.8	1.4	744	0.0
	Uttarakhand	2195	0	39.9	22.3	1.0	221	0.0
	HP	1757	0	32.1	24.4	0.3	206	0.0
	J&K(UT) and Ladakh(UT)	2479	620	50.3	45.6	-1.1	146	11.9
	Chandigarh	268	0	4.2	4.0	0.2	38	0.0
	Chhattisgarh	3789	0	82.2	38.4	-1.1	274	0.0
	Gujarat	16069	0	341.5	86.2	5.4	521	0.0
	MP	14132	0	250.7	143.5	-2.0	432	0.0
WR	Maharashtra	22698	0	466.0	148.9	-2.4	496	0.0
WK	Goa	503	0	10.1	10.3	-0.4	38	0.0
	DD	347	0	7.5	6.9	0.6	55	0.0
	DNH	814	0	19.0	18.9	0.1	55	0.0
	Essar steel	795	0	6.9	6.7	0.2	159	0.0
	Andhra Pradesh	8968	0	182.8	68.9	-1.0	305	0.0
	Telangana	11097	0	217.2	106.8	-0.3	664	0.0
SR	Karnataka	12360	0	233.6	62.3	-1.1	1011	0.0
3N	Kerala	3737	0	76.3	57.0	1.3	218	0.0
	Tamil Nadu	14498	0	300.3	150.6	0.3	586	0.0
	Pondy	364	0	7.5	7.5	0.0	67	0.0
	Bihar	4500	0	79.7	77.3	0.4	189	0.0
	DVC	3056	0	64.4	-35.9	-1.6	170	0.0
ER	Jharkhand	1324	0	26.0	17.1	0.3	110	0.0
EN	Odisha	3772	0	69.5	6.3	0.8	310	0.0
	West Bengal	6362	0	121.4	27.6	1.1	230	0.0
	Sikkim	193	0	2.7	1.9	0.8	40	0.0
	Arunachal Pradesh	121	1	2.3	2.0	0.1	48	0.0
	Assam	1391	20	23.1	19.9	1.2	82	0.4
	Manipur	215	2	2.7	3.1	-0.4	30	0.0
NER	Meghalaya	379	0	6.6	5.5	0.0	58	0.3
	Mizoram	109	1	1.9	1.6	-0.2	18	0.0
	Nagaland	127	1	2.5	2.1	0.2	33	0.0
	Tripura	217	1	3.5	3.4	0.0	50	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	3.2	-10.4	-7.4
Day peak (MW)	509.9	-547.2	-554.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	228.3	-238.5	103.6	-102.2	7.4	-1.4
Actual(MU)	215.4	-257.2	119.6	-97.4	10.5	-9.0
O/D/U/D(MU)	-12.8	-18.7	16.0	4.8	3.1	-7.6

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5093	16028	7222	1360	613	30316
State Sector	11575	16311	6990	4550	112	39538
Total	16668	32339	14212	5910	726	69854

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	490	1220	514	449	11	2685
Lignite	23	14	48	0	0	85
Hydro	127	49	90	34	6	306
Nuclear	24	33	40	0	0	97
Gas, Naptha & Diesel	30	35	18	0	20	103
RES (Wind, Solar, Biomass & Others)	73	84	189	2	0	348
Total	768	1435	899	485	37	3623

Share of RES in total generation (%)	9.55	5.87	21.04	0.32	0.08	9.61
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	29.23	11.57	35.51	7.39	15.56	20.73

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.043	
Based on State Max Demands	1.098	

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

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

Ì		IN	TER-REGI	ONAL EXCH	ANGES	Date of 1	Reporting :	25-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	7.1	0.0 -7.1
1		GAYA-VARANASI	D/C	0	820	0.0	11.1	-7.1
2	765kV	SASARAM-FATEHPUR	S/C	69	333	0.0	3.0	-3.0
3		GAYA-BALIA	S/C	0	519	0.0	8.3	-8.3
6 7	-	PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	212 151	0.0	4.4 2.7	-4.4 -2.7
8		MUZAFFARPUR-GORAKHPUR	D/C	0	735	0.0	9.6	-9.6
9	400 kV	PATNA-BALIA	Q/C	0	922	0.0	16.1	-16.1
10		BIHARSHARIFF-BALIA	D/C	0	407	0.0	6.3	-6.3
11	-	MOTIHARI-GORAKHPUR	D/C	0	5	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	88	267 154	0.0	1.6 2.3	-1.6 -2.3
14	220 117	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.7	0.0	0.7
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	xport of	ER (With WR)			ER-NR	0.7	65.6	-64.9
_	Aport OI		0/0	2410	0	20.0	0.0	20.0
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	2410	0	20.9	0.0	20.9
19 20	1	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	654 90	207 168	4.9 0.0	0.0	4.9 -0.3
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	187	306	0.0	1.3	-1.3
22	400 KV	RANCHI-SIPAT	D/C	237	65	1.7	0.0	1.7
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	121	0.0	1.5	-1.5
24		BUDHIPADAR-KORBA	D/C	178	0 ER-WR	2.4 30.0	0.0 3.1	2.4 26.9
Import/E	Export of	ER (With SR)			ER-WK	30.0	3.1	20.9
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	604.0	0.0	12.3	-12.3
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	1987.0	0.0	41.8	-41.8
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2431.0	0.0	45.7	-45.7
28 29	400 kV 220 kV	TALCHER-I/C BALIMELA-UPPER-SILERRU	D/C S/C	875.0 1.0	1010.0 0.0	0.0	0.5	-0.5 0.0
29	220 KV	BALIWELA-UFFER-SILERRU	3/C	1.0	ER-SR	0.0	99.9	-99.9
Import/E	Export of	ER (With NER)						1
30	400 kV	BINAGURI-BONGAIGAON	D/C	126	180	0.8	1.1	0
31		ALIPURDUAR-BONGAIGAON	D/C	222	232	0.0	0.1	0
32	220 kV	ALIPURDUAR-SALAKATI	D/C	43	51 ER-NER	0.0	0.0	-0.4
Import/E	Export of	NER (With NR)			ER-NER	0.8	1.2	-0.4
33	HVDC	BISWANATH CHARIALI-AGRA	-	468	0	9.3	0.0	9.3
					NER-NR	9.3	0.0	9.3
	Export of	WR (With NR)			1			T
34	HVDC	CHAMPA-KURUKSHETRA		0	2006	0.0	26.2	-26.2
35 36	HVDC	VICITAL D/D	D/C	440		9.6		7.5
		V'CHAL B/B APL -MHG	D/C	449 0	253	8.6 0.0	1.1	7.5 -37.1
37		V'CHAL B/B APL -MHG GWALIOR-AGRA		0 0		8.6 0.0 0.0		7.5 -37.1 -49.1
37 38		APL -MHG	D/C D/C	0	253 1925	0.0	1.1 37.1	-37.1
38 39	765 kV	APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	0 0 0	253 1925 2928 1506 1010	0.0 0.0 0.0 0.0	1.1 37.1 49.1 21.0 30.9	-37.1 -49.1 -21.0 -30.9
38 39 40	- 765 kV	APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C S/C	0 0 0 0 703	253 1925 2928 1506 1010	0.0 0.0 0.0 0.0 11.2	1.1 37.1 49.1 21.0 30.9 0.0	-37.1 -49.1 -21.0 -30.9 11.2
38 39 40 41	765 kV	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	0 0 0 0 0 703	253 1925 2928 1506 1010 0	0.0 0.0 0.0 0.0 11.2 0.0	1.1 37.1 49.1 21.0 30.9 0.0 29.5	-37.1 -49.1 -21.0 -30.9 11.2 -29.5
38 39 40	- 765 kV	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	0 0 0 0 703 0 53	253 1925 2928 1506 1010 0 1547 1063	0.0 0.0 0.0 0.0 11.2 0.0 0.0	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9
38 39 40 41 42		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	0 0 0 0 0 703	253 1925 2928 1506 1010 0	0.0 0.0 0.0 0.0 11.2 0.0	1.1 37.1 49.1 21.0 30.9 0.0 29.5	-37.1 -49.1 -21.0 -30.9 11.2 -29.5
38 39 40 41 42 43	- 765 kV - 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 0 0 0 703 0 53	253 1925 2928 1506 1010 0 1547 1063 185	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1
38 39 40 41 42 43 44 45 46		APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR	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	0 0 0 0 703 0 53 105 33 983 159	253 1925 2928 1506 1010 0 1547 1063 185 449 0	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8
38 39 40 41 42 43 44 45 46 47		APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA 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	0 0 0 0 703 0 53 105 33 983 159	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1
38 39 40 41 42 43 44 45 46 47 48		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	0 0 0 0 703 0 53 105 33 983 159 18	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0 1 0.3	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0
38 39 40 41 42 43 44 45 46 47	400 kV	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 703 0 53 105 33 983 159	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1
38 39 40 41 42 43 44 45 46 47 48 49	400 kV	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	0 0 0 0 703 0 53 105 33 983 159 18 28	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.8	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 0.0 1 0.3 1.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8
38 39 40 41 42 43 44 45 46 47 48 49 50	- 400 kV - 220 kV - 132kV	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-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3	0.0 0.0 0.0 0.0 0.1 0.0 0.1 0.0 22.8 0 0.4 0.1 0.8 0.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0 1 0.3 1.0 0.0	-37.1 -49.1 -21.0 -30.9 -11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8
38 39 40 41 42 43 44 45 46 47 48 49 50 51	- 400 kV - 220 kV - 132kV	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 GWALIOR-SAWAI MADHOPUR WR (With SR)	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0 1 0.3 1.0 0.0 0.1	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8 0.0 0.0 -165.3
38 39 40 41 42 43 44 45 46 47 48 49 50 51	- 400 kV - 220 kV - 132kV	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 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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.8 0.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 1 0.3 1.0 0.0 0.1 0.0 20.3	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8 0.0 0.0 -165.3
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	- 400 kV - 220 kV - 132kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI 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	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.8 0.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 0.0 1 0.3 1.0 0.0 0.0 29.5 1.0 0.0 1.0 0.0 1.0 0.0 1.0 0.0 1.0 0.0 0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8 0.0 0.0 -165.3
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	- 400 kV - 220 kV - 132kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-SHINMAL 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	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.8 0.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0 1 0.3 1.0 0.0 0.1 0.0 20.3 1.0 0.0 20.3	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8 0.0 0.0 -165.3
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	- 400 kV - 220 kV - 132kV - Export of - HVDC	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI 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	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.8 0.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 0.0 1 0.3 1.0 0.0 0.0 29.5 1.0 0.0 1.0 0.0 1.0 0.0 1.0 0.0 1.0 0.0 0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 -0.1 -3.0 22.8 -1 -1.0 0.8 -0.0 -165.3
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	400 kV 220 kV 132kV Export of HVDC 765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASUR-L-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 3.0 0.0 1 0.3 1.0 0.0 0.1 0.0 209.3	-37.1 -49.1 -21.0 -30.9 -11.2 -29.5 -8.9 -0.1 -3.0 -22.8 -1 -0.1 -1.0 -0.8 -0.0 -165.3 -12.1 -12.1 -10.0 -22.8 -38.1
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	- 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	APL -MHG GWALIOR-AGRA PHAGJ-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.0 44.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 1 0.3 1.0 0.0 0.1 0.0 209.3 12.1 0.0 22.8 38.1 0.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 -0.1 -3.0 22.8 -1 -1.0 -0.8 -165.3 -12.1 -1.0 -22.8 -38.1 -9.8 -38.1 -9.8 -0.0 -0.0 -0.0
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57	- 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BHASUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-KUDGI	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 S/C S/C S/C S/C S/C S/C S	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.0 44.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 1 0.3 1.0 0.0 0.1 0.0 209.3 12.1 0.0 22.8 38.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8 0.0 0.0 -165.3 -12.1 0.0 -22.8 -38.1 9.8 0.0 0.0 0.0 1.8
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	- 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	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-RANPUR BHANPURA-WARIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.0 44.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 1 0.3 1.0 0.0 0.1 0.0 209.3 12.1 0.0 22.8 38.1 0.0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 -0.1 -3.0 22.8 -1 -1.0 -0.8 -165.3 -12.1 -1.0 -22.8 -38.1 -9.8 -38.1 -9.8 -0.0 -0.0 -0.0
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58 59	- 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI 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 WARDHA-NIZAMABAD 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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.0 44.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 1 0.3 1.0 0.0 0.1 0.0 209.3 12.1 0.0 22.8 38.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 -0.1 -3.0 22.8 -1 -1.0 -0.8 -0.0 -0.0 -165.3 -12.1 -1.0 -22.8 -38.1 -9.8 -0.0 -0.0 -1.8 -61.3
38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	- 400 kV - 220 kV - 132kV - 2xport of - HVDC - 765 kV - 400 kV	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-RANPUR BHANPURA-WARIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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	0 0 0 0 703 0 53 105 33 983 159 18 28 84 36 0	253 1925 2928 1506 1010 0 1547 1063 185 449 0 419 85 105 3 45 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.1 0.0 22.8 0 0.4 0.1 0.0 44.1 0.0 44.1	1.1 37.1 49.1 21.0 30.9 0.0 29.5 8.9 0.0 1 0.3 1.0 0.0 0.1 0.0 209.3 12.1 0.0 22.8 38.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-37.1 -49.1 -21.0 -30.9 11.2 -29.5 -8.9 0.1 -3.0 22.8 -1 0.1 -1.0 0.8 0.0 0.0 -165.3 -12.1 0.0 -22.8 -38.1 9.8 0.0 0.0 0.0 1.8