

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: 28th Dec 2019

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 27.12.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 27-दिसम्बर-2019 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 27th Dec 2019, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting 28-Dec-19

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)	50716	47726	39097	17393	2385	157317
Peak Shortage (MW)	705	0	0	0	31	736
Energy Met (MU)	1005	1116	963	343	41	3468
Hydro Gen (MU)	118	39	87	34	8	286
Wind Gen (MU)	4	73	22			100
Solar Gen (MU)*	30.07	23.70	75.62	1.64	0.02	131
Energy Shortage (MU)	13.3	0.1	0.0	0.0	0.5	13.9
Maximum Demand Met during the day (MW) & time	51235	53642	46574	18650	2422	168917
(from NLDC SCADA)	18:58	11:10	09:41	18:35	17:51	09:28

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	2.05	2.05	67.80	30.15

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	6619	0	120.9	59.5	-1.6	60	0.0
	Haryana	6868	0	133.6	83.5	0.7	262	0.6
	Rajasthan	12949	0	235.0	68.2	1.3	543	0.0
	Delhi	4872	0	82.0	63.3	0.3	240	0.0
NR	UP	16369	310	304.8	125.9	0.7	1089	0.0
	Uttarakhand	2233	0	41.4	27.7	0.5	141	0.3
	HP	1729	0	30.4	23.1	0.2	325	0.0
	J&K(UT) and Ladakh(UT)	2625	656	52.5	43.0	4.2	507	12.4
	Chandigarh	292	0	4.9	4.5	0.5	75	0.0
	Chhattisgarh	3578	0	75.3	18.3	-2.4	323	0.0
	Gujarat	15603	0	320.9	75.9	-1.6	482	0.0
	MP	13620	0	245.1	116.7	-2.9	496	0.0
WR	Maharashtra	20969	0	428.5	151.4	-0.5	421	0.0
WK	Goa	611	0	13.5	12.7	0.2	32	0.1
	DD	331	0	7.4	7.0	0.4	42	0.0
	DNH	791	0	18.7	18.8	-0.1	30	0.0
	Essar steel	352	0	6.5	6.1	0.4	254	0.0
	Andhra Pradesh	8606	0	172.6	68.5	0.9	560	0.0
	Telangana	11180	0	225.7	119.1	0.5	691	0.0
SR	Karnataka	11741	0	211.6	56.7	1.6	598	0.0
310	Kerala	3682	0	74.4	58.7	2.1	217	0.0
	Tamil Nadu	13090	0	271.4	159.7	-0.3	876	0.0
	Pondy	345	0	6.8	7.1	-0.3	55	0.0
	Bihar	4527	0	77.7	76.1	0.2	250	0.0
	DVC	3222	0	64.9	-37.8	0.6	250	0.0
ER	Jharkhand	1349	0	25.1	16.1	-0.6	180	0.0
LIN	Odisha	3672	0	66.2	6.1	-0.5	200	0.0
	West Bengal	6267	0	107.0	21.7	1.6	400	0.0
	Sikkim	136	0	2.1	1.8	0.4	25	0.0
	Arunachal Pradesh	121	1	2.3	1.9	0.2	41	0.0
	Assam	1365	19	22.8	17.7	0.7	82	0.2
	Manipur	196	2	2.7	3.1	-0.4	31	0.0
NER	Meghalaya	354	0	6.2	3.0	0.4	85	0.2
	Mizoram	106	1	1.7	1.2	0.1	36	0.0
	Nagaland	128	2	2.3	2.3	-0.2	17	0.0
	Tripura	221	0	3.3	1.4	-0.6	15	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	5.4	-8.9	-7.0
Day peak (MW)	251.0	-473.0	-528.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	250.6	-270.6	120.0	-100.8	-1.3	-2.1
Actual(MU)	258.0	-284.9	138.7	-117.3	0.1	-5.4
O/D/U/D(MU)	7.4	-14.3	18.7	-16.5	1.3	-3.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	6510	15033	6752	2120	597	31011
State Sector	12169	15617	8660	4640	11	41097
Total	18679	30649	15412	6760	608	72108

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	500	1194	488	454	13	2649
Lignite	21	16	55	0	0	92
Hydro	118	39	88	34	8	286
Nuclear	29	27	44	0	0	101
Gas, Naptha & Diesel	34	36	18	0	25	112
RES (Wind, Solar, Biomass & Others)	63	110	140	2	0	315
Total	765	1422	832	489	46	3555

Share of RES in total generation (%)	8.28	7.74	16.79	0.34	0.04	8.85
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	27.54	12.37	32.62	7.21	18.25	19.74

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.021	
Based on State Max Demands	1.070	

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.}$

		<u>IN'</u>	TER-REGI	ONAL EXCH	ANGES	Date of 1	Reporting :	28-Dec-19
								Import=(+ve) /Export =(-ve)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	for NET (MU) NET (MU)
Import/E		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	931	0.0	12.2	-12.2
2	765kV	SASARAM-FATEHPUR	S/C	0	434	0.0	6.1	-6.1
3		GAYA-BALIA	S/C	0	575	0.0	9.5	-9.5
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	205 180	0.0	3.8	-3.8 -3.2
8		MUZAFFARPUR-GORAKHPUR	D/C	0	976	0.0	12.5	-12.5
9	400 kV	PATNA-BALIA	Q/C	0	915	0.0	15.9	-15.9
10		BIHARSHARIFF-BALIA	D/C	0	467	0.0	7.8	-7.8
11		MOTIHARI-GORAKHPUR	D/C	0	5	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	0	469 161	0.0	5.2 2.6	-5.2 -2.6
14	220 KV	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	12217	GARWAH-RIHAND	S/C	30	0	0.3	0.0	0.3
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
I	· 6	ED (WAL WD)			ER-NR	0.3	78.8	-78.5
•	лрогі оі	ER (With WR)	0.7				0.0	
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	876	212	6.7	0.0	6.7
19 20	- 705 117	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	506 3	117 257	3.2 0.0	3.6	3.2 -3.6
21	400:	JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	Q/C	236	112	1.0	0.0	1.0
22	400 kV	RANCHI-SIPAT	D/C	222	25	1.6	0.0	1.6
23	220 kV	BUDHIPADAR-RAIGARH	S/C	4	90	0.0	1.2	-1.2
24		BUDHIPADAR-KORBA	D/C	187	0 ER-WR	2.9	0.0	2.9
Import/E	Export of	ER (With SR)			EK-WK	15.4	4.8	10.6
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	668.0	0.0	11.3	-11.3
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2474.0	0.0	48.6	-48.6
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2146.0	0.0	42.8	-42.8
28	400 kV	TALCHER-I/C	D/C	383.0	933.0	0.0	6.6	-6.6
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 102.6	0.0 -102.6
Import/E	Export of	ER (With NER)			ER-SK	0.0	102.0	-102.6
30	Ĺ	BINAGURI-BONGAIGAON	D/C	291	35	4.5	0.0	4
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	340	0	5.1	0.0	5
32	220 kV	ALIPURDUAR-SALAKATI	D/C	68	17	1.1	0.0	1
I	· 6	NIED (W/24L NID)			ER-NER	10.6	0.0	10.6
33	HVDC	NER (With NR) BISWANATH CHARIALI-AGRA		490	0	11.5	0.0	11.5
33	HIIDC		_	470		11.5		11.5
		BIS WILL THE CHINA THE FROM	-		NER-NR	11.5		11.5
Import/E	Export of	WR (With NR)	-		NER-NR	11.5	0.0	11.5
Import/E			D/C	0	NER-NR 2507	0.0		-39.6
34 35	Export of HVDC	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	229	2507 490	0.0	39.6 0.0	-39.6 1.0
34 35 36		WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	229 0	2507 490 1925	0.0 1.0 0.0	39.6 0.0 42.9	-39.6 1.0 -42.9
34 35 36 37		WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	229 0 0	2507 490 1925 2791	0.0 1.0 0.0 0.0	39.6 0.0 42.9 51.7	-39.6 1.0 -42.9 -51.7
34 35 36	HVDC	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	229 0	2507 490 1925	0.0 1.0 0.0	39.6 0.0 42.9	-39.6 1.0 -42.9
34 35 36 37 38		WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	229 0 0 0	2507 490 1925 2791 1531	0.0 1.0 0.0 0.0 0.0	39.6 0.0 42.9 51.7 20.2	-39.6 1.0 -42.9 -51.7 -20.2
34 35 36 37 38 39 40 41	HVDC	WR (With NR) CHAMPA-KURUKSHETRA 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	229 0 0 0 0 0 0 681	2507 490 1925 2791 1531 982 0 1601	0.0 1.0 0.0 0.0 0.0 0.0 0.0 11.8	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5
34 35 36 37 38 39 40 41 42	HVDC	WR (With NR) CHAMPA-KURUKSHETRA 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	229 0 0 0 0 0 681 0 307	2507 490 1925 2791 1531 982 0 1601 964	0.0 1.0 0.0 0.0 0.0 0.0 0.0 11.8 0.0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2
34 35 36 37 38 39 40 41 42 43	HVDC	WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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	229 0 0 0 0 0 681 0 307 158	2507 490 1925 2791 1531 982 0 1601 964 151	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7
34 35 36 37 38 39 40 41 42 43	HVDC	WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 D/C S/C S/C S/C S/C S/C	229 0 0 0 0 681 0 307 158 58	2507 490 1925 2791 1531 982 0 1601 964 151 407	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.7	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6
34 35 36 37 38 39 40 41 42 43	HVDC - 765 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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	229 0 0 0 0 0 681 0 307 158	2507 490 1925 2791 1531 982 0 1601 964 151	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7
34 35 36 37 38 39 40 41 42 43 44 45	HVDC - 765 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND	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	229 0 0 0 0 0 681 0 307 158 58 975	2507 490 1925 2791 1531 982 0 1601 964 151 407 0	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.7 0.0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4
34 35 36 37 38 39 40 41 42 43 44 45	HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA 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	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	229 0 0 0 0 681 0 307 158 58 975 63	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.7 0.0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC - 765 kV	WR (With NR) CHAMPA-KURUKSHETRA 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	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	229 0 0 0 0 681 0 307 158 58 975 63 27 21 82	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 0.3 1.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	HVDC - 765 kV - 400 kV - 220 kV	WR (With NR) CHAMPA-KURUKSHETRA 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	229 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 33	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 3 1.0 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA 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	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	229 0 0 0 0 681 0 307 158 58 975 63 27 21 82	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1 1.0 0.1	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 0.1	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	HVDC 765 kV 400 kV 220 kV	WR (With NR) CHAMPA-KURUKSHETRA 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	229 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 33	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 3 1.0 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	HVDC - 765 kV - 400 kV - 220 kV - 132kV	WR (With NR) CHAMPA-KURUKSHETRA 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	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	229 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1 1.0 0.1	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	HVDC 765 kV 400 kV 220 kV	WR (With NR) CHAMPA-KURUKSHETRA 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 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	229 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 0 33 WR-NR	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.0 0.0 0.1 1.8 0.0 0.0 0.7 0.0 0.2 0.4 0.4 0.1 1.0 0.1 0.1 0.1 0.0 0.0 0.0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 0.3 1.0 0.0 0.1 0.0 230.4	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0 -192.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	HVDC - 765 kV - 400 kV - 220 kV - 132kV	WR (With NR) CHAMPA-KURUKSHETRA 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 GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU 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	229 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 WR-NR	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1 1.0 0.1 0.1 0.0 37.5	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 0.3 1.0 0.0 230.4 11.8 0.0 28.5	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 -22.4 -3 0.1 -1.0 0.0 0.0 -192.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC - 765 kV	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAK 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 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	229 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 33 0 WR-NR	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 0.1 0.0 230.4 11.8 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	HVDC - 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAK 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 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	229 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 WR-NR 498 0 1986 2821 0	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1 1.0 0.1 0.0 37.5	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 230.4 11.8 0.0 28.5 51.5 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5 11.1
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BHASWATI B/B BHASWATI B/B BHASWATI B/B BHASWATI B/B BHASWATI B/B BARSUR-LSILERU 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 S/C S/C S/C S/C S/C S/C S	229 0 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0 0 0 0 0 0 872 0	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 0 WR-NR 498 0 1986 2821 0	0.0 1.0 0.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1 1.0 0.1 0.0 37.5	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 0.1 0.0 230.4 11.8 0.0 28.5 51.7 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5 11.1 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-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) BHASBUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-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 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	229 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0	2507 490 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 WR-NR 498 0 1986 2821 0	0.0 1.0 0.0 0.0 0.0 0.0 11.8 0.0 0.0 0.0 0.0 0.0 0.7 0.0 22.4 0 0.4 0.1 1.0 0.1 0.0 37.5	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 230.4 11.8 0.0 28.5 51.5 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5 11.1
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BHASWATI B/B BHASWATI B/B BHASWATI B/B BHASWATI B/B BHASWATI B/B BARSUR-LSILERU 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	229 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0 0 0 0 0 1	2507 490 1925 1925 2791 1531 982 0 1601 964 151 407 0 335 65 104 0 WR-NR	0.0 1.0 0.0 0.0 0.0 0.0 1.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 3 1.0 0.0 2.6 0.0 0.1 11.8 0.0 28.5 51.5 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5 11.1 0.0 -1.5
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-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 KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-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	229 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0 0 0 0 0 1	2507 490 1925 1925 2791 1531 982 0 1601 964 1507 00 335 65 104 0 WR-NR 498 0 1986 2821 0 0 0 89 100 WR-SR	0.0 1.0 0.0 0.0 0.0 0.0 1.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 230.4 11.8 0.0 28.5 51.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5 11.1 0.0 -1.5 1.8
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 S2 53 54 55 56 57 58	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-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 KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-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	229 0 0 0 0 0 0 681 0 307 158 58 975 63 27 21 82 37 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	2507 490 1925 1925 2791 1531 982 0 1601 964 1507 00 335 65 104 0 WR-NR 498 0 1986 2821 0 0 0 89 100 WR-SR	0.0 1.0 0.0 0.0 0.0 0.0 1.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	39.6 0.0 42.9 51.7 20.2 33.5 0.0 32.5 3.2 0.0 2.6 0.0 3 1.0 0.0 230.4 11.8 0.0 28.5 51.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-39.6 1.0 -42.9 -51.7 -20.2 -33.5 11.8 -32.5 -3.2 0.7 -2.6 22.4 -3 0.1 -1.0 1.0 0.0 0.0 -192.9 -11.8 0.0 -28.5 -51.5 11.1 0.0 -1.5 1.8