

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)
B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016
बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 19th Jan 2020

To,

- 1. कार्यकारी निदेशक, पू.क्षे.भा.प्रे.के.,14, गोल्फ क्लब रोड, कोलकाता ७०००३३ 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.,२९ , रेस कोर्स क्रॉस रोड, बंगलुरु –५६०००९ Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 18.01.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 18-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 18th Jan 2020, is available at the NLDC website.

धन्यवाद,

पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

Report for previous day Date of Reporting 19-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)	46170	47056	37363	17517	2412	150518
Peak Shortage (MW)	605	0	0	0	27	632
Energy Met (MU)	945	1097	948	346	41	3377
Hydro Gen (MU)	132	39	76	33	7	287
Wind Gen (MU)	5	39	34			78
Solar Gen (MU)*	32.38	24.10	80.43	1.12	0.05	138
Energy Shortage (MU)	12.3	0.0	0.0	0.0	1.2	13.5
Maximum Demand Met during the day (MW) & time	47614	53533	44966	18623	2505	161538
(from NLDC SCADA)	19:05	11:00	08:18	18:20	17:40	09:27

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	2.67	2.67	77.86	19.47

C. Power Supply Position in States

C. Power Supply Po	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	5660	0	110.4	57.0	-2.1	73	0.0
	Harvana	6411	125	126.1	93.1	0.7	219	0.0
	Rajasthan	12764	0	230.2	74.9	-1.1	384	0.0
	Delhi	4256	0	73.3	57.4	-0.2	350	0.0
NR	UP	15744	0	279.8	125.0	-0.6	714	0.5
	Uttarakhand	2082	0	39.6	20.6	0.4	106	0.0
	HP	1694	20	31.3	23.8	1.1	213	0.0
	J&K(UT) and Ladakh(UT)	2317	579	49.9	44.0	0.5	339	11.8
	Chandigarh	258	0	4,3	4.3	0.0	31	0.0
	Chhattisgarh	3624	0	72.5	29.7	-1.2	170	0.0
		15611	0	322.1	88.4	2.7	735	0.0
	Gujarat MP	12701	0	230.2	129.6	-3.1	561	0.0
	Maharashtra	21477	0	431.8	145.1	-3.1	664	0.0
WR	Goa	488	0	9.3	9.8	-0.6	54	0.0
	DD	321	0	7.2	6.9	0.3	39	0.0
	DNH	778	0	18.1	18.1	0.0	112	0.0
	Essar steel	290	0	6.1	6.1	0.0	221	0.0
	Andhra Pradesh	8441	0	169.5	64.5	-2.3	246	0.0
	Telangana	10839	0	209.8	103.8	-1.8	466	0.0
SR	Karnataka	12309	0	228.3	62.7	-2.1	622	0.0
	Kerala	3569	0	72.3	57.1	1.4	195	0.0
	Tamil Nadu Pondy	12272 325	0	262.1 6.1	166.9 6.7	0.7 -0.5	524 34	0.0
							315	
	Bihar DVC	4334 3092	0	73.0	74.3 -35.9	-2.3		0.0
	Jharkhand		0	63.5		-0.6	243 63	
ER	Odisha Odisha	1298 3682		24.3 68.4	15.8	-0.8	313	0.0
			0		5.7	0.0		
	West Bengal	6385	0	116.0	22.2	0.2	301	0.0
	Sikkim	140	0	1.2	1.6	-0.4	42	0.0
	Arunachal Pradesh	122	2	2.2	2.3	-0.3	30	0.0
	Assam	1364	10	22.6	19.5	0.6	84	0.4
	Manipur	216	4	2.6	3.1	-0.5	47	0.0
NER	Meghalaya	394	0	6.1	3.1	0.8	84	0.8
	Mizoram	104	1	1.6	1.5	-0.2	22	0.0
	Nagaland	125	3	2.3	2.0	0.1	18	0.0
	Tripura	220	2	3.5	1.7	-0.4	24	0.0

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

The state of the s	Bhutan	Nepal	Bangladesh
Actual(MU)	4.0	-6.4	-8.7
Day peak (MW)	458.7	-254.9	-765.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	236.7	-248.3	119.5	-111.0	3.4	0.3
Actual(MU)	223.2	-256.3	140.0	-115.6	4.7	-4.1
O/D/U/D(MU)	-13.6	-8.0	20.5	-4.7	1.4	-4.4

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	6004	13718	7062	1710	652	29145
State Sector	12760	17701	8270	4550	11	43292
Total	18764	31418	15332	6260	663	72437

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	463	1183	479	454	11	2591
Lignite	19	16	46	0	0	81
Hydro	132	39	76	33	7	287
Nuclear	24	27	45	0	0	97
Gas, Naptha & Diesel	32	30	18	0	22	102
RES (Wind, Solar, Biomass & Others)	66	71	157	1	0	295
Total	737	1367	821	488	41	3453

Share of RES in total generation (%)	8.98	5.21	19.12	0.24	0.12	8.56
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	30.16	10.08	33.89	6.95	17.70	19.67

H. All India Demand Diversity Factor

11 111 India Demand Diversity Luctor		
Based on Regional Max Demands	1.035	
Based on State Max Demands	1.088	

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 :	19-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)
Import/F		ER (With NR)					()	()
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	300	0.0	7.3	0.0 -7.3
1		GAYA-VARANASI	D/C	0	1052	0.0	11.4	-1.3
2	765kV	SASARAM-FATEHPUR	S/C	0	458	0.0	5.5	-5.5
3		GAYA-BALIA	S/C	0	597	0.0	7.2	-7.2
6		PUSAULI-VARANASI	S/C	0	221	0.0	4.1	-4.1
7	_	PUSAULI -ALLAHABAD	S/C	0	185	0.0	3.0	-3.0
9	400 kV	MUZAFFARPUR-GORAKHPUR	D/C	0	1021	0.0	12.7	-12.7
10	400 KV	PATNA-BALIA BIHARSHARIFF-BALIA	Q/C D/C	0	1043 534	0.0	16.9 6.1	-16.9 -6.1
11	1	MOTIHARI-GORAKHPUR	D/C	0	5	0.0	0.0	0.0
12	1	BIHARSHARIFF-VARANASI	D/C	35	482	0.0	4.3	-4.3
13	220 kV	PUSAULI-SAHUPURI	S/C	5	100	0.0	1.1	-1.1
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.6	0.0	0.6
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
	,	ED AND THE			ER-NR	0.6	72.3	-71.7
Import/E	export of	ER (With WR)			1			1
18		JHARSUGUDA-DHARAMJAIGARH	Q/C	1105	0	15.6	0.0	15.6
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	443	422	0.0	2.2	-2.2
20		JHARSUGUDA-DURG	D/C	146	269	0.0	2.7	-2.7
21	400 kV	JHARSUGUDA-RAIGARH RANCHI-SIPAT	Q/C D/C	185 179	227 128	0.0	0.3	-0.3 -0.2
23		BUDHIPADAR-RAIGARH	S/C	0	100	0.0	1.3	-0.2
24	220 kV	BUDHIPADAR-KORBA	D/C	126	0	1.9	0.0	1.9
24	1	BUDIIII ADAR-KUKBA	D/C	120	ER-WR	17.5	6.6	10.9
Import/F	Export of	ER (With SR)				17.0	0.0	100
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	529.0	0.0	12.3	-12.3
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	1977.0	0.0	35.5	-35.5
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2654.0	0.0	54.1	-54.1
28	400 kV	TALCHER-I/C	D/C	906.0	234.0	4.6	0.0	4.6
29	$220~\rm kV$	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	101.8	-101.8
	Export of	ER (With NER)		100		2.2	0.0	
30	400 kV	BINAGURI-BONGAIGAON	D/C	198	68	2.2	0.0	2
32	220 kV	ALIPURDUAR-BONGAIGAON ALIPURDUAR-SALAKATI	D/C D/C	330 56	99 43	3.8 0.5	0.0	4 0
32	220 KV	ALII OKDUAK-SALAKATI	D/C	30	ER-NER	6.5	0.0	6.5
Import/E	Export of	NER (With NR)			DI HER	0.0	0.0	0.5
33	HVDC	BISWANATH CHARIALI-AGRA		472	0	11.7	0.0	11.7
			-		17FD 17F			11.7
		DID WILLIAM CONTROLLY	-		NER-NR	11.7	0.0	
Import/E	Export of	WR (With NR)	-		NEK-NK	11.7	0.0	
Import/E	Î	WR (With NR) CHAMPA-KURUKSHETRA	D/C	0	2353	0.0	49.7	-49.7
34 35	Export of	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	D/C D/C	360	2353	0.0 9.7	49.7	-49.7 9.7
34 35 36	Î	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG	D/C D/C D/C	360 0	2353 0 1927	0.0 9.7 0.0	49.7 0.0 39.4	-49.7 9.7 -39.4
34 35 36 37	Î	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C D/C	360 0 0	2353 0 1927 2555	0.0 9.7 0.0 0.0	49.7 0.0 39.4 41.7	-49.7 9.7 -39.4 -41.7
34 35 36 37 38	Î	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C D/C D/C	360 0 0	2353 0 1927 2555 1494	0.0 9.7 0.0 0.0 0.0	49.7 0.0 39.4 41.7 21.4	-49.7 9.7 -39.4 -41.7 -21.4
34 35 36 37 38 39	Î	WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C D/C D/C	360 0 0 0 0	2353 0 1927 2555 1494 877	0.0 9.7 0.0 0.0 0.0 0.0	49.7 0.0 39.4 41.7 21.4 27.2	-49.7 9.7 -39.4 -41.7 -21.4 -27.2
34 35 36 37 38 39 40	HVDC	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C D/C S/C	360 0 0 0 0 0 0	2353 0 1927 2555 1494 877 0	0.0 9.7 0.0 0.0 0.0 0.0 11.1	49.7 0.0 39.4 41.7 21.4 27.2 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1
34 35 36 37 38 39 40 41	HVDC	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI	D/C D/C D/C D/C D/C D/C S/C S/C	360 0 0 0 0 0 0 697 0	2353 0 1927 2555 1494 877 0 1300	0.0 9.7 0.0 0.0 0.0 0.0 11.1	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8
34 35 36 37 38 39 40 41 42	HVDC	WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 D/C D/C S/C S/C D/C	360 0 0 0 0 0 697 0 387	2353 0 1927 2555 1494 877 0 1300 895	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5
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 JABAL PUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C	360 0 0 0 0 0 697 0 387 173	2353 0 1927 2555 1494 877 0 1300 895 109	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5
34 35 36 37 38 39 40 41 42	HVDC	WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 D/C D/C S/C S/C D/C	360 0 0 0 0 0 697 0 387	2353 0 1927 2555 1494 877 0 1300 895	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5
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 IABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C	360 0 0 0 0 0 697 0 387 173 100	2353 0 1927 2555 1494 877 0 1300 895 109 395	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7
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 D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C	360 0 0 0 0 0 697 0 387 173 100 978	2353 0 1927 2555 1494 877 0 1300 895 109 395 0	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6
34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC - 765 kV - 400 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 RAPP-SHUJALPUR	D/C 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 D/C	360 0 0 0 0 697 0 387 173 100 978 169	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 22.6
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC - 765 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-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	360 0 0 0 0 0 697 0 387 173 100 978 169 18	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.5 0.0 22.6 0	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1
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 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	360 0 0 0 0 697 0 387 173 100 978 169 18	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6 -1 -0.1 -1.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC - 765 kV - 400 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 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	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6 -1 -0.1 -1.0 1.0
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 SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RAPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 0.1	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 111.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 0.3
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 WR (With SR)	D/C 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	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.5 0.0 22.6 0 0.4 0.1 1.0 0.4	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 0.1 0.0	-49.7 9.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 0.3 0.0 -169.0
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 WR (With SR) BHADRAWATI B/B	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	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 0.1 0.0 214.8	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 1.0 0.3 0.0 -169.0
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 WR (With SR) BHADRAWATI B/B BARSUR-L-SILERU	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	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 0.0 11.1 0.0 0.0	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 1 0.5 1.1 0.0 0.1 0.0 214.8	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6 -1 -0.1 -1.0 0.3 0.0 -169.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54	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 WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR	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	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 22.6 0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 0.1 0.0 214.8	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6 -1 -0.1 -1.0 0.3 0.0 -169.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - 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 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 S/C S	360 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 22.6 0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 0.1 0.0 214.8 12.2 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6 -1 -0.1 -1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC	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) BHASUR-LSILIERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C	360 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR 512 0 2072 2456 40	0.0 9.7 0.0 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 22.6 0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1.1 0.0 0.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 111.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57	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 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 BHADRAWATI B/B BHADRAWATI B/B BRASUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI	D/C	360 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 1108 0 24 0 WR-NR 512 0 2072 2456 40 0	0.0 9.7 0.0 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 22.6 0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0	-49.7 9.7 9.7 -39.4 -41.7 -21.4 -27.2 111.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of - 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 RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI	D/C	360 0 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0 0 0 0 0 0 1	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 0.0 11.1 0.0 0.5 0.0 22.6 0 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0	-49.7 9.7 9.7 -39.4 -41.7 -21.4 -27.2 111.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7 0.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57	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 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 BHADRAWATI B/B BHADRAWATI B/B BRASUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI	D/C	360 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0 0.0 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7 0.0 0.0 1.2
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 mport/F 52 53 54 55 56 57 58	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-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-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI	D/C 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	360 0 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0 0 0 0 0 1 1	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 0.0 11.1 0.0 0.5 0.0 22.6 0 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0	-49.7 9.7 9.7 -39.4 -41.7 -21.4 -27.2 111.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7 0.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	HVDC 765 kV 400 kV 220 kV 132kV Export of 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 RAPP-SHUJALPUR 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 KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C 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	360 0 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0 0 0 0 0 0 1	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0 0.0 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 -22.6 -1 -0.1 -1.0 1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7 0.0 0.0 1.2 -76.8
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 52 53 54 55 56 57 58	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-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-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI	D/C 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	360 0 0 0 0 0 0 697 0 387 173 100 978 169 18 30 98 57 0 0 0 0 0 1 1	2353 0 1927 2555 1494 877 0 1300 895 109 395 0 340 73 108 0 24 0 WR-NR	0.0 9.7 0.0 0.0 0.0 0.0 11.1 0.0 0.0 0.5 0.0 0.4 0.1 1.0 0.4 0.0 45.8	49.7 0.0 39.4 41.7 21.4 27.2 0.0 25.8 3.5 0.0 3.7 0.0 1 0.5 1.1 0.0 214.8 12.2 0.0 29.9 42.6 0.0 0.0 0.0	-49.7 9.7 -39.4 -41.7 -21.4 -27.2 11.1 -25.8 -3.5 0.5 -3.7 22.6 -1 -0.1 -1.0 1.0 0.3 0.0 -169.0 -12.2 0.0 -29.9 -42.6 6.7 0.0 0.0 1.2