

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

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, व्वान्त्र क्रान्य हिन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 15th July 2019

To,

- 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. मुख्य महाप्रबंधक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Chief General Manager, 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 14.07.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 14-जुलाई-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 14th July 2019, 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 15-Jul-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 2000 hrs; from RLDCs)	51006	45905	37939	20151	2278	157279
Peak Shortage (MW)	433	0	0	0	219	652
Energy Met (MU)	1214	1091	891	425	43	3666
Hydro Gen (MU)	346	12	40	103	31	531
Wind Gen (MU)	71	185	134			390
Solar Gen (MU)*	20.54	20.5	74.76	2.11	0.02	118
Energy Shortage (MU)	16.0	0.0	0.0	0.0	1.5	17.5
Maximum Demand Met during the day	58081	48167	38879	21380	2312	163308
(MW) & time (from NLDC SCADA)	00:12	23:31	06:57	23:38	19:53	00:12

B. Frequency Profile (%) Region All India FVI <49.7 49.7-49.8 49.8-49.9 49.9-50.05 0.040

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	9341	0	174.4	123.2	-5.3	34	0.0
	Haryana	9636	0	192.3	148.6	-0.3	324	1.0
	Rajasthan	11514	0	247.6	61.2	-0.4	381	0.0
	Delhi	6486	0	125.5	106.1	-0.1	250	5.3
NR	UP	19087	0	370.5	169.9	1.0	501	0.0
	Uttarakhand	1608	0	34.4	11.9	-2.2	83	0.0
	HP	1213	0	25.3	-3.4	-1.8	7	0.0
	J&K	1957	489	40.7	17.0	1.8	311	9.7
	Chandigarh	193	0	3.7	5.4	-1.7	-14	0.0
	Chhattisgarh	4421	0	102.8	35.7	0.2	369	0.0
	Gujarat	15223	0	346.8	58.1	4.0	565	0.0
	MP	8826	0	193.3	88.4	0.0	315	0.0
WR	Maharashtra	17698	0	404.8	103.2	-0.2	543	0.0
WK	Goa	541	0	11.6	10.1	0.9	60	0.0
	DD	312	0	7.1	6.7	0.4	45	0.0
	DNH	776	0	18.4	18.6	-0.2	23	0.0
	Essar steel	340	0	6.2	6.1	0.1	348	0.0
	Andhra Pradesh	7970	0	171.8	22.6	1.8	498	0.0
	Telangana	7950	0	170.2	70.3	-0.3	492	0.0
SR	Karnataka	9278	0	182.3	49.6	1.5	496	0.0
JI.	Kerala	3296	0	65.6	55.4	3.3	309	0.0
	Tamil Nadu	12825	0	294.6	133.6	-1.0	499	0.0
	Pondy	336	0	6.9	7.1	-0.2	50	0.0
	Bihar	4533	0	71.2	72.4	-1.7	70	0.0
	DVC	3032	0	66.6	-33.7	0.0	170	0.0
ER	Jharkhand	1183	0	25.2	16.2	-0.5	80	0.0
LIN	Odisha	4879	0	92.4	36.0	2.6	370	0.0
	West Bengal	8602	0	169.2	66.1	6.0	350	0.0
	Sikkim	70	0	0.8	1.0	-0.2	20	0.0
	Arunachal Pradesh	109	8	2.0	2.7	-0.7	22	0.0
	Assam	1403	43	25.9	19.5	0.6	84	1.5
	Manipur	141	7	2.4	2.4	0.0	18	0.0
NER	Meghalaya	293	10	5.3	-1.0	-0.5	54	0.0
	Mizoram	86	4	1.6	1.3	0.1	11	0.0
	Nagaland	113	9	2.1	2.2	-0.2	25	0.0
	Tripura	220	19	4.1	3.1	-0.2	32	0.0

 $\textbf{D. Transnational Exchanges} \ \ (\textbf{MU}) \ \textbf{- Import} (+\textbf{ve}) \ \ \textbf{/Export} (-\textbf{ve})$

	Bhutan	Nepal	Bangladesh
Actual(MU)	42.9	-2.3	-23.1
Day peak (MW)	1868.6	-120.0	-1095.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	251.2	-249.5	66.6	-52.7	-16.0	-0.3
Actual(MU)	237.1	-251.8	81.0	-50.0	-19.0	-2.7
O/D/U/D(MU)	-14.1	-2.3	14.4	2.7	-3.1	-2.4

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4308	17971	8642	3000	306	34227
State Sector	11730	14590	7090	4890	50	38350
Total	16038	32561	15732	7890	356	72576
	10000	02001	10.02	7030	220	.20.0

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	469	1031	437	379	8	2324
Lignite	17	13	34	0	0	64
Hydro	346	12	40	103	31	531
Nuclear	27	30	52	0	0	109
Gas, Naptha & Diesel	30	39	12	0	28	109
RES (Wind, Solar, Biomass & Others)	107	218	243	2	0	570
Total	996	1343	817	484	67	3708

Share of RES in total generation (%)	10.74	16.24	29.75	0.45	0.03	15.38
Share of Non-fossil fuel (Hydro, Nuclear and	48.18	10.25	40.98	21.71	46.45	32.66
RES) in total generation (%)	40.10	19.33	40.90	21./1	40.45	34.00

H. Diversity Factor
All India Demand Diversity Factor

^{*}Source: 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 :	: 15-Jul-19
								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)	D/C	102	(21	0.0	4.0	4.0
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	192 218	621 214	0.0	4.8 0.3	-4.8 -0.3
3	70587	GAYA-BALIA	S/C	0	351	0.0	3.9	-3.9
4	HVDC	ALIPURDUAR-AGRA	-	0	1603	0.0	39.0	-39.0
5	пове	PUSAULI B/B	S/C	0	98	0.0	2.6	-2.6
6 7		PUSAULI-VARANASI	S/C	0	117	0.0	1.7	-1.7
8		PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	S/C D/C	11	88 536	0.0	0.7 5.8	-0.7 -5.8
9	400 kV	PATNA-BALIA	Q/C	0	832	0.0	11.4	-11.4
10	1	BIHARSHARIFF-BALIA	D/C	26	288	0.0	3.3	-3.3
11		MOTIHARI-GORAKHPUR	D/C	0	356	0.0	5.4	-5.4
12		BIHARSHARIFF-VARANASI	D/C	201	285	0.0	0.7	-0.7
13	220 kV	PUSAULI-SAHUPURI	S/C	23	189	0.0	3.2	-3.2
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 17	-	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17		KARMANASA-CHANDAULI	S/C	0	0 ER-NR	0.0 0.6	0.0 82.5	0.0 -82.0
Import/F	Export of	ER (With WR)			EK-NK	0.0	64.5	-82.0
-			0.0	2150		25.2	0.0	25.2
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	2158	0	35.3	0.0	35.3
19		NEW RANCHI-DHARAMJAIGARH	D/C D/C	1173 393	0	20.9 5.9	0.0	20.9 5.9
21		JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	Q/C	402	85	4.6	0.0	4.6
22	400 kV	RANCHI-SIPAT	D/C	451	0	6.0	0.0	6.0
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	99	0.0	1.6	-1.6
24	220 K V	BUDHIPADAR-KORBA	D/C	225	0	3.8	0.0	3.8
					ER-WR	76.3	1.6	74.8
		ER (With SR)			1			T
25		ANGUL-SRIKAKULAM	D/C	0.0	1593.0	0.0	22.0	-22.0
26	HVDC LINK	JEYPORE-GAZUWAKA B/B	D/C	0.0	680.0	0.0	11.6	-11.6
27 28	400 kV	TALCHER-KOLAR BIPOLE TALCHER-I/C	D/C D/C	178.0	2471.0 1509.0	0.0	37.1 11.0	-37.1 -11.0
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
- 27	220 11 1	D. ILLINDEN OF LER BILLIANC	B/C	1.0	ER-SR	0.0	70.7	-70.7
Import/E	Export of	ER (With NER)						1
30	400 kV	BINAGURI-BONGAIGAON	D/C	0	522	0.0	5.8	-6
31	400 K V	ALIPURDUAR-BONGAIGAON	D/C	444	0	7.6	0.0	8
32	220 kV	ALIPURDUAR-SALAKATI	D/C	16	79	0.0	0.4	0
					ER-NER	7.6	6.1	1.5
		NER (With NR)	1	0	902	0.0	10.4	10.4
33	HVDC	BISWANATH CHARIALI-AGRA	-	0	803	0.0	19.4	-19.4
Import/F					NED-ND	0.0	10.4	
	Export of	WR (With NR)	•		NER-NR	0.0	19.4	-19.4
34	Export of	WR (With NR) CHAMPA-KURUKSHETRA	D/C	0				
		WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B	D/C D/C	0 454	1004 0	0.0 0.0 10.5	19.4 17.0 0.0	-19.4 -17.0 10.5
34		CHAMPA-KURUKSHETRA			1004	0.0	17.0	-17.0
34 35		CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	454	1004	0.0 10.5	17.0 0.0	-17.0 10.5
34 35 36		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	454 0 0 0	1004 0 1169 2377 1002	0.0 10.5 0.0 0.0 0.0	17.0 0.0 29.1	-17.0 10.5 -29.1
34 35 36 37 38 39		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	454 0 0 0 0	1004 0 1169 2377 1002 994	0.0 10.5 0.0 0.0 0.0 0.0	17.0 0.0 29.1 39.7 17.4 33.6	-17.0 10.5 -29.1 -39.7 -17.4 -33.6
34 35 36 37 38 39 40	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C S/C	454 0 0 0 0 0 0 328	1004 0 1169 2377 1002 994	0.0 10.5 0.0 0.0 0.0 0.0 0.0 6.4	17.0 0.0 29.1 39.7 17.4 33.6 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4
34 35 36 37 38 39 40 41	HVDC	CHAMPA-KURUKSHETRA V'CHAL 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	454 0 0 0 0 0 0 328	1004 0 1169 2377 1002 994 0 1311	0.0 10.5 0.0 0.0 0.0 0.0 0.0 6.4 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7
34 35 36 37 38 39 40 41 42	HVDC	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	454 0 0 0 0 0 328 0	1004 0 1169 2377 1002 994 0 1311 968	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6
34 35 36 37 38 39 40 41 42 43	HVDC - 765 kV	CHAMPA-KURUKSHETRA 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 S/C S/C S/C S/C	454 0 0 0 0 0 328 0 0 115	1004 0 1169 2377 1002 994 0 1311 968 96	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2
34 35 36 37 38 39 40 41 42	HVDC	CHAMPA-KURUKSHETRA 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 S/C	454 0 0 0 0 0 328 0 0 115 344	1004 0 1169 2377 1002 994 0 1311 968	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0
34 35 36 37 38 39 40 41 42 43 44	HVDC - 765 kV	CHAMPA-KURUKSHETRA 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 S/C S/C S/C S/C	454 0 0 0 0 0 328 0 0 115	1004 0 1169 2377 1002 994 0 1311 968 96 0	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2
34 35 36 37 38 39 40 41 42 43 44 45	HVDC - 765 kV	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	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	454 0 0 0 0 0 328 0 0 115 344 960	1004 0 1169 2377 1002 994 0 1311 968 96 0	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0
34 35 36 37 38 39 40 41 42 43 44 45	HVDC - 765 kV - 400 kV	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	454 0 0 0 0 0 328 0 0 115 344 960 65	1004 0 1169 2377 1002 994 0 1311 968 96 0 0	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC - 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR	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	454 0 0 0 0 328 0 0 115 344 960 65 46	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 0	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC - 765 kV - 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B 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	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	454 0 0 0 0 328 0 0 115 344 960 65 46 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC - 765 kV - 400 kV	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	454 0 0 0 0 328 0 0 115 344 960 65 46 0 81	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 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	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	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	454 0 0 0 0 328 0 0 115 344 960 65 46 0 81	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 0 0.1 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 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 Export of	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTNA-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	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.0 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 1 0.6 1 0.7 1 0.6 1 0.7	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -0.0 -0.0 -115.1
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 - Export of HVDC	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-JURAIYA 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	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.0 1 1 1 1 1 1 1 1 1 1 1 1 1	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -1.1 -14.1
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53	HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of	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 BARSUR-L.SILERU	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	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 0.0 0.0 -115.1
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 - Export of HVDC	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 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 S/C S	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 0.0 0.0 -115.1
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 LINK - 765 kV	CHAMPA-KURUKSHETRA 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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-MIZAMABAD	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	454 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 0.0 0.0 -115.1
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 - Export of HVDC LINK - 765 kV	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 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 S/C S	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 27 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 6.4 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 0.0 0.0 -115.1
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 LINK - 765 kV - 400 kV	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) BHASEUR-LSILEEU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-RAUGI	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 D/C S/C S/C D/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	454 0 0 0 0 328 0 0 0 115 344 960 65 46 0 81 43 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8 14.1 0.0 7.2 26.5 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 6.4 -26.7 8.6 0.2 5.0 22.0 -1 -0.5 -3.0 0.8 0.0 0.0 -115.1 -14.1 0.0 -7.2 -26.5 8.9
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 LINK - 765 kV - 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATINA-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-KUDGI KOLHAPUR-CHIKODI	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 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	454 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0 0 0 772 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 0 0.1 0.0 0.8 0.2 0.0 45.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8 14.1 0.0 7.2 26.5 0.0 0.0	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -0.0 -115.1 -14.1 -0.0 -7.2 -26.5 -8.9 -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 LINK - 765 kV - 400 kV	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-RANPUR BHANPURA-WARAI MALANPUR-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-UDGI 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 S/C S/C S/C S/C S/C S/C S/C S	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0 0 0 772 0 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR 999 0 1377 1836 155 0	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 177.8 14.1 0.0 7.2 26.5 0.0 0.0 1.4	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -0.0 -115.1 -14.1 -14.1 -0.0 -7.2 -26.5 -8.9 -0.0 -1.4
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 LINK - 765 kV - 400 kV	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-RANPUR BHANPURA-WARIAYA MALANPUR-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-VUDGI 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 S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0 0 0 772 0 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR 999 0 1377 1836 155 0 75 43 WR-SR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8 14.1 0.0 7.2 26.5 0.0 0.0 1.4	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -0.0 -115.1 -14.1 -14.1 -0.0 -7.2 -26.5 -8.9 -0.0 -1.4 -0.8
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 59	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV	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-RANPUR BHANPURA-WARIAYA MALANPUR-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 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	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0 0 0 576 0 772 0 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR 999 0 1377 1836 155 0 75 43 WR-SR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8 14.1 0.0 7.2 26.5 0.0 0.0 1.4	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -0.0 -115.1 -14.1
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 LINK - 765 kV - 400 kV	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-RANPUR BHANPURA-WARIAYA MALANPUR-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-VUDGI 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 S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	454 0 0 0 0 0 328 0 0 115 344 960 65 46 0 81 43 0 0 0 576 0 772 0 0	1004 0 1169 2377 1002 994 0 1311 968 96 0 0 300 69 179 0 WR-NR 999 0 1377 1836 155 0 75 43 WR-SR	0.0 10.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 5.0 22.0 0 0.1 0.0 0.8 0.2 0.0 45.5	17.0 0.0 29.1 39.7 17.4 33.6 0.0 26.7 8.6 0.4 0.0 0.0 1 0.6 3.0 0.0 0.2 0.0 177.8 14.1 0.0 7.2 26.5 0.0 0.0 1.4	-17.0 10.5 -29.1 -39.7 -17.4 -33.6 -6.4 -26.7 -8.6 -0.2 -5.0 -22.0 -1 -0.5 -3.0 -0.8 -0.0 -115.1 -14.1 -14.1 -0.0 -7.2 -26.5 -8.9 -0.0 -1.4 -0.8