

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पाँवर 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: 07th Dec 2019

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 06.12.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 06-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 06th Dec 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 7-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)	44492	47480	36493	18163	2345	148973
Peak Shortage (MW)	560	0	99	0	36	695
Energy Met (MU)	891	1145	850	341	41	3269
Hydro Gen (MU)	133	56	85	41	8	324
Wind Gen (MU)	24	56	62			141
Solar Gen (MU)*	24.56	15.42	60.86	2.02	0.04	103
Energy Shortage (MU)	10.8	0.0	0.0	0.0	0.4	11.2
Maximum Demand Met during the day	45110	53785	40421	18402	2448	153033
(MW) & time (from NLDC SCADA)	18:20	10:39	07:42	17:57	17:25	07:44

C. Power Supply	Position	in	States
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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	5817	0	114.0	54.3	-1.0	95	0.0
NR	Haryana	6102	0	121.6	102.8	1.3	210	0.0
	Rajasthan	12382	0	225.4	62.8	-0.3	438	0.0
	Delhi	3696	0	65.0	53.8	-0.4	189	0.0
	UP	13681	0	249.4	100.4	1.0	1056	0.0
	Uttarakhand	1940	0	36.1	19.2	0.5	112	0.0
	HP	1716	0	30.4	22.2	0.5	115	0.0
	J&K	2230	557	45.9	38.8	-0.5	201	10.8
	Chandigarh	218	0	3.6	3.4	0.2	30	0.0
	Chhattisgarh	3492	0	72.8	20.9	0.3	291	0.0
	Gujarat	15766	0	331.9	99.7	-3.2	511	0.0
	MP	13564	0	253.3	142.8	-2.3	419	0.0
WR	Maharashtra	21043	0	441.9	132.0	-5.5	602	0.0
WK	Goa	541	0	12.5	11.8	0.1	32	0.0
	DD	331	0	7.4	6.8	0.6	46	0.0
	DNH	794	0	18.7	18.8	-0.1	45	0.0
	Essar steel	320	0	6.4	6.3	0.1	295	0.0
	Andhra Pradesh	7306	0	156.0	76.7	-0.1	342	0.0
	Telangana	8888	5	181.5	79.0	0.8	473	0.0
SR	Karnataka	9840	39	179.9	35.1	-1.2	380	0.0
JK.	Kerala	3548	0	68.7	54.5	1.3	211	0.0
	Tamil Nadu	12516	0	257.7	148.6	-1.6	462	0.0
	Pondy	336	0	6.6	7.2	-0.7	35	0.0
	Bihar	3996	0	67.6	66.2	0.0	200	0.0
	DVC	2962	0	61.6	-32.9	0.2	240	0.0
ER	Jharkhand	1176	0	23.8	16.1	-0.3	31	0.0
EN	Odisha	4103	0	75.8	8.5	1.4	300	0.0
	West Bengal	6350	0	110.8	24.3	0.7	430	0.0
	Sikkim	107	0	1.7	1.5	0.2	30	0.0
	Arunachal Pradesh	113	1	2.2	2.1	0.0	74	0.0
	Assam	1345	35	22.6	17.5	0.2	91	0.3
	Manipur	156	1	2.4	2.8	-0.4	31	0.0
NER	Meghalaya	360	0	6.0	3.1	0.3	34	0.0
	Mizoram	104	1	1.8	1.0	0.5	16	0.0
	Nagaland	118	1	2.2	2.2	-0.2	16	0.0
	Tripura	319	1	3,9	1.6	-0.1	29	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	7.1	-5.1	-6.8
Day peak (MW)	595.4	-387.0	-538.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	213.3	-186.0	89.5	-116.0	-0.8	-0.1
Actual(MU)	209.3	-193.6	87.3	-105.9	-1.0	-3.8
O/D/U/D(MU)	-4.0	-7.6	-2.1	10.1	-0.2	-3.7

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	6266	17997	6762	1970	563	33559
State Sector	13780	17340	11570	5700	11	48401
Total	20046	35337	18332	7670	575	81960

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	419	1118	400	418	12	2367
Lignite	23	15	46	0	0	83
Hydro	133	56	85	41	8	324
Nuclear	25	28	57	0	0	110
Gas, Naptha & Diesel	24	49	15	0	25	113
RES (Wind, Solar, Biomass & Others)	75	81	166	2	0	324
Total	699	1347	769	461	46	3322
Share of RES in total generation (%)	10.69	6.02	21.56	0.45	0.09	9.75
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	33.38	12.25	40.08	9.30	18.29	22.81

н	All Inc	lia Dam	and Div	arcity l	Factor

Based on Regional Max Demands	1.047
Based on State Max Demands	1.093

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

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

							Reporting	
								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)
port/I		ER (With NR)			1			
2	765kV	GAYA-VARANASI	D/C S/C	0	1016 404	0.0	13.3 6.2	-13.3 -6.2
3	- 705K	SASARAM-FATEHPUR GAYA-BALIA	S/C	0	498	0.0	8.2	-8.2
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	пове	PUSAULI B/B	S/C	0	196	0.0	5.0	-5.0
6	4	PUSAULI-VARANASI	S/C	0	142	0.0	2.9	-2.9
7	4	PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	S/C D/C	0	142 1133	0.0	1.9	-1.9 -14.8
9	400 kV	PATNA-BALIA	Q/C	0	1061	0.0	18.4	-14.6
10	1	BIHARSHARIFF-BALIA	D/C	0	451	0.0	7.7	-7.7
11	1	MOTIHARI-GORAKHPUR	D/C	2	4	0.0	0.0	0.0
12		BIHARSHARIFF-VARANASI	D/C	0	432	0.0	4.7	-4.7
13	220 kV	PUSAULI-SAHUPURI	S/C	0	104	0.0	1.8	-1.8
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.4	0.0	0.4
16 17	4	KARMANASA-SAHUPURI	S/C S/C	0	0	0.0	0.0	0.0
1 /		KARMANASA-CHANDAULI	S/C	U	ER-NR	0.0	0.0 84.8	0.0 -84.4
port/I	Export of	ER (With WR)			2K-11K	V+T	07.0	-04.4
18	T	JHARSUGUDA-DHARAMJAIGARH	Q/C	782	410	3.8	0.0	3.8
	765 kV				-			
19 20	4	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	351 0	426 335	0.0	0.1 3.9	-0.1 -3.9
21	400.77	JHARSUGUDA-RAIGARH	Q/C	292	239	0.0	0.0	0.0
22	400 kV	RANCHI-SIPAT	D/C	173	140	0.7	0.0	0.7
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	102	0.0	1.4	-1.4
24	220 K	BUDHIPADAR-KORBA	D/C	146	3	1.4	0.0	1.4
4.0		ED (WAL CD)			ER-WR	5.9	5.4	0.6
		ER (With SR)	D/C	0.0	1920.0	0.0	20.2	20.2
25 26	765 kV HVDC	ANGUL-SRIKAKULAM JEYPORE-GAZUWAKA B/B	D/C D/C	0.0	1839.0 522.0	0.0	30.2 12.2	-30.2 -12.2
27	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1591.0	0.0	29.8	-29.8
28	400 kV	TALCHER-I/C	D/C	1038.0	566.0	5.1	0.0	5.1
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
30	Export of 400 kV	ER (With NER) BINAGURI-BONGAIGAON	D/C	312	33	4.5	0.0	4
31	220 kV	ALIPURDUAR-BONGAIGAON ALIPURDUAR-SALAKATI	D/C D/C	346 65	23	4.8 0.6	0.0	5
32	220 KV	ALIFURDUAK-SALAKATI	D/C	0.5	ER-NER	9.8	0.0	9.8
port/I	Export of	NER (With NR)				710	0.0	710
33	HVDC	BISWANATH CHARIALI-AGRA	-	480	0	9.4	0.0	9.4
					NER-NR	9.4	0.0	9.4
	Export of	WR (With NR)						
		· · · · · · · · · · · · · · · · · · ·			1			1
	Ī	CHAMPA-KURUKSHETRA	D/C	0	1111	0.0	26.6	-26.6
35	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	452	0	12.1	26.6 0.0	12.1
35 36	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	452 0	0 1549	12.1 0.0	26.6 0.0 29.1	12.1 -29.1
35 36 37	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	452	0 1549 2279	12.1	26.6 0.0 29.1 41.6	12.1
35 36 37 38		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	452 0 0	0 1549	12.1 0.0 0.0	26.6 0.0 29.1	12.1 -29.1 -41.6
35 36 37 38 39	HVDC - 765 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	452 0 0 0	0 1549 2279 1560	12.1 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5	12.1 -29.1 -41.6 -21.5
35 36 37 38 39 40		CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	452 0 0 0 0	0 1549 2279 1560 852	12.1 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5	12.1 -29.1 -41.6 -21.5 -27.5
35 36 37 38 39 40 41 42		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 S/C S/C D/C	452 0 0 0 0 0 624 0	0 1549 2279 1560 852 0 1381 865	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3
35 36 37 38 39 40 41 42 43		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 S/C S/C D/C S/C S/C S/C	452 0 0 0 0 0 624 0 0 132	0 1549 2279 1560 852 0 1381 865	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3
35 36 37 38 39 40 41 42 43 44		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 S/C	452 0 0 0 0 624 0 0 132 175	0 1549 2279 1560 852 0 1381 865 141 302	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5
35 36 37 38 39 40 41 42 43 44 45	765 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C	452 0 0 0 0 0 624 0 0 132 175 983	0 1549 2279 1560 852 0 1381 865 141 302 0	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 22.5	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 22.5
35 36 37 38 39 40 41 42 43 44 45 46	765 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C D/C	452 0 0 0 0 0 624 0 0 132 175 983 183	0 1549 2279 1560 852 0 1381 865 141 302 0	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1
35 36 37 38 39 40 41 42 43 44 45 46 47	- 765 kV - 400 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	452 0 0 0 0 0 624 0 0 132 175 983 183	0 1549 2279 1560 852 0 1381 865 141 302 0 289	12.1 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 22.5 -1
35 36 37 38 39 40 41 42 43 44 45 46 47	765 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C D/C	452 0 0 0 0 0 624 0 0 132 175 983 183	0 1549 2279 1560 852 0 1381 865 141 302 0	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	- 765 kV - 400 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	452 0 0 0 0 624 0 0 132 175 983 183 11	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94	12.1 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 22.5 -1 0.1 -1.7
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 765 kV - 400 kV	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	452 0 0 0 0 624 0 0 132 175 983 183 11 13	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8	12.1 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -1.7 -0.8
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV 400 kV 220 kV	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	452 0 0 0 0 624 0 0 132 175 983 183 111 13 91 43	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0	12.1 -29.1 -41.6 -21.5 -27.5 -27.5 -10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 0.1 -1.7 0.8 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV 400 kV 220 kV 132kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 22.5 0 0.4 0.0 0.8 0.2 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.0 1.7 0.0 0.1 0.0 188.2	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 0.1 -1.7 0.8 0.0 0.0 -142.1
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV 400 kV 220 kV	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	452 0 0 0 0 624 0 0 132 175 983 183 111 13 91 43	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 22.5 0 0.4 0.0 0.8	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 22.5 -1 0.1 -1.7 0.8 0.0 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	765 kV 400 kV 220 kV 132kV Export of HVDC LINK	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-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	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 22.5 0 0.4 0.0 0.8 0.2 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 0.0 188.2	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 0.1 -1.7 0.8 0.0 0.0 -142.1
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	765 kV 400 kV 220 kV 132kV Export of HVDC	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-RANPUR BHANPURA-WORAK 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	452 0 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 0.1 0.0 188.2	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 0.1 -1.7 0.8 0.0 0.0 -142.1
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	765 kV 400 kV 220 kV 132kV Export of HVDC LINK	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-RANPUR BHANPURA-WORAK 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	452 0 0 0 0 624 0 0 132 175 983 183 111 13 91 43 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 22.5 0 0.4 0.0 0.8 0.2 0.0 46.1	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 0.0 188.2	12.1 -29.1 -41.6 -21.5 -27.5 -10.2 -27.9 -9.3 -0.3 -1.5 -1.5 -1.7 -1.7 -1.7 -1.7 -1.7 -1.7 -1.7 -1.7
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 52 53 54 55 56	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	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 S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 46.1	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 0.0 188.2	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -0.1 -1.7 -0.8 -0.0 -142.1 -10.5 -0.0 -17.7 -355.3 -12.5 -0.0
35 36 37 38 39 40 41 42 43 44 45 50 51 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - Export of LINK - 765 kV	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-SHUJAL-PUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WARAI MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RICAMBAD 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 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	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0 0 0 0 0 0 132 175 983 183 10 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 188.2 10.5 0.0 17.7 35.3 0.0 0.0 1.2	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -0.1 -1.7 -0.8 -0.0 -142.1 -10.5 -10.5 -10.5 -10.5 -10.0 -17.7 -35.3 -12.5 -10.0 -1.2
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	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	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 KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 188.2 10.5 0.0 17.7 35.3 0.0 0.0 1.2 0.0	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -0.1 -1.7 -0.8 -0.0 -142.1 -10.5 -0.0 -17.7 -35.3 -12.5 -0.0 -1.2 -1.4
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 55 50 51 52 53 54 55 56 57 58	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	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-SHUJAL-PUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WARAI MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RICAMBAD 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 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	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0 0 0 0 0 0 132 175 983 183 10 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 188.2 10.5 0.0 17.7 35.3 0.0 0.0 1.2	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -0.1 -1.7 -0.8 -0.0 -142.1 -10.5 -10.5 -10.5 -10.5 -10.0 -17.7 -35.3 -12.5 -10.0 -1.2
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 55 56 57 58 59	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WALIANA MALANPUR-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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 S/C S	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0 0 0 0 0 0 132 175 983 183 10 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 188.2 10.5 0.0 17.7 35.3 0.0 0.0 1.2 0.0	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -0.1 -1.7 -0.8 -0.0 -142.1 -10.5 -0.0 -17.7 -35.3 -12.5 -0.0 -1.2 -1.4
35 36 37 38 39 40 41 42 43 44 45 50 51 52 53 54 55 56 57 58	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	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-SHUJAL-PUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WARAI MELGAON-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 S/C S	452 0 0 0 0 624 0 0 132 175 983 183 11 13 91 43 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1549 2279 1560 852 0 1381 865 141 302 0 289 94 162 8 31 0 WR-NR	12.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	26.6 0.0 29.1 41.6 21.5 27.5 0.0 27.9 9.3 0.3 1.5 0.0 1 0.3 1.7 0.0 0.1 188.2 10.5 0.0 17.7 35.3 0.0 0.0 1.2 0.0	12.1 -29.1 -41.6 -21.5 -27.5 10.2 -27.9 -9.3 -0.3 -1.5 -22.5 -1 -0.1 -1.7 -0.8 -0.0 -142.1 -10.5 -0.0 -17.7 -35.3 -12.5 -1.4 -1.4