

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: 03rd 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.,२९ , रेस कोर्स क्रॉस रोड, बंगलुरु –५६०००९ Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 02.12.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 02-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 02^{nd} 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 3-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)	42531	47325	35163	18377	2286	145682
Peak Shortage (MW)	531	0	0	0	34	565
Energy Met (MU)	830	1131	783	342	40	3127
Hydro Gen (MU)	132	58	88	39	10	327
Wind Gen (MU)	13	71	39			122
Solar Gen (MU)*	30.58	17.82	35.29	2.01	0.04	86
Energy Shortage (MU)	13.7	0.0	0.0	0.0	0.5	14.2
Maximum Demand Met during the day	42849	52276	37003	18485	2426	148420
(MW) & time (from NLDC SCADA)	18:20	10:32	18:41	18:28	17:30	18:23

C. Power Sup	ply Posit	tion 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	5216	0	100.2	48.4	-2.0	68	0.0
	Haryana	5791	0	109.1	94.7	0.1	189	0.0
	Rajasthan	11469	0	210.4	57.9	-0.3	358	0.0
	Delhi	3420	0	60.8	51.0	-1.1	183	0.0
NR	UP	13507	0	240.5	94.7	1.0	1026	0.9
	Uttarakhand	1751	0	33.0	19.6	0.0	124	0.0
	HP	1625	0	28.3	20.6	-0.3	77	0.0
	J&K	2305	576	44.3	37.0	-0.3	201	12.8
	Chandigarh	208	0	3.4	3.4	0.0	19	0.0
	Chhattisgarh	3414	0	71.7	20.1	-0.7	170	0.0
	Gujarat	15753	0	330.3	80.7	0.1	1175	0.0
	MP	13088	0	248.2	139.8	-3.8	419	0.0
WR	Maharashtra	21226	0	437.4	137.9	-2.5	658	0.0
WK	Goa	541	0	12.4	12.3	-0.5	48	0.0
	DD	317	0	6.8	6.3	0.5	46	0.0
	DNH	787	0	18.2	18.3	-0.1	44	0.0
	Essar steel	376	0	5.8	5.6	0.3	295	0.0
	Andhra Pradesh	7195	0	151.6	75.0	-0.6	284	0.0
	Telangana	7933	0	157.3	70.0	0.5	516	0.0
SR	Karnataka	8967	0	167.4	38.4	-1.7	472	0.0
JI.	Kerala	3409	0	70.0	51.5	1.1	200	0.0
	Tamil Nadu	11671	0	230.6	142.3	0.0	1077	0.0
	Pondy	356	0	6.4	7.1	-0.6	40	0.0
	Bihar	3965	0	65.3	65.7	-1.5	75	0.0
	DVC	2954	0	58.0	-29.0	0.7	290	0.0
ER	Jharkhand	1128	0	23.7	16.1	-0.8	31	0.0
EN	Odisha	4508	0	85.4	19.1	0.6	210	0.0
	West Bengal	6265	0	108.5	25.5	2.9	410	0.0
	Sikkim	103	0	1.5	1.5	0.0	30	0.0
	Arunachal Pradesh	115	1	2.3	2.2	-0.1	54	0.0
	Assam	1342	23	23.4	16.5	1.8	128	0.5
	Manipur	200	0	2.4	2.7	-0.3	26	0.0
NER	Meghalaya	351	0	6.0	2.8	0.4	55	0.0
	Mizoram	98	1	1.6	1.4	-0.1	23	0.0
	Nagaland	118	2	2.2	2.1	-0.2	49	0.0
	Tripura	220	0	2.6	1.9	-1.3	37	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	7.3	-3.6	-8.8
Day peak (MW)	589.8	-307.2	-561.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	178.7	-171.5	93.6	-99.5	-1.5	-0.1
Actual(MU)	175.6	-175.8	98.5	-100.9	-3.1	-5.7
O/D/U/D(MU)	-3.1	-4.3	4.8	-1.4	-1.6	-5.6

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5691	18512	7972	1940	618	34733
State Sector	13305	17265	11850	6370	11	48801
Total	18996	35777	19822	8310	629	83534

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	409	1073	397	416	13	2308
Lignite	22	16	30	0	0	67
Hydro	132	58	88	39	10	327
Nuclear	23	23	50	0	0	96
Gas, Naptha & Diesel	19	46	15	0	24	105
RES (Wind, Solar, Biomass & Others)	69	102	114	2	0	287
Total	675	1319	693	457	48	3191
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Share of RES in total generation (%)	10.27	7.77	16.39	0.44	0.08	9.01
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	33.35	13.89	36.29	8.89	21.75	22.27

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.031
Based on State Max Demands	1.089

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)
	Export of	ER (With NR)	200		001	0.0	44.0	110
2	765kV	GAYA-VARANASI	D/C S/C	0	834 537	0.0	11.8 6.9	-11.8 -6.9
3	703KV	SASARAM-FATEHPUR GAYA-BALIA	S/C	0	370	0.0	6.7	-6.7
4		ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	HVDC	PUSAULI B/B	S/C	0	198	0.0	5.0	-5.0
6		PUSAULI-VARANASI	S/C	0	141	0.0	2.7	-2.7
7		PUSAULI -ALLAHABAD	S/C	0	146	0.0	2.1	-2.1
8		MUZAFFARPUR-GORAKHPUR	D/C	0	1053	0.0	15.7	-15.7
9	400 kV	PATNA-BALIA	Q/C	0	942	0.0	16.9	-16.9
10		BIHARSHARIFF-BALIA	D/C	0	358	0.0	5.3	-5.3
11		MOTIHARI-GORAKHPUR	D/C	0	4	0.0	0.0	0.0
12		BIHARSHARIFF-VARANASI	D/C	0	384	0.0	4.8	-4.8
13	220 kV	PUSAULI-SAHUPURI	S/C	0	73	0.0	0.8	-0.8
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		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
2014 F	Symposis A	ED (With WP)			ER-NR	0.4	78.6	-78.2
	xport of	ER (With WR)	1					1
18	705	JHARSUGUDA-DHARAMJAIGARH	Q/C	1193	112	12.1	0.0	12.1
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	357	680	0.0	3.2	-3.2
20	ļ	JHARSUGUDA-DURG	D/C	38	354	0.0	3.9	-3.9
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	287	186	2.0	0.0	2.0
		RANCHI-SIPAT	D/C	170	187	0.0	0.3	-0.3
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	128	0.0	1.9	-1.9
24		BUDHIPADAR-KORBA	D/C	132	10 ER-WR	1.5	0.0	1.5
ort/E	export of	ER (With SR)			ER-WK	15.6	9.2	6.4
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1736.0	0.0	31.8	-31.8
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	550.0	0.0	12.4	-12.4
27	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1975.0	0.0	38.3	-38.3
28	400 kV	TALCHER-I/C	D/C	637.0	506.0	0.0	0.2	-0.2
9	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	82.5	-82.5
ort/E	Export of	ER (With NER)						
30	400 kV	BINAGURI-BONGAIGAON	D/C	303	35	4.3	0.0	4
1	400 KV	ALIPURDUAR-BONGAIGAON	D/C	344	15	5.1	0.0	5
32	220 kV	ALIPURDUAR-SALAKATI	D/C	60	28	0.6	0.0	1
					ER-NER	9.9	0.0	9.9
	· -	NER (With NR)						1
33	HVDC	BISWANATH CHARIALI-AGRA	-	464	0	7.9	0.0	7.9
		TIP (TIME AND)			NER-NR	7.9	0.0	7.9
	export of	WR (With NR)			0.71			
34		CHAMPA-KURUKSHETRA		0				
	TTT 770-0		D/C		851	0.0	15.4	-15.4
35	HVDC	V'CHAL B/B	D/C	451	0	8.8	0.0	8.8
35 36	HVDC	V'CHAL B/B APL -MHG	D/C D/C	451 0	0 1456	8.8 0.0	0.0 29.8	8.8 -29.8
35 36 37	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	451 0 0	0 1456 1863	8.8 0.0 0.0	0.0 29.8 34.6	8.8 -29.8 -34.6
35 36 37 38	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	451 0 0 0	0 1456 1863 1308	8.8 0.0 0.0 0.0	0.0 29.8 34.6 20.0	8.8 -29.8 -34.6 -20.0
35 36 37 38	HVDC - 765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	451 0 0 0 0 669	0 1456 1863 1308 664	8.8 0.0 0.0 0.0 0.0	0.0 29.8 34.6 20.0 24.3	8.8 -29.8 -34.6 -20.0 -24.3
35 36 37 38 39		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	451 0 0 0 0 669 547	0 1456 1863 1308 664	8.8 0.0 0.0 0.0 0.0 0.0 9.8	0.0 29.8 34.6 20.0 24.3 0.0	8.8 -29.8 -34.6 -20.0 -24.3 9.8
35 36 37 38 39 40		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	451 0 0 0 0 669 547 0	0 1456 1863 1308 664 0	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0	0.0 29.8 34.6 20.0 24.3 0.0 25.4	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4
35 36 37 38 39 40		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	451 0 0 0 0 669 547 0 182	0 1456 1863 1308 664 0 1179 904	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.6	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2
35 36 37 38 39 40 41 42		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 S/C	451 0 0 0 669 547 0 182 109	0 1456 1863 1308 664 0 1179 904	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2
35 36 37 38 39 40 41 42 43		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 D/C S/C S/C S/C S/C S/C S/C S/C	451 0 0 0 0 669 547 0 182 109 80	0 1456 1863 1308 664 0 1179 904 138 273	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5
55 66 77 88 89 00 11 22 33 44	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-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 S/C	451 0 0 0 669 547 0 182 109 80 980	0 1456 1863 1308 664 0 1179 904 138 273 0	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7
5 6 7 8 9 0 1 2 3 4 5 6	765 kV	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	451 0 0 0 669 547 0 182 109 80 980 206	0 1456 1863 1308 664 0 1179 904 138 273 0	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7
55 66 77 88 99 00 1.1 22 33 44 55 66	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-SANKROLI ZERDA -BHINMAL V'CHAL -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	451 0 0 0 669 547 0 182 109 80 980 206 13	0 1456 1863 1308 664 0 1179 904 138 273 0 184	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0
355 366 37 388 399 300 311 312 313 314 415 416 417 418	765 kV	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	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	451 0 0 0 669 547 0 182 109 80 980 206 13 14	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 -0.5 -1.1 22.7 0 0.7 -1.2
35 5 6 6 6 6 7 7 7 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9	- 765 kV - 400 kV	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-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	451 0 0 0 669 547 0 182 109 80 980 206 13 14	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 0 0 0.1 1.2	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2
55 66 77 88 89 90 01 12 22 33 44 45 55 66 77 78 88 99 90 90 90 90 90 90 90 90 90	- 765 kV - 400 kV	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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.5 0.0 22.7 0 0.8 0.0 1.2	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2
355 366 377 388 399 300 311 312 313 314 414 415 55 66 66 67 77	- 765 kV - 400 kV	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-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	451 0 0 0 669 547 0 182 109 80 980 206 13 14	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 0.1 1.1 0.0 0 0.1 1.2 0.0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2 0.5
35	765 kV 400 kV - 220 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.5 0.0 22.7 0 0.8 0.0 1.2	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2
355 366 377 388 399 300 41 41 42 42 43 44 44 45 55 66 66 67 77 88 89 99 99 99 90 90 90 90 90 90 90 90 90 90	765 kV - 400 kV - 220 kV - 132kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 1.5 0.0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2 0.5 0.0 -113.8
355 366 37 38 38 39 40 41 41 42 43 44 45 46 47 48 48 49 49 40 40 40 40 40 40 40 40 40 40	765 kV 400 kV - 220 kV	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	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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 0 0.1 1.2 0.0 0.0 1.8 1.2 0.0 0.0 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -6.2 -0.5 -1.1 -22.7 0 0.7 -1.2 1.2 0.5 0.0 -113.8
355 366 377 388 389 390 400 411 412 413 414 415 416 417 418 419 419 419 419 419 419 419 419	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - LINK	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 0.1 1.2 0.0 0.0 1.8 1.2 0.0 0.0 1.3 0.0 0.0 1.1 0.0 0.0 0.1 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2 0.5 0.0 -113.8
355 366 377 388 389 400 441 442 433 444 445 466 477 488 499 500 551 562 563 564	765 kV 400 kV 220 kV 132kV Export of HVDC	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-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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 9.8 0.0 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 0.0 25.4 6.7 0.0 0.1 1.1 0.0 0.0 0.1 1.2 0.0 0.0 0.0 158.7	8.8 -29.8 -34.6 -20.0 -24.3 -9.8 -25.4 -6.2 -0.5 -1.1 -22.7 -0 -7 -1.2 -1.2 -1.3 -11.3.8
385 366 377 388 389 390 400 411 412 413 414 414 415 416 417 418 419 419 419 419 419 419 419 419	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - LINK - 765 kV	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 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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 158.7	8.8 -29.8 -34.6 -20.0 -24.3 -9.8 -25.4 -6.2 -0.5 -1.1 -22.7 -0 -0.7 -1.2 -1.2 -1.3 -1.1.8 -1.2.3 -1.2.3 -1.2.3 -1.3.9
335 366 377 388 399 440 441 442 433 444 445 466 477 488 499 500 511 657 657 657 657 657 657 657 657	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - LINK	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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASPUR-L-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-RUDGI	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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 WR-NR	8.8 0.0 0.0 0.0 0.0 9.8 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 0.2 5.4 6.7 0.0 0.1 1.1 0.0 0.0 0.0 1.1 2.0 0.0 0.0 1.1 1.2 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2 0.5 0.0 -113.8
385 386 377 388 389 400 411 422 433 444 455 466 477 488 499 500 501 502 503 504 505 606 607 607 607 607 607 607 607	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0 0 0 0 0 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 0.1 1.2 0.0 0.0 158.7 12.3 0.0 19.2 33.9 0.0 0.0	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2 0.5 0.0 -113.8 -12.3 0.0 -19.2 -33.9 8.7 0.0
355 366 377 388 399 400 411 422 433 444 455 466 477 488 499 500 511 552 553 564 555 566 567 588	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - LINK - 765 kV	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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANPUR-SILIERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI	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 S/C S/C S/C S/C S/C S/C S/C S	451 0 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0 0 0 0 0 0 0 535	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 158.7 12.3 0.0 19.2 33.9 0.0 0.0 1.4	8.8 -29.8 -34.6 -20.0 -24.3 -9.8 -25.4 -6.2 -0.5 -1.1 -1.2 -1.2 -1.2 -1.2 -1.3 -1.3 -1.3 -1.3 -1.3 -1.4 -1.4
335 366 377 388 389 399 440 441 442 433 444 445 446 447 448 449 456 551 552 553 554 555 566 567 558	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0 0 0 0 0 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9 0.0 0.0 0.0 0.0 0.0 1.5	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 158.7 12.3 0.0 19.2 33.9 0.0 0.0 1.4	8.8 -29.8 -34.6 -20.0 -24.3 -9.8 -25.4 -6.2 -0.5 -1.1 -1.2 -1.2 -1.2 -1.2 -1.3 -1.3 -1.3 -1.3 -1.4 -1.5
355 366 377 388 399 400 411 422 433 444 455 466 477 488 499 500 511 552 553 564 555 566 567 588	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANPURA-ILERU 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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0 0 0 0 0 0 0 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 158.7 12.3 0.0 19.2 33.9 0.0 0.0 1.4	8.8 -29.8 -34.6 -20.0 -24.3 -9.8 -25.4 -6.2 -0.5 -1.1 -1.2 -1.2 -1.2 -1.2 -1.3 -1.3 -1.3 -1.3 -1.3 -1.4 -1.4
335 366 377 388 389 399 40 411 412 413 414 414 415 416 417 418 419 419 419 419 419 419 419 419	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WARIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI TI	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	451 0 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0 0 0 0 0 0 0 535	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9 0.0 0.0 0.0 0.0 0.0 1.5	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 158.7 12.3 0.0 19.2 33.9 0.0 0.0 1.4	8.8 -29.8 -34.6 -20.0 -24.3 -9.8 -25.4 -6.2 -0.5 -1.1 -1.2 -1.2 -1.2 -1.2 -1.3 -1.3 -1.3 -1.3 -1.4 -1.5
355 366 377 388 399 400 411 422 433 444 455 466 477 488 499 500 511 552 553 564 555 566 567 588	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANPURA-ILERU 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	451 0 0 0 669 547 0 182 109 80 980 206 13 14 116 71 0 0 0 0 0 0 0 0	0 1456 1863 1308 664 0 1179 904 138 273 0 184 58 113 0 15 0 WR-NR	8.8 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.5 0.0 22.7 0 0.8 0.0 1.2 0.5 0.0 44.9 0.0 0.0 0.0 0.0 0.0 1.5	0.0 29.8 34.6 20.0 24.3 0.0 25.4 6.7 0.0 1.1 0.0 0 0.1 1.2 0.0 0.0 158.7 12.3 0.0 19.2 33.9 0.0 0.0 1.4	8.8 -29.8 -34.6 -20.0 -24.3 9.8 -25.4 -6.2 0.5 -1.1 22.7 0 0.7 -1.2 1.2 0.5 0.0 -113.8 -12.3 0.0 -19.2 -333.9 8.7 0.0 -1.4