

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: 20th 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 19.01.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-२०१० की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 19-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 19th 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 20-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)	43761	45143	35787	17544	2350	144585
Peak Shortage (MW)	541	0	0	0	52	593
Energy Met (MU)	911	1088	892	340	41	3270
Hydro Gen (MU)	128	42	64	27	7	269
Wind Gen (MU)	12	81	23			115
Solar Gen (MU)*	31.94	21.80	80.31	1.06	0.03	135
Energy Shortage (MU)	12.9	0.0	0.0	0.0	1.3	14.2
Maximum Demand Met during the day (MW) & time	46687	53059	43622	17901	2369	159665
(from NLDC SCADA)	09:51	11:03	09:25	18:38	17:59	09:39

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	0.033	0.00	0.00	4.22	4.22	74.44	21.33

C. Power Supply Position in States

Region	States	Max. Demand Met during the day (MW)	Shortage during maximum Demand (MW)	Energy Met (MU)	Drawal Schedule (MU)	OD(+)/UD(-) (MU)	Max OD (MW)	Energy Shortage (MU
	Punjab	5647	0	104.6	55.7	-1.3	75	0.0
	Haryana	5828	0	115.6	84.0	0.8	218	0.0
	Rajasthan	13193	0	228.2	69.0	-0.8	427	0.0
	Delhi	4566	0	71.7	55.8	-0.1	288	0.0
NR	UP	15218	0	271.3	121.4	0.1	1009	1.1
	Uttarakhand	2053	0	36.7	18.9	0.0	187	0.0
	HP	1656	0	28.7	22.1	0.1	287	0.0
	J&K(UT) and Ladakh(UT)	2299	575	50.0	44.8	-0.9	338	11.8
	Chandigarh	242	0	3.9	3.8	0.0	29	0.0
	Chhattisgarh	3576	0	78.7	27.7	-1.6	171	0.0
	Gujarat	15239	0	313.5	62.9	3.3	666	0.0
	MP	12603	0	229.3	130.8	-1.9	431	0.0
WR	Maharashtra	21473	0	426.8	145.3	-0.8	486	0.0
WK	Goa	442	0	8.7	8.7	-0.3	21	0.0
	DD	297	0	6.6	6.3	0.3	32	0.0
	DNH	765	0	18.1	18.2	-0.1	27	0.0
	Essar steel	300	0	6.0	5.8	0.2	222	0.0
	Andhra Pradesh	8814	0	170.2	65.5	-0.4	588	0.0
	Telangana	10667	0	208.6	103.8	-0.1	412	0.0
SR	Karnataka	12252	0	192.3	56.7	-0.2	718	0.0
311	Kerala	3410	0	67.8	56.1	1.4	202	0.0
	Tamil Nadu	12149	0	246.7	155.0	0.4	403	0.0
	Pondy	289	0	6.0	6.2	-0.2	46	0.0
	Bihar	4403	0	75.0	74.4	-0.6	863	0.0
	DVC	3098	0	63.2	-33.8	0.1	233	0.0
ER	Jharkhand	1267	0	24.0	15.9	-1.5	109	0.0
EN	Odisha	3667	0	68.4	8.9	-0.2	281	0.0
	West Bengal	5706	0	107.4	20.4	0.8	267	0.0
	Sikkim	117	0	1.6	1.7	-0.1	33	0.0
	Arunachal Pradesh	118	1	2,2	2.1	-0.1	30	0.0
	Assam	1245	22	22.7	18.2	1.8	107	0.6
	Manipur	213	2	2.6	3.1	-0.5	24	0.0
NER	Meghalaya	362	0	6.1	3.0	0.7	98	0.7
	Mizoram	102	1	1.6	1.4	-0.1	22	0.0
	Nagaland	118	1	2.2	2.0	0.0	26	0.0
	Tripura	278	0	3,4	1.8	-0.4	47	0.0

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

	,		
	Bhutan	Nepal	Bangladesh
Actual(MU)	4.6	-8.3	-10.2
Day peak (MW)	503.6	-516.0	-771.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	226.6	-259.9	117.9	-88.2	3.5	-0.1
Actual(MU)	208.1	-265.1	142.6	-95.1	4.5	-4.9
O/D/U/D(MU)	-18.5	-5.2	24.6	-6.9	1.0	-4.9

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	6205	15058	7172	1710	588	30733
State Sector	12625	17699	8270	4550	11	43155
Total	18830	32757	15442	6260	600	73888

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	426	1130	444	434	11	2445
Lignite	21	14	45	0	0	80
Hydro	128	42	64	27	7	269
Nuclear	25	27	40	0	0	92
Gas, Naptha & Diesel	33	25	18	0	22	97
RES (Wind, Solar, Biomass & Others)	72	121	139	1	0	334
Total	706	1360	749	462	40	3317

Share of RES in total generation (%)	10.23	8.92	18.60	0.24	0.07	10.07
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	32.00	14.02	32.42	6.05	18.28	20.94

H. All India Demand Diversity Factor

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Based on Regional Max Demands	1.025
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.}$

		IN	TER-REGI	ONAL EXCH	ANGES	Date of l	Reporting :	20-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)
		ER (With NR)						
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	300	0.0	0.0 7.4	0.0 -7.4
1		GAYA-VARANASI	D/C	0	1000	0.0	11.3	-11.3
2	765kV	SASARAM-FATEHPUR	S/C	0	496	0.0	5.0	-5.0
3		GAYA-BALIA	S/C	0	591	0.0	8.5	-8.5
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	207 187	0.0	4.3 2.9	-4.3 -2.9
8		MUZAFFARPUR-GORAKHPUR	D/C	0	953	0.0	11.5	-11.5
9	400 kV	PATNA-BALIA	Q/C	0	1006	0.0	15.4	-15.4
10		BIHARSHARIFF-BALIA	D/C	0	471	0.0	6.4	-6.4
11		MOTIHARI-GORAKHPUR	D/C	0	5	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	5	495 149	0.0	1.4	-4.4 -1.4
14	220 K V	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	12217	GARWAH-RIHAND	S/C	30	0	0.7	0.0	0.7
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
Import/F	vnout -P	ED (With WP)			ER-NR	0.7	71.1	-70.5
-	xport of	ER (With WR)	0.7			** *	0.5	***
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	6553	0	23.0	0.0	23.0
19 20		NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	512 1000101	140 141	3.3 1.6	0.0	3.3 1.6
21	400:	JHARSUGUDA-RAIGARH	Q/C	207	94	1.6	0.0	1.6
22	400 kV	RANCHI-SIPAT	D/C	197	49	1.4	0.0	1.4
23	220 kV	BUDHIPADAR-RAIGARH	S/C	17	83	0.0	0.9	-0.9
24		BUDHIPADAR-KORBA	D/C	172	0 ER-WR	2.7	0.0	2.7
Import/F	export of	ER (With SR)			ER-WK	33.2	0.9	32.4
26		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	2464.0	0.0	42.1	-42.1
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2582.0	0.0	50.6	-50.6
28	400 kV	TALCHER-I/C	D/C	408.0	788.0	0.0	1.8	-1.8
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 104.9	0.0 - 104.9
Import/E	export of	ER (With NER)			EK-5K	0.0	104.9	-104.9
30	Ţ,	BINAGURI-BONGAIGAON	D/C	173	78	2.5	0.0	3
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	320	82	4.0	0.0	4
32	220 kV	ALIPURDUAR-SALAKATI	D/C	46	38	0.5	0.0	1
Import/E	'vnort of	NER (With NR)			ER-NER	7.0	0.0	7.0
33	HVDC	BISWANATH CHARIALI-AGRA	- 1	472	0	11.7	0.0	11.7
			_ l		NER-NR		0.0	11.7
Import/E	export of	WR (With NR)						
34								
35		CHAMPA-KURUKSHETRA	D/C	0	2349	0.0	21.2	-21.2
	HVDC	V'CHAL B/B	D/C	448	0	10.2	0.0	10.2
36	HVDC	V'CHAL B/B APL -MHG	D/C D/C	448	0 1926	10.2 0.0	0.0 39.7	10.2 -39.7
	HVDC	V'CHAL B/B	D/C	448	0	10.2	0.0	10.2
36 37		V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 0	0 1926 2769	10.2 0.0 0.0	0.0 39.7 46.0	10.2 -39.7 -46.0
36 37 38 39 40	HVDC 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C S/C	448 0 0 0 0 0 0 634	0 1926 2769 1601 939	10.2 0.0 0.0 0.0 0.0 0.0 9.7	0.0 39.7 46.0 19.3 28.6 0.0	10.2 -39.7 -46.0 -19.3 -28.6 9.7
36 37 38 39 40 41		VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI	D/C D/C D/C D/C D/C S/C S/C	448 0 0 0 0 0 0 634 0	0 1926 2769 1601 939 0	10.2 0.0 0.0 0.0 0.0 0.0 9.7 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8
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	D/C D/C D/C D/C D/C S/C S/C D/C	448 0 0 0 0 0 0 634 0	0 1926 2769 1601 939 0 1419	10.2 0.0 0.0 0.0 0.0 0.0 9.7 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5
36 37 38 39 40 41 42 43	765 kV	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 D/C S/C S/C S/C S/C	448 0 0 0 0 0 0 634 0	0 1926 2769 1601 939 0 1419 1255 222	10.2 0.0 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7
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	D/C D/C D/C D/C D/C S/C S/C D/C	448 0 0 0 0 0 634 0 0 70	0 1926 2769 1601 939 0 1419	10.2 0.0 0.0 0.0 0.0 0.0 9.7 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5
36 37 38 39 40 41 42 43 44	765 kV	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	448 0 0 0 0 0 634 0 0 70 0	0 1926 2769 1601 939 0 1419 1255 222 483	10.2 0.0 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0
36 37 38 39 40 41 42 43 44 45	765 kV	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	448 0 0 0 0 0 634 0 0 70 0 986 261 21	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 22.4 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1
36 37 38 39 40 41 42 43 44 45 46 47 48	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	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	448 0 0 0 0 0 634 0 0 0 0 0 986 261 21 20	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9
36 37 38 39 40 41 42 43 44 45 46 47 48	- 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	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	448 0 0 0 0 634 0 0 70 0 986 261 21 20 92	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 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 MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0	10.2 -39.7 -46.0 -19.3 -28.6 -9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2
36 37 38 39 40 41 42 43 44 45 46 47 48	- 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	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	448 0 0 0 0 634 0 0 70 0 986 261 21 20 92	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 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	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	448 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 22.4 0 0.5 0.0 0.9 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0	10.2 -39.7 -46.0 -19.3 -28.6 -9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E	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) 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	448 0 0 0 0 0 634 0 0 0 70 0 986 261 21 20 92 47 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0	10.2 -39.7 -46.0 -19.3 -28.6 -9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53	- 765 kV - 400 kV - 220 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	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	448 0 0 0 0 0 634 0 0 0 70 0 986 261 21 20 92 47 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 29 0 WR-NR	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 0.0 -153.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54	765 kV 400 kV 220 kV 132kV	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 WR-NR	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 22.4 0 0.5 0.0 0.9 0.3 0.0 43.9	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 -9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 0.0 -153.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	765 kV 400 kV 220 kV 132kV Export of HVDC	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 WR-NR	10.2 0.0 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 39.7 46.0 19.3 28.6 0.0 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 -9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 0.0 -153.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54	765 kV 400 kV 220 kV 132kV Export of	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) BHASUR-L-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	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	448 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 WR-NR	10.2 0.0 0.0 0.0 0.0 9.7 0.0 0.0 0.0 0.0 22.4 0 0.5 0.0 0.9 0.3 0.0 43.9	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 -9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 0.0 -153.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	765 kV 400 kV 220 kV 132kV Export of HVDC	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 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	448 0 0 0 0 0 634 0 0 0 986 261 21 20 92 47 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 WR-NR	10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 0.0 197.7 14.7 0.0 28.8 42.0 0.1	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 -153.8 -14.7 -0.0 -28.7 -42.0 -4.9
36 37 38 39 40 41 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	765 kV 400 kV 220 kV 132kV Export of HVDC 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0 0 0 0 611 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 29 0 WR-NR	10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 -0.1 -0.9 0.9 0.2 -153.8 -14.7 -0.0 -28.7 -42.0 -4.9 -0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 55 57	765 kV 400 kV 220 kV 132kV Export of HVDC 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-RAPUR BHANPURA-WORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANGHAND BHANGHAND BHANGHAND BHANGHANGHANGHANGHANGHANGHANGHANGHANGHANG	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0 0 0 0 1	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 29 0 WR-NR	10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 0.1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 -0.1 -0.9 0.9 0.2 -153.8 -14.7 -0.0 -28.7 -42.0 -4.9 -0.0 -0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 55 56	765 kV 400 kV 220 kV 132kV Export of HVDC 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-RANPUR BHANPURA-RANPUR BHANPURA-WORAK MEHGAON-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0 0 0 0 1	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 29 0 WR-NR	10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 -153.8 -14.7 0.0 -28.7 -42.0 4.9 0.0 0.0 1.7
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 55	765 kV 400 kV 220 kV 132kV Export of HVDC 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-RANPUR BHANPURA-RANPUR BHANPURA-WORAK MEHGAON-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	448 0 0 0 0 0 0 634 0 0 70 0 986 261 21 20 92 47 0 0 0 0 1 0 1 0	0 1926 2769 1601 939 0 1419 1255 222 483 0 391 98 107 0 29 0 WR-NR	10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 39.7 46.0 19.3 28.6 0.0 27.8 8.5 0.7 4.0 0.0 1 0.3 0.9 0.0 1 0.0 197.7	10.2 -39.7 -46.0 -19.3 -28.6 9.7 -27.8 -8.5 -0.7 -4.0 22.4 -1 0.1 -0.9 0.9 0.2 -153.8 -14.7 0.0 -28.7 -42.0 4.9 0.0 0.0 1.7