

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम) B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016 बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 20th Mar 2020

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.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 19.03.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 19-मार्च-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 Mar 2020, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting 20-Mar-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)	39473	48434	45593	17724	2418	153642
Peak Shortage (MW)	534	0	0	0	58	592
Energy Met (MU)	860	1171	1147	373	42	3594
Hydro Gen (MU)	147	46	91	28	4	315
Wind Gen (MU)	5	43	17			65
Solar Gen (MU)*	39.11	27.50	93.46	4.56	0.04	165
Energy Shortage (MU)	9.3	0.0	0.0	0.0	0.6	9.9
Maximum Demand Met during the day (MW) & time	42914	53319	52928	17750	2487	163703
(from NLDC SCADA)	19:18	11:25	10:28	18:32	18:14	10:24

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	0.046	0.09	1.50	4.66	6.26	74.42	19.32

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	5080	0	103.9	69.9	-1.0	75	0.0
	Harvana	5791	0	116.2	85.3	0.2	191	0.0
NR	Rajasthan	12151	0	216.8	58.9	-2.1	251	0.0
	Delhi	3413	0	60.6	50.0	-0.9	212	0.0
	UP	13911	0	256.7	115.6	0.2	387	0.0
	Uttarakhand	1697	0	33.7	11.9	0.2	124	0.0
	HP	1513	0	24.7	17.7	-0.3	132	0.0
	J&K(UT) and Ladakh(UT)	2139	535	44.8	38.0	-1.2	259	9.3
	Chandigarh	188	0	3.1	3.3	-0.3	11	0.0
	Chhattisgarh	3843	0	83.7	32.8	-1.9	210	0.0
	Gujarat	16511	0	364.5	78.4	3.7	586	0.0
	MP	10359	0	200.5	105.5	-0.9	525	0.0
WR	Maharashtra	22807	0	479.0	168.3	-3.8	498	0.0
WK	Goa	479	0	10.6	10.4	-0.3	26	0.0
	DD	326	0	7.4	7.2	0.2	28	0.0
	DNH	811	0	19.1	19.1	0.0	24	0.0
	Essar steel	840	0	6.5	6.5	0.0	263	0.0
	Andhra Pradesh	10201	0	201.3	100.7	-0.7	570	0.0
	Telangana	12408	0	247.4	143.9	-1.7	396	0.0
SR	Karnataka	12497	0	258.6	84.6	-0.1	573	0.0
3K	Kerala	4116	0	85.3	62.1	1.7	347	0.0
	Tamil Nadu	15591	0	345.6	211.5	1.8	890	0.0
	Pondy	386	0	8.3	8.6	-0.3	20	0.0
	Bihar	4248	0	74.1	69.1	1.5	520	0.0
	DVC	2994	0	63.1	-44.7	-0.4	180	0.0
ER	Jharkhand	1200	0	23.9	14.7	-0.2	95	0.0
LN	Odisha	3939	0	69.3	-0.6	0.0	340	0.0
	West Bengal	7143	0	141.3	37.1	1.3	450	0.0
	Sikkim	101	0	1.4	1.8	-0.4	15	0.0
	Arunachal Pradesh	123	1	2.2	2.1	-0.1	42	0.0
	Assam	1466	40	24.2	20.5	0.1	95	0.4
	Manipur	186	2	2.9	2.5	0.4	26	0.0
NER	Meghalaya	317	0	5.2	3.9	0.3	23	0.1
	Mizoram	98	2	1.8	1.4	0.1	14	0.0
	Nagaland	118	1	2.1	2.1	0.0	8	0.0
	Tripura	241	1	3.8	3.1	-0.4	45	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	1.3	-11.4	-15.8
Day peak (MW)	320.9	-593.6	-966.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	178.2	-278.6	200.2	-106.2	6.4	0.0
Actual(MU)	167.2	-286.9	210.1	-112.5	8.7	-13.5
O/D/U/D(MU)	-11.0	-8.3	9.9	-6.4	2.3	-13.4

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5430	12841	4952	2310	727	26261
State Sector	16410	15382	8125	5000	11	44928
Total	21840	28223	13077	7310	738	71188

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	419	1210	571	487	11	2698
Lignite	21	14	52	0	0	87
Hydro	147	46	91	28	4	315
Nuclear	24	37	66	0	0	127
Gas, Naptha & Diesel	30	80	18	0	23	152
RES (Wind, Solar, Biomass & Others)	71	79	140	5	0	294
Total	712	1466	937	519	38	3672

Share of RES in total generation (%)	9.91	5.38	14.94	0.89	0.10	8.01
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	33.87	11.05	31.66	6.19	11.14	20.04

H. All India Demand Diversity Factor

III III III III Deliuliu Diversity I uctor	
Based on Regional Max Demands	1.035
Based on State Max Demands	1.095

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.}$

	INTER-REGIONAL EXCHANGES Date of 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)
Import/E		ER (With NR)					(1120)	(3720)
4	HVDC	ALIPURDUAR-AGRA	- 0/0	0	0	0.0	0.0	0.0
5		PUSAULI B/B GAYA-VARANASI	S/C D/C	0 27	249 751	0.0	6.1 8.0	-6.1 -8.0
2	765kV	SASARAM-FATEHPUR	S/C	142	263	0.0	2.4	-2.4
3		GAYA-BALIA	S/C	0	494	0.0	8.5	-8.5
6		PUSAULI-VARANASI	S/C	0	231	0.0	4.1	-4.1
7	_	PUSAULI -ALLAHABAD	S/C	0	132	0.0	1.8	-1.8
9	400 kV	MUZAFFARPUR-GORAKHPUR	D/C	68	589	0.0	6.3	-6.3
10	400 KV	PATNA-BALIA BIHARSHARIFF-BALIA	Q/C D/C	0	957 333	0.0	18.0 4.7	-18.0 -4.7
11	1	MOTIHARI-GORAKHPUR	D/C	0	322	0.0	6.4	-6.4
12	1	BIHARSHARIFF-VARANASI	D/C	265	248	0.2	0.0	0.2
13	220 kV	PUSAULI-SAHUPURI	S/C	0	149	0.0	2.6	-2.6
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.3	0.0	0.3
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
	,	DD WHA WE			ER-NR	0.5	68.8	-68.3
Import/E	export of	ER (With WR)			1			
18	1_	JHARSUGUDA-DHARAMJAIGARH	Q/C	1753	0	33.0	0.0	33.0
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	737	45	7.2	0.0	7.2
20	<u> </u>	JHARSUGUDA-DURG	D/C	213	55	1.0	0.0	1.0
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	189	272	0.4	0.7	-0.4
23		RANCHI-SIPAT	D/C S/C	290 26	33 106	2.0 0.0	1.0	2.0 -1.0
24	220 kV	BUDHIPADAR-RAIGARH BUDHIPADAR-KORBA	D/C	165	0	2.1	0.0	2.1
24		BUDHIFADAR-KUKBA	D/C	103	ER-WR	45.7	1.8	43.9
Import/E	Export of	ER (With SR)				45.7	1.0	43.5
26	T	JEYPORE-GAZUWAKA B/B	D/C	0.0	706.0	0.0	16.7	-16.7
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2465.0	0.0	49.7	-49.7
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	3082.0	0.0	61.3	-61.3
28	400 kV	TALCHER-I/C	D/C	0.0	766.0	0.0	6.2	-6.2
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	127.7	-127.7
	Export of	ER (With NER)	1 1					
30	400 kV	BINAGURI-BONGAIGAON	D/C	145	522	0.9	5.6	-5
31	220 kV	ALIPURDUAR-BONGAIGAON	D/C	235	674	0.0	5.4	-5
32	220 KV	ALIPURDUAR-SALAKATI	D/C	52	123 ER-NER	0.0 0.9	0.8	-1 -10.9
Import/F	Export of	NER (With NR)			ER-HER	0.9	11.0	-10.5
33	HVDC	BISWANATH CHARIALI-AGRA	-	465	502	0.0	2.0	-2.0
					NER-NR	0.0	2.0	-2.0
Import/E	Export of	WR (With NR)						
		CHAMPA-KURUKSHETRA	D (G	0	999	0.0	6.6	-6.6
34			D/C					
35	HVDC	V'CHAL B/B	D/C	449	0	11.5	0.0	11.5
35 36	HVDC	V'CHAL B/B APL -MHG	D/C D/C	0	1080	0.0	0.0 26.7	-26.7
35 36 37	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0	1080 2142	0.0	0.0 26.7 41.3	-26.7 -41.3
35 36 37 38	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 0 0	1080 2142 1199	0.0 0.0 0.0	0.0 26.7 41.3 18.2	-26.7 -41.3 -18.2
35 36 37 38 39	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	0 0 0	1080 2142 1199 711	0.0 0.0 0.0 0.0	0.0 26.7 41.3 18.2 26.1	-26.7 -41.3 -18.2 -26.1
35 36 37 38 39 40		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	0 0 0 0 0 593	1080 2142 1199 711 0	0.0 0.0 0.0 0.0 8.8	0.0 26.7 41.3 18.2 26.1 0.0	-26.7 -41.3 -18.2 -26.1 8.8
35 36 37 38 39 40 41		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	0 0 0 0 0 593	1080 2142 1199 711 0 1348	0.0 0.0 0.0 0.0 8.8 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5	-26.7 -41.3 -18.2 -26.1 8.8 -28.5
35 36 37 38 39 40		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	0 0 0 0 593 0	1080 2142 1199 711 0 1348 542	0.0 0.0 0.0 0.0 8.8 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8	-26.7 -41.3 -18.2 -26.1 8.8 -28.5 -2.8
35 36 37 38 39 40 41 42	765 kV	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	0 0 0 0 0 593	1080 2142 1199 711 0 1348	0.0 0.0 0.0 0.0 8.8 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5	-26.7 -41.3 -18.2 -26.1 8.8 -28.5
35 36 37 38 39 40 41 42 43		VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATINA-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	0 0 0 0 593 0 167 137	1080 2142 1199 711 0 1348 542 45	0.0 0.0 0.0 0.0 8.8 0.0 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0	-26.7 -41.3 -18.2 -26.1 8.8 -28.5 -2.8 1.1
35 36 37 38 39 40 41 42 43	765 kV	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 S/C S/C S/C S/C S/C S/C	0 0 0 0 593 0 167 137 78	1080 2142 1199 711 0 1348 542 45	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0	-26.7 -41.3 -18.2 -26.1 8.8 -28.5 -2.8 1.1 -1.2
35 36 37 38 39 40 41 42 43 44 45	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C	0 0 0 0 593 0 167 137 78	1080 2142 1199 711 0 1348 542 45 244 0	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 1.1 -1.2 -22.6
35 36 37 38 39 40 41 42 43 44 45 46	- 765 kV - 400 kV	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	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	0 0 0 0 593 0 167 137 78 980	1080 2142 1199 711 0 1348 542 45 244 0	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1
35 36 37 38 39 40 41 42 43 44 45 46 47	765 kV	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 593 0 167 137 78 980 164	1080 2142 1199 711 0 1348 542 45 244 0 131 83	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 1.1 -1.2 22.6 1 -0.8
35 36 37 38 39 40 41 42 43 44 45 46 47	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-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	0 0 0 0 593 0 167 137 78 980 164 18	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48	- 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	0 0 0 0 593 0 167 137 78 980 164 18 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0 0 0.9 1.5 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 1.1 -1.2 22.6 1 -0.8 -1.5 1.0 0.2 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	765 kV 400 kV 220 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-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	0 0 0 0 593 0 167 137 78 980 164 18 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0 0 0.9 1.5 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	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)	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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1 29 0 WR-NR	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.0 1.0 1.0 1.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0 0.9 1.5 0.0 0.1 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -107.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	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	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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1 0 WR-NR	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 1.5 0.0 0.1 1.5 0.0 1.2 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -107.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV - 400 kV - 220 kV - 132kV	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-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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1 0 WR-NR	0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 1.5 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -107.5 -24.0 -0.0
35 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	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1 0 WR-NR	0.0 0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 50.3	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -107.5 -24.0 -0.0 -50.3
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55	765 kV 400 kV 220 kV 132kV Export of HVDC 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 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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 1129 1 29 0 WR-NR	0.0 0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 50.3 71.9	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -0.0 -50.3 -71.9
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56	765 kV 400 kV 220 kV 132kV Export of HVDC	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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1 29 0 WR-NR	0.0 0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 50.3 71.9 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -0.0 -50.3 -71.9 -12.9
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 S1 S2 S3 S3 S9 S9 S9 S9 S9 S9 S9 S9 S9 S9	765 kV 400 kV 220 kV 132kV Export of HVDC 765 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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI 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 S/C S	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 1 29 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -0.0 -50.3 -71.9 -12.9 -0.0
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	765 kV 400 kV 220 kV 132kV Export of HVDC 765 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-RANPUR BHANPURA-WANDUR GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI 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 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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 0 WR-NR	0.0 0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0 0.9 1.5 0.0 0.0 1.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -50.3 -71.9 -12.9 -0.0 -1.4
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 S1 S2 S3 S3 S4 S5 S5 S6 S7	765 kV 400 kV 220 kV 132kV Export of HVDC 765 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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI 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 S/C S	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 0.0 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -50.3 -71.9 -12.9 -0.0 -1.4 -2.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 (mport/F) 52 53 54 55 56 57 58	765 kV 400 kV 220 kV 132kV Export of HVDC 765 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-RANPUR BHANPURA-RANPUR GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 0 WR-NR	0.0 0.0 0.0 0.0 0.0 8.8 0.0 0.0 1.1 0.0 22.6 1 0.1 0.0 1.0 0.3 0.0 46.2	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0 0.9 1.5 0.0 0.0 1.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -50.3 -71.9 -12.9 -0.0 -1.4
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 52 53 54 55 56 57 58 59	765 kV 400 kV 220 kV 132kV Export of HVDC 765 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-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 0.0 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -50.3 -71.9 -12.9 -0.0 -1.4 -2.0 -132.6
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 (mport/F) 52 53 54 55 56 57 58	765 kV 400 kV 220 kV 132kV Export of HVDC 765 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-RANPUR BHANPURA-RANPUR GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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	0 0 0 0 593 0 167 137 78 980 164 18 0 92 47 0	1080 2142 1199 711 0 1348 542 45 244 0 131 83 129 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 26.7 41.3 18.2 26.1 0.0 28.5 2.8 0.0 1.2 0.0 0 0.9 1.5 0.0 0.1 0.0 153.7 24.0 0.0 0.0 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-26.7 -41.3 -18.2 -26.1 -8.8 -28.5 -2.8 -1.1 -1.2 -22.6 -1 -0.8 -1.5 -1.0 -0.2 -0.0 -107.5 -24.0 -50.3 -71.9 -12.9 -0.0 -1.4 -1.4 -1.5 -2.8 -1.5 -2.8 -1.1 -1.2 -2.6 -1.5 -1.0 -2.0 -1.0 -1.0 -2.0 -1.0 -1.0 -2.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1