

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)
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बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 20th Apr 2019

To,

- कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033
 Executive Director, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata, 700033
- 2. कार्यकारी निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए , शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi – 110016
- 3. कार्यकारी निदेशक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. मुख्य महाप्रबंधक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Chief General Manager, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 19.04.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 19-अप्रैल-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 19th April 2019, is available at the NLDC website.

धन्यवाद,

पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

Report for previous day

A. Maximum Demand

Date of Reporting

20-Apr-19

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	44267	47365	41839	20055	2429	155955
Peak Shortage (MW)	499	0	0	0	121	620
Energy Met (MU)	885	1167	994	421	44	3511
Hydro Gen (MU)	187	33	61	53	4	338
Wind Gen (MU)	5	49	41			95
Solar Gen (MU)*	26.27	28.27	84.30	0.94	0.05	140
Energy Shortage (MU)	10.6	0.0	0.0	0.0	1.0	11.5
Maximum Demand Met during the day	44866	51504	45026	20446	2416	158452
(MW) & time (from NLDC SCADA)	19:47	11:29	14:54	20:27	19-01	19:37

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	0.027	0.00	0.16	4.70	4.86	78.16	16,98

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	5248	0	104.6	44.3	-0.9	153	0.0
	Haryana	6679	0	114.3	89.6	-0.2	166	0.0
	Rajasthan	8243	0	178.1	54.6	-1.7	287	0.0
	Delhi	3638	0	75.2	66.0	-1.6	88	0.0
NR	UP	16036	0	301.0	140.5	1.1	989	0.0
	Uttarakhand	1794	0	37.5	17.3	0.6	120	0.0
	HP	1376	0	26.6	8.9	1.0	177	0.0
	J&K	2144	536	44.7	28.1	-0.6	184	10.6
	Chandigarh	170	0	3.2	3.6	-0.4	19	0.0
	Chhattisgarh	4147	0	93.6	42.5	-3.7	316	0.0
	Gujarat	15775	0	358.8	130.1	2.8	578	0.0
	MP	8615	0	192.0	83.1	-1.9	445	0.0
WR	Maharashtra	21143	0	477.8	148.1	-1.1	535	0.0
WK	Goa	548	0	13.8	10.7	2.9	42	0.0
	DD	334	0	7.5	7.3	0.2	44	0.0
	DNH	787	0	18.5	18.6	-0.1	52	0.0
	Essar steel	302	0	5.2	5.0	0.2	284	0.0
	Andhra Pradesh	8945	0	193.5	62.7	-0.2	417	0.0
	Telangana	8279	0	173.3	68.0	-0.9	558	0.0
SR	Karnataka	11510	0	220.7	63.8	0.6	441	0.0
3N	Kerala	3363	0	69.2	53.8	1.1	169	0.0
	Tamil Nadu	14451	0	329.0	182.4	0.2	814	0.0
	Pondy	425	0	8.7	8.7	0.0	68	0.0
	Bihar	4593	0	86.6	83.1	0.4	356	0.0
	DVC	3144	0	66.9	-47.3	-0.6	325	0.0
ER	Jharkhand	960	0	19.7	14.0	-0.5	185	0.0
LIN	Odisha	4066	0	80.7	29.0	0.4	398	0.0
	West Bengal	8358	0	166.0	49.7	2.1	432	0.0
	Sikkim	81	0	1.0	1.4	-0.4	20	0.0
	Arunachal Pradesh	117	3	2.1	2.4	-0.3	6	0.0
	Assam	1467	80	26.1	21.6	1.2	177	0.8
	Manipur	152	2	1.9	1.9	0.0	37	0.0
NER	Meghalaya	316	0	5.3	4.1	0.2	57	0.1
	Mizoram	79	2	1.8	1.3	0.4	9	0.0
	Nagaland	130	3	2.1	2.0	0.1	15	0.0
	Tripura	268	0	4.4	3.8	0.1	37	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	8.9	-7.7	-18.7
Day peak (MW)	636.6	-426.7	-925.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	163.4	-236.6	144.1	-72,2	0.0	-1.3
Actual(MU)	160.2	-254.0	159.9	-71.1	4.5	-0.5
O/D/U/D(MU)	-3.2	-17.4	15.7	1.1	4.5	0.8

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5266	11587	7762	810	472	25897
State Sector	13130	15339	5910	2595	50	37024
Total	18396	26926	13672	3405	522	62920
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G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	435	1216	519	471	10	2650
Lignite	15	15	51	0	0	81
Hydro	187	33	61	53	4	338
Nuclear	28	31	37	0	0	96
Gas, Naptha & Diesel	23	49	15	0	30	117
RES (Wind, Solar, Biomass & Others)	59	83	161	1	0	304
Total	747	1426	844	525	44	3585

Share of RES in total generation (%)	7.94	5.81	19.06	0.19	0.11	8.48
Share of Non-fossil fuel (Hydro, Nuclear and	26.54	10.20	20.41	10.25	10.24	20.50
RES) in total generation (%)	36.74	10.30	30.61	10.27	10.34	20.58

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

H. Diversity Factor
All India Demand Diversity Factor
Diversity factor = Sum of regional maximum demands / All India maximum demand

						Date of 1	Reporting :	20-Apr-
								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)
nport/I	Export of	ER (With NR)						
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	0	536 291	0.0	6.7 4.7	-6.7 -4.7
3	- /USKY	GAYA-BALIA	S/C S/C	0	380	0.0	5.0	-4.7
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	HVDC	PUSAULI B/B	S/C	0	49	0.0	1.2	-1.2
6		PUSAULI-VARANASI	S/C	0	90	0.0	1.0	-1.0
7	4	PUSAULI -ALLAHABAD	S/C	30	41	0.0	0.1	-0.1
9	400 kV	MUZAFFARPUR-GORAKHPUR	D/C	55	780	0.0	9.6	-9.6
10	- 400 KV	PATNA-BALIA BIHARSHARIFF-BALIA	Q/C D/C	0	835 397	0.0	14.0 6.1	-14.0 -6.1
11	-	MOTIHARI-GORAKHPUR	D/C	0	317	0.0	5.4	-5.4
12	1	BIHARSHARIFF-VARANASI	D/C	3	0	0.0	0.0	0.0
13	220 kV	PUSAULI-SAHUPURI	S/C	0	158	0.0	3.0	-3.0
14	1	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.6	0.0	0.6
16	132 KV	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17	<u> </u>	KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
	E 1 ^	ED (WAL WE)			ER-NR	0.6	56.8	-56.2
	Export of	ER (With WR)	1					
18		JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1793	0	37.3	0.0	37.3
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	596	37	3.5	0.0	3.5
20	 	JHARSUGUDA-DURG	D/C	108	69	0.1	0.0	0.1
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	271	60	1.5	0.0	1.5
22	+	RANCHI-SIPAT	D/C S/C	0	127	0.0	0.0	1.8
23	220 kV	BUDHIPADAR-RAIGARH BUDHIPADAR-KORBA	S/C D/C	143	0	2.6	0.0	-1.8 2.6
24		BUDHIPADAR-KURBA	D/C	143	ER-WR	46.8	1.8	45.0
ıport/I	Export of	ER (With SR)				40.0	1.0	45.0
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2093.0	0.0	43.1	-43.1
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	694.0	0.0	16.1	-16.1
27	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	2449.0	0.0	48.5	-48.5
28	400 kV	TALCHER-I/C	D/C	327.0	657.0	0.0	4.8	-4.8
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	107.8	-107.8
	Export of	ER (With NER)	1 1					
30	400 kV	BINAGURI-BONGAIGAON	D/C	338	315	0.8	0.0	1
31		ALIPURDUAR-BONGAIGAON	D/C	436	260	2.3	0.0	2
32	220 kV	ALIPURDUAR-SALAKATI	D/C	67	72 ER-NER	0.1 3.3	0.0	3,3
nport/I	Export of	NER (With NR)				310	0.0	5.5
33	HVDC	BISWANATH CHARIALI-AGRA	-	0	653	6.6	0.0	6.6
					NER-NR	6.6	0.0	6.6
nport/I	Export of	WR (With NR)			_			
34				0	500	0.0		-12.0
	↓ _	CHAMPA-KURUKSHETRA	D/C				12.0	
35	HVDC	V'CHAL B/B	D/C	243	0	6.0	0.0	6.0
35 36	HVDC	V'CHAL B/B APL -MHG	D/C D/C	0	0 1361	6.0 0.0	0.0 30.6	-30.6
35 36 37	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0	0 1361 2316	6.0 0.0 0.0	0.0 30.6 39.5	-30.6 -39.5
35 36 37 38	HVDC	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 0 0	0 1361 2316 1090	6.0 0.0 0.0 0.0	0.0 30.6 39.5 18.1	-30.6 -39.5 -18.1
35 36 37 38 39	HVDC - 765 kV	VCHAL 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	0 1361 2316 1090 700	6.0 0.0 0.0 0.0 0.0	0.0 30.6 39.5 18.1 22.1	-30.6 -39.5 -18.1 -22.1
35 36 37 38 39 40		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	0 0 0 0 467	0 1361 2316 1090 700	6.0 0.0 0.0 0.0 0.0 9.5	0.0 30.6 39.5 18.1 22.1 0.0	-30.6 -39.5 -18.1 -22.1 9.5
35 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	0 0 0 0 467	0 1361 2316 1090 700 0 1353	6.0 0.0 0.0 0.0 0.0 0.0 9.5	0.0 30.6 39.5 18.1 22.1 0.0 28.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0
35 36 37 38 39 40 41 42		VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITORGARH-BANASKANTHA	D/C D/C D/C D/C D/C S/C S/C D/C	0 0 0 0 467 0 586	0 1361 2316 1090 700 0 1353 293	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3	0.0 30.6 39.5 18.1 22.1 0.0 28.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3
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 CHITORGARH-BANASKANTHA ZERDA-KANKROLI	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 0 467 0 586 230	0 1361 2316 1090 700 0 1353 293 8	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1
35 36 37 38 39 40 41 42 43 44		VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITORGARH-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	0 0 0 0 467 0 586 230	0 1361 2316 1090 700 0 1353 293 8 114	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6
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 CHITORGARH-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	0 0 0 0 467 0 586 230	0 1361 2316 1090 700 0 1353 293 8	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1
35 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 CHITORGARH-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 S/C	0 0 0 0 467 0 586 230 149	0 1361 2316 1090 700 0 1353 293 8 114	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3
35 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 CHTORGARH-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 S/C S	0 0 0 0 467 0 586 230 149 969 213	0 1361 2316 1090 700 0 1353 293 8 114 0	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3
35 36 37 38 39 40 41 42 43 44 45 46 47	765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITORGARH-BANASKANTHA ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA	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 0 467 0 586 230 149 969 213 53	0 1361 2316 1090 700 0 1353 293 8 114 0 199	6.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4
35 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 CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK	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 0 467 0 586 230 149 969 213 53	0 1361 2316 1090 700 0 1353 293 8 1114 0 199 51	6.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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	0 0 0 0 467 0 586 230 149 969 213 53 0	0 1361 2316 1090 0 0 1353 293 8 114 0 199 51 78	6.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3
35 36 37 38 39 40 41 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 GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 0 467 0 586 230 149 969 213 53 0 41	0 1361 2316 1090 0 0 1353 293 8 114 0 199 51 78	6.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0	0.0 30.6 39.5 18.1 22.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3
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 GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 0 467 0 586 230 149 969 213 53 0 41 13	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	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 CHTTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 -0.0 -110.4
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 GWALIOR-ORAI SATNA-ORAI CHITORGARH-BANASKANTHA ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-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 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 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 1.1 0.0 0.3 0.0 152.5	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 -0.0 -110.4
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 19 19 19 19 19 19 19 19 19 1	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 CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 30.6 39.5 18.1 22.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.1 0.0 0.3 0.0 152.5	-30.6 -39.5 -18.1 -22.1 -9.5 -28.0 -0.3 -3.1 -0.6 -0.4 -1.1 -0.3 -0.3 -0.0 -110.4 -11.2 -0.0 -42.3
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 52 53 54 55	- 765 kV - 400 kV - 220 kV - 132kV - T65 kV	VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU 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 S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 30.6 39.5 18.1 22.1 0.0 0.0 28.0 0.0 0.0 0.0 0.0 0.0 152.5 11.2 0.0 42.3 47.0	-30.6 -39.5 -18.1 -22.1 -9.5 -28.0 -0.3 -3.1 -0.6 -22.3 -0.4 -1.1 -0.3 -0.3 -0.0 -110.4 -11.2 -0.0 -42.3 -47.0
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	VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C D/C D/C D/C D/C D/C D/C S/C S/C D/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 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR	6.0 0.0 0.0 0.0 0.0 0.0 9.5 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.1 0.0 0.3 0.0 152.5 11.2 0.0 42.3 47.0 0.0	-30.6 -39.5 -18.1 -22.1 -9.5 -28.0 -0.3 -3.1 -0.6 -22.3 -0.4 -1.1 -0.3 -0.3 -0.0 -110.4 -11.2 -11.2 -42.3 -47.0 -1.7
35 36 37 38 39 40 41 42 43 44 45 46 47 47 48 49 50 51 51 52 53 54 55 56 57	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV 100 kV - 100 k	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C D/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 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR 478 0 22287 2238 173 0	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 1.1 0.0 0.3 0.0 152.5	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4 -11.2 0.0 -42.3 -47.0 1.7 0.0
35 36 37 38 39 40 40 41 42 43 44 45 46 47 48 49 50 51 51 52 53 54 55 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - T65 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI FONDA-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR 478 0 2287 2238 173 0 0	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 1.1 1.1 0.0 0.3 0.0 152.5 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4 -11.2 0.0 -42.3 -47.0 1.7 0.0 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 55 55 56 57	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV 100 kV - 100 k	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C D/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 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 12 42 0 WR-NR 478 0 22287 2238 173 0 0 63	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 1.1 0.0 0.3 0.0 152.5 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4 -11.2 0.0 -42.3 -47.0 1.7 0.0 0.0 1.3
35 36 37 38 39 40 41 42 43 44 45 46 47 50 51 51 52 53 55 55 55 55 55 58	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV 100 kV - 100 k	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 XELDEM-AMBEWADI XELDEM-ARICHUR	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 112 42 0 WR-NR 478 0 22287 2238 173 0 0 63 WR-SR	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 1.1 1.1 0.0 0.3 0.0 152.5 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4 -11.2 0.0 -42.3 -47.0 1.7 0.0 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 52 53 54 55 55 56 57 58 59	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV 100 kV - 100 k	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 TR	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 112 42 0 WR-NR 478 0 22287 2238 173 0 0 63 WR-SR	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 1.1 0.0 0.3 0.0 152.5 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4 -11.2 0.0 -42.3 -47.0 1.7 0.0 0.0 1.3
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 51 55 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV 100 kV - 100 k	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 XELDEM-AMBEWADI XELDEM-ARICHUR	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 467 0 586 230 149 969 213 53 0 41 13 0	0 1361 2316 1090 700 0 1353 293 8 114 0 199 51 78 112 42 0 WR-NR 478 0 22287 2238 173 0 0 63 WR-SR	6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 3.1 0.6 22.3 0 0.0 0.0 0.0 42.1	0.0 30.6 39.5 18.1 22.1 0.0 28.0 0.0 0.0 0.0 0.0 0.0 1.1 0.0 0.3 0.0 152.5 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-30.6 -39.5 -18.1 -22.1 9.5 -28.0 0.3 3.1 0.6 22.3 0 -0.4 -1.1 0.3 -0.3 0.0 -110.4 -11.2 0.0 -42.3 -47.0 1.7 0.0 0.0 1.3