

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, क़ुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 18th Oct 2018

To,

- कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033
 Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, 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 17.10.2018.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 17-अक्टूबर-2018 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 17th October 2018, 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** 18-Oct-18

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	45884	53546	40031	19237	2361	161059
Peak Shortage (MW)	1660	272	0	0	26	1958
Energy Met (MU)	1013	1279	922	396	42	3651
Hydro Gen (MU)	176	33	84	74	18	385
Wind Gen (MU)	7	14	17			38
Solar Gen (MU)*	18.41	16.90	51.75	0.73	0.05	88
Energy Shortage (MU)	14.7	12.9	0.0	0.0	0.6	28.2
Maximum Demand Met during the day	47324	57651	40584	19984	2454	162610
(MW) & time (from NLDC SCADA)	18:39	11:00	09:45	19:40	18:16	18:48

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	0.022	0.00	0.00	2.55	2.55	86.70	10.75

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	6212	0	140.6	43.4	0.2	126	0.0
	Haryana	6704	0	146.0	100.2	1.6	314	4.8
	Rajasthan	10685	0	221.4	36.2	2.5	422	0.0
	Delhi	3970	0	80.9	62.9	0.3	160	0.0
NR	UP	15095	1180	317.8	113.5	1.2	324	0.0
	Uttarakhand	1781	0	36.0	12.5	0.7	172	0.5
	HP	1440	0	27.4	12.1	1.5	161	0.0
	J&K	1985	496	38.9	35.3	-6.0	171	9.3
	Chandigarh	186	0	3.4	3.3	0.1	22	0.0
	Chhattisgarh	4404	0	100.7	28.0	-1.9	122	0.0
Gujarat	16514	0	370.5	133.9	6.6	674	0.0	
	MP	11560	0	253.3	142.7	-0.4	319	0.0
WR	Maharashtra	24687	834	511.7	209.2	1.1	564	12.9
WK	Goa	470	0	11.1	10.2	0.5	29	0.0
	DD	311	0	7.1	6.7	0.4	58	0.0
	DNH	743	0	17.6	16.9	0.6	70	0.0
	Essar steel	408	0	6.8	6.7	0.2	300	0.0
	Andhra Pradesh	8642	0	183.2	81.9	3.2	1043	0.0
	Telangana	9750	0	207.6	92.7	0.8	608	0.0
SR	Karnataka	8508	0	169.2	38.8	0.1	380	0.0
3N	Kerala	3519	0	67.6	40.8	0.4	183	0.0
	Tamil Nadu	13085	0	286.8	143.1	-0.2	602	0.0
	Pondy	333	0	7.2	7.5	-0.3	26	0.0
	Bihar	4584	0	82.2	80.4	-0.8	385	0.0
	DVC	2961	0	63.1	-21.8	4.0	445	0.0
ER	Jharkhand	999	0	24.6	14.2	-0.6	125	0.0
EN	Odisha	4917	0	99.9	41.2	2.2	320	0.0
	West Bengal	6637	0	125.6	4.4	-0.7	425	0.0
	Sikkim	84	0	1.1	1.2	-0.1	20	0.0
	Arunachal Pradesh	125	2	2.3	2.1	0.2	30	0.0
	Assam	1460	34	24.0	18.3	0.9	152	0.4
	Manipur	163	2	2.3	2.2	0.1	49	0.0
NER	Meghalaya	289	0	5.0	1.7	0.1	77	0.0
	Mizoram	83	4	1.9	0.8	0.5	11	0.0
	Nagaland	113	2	2.5	1.6	0.4	14	0.0
	Tripura	251	1	4.1	2.6	0.3	128	0.1

 $\textbf{D. Transnational Exchanges} \ \ (\textbf{MU}) \textbf{-} \textbf{Import} (+\textbf{ve}) / \textbf{Export} (-\textbf{ve})$

	Bhutan	Nepal	Bangladesh
Actual(MU)	10.6	-1.4	-21.1
Day peak (MW)	651.3	-86.0	-922.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	146.6	-135.5	85.0	-91.6	-2.7	1.7
Actual(MU)	136.9	-140.9	88.3	-87.0	-2.2	-4.9
O/D/U/D(MU)	-9.7	-5.4	3.4	4.6	0.5	-6.6

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4024	11783	5662	1010	306	22785
State Sector	8690	13280	7430	5085	50	34535
Total	12714	25063	13092	6095	356	57319

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	617	1272	587	420	4	2900
Hydro	176	33	84	74	18	385
Nuclear	24	27	34	0	0	85
Gas, Naptha & Diesel	51	59	22	0	26	158
RES (Wind, Solar, Biomass & Others)	43	31	114	1	0	190
Total	911	1423	841	495	48	3718

Share of RES in total generation (%)	4.76	2.20	13.62	0.16	0.10	5.11
Share of Non-fossil fuel (Hydro, Nuclear and	26.75	6.45	27.58	15.08	27.21	17.75
RES) in total generation (%)	20.75	0.45	21.56	15.06	37.21	17.75

H. Diversity Factor
All India Demand Diversity Factor
1.033
Diversity factor = Sum of regional maximum demands / All India maximum demand

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

					<u>-</u>	Date of I	Reporting :	18-Oct-
								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)	D/C	7.5	47.4	0.0		
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	75 280	474 63	0.0 1.2	0.0	-6.4 1.2
3	70011	GAYA-BALIA	S/C	0	229	0.0	4.2	-4.2
4	HVDC	ALIPURDUAR-AGRA	-	0	500	0.0	12.4	-12.4
5	пове	PUSAULI B/B	S/C	0	399	0.0	9.5	-9.5
6	_	PUSAULI-VARANASI	S/C	0	284	0.0	5.9	-5.9
7 8	_	PUSAULI -ALLAHABAD	S/C D/C	0	190 514	0.0	7.0	-3.5 -7.0
9	400 kV	MUZAFFARPUR-GORAKHPUR PATNA-BALIA	O/C	0	812	0.0	15.0	-15.0
10	100 K	BIHARSHARIFF-BALIA	D/C	0	228	0.0	3.6	-3.6
11		MOTIHARI-GORAKHPUR	D/C	0	389	0.0	7.6	-7.6
12		BIHARSHARIFF-VARANASI	D/C	171	163	0.0	1.1	-1.1
13	220 kV	PUSAULI-SAHUPURI	S/C	0	180	0.0	3.4	-3.4
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	0	0	0.7	0.0	0.7
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
port/I	Export of	ER (With WR)			ER-NR	1.8	79.5	-77.7
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	700	793	0.0	6.6	-6.6
19	ļ	NEW RANCHI-DHARAMJAIGARH	D/C	274	495	0.0	3.3	-3.3
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	431	459	0.0	3.3	-3.3
21	1	RANCHI-SIPAT	D/C S/C	231	157	0.2	0.0	0.2
23	220 kV	BUDHIPADAR-RAIGARH BUDHIPADAR-KORBA	D/C	162	6	1.8	0.0	1.8
23		BUDHIFADAK-KUKBA	D/C	102	ER-WR	2.0	13.2	-11.3
port/E	Export of 765 kV	ER (With SR)	D/C	0.0	1059.0	0.0	9.4	-8.4
25		ANGUL-SRIKAKULAM JEYPORE-GAZUWAKA B/B	D/C D/C	0.0	634.0	0.0	8.4 14.4	-8.4
26	HVDC LINK	TALCHER-KOLAR BIPOLE	D/C	50.0	576.0	0.0	3.4	-3.4
27	400 kV	TALCHER-I/C	D/C	190.0	273.0	29.1	0.0	29.1
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	26.2	-26.2
1 port/l 29	T	ER (With NER) BINAGURI-BONGAIGAON	D/C	0	603	0.0	8.4	-8
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	41	430	0.0	3.5	-4
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	128	0.0	1.7	-2
. 19		NED (Wild ND)			ER-NER	0.0	13.6	-13.6
32		NER (With NR) BISWANATH CHARIALI-AGRA	-	0	704	0.0	16.9	-16.9
					NER-NR	0.0	16.9	-16.9
iport/I	Export of	WR (With NR)						•
33		CHAMPA-KURUKSHETRA	D/C	0	451	0.0	10.6	-10.6
					+			6.0
34	HVDC	V'CHAL B/B	D/C	241	0	6.0	0.0	
35	HVDC	V'CHAL B/B APL -MHG	D/C D/C	0	0 594	0.0	14.6	-14.6
35 36	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0	0 594 561	0.0	14.6 19.9	-14.6 -19.9
35 36 37		V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 0 0	0 594 561 1057	0.0 0.0 0.0	14.6 19.9 17.0	-14.6 -19.9 -17.0
35 36 37 38	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 0 164	0 594 561 1057	0.0 0.0 0.0 0.8	14.6 19.9 17.0 0.2	-14.6 -19.9 -17.0 0.6
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	0 0 0 164 437	0 594 561 1057 131	0.0 0.0 0.0 0.8 8.1	14.6 19.9 17.0 0.2 0.0	-14.6 -19.9 -17.0 0.6 8.1
35 36 37 38		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 D/C	0 0 0 164	0 594 561 1057	0.0 0.0 0.0 0.8	14.6 19.9 17.0 0.2	-14.6 -19.9 -17.0 0.6
35 36 37 38 39 40	765 kV	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 S/C	0 0 0 164 437 0	0 594 561 1057 131 0	0.0 0.0 0.0 0.8 8.1 0.0	14.6 19.9 17.0 0.2 0.0 35.5	-14.6 -19.9 -17.0 0.6 8.1 -35.5
35 36 37 38 39 40 41		V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI	D/C D/C D/C D/C D/C S/C S/C S/C	0 0 0 164 437 0 488	0 594 561 1057 131 0 1571	0.0 0.0 0.0 0.8 8.1 0.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0	-14.6 -19.9 -17.0 0.6 8.1 -35.5
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 ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 0 0 164 437 0 488 372	0 594 561 1057 131 0 1571 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5	14.6 19.9 17.0 0.2 0.0 35.5 0.0	-14.6 -19.9 -17.0 0.6 8.1 -35.5 8.0 5.5
35 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 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	0 0 0 164 437 0 488 372 485	0 594 561 1057 131 0 1571 0 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0	-14.6 -19.9 -17.0 0.6 8.1 -35.5 8.0 5.5 11.3
35 36 37 38 39 40 41 42 43 44 45 46	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 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 0 164 437 0 488 372 485 197	0 594 561 1057 131 0 1571 0 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 0.0	-14.6 -19.9 -17.0 0.6 8.1 -35.5 8.0 5.5 11.3
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 ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA	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 0 164 437 0 488 372 485 197 119 123	0 594 561 1057 131 0 1571 0 0 0 0 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0	-14.6 -19.9 -17.0 0.6 8.1 -35.5 8.0 5.5 11.3 -4 2.7 2.1 2.7
35 36 37 38 39 40 41 42 43 44 45 46 47 48	765 kV - 400 kV - 220 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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	0 0 0 164 437 0 488 372 485 197 119 123 168	0 594 561 1057 131 0 1571 0 0 0 0 0 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0	-14.6 -19.9 -17.0 0.6 8.1 -35.5 8.0 11.3 -4 2.7 2.1 1.9
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 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 0 164 437 0 488 372 485 197 119 123	0 594 561 1057 131 0 1571 0 0 0 0 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -18.1 -35.5 -3
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV 400 kV 220 kV 132kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 0 164 437 0 488 372 485 197 119 123 168	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -35.5 -35.5 -3.0 -11.3 -4 -2.7 -1.9 -0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	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 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 101.5	-14.6 -19.9 -17.0 -0.6 -8.1 -35.5 -8.0 -5.5 -11.3 -4 -2.7 -2.1 -2.7 -1.9 -0.0 -52.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV 400 kV 220 kV 132kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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	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 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -8.1 -35.5 -8.0 -5.5 -11.3 -4 -2.7 -1.9 -0.0 -52.5 -23.9 -0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	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 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 port/I 50 51 52 53	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 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 BADOD-KOTA BADOD-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 S/C S/C S	0 0 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 101.5	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	765 kV 400 kV 220 kV 132kV Export of HVDC LINK	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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	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 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0 0.0 0.0 0.0 0.0 10.8	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0 101.5 23.9 0.0 31.3 56.2 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 50 51 52 53 54 55	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 SATNA-ORAI 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0 0.0 0.0 0.0 0.0 10.8 0.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0 101.5 23.9 0.0 31.3 56.2 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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	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 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 WR-NR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0 0.0 0.0 0.0 0.0 10.8	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0 101.5 23.9 0.0 31.3 56.2 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 49 50 51 52 53 54 55 56	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 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 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 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 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 WR-NR 999 0 1965 2857 0 0 0	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 49 50 51 52 53 54 55 56	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 SATNA-ORAI 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 PONDA-AMBEWADI XELDEM-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 S	0 0 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 0 WR-NR 999 0 1965 2857 0 0 0 0 WR-SR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0 0.0 0.0 0.0 0.0 10.8 0.0 0.0 1.1	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0 101.5 23.9 0.0 31.3 56.2 0.0 0.0 0.0 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17
35 36 37 38 39 40 41 42 44 44 45 46 47 48 49 port/I 52 53 54 55 56	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 SATNA-ORAI 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 PONDA-AMBEWADI XELDEM-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 S	0 0 0 164 437 0 488 372 485 197 119 123 168 124 0	0 594 561 1057 131 0 1571 0 0 0 0 0 0 0 0 0 WR-NR 999 0 1965 2857 0 0 0 0 WR-SR	0.0 0.0 0.0 0.8 8.1 0.0 8.0 5.5 11.3 0 2.7 2.1 2.7 1.9 0.0 49.0 0.0 0.0 0.0 0.0 10.8 0.0 0.0 1.1	14.6 19.9 17.0 0.2 0.0 35.5 0.0 0.0 4 0.0 0.0 0.0 0.0 0.0 101.5 23.9 0.0 31.3 56.2 0.0 0.0 0.0 0.0 0.0 0.0	-14.6 -19.9 -17.0 -0.6 -17.0 -0.6 -17.0 -0.6 -17.0 -17