

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: 29th Nov 2018

Τо

- 1. 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.,२९ , रेस कोर्स क्रॉस रोड , बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 27.11.2018.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 28-नवंबर-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 28th November 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** 29-Nov-18

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	42716	48491	40620	18217	2426	152470
Peak Shortage (MW)	496	0	0	0	50	546
Energy Met (MU)	922	1147	898	351	44	3362
Hydro Gen (MU)	122	20	60	39	8	249
Wind Gen (MU)	9	37	52			98
Solar Gen (MU)*	19.20	18.02	71.18	0.82	0.05	109
Energy Shortage (MU)	10.8	0.0	0.0	0.0	0.3	11.2
Maximum Demand Met during the day	43820	53899	41085	18539	2488	155660
(MW) & time (from NLDC SCADA)	18:15	10:56	18:40	18:47	17:36	18:23

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	0.030	0.00	0.13	4.06	4.19	81.91	13.90

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	5579	0	126.2	30.3	0.2	91	0.0
	Haryana	6258	25	122.7	72.1	0.6	151	0.5
	Rajasthan	11688	0	231.5	71.8	1.1	464	0.0
	Delhi	3309	0	62.5	46.1	-0.4	219	0.0
NR	UP	12631	0	267.5	110.3	1.4	334	0.0
	Uttarakhand	1897	0	36.0	23.5	0.8	87	0.0
	HP	1585	0	28.9	20.5	0.2	120	0.1
	J&K	2048	512	43.5	39.5	-2.5	155	10.3
	Chandigarh	189	0	3.3	2.9	0.4	36	0.0
	Chhattisgarh	3568	0	77.3	7.5	-0.4	636	0.0
	Gujarat	14803	0	326.7	128.1	1.5	369	0.0
	MP	13177	0	257.8	150.4	-4.7	378	0.0
WR	Maharashtra	21428	0	440.9	118.1	-0.8	389	0.0
WK	Goa	480	0	10.2	9.7	0.2	16	0.0
	DD	322	0	7.0	6.5	0.5	57	0.0
	DNH	700	0	16.1	15.4	0.6	140	0.0
	Essar steel	525	0	11.2	11.1	0.1	-	0.0
	Andhra Pradesh	8018	0	172.2	60.3	0.5	671	0.0
	Telangana	8060	0	169.9	64.0	1.1	451	0.0
SR	Karnataka	10147	0	203.5	67.3	0.0	431	0.0
310	Kerala	3606	0	70.6	57.3	1.3	346	0.0
	Tamil Nadu	13395	0	275.7	128.0	0.5	566	0.0
	Pondy	324	0	6.6	7.0	-0.4	20	0.0
	Bihar	4036	0	69.1	69.0	-2.8	460	0.0
	DVC	2667	0	55.7	-26.3	0.2	396	0.0
ER	Jharkhand	1128	0	25.8	14.5	0.4	169	0.0
LIX	Odisha	4581	0	86.4	38.9	2.8	267	0.0
	West Bengal	6558	0	112.2	21.6	1.2	309	0.0
	Sikkim	100	0	1.5	1.8	-0.4	18	0.0
•	Arunachal Pradesh	115	2	2.2	2.2	0.1	62	0.0
	Assam	1426	39	24.7	18.2	1.8	111	0.3
	Manipur	170	2	2.5	2.8	-0.3	25	0.0
NER	Meghalaya	350	0	6.6	5.1	0.1	262	0.0
	Mizoram	85	4	2.0	1.2	0.2	13	0.0
	Nagaland	116	3	2.2	1.8	0.2	41	0.0
	Tripura	225	1	3.7	1.7	0.7	40	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	6.9	-2.8	-15.9
Day peak (MW)	291.3	-132.0	-822.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	163.4	-177.0	92.1	-78.6	0.1	0.0
Actual(MU)	161.8	-180.3	89.5	-70.6	0.9	1.3
O/D/U/D(MU)	-1.6	-3.2	-2.6	8.0	0.7	1.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4980	14525	7082	1100	81	27768
State Sector	10975	14935	7880	5065	50	38905
Total	15955	29460	14962	6165	131	66673

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	538	1214	530	412	10	2704
Hydro	122	20	60	39	8	249
Nuclear	25	19	36	0	0	79
Gas, Naptha & Diesel	33	36	26	0	29	124
RES (Wind, Solar, Biomass & Others)	65	56	161	1	0	283
Total	782	1345	814	452	47	3440

Share of RES in total generation (%)	8.26	4.19	19.82	0.19	0.11	8.23
Share of Non-fossil fuel (Hydro, Nuclear and	26.95	7.11	31.62	0.74	16.77	17.77
RES) in total generation (%)	20.95	7.11	31.02	0./4	10.77	17.77

H. Diversity Factor
All India Demand Diversity Factor
1.027
Diversity factor = Sum of regional maximum demands / All India maximum demand

					CHANGES	Date of 1	Reporting :	29-Nov-
								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)
mport/E	Export of	ER (With NR) GAYA-VARANASI	D/C	93	518	0.0	5.3	-5.3
2	765kV		S/C	1	249	0.0	3.0	-3.0
3		GAYA-BALIA	S/C	0	271	0.0	4.2	-4.2
4	HVDC	ALIPURDUAR-AGRA	-	0	300	0.0	7.3	-7.3
5		PUSAULI B/B	S/C	4	0	0.0	0.0	0.0
6 7		PUSAULI-VARANASI	S/C S/C	77 104	6 36	0.5	0.0	-0.9
8	1	PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	D/C	185	271	0.0	0.9	0.0
9	400 kV		Q/C	0	759	0.0	14.6	-14.6
10		BIHARSHARIFF-BALIA	D/C	0	110	0.0	1.4	-1.4
11		MOTIHARI-GORAKHPUR	D/C	0	344	0.0	6.3	-6.3
12		BIHARSHARIFF-VARANASI	D/C	186	118	0.9	0.0	0.9
13	220 kV	PUSAULI-SAHUPURI	S/C	0	127	0.0	2.4	-2.4
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	25	0	0.7	0.0	0.7
16		KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17	<u> </u>	KARMANASA-CHANDAULI	S/C	0	0 ER-NR	0.0 2.1	0.0 45.3	0.0 -43.3
mport/E	Export of	ER (With WR)	1	T	ER-IK	2.1	45.3	-43.3
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1437	0	22.3	0.0	22.3
19	. 50 R 7	NEW RANCHI-DHARAMJAIGARH	D/C	413	288	2.7	0.0	2.7
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	281	9	3.3	0.0	3.3
21		RANCHI-SIPAT	D/C	233	0	2.7	0.0	2.7
22	220 kV	BUDHIPADAR-RAIGARH	S/C	9	79	0.0	0.8	-0.8
23		BUDHIPADAR-KORBA	D/C	227	0 ER-WR	4.1 35.1	0.0	4.1 34.2
	· -	ER (With SR)		1				1
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1501.0	0.0	24.5	-24.5
25	HVDC LINK	JEYPORE-GAZUWAKA B/B	D/C	0.0	630.0	0.0	14.6	-14.6
26 27		TALCHER-KOLAR BIPOLE TALCHER-I/C	D/C D/C	0.0	2171.0 844.0	0.0	43.9 5.2	-43.9 -5.2
28	400 kV 220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
	ı				ER-SR	0.0	83.0	-83.0
29	Export of	ER (With NER)	D/C	0	510	0.0	0.2	-9
30	400 kV	BINAGURI-BONGAIGAON ALIPURDUAR-BONGAIGAON	D/C	0	510 310	0.0	9.3 5.3	-5
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	138	0.0	2.2	-2
	a 4 6	NIED (Wist NID)	•		ER-NER	0.0	16.8	-16.8
32		NER (With NR) BISWANATH CHARIALI-AGRA	-	0	703	0.0	15.7	-15.7
				I	NER-NR	0.0	15.7	-15.7
mport/E	Export of	WR (With NR)						
33	Ĺ	CHAMPA-KURUKSHETRA	D/C	0	2004	0.0	32.6	-32.6
33 34	Export of HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	240	0	6.0	0.0	6.0
33 34 35	Ĺ	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	240 0	0 1170	6.0 0.0	0.0 24.1	6.0 -24.1
33 34 35 36	Ĺ	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	240 0 0	0 1170 892	6.0 0.0 0.0	0.0 24.1 23.7	6.0 -24.1 -23.7
33 34 35	Ĺ	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C	240 0	0 1170	6.0 0.0	0.0 24.1 23.7 23.0	6.0 -24.1
33 34 35 36 37	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	240 0 0 0	0 1170 892 1579	6.0 0.0 0.0 0.0	0.0 24.1 23.7	6.0 -24.1 -23.7 -23.0
33 34 35 36 37 38	HVDC	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	240 0 0 0 0 162	0 1170 892 1579 419	6.0 0.0 0.0 0.0 0.0	0.0 24.1 23.7 23.0 5.8	6.0 -24.1 -23.7 -23.0 -5.8
33 34 35 36 37 38 39	HVDC	CHAMPA-KURUKSHETRA 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	240 0 0 0 0 162 515	0 1170 892 1579 419	6.0 0.0 0.0 0.0 0.0 0.0 8.1	0.0 24.1 23.7 23.0 5.8 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1
33 34 35 36 37 38 39 40	HVDC	CHAMPA-KURUKSHETRA 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	240 0 0 0 162 515 0 338 216	0 1170 892 1579 419 0 1724 3	6.0 0.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8
33 34 35 36 37 38 39 40 41 42 43	HVDC 765 kV	CHAMPA-KURUKSHETRA 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	240 0 0 0 162 515 0 338 216 985	0 1170 892 1579 419 0 1724 3 181	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6
33 34 35 36 37 38 39 40 41 42 43 44	HVDC 765 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 D/C	240 0 0 0 162 515 0 338 216 985 223	0 1170 892 1579 419 0 1724 3 181 0	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6
33 34 35 36 37 38 39 40 41 42 43 44 45	HVDC 765 kV	CHAMPA-KURUKSHETRA 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62	0 1170 892 1579 419 0 1724 3 181 0	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1
33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV	CHAMPA-KURUKSHETRA 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	240 0 0 0 162 515 0 338 216 985 223 62 16	0 1170 892 1579 419 0 1724 3 181 0 196 21	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1 1.2 -0.2
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA 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	240 0 0 0 162 515 0 338 216 985 223 62 16 133	0 1170 892 1579 419 0 1724 3 181 0 196 21 28	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.3	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1 1.2 -0.2 1.8
33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62 16	0 1170 892 1579 419 0 1724 3 181 0 196 21	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1 1.2 -0.2
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC 765 kV 400 kV 220 kV	CHAMPA-KURUKSHETRA 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	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	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.3	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1 1.2 -0.2 1.8 1.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC 765 kV 400 kV 220 kV 132kV	CHAMPA-KURUKSHETRA 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)	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	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 148.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1.2 -0.2 1.8 1.0 0.0 -101.4
333 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC	CHAMPA-KURUKSHETRA 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	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 148.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 5.4 1.8 20.6 1 1.2 -0.2 1.8 1.0 0.0 -101.4
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 0.0	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 148.0	6.0 -24.1 -23.7 -23.0 -5.8 -5.1 -38.5 -5.4 -1.8 -20.6 -1 -1.2 -0.2 -1.8 -0.0 -101.4 -21.8 -0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 46.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 0.0 148.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 -38.5 1.8 20.6 1 1.2 -0.2 1.8 1.0 0.0 -101.4
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 0.0	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 148.0	6.0 -24.1 -23.7 -23.0 -5.8 -5.1 -38.5 -5.4 -1.8 -20.6 -1 -1.2 -0.2 -1.8 -0.0 -101.4 -21.8 -0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 50 51 52 53	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI 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-MIZAMABAD	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	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 46.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 0.0 148.0 21.8 0.0 15.1 23.3	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 -5.4 1.8 -20.6 1 1.2 -0.2 1.8 1.0 0.0 -101.4
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA 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	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 46.6	0.0 24.1 23.7 23.0 5.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 148.0 21.8 0.0 15.1 23.3 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 -5.4 -1.8 -20.6 -1 -1.2 -0.2 -1.8 -1.0 -0.0 -101.4 -21.8 -0.0 -15.1 -23.3 -14.5
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA 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	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 D/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	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0 0 0 1090 256 1154 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 46.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 0.0 148.0 21.8 0.0 15.1 23.3 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 -38.5 -1.8 -20.6 -1 -1.2 -0.2 -1.8 -1.0 -101.4 -21.8 -0.0 -15.1 -23.3 -14.5 -0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 49 50 51 51 52 53 54 55 56	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA 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 XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0 0 0 1090 256 1154 0 1	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 46.6	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 0.0 148.0 21.8 0.0 15.1 23.3 0.0 0.0 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 -38.5 -1.8 -20.6 -1 -1.2 -0.2 -1.8 -1.0 -101.4 -21.8 -0.0 -15.1 -23.3 -14.5 -0.0 -0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 49 50 51 51 52 53 54 55 56	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA 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 XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	240 0 0 0 162 515 0 338 216 985 223 62 16 133 86 0 0 0 1090 256 1154 0	0 1170 892 1579 419 0 1724 3 181 0 196 21 28 0 0 0 WR-NR	6.0 0.0 0.0 0.0 0.0 8.1 0.0 5.4 1.8 20.6 1 1.2 0.2 1.8 1.0 0.0 46.6 0.0 0.0 0.0 14.5 0.0 0.0 1.2	0.0 24.1 23.7 23.0 5.8 0.0 38.5 0.0 0.0 0.0 0.0 0.0 148.0 21.8 0.0 15.1 23.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	6.0 -24.1 -23.7 -23.0 -5.8 8.1 -38.5 -38.5 -1.8 -20.6 -1 -1.2 -0.2 -1.8 -1.0 -101.4 -21.8 -2.