

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: 19th Nov 2018

Τо

- 1. कार्यकारी निदेशक, पू.क्षे.भा.प्रे.के.,14, गोल्फ क्लब रोड, कोलकाता ७०००३३ 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 –५६०००९ Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 18.11.2018.

महोदय/Dear Sir.

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 18-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 18th 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** 19-Nov-18

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	38371	47393	36696	17478	2278	142216
Peak Shortage (MW)	571	0	0	240	19	830
Energy Met (MU)	860	1148	868	347	40	3263
Hydro Gen (MU)	130	21	57	36	10	255
Wind Gen (MU)	7	7	28			42
Solar Gen (MU)*	21.61	20.05	60.98	0.77	0.04	103
Energy Shortage (MU)	10.6	0.0	0.0	0.7	0.7	12.0
Maximum Demand Met during the day	39911	53064	38353	18003	2254	145381
(MW) & time (from NLDC SCADA)	18:17	10:58	11:48	18:34	18:35	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	0.041	0.00	0.00	10.97	10.97	79.85	9.18

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	5036	0	108.5	23.0	-0.1	75	0.0
	Haryana	5305	0	105.1	56.7	1.8	319	0.0
	Rajasthan	11268	0	225.8	64.5	1.0	594	0.0
	Delhi	3179	0	57.3	45.9	-0.5	208	0.0
NR	UP	12175	0	259.0	109.2	0.4	300	0.0
	Uttarakhand	1664	0	31.7	21.5	0.0	108	0.0
	HP	1490	0	26.2	16.6	0.1	152	0.3
	J&K	2202	550	44.0	37.3	-2.5	194	10.3
	Chandigarh	163	0	2.8	2.6	0.2	26	0.0
	Chhattisgarh	3529	0	76.7	14.3	-1.6	218	0.0
	Gujarat	14120	0	315.0	132.5	7.0	583	0.0
	MP	13116	0	268.4	154.2	-1.5	515	0.0
WR	Maharashtra	21191	0	445.6	138.3	0.2	510	0.0
WK	Goa	480	0	10.0	9.0	0.6	61	0.0
	DD	278	0	6.5	5.4	1.1	71	0.0
	DNH	631	0	14.6	14.1	0.5	111	0.0
	Essar steel	531	0	11.0	10.8	0.1	267	0.0
	Andhra Pradesh	7895	0	175.6	60.5	-0.1	437	0.0
	Telangana	8010	0	174.7	81.1	0.9	709	0.0
SR	Karnataka	10584	0	205.0	73.6	-0.4	403	0.0
SK	Kerala	3165	0	63.2	50.3	0.9	227	0.0
	Tamil Nadu	11157	0	243.7	134.8	-0.9	297	0.0
	Pondy	288	0	6.2	6.5	-0.4	21	0.0
	Bihar	3992	0	68.2	67.6	-2.0	460	0.0
	DVC	2964	0	63.7	-28.8	1.1	396	0.4
ER	Jharkhand	1069	110	23.9	16.1	-0.3	169	0.3
EK	Odisha	4393	0	86.7	35.3	1.2	267	0.0
	West Bengal	5818	0	102.8	21.7	0.5	309	0.0
	Sikkim	90	0	1.5	1.1	0.3	18	0.0
	Arunachal Pradesh	99	2	2.2	2.4	-0.2	9	0.0
	Assam	1379	12	22.5	17.0	0.9	140	0.6
	Manipur	158	3	2.4	2.6	-0.2	29	0.0
NER	Meghalaya	319	0	6.0	4.5	-0.1	25	0.0
	Mizoram	79	1	1.5	1.1	-0.3		0.0
	Nagaland	108	2	2.2	2.0	0.0		0.0
	Tripura	215	1	3.6	1.9	-0.2	33	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	6.9	-2.8	-18.4
Day peak (MW)	286.6	-140.0	-847.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	117.4	-156.6	113.0	-70.6	-3.0	0.3
Actual(MU)	117.5	-158.2	112.3	-67.8	-5.5	-1.7
O/D/U/D(MU)	0.1	-1.6	-0.7	2.8	-2.5	-2.0

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4701	12533	6112	2050	143	25538
State Sector	12150	14210	8820	5615	50	40845
Total	16851	26743	14932	7665	192	66383

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	541	1208	512	411	8	2680
Hydro	130	21	57	36	10	255
Nuclear	25	19	46	0	0	89
Gas, Naptha & Diesel	21	43	25	0	31	119
RES (Wind, Solar, Biomass & Others)	52	29	126	1	0	208
Total	769	1319	765	448	49	3351

Share of RES in total generation (%)	6.81	2.16	16.49	0.18	0.08	6.21
Share of Non-fossil fuel (Hydro, Nuclear and	26.98	5.15	29.92	0.21	21.08	16.48
RES) in total generation (%)	20.98	5.15	29.92	0.51	21.00	10.40

H. Diversity Factor
All India Demand Diversity Factor
1.043
Diversity factor = Sum of regional maximum demands / All India maximum demand

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

		INTER-REGIONAL EXCHANGES Date of Reporting:						19-Nov-18
								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)		, , , , , ,				
1	TCTLX!	GAYA-VARANASI	D/C	172	391	0.0	3.4	-3.4
3	765kV	SASARAM-FATEHPUR GAYA-BALIA	S/C S/C	221 29	83 187	0.0	0.0 1.9	1.3 -1.9
4		ALIPURDUAR-AGRA	-	0	301	0.0	7.5	-7.5
5	HVDC	PUSAULI B/B	S/C	0	346	0.0	7.9	-7.9
6		PUSAULI-VARANASI	S/C	0	250	0.0	5.0	-5.0
7		PUSAULI -ALLAHABAD	S/C	0	161	0.0	2.9	-2.9
8		MUZAFFARPUR-GORAKHPUR	D/C	51	411	0.0	3.4	-3.4
9	400 kV	PATNA-BALIA	Q/C	0	750	0.0	14.4	-14.4
10	_	BIHARSHARIFF-BALIA	D/C D/C	16	88 345	0.0	6.8	-2.2 -6.8
12	_	MOTIHARI-GORAKHPUR BIHARSHARIFF-VARANASI	D/C D/C	196	91	0.8	0.0	0.8
13	220 kV	PUSAULI-SAHUPURI	S/C	0	115	0.0	2.0	-2.0
14	220111	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	400.55	GARWAH-RIHAND	S/C	25	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
Import/E	Export of	ER (With WR)			ER-NR	2.8	57.4	-54.7
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1656	0	25.0	0.0	25.0
19	, 03 K V	NEW RANCHI-DHARAMJAIGARH	D/C	221	394	0.0	1.5	-1.5
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	403	31	5.3	0.0	5.3
21	700 K V	RANCHI-SIPAT	D/C	185	17	2.4	0.0	2.4
22	220 kV	BUDHIPADAR-RAIGARH	S/C	42	59	0.0	0.2	-0.2
23		BUDHIPADAR-KORBA	D/C	121	0	1.8	0.0	1.8
Import/F	Export of	ER (With SR)			ER-WR	34.5	1.7	32.8
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1747.0	0.0	30.4	-30.4
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	623.0	0.0	14.6	-14.6
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	2466.0	0.0	47.5	-47.5
27	400 kV	TALCHER-I/C	D/C	0.0	837.0	0.0	2.3	-2.3
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
Import/F	Export of	ER (With NER)			ER-SR	0.0	92.5	-92.5
29	ZAPOIT OI	BINAGURI-BONGAIGAON	D/C	0	333	0.0	4.7	-5
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	60	139	0.0	0.6	-1
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	97	0.0	1.2	-1
					ER-NER	0.0	6.6	-6.6
32		NER (With NR) BISWANATH CHARIALI-AGRA	1	0	503	0.0	12.1	-12.1
32	HVDC	DISWANATH CHARIALI-AGRA		U		0.0	12.1	
					NER-NR	0.0	12.1	-12.1
Import/E	Export of	WR (With NR)				0.0	12.1	-12.1
Import/E		WR (With NR) CHAMPA-KURUKSHETRA	D/C	0	NER-NR 903	0.0	21.2	-12.1 -21.2
33 34	Export of HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	241	903 0	0.0 6.1	21.2	-21.2 6.1
33 34 35		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	241	903 0 885	0.0 6.1 0.0	21.2 0.0 21.5	-21.2 6.1 -21.5
33 34 35 36		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	241 0 0	903 0 885 646	0.0 6.1 0.0 0.0	21.2 0.0 21.5 20.2	-21.2 6.1 -21.5 -20.2
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	241 0 0 0	903 0 885 646 1392	0.0 6.1 0.0 0.0 0.0	21.2 0.0 21.5 20.2 20.8	-21.2 6.1 -21.5 -20.2 -20.8
33 34 35 36 37 38	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	241 0 0 0 0 299	903 0 885 646 1392	0.0 6.1 0.0 0.0 0.0 0.0	21.2 0.0 21.5 20.2 20.8 1.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0
33 34 35 36 37	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C	241 0 0 0	903 0 885 646 1392	0.0 6.1 0.0 0.0 0.0	21.2 0.0 21.5 20.2 20.8	-21.2 6.1 -21.5 -20.2 -20.8
33 34 35 36 37 38 39	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C S/C	241 0 0 0 0 299 603	903 0 885 646 1392 125	0.0 6.1 0.0 0.0 0.0 0.0 0.0	21.2 0.0 21.5 20.2 20.8 1.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0
33 34 35 36 37 38 39 40	HVDC 765 kV	CHAMPA-KURUKSHETRA 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	241 0 0 0 0 299 603 0	903 0 885 646 1392 125 0	0.0 6.1 0.0 0.0 0.0 0.0 0.0 10.1	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7
33 34 35 36 37 38 39 40 41	HVDC	CHAMPA-KURUKSHETRA 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	241 0 0 0 0 299 603 0 403	903 0 885 646 1392 125 0 1480	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5
33 34 35 36 37 38 39 40 41 42	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	D/C D/C D/C D/C D/C S/C S/C S/C S/C	241 0 0 0 299 603 0 403 271 992 384	903 0 885 646 1392 125 0 1480 0 61	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0
33 34 35 36 37 38 39 40 41 42 43	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	241 0 0 0 299 603 0 403 271 992 384 74	903 0 885 646 1392 125 0 1480 0 61 0	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7
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 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	241 0 0 0 299 603 0 403 271 992 384 74 62	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 25	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6
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	241 0 0 0 299 603 0 403 271 992 384 74 62 127	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 25	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 25 0 0	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0
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	241 0 0 0 299 603 0 403 271 992 384 74 62 127	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 25	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9
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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 WR-NR	0.0 6.1 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0
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 Export of HVDC	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 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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 WR-NR	0.0 6.1 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 118.4	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 50 51	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 WR-NR	0.0 6.1 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 118.4	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 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-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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 0 WR-NR	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 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 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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 0 WR-NR	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 50 51 52	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 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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 0 WR-NR	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 50 51 52 53 54	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 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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 0 WR-NR 995 0 1808 2256 0	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0 -23.7 0.0 -20.3 -34.1 10.5
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 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-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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0 0 0 0 0 0 0 0 0 0 0 0 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 WR-NR 995 0 1808 2256 0 0	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0 -23.7 0.0 -20.3 -34.1 10.5 0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 50 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	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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0 0 0 222 0 761 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 0 0 WR-NR 995 0 1808 2256 0 0 0	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3 0.0 0.0 0.0 0.0 0.0	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 118.4 23.7 0.0 20.3 34.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0 -23.7 0.0 -20.3 -34.1 10.5 0.0 0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 50 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-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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0 0 0 222 0 761 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 25 0 0 WR-NR 995 0 1808 2256 0 0 0 0 WR-SR	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3 0.0 0.0 0.0 10.5 0.0 0.0 11.5	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 118.4 23.7 0.0 20.3 34.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0 -23.7 0.0 -20.3 -34.1 10.5 0.0 0.0 1.2
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/F 50 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-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	241 0 0 0 299 603 0 403 271 992 384 74 62 127 81 0 0 0 222 0 761 0	NER-NR 903 0 885 646 1392 125 0 1480 0 61 0 0 25 0 0 WR-NR 995 0 1808 2256 0 0 0 0 WR-SR	0.0 6.1 0.0 0.0 0.0 0.0 10.1 0.0 7.5 3.7 23.0 3 2.7 0.7 1.9 1.0 0.0 59.3 0.0 0.0 0.0 10.5 0.0 0.0 11.5	21.2 0.0 21.5 20.2 20.8 1.0 0.0 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 118.4 23.7 0.0 20.3 34.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-21.2 6.1 -21.5 -20.2 -20.8 -1.0 10.1 -33.7 7.5 3.7 23.0 3 2.7 0.6 1.9 1.0 0.0 -59.0 -23.7 0.0 -20.3 -34.1 10.5 0.0 0.0 1.2