

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

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 18th Feb 2019

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. 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 17.02.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 17-फ़रवरी-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 17th February 2019, 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-Feb-19

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	40254	43675	40190	16266	2076	142461
Peak Shortage (MW)	498	0	0	0	244	742
Energy Met (MU)	855	1064	967	345	37	3268
Hydro Gen (MU)	144	17	56	25	3	245
Wind Gen (MU)	19	16	43			78
Solar Gen (MU)*	20.58	25.42	79.19	1.01	0.03	126
Energy Shortage (MU)	9.9	0.0	0.0	0.0	4.0	13.9
Maximum Demand Met during the day	41324	52512	42520	17825	2020	151503
(MW) & time (from NLDC SCADA)	18:54	10:58	09:46	19:00	19:01	09:47

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	0.037	0.00	0.17	3.26	3.44	69.77	26.79

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
<u> </u>	Punjab	5145	0	98.7	37.8	-1.5	28	0.0
	Haryana	5421	0	107.4	79.3	0.6	278	0.0
	Rajasthan	11836	0	227.8	62.5	-0.4	480	0.0
	Delhi	3975	0	61.6	53.8	-1.2	217	0.0
NR	UP	13376	0	250.5	100.9	-0.1	448	0.0
	Uttarakhand	1937	0	35.7	21.2	-0.3	90	0.0
	HP	1552	0	27.9	19.8	1.1	126	0.0
	J&K	2067	517	42.2	40.8	-7.9	-38	9.9
	Chandigarh	192	0	3.1	3.7	-0.6	2	0.0
	Chhattisgarh	3690	0	82.1	23.9	-1.3	291	0.0
	Gujarat	14602	0	311.7	109.0	1.7	483	0.0
	MP	11757	0	216.8	107.3	-0.3	868	0.0
WR	Maharashtra	19705	0	404.0	126.0	1.5	656	0.0
WK	Goa	498	0	11.9	10.2	1.1	35	0.0
	DD	290	0	6.7	6.7	0.0	25	0.0
	DNH	746	0	17.4	17.3	0.1	81	0.0
	Essar steel	631	0	13.6	14.1	-0.4	229	0.0
	Andhra Pradesh	8364	0	184.3	68.9	0.2	480	0.0
	Telangana	9034	0	194.5	68.1	0.2	425	0.0
SR	Karnataka	10767	0	210.2	70.2	-0.8	598	0.0
3K	Kerala	3469	0	70.1	57.0	0.8	207	0.0
	Tamil Nadu	13330	0	301.0	165.1	-0.4	554	0.0
	Pondy	365	0	6.9	7.1	-0.2	36	0.0
	Bihar	3981	0	68.4	63.2	-0.2	460	0.0
	DVC	2950	0	63.8	-38.1	0.8	396	0.0
ER	Jharkhand	1000	0	22.4	16.2	-1.0	169	0.0
EN	Odisha	3871	0	74.9	21.3	2.5	267	0.0
	West Bengal	6024	0	114.6	21.2	-0.8	309	0.0
	Sikkim	95	0	1.3	1.2	0.0	18	0.0
	Arunachal Pradesh	91	3	2.0	2.4	-0.4	-	0.0
	Assam	1091	180	19.2	14.7	0.1	113	4.0
	Manipur	168	3	2.4	2.5	-0.1	37	0.0
NER	Meghalaya	369	6	5.9	4.8	-0.2	76	0.0
	Mizoram	93	9	1.7	1.4	0.1	27	0.0
	Nagaland	112	5	2.0	1.9	0.0	28	0.0
	Tripura	224	11	3.3	1.5	-0.2	31	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	1.5	-6.8	-19.3
Day peak (MW)	137.6	-270.0	-967.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	149.7	-204.8	122.1	-69.8	3.0	0.2
Actual(MU)	144.5	-210.3	116.9	-62.6	1.9	-9.7
O/D/U/D(MU)	-5.2	-5.5	-5.3	7.2	-1.1	-9.9

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4211	14254	6582	1370	545	26962
State Sector	12775	14786	7420	3875	50	38906
Total	16986	29040	14002	5245	594	65867

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	468	1137	523	414	7	2549
Lignite	17	16	58	0	0	91
Hydro	144	17	56	25	3	245
Nuclear	24	31	36	0	0	91
Gas, Naptha & Diesel	25	30	18	0	28	101
RES (Wind, Solar, Biomass & Others)	69	43	164	1	0	277
Total	747	1275	854	440	38	3354

Share of RES in total generation (%)	9.30	3.38	19.17	0.24	0.08	8.27
Share of Non-fossil fuel (Hydro, Nuclear and	31.76	7.14	29.91	5.89	8.68	18.28
RES) in total generation (%)	31./0	7.14	29.91	5.09	0.00	10.20

H. Diversity Factor
All India Demand Diversity Factor
1.031
Diversity factor = Sum of regional maximum demands / All India maximum demand

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

		INTE	R-REGI	ONAL EXO	CHANGES	Date of I	18-Feb-19	
								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)						
2	765kV	GAYA-VARANASI	D/C	0	353	0.0	3.9	-3.9
3	/05KV	SASARAM-FATEHPUR GAYA-BALIA	S/C S/C	24 0	250 384	0.0	2.1 5.8	-2.1 -5.8
4	rmmc.	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	HVDC	PUSAULI B/B	S/C	0	147	0.0	3.6	-3.6
6		PUSAULI-VARANASI	S/C	0	145	0.0	2.8	-2.8
7		PUSAULI -ALLAHABAD	S/C	0	65	0.0	0.6	-0.6
8	400 1-37	MUZAFFARPUR-GORAKHPUR	D/C	0	481	0.0	6.3	-6.3
9	400 kV	PATNA-BALIA BIHARSHARIFF-BALIA	Q/C D/C	0	755 283	0.0	13.3	-13.3 -4.2
11	_	MOTIHARI-GORAKHPUR	D/C	0	324	0.0	6.1	-6.1
12	_	BIHARSHARIFF-VARANASI	D/C	82	110	0.0	0.5	-0.5
13	220 kV	PUSAULI-SAHUPURI	S/C	0	147	0.0	2.8	-2.8
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	122 1-37	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		KARMANASA-CHANDAULI	S/C	1	0	0.0	0.0	0.0
		DD (MA) MAD			ER-NR	0.6	52.0	-51.4
1mport/E	Export of	ER (With WR)	1		T			
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1723	0	28.8	0.0	28.8
19		NEW RANCHI-DHARAMJAIGARH	D/C	396	202	2.1	0.0	2.1
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	192	84	1.0	0.0	1.0
21		RANCHI-SIPAT	D/C	240	0	3.0	0.0	3.0
22	220 kV	BUDHIPADAR-RAIGARH	S/C	5	82	0.0	0.9	-0.9
23		BUDHIPADAR-KORBA	D/C	214	0 ER-WR	3.7 38.7	0.0 0.9	3.7
Import/F	Export of	ER (With SR)			ER-WK	38.7	0.9	37.8
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1649.0	0.0	29.8	-29.8
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	688.0	0.0	16.0	-16.0
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1977.0	0.0	45.8	-45.8
27	400 kV	TALCHER-I/C	D/C	0.0	678.0	0.0	16.3	-16.3
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	91.6	-91.6
	Export of	ER (With NER)	1					
29	400 kV	BINAGURI-BONGAIGAON	D/C	292	30	3.8	0.0	4
30	220 kV	ALIPURDUAR-BONGAIGAON ALIPURDUAR-SALAKATI	D/C D/C	390 68	0 22	5.6 0.7	0.0	6
31	220 KV	ALIFUNDUAR-SALAKATI	D/C	08	ER-NER	10.0	0.0	10.0
Import/F	Export of	NER (With NR)				1010	0.0	1010
		BISWANATH CHARIALI-AGRA	-	661		10.6		12.6
				•	0	12.6	0.0	
Import/F					0 NER-NR	12.6 12.6	0.0	12.6
	Export of	WR (With NR)			Ü			
33	Export of	WR (With NR) CHAMPA-KURUKSHETRA	D/C	0	Ü			
34	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	241	NER-NR 1401 0	0.0 6.0	25.0 0.0	-25.0 6.0
34 35	ĺ	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	241	NER-NR 1401 0 1741	0.0 6.0 0.0	25.0 0.0 37.0	-25.0 6.0 -37.0
34 35 36	ĺ	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	241 0 0	NER-NR 1401 0 1741 2336	0.0 6.0 0.0 0.0	25.0 0.0 37.0 34.2	-25.0 6.0 -37.0 -34.2
34 35 36 37	HVDC	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	241 0 0 0	NER-NR 1401 0 1741 2336 918	0.0 6.0 0.0 0.0 0.0	25.0 0.0 37.0 34.2 13.3	-25.0 6.0 -37.0 -34.2 -13.3
34 35 36 37 38	ĺ	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	241 0 0 0 0	NER-NR 1401 0 1741 2336 918 631	0.0 6.0 0.0 0.0 0.0 0.0	25.0 0.0 37.0 34.2 13.3 17.8	-25.0 6.0 -37.0 -34.2 -13.3 -17.8
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 C D/C S/C	241 0 0 0 0 0 0 630	1401 0 1741 2336 918 631	0.0 6.0 0.0 0.0 0.0 0.0 0.0 11.8	25.0 0.0 37.0 34.2 13.3 17.8 0.0	-25.0 6.0 -37.0 -34.2 -13.3 -17.8
34 35 36 37 38	HVDC	CHAMPA-KURUKSHETRA 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 D/C	241 0 0 0 0	NER-NR 1401 0 1741 2336 918 631	0.0 6.0 0.0 0.0 0.0 0.0	25.0 0.0 37.0 34.2 13.3 17.8	-25.0 6.0 -37.0 -34.2 -13.3 -17.8
34 35 36 37 38 39 40	HVDC 765 kV	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 S/C	241 0 0 0 0 0 630 0	1401 0 1741 2336 918 631 0 1251	0.0 6.0 0.0 0.0 0.0 0.0 0.0 11.8	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8	-25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8
34 35 36 37 38 39 40 41	HVDC	CHAMPA-KURUKSHETRA VCHAL 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 D/C S/C S/C S/C	241 0 0 0 0 0 630 0 222	NER-NR 1401 0 1741 2336 918 631 0 1251	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0	-25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7
34 35 36 37 38 39 40 41 42	HVDC 765 kV	CHAMPA-KURUKSHETRA VCHAL 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 0 630 0 222 217	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0	-25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5
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	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C	241 0 0 0 0 630 0 222 217 959	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0	0.0 6.0 0.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0 0.0	-25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5
34 35 36 37 38 39 40 41 42 43	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	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	241 0 0 0 0 630 0 222 217 959 199	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149	0.0 6.0 0.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0 0.0	-25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5
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 ZERDA-ORAI 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 0 630 0 222 217 959 199 23	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0	25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC 765 kV 400 kV 220 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABAL-PUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RIHAND RAPP-SHUJAL-PUR 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	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0.0 0.0 1.1 0.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0 0.0 0.0 0.0 1.3 0.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3
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-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 0 630 0 222 217 959 199 23 30 104	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0
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	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0.0 0.0 1.1 0.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0 0.0 0.0 0.0 1.3 0.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3
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 SATINA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-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 0 630 0 222 217 959 199 23 30 104 59 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 1.3 0.0 0.0 1.3 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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	CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 1.3 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 WR-NR 995 0 1550	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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-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 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	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 WR-NR 995 0 1550 1805	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 WR-NR 995 0 1550	12.6 0.0 6.0 0.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1 -23.7 0.0 -20.5 -28.3
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	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 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 S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 23.8 0.0 0.0 0.0 1.3 0.0 1.3 0.0 1.52.4	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1 -23.7 0.0 -20.5 -28.3 9.6
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-LSILERU 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 S/C D/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C D/C D/C D/C D/C D/C D/C D/C	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0 0 0 118 0 783 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR 995 0 1550 1805 34 0	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 1.3 0.0 0.0 1.52.4	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1 -23.7 0.0 -20.5 -28.3 9.6 0.0
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 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 S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0 0 0 0 0 0 0 0 0 0 0 0 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR 995 0 1550 1805 34 0 68	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 152.4 23.7 0.0 20.5 28.3 0.0 0.0 1.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1 -23.7 0.0 -20.5 -28.3 9.6 0.0 -1.0
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-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-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 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 0 630 0 222 217 959 199 23 30 104 59 0 0 0 0 0 0 0 0 0 0 0 0 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR 995 0 1550 1805 34 0 68 64 WR-SR	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 152.4 23.7 0.0 20.5 28.3 0.0 0.0 1.0 0.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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-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-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 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 0 630 0 222 217 959 199 23 30 104 59 0 0 0 118 0 783 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR 995 0 1550 1805 34 0 68 64 WR-SR	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 152.4 23.7 0.0 20.5 28.3 0.0 0.0 1.0 0.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1
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 57	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-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	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	241 0 0 0 0 630 0 222 217 959 199 23 30 104 59 0 0 0 118 0 783 0	NER-NR 1401 0 1741 2336 918 631 0 1251 13 145 0 149 45 115 0 24 0 WR-NR 995 0 1550 1805 34 0 68 64 WR-SR	12.6 0.0 6.0 0.0 0.0 0.0 11.8 0.0 3.7 0.5 19.5 0 0.0 1.1 0.3 0.0 43.3	0.0 25.0 0.0 37.0 34.2 13.3 17.8 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 152.4 23.7 0.0 20.5 28.3 0.0 0.0 1.0 0.0	12.6 -25.0 6.0 -37.0 -34.2 -13.3 -17.8 11.8 -23.8 3.7 0.5 19.5 0 0.0 -1.3 1.1 0.3 0.0 -109.1 -23.7 0.0 -20.5 -28.3 9.6 0.0 -1.0 0.9 -62.9