

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: 21st Dec 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 ७९३००६ 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 20.12.2018.

महोदय/Dear Sir.

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 20-दिसम्बर-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 20th December 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 21-Dec-18

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	44887	48496	41604	17483	2372	154842
Peak Shortage (MW)	719	0	200	0	33	952
Energy Met (MU)	949	1103	909	341	42	3344
Hydro Gen (MU)	124	34	87	37	8	291
Wind Gen (MU)	5	37	30			72
Solar Gen (MU)*	23.34	21.25	64.65	0.72	0.03	110
Energy Shortage (MU)	16.2	0.0	0.5	0.0	0.5	17.2
Maximum Demand Met during the day	45610	53556	42643	17994	2379	157410
(MW) & time (from NLDC SCADA)	18:02	10:39	07:43	18:42	18:13	18:40

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	0.068	0.00	2.21	17.96	20.17	71.91	7.92

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	5913	0	121.6	24.9	-0.5	104	0.0
	Haryana	6654	0	127.6	63.7	-0.1	181	0.0
	Rajasthan	12620	0	235.4	66.6	0.6	304	0.0
	Delhi	3805	0	67.0	50.3	0.2	200	0.0
NR	UP	13449	70	278.0	111.6	1.0	382	4.0
	Uttarakhand	1952	0	38.0	23.7	1.1	198	0.6
	HP	1569	0	28.8	21.0	1.5	368	0.0
	J&K	2529	632	49.4	41.6	1.8	424	11.6
	Chandigarh	217	0	3.6	3.1	0.5	69	0.0
	Chhattisgarh	3415	0	71.3	11.0	-1.1	138	0.0
	Gujarat	14921	0	324.0	94.9	1.8	575	0.0
	MP	13494	0	252.6	132.1	1.3	956	0.0
WR	Maharashtra	20479	0	411.7	102.8	0.7	492	0.0
WK	Goa	452	0	9.1	7.9	0.7	74	0.0
	DD	316	0	6.1	5.3	0.8	112	0.0
	DNH	759	0	17.5	16.7	0.9	116	0.0
	Essar steel	502	0	10.1	10.4	-0.3	263	0.0
	Andhra Pradesh	7291	0	153.8	54.3	-0.5	703	0.0
	Telangana	8458	0	169.4	100.4	1.0	510	0.0
SR	Karnataka	10905	0	207.5	63.9	-0.6	479	0.0
3N	Kerala	3693	0	69.8	51.9	1.1	298	0.5
	Tamil Nadu	14520	0	301.5	154.0	1.0	586	0.0
	Pondy	343	0	6.8	7.0	-0.3	30	0.0
	Bihar	3945	0	66.8	63.8	-2.5	460	0.0
	DVC	3025	0	64.4	-27.0	1.8	396	0.0
ER	Jharkhand	1116	0	23.4	17.0	-0.3	169	0.0
EN	Odisha	3796	0	70.2	20.5	3.5	267	0.0
	West Bengal	6440	0	115.0	19.1	0.8	309	0.0
	Sikkim	100	0	1.6	1.6	0.0	18	0.0
	Arunachal Pradesh	106	2	2.1	2.1	0.0	23	0.0
	Assam	1373	26	23.1	16.8	1.3	92	0.4
	Manipur	166	3	2.6	2.8	-0.2	12	0.0
NER	Meghalaya	333	0	6.6	5.2	0.1	24	0.0
	Mizoram	85	1	1.7	1.2	0.2	33	0.0
	Nagaland	112	3	2.2	2.0	0.0	30	0.0
	Tripura	219	2	3.8	1.6	0.4	16	0.1

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	3.2	-6.4	-13.9
Day peak (MW)	263.5	-284.0	-791.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	143.2	-186.6	125.1	-79.4	-2.1	0.2
Actual(MU)	143.6	-195.9	122.4	-73.3	-2.1	-5.3
O/D/U/D(MU)	0.4	-9.3	-2.7	6.1	0.0	-5.5

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5311	18335	7082	1870	81	32679
State Sector	11335	14740	9510	5905	50	41540
Total	16646	33075	16592	7775	131	74219

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	570	1128	457	402	10	2567
Lignite	21	17	56	0	0	94
Hydro	124	34	87	37	8	291
Nuclear	24	19	36	0	0	80
Gas, Naptha & Diesel	27	41	23	0	30	120
RES (Wind, Solar, Biomass & Others)	57	60	130	1	0	248
Total	823	1299	789	441	48	3400
Share of RES in total generation (%)	6.05	166	16.44	0.17	0.06	7 20

Share of RES in total generation (%)	6.95	4.66	16.44	0.17	0.06	7.30
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	25.00	8.71	32.11	8.64	17.57	18.21

H. Diversity Factor
All India Demand Diversity Factor
1.030
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} \ \text{for embedded solar.} \ Limited \ visibility \ \text{of embedded solar} \ \text{data}.$

		INTER-REGIONAL EXCHANGES Date of Reporting:						21-Dec-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	Export of	ER (With NR)						
2	765kV	GAYA-VARANASI	D/C	0	576 336	0.0	9.4 5.3	-9.4 -5.3
3	/05KV	SASARAM-FATEHPUR GAYA-BALIA	S/C S/C	0	230	0.0	4.6	-5.3 -4.6
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	nvbc	PUSAULI B/B	S/C	2	0	0.0	0.0	0.0
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	16 45	40 59	0.0	0.4	-0.4 -0.4
8	1	MUZAFFARPUR-GORAKHPUR	D/C	0	675	0.0	10.3	-10.3
9	400 kV	PATNA-BALIA	Q/C	0	826	0.0	17.8	-17.8
10		BIHARSHARIFF-BALIA	D/C	0	250	0.0	4.6	-4.6
11		MOTIHARI-GORAKHPUR	D/C	0	345	0.0	7.0	-7.0
12	****	BIHARSHARIFF-VARANASI	D/C	3	210	0.0	3.1	-3.1
13 14	220 kV	PUSAULI-SAHUPURI SONE NAGAR-RIHAND	S/C S/C	0	122	0.0	0.0	-2.4 0.0
15	1	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>L</u>	KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
Import/E	Export of	ER (With WR)			ER-NR	0.6	65.1	-64.5
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1066	0	16.4	0.0	16.4
19	765 KV	NEW RANCHI-DHARAMJAIGARH	D/C	157	405	0.0	2.8	-2.8
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	450	0	6.3	0.0	6.3
21	400 K V	RANCHI-SIPAT	D/C	158	19	1.8	0.0	1.8
22	220 kV	BUDHIPADAR-RAIGARH	S/C D/C	28 144	73	0.0 2.1	0.6	-0.6 2.1
23		BUDHIPADAR-KORBA	D/C	144	ER-WR	26.6	3.4	23.2
Import/E	Export of	ER (With SR)						
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1431.0	0.0	26.0	-26.0
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	436.0	0.0	9.8	-9.8
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1980.0	0.0	42.6	-42.6
27 28	400 kV 220 kV	TALCHER-I/C BALIMELA-UPPER-SILERRU	D/C S/C	0.0 1.0	937.0	0.0	9.0	-9.0 0.0
20	220 K V	BALINILLA-UI I EN-SILLERRU	3/C	1.0	ER-SR	0.0	78.4	-78.4
Import/E	Export of	ER (With NER)						•
29	400 kV	BINAGURI-BONGAIGAON	D/C	286	0	4.3	0.0	4
30	****	ALIPURDUAR-BONGAIGAON	D/C	482	0	7.9	0.0	8
31	220 kV	ALIPURDUAR-SALAKATI	D/C	71	0 ER-NER	1.0	0.0	1 13.2
						10.2	010	10.2
20		NER (With NR)		472		11.7	0.0	11.7
32		NER (With NR) BISWANATH CHARIALI-AGRA	-	472	0 NER-NR	11.7	0.0	11.7
	HVDC	BISWANATH CHARIALI-AGRA	-	472	0 NER-NR	11.7 11.7	0.0	11.7 11.7
	HVDC		- D/C	472				
Import/E	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR)	D/C D/C		NER-NR	11.7	0.0	11.7
33 34 35	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG	D/C D/C	0 241 0	701 0 694	0.0 6.0 0.0	0.0 16.7 0.0 17.0	-16.7 6.0 -17.0
33 34 35 36	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 241 0	701 0 694 1000	0.0 6.0 0.0 0.0	16.7 0.0 17.0 34.9	-16.7 6.0 -17.0 -34.9
33 34 35 36 37	Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 241 0 0	701 0 694 1000 1045	0.0 6.0 0.0 0.0 0.0	0.0 16.7 0.0 17.0 34.9 17.1	-16.7 6.0 -17.0 -34.9 -17.1
33 34 35 36	Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 241 0	701 0 694 1000	0.0 6.0 0.0 0.0	16.7 0.0 17.0 34.9	-16.7 6.0 -17.0 -34.9
33 34 35 36 37 38	Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7	701 0 694 1000 1045 303	0.0 6.0 0.0 0.0 0.0 0.0	16.7 0.0 17.0 34.9 17.1 8.8	-16.7 6.0 -17.0 -34.9 -17.1 -8.8
Import/E 33 34 35 36 37 38 39	Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7 588	701 0 694 1000 1045 303 0	0.0 6.0 0.0 0.0 0.0 0.0 0.0 10.3	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0	-16.7 6.0 -17.0 -34.9 -17.1 -8.8 10.3
Import/E 33 34 35 36 37 38 39 40 41 42	Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7 588 0 161 44	NER-NR 701 0 694 1000 1045 303 0 1458 175 358	0.0 6.0 0.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6	16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7	-16.7 -6.0 -17.0 -34.9 -17.1 -8.8 -10.3 -32.3 -32.3 -32.7
Import/E 33 34 35 36 37 38 39 40 41 42 43	HVDC Export of HVDC 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7 588 0 161 44 983	NER-NR 701 0 694 1000 1045 303 0 1458 175 358	0.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0	-16.7 -6.0 -17.0 -34.9 -17.1 -8.8 -10.3 -32.3 -6.6 -2.7 -14.2
Import/E 33 34 35 36 37 38 39 40 41 42 43 44	HVDC Export of HVDC 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	0 241 0 0 0 7 7 588 0 161 44 983 278	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33	0.0 6.0 0.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0	16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0	-16.7 -6.0 -17.0 -34.9 -17.1 -8.8 -10.3 -32.3 -32.3 -32.7 -14.2 -2
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45	HVDC Export of HVDC 765 kV 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7 588 0 161 44 983 278 28	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47	0.0 6.0 0.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0 14.2 2	16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4
Import/E 33 34 35 36 37 38 39 40 41 42 43 44	HVDC Export of HVDC 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	0 241 0 0 0 7 7 588 0 161 44 983 278	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33	0.0 6.0 0.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0	16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0	-16.7 -6.0 -17.0 -34.9 -17.1 -8.8 -10.3 -32.3 -32.3 -32.7 -14.2 -2
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC Export of HVDC 765 kV 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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	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	0 241 0 0 0 7 588 0 161 44 983 278 28	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98	0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0 14.2 2 0.5	16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC Export of HVDC 765 kV 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI ZERDA-KANKROLI ZERDA-KANKROLI ZERDA-HINMAL 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13	0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0 14.2 2 0.5 0.0 1.2 0.4	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 0.1 0.8 0.0 0.0 0.0	11.7 -16.7 6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 0.0
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC Export of HVDC 765 kV 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0 14.2 2 0.5 0.0	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 0.1 0.8 0.0 0.0	11.7 -16.7 6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 -2.7 14.2 2 0.4 -0.8 1.2 0.4
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 113 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 0.0 -95.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV	BISWANATH CHARIALI-AGRA WR (With NR) 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 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 0.0 -95.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) 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 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 -95.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 -0.9 -95.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK	BISWANATH CHARIALI-AGRA WR (With NR) 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 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 -95.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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-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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 -0.9 -5.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54 55	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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 BARSUR-LSILERU 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5 22.1 0.0 29.9 38.4 0.0 0.0	11.7 -16.7 -6.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 -0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 -0.8 1.2 0.4 -0.9 -95.6
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54 55 56	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR 999 0 1992 2361 0 0 0	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 0.6 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9 0.0 0.0 0.0 1.1 0.0 0.0 0.0 0	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5	11.7 -16.7 -0.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 0.0 -95.6 -22.1 0.0 -29.9 -38.4 11.9 0.0 0.0
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54 55 56	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI TRA	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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR 999 0 1992 2361 0 0 0 63 WR-SR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9 0.0 0.0 0.0 11.9 0.0 0.0 11.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5 22.1 0.0 0.9 38.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	11.7 -16.7 -0.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 0.0 -95.6 -22.1 0.0 -29.9 -38.4 11.9 0.0 0.0 1.2
Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54 55 56	HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI X'ELDEM-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	0 241 0 0 0 7 588 0 161 44 983 278 28 7 91 46 0	NER-NR 701 0 694 1000 1045 303 0 1458 175 358 0 33 47 98 0 13 0 WR-NR 999 0 1992 2361 0 0 0 63 WR-SR	11.7 0.0 6.0 0.0 0.0 0.0 0.0 10.3 0.0 14.2 2 0.5 0.0 1.2 0.4 0.0 34.9 0.0 0.0 0.0 11.9 0.0 0.0 11.9	0.0 16.7 0.0 17.0 34.9 17.1 8.8 0.0 32.3 0.0 2.7 0.0 0 0.1 0.8 0.0 0.0 130.5 22.1 0.0 0.9 38.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	11.7 -16.7 -0.0 -17.0 -34.9 -17.1 -8.8 10.3 -32.3 0.6 -2.7 14.2 2 0.4 -0.8 1.2 0.4 0.0 -95.6 -22.1 0.0 -29.9 -38.4 11.9 0.0 0.0 1.2