

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम)
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बी-9, क़ुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 21st Jan 2019

To,

- कार्यकारी निदेशक, पू.क्षे.भा .प्रे.के.,14 , गोल्फ क्लब रोड , कोलकाता 700033
 Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, Kolkata, 700033
- कार्यकारी निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए, शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016
 Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi 110016
- 3. कार्यकारी निदेशक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. कार्यकारी निदेशक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 20.01.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 20-जनवरी-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 20th January 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 21-Jan-19

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	42786	45785	37336	17262	2339	145508
Peak Shortage (MW)	775	0	83	232	42	1132
Energy Met (MU)	926	1108	872	350	42	3298
Hydro Gen (MU)	115	19	61	21	7	224
Wind Gen (MU)	12	20	50			82
Solar Gen (MU)*	20.12	20.71	71.67	0.83	0.02	113
Energy Shortage (MU)	18.0	0.0	0.0	0.7	0.3	19.0
Maximum Demand Met during the day	44000	54969	41436	18008	2403	155409
(MW) & time (from NLDC SCADA)	11:33	10:59	09:30	19:20	17:51	09:30

B. Frequency Profile (%)
Region
All India <49.7 49.7-49.8 49.8-49.9 49.9-50.05 > 50.05 0.033 0.00 0.14 25.13

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	5502	0	109.1	32.4	0.1	219	0.0
	Haryana	5940	0	118.6	74.4	0.1	160	0.0
NR	Rajasthan	12569	0	239.6	69.9	-0.3	456	0.0
	Delhi	4064	0	64.6	49.3	-1.8	102	0.0
	UP	13609	0	280.0	109.7	0.2	198	4.0
	Uttarakhand	2026	0	36.2	21.4	0.3	118	0.0
	HP	1491	0	25.3	21.0	-0.7	103	2.6
	J&K	2676	669	49.0	45.1	-1.2	449	11.3
	Chandigarh	210	0	3.4	3.7	-0.3	27	0.0
	Chhattisgarh	3793	0	84.7	38.6	2.8	193	0.0
	Gujarat	15056	0	321.9	78.8	1.0	735	0.0
	MP	13659	0	250.8	141.8	-0.9	608	0.0
WR	Maharashtra	19972	0	403.2	124.0	0.7	645	0.0
WK	Goa	498	0	12.0	9.2	2.1	55	0.0
	DD	294	0	6.8	6.6	0.1	32	0.0
	DNH	749	0	17.2	17.1	0.1	60	0.0
	Essar steel	637	0	11.9	11.3	0.6	302	0.0
	Andhra Pradesh	8102	0	163.4	67.7	0.0	478	0.0
	Telangana	8981	0	181.2	70.4	0.0	392	0.0
SR	Karnataka	10336	0	197.4	73.0	-0.4	578	0.0
JI.	Kerala	3017	0	58.8	49.6	0.5	164	0.0
	Tamil Nadu	12473	0	264.6	139.9	0.3	439	0.0
	Pondy	314	0	6.5	6.7	-0.2	51	0.0
	Bihar	4274	0	76.2	72.2	-1.1	460	0.0
	DVC	3134	0	65.4	-42.0	-0.6	396	0.0
ER	Jharkhand	999	232	23.2	16.0	0.6	169	0.7
LIV	Odisha	3720	0	73.3	25.0	0.5	267	0.0
	West Bengal	6138	0	111.0	12.3	-0.3	309	0.0
	Sikkim	84	0	1.1	1.8	-0.6	18	0.0
	Arunachal Pradesh	118	2	2.3	2.0	0.3	53	0.0
	Assam	1328	28	22,2	16.6	1.0	90	0.2
	Manipur	185	3	3.0	3.0	-0.1	18	0.0
NER	Meghalaya	331	0	6.4	5.6	-0.1	31	0.0
	Mizoram	93	2	1.8	1.7	0.0	5	0.0
	Nagaland	110	3	2.1	2.0	0.0	17	0.0
	Tripura	242	1	4.0	3.8	0.6	50	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	0.7	-6.8	-14.1
Day peak (MW)	74.2	-311.0	-820.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	167.2	-178.5	95.9	-84.0	-0.2	0.5
Actual(MU)	162.4	-178.3	92.6	-77.1	0.1	-0.3
O/D/U/D(MU)	-4.8	0.2	-3.2	6.9	0.2	-0.7

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	897	15227	6602	4165	292	27182
State Sector	470	15118	10680	4165	50	30483
Total	1367	30345	17282	8330	341	57665

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	538	1151	451	429	9	2578
Lignite	19	19	58	0	0	96
Hydro	115	19	61	21	7	224
Nuclear	24	31	32	0	0	87
Gas, Naptha & Diesel	28	41	18	0	30	117
RES (Wind, Solar, Biomass & Others)	61	42	161	1	0	265
Total	785	1303	781	451	45	3366
Share of RFS in total generation (%)	7 91	2 21	20.64	0.20	0.04	7 99

Share of RES in total generation (%)	7.81	3.21	20.64	0.20	0.04	7.88
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	25.53	7.08	32.47	4.95	15.43	17.11

H. Diversity Factor
All India Demand Diversity Factor
1.035
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}.$

		INTE	R-REGIO	ONAL EX	CHANGES	Date of I	Reporting :	21-Jan-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)
	Export of	ER (With NR)						1
1	7651-37	GAYA-VARANASI	D/C	0	661	0.0	9.6	-9.6
3	765kV	SASARAM-FATEHPUR GAYA-BALIA	S/C S/C	0	312 311	0.0	3.7 5.1	-3.7 -5.1
4		ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	HVDC	PUSAULI B/B	S/C	0	149	0.0	3.8	-3.8
6		PUSAULI-VARANASI	S/C	0	129	0.0	2.5	-2.5
7		PUSAULI -ALLAHABAD	S/C	0	83	0.0	1.1	-1.1
8	400 1 77	MUZAFFARPUR-GORAKHPUR	D/C	0	527	0.0	7.9	-7.9
9	400 KV	PATNA-BALIA	Q/C D/C	0	914 279	0.0	18.6 4.1	-18.6 -4.1
10		BIHARSHARIFF-BALIA MOTIHARI-GORAKHPUR	D/C D/C	0	408	0.0	7.5	-4.1
12	1	BIHARSHARIFF-VARANASI	D/C	33	229	0.0	2.3	-2.3
13	220 kV	PUSAULI-SAHUPURI	S/C	0	154	0.0	2.9	-2.9
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	132 KV	KARMANASA-SAHUPURI	S/C	41	0	0.7	0.0	0.7
17		KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
Import/E	Export of	ER (With WR)			ER-NR	1.3	69.1	-67.8
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1258	0	19.9	0.0	19.9
19	R 7	NEW RANCHI-DHARAMJAIGARH	D/C	109	502	0.0	2.7	-2.7
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	22	182	0.0	3.1	-3.1
21	100 11 1	RANCHI-SIPAT	D/C	114	117	0.0	0.5	-0.5
22	220 kV	BUDHIPADAR-RAIGARH	S/C	0	90	0.0	1.0	-1.0
23		BUDHIPADAR-KORBA	D/C	85	17 ER-WR	0.9 20.8	7.3	0.9 13.5
Import/E	Export of	ER (With SR)				2010	710	10.0
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1575.0	0.0	26.2	-26.2
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	638.0	0.0	16.0	-16.0
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1971.0	0.0	39.5	-39.5
27	400 kV	TALCHER-I/C	D/C	255.0	198.0	2.3	0.0	2.3
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0 0.0	0.0 81.7	0.0 -81.7
Import/E	Export of	ER (With NER)			ER-SK	0.0	81./	-01./
29	Ĺ	BINAGURI-BONGAIGAON	D/C	306	51	4.9	0.0	5
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	435	0	7.6	0.0	8
31	220 kV	ALIPURDUAR-SALAKATI	D/C	85	26	0.9	0.0	1
					ER-NER	13.5	0.0	13.5
					EK-IVEK		0.0	
	_	NER (With NR)	1	660				12.0
Import/E	_	NER (With NR) BISWANATH CHARIALI-AGRA	-	668	0	13.9	0.0	13.9
32	HVDC	BISWANATH CHARIALI-AGRA	-	668				13.9 13.9
32	HVDC		- D/C	668	0	13.9	0.0	
32	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR)	D/C D/C		0 NER-NR	13.9 13.9	0.0	13.9
32 Import/E 33	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA	-	0	0 NER-NR	13.9 13.9	0.0 0.0 23.5	-23.5
32 Import/E 33 34	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	D/C	0 241	0 NER-NR 1503 253	13.9 13.9 0.0 3.6	0.0 0.0 23.5 2.2	-23.5 1.4 -38.9 -29.3
32 Import/E 33 34 35 36 37	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 241 0 0	0 NER-NR 1503 253 1736 892 1136	13.9 13.9 0.0 3.6 0.0 0.0 0.0	0.0 0.0 23.5 2.2 38.9 29.3 15.8	-23.5 1.4 -38.9 -29.3 -15.8
32 Import/E 33 34 35 36 37 38	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) 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	0 241 0 0 0	0 NER-NR 1503 253 1736 892 1136 545	13.9 13.9 0.0 3.6 0.0 0.0 0.0	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5	-23.5 1.4 -38.9 -29.3 -15.8 -18.5
32 Import/E 33 34 35 36 37 38 39	HVDC 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	D/C D/C D/C D/C D/C S/C	0 241 0 0 0 0 0	0 NER-NR 1503 253 1736 892 1136 545	13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0	-23.5 1.4 -38.9 -29.3 -15.8 -18.5
32 Import/E 33 34 35 36 37 38 39 40	HVDC 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	D/C D/C D/C D/C D/C S/C S/C	0 241 0 0 0 0 0 0 670	0 NER-NR 1503 253 1736 892 1136 545 0 1077	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6	-23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6
32 Import/E 33 34 35 36 37 38 39 40 41	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	D/C D/C D/C D/C D/C S/C S/C S/C	0 241 0 0 0 0 0 670 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0	23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9
32 Import/E 33 34 35 36 37 38 39 40 41 42	HVDC 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 0 0 670 0 146 129	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 0.9	23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 2.3	-23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3
32 Import/E 33 34 35 36 37 38 39 40 41	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	D/C D/C D/C D/C D/C S/C S/C S/C	0 241 0 0 0 0 0 670 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0	23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9
32 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 0 0 670 0 146 129 984	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 10.9 0.0 0.9 0.0 20.5	23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 2.3 0.0	-23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5
32 Import/E 33 34 35 36 37 38 39 40 41 42 43 44	HVDC Export of HVDC 765 kV 400 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 0 0 670 0 146 129 984	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 10.9 0.0 0.9 0.0 20.5	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 2.3 0.0	-23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5
32 Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45	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 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 0 670 0 146 129 984 187 28	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 10.9 0.0 0.9 0.0 20.5 0	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 2.3 0.0 0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7
32 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 ZERDA-KANKROLI 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 0 0 670 0 146 129 984 187 28	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 10.9 0.0 0.0 20.5 0 0.8 0.0	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 2.3 0.0 0 0.1 0.9	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9
32 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-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 241 0 0 0 0 67 0 146 129 984 187 28 4	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 10.9 0.0 0.9 0.0 20.5 0 0.8 0.0 0.9	0.0 0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.0 0.1 0.9 0.0 0.0 0.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9 0.0
32 Import/E 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	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 0 670 0 146 129 984 187 28 4 128 72	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3	13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 10.9 0.0 0.0 20.5 0 0.8 0.0	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.2 0.0 0.1 0.9 0.0 0.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9
32 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 220 kV 132kV Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR IABALPUR-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 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3 0 WR-NR	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.0 0.1 0.9 0.0 0.0 154.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9 0.0 -114.1
32 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 Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR IABALPUR-ORAI SATNA-ORAI 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	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 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3 0 WR-NR	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 154.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.0 -114.1
32 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 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 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 WR-NR	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 154.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.0 -114.1 -19.1 0.0 -23.2
32 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 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	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 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 WR-NR 1002 0 2019	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 0.0 154.0 19.1 0.0 23.2 25.6	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9 -114.1 -19.1 0.0 -23.2 -25.6
32 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	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-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 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 WR-NR 1002 0 2019 1981	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9 0.0 0.0 0.0 14.3	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 0.0 22.6 0.0 0.1 0.9 0.0 0.0 154.0 19.1 0.0 23.2 25.6 0.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.0 -114.1 -19.1 0.0 -23.2 -25.6 14.3
32 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 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 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 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3 0 WR-NR 1002 0 2019 1981 0 0	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9 0.0 0.0 0.0 1.9 0.0 1.9 0.0 0.0 1.9 0.0 1.9 0.0 0.0 1.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 154.0 19.1 0.0 23.2 25.6 0.0 0.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.7 -0.9 1.9 0.0 -114.1 -19.1 0.0 -23.2 -25.6 14.3 0.0
32 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 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 S/C S/C S	0 241 0 0 0 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 WR-NR 1002 0 2019 1981	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9	0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 0.0 22.6 0.0 0.1 0.9 0.0 0.0 154.0 19.1 0.0 23.2 25.6 0.0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9 -114.1 -19.1 0.0 -23.2 -25.6 14.3 0.0 -0.2
32 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 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 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 0 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3 0 WR-NR 1002 0 2019 1981 0 0 52	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9 0.0 0.0 0.0 1.9 0.0 1.9 0.0 0.0 1.9 0.0 1.9 0.0 0.0 1.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 154.0 19.1 0.0 23.2 25.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.7 -0.9 1.9 0.0 -114.1 -19.1 0.0 -23.2 -25.6 14.3 0.0
32 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 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 241 0 0 0 0 0 670 0 146 129 984 187 28 4 128 72 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3 0 WR-NR 1002 0 2019 1981 0 0 52 48 WR-SR	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 0.0 154.0 19.1 0.0 23.2 25.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9 -114.1 -19.1 0.0 -23.2 -25.6 14.3 0.0 -0.2 0.6
32 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 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 241 0 0 0 0 0 0 670 0 146 129 984 187 28 4 128 72 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 NER-NR 1503 253 1736 892 1136 545 0 1077 67 251 0 125 15 109 0 3 0 WR-NR 1002 0 2019 1981 0 0 52 48 WR-SR	13.9 13.9 13.9 13.9 0.0 3.6 0.0 0.0 0.0 0.0 10.9 0.0 20.5 0 0.8 0.0 1.9 0.9 0.0 39.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 23.5 2.2 38.9 29.3 15.8 18.5 0.0 22.6 0.0 0.1 0.9 0.0 0.0 0.0 154.0 19.1 0.0 23.2 25.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	13.9 -23.5 1.4 -38.9 -29.3 -15.8 -18.5 10.9 -22.6 0.9 -2.3 20.5 0 0.7 -0.9 1.9 0.9 -114.1 -19.1 0.0 -23.2 -25.6 14.3 0.0 -0.2 0.6