

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: 5th Jan 2020

To,

- 1. कार्यकारी निदेशक, पू.क्षे.भा.प्रे.के.,14, गोल्फ क्लब रोड, कोलकाता ७०००३३ 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. 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 04.01.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 04-जनवरी-2020 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 04th Jan 2020, 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 5-Jan-20

A. Power Supply Position at All India and Regional level

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	48126	46045	39977	17714	2367	154229
Peak Shortage (MW)	609	0	0	0	26	635
Energy Met (MU)	985	1075	952	337	40	3388
Hydro Gen (MU)	116	44	94	36	9	299
Wind Gen (MU)	3	36	14			53
Solar Gen (MU)*	26.93	18.80	75.11	1.13	0.03	122
Energy Shortage (MU)	12.8	0.0	0.0	0.0	1.3	14.1
Maximum Demand Met during the day (MW) & time	50126	52336	45248	17930	2428	163488
(from NLDC SCADA)	09:54	10:40	08:48	19:02	17:32	09:52

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	0.49	6.69	7.18	78.41	14.41

C. Power Supply Position in States

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	6159	0	118.0	59.6	-2.0	8	0.0
	Haryana	6900	0	132.1	81.7	-0.1	184	0.0
	Rajasthan	13658	0	241.9	79.8	-1.6	288	0.0
	Delhi	4215	0	71.1	60.7	-0.7	255	0.0
NR	UP	15743	0	294.2	121.0	-1.7	532	0.0
	Uttarakhand	2102	0	40.1	22.6	0.7	151	0.0
	HP	1635	7	30.1	24.1	-0.6	90	0.1
	J&K(UT) and Ladakh(UT)	2934	734	53.3	45.6	2.3	620	12.7
	Chandigarh	246	0	4.0	4.0	0.1	28	0.0
	Chhattisgarh	3414	0	73.1	19.1	-0.3	578	0.0
	Gujarat	15441	0	319.4	83.3	0.8	583	0.0
	MP	12714	0	230.3	116.7	-4.5	471	0.0
WR	Maharashtra	20301	0	408.1	129.5	-3.2	666	0.0
WK	Goa	491	0	12.7	9.8	2.3	40	0.0
	DD	317	0	7.2	6.7	0.5	41	0.0
	DNH	786	0	18.3	18.4	-0.1	39	0.0
	Essar steel	307	0	5.7	5.4	0.3	306	0.0
	Andhra Pradesh	8004	0	166.4	67.4	-0.6	429	0.0
	Telangana	9618	0	191.9	99.8	1.0	530	0.0
SR	Karnataka	12205	0	217.4	57.5	0.0	612	0.0
3N	Kerala	3654	0	74.9	57.6	0.8	228	0.0
	Tamil Nadu	14397	0	294.2	171.0	0.8	485	0.0
	Pondy	351	0	7.0	7.4	-0.4	40	0.0
	Bihar	4258	0	75.3	74.9	-0.9	250	0.0
	DVC	3043	0	63.2	-30.7	-0.3	200	0.0
ER	Jharkhand	1232	0	23.9	19.1	-0.7	100	0.0
EK	Odisha	3534	0	64.0	0.0	-0.5	200	0.0
	West Bengal	5978	0	109.3	24.1	-0.3	200	0.0
	Sikkim	123	0	1.5	1.6	-0.1	50	0.0
	Arunachal Pradesh	123	1	2.2	2.1	0.0	32	0.0
	Assam	1343	17	21.4	18.2	-0.4	130	0.7
	Manipur	215	2	2.5	2.9	-0.4	48	0.0
NER	Meghalaya	368	0	6.1	3.1	0.6	68	0.5
	Mizoram	106	1	1.8	1.4	0.0	18	0.0
	Nagaland	128	2	2.3	2.0	0.1	16	0.0
	Tripura	218	0	3.3	1.4	-0.4	48	0.0

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

	,		
	Bhutan	Nepal	Bangladesh
Actual(MU)	5.0	-7.9	-9.1
Day peak (MW)	561.6	-451.0	-756.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	239.1	-264.9	115.8	-89.3	-0.8	-0.1
Actual(MU)	224.3	-279.7	136.9	-84.2	-0.5	-3.2
O/D/U/D(MU)	-14.8	-14.9	21.1	5.2	0.3	-3.1

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4627	15883	7472	2510	732	31223
State Sector	11789	16996	8600	5050	11	42446
Total	16416	32878	16072	7560	743	73669

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	522	1187	537	421	13	2680
Lignite	25	14	43	0	0	81
Hydro	116	44	94	36	9	299
Nuclear	30	27	44	0	0	101
Gas, Naptha & Diesel	28	38	18	0	23	107
RES (Wind, Solar, Biomass & Others)	58	63	89	1	0	211
Total	778	1373	824	458	45	3479

Share of RES in total generation (%)	7.48	4.57	10.78	0.25	0.07	6.07
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	26.21	9.76	27.54	8.16	19.07	17.56

H. All India Demand Diversity Factor

III III III III Belliulu Bireisti I uctor	
Based on Regional Max Demands	1.028
Based on State Max Demands	1.078

Diversity factor = Sum of regional or state-wise maximum demands / All India maximum demand

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

		IN	TER-REGI	ONAL EXCH	ANGES	Date of I	Reporting :	5-Jan-20
								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)						
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	501 297	0.0	7.1	-11.9 -7.1
1		GAYA-VARANASI	D/C	18	841	0.0	9.8	-9.8
2	765kV	SASARAM-FATEHPUR	S/C	68	363	0.0	3.5	-3.5
3		GAYA-BALIA	S/C	0	415	0.0	6.3	-6.3
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	241 141	0.0	4.7 2.9	-4.7 -2.9
8		MUZAFFARPUR-GORAKHPUR	D/C	70	697	0.0	5.0	-5.0
9	400 kV	PATNA-BALIA	Q/C	0	867	0.0	13.3	-13.3
10		BIHARSHARIFF-BALIA	D/C	26	308	0.0	2.9	-2.9
11		MOTIHARI-GORAKHPUR	D/C	0	5	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	155 0	260 96	0.0	1.2	-0.4 -1.2
14	220 11 1	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.7	0.0	0.7
16	132 KV	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17		KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
Import/E	xport of	ER (With WR)			ER-NR	0.7	49.9	-49.3
-	Aport Of		0/0	1500	0	20.0	0.0	20.0
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1568	0	20.9	0.0	20.9
19 20	1	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	562 134	71 76	6.5 0.4	0.0	6.5 0.4
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	298	101	2.7	0.0	2.7
22	400 KV	RANCHI-SIPAT	D/C	239	0	3.0	0.0	3.0
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	91	0.0	1.2	-1.2
24		BUDHIPADAR-KORBA	D/C	185	0 ER-WR	3.1 36.5	0.0	3.1 35.3
Import/E	Export of	ER (With SR)			ER-WK	30.3	1,2	35.3
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	666.0	0.0	15.2	-15.2
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2462.0	0.0	49.6	-49.6
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1934.0	0.0	34.5	-34.5
28	400 kV	TALCHER-I/C	D/C	0.0	1376.0	0.0	9.0	-9.0
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 99.3	0.0 -99.3
Import/E	Export of	ER (With NER)			DA DA	0.0	77.5	-55.5
30	400 kV	BINAGURI-BONGAIGAON	D/C	0	239	0.0	2.6	-3
31	400 KV	ALIPURDUAR-BONGAIGAON	D/C	235	5	3.0	0.0	3
32	220 kV	ALIPURDUAR-SALAKATI	D/C	26	44	0.0	0.2	0
Import/F					ER-NER	3.0	2.7	0.2
mpor or	vnort of	NED (With ND)						
33	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA	- 1	0	0	0.0	0.0	0.0
•			-	0	0 NER-NR		0.0	0.0
33	HVDC		- 1	0				
33 Import/E 34	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA	- D/C	0	NER-NR 2353	0.0	0.0 34.0	-34.0
33 Import/E 34 35	HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	D/C	0 360	2353 0	0.0	34.0 0.0	-34.0 8.8
33 Import/E 34 35 36	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG	D/C D/C	0 360 0	2353 0 1924	0.0 0.0 8.8 0.0	34.0 0.0 44.7	-34.0 8.8 -44.7
33 Import/E 34 35	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	D/C	0 360	2353 0	0.0	34.0 0.0	-34.0 8.8
33 Import/E 34 35 36 37	HVDC 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	0 360 0	NER-NR 2353 0 1924 2538	0.0 8.8 0.0 0.0	34.0 0.0 44.7 44.6	-34.0 8.8 -44.7 -44.6
33 Import/E 34 35 36 37 38 39 40	HVDC Export of	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	0 360 0 0 0 0	2353 0 1924 2538 1847 908 0	0.0 8.8 0.0 0.0 0.0 0.0 0.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0	-34.0 8.8 -44.7 -44.6 -20.8 -30.0
33 Import/E 34 35 36 37 38 39 40 41	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	0 360 0 0 0 0 0 0	2353 0 1924 2538 1847 908 0 1435	0.0 8.8 0.0 0.0 0.0 0.0 10.1	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4
33 Import/E 34 35 36 37 38 39 40 41 42	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 CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C S/C S/C D/C	0 360 0 0 0 0 0 640 0 392	2353 0 1924 2538 1847 908 0 1435 582	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1
33 Import/E 34 35 36 37 38 39 40 41 42 43	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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI	D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 360 0 0 0 0 0 640 0 392 159	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0
33 Import/E 34 35 36 37 38 39 40 41 42	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 CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C S/C S/C D/C	0 360 0 0 0 0 0 640 0 392	2353 0 1924 2538 1847 908 0 1435 582	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1
33 Import/E 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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C	0 360 0 0 0 0 0 640 0 392 159	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359	0.0 8.8 0.0 0.0 0.0 0.0 10.1 1.7 1.0 0.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5
33 Import/E 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 V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR	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	0 360 0 0 0 0 640 0 392 159 90 972 107	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47	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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK	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	0 360 0 0 0 0 640 0 392 159 90 972 107	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2
33 Import/E 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 V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-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	0 360 0 0 0 0 640 0 392 159 90 972 107 12	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 -22.4 -1 -0.1 -1.2 1.4
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 21	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2 0.0 0.0	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3
33 Import/E 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 V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-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	0 360 0 0 0 0 640 0 392 159 90 972 107 12	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 -22.4 -1 -0.1 -1.2 1.4
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 21	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2 0.0 0.0	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52	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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 WR-NR	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0	0.0 34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 1 0.4 1.2 0.0 0.0 211.7	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	HVDC Export of HVDC 765 kV 400 kV 132kV Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 UR-NR	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0	0.0 34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 1 0.4 1.2 0.0 0.0 211.7	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	HVDC Export of HVDC 765 kV 400 kV 132kV Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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 D/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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 21 0 WR-NR	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2 0.0 0.0 211.7	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV 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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 211 0 WR-NR	0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2 0.0 0.0 211.7	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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 D/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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 21 0 WR-NR	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2 0.0 0.0 211.7	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV 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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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 S/C S	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 21 0 WR-NR	0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0	34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 2.5 0.0 1 0.4 1.2 0.0 0.0 211.7 12.2 0.0 30.9 43.4 0.0	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	HVDC Export of HVDC - 765 kV - 400 kV - 132kV 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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WARIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C 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 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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 WR-NR 518 0 2181 2427 74	0.0 8.8 0.0 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 1 0.4 1.2 0.0 0.0 211.7	-34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7 -12.2 0.0 -30.9 -43.4 6.0 0.0
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	HVDC Export of HVDC - 765 kV - 400 kV - 132kV 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 CHITTORGARH-BANASKANTHA ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-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 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 WR-NR 518 0 2181 2427 74 0 0	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 1 0.4 1.2 0.0 0.0 211.7	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7 -12.2 0.0 -30.9 -43.4 6.0 0.0 0.0
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	HVDC Export of HVDC - 765 kV - 400 kV - 132kV 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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RICHUR WARDHA-NIZAMBAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI XELDEM-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 D/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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 WR-NR 518 0 2181 2427 74 0 0 75 WR-SR	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0 0.0 0.0 0.0 0.0 0.0 1.4	0.0 34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 1 0.4 1.2 0.0 0.0 211.7	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7 -12.2 0.0 -30.9 -43.4 -6.0 0.0 0.0 1.4
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	HVDC Export of HVDC - 765 kV - 400 kV - 132kV 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 CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RICHUR WARDHA-NIZAMBAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI XELDEM-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 D/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	0 360 0 0 0 0 640 0 392 159 90 972 107 12 11 91 39 0	NER-NR 2353 0 1924 2538 1847 908 0 1435 582 108 359 0 385 92 126 0 WR-NR 518 0 2181 2427 74 0 0 75 WR-SR	0.0 0.0 8.8 0.0 0.0 0.0 10.1 0.0 1.7 1.0 0.0 22.4 0 0.3 0.0 1.4 0.3 0.0 46.0 0.0 0.0 0.0 0.0 0.0 1.4	0.0 34.0 0.0 44.7 44.6 20.8 30.0 0.0 29.4 2.7 0.0 1 0.4 1.2 0.0 0.0 211.7	0.0 -34.0 8.8 -44.7 -44.6 -20.8 -30.0 10.1 -29.4 -1.1 1.0 -2.5 22.4 -1 -0.1 -1.2 1.4 0.3 0.0 -165.7 -12.2 0.0 -30.9 -43.4 -6.0 0.0 0.0 1.4