

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: 01st 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 31.12.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 31-दिसम्बर-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 31st Dec 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 1-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)	50453	46564	38605	18764	2426	156812
Peak Shortage (MW)	657	0	0	0	45	702
Energy Met (MU)	1021	1113	952	352	42	3480
Hydro Gen (MU)	118	41	103	33	9	303
Wind Gen (MU)	23	50	29			102
Solar Gen (MU)*	15.12	19.40	68.46	1.56	0.05	105
Energy Shortage (MU)	14.1	0.5	0.0	0.0	0.7	15.3
Maximum Demand Met during the day (MW) & time	51465	55086	46002	18823	2457	169360
(from NLDC SCADA)	10:17	09:43	09:19	18:16	17:24	09:43

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	0.053	0.00	1.98	10.72	12.70	73.23	14.07

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	6203	0	121.9	55.2	-1.8	97	0.0
	Haryana	6808	0	133.5	77.5	-0.7	174	0.0
	Rajasthan	13128	386	240.2	67.1	0.4	510	0.0
NR	Delhi	5149	0	85.5	73.1	0.3	285	0.0
	UP	16894	310	311.8	143.0	0.2	491	1.1
	Uttarakhand	2088	0	39.3	26.3	-0.2	133	0.1
	HP	1692	0	30.1	23.7	-0.3	134	0.0
	J&K(UT) and Ladakh(UT)	2755	689	54.1	44.1	4.7	552	12.8
	Chandigarh	306	0	4.9	4.7	0.2	46	0.0
	Chhattisgarh	3767	0	78.8	27.6	-1.0	435	0.1
	Gujarat	15676	0	316.7	68.5	-2.5	538	0.0
	MP	14498	0	253.6	122.8	-3.9	320	0.0
WR	Maharashtra	21162	0	419.6	127.0	-1.6	468	0.0
WK	Goa	508	25	13.7	11.3	1.9	38	0.4
	DD	307	0	6.9	6.4	0.5	46	0.0
	DNH	773	0	18.2	18.3	-0.1	30	0.0
	Essar steel	318	0	5.1	5.6	-0.5	262	0.0
	Andhra Pradesh	8561	0	170.1	66.3	-0.5	367	0.0
	Telangana	10347	0	204.5	100.3	-0.6	399	0.0
SR	Karnataka	11660	0	212,2	59.4	0.6	819	0.0
311	Kerala	3716	0	73.6	56.1	1.0	203	0.0
	Tamil Nadu	13703	0	285.2	165.9	1.6	530	0.0
	Pondy	349	0	6.5	7.1	-0.6	16	0.0
	Bihar	4656	0	82.0	81.2	-0.7	255	0.0
	DVC	3090	0	64.3	-31.5	-0.4	200	0.0
ER	Jharkhand	1391	0	25.6	17.0	-0.5	180	0.0
LIN	Odisha	3697	0	67.9	5.3	0.1	230	0.0
	West Bengal	6255	0	110.2	28.2	-0.3	375	0.0
	Sikkim	129	0	1.9	1.7	0.2	40	0.0
	Arunachal Pradesh	109	1	2.2	1.9	0.2	34	0.0
	Assam	1358	28	23.4	17.3	1.3	90	0.2
	Manipur	211	2	2.4	3.1	-0.7	23	0.0
NER	Meghalaya	363	0	6.5	3.0	0.6	69	0.5
	Mizoram	102	0	1.8	1.4	0.3	14	0.0
	Nagaland	127	1	2,2	2.3	-0.2	16	0.0
	Tripura	231	0	3.6	1.6	-0.2	28	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	4.0	-9.8	-9.7
Day peak (MW)	523.8	-518.6	-759.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	252.5	-278.0	114.8	-87.6	-1.6	0.0
Actual(MU)	265.7	-303.4	134.6	-96.5	-0.6	-0.3
O/D/U/D(MU)	13.2	-25.4	19.8	-8.9	1.0	-0.4

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4973	15813	7752	2310	597	31444
State Sector	13714	15458	9370	5040	11	43593
Total	18687	31270	17122	7350	608	75037

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	521	1221	475	445	15	2678
Lignite	19	13	50	0	0	81
Hydro	118	41	103	33	9	303
Nuclear	29	34	44	0	0	106
Gas, Naptha & Diesel	27	40	17	0	23	108
RES (Wind, Solar, Biomass & Others)	68	81	139	2	0	290
Total	782	1430	828	480	47	3568

Share of RES in total generation (%)	8.67	5.68	16.81	0.34	0.11	8.13
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	27.44	10.90	34.51	7.22	18.67	19.61

H. All India Demand Diversity Factor

III III III III Belliulu Bireisti I uctoi	
Based on Regional Max Demands	1.026
Based on State Max Demands	1.075

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 l	Reporting :	1-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)	1		1			
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	299	0.0	7.1	0.0 -7.1
1		GAYA-VARANASI	D/C	0	1061	0.0	12.1	-12.1
2	765kV	SASARAM-FATEHPUR	S/C	28	448	0.0	5.1	-5.1
3		GAYA-BALIA	S/C	0	601	0.0	8.8	-8.8
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	217 194	0.0	3.9	-3.9 -3.1
8	1	MUZAFFARPUR-GORAKHPUR	D/C	0	887	0.0	10.0	-10.0
9	400 kV	PATNA-BALIA	Q/C	0	983	0.0	17.1	-17.1
10		BIHARSHARIFF-BALIA	D/C	0	437	0.0	6.5	-6.5
11		MOTIHARI-GORAKHPUR	D/C	0	4	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	50 3	448 103	0.0	4.3 1.1	-4.3 -1.1
14	220 KV	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15		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	0	0	0.0	0.0	0.0
T	· 6	ED (With WD)			ER-NR	0.6	72.0	-71.4
_	xport of	ER (With WR)						
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1003	316	10.1	0.0	10.1
19 20	- 705 117	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	705 102	75 149	5.7 0.0	0.0	5.7 -0.8
21	400:	JHARSUGUDA-RAIGARH	Q/C	255	232	0.0	0.0	0.4
22	400 kV	RANCHI-SIPAT	D/C	235	50	1.2	0.0	1.2
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	105	0.0	1.3	-1.3
24		BUDHIPADAR-KORBA	D/C	186	0 ER-WR	2.7	0.0	2.7
Import/F	Export of	ER (With SR)			ER-WK	20.2	2.2	18.0
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	662.0	0.0	11.4	-11.4
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2467.0	0.0	46.2	-46.2
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2032.0	0.0	38.2	-38.2
28	400 kV	TALCHER-I/C	D/C	319.0	880.0	0.0	5.6	-5.6
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 95.9	0.0 -95.9
Import/E	Export of	ER (With NER)			ER-SR	0.0	95.9	-95.9
30	Ĺ	BINAGURI-BONGAIGAON	D/C	271	0	4.8	0.0	5
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	356	0	5.9	0.0	6
32								
32	220 kV	ALIPURDUAR-SALAKATI	D/C	72	5	1.0	0.0	1
			D/C	72	5 ER-NER	1.0 11.6	0.0	
Import/E	Export of	NER (With NR)	D/C		ER-NER	11.6	0.0	1 11.6
			D/C	490	ER-NER	11.6	0.0	1 11.6
Import/E	Export of HVDC	NER (With NR)	D/C		ER-NER	11.6	0.0	1 11.6
Import/E	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA	D/C - D/C		ER-NER	11.6	0.0	1 11.6
33 Import/E 34 35	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	- D/C D/C	490 0 447	0 NER-NR 2805 488	11.6 11.5 11.5 0.0 5.9	0.0 0.0 0.0 44.5 2.7	1 11.6 11.5 11.5 11.5 12.5 3.2
33 Import/E 34 35 36	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C D/C	490 0 447 0	0 NER-NR 2805 488 2379	11.6 11.5 11.5 0.0 5.9 0.0	0.0 0.0 0.0 44.5 2.7 44.9	1 11.6 11.5 11.5 11.5 12.5 12.5 12.5 12.5 12.5
Import/E 33 Import/E 34 35 36 37	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA	D/C D/C D/C D/C	0 447 0 0	2805 488 2379 2856	11.6 11.5 11.5 0.0 5.9 0.0 0.0	0.0 0.0 0.0 44.5 2.7 44.9 49.6	1 11.6 11.5 11.5 11.5 3.2 -44.9 -49.6
33 Import/E 34 35 36	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C D/C	490 0 447 0	2805 488 2379 2856 1748	11.6 11.5 11.5 0.0 5.9 0.0	0.0 0.0 0.0 44.5 2.7 44.9	1 11.6 11.5 11.5 11.5 12.5 13.2 -44.9
Import/E 33 Import/E 34 35 36 37 38	Export of HVDC	NER (With NR) 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 D/C D/C	0 447 0 0 0	2805 488 2379 2856	11.5 11.5 11.5 0.0 5.9 0.0 0.0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9	1 11.6 11.5 11.5 11.5 12.5 14.5 3.2 44.9 49.6 -23.9
Import/E 33 Import/E 34 35 36 37 38 39 40 41	Export of HVDC HVDC	NER (With NR) 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 D/C S/C S/C	490 0 447 0 0 0 0 0 742 0	2805 488 2379 2856 1748 1011 0	11.6 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 8.2 0.0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2	1 11.6 11.5 11.5 11.5 11.5 11.5 12.5 12.5 12.5
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42	Export of HVDC HVDC	NER (With NR) 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 D/C S/C S/C D/C	490 0 447 0 0 0 0 0 742 0 188	2805 488 2379 2856 1748 1011 0 1528	11.6 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 8.2 0.0 0.0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 D/C D/C S/C S/C S/C S/C	490 0 447 0 0 0 0 0 742 0 188 131	2805 488 2379 2856 1748 1011 0 1528 975	11.6 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 8.2 0.0 0.0 0.0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44	Export of HVDC HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 D/C D/C D/C D/C S/C S/C S/C S/C S/C	490 0 447 0 0 0 0 742 0 188 131 212	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347	11.6 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 D/C D/C S/C S/C S/C S/C	490 0 447 0 0 0 0 0 742 0 188 131	2805 488 2379 2856 1748 1011 0 1528 975	11.6 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 8.2 0.0 0.0 0.0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44	Export of HVDC Export of HVDC - 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND	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	490 0 447 0 0 0 0 742 0 188 131 212 967	2805 488 2379 2856 1748 1011 0 1528 975 170 347 0	11.6 11.5 11.5 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45	Export of HVDC Export of HVDC - 765 kV	NER (With NR) 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	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	490 0 447 0 0 0 0 0 742 0 188 131 212 967 88	2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412	11.6 11.5 11.5 11.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 3	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Export of HVDC Export of HVDC - 765 kV	NER (With NR) 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6	2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0	11.6 11.5 11.5 11.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 3 0.4 1.2	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	Export of HVDC Export of HVDC - 765 kV - 400 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHISMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	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 S/C S	0 447 0 0 0 0 742 0 188 131 212 967 88 20 6	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 3 0.0 0.0 0.0 0.0 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Export of HVDC Export of HVDC - 765 kV	NER (With NR) 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	Export of HVDC Export of HVDC - 765 kV - 400 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHISMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	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 S/C S	0 447 0 0 0 0 742 0 188 131 212 967 88 20 6	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 3 0.0 0.0 0.0 0.0 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	Export of HVDC Export of HVDC 765 kV 400 kV 132kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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 S/C S	0 447 0 0 0 0 742 0 188 131 212 967 88 20 6	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 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	Export of HVDC Export of HVDC - 765 kV - 400 kV	NER (With NR) 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 BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR)	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 S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0	0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR	11.6 11.5 11.5 11.5 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.4 1.2 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 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	Export of HVDC Export of HVDC 765 kV 400 kV 132kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHISMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAI 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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0	0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR	11.6 11.5 11.5 11.5 11.5 0.0 0.0 0.0	0.0 0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.1 1.2 0.0 0.1 1.2 0.0 1.1 0.0 243.9 1.1 0.0 243.9 1.1 0.0 243.9 1.1 0.0 243.9 1.1 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 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	Export of HVDC Export of HVDC 765 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -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 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 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	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0 0 0 0 289	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR 518 0 2125 2713	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.3 0.0 38.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 1.2 0.0 3 0.4 1.2 0.0 0.1 0.0 243.9 11.1 0.0 32.8 44.2	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 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	Export of HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B'B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJAL-PUR 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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0 0 0 0 289	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR 518 0 2125 2713 0	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 0.0 0.1 0.0 0.1 0.0 243.9 1.1 0.0 3.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 -44.5 3.2 -44.9 -49.6 -23.9 -35.0 8.2 -31.2 -6.6 0.4 -1.2 22.2 -3 -0.1 -1.2 1.3 0.2 0.0 -205.5
Import/E 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	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANDUR MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L SILERU 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 S/C S	0 447 0 0 0 0 0 742 0 188 131 212 967 88 20 6 6 99 37 0	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR 518 0 2125 2713 0 0	11.6 11.5 11.5 11.5 11.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 0.0 3 0.4 1.2 0.0 0.1 0.0 243.9 1.1 0.0 243.9 1.1 0.0 243.9 1.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WALIANIANA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANDRASH BHANDRASH BHANDRASH BHANDRASH SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI	D/C 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 S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0 0 0 0 289	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR 518 0 2125 2713 0	11.6 11.5 11.5 11.5 0.0 5.9 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 0.0 0.1 0.0 0.1 0.0 243.9 1.1 0.0 3.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.0	1 11.6 11.5 11.5 11.5 11.5 11.5 -44.5 3.2 -44.9 -49.6 -23.9 -35.0 8.2 -31.2 -6.6 0.4 -1.2 22.2 -3 -0.1 -1.2 1.3 0.2 0.0 -205.5
Import/E 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	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANDUR MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L SILERU 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0 0 289 0 771 0 2	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 41 0 WR-NR 518 0 2125 2713 0 0 0	11.6 11.5 11.5 11.5 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.1 0.0 243.9 11.1 0.0 3243.9 44.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 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	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -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-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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 S/C S	490 0 447 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0 0 289 0 771 0 2	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 411 0 WR-NR 518 0 2125 2713 0 0 0 78 WR-SR	11.6 11.5 11.5 11.5 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.1 0.0 243.9 11.1 0.0 243.9 11.1 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.
Import/E 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	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC 765 kV	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -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-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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 S/C S	490 0 447 0 0 0 0 0 0 742 0 188 131 212 967 88 20 6 99 37 0 0 0 289 0 771 0 2	ER-NER 0 NER-NR 2805 488 2379 2856 1748 1011 0 1528 975 170 347 0 412 87 120 0 411 0 WR-NR 518 0 2125 2713 0 0 0 78 WR-SR	11.6 11.5 11.5 11.5 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 44.5 2.7 44.9 49.6 23.9 35.0 0.0 31.2 6.6 0.0 1.2 0.0 0.1 0.0 243.9 11.1 0.0 243.9 11.1 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 11.6 11.5 11.5 11.5 11.5 11.5 11.5 11.