

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम)
B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016
बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 28th Feb 2020

To,

- 1. कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033 Executive Director, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata, 700033
- 2. कार्यकारी निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए , शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi – 110016
- 3. कार्यकारी निदेशक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. 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 27.02.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 27-फरवरी-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 27th Feb 2020, is available at the NLDC website.

धन्यवाद,

Report for previous day

A. Power Supply Position at All India and Regional level

Date of Reporting 28-Feb-20

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900	43687	50372	45339	15995	2378	157771
hrs; from RLDCs)						
Peak Shortage (MW)	555	0	0	0	30	585
Energy Met (MU)	921	1209	1117	344	39	3630
Hydro Gen (MU)	135	48	109	28	7	327
Wind Gen (MU)	18	25	44			87
Solar Gen (MU)*	34.69	27.00	92.12	1.44	0.02	155
Energy Shortage (MU)	12.4	0.0	0.0	0.0	1.8	14.1
Maximum Demand Met during the day (MW) & time	46604	57867	52586	17619	2401	173004
(from NLDC SCADA)	08:51	10:48	09:46	19:50	18:23	09:26

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	0.032	0.00	0.35	4.17	4.51	77.33	18.16

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	6083	0	121.8	79.0	-2.1	7	0.0
	Haryana	6063	0	123.0	89.1	0.0	103	0.0
	Rajasthan	13915	0	245.7	75.6	-2.2	239	0.0
	Delhi	3461	0	62.5	46.4	-0.3	268	0.0
NR	UP	13967	0	250.6	111.7	-0.8	771	0.9
	Uttarakhand	1901	0	36.0	16.8	0.7	163	0.0
	HP	1631	0	29.1	22,2	-0.3	119	0.0
	J&K(UT) and Ladakh(UT)	2222	555	48.8	40.3	-0.9	229	11.5
	Chandigarh	219	0	3.5	3.3	0.1	16	0.0
	Chhattisgarh	3679	0	79.2	32.6	-1.9	234	0.0
	Gujarat	15921	0	344.5	98.5	4.2	512	0.0
	MP	13222	0	250.6	125.8	-2.5	324	0.0
WR	Maharashtra	23759	0	493.4	143.6	-2.2	388	0.0
WK	Goa	519	0	10.9	10.5	-0.2	37	0.0
	DD	314	0	7.2	6.8	0.4	32	0.0
	DNH	815	0	19.1	19.0	0.1	87	0.0
	Essar steel	729	0	3.9	4.8	-0.9	218	0.0
	Andhra Pradesh	9954	0	199.0	78.6	0.8	602	0.0
	Telangana	12810	0	249.7	134.1	-0.4	632	0.0
SP	Karnataka	12751	0	252.0	80.9	-0.7	621	0.0
JK.	Kerala	3964	0	80.6	62.3	1.3	169	0.0
	Tamil Nadu	14784	0	328.3	171.5	0.9	585	0.0
Telangana 12810 SR Karnataka 12751 Kerala 3964 Tamil Nadu 14784 Pondy 377	0	7.9	8.1	-0.2	28	0.0		
	Bihar	12751 0 252.0 80.9 -0.7 62 3964 0 80.6 62.3 1.3 16 14784 0 328.3 171.5 0.9 55 377 0 7.9 8.1 -0.2 2 3912 0 69.0 66.6 -0.4 36	363	0.0				
	DVC	3007	0	64.4	-36.8	-0.3	186	0.0
ER	Jharkhand	1268	0	22.3	13.0	0.6	156	0.0
LIX	Odisha	3559	0	67.5	2.8	-0.6	194	0.0
	West Bengal	6101	0	119.7	26.7	-0.3	387	0.0
	Sikkim	115	0	1.5	1.7	-0.2	12	0.0
	Arunachal Pradesh	120	2	2.1	2.3	-0.3	33	0.0
	Assam	1343	18	21.0	17.3	-0.1	71	1.5
	Manipur	201	3	2.6	3.0	-0.4	25	0.0
NER	Meghalaya	341	0	5.7	4.6	-0.1	50	0.2
	Mizoram	104	1	1.6	1.6	-0.2	27	0.0
	Nagaland	134	2	2.2	2.0	0.1	37	0.0
	Tripura	221	0	3.4	1.8	0.0	33	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	2.6	-9.7	-14.9
Day peak (MW)	458.6	-538.3	-953.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	215.9	-273.9	151.1	-104.2	10.9	-0.1
Actual(MU)	201.6	-253.6	159.4	-116.9	10.2	0.7
O/D/U/D(MU)	-14.3	20.2	8.3	-12.7	-0.7	0.8

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5581	13355	5752	500	1090	26278
State Sector	15240	12344	7035	4596	11	39226
Total	20821	25698	12787	5096	1101	65503

G. Sourcewise generation (MII)

	NR	WR	SR	ER	NER	All India
Coal	427	1275	555	464	11	2732
Lignite	22	9	48	0	0	78
Hydro	135	48	109	28	7	327
Nuclear	19	37	45	0	0	101
Gas, Naptha & Diesel	30	71	17	0	15	134
RES (Wind, Solar, Biomass & Others)	79	61	173	1	0	314
Total	713	1500	946	493	33	3685

Share of RES in total generation (%)	11.12	4.03	18.24	0.30	0.06	8.52
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	32.77	9.66	34.47	5.95	21.04	20.11

H. All India Demand Diversity Factor

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Based on Regional Max Demands	1.024
Based on State Max Demands	1.061

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

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

		IN	ΓER-REGI	ONAL EXCH	ANGES	Date of l	Reporting :	28-Feb-20
1								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	200 251	0.0	0.7 6.3	-0.7 -6.3
1		GAYA-VARANASI	D/C	0	805	0.0	10.9	-10.9
2	765kV	SASARAM-FATEHPUR	S/C	0	308	0.0	4.5	-4.5
3		GAYA-BALIA	S/C	0	435	0.0	7.3	-7.3
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	192 258	0.0	3.9 2.3	-3.9 -2.3
8	1	MUZAFFARPUR-GORAKHPUR	D/C	149	459	0.0	2.1	-2.1
9	400 kV	PATNA-BALIA	Q/C	0	626	0.0	8.7	-8.7
10		BIHARSHARIFF-BALIA	D/C	6	284	0.0	3.2	-3.2
11		MOTIHARI-GORAKHPUR	D/C	0	540	0.0	9.7	-9.7
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	146 0	229 144	0.0	0.6 2.7	-0.6 -2.7
14	220 KV	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15		GARWAH-RIHAND	S/C	30	0	0.4	0.0	0.4
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/F	vnout -	ED (With WP)			ER-NR	0.4	62.9	-62.5
-	xport of	ER (With WR)						
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1560	0	30.9	0.0	30.9
19 20	- 700 111	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	876 0	0 22	8.8 0.3	0.0	8.8 0.3
20		JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	Q/C	84	175	0.3	0.0	-0.7
22	400 kV	RANCHI-SIPAT	D/C	283	0	2.3	0.0	2.3
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	78	0.0	1.0	-1.0
24		BUDHIPADAR-KORBA	D/C	161	0 ER-WR	2.8	0.0	2.8
Import/E	Export of	ER (With SR)			EK-WK	45.1	1.7	43.4
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	699.0	0.0	16.2	-16.2
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2455.0	0.0	49.8	-49.8
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2945.0	0.0	60.5	-60.5
28	400 kV	TALCHER-I/C	D/C	0.0	639.0	0.0	5.0	-5.0
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0	0.0
Import/E	Export of	ER (With NER)			ER-SR	0.0	126.5	-126.5
30	Ĺ	BINAGURI-BONGAIGAON	D/C	0	591	0.0	8.1	-8
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	0	891	0.0	12.4	-12
32	220 kV	AT IDUDDITAD CAT AIZATE		0	165	0.0	2.1	-2
		ALIPURDUAR-SALAKATI	D/C		1	0.0		
I			D/C		ER-NER	0.0	22.6	-22.6
	Export of	NER (With NR)	D/C	0	ER-NER	0.0	22.6	-22.6
Import/E			- D/C	0	ER-NER	0.0	22.6 12.3	-22.6 -12.3
33	Export of HVDC	NER (With NR)	- D/C	0	ER-NER	0.0	22.6	-22.6
33	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA	D/C - D/C	0	ER-NER	0.0	22.6 12.3	-22.6 -12.3
33 Import/E 34 35	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B	- D/C D/C	0 447	503 NER-NR 489	0.0 0.0 0.0 0.0 8.4	12.3 12.3 1.0 0.0	-22.6 -12.3 -12.3 -1.0 8.4
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	0 447 0	503 NER-NR 489 0 1459	0.0 0.0 0.0 0.0 8.4 0.0	12.3 12.3 1.0 0.0 28.3	-12.3 -12.3 -12.3 -1.0 8.4 -28.3
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	503 NER-NR 489 0 1459 2559	0.0 0.0 0.0 0.0 8.4 0.0 0.0	12.3 12.3 1.0 0.0 28.3 42.5	-12.3 -12.3 -12.3 -1.0 8.4 -28.3 -42.5
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	0 447 0	503 NER-NR 489 0 1459	0.0 0.0 0.0 0.0 8.4 0.0	12.3 12.3 1.0 0.0 28.3	-12.3 -12.3 -12.3 -1.0 8.4 -28.3
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	503 NER-NR 489 0 1459 2559 1697	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0	12.3 12.3 1.0 0.0 28.3 42.5 26.6	-12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6
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 D/C S/C S/C	0 447 0 0 0 0 0 0	503 NER-NR 489 0 1459 22559 1697 983 0 1391	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0	12.3 12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5	-12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5
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 VCHAL 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 D/C S/C S/C D/C	0 447 0 0 0 0 0 0 679 0	503 NER-NR 489 0 1459 2559 1697 983 0 1391 906	0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0 0.0	12.3 12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4	-12.6 -12.3 -12.3 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0
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 D/C S/C S/C S/C S/C	0 447 0 0 0 0 0 679 0 95	503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200	0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0 0.0	12.3 12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3	-12.6 -12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3
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	0 447 0 0 0 0 0 679 0 95 146 240	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445	0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 11.2 0.0 0.0 0.0	12.3 12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3
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 D/C S/C S/C S/C S/C	0 447 0 0 0 0 0 679 0 95	503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200	0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0 0.0	12.3 12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3	-12.6 -12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3
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 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	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	0 447 0 0 0 0 679 0 95 146 240	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0	0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0 0.0 0.0 0.0 22.8	12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8
33 Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46	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 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	0 447 0 0 0 0 679 0 95 146 240 987	503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469	0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0 0.0 0.0 0.0 22.8	12.3 12.3 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2
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 VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -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	0 447 0 0 0 0 679 0 95 146 240 987 55 0	503 NER-NR 489 0 1459 22559 1697 983 0 1391 906 200 4445 0 469 113 164 0	0.0 0.0 0.0 8.4 0.0 0.0 0.0 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0	-22.6 -12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 -2.8 -2 -0.8 -1.7 1.5
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 0 679 0 95 146 240 987 55 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27	0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 0.0 0.1	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3
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 VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -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	0 447 0 0 0 0 679 0 95 146 240 987 55 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0	0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 0.1 1.7 0.0 0.1	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 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	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 0 679 0 95 146 240 987 55 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27	0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 0.0 0.1	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3
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 Export of	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B'B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-BANASK 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 0 679 0 95 146 240 987 55 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0	0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 0.1 1.7 0.0 0.1	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 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	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 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)	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 0 679 0 95 146 240 987 55 0 13 113 42	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 174.4	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8
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	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-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WORAI GWALIOR-SAWAI MADHOPUR WR (With SR) BHARBAWATI 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	0 447 0 0 0 0 0 679 0 95 146 240 987 55 0 13 113 42 0	503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 0 27 0 WR-NR	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 0.1 0.0 174.4	-22.6 -12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8
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	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 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	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 0 679 0 95 146 240 987 555 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276	0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 0.1 7 0.0 1.7 0.0 1.7 0.0 39.3 35.7	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8
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-ANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L-SILIERU 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	0 447 0 0 0 0 0 0 679 0 95 146 240 987 55 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276 0	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 1.7 0.0 174.4	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8
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 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-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANGAK 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 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 0 679 0 95 146 240 987 55 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276 0 0	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 1.7 0.0 174.4	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8 -11.9 0.0 -39.3 -35.7 11.3 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 53 54	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV 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 SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WALIANIANA GWALIOR-SAWAI MADHOPUR WR (With SR) BHARDAWATI B/B BARSUR-L.SILERU SOLAPUR-RICHMODI KOLHAPUR-KUDGI 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	0 447 0 0 0 0 0 0 679 0 95 146 240 987 55 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276 0	0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 1.7 0.0 174.4	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8
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 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-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANGAK 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 S/C S/C	0 447 0 0 0 0 679 0 95 146 240 987 55 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276 0 0 68	0.0 0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 1.7 0.0 174.4 11.9 0.0 39.3 35.7 0.0 0.0 1.4	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8 -11.9 0.0 -39.3 -35.7 11.3 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	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV 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 SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUIALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD 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	0 447 0 0 0 0 679 0 95 146 240 987 55 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276 0 0 0 68 99 WR-SR	0.0 0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 1.7 0.0 174.4 11.9 0.0 39.3 35.7 0.0 0.0 1.4	-22.6 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8 -11.9 0.0 -39.3 -35.7 11.3 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	Export of HVDC Export of HVDC 765 kV 400 kV 220 kV 132kV 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 SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA - BHINMAL VCHAL - RIHAND RAPP-SHUIALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD 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	0 447 0 0 0 0 679 0 95 146 240 987 55 0 13 113 42 0	ER-NER 503 NER-NR 489 0 1459 2559 1697 983 0 1391 906 200 445 0 469 113 164 0 27 0 WR-NR 515 0 2462 3276 0 0 0 68 99 WR-SR	0.0 0.0 0.0 0.0 0.0 8.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	22.6 12.3 1.0 0.0 28.3 42.5 26.6 32.7 0.0 28.5 8.4 0.3 1.3 0.0 2 1.0 1.7 0.0 1.7 0.0 174.4 11.9 0.0 39.3 35.7 0.0 0.0 1.4	-22.6 -12.3 -12.3 -1.0 8.4 -28.3 -42.5 -26.6 -32.7 11.2 -28.5 -8.4 -0.3 -1.3 22.8 -2 -0.8 -1.7 1.5 0.3 0.0 -129.8 -11.9 0.0 -39.3 -35.7 11.3 0.0 -1.4