

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: 11th 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 10.02.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 10-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 10th Feb 2020, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting 11-Feb-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)	48741	48880	42783	18321	2410	161135
Peak Shortage (MW)	644	0	0	0	30	674
Energy Met (MU)	984	1166	990	371	41	3552
Hydro Gen (MU)	122	43	67	32	5	269
Wind Gen (MU)	9	74	59			142
Solar Gen (MU)*	38.38	25.50	73.32	1.54	0.04	139
Energy Shortage (MU)	10.9	0.0	0.0	0.0	0.7	11.7
Maximum Demand Met during the day (MW) & time	49805	55695	47862	19200	2473	171206
(from NLDC SCADA)	18:38	10:57	08:24	18:53	19:42	09:30

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	0.08	2.57	2.65	67.74	29.61

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	6429	0	130.1	78.1	-1.2	75	0.0
	Haryana	6899	0	131.9	87.1	1.4	227	0.0
NR	Rajasthan	13864	0	243.3	71.6	1.7	340	0.0
	Delhi	4052	0	68.5	52.4	-0.8	238	0.0
	UP	16488	0	290.4	123.5	-1.2	521	0.3
	Uttarakhand	2067	0	37.5	19.2	0.2	199	0.0
	HP	1667	0	28.0	23.7	-2.0	95	0.0
	J&K(UT) and Ladakh(UT)	2578	644	50.4	45.1	-0.1	388	10.6
	Chandigarh	255	0	3.9	4.0	-0.1	34	0.0
	Chhattisgarh	3490	0	73.7	27.5	-0.9	310	0.0
	Gujarat	15695	0	329.0	91.2	0.1	557	0.0
	MP	14399	0	267.4	126.6	-2.3	1091	0.0
WR	Maharashtra	22537	0	457.1	134.4	-1.0	748	0.0
WK	Goa	486	0	9.5	9.3	-0.3	77	0.0
	DD	322	0	7.0	6.6	0.4	87	0.0
	DNH	769	0	17.1	17.3	-0.2	144	0.0
	Essar steel	819	0	5.5	5.4	0.1	311	0.0
	Andhra Pradesh	9130	0	180.7	71.9	0.2	496	0.0
	Telangana	9867	0	192.4	106.6	1.0	761	0.0
SR	Karnataka	12169	0	231.5	78.4	-1.8	524	0.0
JI.	Kerala	3730	0	73.8	61.5	1.5	198	0.0
	Tamil Nadu	14368	0	304.3	145.4	0.1	751	0.0
	Pondy	371	0	7.5	7.8	-0.3	25	0.0
	Bihar	4446	0	77.5	75.7	0.1	210	0.0
	DVC	3269	0	65.9	-38.5	-0.3	300	0.0
ER	Jharkhand	1308	0	25.9	20.0	-0.2	110	0.0
LIN	Odisha	4198	0	80.6	17.9	0.6	330	0.0
	West Bengal	6393	0	119.7	33.9	0.6	220	0.0
	Sikkim	132	0	1.9	1.8	0.1	35	0.0
	Arunachal Pradesh	122	3	2.2	2.1	0.0	26	0.0
	Assam	1413	10	22.1	19.6	0.1	180	0.5
	Manipur	153	3	2.5	2.7	-0.3	55	0.1
NER	Meghalaya	372	0	6.6	5.7	-0.2	21	0.2
	Mizoram	104	1	1.6	1.4	0.1	46	0.0
	Nagaland	126	3	2.3	1.9	0.2	60	0.0
	Tripura	223	1	3.4	1.5	-0.2	34	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	2.4	-10.8	-12.9
Day peak (MW)	411.6	-584.2	-584.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	244.6	-284.3	111.2	-81.8	9.9	-0.4
Actual(MU)	235.1	-280.4	115.0	-71.6	8.4	6.5
O/D/U/D(MU)	-9.5	3.9	3.8	10.2	-1.5	7.0

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5813	13823	4872	1560	987	27054
State Sector	12020	14703	7970	6540	11	41244
Total	17833	28525	12842	8100	998	68298

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	485	1223	526	438	7	2680
Lignite	27	15	50	0	0	92
Hydro	122	43	67	32	5	269
Nuclear	24	26	40	0	0	89
Gas, Naptha & Diesel	35	40	18	0	22	115
RES (Wind, Solar, Biomass & Others)	77	111	175	2	0	365
Total	771	1458	876	472	35	3611

Share of RES in total generation (%)	10.05	7.65	19.97	0.34	0.12	10.12
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	29.06	12.34	32.12	7.13	13.61	20.04

H. All India Demand Diversity Factor

III III III III Deliuliu Diversity I uctor	
Based on Regional Max Demands	1.022
Based on State Max Demands	1.079

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.}$

l		IN	TER-REGI	ONAL EXCH	ANGES	Date of 1	Reporting :	11-Feb-20
								Import=(+ve) /Export =(-ve)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	for NET (MU) NET (MU)
Import/E		ER (With NR)						
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	0 378	0.0	9.3	0.0 -9.3
1		GAYA-VARANASI	D/C	65	676	0.0	6.5	-6.5
2	765kV	SASARAM-FATEHPUR	S/C	174	201	0.0	0.8	-0.8
3		GAYA-BALIA	S/C	0	463	0.0	7.0	-7.0
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	297 167	0.0	3.0	-6.1 -3.0
8	_	MUZAFFARPUR-GORAKHPUR	D/C	156	226	0.0	0.7	-0.7
9	400 kV	PATNA-BALIA	Q/C	0	649	0.0	8.9	-8.9
10		BIHARSHARIFF-BALIA	D/C	14	268	0.0	3.0	-3.0
11	_	MOTIHARI-GORAKHPUR	D/C	0	478	0.0	8.2	-8.2
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	197 24	160 152	0.5	0.0	0.5 -0.8
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	Export of	ER (With WR)			ER-NR	1.2	54.1	-52.9
-	Aport Ol		0/0	5000	0	22.2	0.0	22.2
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	5982	0	23.2	0.0	23.2
19 20	1	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	936 999996	96	12.1 2.5	0.0	12.1 2.5
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	282	166	1.2	0.0	1.2
22	400 KV	RANCHI-SIPAT	D/C	331	0	3.3	0.0	3.3
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	1	0.0	0.0	0.0
24		BUDHIPADAR-KORBA	D/C	106	0 ER-WR	1.4 43.7	0.0	1.4 43.7
Import/E	Export of	ER (With SR)			ER-WK	43.7	0.0	43.7
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	535.0	0.0	12.3	-12.3
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2461.0	0.0	37.6	-37.6
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2313.0	0.0	43.0	-43.0
28	400 kV	TALCHER-I/C	D/C	749.0	678.0	3.6	0.0	3.6
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	2.0	0.0 ER-SR	0.0	0.0 93.0	0.0 -93.0
Import/E	Export of	ER (With NER)			DA DA	0.0	75.0	-55.0
30	400 kV	BINAGURI-BONGAIGAON	D/C	0	547	0.0	8.0	-8
31	400 K V	ALIPURDUAR-BONGAIGAON	D/C	0	708	0.0	10.4	-10
32	220 kV	ALIPURDUAR-SALAKATI	D/C	0	136	0.0	1.8	-2
Import/E	Export of	NER (With NR)			ER-NER	0.0	20.2	-20,2
33	HVDC	BISWANATH CHARIALI-AGRA		0	503	0.0	11.0	-11.0
	II.		-					
			-		NER-NR	0.0	11.0	-11.0
Import/E	Export of	WR (With NR)			NER-NR	0.0		-11.0
34		CHAMPA-KURUKSHETRA	D/C	0	1	0.0	11.0 28.1	-28.1
34 35	Export of	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	287	1 250	0.0 5.0	28.1 0.2	-28.1 4.8
34 35 36		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	287	1 250 1924	0.0 5.0 0.0	28.1 0.2 43.3	-28.1 4.8 -43.3
34 35		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C	287	1 250	0.0 5.0	28.1 0.2	-28.1 4.8
34 35 36 37	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C D/C	287 0 0	1 250 1924 2658	0.0 5.0 0.0 0.0	28.1 0.2 43.3 48.4	-28.1 4.8 -43.3 -48.4
34 35 36 37 38 39 40		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	287 0 0 0 0 0 710	1 250 1924 2658 1667 1008	0.0 5.0 0.0 0.0 0.0 0.0 11.5	28.1 0.2 43.3 48.4 24.9 35.4 0.0	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5
34 35 36 37 38 39 40 41	HVDC	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	287 0 0 0 0 0 710	1 250 1924 2658 1667 1008 0	0.0 5.0 0.0 0.0 0.0 0.0 0.0 11.5	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8
34 35 36 37 38 39 40 41 42	HVDC	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 S/C S/C D/C	287 0 0 0 0 0 710 0 152	1 250 1924 2658 1667 1008 0 1440 987	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8
34 35 36 37 38 39 40 41 42 43	HVDC - 765 kV	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 D/C S/C S/C S/C S/C	287 0 0 0 0 0 710 0 152 144	1 250 1924 2658 1667 1008 0 1440 987 168	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3
34 35 36 37 38 39 40 41 42	HVDC	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 S/C S/C D/C	287 0 0 0 0 0 710 0 152	1 250 1924 2658 1667 1008 0 1440 987	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8
34 35 36 37 38 39 40 41 42 43	HVDC - 765 kV	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	287 0 0 0 0 710 0 152 144 163	1 250 1924 2658 1667 1008 0 1440 987 168 376	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.0	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7
34 35 36 37 38 39 40 41 42 43 44 45	HVDC - 765 kV	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	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	287 0 0 0 0 710 0 152 144 163 985 80 34	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65	0.0 5.0 0.0 0.0 0.0 11.5 0.0 0.3 0.0 22.5 0	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC - 765 kV	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	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	287 0 0 0 0 710 0 152 144 163 985 80 34 29	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 0.0 0.5 0.1	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC - 765 kV - 400 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	HVDC 765 kV 400 kV 220 kV	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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0.5 0.1 1.4	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0	-28.1 4.8 4.3.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 -22.5 -2 0.3 -0.8 1.4 0.5
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC - 765 kV - 400 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	HVDC 765 kV 400 kV 220 kV	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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 0 13 0 0	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1 1.4 0.5	28.1 0.2 43.3 48.4 24.9 35.4 0.0 1.7 0.0 2 0.2 0.2 0.9 0.0	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52	HVDC 765 kV 400 kV 220 kV	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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.0 0.0 0.0 11.5 0.0 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	HVDC - 765 kV - 400 kV - 220 kV - 132kV	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-WARIYA MALANPUR-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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 0 13 0 WR-NR	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.0 0.0 0.3 0.0 0.22.5 0 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 -22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54	HVDC - 765 kV - 400 kV - 220 kV - 132kV	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-WORAK 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 -22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55	HVDC - 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC - 765 kV	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-WORAK 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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR 1002 0 1937 2389	0.0 5.0 0.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54	HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of - HVDC	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-WORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASBURL-SILEEU 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
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 - 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC - 765 kV	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-WORAK 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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR 1002 0 1937 2389 0	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.0 22.5 0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
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 - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	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-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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR 1002 0 1937 2389 0 0 0	0.0 5.0 0.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.0 0.3 0.0 22.5 0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7 -19.6 0.0 -20.5 -35.4 12.1 0.0
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 - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	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-ANPUR BHANPURA-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 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	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0 0 0 575 0 957	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR 1002 0 1937 2389 0 0 0 123	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.0 0.0 22.5 0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5 19.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-28.1 4.8 -43.3 -48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
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 - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	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 MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RICAMBEWADI KOLHAPUR-CHIKODI PONDA-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 S/C S/C S/C S/C S/C S/C S	287 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0 0 0 575 0 957	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR 1002 0 1937 2389 0 0 0 123 84 WR-SR	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5 19.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-28.1 4.8 -43.3 48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7
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 - 765 kV - 400 kV - 220 kV - 132kV - Export of - HVDC - 765 kV - 400 kV	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 MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RICAMBEWADI KOLHAPUR-CHIKODI PONDA-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 S/C S/C S/C S/C S/C S/C S	287 0 0 0 0 0 710 0 152 144 163 985 80 34 29 92 47 0 0 0 575 0 957	1 250 1924 2658 1667 1008 0 1440 987 168 376 0 382 65 101 0 WR-NR 1002 0 1937 2389 0 0 0 123 84 WR-SR	0.0 5.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 0.3 0.0 0.5 0.1 1.4 0.5 0.0 41.8	28.1 0.2 43.3 48.4 24.9 35.4 0.0 29.8 4.8 0.0 1.7 0.0 2 0.2 0.9 0.0 0.0 219.5 19.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-28.1 4.8 -43.3 48.4 -24.9 -35.4 11.5 -29.8 -4.8 0.3 -1.7 22.5 -2 0.3 -0.8 1.4 0.5 0.0 -177.7