

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: 14th Jan 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 13.01.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 13-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 13th Jan 2020, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting 14-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)	45698	47390	39455	18018	2427	152988
Peak Shortage (MW)	287	0	0	0	32	319
Energy Met (MU)	920	1133	975	351	41	3421
Hydro Gen (MU)	119	54	81	36	7	297
Wind Gen (MU)	11	35	12			59
Solar Gen (MU)*	13.39	19.10	93.97	1.99	0.03	128
Energy Shortage (MU)	8.0	0.0	0.0	0.0	1.5	9.5
Maximum Demand Met during the day (MW) & time	46833	55471	46174	18618	2420	165721
(from NLDC SCADA)	09:36	11:06	09:43	18:40	18:01	09:42

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	0.30	5.51	5.81	75.21	18.98

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	5256	0	96.1	48.8	-1.5	82	0.0
	Haryana	6348	0	120.7	79.8	1.3	243	0.0
	Rajasthan	12415	0	226.5	79.4	0.4	517	0.0
	Delhi	4392	0	74.9	58.0	-0.2	304	0.0
NR	UP	16534	0	296.5	107.2	0.1	608	0.2
	Uttarakhand	2132	0	39.3	23.3	-0.4	115	0.0
	HP	1695	0	28.4	23.1	-1.4	119	0.0
	J&K(UT) and Ladakh(UT)	2031	358	33.6	34.8	-6.5	143	7.8
	Chandigarh	270	0	4.6	4.7	-0.2	18	0.0
	Chhattisgarh	3620	0	77.0	24.0	-1.5	473	0.0
	Gujarat	15622	0	324.1	102.6	2.1	588	0.0
	MP	13916	0	245.5	126.2	-3.1	696	0.0
WR	Maharashtra	22084	0	445.4	147.4	-0.7	563	0.0
VVIN	Goa	613	0	9.4	9.9	-0.5	39	0.0
	DD	328	0	7.2	6.6	0.6	50	0.0
	DNH	805	0	18.9	18.8	0.1	68	0.0
	Essar steel	283	0	5.6	5.7	-0.1	255	0.0
	Andhra Pradesh	8832	0	170.4	66.9	-0.8	449	0.0
	Telangana	10664	0	211.0	102.1	0.0	525	0.0
SR	Karnataka	12343	0	222.7	64.7	0.3	605	0.0
JI.	Kerala	3562	0	69.3	54.0	1.6	212	0.0
	Tamil Nadu	14329	0	294.7	164.2	1.1	571	0.0
	Pondy	356	0	7.1	7.4	-0.4	38	0.0
	Bihar	4597	0	83.8	80.7	1.1	300	0.0
	DVC	3120	0	63.9	-31.5	-0.6	200	0.0
ER	Jharkhand	1209	0	24.6	15.4	0.2	100	0.0
	Odisha	3736	0	66.2	4.4	0.3	300	0.0
	West Bengal	6167	0	110.9	19.9	0.4	300	0.0
	Sikkim	136	0	2.1	1.8	0.3	35	0.0
	Arunachal Pradesh	120	2	2.2	1.9	0.1	56	0.0
	Assam	1352	12	23.1	19.7	0.4	82	0.4
	Manipur	213	3	2.7	3.1	-0.5	31	0.0
NER	Meghalaya	394	0	5.9	3.3	0.7	90	1.1
	Mizoram	102	2	1.6	1.5	-0.2	35	0.0
	Nagaland	127	2	2.2	2.2	-0.1	20	0.0
	Tripura	229	0	3.5	2.3	-0.1	47	0.0

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

The state of the s	Bhutan	Nepal	Bangladesh
Actual(MU)	4.2	-10.6	-10.2
Day peak (MW)	512.8	-551.0	-773.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	204.6	-219.5	105.5	-95.0	4.7	0.4
Actual(MU)	192.6	-219.4	109.1	-85.7	4.4	1.1
O/D/U/D(MU)	-12.0	0.1	3.6	9.3	-0.3	0.7

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4574	17303	5202	2560	563	30202
State Sector	11185	17466	7200	4600	11	40462
Total	15759	34768	12402	7160	575	70664

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	503	1180	537	435	12	2666
Lignite	19	15	48	0	0	81
Hydro	119	54	81	36	7	297
Nuclear	29	25	38	0	0	92
Gas, Naptha & Diesel	29	29	18	0	23	99
RES (Wind, Solar, Biomass & Others)	54	64	152	2	0	272
Total	753	1366	874	473	42	3508

Share of RES in total generation (%)	7.11	4.67	17.40	0.43	0.07	7.74
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	26.85	10.40	31.07	8.01	17.22	18.84

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.023	
Based on State Max Demands	1.086	

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

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

		IN	FER-REGI	ONAL EXCH	ANGES	Date of I	Reporting :	14-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)				0.0		
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	299	0.0	7.0	-7.0
1		GAYA-VARANASI	D/C	0	1082	0.0	12.6	-12.6
2	765kV	SASARAM-FATEHPUR	S/C	50	392	0.0	3.3	-3.3
6		GAYA-BALIA PUSAULI-VARANASI	S/C S/C	0	374 248	0.0	0.9 4.9	-0.9 -4.9
7		PUSAULI -ALLAHABAD	S/C	0	138	0.0	2.2	-2.2
8		MUZAFFARPUR-GORAKHPUR	D/C	0	858	0.0	8.7	-8.7
9	400 kV	PATNA-BALIA	Q/C	0	1137	0.0	16.6	-16.6
10		BIHARSHARIFF-BALIA	D/C	0	574	0.0	6.6	-6.6
11		MOTIHARI-GORAKHPUR	D/C	99	7	0.0	1.0	0.0 -1.0
13	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	0	291 149	0.0	2.6	-1.0
14	220 87	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	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
Impost/E	vnort of	ER (With WR)			ER-NR	0.6	59.3	-58.7
•	Aport Of		0/0	1011	220	11.2	0.0	11.2
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1211	220	11.2	0.0	11.2
19 20	1	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	439 156	345 532	0.8	5.5	0.8 -5.5
21	400 kV	JHARSUGUDA-RAIGARH	Q/C	254	286	0.0	0.3	-0.3
22	400 KV	RANCHI-SIPAT	D/C	200	117	0.2	0.0	0.2
23	220 kV	BUDHIPADAR-RAIGARH	S/C	0	106	0.0	1.2	-1.2
24		BUDHIPADAR-KORBA	D/C	177	0 ER-WR	2.9 15.2	7.0	2.9 8.2
Import/E	export of	ER (With SR)			ER-WK	13.2	7.0	6.2
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	694.0	0.0	16.2	-16.2
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	1981.0	0.0	32.1	-32.1
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1971.0	0.0	35.0	-35.0
28	400 kV	TALCHER-I/C	D/C	1595.0	218.0	8.6	0.0	8.6
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0 0.0	0.0 83.2	0.0 -83.2
Import/E	Export of	ER (With NER)			EK SK	0.0	05.2	-05.2
30	400 kV	BINAGURI-BONGAIGAON	D/C	229	111	2.5	0.0	2
31	400 KV	ALIPURDUAR-BONGAIGAON	D/C	266	54	3.5	0.0	4
32	220 kV	ALIPURDUAR-SALAKATI	D/C	48	23	0.6	0.0	1
Import/F	vnort of	NER (With NR)			ER-NER	6.6	0.0	6.6
33	HVDC	BISWANATH CHARIALI-AGRA	-	473	0	11.7	0.0	11.7
			- 1		NER-NR		0.0	11.7
Import/E	Export of	WR (With NR)					0.0	
34		***************************************					0.0	
		CHAMPA-KURUKSHETRA	D/C	0	1857	0.0	36.1	-36.1
35	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	449	0	0.0 12.1	36.1 0.0	12.1
36	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C		0 1923	0.0	36.1	
	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	449 0	0	0.0 12.1 0.0	36.1 0.0 36.7	12.1 -36.7
36 37		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 0	0 1923 2167	0.0 12.1 0.0 0.0	36.1 0.0 36.7 39.9	12.1 -36.7 -39.9
36 37 38 39 40	HVDC - 765 kV	CHAMPA-KURUKSHETRA VCHAL 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 0 0 0 0 713	0 1923 2167 1606 829	0.0 12.1 0.0 0.0 0.0 0.0 0.0 11.5	36.1 0.0 36.7 39.9 20.5 27.2 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5
36 37 38 39 40 41		CHAMPA-KURUKSHETRA VCHAL 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	449 0 0 0 0 0 0 713	0 1923 2167 1606 829 0	0.0 12.1 0.0 0.0 0.0 0.0 0.0 11.5	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9
36 37 38 39 40 41 42		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	449 0 0 0 0 0 713 0 306	0 1923 2167 1606 829 0 1359 795	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9
36 37 38 39 40 41 42 43	765 kV	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 S/C S/C S/C S/C	449 0 0 0 0 0 713 0 306 180	0 1923 2167 1606 829 0 1359 795	0.0 12.1 0.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3
36 37 38 39 40 41 42		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	449 0 0 0 0 0 713 0 306	0 1923 2167 1606 829 0 1359 795	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9
36 37 38 39 40 41 42 43 44	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	449 0 0 0 0 713 0 306 180 256	0 1923 2167 1606 829 0 1359 795 88 217	0.0 12.1 0.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5
36 37 38 39 40 41 42 43 44 45 46 47	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 0 713 0 306 180 256 983 223 46	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2.9 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2
36 37 38 39 40 41 42 43 44 45 46 47 48	765 kV	CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARI-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	449 0 0 0 0 713 0 306 180 256 983 223 46 29	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 0.0 0.5 0.0 2 0.5 1.2	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2
36 37 38 39 40 41 42 43 44 45 46 47 48	- 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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 1.3 0.0 1.1 1 1 1.5	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.5 1.2	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 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	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	449 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 13 0.0 22.1 1 0.4 0.1 1.5 0.5	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.5 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5
36 37 38 39 40 41 42 43 44 45 46 47 48	- 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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.0 0.0 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	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	449 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 13 0.0 22.1 1 0.4 0.1 1.5 0.5	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.5 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	- 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-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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.0 0.0 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	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 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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.0 0.5 1.2 0.0 0.0 1.2 1.2 1.2 1.2 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 -22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	- 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-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.0 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	- 765 kV - 400 kV - 220 kV - 132kV - 2xport 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 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 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	449 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4 34.4	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	- 765 kV - 400 kV - 220 kV - 132kV - 2xport 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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHASUL-ISILERU 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	449 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 0.0 2 0.0 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 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-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0 0 0 781	0 1923 2167 1606 829 0 13359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 13.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 2.9 0.0 0.5 0.0 2 0.0 0.0 194.1 18.5 0.0 25.4 34.4 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 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-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 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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0 0 0 781 0	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 0.0 11.5 0.0 0.0 1.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4 34.4 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 55	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 765 kV - 400 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 V'CHAL -RIHAND RAPP-SHUJALPUR 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-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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0 0 0 781 0 1	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 13.3 0.0 22.1 1 0.4 0.1 1.5 0.5 0.0 50.7	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4 34.4 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 55 56	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 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-RANPUR BHANPURA-WARIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0 0 0 781 0 1	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 13.3 0.0 13.0 0.0 14.5 0.0 15.5 0.0 15.5 0.0 16.6	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4 34.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5 -18.5 0.0 -24.6 -34.4 9.4 0.0 0.0 1.6
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 55 56	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 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-RANPUR BHANPURA-WARIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-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	449 0 0 0 0 0 713 0 306 180 256 983 223 46 29 105 48 0 0 522 0 781 0 1	0 1923 2167 1606 829 0 1359 795 88 217 0 293 56 129 0 WR-NR	0.0 12.1 0.0 0.0 0.0 0.0 11.5 0.0 0.0 13.3 0.0 13.0 0.0 14.5 0.0 15.5 0.0 15.5 0.0 16.6	36.1 0.0 36.7 39.9 20.5 27.2 0.0 26.9 2.9 0.0 0.5 1.2 0.0 0.0 194.1 18.5 0.0 25.4 34.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.1 -36.7 -39.9 -20.5 -27.2 11.5 -26.9 -2.9 1.3 -0.5 22.1 0 -0.2 -1.2 1.5 0.5 0.0 -143.5 -18.5 0.0 -24.6 -34.4 9.4 0.0 0.0 1.6