

# 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, क़ुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 4<sup>th</sup> Mar 2018

To,

- 1. कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033 Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, Kolkata, 700033
- 2. महाप्रबंधक, ऊ. क्षे. भा. प्रे. के., 18/ ए, शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 General Manager, 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. महाप्रबंधक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 General Manager, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 03.03.2018.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 03-Mar-2018 की अखिल भारतीय प्रणाली की दैनिक ग्रिड निष्पादन रिपोर्ट रा०भा०प्रे०के० 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 3<sup>rd</sup> Mar 2018, 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	4-Mar-18

A	Maximum	Domand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	36586	43310	42683	18581	2183	143343
Peak Shortage (MW)	476	43	0	0	115	635
Energy Met (MU)	797	1010	995	358	35	3194
Hydro Gen(MU)	112	24	62	29	7	234
Wind Gen(MU)	13	43	33			89
Solar Gen (MU)*	8.45	18.32	53.64	1.40	0.02	82
Energy Shortage (MU)	10.3	0.0	0.0	0.0	2.0	12.3
Maximum Demand Met during the day (MW) (from NLDC SCADA)	38512	48159	44847	18691	2134	146839

### 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	0.027	0.00	0.00	4.91	4.91	85.12	9.98

C. Power Supply Position in States

RegionRegion	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	4557	0	94.6	28.2	0.2	154	0.0
	Harvana	5408	0	103.7	59.3	0.8	198	0.0
	Rajasthan	9507	0	184.3	49.5	3.0	718	0.0
	Delhi	2887	0	53.2	49.1	-0.5	148	0.0
NR	UP	13239	0	269.3	97.0	4.0	853	0.6
	Uttarakhand	1562	0	26.6	19.1	-1.0	97	0.0
	HP	1176	0	20.7	16.2	0.0	77	0.0
	J&K	1905	476	41.8	39.1	-1.8	100	9.6
	Chandigarh	159	0	2.9	3.0	-0.1	21	0.0
	Chhattisgarh	3368	0	70.9	23.8	-1.1	107	0.0
	Gujarat	13159	0	275.4	124.9	1.2	309	0.0
	MP	9295	0	184.7	81.5	-3.2	455	0.0
WR	Maharashtra	21116	0	441.3	148.1	-1.0	431	0.0
VVK	Goa	457	0	9.1	8.6	-0.1	25	0.0
	DD	264	0	5.0	5.0	0.0	18	0.0
	DNH	638	0	12.9	12.5	0.4	77	0.0
	Essar steel	500	0	10.3	9.8	0.5	187	0.0
	Andhra Pradesh	8791	0	173.4	53.0	0.8	478	0.0
	Telangana	9693	0	206.2	93.0	1.5	398	0.0
SR	Karnataka	10183	0	225.1	88.6	0.4	362	0.0
JI.	Kerala	3612	0	73.6	50.0	1.6	195	0.0
	Tamil Nadu	14589	0	309.4	158.8	0.9	485	0.0
	Pondy	344	0	6.9	7.3	-0.4	35	0.0
	Bihar	4112	0	68.7	62.8	-1.0	250	0.0
	DVC	2880	0	60.4	-40.0	-0.3	400	0.0
ER	Jharkhand	1115	0	22.8	13.9	-0.9	80	0.0
	Odisha	4367	0	83.4	39.8	1.1	380	0.0
	West Bengal	6507	0	122.2	19.9	1.8	400	0.0
	Sikkim	87	0	0.8	1.7	-0.9	0	0.0
	Arunachal Pradesh	101	15	2.0	2.0	0.0	59	0.0
	Assam	1227	5	17.5	15.6	-1.0	146	1.9
	Manipur	162	8	2.2	2.5	-0.2	22	0.0
NER	Meghalaya	297	1	5.3	3.6	-0.3	57	0.0
	Mizoram	85	12	1.4	1.4	0.0	34	0.0
	Nagaland	125	4	2.1	1.9	0.0	40	0.0
	Tripura	219	2	3.8	2.7	0.0	26	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	3.2	-6.7	-13.7
Day peak (MW)	188.0	-461.8	-653.1

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	131.6	-153.2	106.0	-88.8	4.0	-0.3
Actual(MU)	127.7	-156.2	116.2	-84.3	1.3	4.7
O/D/U/D(MU)	-3.9	-3.0	10.1	4.6	-2.7	5.1

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4997	15396	6052	270	181	26896
State Sector	12180	18958	4610	5705	50	41503
Total	17177	34354	10662	5975	231	68399

G. Sourcewise generation (MU)

general (man)	NR	WR	SR	ER	NER	Total
Thermal (Coal & Lignite)	489	1046	636	439	7	2616
Hydro	112	23	62	29	7	234
Nuclear	28	24	47	0	0	99
Gas, Naptha & Diesel	12	41	20	0	23	95
RES (Wind, Solar, Biomass & Others)	49	61	132	2	0	245
Total	690	1196	896	470	37	3289

<sup>\*</sup>Source: RLDCs for solar connected to ISTS; SLDCs for embedded solar. Limited visibility of embedded solar data. सचिव(कर्जा) अंपुक्त सचिव(पांपण)((ओ एम))निदेशक(ओ एम))पूछ्य अभियता-कै०वि०प्रा०(ग्रि०प्रा०)/ पुछ्य कार्षपालक अधिकारी(पोसोको)/सभी राज्यों के मुख्य सचिवर/कर्जा सचिव

						Date of F	Reporting :	4-Mar-
								Import=(+ve) /Export =(-ve) for NET (MU)
SI No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
	Export of	ER (With NR)	D/C	0	345	0.0	4.0	4.0
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	0	165	0.0	4.8 0.0	-4.8 0.1
3	70381	GAYA-BALIA	S/C	0	330	0.0	4.5	-4.5
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	nvbc	PUSAULI B/B	S/C	0	198	0.0	4.7	-4.7
6		PUSAULI-VARANASI	S/C	0	171	0.0	0.0	0.0
7		PUSAULI -ALLAHABAD	S/C	0	96	0.0	0.0	0.0
8	400 1 17	MUZAFFARPUR-GORAKHPUR	D/C	0	424	0.0	4.6	-4.6
9	400 kV	PATNA-BALIA	Q/C	0	925	0.0	14.8	-14.8
		BIHARSHARIFF-BALIA MOTIHARI-GORAKHPUR	D/C D/C	0	224 357	0.0	3.2 5.6	-3.2 -5.6
11		BIHARSHARIFF-VARANASI	D/C	0	245	0.0	0.8	-0.8
13	220 kV	PUSAULI-SAHUPURI	S/C	0	151	0.0	2.8	-0.8
14	220 KV	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	1	GARWAH-RIHAND	S/C	0	0	0.6	0.0	0.6
16	132 kV	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17	1	KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
	1		_, _,		ER-NR	0.6	45.7	-45.1
port/E	Export of	ER (With WR)						*
18		JHARSUGUDA-DHARAMJAIGARH S/C	D/C	0	0	12.6	0.0	12.6
	765 kV				-			
19 20		NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-RAIGARH	D/C Q/C	0	617 147	0.0	5.5	-5.5 0.1
21	400 kV	RANCHI-SIPAT	D/C	0	144	0.0	0.0	0.0
22		BUDHIPADAR-RAIGARH	S/C	0	138	0.0	2.2	-2.2
23	220 kV	BUDHIPADAR-KORBA	D/C	0	0	2.7	0.0	2.7
		<del> </del>			ER-WR	15.3	7.8	7.5
iport/E	Export of	ER (With SR)						
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	0.0	0.0	28.7	-28.7
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	347.1	0.0	14.3	-14.3
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	2263.5	0.0	45.5	-45.5
27	400 kV	TALCHER-I/C	D/C	0.0	955.4	0.0	3.9	-3.9
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	0.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	88.5	-88.5
	Export of	ER (With NER)						
29	400 kV	BINAGURI-BONGAIGAON	D/C	0	969	0.0	2.1	-2
30		ALIPURDUAR-BONGAIGAON	D/C	0	787	3.9		4
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	0	0.0	1.2	-1
						2.0	2.2	
	· · · · · · · · · · · · · · · · · · ·	NED (WALNE)			ER-NER	3.9	3.3	0.6
•		NER (With NR)		402	ER-NER			1
port/E		NER (With NR) BISWANATH CHARIALI-AGRA	-	492	ER-NER	2.5	5.4	-2.8
32	HVDC	BISWANATH CHARIALI-AGRA	-	492	ER-NER			1
32 nport/E	HVDC	BISWANATH CHARIALI-AGRA WR (With NR)			ER-NER 654 NER-NR	2.5 2.5	5.4 5.4	-2.8 -2.8
32 nport/E 33	HVDC Export of	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA	D/C	0	654 NER-NR	2.5 2.5	5.4 5.4 39.7	-2.8 -2.8
32 nport/H 33 34	HVDC	BISWANATH CHARIALI-AGRA WR (With NR)			ER-NER 654 NER-NR	2.5 2.5	5.4 5.4	-2.8 -2.8 -39.7 6.0
32 nport/F 33 34 35	Export of HVDC	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  VCHAL B/B  APL -MHG	D/C D/C D/C	0 250 0	654 NER-NR 1172 0 408	2.5 2.5 0.0 6.0 0.0	5.4 5.4 39.7 0.0 11.1	-2.8 -2.8 -39.7 6.0 -11.1
32 nport/F 33 34 35 36	HVDC Export of	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V°CHAL B/B  APL -MHG  GWALIOR-AGRA	D/C D/C D/C D/C	0 250 0	654 NER-NR 1172 0 408 2644	2.5 2.5 0.0 6.0 0.0 0.0	5.4 5.4 39.7 0.0 11.1 44.3	-2.8 -2.8 -39.7 6.0 -11.1 -44.3
32 aport/F 33 34 35 36 37	Export of HVDC	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR	D/C D/C D/C	0 250 0	654 NER-NR 1172 0 408	2.5 2.5 0.0 6.0 0.0 0.0 0.0	5.4 5.4 39.7 0.0 11.1	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8
32 aport/F 33 34 35 36 37 38	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI	D/C D/C D/C D/C D/C	0 250 0 0 474	ER-NER  654  NER-NR  1172  0  408  2644  1410	2.5 2.5 0.0 6.0 0.0 0.0	5.4 5.4 39.7 0.0 11.1 44.3 23.8	-2.8 -2.8 -39.7 6.0 -11.1 -44.3
32 aport/F 33 34 35 36 37	Export of HVDC	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR	D/C D/C D/C D/C D/C S/C	0 250 0 0 474 449	ER-NER 654 NER-NR 1172 0 408 2644 1410 0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.0 6.7	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7
32 33 34 35 36 37 38 39	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA  WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA-BHINMAL	D/C D/C D/C D/C D/C S/C S/C	0 250 0 0 474 449 419	ER-NER 654 NER-NR 1172 0 408 2644 1410 0 14 0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8
32 mport/F 33 34 35 36 37 38 39 40	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND	D/C D/C D/C D/C D/C S/C S/C S/C	0 250 0 0 474 449 419 952	ER-NER 654 NER-NR 1172 0 408 2644 1410 0 14	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5
32 mport/F 33 34 35 36 37 38 39 40 41	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V°CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA -BHINMAL  V°CHAL -RIHAND  RAPP-SHUJALPUR	D/C D/C D/C D/C D/C S/C S/C S/C D/C	0 250 0 0 474 449 419 952	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7
32 aport/F 33 34 35 36 37 38 39 40 41 42	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL-MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL-RIHAND  RAPP-SHUJALPUR  BADOD-KOTA	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C	0 250 0 0 474 449 419 952 0 64	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2
32 32 33 34 35 36 37 38 39 40 41 42 43	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA  WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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	0 250 0 0 474 449 419 952 0 64 38	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 0.0	-2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2
32 33 34 35 36 37 38 39 40 41 42 43 44	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA  WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 250 0 0 474 449 419 952 0 64 38	ER-NER 654 NER-NR 1172 0 408 2644 1410 0 14 0 350 22 90 0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0
32 33 34 35 36 37 38 39 40 41 42 43 44 45	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 250 0 0 474 449 419 952 0 64 38 107 65	ER-NER 654  NER-NR 1172 0 408 2644 1410 0 14 0 22 90 0 0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.0 1.0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0 1.0
32 aport/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC  Export of  HVDC  765 kV  400 kV  220 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 250 0 0 474 449 419 952 0 64 38 107 65	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  0  0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 0.0 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0 1.0
32 aport/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC  Export of  HVDC  765 kV  400 kV  220 kV	BISWANATH CHARIALI-AGRA  WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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	0 250 0 0 474 449 419 952 0 64 38 107 65	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  0  0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 0.0 0.0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0 1.0
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of	BISWANATH CHARIALI-AGRA  WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 250 0 0 474 449 419 952 0 64 38 107 65	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 0.0 0.1 1.1 1.1 1.1 1.1	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7
32  mport/F 33 34 35 36 37 38 39 40 41 42 42 43 44 45 46	HVDC  Export of  HVDC  765 kV  400 kV  132kV  Export of  HVDC  LINK	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 0.0 121.8	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7
32  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of HVDC	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR	2.5 2.5 0.0 6.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1	5.4 5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 0.0 12.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-2.8 -2.8 -39.7 6.0 -11.1 -44.3 -23.8 6.7 4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7
32 33 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC  Export of  HVDC  765 kV  400 kV  132kV  Export of  HVDC  LINK	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-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	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 121.8	-2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -4.8 20.5 -2 0.7 -0.2 2.0 0.0 -79.7
32  mport/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46  mport/F 48 49 50	HVDC  Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  765 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B'B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-MOTAL  BADOD-MOTAL  BADOD-MOTAL  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	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR  1000  0  1174  1890	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1 0.0 0.0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 0.1 0.4 0.0 0.0 121.8 23.9 0.0 18.6 35.1	-2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -4.8 -20.5 -2 -0.7 -0.2 -2.0 -1.0 -79.7 -23.9 -0.0 -18.6 -35.1
32  ***mport/F** 33 34 35 36 37 38 39 40 41 42 43 44 45 46  ***mport/F** 47 48 49 50 51	HVDC  Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  765 kV	BISWANATH CHARIALI-AGRA  WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR  WR (With SR) BHARDRAWATI B/B BARSUR-L.SILERU SOLAPUR-RICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR  1000  0  1174  1890  64	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 0.1 0.4 0.0 0.0 0.0 121.8 23.9 0.0 18.6 35.1 0.2	-2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7 -23.9 0.0 -18.6 -35.1 2.9 0.0
32  pport/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46  pport/F 47 48 49 50 51 52	#WDC  Export of  #WDC  765 kV  400 kV  220 kV  132kV  Export of  #WDC  LINK  765 kV  400 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L. SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-CHIKODI	D/C	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  WR-NR  1000  0  1174  1890  64  0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.4 5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 0.0 0.0 0.0 121.8 23.9 0.0 18.6 35.1 0.2 0.0	-2.8 -2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -2.8 -20.5 -2 -2.0 -7.0 -0.2 -2.0 -79.7 -0.2 -2.0 -79.7
32  port/F 33 34 35 36 37 38 39 40 41 42 43 44 45 66  47 48 49 50 51 52 53	#WDC  Export of  #WDC  765 kV  400 kV  220 kV  132kV  Export of  #WDC  LINK  765 kV  400 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  V'CHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-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-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI	D/C	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172 0 408 20644 1410 0 14 0 350 22 90 0 0 WR-NR  1000 0 1174 1890 64 0 0	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.0 6.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.4 5.4 39.7 0.0 11.1 44.3 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 121.8 23.9 0.0 18.6 35.1 0.2 0.0 0.0	-2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7 -23.9 0.0 -18.6 -35.1 2.9 0.0
32  port/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46  47 48 49 55 51 55 53	#WDC  Export of  #WDC  765 kV  400 kV  220 kV  132kV  Export of  #WDC  LINK  765 kV  400 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  VCHAL B/B  APL-MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	D/C	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  0  WR-NR  1000  0  1174  1890  64  0  0  0  WR-SR	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 121.8 23.9 0.0 18.6 35.1 0.2 0.0 0.0 0.0	-2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7 -23.9 0.0 -18.6 -35.1 2.9 0.0 0.0 2.2
32  port/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46  port/F 47 48 49 55 51 55 53	#WDC  Export of  #WDC  765 kV  400 kV  220 kV  132kV  Export of  #WDC  LINK  765 kV  400 kV	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  VCHAL B/B  APL-MHG  GWALIOR-AGRA  PHAGI-GWALIOR  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	D/C	0 250 0 0 474 449 419 952 0 64 38 107 65 0	ER-NER  654  NER-NR  1172  0  408  2644  1410  0  14  0  350  22  90  0  0  WR-NR  1000  0  1174  1890  64  0  0  0  WR-SR	2.5 2.5 0.0 6.0 0.0 0.0 0.0 0.7 4.8 20.5 0 0.8 0.2 2.0 1.0 0.0 42.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.4 5.4 39.7 0.0 11.1 44.3 23.8 0.0 0.0 0.0 2 0.1 0.4 0.0 0.0 121.8 23.9 0.0 18.6 35.1 0.2 0.0 0.0 0.0	-2.8 -39.7 -6.0 -11.1 -44.3 -23.8 -6.7 -4.8 20.5 -2 0.7 -0.2 2.0 1.0 0.0 -79.7 -23.9 0.0 -18.6 -35.1 2.9 0.0 0.0 2.2