

### 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: 17<sup>th</sup> May 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 16.05.2018.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 16-मई-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 16<sup>th</sup> May 2018, is available at the NLDC website.

धन्यवाद,

# पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

## Report for previous day 17-May-18

## A. Maximum Demand

	NR	WR	SR	ER	NER	Total
<b>Demand Met during Evening Peak hrs(MW)</b> (at 2000 hrs; from RLDCs)	47944	47815	40669	18115	2330	156872
Peak Shortage (MW)	810	142	0	150	157	1259
Energy Met (MU)	1071	1168	907	389	40	3574
Hydro Gen (MU)	182	36	54	52	14	338
Wind Gen (MU)	7	72	18			97
Solar Gen (MU)*	13.10	19.13	57.04	1.07	0.01	90
Energy Shortage (MU)	20.0	0.0	0.0	0.5	1.5	21.9
Maximum Demand Met during the day	50739	51641	41354	18865	2540	158961
(MW) & time (from NLDC SCADA)	23:19	14:25	20:04	00:02	18:45	19:42

**B.** Frequency Profile (%)

20110400000 110000	( ) ( )						
Region	FVI	<49.7	49.7-49.8	49.8-49.9	<49.9	49.9-50.05	> 50.05
All India	0.121	0.34	5.66	32.81	38.81	57.12	4.07

C. Power Supply Position in States

Region	States	Max. Demand Met during the day (MW)	Shortage during maximum Demand (MW)	Energy Met (MU)	Drawal Schedule (MU)	OD(+)/UD(-) (MU)	Max OD (MW)	Energy Shortage (MU
	Punjab	7344	0	157.8	76.5	-1.3	255	0.0
NR	Haryana	6571	307	126.0	67.0	2.0	598	6.4
	Rajasthan	9957	234	218.1	73.6	1.9	388	2.6
	Delhi	5328	0	103.2	82.3	-3.7	164	0.0
	UP	16924	0	349.1	156.0	1.4	581	0.0
	Uttarakhand	2025	75	41.1	21.5	0.7	273	0.6
	HP	1346	0	26.5	11.4	2.0	180	0.0
	J&K	2138	534	44.1	27.8	-0.3	331	10.4
	Chandigarh	269	0	5.2	4.6	0.6	85	0.0
	Chhattisgarh	3583	0	80.7	19.9	-1.3	222	0.0
	Gujarat	15812	0	351.8	142.4	6.5	504	0.0
	MP	8705	0	189.0	101.0	-2.5	299	0.0
NA/D	Maharashtra	22946	0	506.6	161.2	-1.3	445	0.0
WR	Goa	544	0	10.9	11.2	-0.8	23	0.0
	DD	339	0	7.6	6.8	0.8	93	0.0
	DNH	758	0	17.8	17.4	0.4	49	0.0
	Essar steel	202	0	3.8	3.7	0.1	220	0.0
	Andhra Pradesh	8236	0	172.7	57.9	0.1	474	0.0
	Telangana	6889	0	145.7	51.4	0.3	491	0.0
SR	Karnataka	8509	0	177.3	65.8	-2.9	364	0.0
311	Kerala	3531	0	71.8	46.7	1.0	210	0.0
	Tamil Nadu	14711	0	331.0	180.2	1.1	480	0.0
	Pondy	373	0	8.3	8.3	0.0	48	0.0
	Bihar	4730	0	83.2	81.6	-1.1	150	0.0
	DVC	2939	0	67.5	-49.7	2.4	200	0.5
ER	Jharkhand	1227	0	24.6	18.7	1.3	85	0.0
EK	Odisha	3800	0	73.9	22.8	-0.6	225	0.0
	West Bengal	7218	0	138.3	32.3	1.5	225	0.0
	Sikkim	74	0	1.0	1.0	0.0	18	0.0
	Arunachal Pradesh	112	3	2.3	1.9	0.4	16	0.0
	Assam	1472	92	23.6	18.1	2.3	154	1.2
	Manipur	167	3	2.4	2.1	0.2	22	0.0
NER	Meghalaya	265	0	4.4	2.9	-0.1	58	0.0
	Mizoram	79	2	1.6	0.9	0.3	5	0.0
	Nagaland	117	3	2.0	1.7	0.2	29	0.0
	Tripura	223	4	3.3	3.0	-0.4	58	0.2

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	6.6	-9.1	-14.7
Day peak (MW)	336.1	-272.8	-645.8

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	213.5	-186.1	55.8	-80.5	-1.7	1.0
Actual(MU)	214.3	-196.6	56.7	-71.8	-1.7	0.9
O/D/U/D(MU)	0.8	-10.5	0.9	8.7	0.0	-0.1

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	3968	12960	6122	2160	376	25586
State Sector	8675	15383	5610	5985	50	35703
Total	12643	28343	11732	8145	425	61288

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	588	1184	634	430	5	2841
Hydro	182	36	55	52	14	340
Nuclear	27	18	46	0	0	91
Gas, Naptha & Diesel	37	56	17	0	23	133
RES (Wind, Solar, Biomass & Others)	44	91	112	2	0	249
Total	878	1385	864	484	43	3653

Share of RES in total generation (%)	5.05	6.58	12.91	0.34	0.08	6.81
Share of Non-fossil fuel (Hydro, Nuclear and	20.00	10.40	24.62	11.07	22.00	10.50
RFS) in total generation (%)	28.88	10.49	24.62	11.07	32.88	18.59

H. Diversity Factor

All India Demand Diversity Factor 1.039

Diversity factor = Sum of regional maximum demands / All India maximum demand

1		INTER-REGIONAL EXCHANGES  Date of Reporting:						17-May-18	
								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)	
Import/F	Export of	ER (With NR)	D/C	0	1 0	0.0	1.6	1.6	
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	0 191	0 175	0.0	4.6 0.0	-4.6 0.3	
3	70011	GAYA-BALIA	S/C	0	558	0.0	9.9	-9.9	
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0	
5	11,20	PUSAULI B/B	S/C	0	149	0.0	3.7	-3.7	
<u>6</u> 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	140	0.0	0.0	0.0	
8		MUZAFFARPUR-GORAKHPUR	D/C	5	654	0.0	10.0	-10.0	
9	400 kV	PATNA-BALIA	Q/C	0	1025	0.0	18.6	-18.6	
10		BIHARSHARIFF-BALIA	D/C	0	449	0.0	7.8	-7.8	
11		MOTIHARI-GORAKHPUR	D/C	0	242	0.0	3.7	-3.7	
12		BIHARSHARIFF-VARANASI	D/C	426	49	0.0	1.2	-1.2	
13	220 kV	PUSAULI-SAHUPURI	S/C	0	210	0.0	3.8	-3.8	
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0	
15 16	132 kV	GARWAH-RIHAND KARMANASA-SAHUPURI	S/C S/C	10	0 0	0.6	0.0	0.6	
17		KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0	
- /	<u> </u>	1		<u> </u>	ER-NR		63.2	-62.3	
Import/F	Export of	ER (With WR)							
18	B/8133	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	639	377	8.7	0.0	8.7	
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	456	187	3.8	0.0	3.8	
20	400 1 57	JHARSUGUDA-RAIGARH	Q/C	710	0	9.6	0.0	9.6	
21	400 kV	RANCHI-SIPAT	D/C	227	21	3.4	0.0	3.4	
22	220 kV	BUDHIPADAR-RAIGARH	S/C	66	49	0.3	0.0	0.3	
23		BUDHIPADAR-KORBA	D/C	103	6	1.0	0.0	1.0	
Import/I	Export of	ER (With SR)			ER-WR	26.8	0.0	26.8	
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1616.8	0.0	25.9	-25.9	
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	268.0	0.0	9.8	-9.8	
26	LINK	TALCHER-KOLAR BIPOLE	D/C	21.8	1921.1	0.0	40.4	-40.4	
27	400 kV	TALCHER-I/C	D/C	578.6	149.6	3.1	1.3	1.8	
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	0.0	0.0	0.0	0.0	0.0	
T	7	P TED (XX/24L NIED)			ER-SR	0.0	76.2	-76.2	
29	export of	f ER (With NER) BINAGURI-BONGAIGAON	D/C	488	152	0.8	0.0	1	
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	362	155	2.3	0.0	2	
	220 kV	ALIDUDDUAD CALAKATI	D/C	16	117	0.0	0.8	-1	
31		ALIPURDUAR-SALAKATI	D/C	10	11/	0.0	0.8	-1	
31	ļ	ALIPURDUAR-SALAKATI	D/C	10	ER-NER	3.1	0.8	2.4	
Import/F	T	NER (With NR)	D/C		ER-NER	3.1	0.8	2.4	
	T			0	ER-NER 0	0.0	0.8	0.0	
Import/E	HVDC	NER (With NR) BISWANATH CHARIALI-AGRA			ER-NER	3.1	0.8	2.4	
Import/E	HVDC	NER (With NR) BISWANATH CHARIALI-AGRA WR (With NR)	-	0	ER-NER  0  NER-NR	0.0 0.0	0.8 0.0 0.0	0.0 0.0	
Import/F 32 Import/F	HVDC Export of	NER (With NR) BISWANATH CHARIALI-AGRA			ER-NER 0	0.0	0.8	0.0	
Import/E 32 Import/E 33	HVDC Export of	NER (With NR)  BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA	- D/C	0 13	0 NER-NR	0.0 0.0 0.0	0.8 0.0 0.0 53.5	0.0 0.0 -53.5	
Import/E 32 Import/E 33 34	HVDC Export of	NER (With NR)  BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B	D/C D/C	0 13 0	0 NER-NR 1444 250	0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3	2.4 0.0 0.0 -53.5 -4.3	
Import/F 32 Import/F 33 34 35 36 37	Export of HVDC	NER (With NR)  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	0 13 0 0 0	0 NER-NR 1444 250 1513 1424 1790	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3 18.2 29.6 34.4	2.4 0.0 0.0 -53.5 -4.3 -18.2 -29.6 -34.4	
Import/F 32  Import/F 33 34 35 36 37 38	HVDC 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	D/C D/C D/C D/C D/C D/C D/C	0 13 0 0 0 0	0 NER-NR 1444 250 1513 1424 1790 779	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3 18.2 29.6 34.4 13.3	2.4 0.0 0.0 -53.5 -4.3 -18.2 -29.6 -34.4 -13.3	
Import/E 32  Import/E 33 34 35 36 37 38 39	Export of 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	D/C D/C D/C D/C D/C C D/C S/C	0 13 0 0 0 0 0 0 437	0 NER-NR 1444 250 1513 1424 1790 779 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3 18.2 29.6 34.4 13.3 0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0	
Import/F 32  Import/F 33 34 35 36 37 38 39 40	Export of 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 S/C S/C	0 13 0 0 0 0 0 437 0	0 NER-NR 1444 250 1513 1424 1790 779 0 1789	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3 18.2 29.6 34.4 13.3 0.0 40.6	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6	
Import/F 32 Import/F 33 34 35 36 37 38 39 40 41	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  ZERDA-KANKROLI	D/C D/C D/C D/C D/C S/C S/C S/C	0 13 0 0 0 0 0 437 0 459	0 NER-NR 1444 250 1513 1424 1790 779 0 1789 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3 18.2 29.6 34.4 13.3 0.0 40.6 0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2	
Import/F 32  Import/F 33 34 35 36 37 38 39 40	Export of 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 S/C S/C	0 13 0 0 0 0 0 437 0	0 NER-NR 1444 250 1513 1424 1790 779 0 1789	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 53.5 4.3 18.2 29.6 34.4 13.3 0.0 40.6	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42	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  ZERDA-KANKROLI  ZERDA -BHINMAL	D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 13 0 0 0 0 0 437 0 459 424	0 NER-NR 1444 250 1513 1424 1790 779 0 1789 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42 43	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  ZERDA-KANKROLI  ZERDA -BHINMAL  V'CHAL -RIHAND	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C	0 13 0 0 0 0 0 437 0 459 424 962	0 NER-NR 1444 250 1513 1424 1790 779 0 1789 0	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC Export of HVDC 765 kV 400 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  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 S/C S/C S	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18	0 NER-NR 1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  2  0.1  0.4	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	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  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 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	HVDC Export of HVDC 765 kV 400 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  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 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13 31	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  0.0  0.0  0.	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2	
Import/F 32  Import/F 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	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 ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F	HVDC  Export of  HVDC  765 kV  400 kV  220 kV  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 GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 13 0 0 0 0 437 0 459 424 962 0 60 18 39 9	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13 31 0 WR-NR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49  Import/F 50	HVDC  Export of  HVDC  765 kV  400 kV  220 kV  132kV  Export of  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  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 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13 31 0 WR-NR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51	HVDC  Export of  HVDC  765 kV  400 kV  220 kV  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  GWALIOR-ORAI  SATNA-ORAI  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	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13 31 0 WR-NR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52	HVDC  Export of  HVDC  765 kV  400 kV  220 kV  132kV  Export of  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  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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61 72 13 31 0 WR-NR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4	
Import/F 32  Import/F 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49  Import/F 50 51	HVDC  Export of  HVDC  765 kV  400 kV  220 kV  132kV  Export of  HVDC  LINK	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  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	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13 31 0 WR-NR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52  53	HVDC Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  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  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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 391 61 72 13 31 0 WR-NR  1000 0 1060 1816	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4  -24.0  0.0  1.1  -18.4	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52  53  54	HVDC Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  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  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	- 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	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61 72 13 31 0 WR-NR  1000 0 1060 1816 0	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4  -24.0  0.0  1.1  -18.4  17.5	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52  53  54  55	HVDC Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  765 kV  400 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  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 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 D/C D/C D/C D/C D/C D/C D/C D/C D	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0 0 0 0 18 39 0 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61 72 13 31 0 WR-NR  1000 0 1060 1816 0 0	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5  24.0  0.0  0.0  18.4  0.0  0.0  0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4  -13.4	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52  53  54  55  56	HVDC Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  765 kV  400 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 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 PONDA-AMBEWADI	- 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	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0 0 0 0 0 0 0 0 0 0 0 0 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61 72 13 31 0 WR-NR  1000 0 1060 1816 0 0	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5  24.0  0.0  0.0  18.4  0.0  0.0  0.0  0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4  -24.0  0.0  1.1  -18.4  17.5  0.0  0.0	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52  53  54  55  56	HVDC Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  765 kV  400 kV	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 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) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	- D/C D/C D/C D/C D/C D/C 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	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0 0 0 0 0 0 0 0 0 0 0 0 0	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61 72 13 31 0 WR-NR  1000 0 1060 1816 0 0 0 WR-SR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5  24.0  0.0  0.0  18.4  0.0  0.0  0.0  0.0  0.0  0.0  0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4  -18.4  17.5  0.0  0.0  1.1  -18.4  17.5  0.0  0.0  1.5	
Import/F  32  Import/F  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  Import/F  50  51  52  53  54  55  56	HVDC Export of HVDC  765 kV  400 kV  132kV  Export of HVDC LINK  765 kV  400 kV	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 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) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	- D/C D/C D/C D/C D/C D/C 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	0 13 0 0 0 0 0 437 0 459 424 962 0 60 18 39 9 0 0 0 0 0 73	0 NER-NR  1444 250 1513 1424 1790 779 0 1789 0 0 0 391 61 72 13 31 0 WR-NR  1000 0 1060 1816 0 0 0 WR-SR	3.1  0.0  0.0  0.0  0.0  0.0  0.0  0.0	0.8  0.0  0.0  0.0  53.5  4.3  18.2  29.6  34.4  13.3  0.0  40.6  0.0  0.0  0.0  2  0.1  0.4  0.4  0.3  0.0  197.5  24.0  0.0  0.0  18.4  0.0  0.0  0.0  0.0  0.0  0.0  0.0	2.4  0.0  0.0  -53.5  -4.3  -18.2  -29.6  -34.4  -13.3  9.0  -40.6  7.2  4.5  22.5  -2  0.6  -0.3  -0.3  -0.2  0.0  -153.4  -18.4  17.5  0.0  0.0  1.5	