

## 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: 31<sup>st</sup> Oct 2018

Τо

- 1. कार्यकारी निदेशक, पू.क्षे.भा.प्रे.के.,14, गोल्फ क्लब रोड, कोलकाता ७०००३३ Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, 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 ७९३००६ Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के., २९ , रेस कोर्स क्रॉस रोड, बंगलुरु –५६०००९ Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 30.10.2018.

महोदय/Dear Sir.

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 30-अक्टूबर-2018 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 30<sup>th</sup> October 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 31-Oct-18

#### A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	43028	51613	44053	19718	2451	160863
Peak Shortage (MW)	457	0	370	610	61	1498
Energy Met (MU)	925	1231	1007	373	44	3580
Hydro Gen (MU)	151	23	116	65	13	369
Wind Gen (MU)	8	40	28			77
Solar Gen (MU)*	21.63	19.56	73.22	1.29	0.03	116
Energy Shortage (MU)	8.1	0.0	1.4	1.8	0.9	12.4
Maximum Demand Met during the day	44137	56053	44466	19692	2477	163659
(MW) & time (from NLDC SCADA)	18:49	10:32	18:51	19:03	18:03	18:37

B. Frequency Profile (%) FVI <49.7 49.7-49.8 49.8-49.9 <49.9 49.9-50.05 > 50.05 All India 0.051 14.81 0.00 0.81 14.00 80.58 4.61

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	5758	0	123.0	33.7	-0.7	111	0.0
	Haryana	6304	100	125.0	87.9	-0.1	140	0.5
	Rajasthan	11001	0	223.0	50.9	2.2	569	0.0
	Delhi	3664	0	71.8	53.2	-0.2	378	0.0
NR	UP	13268	210	285.4	115.8	0.5	362	0.3
	Uttarakhand	1860	0	35.0	15.5	0.6	151	0.0
	HP	1481	0	27.8	15.9	1.8	235	0.0
	J&K	1657	414	30.6	37.6	-14.2	247	7.3
	Chandigarh	179	0	3.3	3.2	0.1	23	0.0
	Chhattisgarh	4039	0	86.4	32.6	-0.6	352	0.0
	Gujarat	15951	0	356.5	106.0	5.9	576	0.0
	MP	12244	0	259.0	140.3	-2.9	578	0.0
WR	Maharashtra	22586	0	483.9	162.0	-2.3	570	0.0
WK	Goa	475	0	9.8	8.9	0.2	58	0.0
	DD	320	0	7.2	6.2	1.0	105	0.0
	DNH	695	0	16.0	15.2	0.8	75	0.0
	Essar steel	606	0	11.7	12.0	-0.3	233	0.0
	Andhra Pradesh	8915	0	191.9	64.6	8.2	959	0.0
	Telangana	9729	0	210.0	89.6	2.0	610	0.0
SR	Karnataka	10544	0	215.6	46.1	2.5	584	0.0
3N	Kerala	3407	320	69.9	42.7	1.3	278	1.4
	Tamil Nadu	14741	0	312.5	154.0	4.8	809	0.0
	Pondy	337	20	7.0	7.1	-0.1	37	0.1
	Bihar	4507	0	80.9	73.3	4.6	100	0.0
	DVC	3070	0	63.8	-26.2	0.9	150	0.0
ER	Jharkhand	1000	0	21.9	15.6	1.6	150	0.8
EN	Odisha	4685	350	93.6	31.3	1.6	300	1.1
	West Bengal	6902	0	111.8	26.8	2.0	200	0.0
	Sikkim	94	0	1.3	1.2	0.1	20	0.0
	Arunachal Pradesh	120	2	2.0	2.0	0.1	2	0.0
	Assam	1550	33	25.8	20.3	1.5	184	0.9
	Manipur	175	3	2.4	2.3	0.2	39	0.0
NER	Meghalaya	303	0	5.4	2.7	-0.1	24	0.0
	Mizoram	87	1	1.6	1.0	0.2	0	0.0
	Nagaland	117	2	2.1	1.7	0.0	18	0.0
	Tripura	238	2	4.8	2.3	0.6	22	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	7.8	-2.5	-19.5
Day peak (MW)	480.6	-170.0	-891.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	134.5	-177.0	108.6	-60.8	-4.5	0.7
Actual(MU)	106.6	-189.6	129.5	-46.9	-5.0	-5.3
O/D/U/D(MU)	-27.8	-12.6	20.9	14.0	-0.5	-6.0

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4344	14903	9532	2030	151	30960
State Sector	11305	12978	5350	4695	50	34378
Total	15649	27881	14882	6725	201	65337

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	569	1230	545	383	11	2738
Hydro	151	23	116	65	13	369
Nuclear	24	30	43	0	0	98
Gas, Naptha & Diesel	58	84	24	0	28	194
RES (Wind, Solar, Biomass & Others)	46	61	142	1	0	250
Total	849	1428	870	450	52	3650
Share of RES in total generation (%)	5.45	4.27	16.30	0.29	0.06	6.86
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	26.13	8.01	34.56	14.82	25.50	19.64

RES) in total generation (%)

H. Diversity Factor All India Demand Diversity Factor

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

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

		INTE	R-REGI	-REGIONAL EXCHANGES			Date of Reporting :		
								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)	
-	xport of l	ER (With NR)	7.0	T					
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	211	244 36	0.5 3.7	0.0	0.5 3.7	
3	70211	GAYA-BALIA	S/C	41	109	0.0	1.0	-1.0	
4	HVDC	ALIPURDUAR-AGRA	-	0	305	0.0	3.5	-3.5	
5	n.DC	PUSAULI B/B	S/C	0	401	0.0	9.9	-9.9	
6		PUSAULI-VARANASI	S/C	0	299	0.0	6.6	-6.6	
7 8		PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	S/C D/C	104	180 392	0.0	1.3	-3.1 -1.3	
9	400 kV	PATNA-BALIA	Q/C	0	644	0.0	10.9	-10.9	
10		BIHARSHARIFF-BALIA	D/C	91	134	0.1	0.0	0.1	
11		MOTIHARI-GORAKHPUR	D/C	0	290	0.0	5.7	-5.7	
12		BIHARSHARIFF-VARANASI	D/C	249	43	2.7	0.0	2.7	
13	220 kV	PUSAULI-SAHUPURI	S/C	0	147	0.0	3.1	-3.1	
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0	
15	132 kV	GARWAH-RIHAND	S/C	25	0	0.7	0.0	0.7	
16		KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0	
17		KARMANASA-CHANDAULI	S/C	0	0 ER-NR	0.0	0.0	0.0	
Import/E	xport of l	ER (With WR)			EK-NR	7.6	45.1	-37.5	
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1338	0	23.8	0.0	23.8	
19	703 KV	NEW RANCHI-DHARAMJAIGARH	D/C	337	153	3.2	0.0	3.2	
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	595	0	11.6	0.0	11.6	
21	400 KV	RANCHI-SIPAT	D/C	200	0	3.9	0.0	3.9	
22	220 kV	BUDHIPADAR-RAIGARH	S/C	0	1	0.0	0.0	0.0	
23	]	BUDHIPADAR-KORBA	D/C	246	0 ER-WR	4.2	0.0	4.2	
Import/E	vnort of l	ER (With SR)			ER-WK	46.7	0.0	46.7	
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1671.0	0.0	28.0	-28.0	
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	661.0	0.0	15.7	-15.7	
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1967.0	0.0	42.6	-42.6	
27	400 kV	TALCHER-I/C	D/C	0.0	988.0	0.0	15.1	-15.1	
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0	
					ER-SR	0.0	86.3	-86.3	
•	xport of	ER (With NER)	1						
29	400 kV	BINAGURI-BONGAIGAON	D/C	114	338	0.0	3.8	-4	
30 31	220 kV	ALIPURDUAR-BONGAIGAON ALIPURDUAR-SALAKATI	D/C D/C	187 21	232 91	0.0	1.8	-2 -1	
31	220 KV	ALIFUNDUAN-SALAKATI	D/C	21	ER-NER	0.0	6.5	-6.5	
		NER (With NR)		•					
32	HVDC	BISWANATH CHARIALI-AGRA	-	0	652	0.0	12.1	-12.1	
T + 475		WD (WALL ND)			NER-NR	0.0	12.1	-12.1	
_	xport of	WR (With NR)	D/G	1 0	652	0.0	15.2	15.2	
33 34	HVDC	CHAMPA-KURUKSHETRA	D/C	0	653	0.0	15.3	-15.3	
35	HADC	V'CHAL R/R	D/C	2/11	Λ	6.0	0.0	6.0	
		V'CHAL B/B APL -MHG	D/C D/C	241	0 981	6.0	0.0	6.0 -24.2	
36		V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 0	0 981 874	6.0 0.0 0.0	0.0 24.2 26.4	6.0 -24.2 -26.4	
36 37		APL -MHG	D/C	0	981	0.0	24.2	-24.2	
	765 kV	APL -MHG GWALIOR-AGRA	D/C D/C	0	981 874	0.0	24.2 26.4	-24.2 -26.4	
37	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C	0 0	981 874 1110	0.0 0.0 0.0	24.2 26.4 17.1	-24.2 -26.4 -17.1	
37 38 39 40	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI	D/C D/C D/C D/C S/C S/C	0 0 0 328 498	981 874 1110 254 0 1609	0.0 0.0 0.0 0.9 8.5 0.0	24.2 26.4 17.1 0.0 0.0 35.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0	
37 38 39 40 41	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI	D/C D/C D/C D/C S/C S/C S/C	0 0 0 328 498 0 447	981 874 1110 254 0 1609	0.0 0.0 0.0 0.9 8.5 0.0 7.2	24.2 26.4 17.1 0.0 0.0 35.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2	
37 38 39 40 41 42	765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C S/C S/C S/C S/C	0 0 0 328 498 0 447 344	981 874 1110 254 0 1609 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9	24.2 26.4 17.1 0.0 0.0 35.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9	
37 38 39 40 41 42 43		APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND	D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C	0 0 0 328 498 0 447 344 488	981 874 1110 254 0 1609 0 61	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3	
37 38 39 40 41 42 43 44		APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR	D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	0 0 0 328 498 0 447 344 488 478	981 874 1110 254 0 1609 0 61 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3	
37 38 39 40 41 42 43 44 45	400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA	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 0 0 328 498 0 447 344 488 478 62	981 874 1110 254 0 1609 0 61 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0	
37 38 39 40 41 42 43 44		APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR	D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	0 0 0 328 498 0 447 344 488 478	981 874 1110 254 0 1609 0 61 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3	
37 38 39 40 41 42 43 44 45 46	400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-HINMAL VCHAL-RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK	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 0 0 328 498 0 447 344 488 478 62 40	981 874 1110 254 0 1609 0 61 0 0 0 52	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1	
37 38 39 40 41 42 43 44 45 46 47	400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA	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 0 0 328 498 0 447 344 488 478 62 40	981 874 1110 254 0 1609 0 61 0 0 0 52 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4	
37 38 39 40 41 42 43 44 45 46 47 48	400 kV 220 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138	981 874 1110 254 0 1609 0 61 0 0 0 52 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7	
37 38 39 40 41 42 43 44 45 46 47 48	400 kV 220 kV 132kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5	
37 38 39 40 41 42 43 44 45 46 47 48 49	400 kV 220 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138 99	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0	
37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E	400 kV  220 kV  132kV  xport of V  HVDC LINK	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI 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	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 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5	
37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51	400 kV  220 kV  132kV  xport of V	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI 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 BARSUR-L.SILERU	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 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5	
37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52	400 kV  220 kV  132kV  xport of V  HVDC LINK	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-HINMAL VCHAL-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 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 S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5	
37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53	220 kV 132kV xport of V HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RHIAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	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 D/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 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5	
37 38 39 40 41 42 43 44 45 46 47 48 49 <b>Import/E</b> 50 51 52 53 54 55 56	220 kV 132kV xport of V HVDC LINK 765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI	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 D/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 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5  -23.1 0.0 -26.7 -31.2 9.8 0.0 0.0	
37 38 39 40 41 42 43 44 45 46 47 48 49 <b>Import/E</b> 50 51 52 53 54 55	220 kV 132kV xport of V HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL-RHIAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	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 D/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 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5  -23.1 0.0 -26.7 -31.2 9.8 0.0 0.0 1.2	
37 38 39 40 41 42 43 44 45 46 47 48 49  Import/E 50 51 52 53 54 55 56	220 kV 132kV xport of V HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR  999 0 2002 2067 0 0 0 WR-SR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5  -23.1 0.0 -26.7 -31.2 9.8 0.0 0.0	
37 38 39 40 41 42 43 44 45 46 47 48 49  Import/E 50 51 52 53 54 55 56 57	220 kV 132kV xport of V HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR  999 0 2002 2067 0 0 0 WR-SR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5  -23.1 0.0 -26.7 -31.2 9.8 0.0 0.0 1.2 -70.0	
37 38 39 40 41 42 43 44 45 46 47 48 49 <b>Import/E</b> 50 51 52 53 54 55 56 57	220 kV 132kV xport of V HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR  WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI TRA	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR  999 0 2002 2067 0 0 0 WR-SR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5  -23.1 0.0 -26.7 -31.2 9.8 0.0 0.0 1.2 -70.0	
37 38 39 40 41 42 43 44 45 46 47 48 49  Import/E 50 51 52 53 54 55 56 57	220 kV 132kV xport of V HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI 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 BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 328 498 0 447 344 488 478 62 40 138 99 0	981 874 1110 254 0 1609 0 61 0 0 0 52 0 0 WR-NR  999 0 2002 2067 0 0 0 WR-SR	0.0 0.0 0.0 0.9 8.5 0.0 7.2 2.9 11.3 4 2.0 0.2 2.4 1.7 0.0 46.6	24.2 26.4 17.1 0.0 0.0 35.0 0.0 0.0 0.0 0.0 0.0 0.0 118.2 23.1 0.0 26.7 31.2 0.0 0.0 0.0 0.0	-24.2 -26.4 -17.1 0.9 8.5 -35.0 7.2 2.9 11.3 4 2.0 0.1 2.4 1.7 0.0 -71.5  -23.1 0.0 -26.7 -31.2 9.8 0.0 0.0 1.2 -70.0	