

# National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

# POWER SYSTEM OPERATION CORPORATION LIMITED पाँवर 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: 06<sup>th</sup> Oct 2019

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.,२९ , रेस कोर्स क्रॉस रोड, बंगलुरु –५६०००९ Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

## Sub: Daily PSP Report for the date 05.10.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-२०१० की धारा स.-5.5.१ के प्रावधान के अनुसार, दिनांक ०५-अक्टूबर-२०१९ 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 05<sup>th</sup> Oct 2019, is available at the NLDC website.

धन्यवाद,

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

Date of Reporting Report for previous day 6-Oct-19

### A. Power Supply Position at All India and Regional level

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 2000 hrs; from RLDCs)	46829	45961	37670	20428	2726	153614
Peak Shortage (MW)	1195	0	0	0	93	1288
Energy Met (MU)	984	1017	881	406	51	3337
Hydro Gen (MU)	209	103	99	130	24	564
Wind Gen (MU)	7	10	8			24
Solar Gen (MU)*	29.81	20.84	79.45	1.64	0.04	132
Energy Shortage (MU)	9.0	0.0	0.0	0.0	0.5	9.5
Maximum Demand Met during the day	47081	46335	39677	20573	2868	155858
(MW) & time (from NLDC SCADA)	19:04	19:00	18:50	18:44	17:55	19:00

B. Frequency Profile (%) Region All India FVI <49.7 49.7-49.8 49.8-49.9 <49.9 49.9-50.05 > 50.05 0.022 23.09

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	6331	0	139.3	68.3	-1.1	89	0.0
	Haryana	7235	0	143.8	102.2	0.5	208	0.0
	Rajasthan	8640	0	195.2	60.5	-3.5	245	0.0
	Delhi	3925	0	82,2	66.9	-1.3	123	0.0
NR	UP	16485	0	319.5	141.6	-1.1	500	0.0
	Uttarakhand	1709	0	35.5	12.1	0.0	94	0.0
	HP	1422	0	26.9	9.8	0.4	94	0.0
	J&K	2033	508	37.6	26.9	-1.8	206	9.0
	Chandigarh	188	0	3.5	4.1	-0.6	9	0.0
	Chhattisgarh	3908	0	89.6	42.5	3.0	471	0.0
	Gujarat	13777	0	305.6	60.4	6.5	485	0.0
	MP	8222	0	170.7	85.4	-2.7	457	0.0
WR	Maharashtra	18271	0	406.3	166.4	-1.3	644	0.0
WK	Goa	541	0	12.4	12.2	-0.3	123	0.0
	DD	329	0	7.5	7.0	0.5	44	0.0
	DNH	790	0	18.5	18.4	0.1	98	0.0
	Essar steel	320	0	6.1	5.7	0.4	323	0.0
	Andhra Pradesh	7492	0	163.3	84.4	1.0	432	0.0
	Telangana	8254	0	177.0	62.1	0.6	582	0.0
SR	Karnataka	8250	0	156.7	39.6	-0.3	500	0.0
SK	Kerala	3135	0	69.6	47.1	1.8	270	0.0
	Tamil Nadu	13810	0	305.9	151.9	1.2	535	0.0
	Pondy	370	0	8.3	8.4	-0.1	22	0.0
	Bihar	5029	0	88.2	91.6	-5.2	260	0.0
	DVC	2942	0	62.4	-11.8	2.9	340	0.0
ER	Jharkhand	1226	0	24.8	16.7	-0.4	115	0.0
EK	Odisha	4164	0	85.7	10.2	7.9	635	0.0
	West Bengal	7618	0	143.9	34.7	0.1	240	0.0
	Sikkim	75	0	0.9	1.5	-0.6	15	0.0
	Arunachal Pradesh	128	1	2.1	1.9	-0.1	119	0.0
	Assam	1722	62	31.7	24.9	0.8	110	0.4
	Manipur	162	2	2.5	2.2	0.3	28	0.0
NER	Meghalaya	310	0	5.4	0.1	-0.2	59	0.0
	Mizoram	93	1	1.8	0.8	0.3	12	0.0
	Nagaland	129	2	2.1	2.3	-0.5	34	0.0
	Tripura	288	0	5.0	4.1	-0.4	50	0.0

## $\textbf{D. Transnational Exchanges} \ \ (\textbf{MU}) \ \textbf{- Import} (+\textbf{ve}) / \textbf{Export} (-\textbf{ve})$

	Bhutan	Nepal	Bangladesh
Actual(MU)	39.1	-1.2	-24.4
Day peak (MW)	1642.7	-80.0	-1058.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	208.4	-186.8	71.4	-84.6	-8.5	0.0
Actual(MU)	196.0	-181.2	88.4	-95.0	-9.1	-0.9
O/D/U/D(MU)	-12.4	5.5	17.0	-10.4	-0.6	-0.9

#### F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4394	16913	7932	2070	97	31405
State Sector	8091	19973	9020	5240	11	42335
Total	12485	36886	16952	7310	108	73740

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	474	953	449	405	12	2294
Lignite	16	11	49	0	0	75
Hydro	209	103	99	130	24	564
Nuclear	28	31	55	0	0	113
Gas, Naptha & Diesel	30	64	15	0	29	138
RES (Wind, Solar, Biomass & Others)	48	35	122	2	0	207
Total	804	1196	790	536	65	3391

Share of RES in total generation (%)	5.96	2.96	15.45	0.31	0.06	6.11
Share of Non-fossil fuel (Hydro, Nuclear and	35.32	14.13	34.96	24.47	37.53	26.09
RES) in total generation (%)	35.34	14.13	34.90	24.47	37.33	20.09

H. Diversity Factor
All India Demand Diversity Factor
1.004
Diversity factor = Sum of regional maximum demands / All India maximum demand

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

		IN	TER-REGIO	ONAL EXCH	ANGES	Date of l	Reporting :	6-Oct-19
								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/E	Export of	ER (With NR)						
2	765kV	GAYA-VARANASI	D/C S/C	105 56	347 280	0.0	2.0	-3.8 -2.0
3	70387	SASARAM-FATEHPUR GAYA-BALIA	S/C	0	345	0.0	4.2	-4.2
4	HVDC	ALIPURDUAR-AGRA	-	0	900	0.0	16.0	-16.0
5	nvbc	PUSAULI B/B	S/C	0	196	0.0	4.8	-4.8
6		PUSAULI-VARANASI	S/C	0	220	0.0	3.4	-3.4
7	-	PUSAULI -ALLAHABAD	S/C	15	97	0.0	1.3	-1.3
9	400 kV	MUZAFFARPUR-GORAKHPUR PATNA-BALIA	D/C O/C	0	1117 945	0.0	17.6 16.7	-17.6 -16.7
10	400 K	BIHARSHARIFF-BALIA	D/C	0	355	0.0	5.8	-5.8
11	1	MOTIHARI-GORAKHPUR	D/C	0	10	0.0	0.0	0.0
12		BIHARSHARIFF-VARANASI	D/C	110	174	0.0	0.9	-0.9
13	220 kV	PUSAULI-SAHUPURI	S/C	0	148	0.0	2.4	-2.4
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.3	0.0	0.3
16	102111	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
[mm 4 /m	Zermand A	ED (With WP)			ER-NR	0.3	78.7	-78.4
	export of	ER (With WR)						
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1656	0	27.2	0.0	27.2
19	765 KV	NEW RANCHI-DHARAMJAIGARH	D/C	504	343	3.6	0.0	3.6
20	<b> </b>	JHARSUGUDA-DURG	D/C Q/C	173 89	106 290	0.8	0.0 1.6	-1.6
22	400 kV	JHARSUGUDA-RAIGARH RANCHI-SIPAT	Q/C D/C	148	131	0.0	0.0	0.9
23		BUDHIPADAR-RAIGARH	S/C	0	75	0.0	1.0	-1.0
24	220 kV	BUDHIPADAR-KORBA	D/C	75	24	0.4	0.0	0.4
	1				ER-WR	32.9	2.6	30.3
Import/E	Export of	ER (With SR)						-
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1834.0	0.0	33.0	-33.0
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	690.0	0.0	14.3	-14.3
27	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1971.0	0.0	33.8	-33.8
28	400 kV	TALCHER-I/C	D/C	423.0	694.0	0.0	1.2	-1.2
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 <b>81.0</b>	0.0 -81.0
[mport/F	Export of	ER (With NER)			ER-3R	0.0	01.0	-01.0
30	T	BINAGURI-BONGAIGAON	D/C	128	269	0.0	1.9	-2
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	233	167	1.2	0.0	1
32	220 kV	ALIPURDUAR-SALAKATI	D/C	13	77	0.0	0.7	-1
					ER-NER	1.2	2.6	-1.4
Import/E	Export of	NER (With NR)						
33	HVDC	BISWANATH CHARIALI-AGRA	-	0	502	0.0	12.2	-12.2
	? 4 <b>6</b>	WD (With ND)			NER-NR	0.0	12.2	-12.2
34	export of	WR (With NR) CHAMPA-KURUKSHETRA	D/C	0	303	0.0	0.0	0.0
35	HVDC	CHAMPA-KUKUKSHETKA		450	303	0.0	0.0	
36	n, bc	V'CHAL R/R	D/C		0	0.0	0.0	0.0
311		V'CHAL B/B APL -MHG	D/C D/C		1080	0.0	0.0	-23.3
		APL -MHG	D/C	0	1080	0.0	23.3	-23.3
37	_	APL -MHG GWALIOR-AGRA	D/C D/C	0	1080 1818	0.0	23.3 35.4	-23.3 -35.4
		APL -MHG	D/C	0	1080	0.0	23.3	-23.3
37 38	- 765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C	0 0 0	1080 1818 926	0.0 0.0 0.0	23.3 35.4 18.0	-23.3 -35.4 -18.0
37 38 39	- 765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C	0 0 0	1080 1818 926 577	0.0 0.0 0.0 0.0	23.3 35.4 18.0 10.5	-23.3 -35.4 -18.0 -10.5
37 38 39 40	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C S/C	0 0 0 0 0 370	1080 1818 926 577 0	0.0 0.0 0.0 0.0 7.0	23.3 35.4 18.0 10.5 0.0	-23.3 -35.4 -18.0 -10.5 7.0
37 38 39 40 41	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 0 370	1080 1818 926 577 0 1285	0.0 0.0 0.0 0.0 7.0 0.0	23.3 35.4 18.0 10.5 0.0 28.1	-23.3 -35.4 -18.0 -10.5 7.0 -28.1
37 38 39 40 41 42 43 44	-	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 S/C S/C S/C S/C S/C S/C	0 0 0 0 370 0 15 50	1080 1818 926 577 0 1285 637 82 207	0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9
37 38 39 40 41 42 43 44 45	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA 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 S/C	0 0 0 0 370 0 15 50 110	1080 1818 926 577 0 1285 637 82 207 0	0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7
37 38 39 40 41 42 43 44 45 46	-	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR	D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C D/C	0 0 0 0 370 0 15 50 110 970	1080 1818 926 577 0 1285 637 82 207 0 188	0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2
37 38 39 40 41 42 43 44 45 46 47	-	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27	1080 1818 926 577 0 1285 637 82 207 0 188	0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7 0	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2 -0.4
37 38 39 40 41 42 43 44 45 46 47	-	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK	D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27	1080 1818 926 577 0 1285 637 82 207 0 188 44	0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7 0 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2 -0.4 -1.1
37 38 39 40 41 42 43 44 45 46 47 48	400 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0	0.0 0.0 0.0 0.0 7.0 0.0 0.1 0.1 22.7 0 0.1 0.0	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2 -0.4 -1.1 1.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50	400 kV - 220 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27 0 77	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12	0.0 0.0 0.0 0.0 7.0 0.0 0.1 0.1 22.7 0 0.1 0.0 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2 -0.4 -1.1 1.0 0.4
37 38 39 40 41 42 43 44 45 46 47 48	400 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0	0.0 0.0 0.0 0.0 7.0 0.0 0.1 0.1 22.7 0 0.1 0.0	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	- 400 kV - 220 kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27 0 77	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 0.0	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2 -0.4 -1.1 1.0 0.4 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	- 400 kV - 220 kV	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	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 0 370 0 15 50 110 970 16 27 0 77	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 0.0	-23.3 -35.4 -18.0 -10.5 7.0 -28.1 -8.8 -0.5 -1.9 22.7 -2 -0.4 -1.1 1.0 0.4 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	400 kV 220 kV 132kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-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 0 370 0 115 50 110 970 16 27 0 77 52	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12 0 WR-NR	0.0 0.0 0.0 0.0 7.0 0.0 0.1 0.1 22.7 0 0.1 0.0 0.0 0.1 31.4	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	220 kV  132kV  Export of HVDC LINK	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 15 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 112 0 WR-NR	0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7 0 0.1 0.0 0.0 31.4	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	400 kV 220 kV 132kV Export of HVDC	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	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 0 370 0 15 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12 0 WR-NR	0.0 0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7 0 0.1 0.0 1.0 0.0 31.4	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 0.0 130.4	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -0.0 -0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 (Import/E 52 53 54	220 kV  132kV  Export of HVDC LINK	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	D/C D/C D/C D/C D/C S/C S/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 D/C S/C S/C D/C S/C D/C S/C D/C S/C D/C D/C S/C D/C D/C S/C D/C D/C D/C D/C D/C D/C D/C D/C D/C D	0 0 0 0 370 0 15 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12 0 WR-NR	0.0 0.0 0.0 0.0 0.0 7.0 0.0 0.0 0.1 0.1 22.7 0 0.1 0.0 1.0 0.0 31.4	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -99.0 -99.0 -17.1
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 (mport/E) 52 53 54 55	220 kV 132kV Export of HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANDAK MEHGAON-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 115 50 1110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4 0.0 0.0 17.1 34.7 0.0 0.0	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -17.1 -34.7 -11.6 -0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51  Import/E 52 53 54 55 56 57 58	220 kV 132kV Export of HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARI-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WALIORAI 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 S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 115 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 12 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4 0.0 17.1 34.7 0.0 0.0 1.2	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -17.1 -34.7 -11.6 -0.0 -1.2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51  [Import/E] 52 53 54 55 56 57	220 kV 132kV Export of HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WANDAK MEHGAON-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 S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 115 50 1110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 112 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4 0.0 0.0 17.1 34.7 0.0 0.0 1.2 0.0	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -17.1 -34.7 -11.6 -0.0 -1.2 -0.7
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>import/E</b> 52 53 54 55 56 57 58	220 kV 132kV Export of HVDC LINK 765 kV 400 kV	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-WALIANIA GWALIOR-SAWAI MADHOPUR  WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI 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 S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 115 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 112 0 WR-NR  613 0 1429 2019 0 0 86 50 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4 0.0 17.1 34.7 0.0 0.0 1.2	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -17.1 -34.7 -11.6 -0.0 -1.2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>mport/E</b> 52 53 54 55 56 57 58 59	220 kV 132kV Export of HVDC LINK 765 kV 400 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-LL-SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD 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 S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 115 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 112 0 WR-NR  613 0 1429 2019 0 0 86 50 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4 0.0 0.0 17.1 34.7 0.0 0.0 1.2 0.0	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -17.1 -34.7 -11.6 -0.0 -1.2 -0.7
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>mport/E</b> 52 53 54 55 56 57 58	220 kV 132kV Export of HVDC LINK 765 kV 400 kV	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-WALIANIA GWALIOR-SAWAI MADHOPUR  WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI 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 S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 370 0 115 50 110 970 16 27 0 77 52 0	1080 1818 926 577 0 1285 637 82 207 0 188 44 73 0 112 0 WR-NR  613 0 1429 2019 0 0 86 50 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1	23.3 35.4 18.0 10.5 0.0 28.1 8.8 0.6 2.0 0.0 2 0.5 1.1 0.0 0.0 130.4 0.0 0.0 17.1 34.7 0.0 0.0 1.2 0.0	-23.3 -35.4 -18.0 -10.5 -7.0 -28.1 -8.8 -0.5 -1.9 -22.7 -2 -0.4 -1.1 -1.0 -0.4 -0.0 -99.0 -17.1 -34.7 -11.6 -0.0 -1.2 -0.7