

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: 5th Feb 2019

To,

- 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. मुख्य महाप्रबंधक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Chief General Manager, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 04.02.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 04-फ़रवरी-2019 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 03rd February 2019, 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 5-Feb-19

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	43973	47414	41240	17752	2487	152866
Peak Shortage (MW)	470	0	0	0	36	506
Energy Met (MU)	913	1100	926	360	43	3341
Hydro Gen (MU)	114	26	72	29	6	247
Wind Gen (MU)	17	52	78			147
Solar Gen (MU)*	22.43	17.91	73.92	0.96	0.05	115
Energy Shortage (MU)	11.9	0.0	0.0	0.0	0.2	12.1
Maximum Demand Met during the day	46426	54523	42736	18933	2415	159025
(MW) & time (from NLDC SCADA)	18:50	09:23	09:30	19:01	18:16	09:27

B. Frequency Profile (%)
Region
All India <49.7 49.7-49.8 49.8-49.9 49.9-50.05 > 50.05 0.032 0.00 0.02 3.01 3.03 23.26

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	5205	0	102.8	36.6	-0.7	101	0.0
	Haryana	6551	0	123.4	76.0	0.3	159	0.1
	Rajasthan	11914	0	229.6	63.9	-0.7	340	0.0
	Delhi	4197	0	69.1	64.3	-0.3	205	0.0
NR	UP	13659	0	268.0	105.8	0.8	372	0.0
	Uttarakhand	2047	0	38.1	25.8	-1.1	115	0.0
	HP	1610	0	29.0	23.6	-0.1	86	0.0
	J&K	2764	691	49.6	44.3	-1.9	496	11.7
	Chandigarh	235	0	3.7	4.0	-0.3	19	0.0
	Chhattisgarh	3620	0	81.3	31.3	0.0	253	0.0
	Gujarat	15281	0	326.3	92.1	1.3	690	0.0
	MP	13144	0	237.7	120.8	-0.6	505	0.0
WR	Maharashtra	19867	0	408.3	118.4	0.5	447	0.0
WK	Goa	498	0	10.8	10.7	-0.5	88	0.0
	DD	322	0	7.0	6.8	0.2	48	0.0
	DNH	791	0	18.2	18.0	0.1	68	0.0
	Essar steel	533	0	10.6	10.6	0.0	276	0.0
	Andhra Pradesh	7770	0	164.0	60.6	1.0	489	0.0
	Telangana	8686	0	174.0	65.6	0.9	498	0.0
SR	Karnataka	11189	0	213.1	65.2	-0.2	488	0.0
JI.	Kerala	3648	0	71.1	48.2	1.1	184	0.0
	Tamil Nadu	14104	0	296.5	150.7	-1.2	489	0.0
	Pondy	357	0	7.0	7.2	-0.2	28	0.0
	Bihar	4140	0	73.5	68.4	-0.1	460	0.0
	DVC	3026	0	64.2	-44.6	0.0	396	0.0
ER	Jharkhand	1139	0	22.8	17.2	-0.8	169	0.0
LIN	Odisha	3978	0	74.2	21.2	1.6	267	0.0
	West Bengal	6863	0	123.7	26.4	1.3	309	0.0
	Sikkim	100	0	1.4	1.4	0.1	18	0.0
	Arunachal Pradesh	118	2	2,2	2.2	0.0	21	0.0
	Assam	1395	26	23.6	17.7	1.3	68	0.2
	Manipur	207	2	2.9	2.7	0.2	41	0.0
NER	Meghalaya	349	0	6.2	4.7	0.1	70	0.0
	Mizoram	105	3	2.1	1.6	0.3	12	0.0
	Nagaland	151	2	2.1	1.8	0.2	5	0.0
	Tripura	220	1	3.6	1.9	0.1	84	0.0

$\begin{tabular}{ll} \textbf{D. Transnational Exchanges} & \textbf{(MU) - Import(+ve)/Export(-ve)} \end{tabular}$

	Bhutan	Nepal	Bangladesh
Actual(MU)	0.3	-6.9	-16.3
Day peak (MW)	23.6	-324.0	-841.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	185.7	-201.6	95.5	-82.1	2.1	-0.4
Actual(MU)	175.0	-203.2	94.2	-71.6	4.0	-1.7
O/D/U/D(MU)	-10.7	-1.7	-1.3	10.6	1.9	-1.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	3104	16021	6052	1970	353	27499
State Sector	10200	15539	9880	3565	50	39234
Total	13304	31560	15932	5535	403	66733

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	522	1124	464	430	10	2549
Lignite	19	15	48	0	0	81
Hydro	114	26	72	29	6	247
Nuclear	16	31	36	0	0	83
Gas, Naptha & Diesel	20	36	19	0	27	102
RES (Wind, Solar, Biomass & Others)	68	73	197	1	0	339
Total	759	1304	834	461	43	3401
Share of RES in total generation (%)	0.01	5.60	23.58	0.22	0.12	0.08

Share of RES in total generation (%)	9.01	5.60	23.58	0.22	0.12	9.98
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	26.18	9.99	36.45	6.59	13.68	19.68

H. Diversity Factor
All India Demand Diversity Factor
1.038
Diversity factor = Sum of regional maximum demands / All India maximum demand

 $[\]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}.$

Į.		INTE	R-REGIO	ONAL EX	CHANGES	Date of I	Reporting :	5-Feb-19
1								Import=(+ve) /Export =(-ve) for NET (MU)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
	Export of	ER (With NR)	1			1		
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	9	890 315	0.0	13.5 3.7	-13.5 -3.7
3	703KV	GAYA-BALIA	S/C	0	451	0.0	7.2	-7.2
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	11120	PUSAULI B/B	S/C	0	149	0.0	3.6	-3.6
7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	106 103	0.0	1.9	-1.9 -1.6
8		MUZAFFARPUR-GORAKHPUR	D/C	0	620	0.0	7.4	-7.4
9	400 kV	PATNA-BALIA	Q/C	0	984	0.0	17.9	-17.9
10		BIHARSHARIFF-BALIA	D/C	0	354	0.0	5.3	-5.3
11		MOTIHARI-GORAKHPUR	D/C	0	418	0.0	7.4	-7.4
12	220 1-37	BIHARSHARIFF-VARANASI	D/C S/C	25 0	271 139	0.0	2.9	-3.0 -2.9
13 14	220 KV	PUSAULI-SAHUPURI SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15		GARWAH-RIHAND	S/C	25	0	0.6	0.0	0.6
16	132 kV	KARMANASA-SAHUPURI	S/C	36	0	0.6	0.0	0.6
17		KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
Import/F	Export of	ER (With WR)			ER-NR	1.2	75.3	-74.1
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	843	0	11.3	0.0	11.3
19	/05 KV	NEW RANCHI-DHARAMJAIGARH	D/C	425	288	0.5	0.0	0.5
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	4	382	0.0	4.7	-4.7
21		RANCHI-SIPAT	D/C	156	95	0.7	0.0	0.7
22	220 kV	BUDHIPADAR-RAIGARH BUDHIPADAR-KORBA	S/C D/C	74	105 42	0.0	0.0	-1.4 0.6
23		BUDINI ADAK-KOKBA	D/C	74	ER-WR	13.1	6.1	7.0
Import/E	Export of	ER (With SR)						11
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1727.0	0.0	35.6	-35.6
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	688.0	0.0	16.0	-16.0
26	LINK	TALCHER-KOLAR BIPOLE	D/C	17.0	0.0	0.0	0.0	0.0
27 28	400 kV 220 kV	TALCHER-I/C BALIMELA-UPPER-SILERRU	D/C S/C	571.0 1.0	0.0	31.6 0.0	0.0	31.6 0.0
	220 R V	D. LEINELET CTT EX SELEXIVO	5,0	1.0	ER-SR	0.0	51.7	-51.7
Import/E	Export of	ER (With NER)						
29	400 kV	BINAGURI-BONGAIGAON	D/C	259	0	4.1	0.0	4
30	220 1 17	ALIPURDUAR-BONGAIGAON	D/C	370 80	3	6.3 1.0	0.0	6
31	220 kV	ALIPURDUAR-SALAKATI	D/C	80	ER-NER	11.4	0.0	11.4
	· •	NER (With NR)	1	661	0			
32	пурс	BISWANATH CHARIALI-AGRA	-	661	0 NER-NR	16.1 16.1	0.0	16.1 16.1
Import/F	Export of	WR (With NR)						
33		CHAMPA-KURUKSHETRA	D/C	0		0.0	21.1	-21.1
	HVDC				1351	0.0	21.1	
34		V'CHAL B/B	D/C	241	1351 0	6.1	0.0	6.1
35		APL -MHG	D/C	0	0 1737	6.1 0.0	0.0 34.1	-34.1
35 36		APL -MHG GWALIOR-AGRA	D/C D/C	0	0 1737 1035	6.1 0.0 0.0	0.0 34.1 36.1	-34.1 -36.1
35 36 37	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C	0 0 0	0 1737 1035 1444	6.1 0.0 0.0 0.0	0.0 34.1 36.1 23.2	-34.1 -36.1 -23.2
35 36	765 kV	APL -MHG GWALIOR-AGRA	D/C D/C	0	0 1737 1035	6.1 0.0 0.0	0.0 34.1 36.1	-34.1 -36.1
35 36 37 38	765 kV	APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C	0 0 0	0 1737 1035 1444 695	6.1 0.0 0.0 0.0 0.0	0.0 34.1 36.1 23.2 23.3	-34.1 -36.1 -23.2 -23.3
35 36 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 0 0 691	0 1737 1035 1444 695	6.1 0.0 0.0 0.0 0.0 12.8	0.0 34.1 36.1 23.2 23.3 0.0	-34.1 -36.1 -23.2 -23.3 12.8
35 36 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 S/C	0 0 0 0 691 0 198	0 1737 1035 1444 695 0 1212 64 180	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0
35 36 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 0 691 0 198 105 974	0 1737 1035 1444 695 0 1212 64 180	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8
35 36 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 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 0 691 0 198 105 974 246	0 1737 1035 1444 695 0 1212 64 180 0	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8
35 36 37 38 39 40 41 42 43	400 kV	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 0 691 0 198 105 974	0 1737 1035 1444 695 0 1212 64 180	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8
35 36 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 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 0 691 0 198 105 974 246	0 1737 1035 1444 695 0 1212 64 180 0 186 25	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1
35 36 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-BHINMAL 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 0 691 0 198 105 974 246 46	0 1737 1035 1444 695 0 1212 64 180 0 186 25	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6
35 36 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 0 691 0 198 105 974 246 46 10	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4
35 36 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 V'CHAL-RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-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 0 691 0 198 105 974 246 46 10	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.1 0.1 0.6 0.0 0.0 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48	400 kV 220 kV 132kV Export of HVDC	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 691 0 198 105 974 246 46 10	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.1 0.1 0.6 0.0 0.0 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51	400 kV 220 kV 132kV	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 165.1	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51	400 kV 220 kV 132kV Export of HVDC	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	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 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 165.1	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53	220 kV 132kV Export of 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	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 S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 1 0.1 23.8 0.0 31.2 29.3	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2 -29.3
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51	220 kV 132kV Export of HVDC LINK	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	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 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 165.1	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54	220 kV 132kV Export of 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	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 D/C S/C D/C S/C S/C D/C S/C S/C D/C D/C D/C D/C D/C D/C	0 0 0 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 0.0 165.1 23.8 0.0 31.2 29.3 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2 -29.3 10.9
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/E 50 51 52 53 54 55	220 kV 132kV 2xport of HVDC LINK 765 kV	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 KOLHAPUR-CHIKODI	D/C D/C D/C D/C D/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 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 0.0 165.1 23.8 0.0 31.2 29.3 0.0 0.0	-34.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2 -29.3 10.9 0.0
35 36 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 2xport of HVDC LINK 765 kV	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 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 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 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 0.0 165.1 23.8 0.0 31.2 29.3 0.0 0.0 1.3	-34.1 -36.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2 -29.3 10.9 0.0 -1.3
35 36 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 2xport of HVDC LINK 765 kV	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 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 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 0 691 0 198 105 974 246 46 10 111 62 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR 999 0 1943 1817 0 0 72 52 WR-SR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 0.0 165.1 23.8 0.0 31.2 29.3 0.0 0.0 1.3 0.0	-34.1 -36.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2 -29.3 10.9 0.0 -1.3 0.9
35 36 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 2xport of HVDC LINK 765 kV	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 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 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 0 691 0 198 105 974 246 46 10 111 62 0 0 0 0 0 0 0 0	0 1737 1035 1444 695 0 1212 64 180 0 186 25 85 0 17 0 WR-NR 999 0 1943 1817 0 0 72 52 WR-SR	6.1 0.0 0.0 0.0 0.0 12.8 0.0 1.6 0.0 19.8 0 0.5 0.0 1.4 0.5 0.0 42.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 34.1 36.1 23.2 23.3 0.0 25.0 0.0 1.0 0.0 1 0.1 0.6 0.0 0.0 0.0 165.1 23.8 0.0 31.2 29.3 0.0 0.0 1.3 0.0	-34.1 -36.1 -36.1 -23.2 -23.3 12.8 -25.0 1.6 -1.0 19.8 -1 0.4 -0.6 1.4 0.5 0.0 -122.5 -23.8 0.0 -31.2 -29.3 10.9 0.0 -1.3 0.9