

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: 12th Nov 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.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 11.11.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 11-नवम्बर-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 11^{th} Nov 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 12-Nov-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 1900 hrs; from RLDCs)	42187	46333	38445	17856	2318	147139
Peak Shortage (MW)	442	0	0	0	56	498
Energy Met (MU)	851	1035	863	345	42	3135
Hydro Gen (MU)	137	42	132	59	12	382
Wind Gen (MU)	7	19	19			44
Solar Gen (MU)*	31.33	19.7	76.36	1.80	0.03	129
Energy Shortage (MU)	9.7	0.0	0.0	0.0	0.7	10.4
Maximum Demand Met during the day	42452	47411	40627	18077	2308	150551
(MW) & time (from NLDC SCADA)	18:19	18:19	18:37	18:18	17:42	18:19

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 0.024 23.94

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	5032	0	99.0	43.0	-1.5	67	0.0
ND	Haryana	5679	0	107.9	106.9	-0.1	146	0.0
	Rajasthan	10976	0	212.4	67.0	0.1	416	0.0
	Delhi	3234	0	63.2	46.7	-0.1	244	0.0
NR	UP	14220	0	269.0	119.2	1.0	991	1.1
	Uttarakhand	1710	0	32.9	18.1	-0.1	107	0.0
	HP	1533	0	27.3	17.5	0.5	143	0.0
	J&K	2000	500	36.2	31.1	-2.4	201	8.6
	Chandigarh	179	0	3.3	3.2	0.1	21	0.0
	Chhattisgarh	3343	0	72.1	23.5	-0.6	299	0.0
	Gujarat	14379	0	308.7	76.2	1.9	674	0.0
	MP	10329	0	209.1	142.6	-3.4	439	0.0
WR	Maharashtra	18691	0	402.5	133.8	-1.8	506	0.0
WK	Goa	541	0	12.2	11.4	0.2	52	0.0
	DD	317	0	6.9	6.5	0.4	41	0.0
	DNH	769	0	17.7	17.9	-0.2	61	0.0
	Essar steel	274	0	5.3	5.7	-0.4	284	0.0
	Andhra Pradesh	8308	0	173.2	75.3	1.0	362	0.0
	Telangana	7527	0	160.5	47.1	0.6	446	0.0
SR	Karnataka	8688	0	168.5	31.4	-0.5	785	0.0
3N	Kerala	3451	0	67.9	52.4	1.3	163	0.0
	Tamil Nadu	14126	0	286.3	147.3	-0.1	590	0.0
	Pondy	368	0	6.5	8.0	-1.5	18	0.0
	Bihar	4307	0	74.8	73.0	1.0	430	0.0
	DVC	2993	0	62.8	-29.0	0.0	170	0.0
ER	Jharkhand	1184	0	23.9	14.5	0.3	60	0.0
LIN	Odisha	3622	0	73.3	4.4	3.3	160	0.0
	West Bengal	6470	0	109.0	32.1	1.4	220	0.0
	Sikkim	100	0	1.2	1.3	-0.1	55	0.0
	Arunachal Pradesh	105	5	2.1	1.7	0.2	45	0.0
	Assam	1385	52	23.6	16.5	1.0	117	0.6
	Manipur	170	3	2,3	2.3	0.0	24	0.0
NER	Meghalaya	339	1	5.9	3.2	-0.1	130	0.0
	Mizoram	92	2	1.8	0.9	0.1	8	0.0
	Nagaland	102	2	2.2	1.9	0.0	21	0.0
	Tripura	226	12	4.3	2.2	0.6	43	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	12.6	-0.4	-15.1
Day peak (MW)	627.5	-180.1	-913.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	196.8	-194.0	96.2	-98.6	-1.5	-1.0
Actual(MU)	187.7	-189.1	100.4	-99.1	0.1	0.1
O/D/U/D(MU)	-9.1	4.8	4.2	-0.5	1.6	1.0

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5393	17773	8392	2935	563	35056
State Sector	12776	18770	9533	5080	11	46170
Total	18169	36543	17925	8015	575	81226

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	420	1065	394	403	11	2292
Lignite	17	16	44	0	0	77
Hydro	137	42	132	59	12	382
Nuclear	28	24	55	0	0	107
Gas, Naptha & Diesel	29	45	15	0	24	113
RES (Wind, Solar, Biomass & Others)	52	47	130	2	0	231
Total	683	1239	769	464	47	3202

Share of RES in total generation (%)	7.59	3.82	16.85	0.40	0.06	7.20
Share of Non-fossil fuel (Hydro, Nuclear and	31.72	9.11	41.09	13.14	26.52	22,45
RES) in total generation (%)						

H. Diversity Factor
All India Demand Diversity Factor
1.002
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}.$

		<u>IN</u>	TER-REGI	ONAL EXCH	ANGES			
						Date of 1	Reporting :	12-Nov-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)
	Export of	ER (With NR)	D/G	0	-15	0.0		
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	0	615 369	0.0	9.0 4.7	-9.0 -4.7
3	7001	GAYA-BALIA	S/C	0	368	0.0	6.2	-6.2
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	пове	PUSAULI B/B	S/C	0	198	0.0	4.9	-4.9
6	_	PUSAULI-VARANASI	S/C	0	161	0.0	3.1	-3.1
7 8		PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	S/C D/C	0	122 873	0.0	1.6	-1.6 -12.2
9	400 kV	PATNA-BALIA	Q/C	0	1006	0.0	17.6	-12.2
10	1	BIHARSHARIFF-BALIA	D/C	0	284	0.0	4.6	-4.6
11		MOTIHARI-GORAKHPUR	D/C	1	8	0.0	0.0	0.0
12		BIHARSHARIFF-VARANASI	D/C	52	253	0.0	1.8	-1.8
13	220 kV	PUSAULI-SAHUPURI	S/C	8	64	0.0	0.7	-0.7
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.4	0.0	0.4
16		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
Import/F	Evneut - P	ED (With WP)			ER-NR	0.4	66.4	-66.0
-	export of	ER (With WR)	1 1					I
18	765 1.37	JHARSUGUDA-DHARAMJAIGARH	Q/C	805	0	13.2	0.0	13.2
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	472	354	2.5	0.0	2.5
20		JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	D/C Q/C	22 138	157 332	0.0	2.1	-1.2 -2.1
22	400 kV	RANCHI-SIPAT	D/C	107	31	1.0	0.0	1.0
23		BUDHIPADAR-RAIGARH	S/C	4	70	0.0	1.2	-1.2
24	220 kV	BUDHIPADAR-KORBA	D/C	130	0	1.7	0.0	1.7
	L				ER-WR	18.5	4.5	14.0
Import/E	Export of	ER (With SR)						
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2050.0	0.0	35.2	-35.2
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	680.0	0.0	15.9	-15.9
27	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1984.0	0.0	44.8	-44.8
28	400 kV	TALCHER-I/C	D/C	66.0	991.0	0.0	9.5	-9.5
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
Import/E	Evnort of	ER (With NER)			ER-SR	0.0	95.9	-95.9
30	Export of	BINAGURI-BONGAIGAON	D/C	290	9	4.8	0.0	5
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	297	20	4.3	0.0	4
32	220 kV	ALIPURDUAR-SALAKATI	D/C	42	50	0.2	0.0	0
		!			ER-NER	9.3	0.0	9.3
Import/E	Export of	NER (With NR)						•
33	HVDC	BISWANATH CHARIALI-AGRA	-	0	366	6.8	0.0	6.8
					NER-NR	6.8	0.0	6.8
	Export of	WR (With NR)	1 1		1000			1
34	HVDC	CHAMPA-KURUKSHETRA	D/C	0	1829	0.0	31.1	-31.1
35					-			
26	n, bc	V'CHAL B/B	D/C	451	0	12.2	0.0	12.2
36 37	n, be	V'CHAL B/B APL -MHG	D/C D/C	0	0 2099	12.2 0.0	0.0 33.9	12.2 -33.9
37	IIVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0	0 2099 2212	0.0 0.0	0.0 33.9 36.9	12.2 -33.9 -36.9
	-	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C	0	0 2099 2212 1358	12.2 0.0 0.0 0.0	0.0 33.9 36.9 21.4	12.2 -33.9 -36.9 -21.4
37 38	- 765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C D/C	0 0	0 2099 2212	0.0 0.0	0.0 33.9 36.9	12.2 -33.9 -36.9
37 38 39	-	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	0 0 0	0 2099 2212 1358 822	12.2 0.0 0.0 0.0 0.0	0.0 33.9 36.9 21.4 25.3	12.2 -33.9 -36.9 -21.4 -25.3
37 38 39 40	-	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C S/C	0 0 0 0 0 565	0 2099 2212 1358 822 0	12.2 0.0 0.0 0.0 0.0 10.5	0.0 33.9 36.9 21.4 25.3 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5
37 38 39 40 41	-	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 0 0 0 565	0 2099 2212 1358 822 0 1260	12.2 0.0 0.0 0.0 0.0 10.5 0.0	0.0 33.9 36.9 21.4 25.3 0.0 27.4	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4
37 38 39 40 41 42	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA	D/C D/C D/C D/C D/C S/C S/C D/C	0 0 0 0 565 0 321	0 2099 2212 1358 822 0 1260 521	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8
37 38 39 40 41 42 43	-	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA 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 S/C S/C S/C	0 0 0 0 565 0 321 132 257 995	0 2099 2212 1358 822 0 1260 521 89 309 0	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8
37 38 39 40 41 42 43 44 45 46	765 kV	V'CHAL B/B 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 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 0 565 0 321 132 257 995	0 2099 2212 1358 822 0 1260 521 89 309 0	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0
37 38 39 40 41 42 43 44 45 46 47	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-SANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2
37 38 39 40 41 42 43 44 45 46 47 48	765 kV	V'CHAL B/B 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	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 0 0 0 565 0 321 132 257 995 172 49	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45	12.2 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 -1.1 -1.0 22.8 0 0.2 -0.1
37 38 39 40 41 42 43 44 45 46 47 48 49	- 765 kV - 400 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65	12.2 0.0 0.0 0.0 10.5 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6
37 38 39 40 41 42 43 44 45 46 47 48 49 50	- 765 kV - 400 kV - 220 kV	V'CHAL B/B 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	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 0 0 0 565 0 321 132 257 995 172 49 32 113 63	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6
37 38 39 40 41 42 43 44 45 46 47 48 49	- 765 kV - 400 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 0.0 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50	765 kV 400 kV 220 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-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 0 0 0 565 0 321 132 257 995 172 49 32 113 63	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV - 400 kV - 220 kV - 132kV	VCHAL B/B 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)	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 0 0 0 565 0 321 132 257 995 172 49 32 113 63	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0 -133.4
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E	765 kV 400 kV 220 kV	V'CHAL B/B 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 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 0 565 0 321 132 257 995 172 49 32 113 63	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 0.0 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV 400 kV 220 kV 132kV Export of HVDC LINK	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-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-L-SILERU	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0 -133.4
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	765 kV 400 kV 220 kV 132kV Export of HVDC	V'CHAL B/B 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0 -133.4
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	765 kV 400 kV 220 kV 132kV Export of HVDC LINK	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 0.0 184.0	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6 -0.0 -133.4 -16.4 -0.0 -7.9
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - LINK - 765 kV	VCHAL B/B 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 WARDHA-NIZAMABAD	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 0.0 184.0	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6 -0.0 -133.4 -16.4 -0.0 -7.9 -28.0
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	- 765 kV - 400 kV - 220 kV - 132kV - 2xport of - HVDC - LINK - 765 kV	VCHAL B/B 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) BHASURI-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-RUDGI	D/C D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C 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 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0 16.4 0.0 11.4 28.0 0.0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0 -133.4 -16.4 0.0 -7.9 -28.0 11.1
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV - 100 kV - 100 kV - 100 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATTNA-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 BHASUR-LSILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-KUDGI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0 16.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.2 -33.9 -36.9 -21.4 -25.3 10.5 -27.4 -4.8 1.1 -1.0 22.8 0 0.2 -0.1 1.6 0.6 0.0 -133.4 -16.4 0.0 -7.9 -28.0 11.1 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	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV - 100 kV - 100 kV - 100 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANPURA-ISILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C 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 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0 16.4 0.0 11.4 28.0 0.0 0.0 1.3	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6 -0.0 -133.4 -16.4 -0.0 -7.9 -28.0 -11.1 -0.0 -1.3
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV - 100 kV - 100 kV - 100 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANPUR-ISILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0 16.4 0.0 11.4 28.0 0.0 0.0 1.3	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6 -0.0 -133.4 -16.4 -0.0 -7.9 -28.0 -11.1 -0.0 -1.3 -1.3 -1.3 -1.7
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV - 100 kV - 100 kV - 100 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANPUR-ISILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0 16.4 0.0 11.4 28.0 0.0 0.0 1.3	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6 -0.0 -133.4 -16.4 -0.0 -7.9 -28.0 -11.1 -0.0 -1.3 -1.3 -1.3 -1.7
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	- 765 kV - 400 kV - 220 kV - 132kV - Export of HVDC LINK - 765 kV - 400 kV - 100 kV - 100 kV - 100 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-RANPUR BHANPURA-RANPUR BHANPURA-WARAI 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 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 0 565 0 321 132 257 995 172 49 32 113 63 0	0 2099 2212 1358 822 0 1260 521 89 309 0 177 45 65 0 2 0 WR-NR	12.2 0.0 0.0 0.0 0.0 10.5 0.0 1.3 0.7 22.8 1 0.3 0.2 1.6 0.6 0.0 50.6	0.0 33.9 36.9 21.4 25.3 0.0 27.4 4.8 0.2 1.7 0.0 1 0.2 0.3 0.0 0.0 184.0 16.4 0.0 11.4 28.0 0.0 0.0 1.3	12.2 -33.9 -36.9 -21.4 -25.3 -10.5 -27.4 -4.8 -1.1 -1.0 -22.8 -0 -0.2 -0.1 -1.6 -0.6 -0.0 -133.4 -16.4 -0.0 -7.9 -28.0 -11.1 -0.0 -1.3 -1.3 -1.3 -1.3 -1.3