

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, क़ुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 28th 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 27.10.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-२०१० की धारा स.-5.5.१ के प्रावधान के अनुसार, दिनांक २७-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 27th 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 28-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 1900 hrs; from RLDCs)	36869	34586	29524	18246	2196	121421
Peak Shortage (MW)	483	0	0	0	85	568
Energy Met (MU)	820	810	679	352	41	2702
Hydro Gen (MU)	141	31	143	82	19	416
Wind Gen (MU)	9	57	11			77
Solar Gen (MU)*	29.12	13.04	53.75	2.02	0.04	98
Energy Shortage (MU)	10.3	0.0	0.0	0.0	1.8	12.1
Maximum Demand Met during the day	39431	38134	31110	18394	2305	124786
(MW) & time (from NLDC SCADA)	06:40	07:07	08:14	18:31	17:42	18:34

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 0.033

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	4594	0	90.7	49.7	-1.5	85	0.0
ALD.	Haryana	5309	0	104.3	99.0	-0.7	152	0.0
	Rajasthan	9855	0	185.3	54.5	-0.6	418	0.0
	Delhi	3006	0	60.8	45.2	-0.8	103	0.0
NR	UP	14083	0	290.0	126.1	0.5	665	0.0
	Uttarakhand	1328	0	26.1	13.9	0.0	73	0.0
	HP	1041	0	17.0	9.0	-0.5	151	0.0
	J&K	2194	549	43.1	37.1	-1.5	126	10.2
	Chandigarh	156	0	2.9	3.4	-0.5	3	0.0
	Chhattisgarh	2972	0	68.5	23.9	-1.2	183	0.0
	Gujarat	10552	0	233.3	77.0	-0.9	725	0.0
	MP	7857	0	162.8	113.4	-0.7	300	0.0
WR	Maharashtra	14584	0	313.9	109.5	-2.2	474	0.0
WK	Goa	541	0	8.9	8.5	-0.2	54	0.0
	DD	246	0	4.0	3.4	0.5	68	0.0
	DNH	701	0	12.0	12.3	-0.3	102	0.0
	Essar steel	358	0	6.8	7.2	-0.5	288	0.0
	Andhra Pradesh	6576	0	146.1	57.2	-0.6	395	0.0
	Telangana	6553	0	141.9	39.2	-4.0	232	0.0
SR	Karnataka	6988	0	132.6	37.1	-4.7	710	0.0
3N	Kerala	2950	0	57.2	44.3	0.7	170	0.0
	Tamil Nadu	9968	0	195.7	117.8	-2.7	644	0.0
	Pondy	272	0	5.3	6.4	-1.2	-0.7	0.0
	Bihar	4536	0	77.9	76.7	-0.8		0.0
	DVC	2826	0	58.8	-17.0		217	0.0
ER	Jharkhand	1265	0	24.5	14.7	-0.9		0.0
LIN	Odisha	3695	0	76.1	10.0	0.4	220	0.0
	West Bengal	6408	0	113.9	37.0	3.6	350	0.0
	Sikkim	84	0	0.8	1.3	-0.5	0	0.0
	Arunachal Pradesh	109	1	2,2	2.1	-0.1	95	0.0
	Assam	1318	70	22.7	16.3	1.0	182	1.8
	Manipur	156	2	2.5	2.3	0.2	38	0.0
NER	Meghalaya	301	0	5.6	0.6	-0.4	16	0.0
	Mizoram	94	1	1.7	0.9	0.3	42	0.0
	Nagaland	119	2	2.4	1.9	0.3	16	0.0
	Tripura	248	1	4.1	3.3	-0.5	15	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	19.3	-1.4	-23.3
Day peak (MW)	852.8	-130.0	-1103.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	190.6	-203.1	74.0	-56.9	-4.6	0.0
Actual(MU)	171.3	-195.4	63.9	-41.7	-2,4	-4.3
O/D/U/D(MU)	-19.3	7.7	-10.1	15.2	2.1	-4.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	2367	15311	9212	2030	660	29580
State Sector	12441	25670	13693	6180	11	57995
Total	14808	40981	22905	8210	672	87575

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	414	836	266	325	10	1850
Lignite	17	11	42	0	0	70
Hydro	141	31	143	82	19	416
Nuclear	24	29	60	0	0	113
Gas, Naptha & Diesel	23	34	16	0	21	94
RES (Wind, Solar, Biomass & Others)	45	82	93	2	0	222
Total	663	1023	621	409	49	2765

Share of RES in total generation (%)	6.72	8.04	15.03	0.50	0.08	8.04
Share of Non-fossil fuel (Hydro, Nuclear and	31.58	13.89	47.81	20.57	38.39	27.17
RES) in total generation (%)	31.50	15.07	47.01	20.07	50.57	2,.1,

H. Diversity Factor All India Demand Diversity Factor

All India Demand Diversity Factor 1.037

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}.$

		IN	TER-REGI	ONAL EXCH	ANGES	Date of I	Reporting :	28-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		ER (With NR)						
1	765kV	GAYA-VARANASI	D/C	150	312	0.0	3.6	-3.6
3	/05KV	SASARAM-FATEHPUR GAYA-BALIA	S/C S/C	0	134 256	0.0	0.4 4.9	-0.4 -4.9
4	HVDC	ALIPURDUAR-AGRA	-	0	600	0.0	11.6	-11.6
5	HVDC	PUSAULI B/B	S/C	0	199	0.0	5.1	-5.1
6		PUSAULI-VARANASI	S/C	0	192	0.0	3.7	-3.7
7		PUSAULI -ALLAHABAD	S/C	0	83	0.0	1.3	-1.3
9	400 kV	MUZAFFARPUR-GORAKHPUR PATNA-BALIA	D/C Q/C	0	502 569	0.0	7.3	-7.3 -11.6
10	400 K	BIHARSHARIFF-BALIA	D/C	26	164	0.0	2.0	-2.0
11		MOTIHARI-GORAKHPUR	D/C	0	6	0.0	0.0	0.0
12		BIHARSHARIFF-VARANASI	D/C	217	49	1.5	0.0	1.5
13	220 kV	PUSAULI-SAHUPURI	S/C	17	102	0.0	1.1	-1.1
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 ED ND	0.0	0.0	0.0
Import/E	Export of	ER (With WR)			ER-NR	1.8	52.5	-50.6
-	Aport Ol	· · · · · · · · · · · · · · · · · · ·		1500		21.	0.0	21.1
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1522	0	21.1	0.0	21.1
19	, 0.5 R V	NEW RANCHI-DHARAMJAIGARH	D/C	799	0	13.2	0.0	13.2
20		JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	D/C Q/C	135 218	21 0	1.4 2.1	0.0	1.4 2.1
22	400 kV	RANCHI-SIPAT	D/C	284	0	4.5	0.0	4.5
23	220 1-37	BUDHIPADAR-RAIGARH	S/C	0	57	0.0	0.7	-0.7
24	220 kV	BUDHIPADAR-KORBA	D/C	89	0	1.3	0.0	1.3
					ER-WR	43.6	0.7	42.9
_	_	ER (With SR)			_			1
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1794.0	0.0	24.2	-24.2
26	HVDC LINK	JEYPORE-GAZUWAKA B/B	D/C	0.0	424.0	0.0	9.9	-9.9
27 28	400 kV	TALCHER-KOLAR BIPOLE TALCHER-I/C	D/C D/C	0.0 612.0	1488.0 506.0	0.0	29.5 3.6	-29.5 -3.6
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
27	220 K Y	BALLALLY-CITER-SILLARC	5/-C	1.0	ER-SR	0.0	63.6	-63.6
Import/E	Export of	ER (With NER)						· ·
30	400 kV	BINAGURI-BONGAIGAON	D/C	45	310	0.0	1.3	-1
31	400 K Y	ALIPURDUAR-BONGAIGAON	D/C	166	175	1.4	0.0	1
32	220 kV	ALIPURDUAR-SALAKATI	D/C	6	72	0.0	0.4	0
Y 4/70	2 4 6	NED ANA ND			ER-NER	1.4	1.7	-0.3
33	HVDC	NER (With NR) BISWANATH CHARIALI-AGRA		0	503	0.0	6.6	-6.6
33	пурс	BISWANATH CHARLALFACKA		0	NER-NR	0.0	6.6	-6.6
Import/E	Export of	WR (With NR)						
34					_			
		CHAMPA-KURUKSHETRA	D/C	0	491	0.0	14.4	-14.4
35	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C D/C	452	491 0	0.0 12.2	14.4 0.0	-14.4 12.2
35 36	HVDC	V'CHAL B/B APL -MHG						
36 37	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	452 0 0	0 1076 2112	12.2 0.0 0.0	0.0 21.0 41.0	12.2 -21.0 -41.0
36 37 38	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	452 0 0 0	0 1076 2112 1157	12.2 0.0 0.0 0.0	0.0 21.0 41.0 21.7	12.2 -21.0 -41.0 -21.7
36 37 38 39	HVDC 765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	452 0 0 0 0	0 1076 2112 1157 734	12.2 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5	12.2 -21.0 -41.0 -21.7 -28.5
36 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	452 0 0 0 0 0 0 394	0 1076 2112 1157 734 0	12.2 0.0 0.0 0.0 0.0 0.0 7.9	0.0 21.0 41.0 21.7 28.5 0.0	12.2 -21.0 -41.0 -21.7 -28.5 7.9
36 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	452 0 0 0 0 0 0 394 0	0 1076 2112 1157 734 0 1329	12.2 0.0 0.0 0.0 0.0 0.0 7.9 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5	12.2 -21.0 -41.0 -21.7 -28.5 7.9 -28.5
36 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	452 0 0 0 0 0 0 394	0 1076 2112 1157 734 0	12.2 0.0 0.0 0.0 0.0 0.0 7.9	0.0 21.0 41.0 21.7 28.5 0.0	12.2 -21.0 -41.0 -21.7 -28.5 7.9
36 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	452 0 0 0 0 0 394 0 208	0 1076 2112 1157 734 0 1329 929	12.2 0.0 0.0 0.0 0.0 0.0 7.9 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2	12.2 -21.0 -41.0 -21.7 -28.5 7.9 -28.5 -7.2
36 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	D/C D/C D/C D/C D/C S/C S/C D/C S/C S/C	452 0 0 0 0 0 394 0 208 121	0 1076 2112 1157 734 0 1329 929 114	12.2 0.0 0.0 0.0 0.0 0.0 7.9 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5	12.2 -21.0 -41.0 -21.7 -28.5 7.9 -28.5 -7.2 0.1
36 37 38 39 40 41 42 43 44	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 S/C S/C S/C S/C S/C S/C S/C	452 0 0 0 0 0 394 0 208 121 55	0 1076 2112 1157 734 0 13329 929 114 261	12.2 0.0 0.0 0.0 0.0 7.9 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5	12.2 -21.0 -41.0 -21.7 -28.5 7.9 -28.5 -7.2 0.1 -2.0
36 37 38 39 40 41 42 43 44 45	765 kV	V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-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	452 0 0 0 0 394 0 208 121 55 971	0 1076 2112 1157 734 0 1329 929 114 261 0	12.2 0.0 0.0 0.0 0.0 7.9 0.0 0.0 0.7 0.1 22.2	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2	12.2 -21.0 -41.0 -21.7 -28.5 7.9 -28.5 -7.2 0.1 -2.0 -2.2
36 37 38 39 40 41 42 43 44 45 46 47 48	- 765 kV - 400 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	452 0 0 0 0 394 0 208 121 55 971 69 21	0 1076 2112 1157 734 0 1329 929 114 261 0	12.2 0.0 0.0 0.0 0.0 7.9 0.0 0.0 0.7 0.1 22.2 0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 -0.1 -2.0 -22.2 -1 -0.3 -0.5
36 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 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	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 -0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.5
36 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	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.2
36 37 38 39 40 41 42 43 44 45 46 47 48	- 765 kV - 400 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	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	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 0.5 -0.2
36 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	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.2
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 3 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.0 1	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.5 -0.2 0.0 -123.9
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	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	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 0.5 -0.2
36 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 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	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 3 0 WR-NR	12.2 0.0 0.0 0.0 0.0 7.9 0.0 0.7 0.1 22.2 0 0.0 0.0 0.0 43.6	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.2 0.0 0.2 0.0	12.2 -21.0 -41.0 -21.7 -28.5 7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 -0.5 -0.2 0.0 -123.9
36 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 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 7.9 0.0 0.7 0.1 22.2 0 0.0 0.0 0.5 0.0 0.0 43.6	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.2 0.0 0.2 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 -0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.5 -0.2 -0.0 -123.9
36 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-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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	452 0 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.2 0.0 0.2 0.0 0.0 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 -0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.5 -0.2 -0.0 -123.9
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 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 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 0.2 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.2 0.0 0.2 0.0 0.2 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 0.5 -0.2 0.0 -123.9 -6.5 0.0 -5.1 -23.6 -7.6 0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	- 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-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANGHANT 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 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.2 0.0 167.5 6.5 0.0 5.1 23.6 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 -0.5 -0.2 0.0 -123.9 -6.5 0.0 -5.1 -23.6 -7.6 0.0 -0.8
36 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 - 220 kV - 132kV - 220 kV - 132kV - 765 kV - 400 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-RANPUR BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BHASWATI B/B BHASWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	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 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 0.2 28.5 7.2 0.0 1 0.3 0.5 0.0 0.0 0.2 0.0 167.5 6.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 0.5 -0.2 0.0 -123.9 -6.5 0.0 -5.1 -23.6 -7.6 0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 220 kV - 132kV - 765 kV - 400 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) BHANGHANT 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 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.2 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 -0.5 -0.2 0.0 -123.9 -6.5 0.0 -5.1 -23.6 -7.6 0.0 -0.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/F 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 220 kV - 132kV - 765 kV - 400 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-WARIYA 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 -0.5 -0.2 0.0 -123.9 -6.5 0.0 -5.1 -23.6 -7.6 0.0 -0.8 0.5
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58 59	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 220 kV - 132kV - 765 kV - 400 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA 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 KOLHAPUR-KUDGI KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI ZELDEM-AMBEWADI T BHUTAN	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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0 195 0 991 0 636 0 1	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 -0.1 -2.0 -22.2 -1 -0.3 -0.5 -0.5 -0.2 -0.0 -123.9 -6.5 -0.0 -5.1 -23.6 -7.6 -0.0 -0.8 -0.5 -27.9
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57 58 59	- 765 kV - 400 kV - 220 kV - 132kV - 220 kV - 132kV - 220 kV - 132kV - 765 kV - 400 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-WARIYA 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	452 0 0 0 0 394 0 208 121 55 971 69 21 14 54 18 0 195 0 991 0 636 0 1	0 1076 2112 1157 734 0 1329 929 114 261 0 195 34 61 3 30 0 WR-NR	12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 21.0 41.0 21.7 28.5 0.0 28.5 7.2 0.5 2.2 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 1 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	12.2 -21.0 -41.0 -21.7 -28.5 -7.9 -28.5 -7.2 0.1 -2.0 22.2 -1 -0.3 -0.5 -0.5 -0.2 0.0 -123.9 -6.5 0.0 -5.1 -23.6 -7.6 0.0 -0.8 0.5 -0.5 -0.5 -0.9