

# 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)
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बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 22<sup>nd</sup> Nov 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. 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 21.11.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 21-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 21<sup>st</sup> Nov 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 22-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)	43761	48568	39112	18595	2355	152391
Peak Shortage (MW)	510	0	0	0	56	566
Energy Met (MU)	877	1116	910	345	42	3290
Hydro Gen (MU)	127	46	97	47	11	328
Wind Gen (MU)	14	24	49			87
Solar Gen (MU)*	25.27	21.9	74.33	2.02	0.00	124
Energy Shortage (MU)	11.7	0.0	0.0	0.0	1.2	13.0
Maximum Demand Met during the day	44212	50584	41438	18585	2453	153793
(MW) & time (from NLDC SCADA)	18:27	11:05	18:53	18:00	18:07	18:27

C. Power Sup	ply Posit	tion in	States
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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	5266	0	104.4	39.9	-2.2	10	0.0
	Haryana	5877	0	116.7	104.2	0.8	157	0.0
	Rajasthan	11551	0	215.5	56.9	-0.3	537	0.0
	Delhi	3337	0	63.4	52.8	-1.0	123	0.0
NR	UP	14493	0	266.6	117.8	0.6	890	1.2
	Uttarakhand	1766	0	34.6	19.7	0.6	137	0.0
	HP	1580	0	27.9	20.1	-0.5	128	0.0
	J&K	2160	540	44.4	37.1	-0.1	201	10.5
	Chandigarh	195	0	3.4	3.3	0.0	23	0.0
	Chhattisgarh	3400	0	71.6	30.7	-0.3	255	0.0
	Gujarat	14953	0	326.4	83.0	3.3	500	0.0
	MP	12408	0	240.6	154.3	0.0	419	0.0
WR	Maharashtra	20265	0	433.4	136.1	-2.0	485	0.0
WK	Goa	602	0	13.0	12.6	-0.2	28	0.0
	DD	327	0	7.4	6.8	0.6	43	0.0
	DNH	796	0	18.4	18.3	0.1	50	0.0
	Essar steel	315	0	4.8	5.6	-0.8	295	0.0
	Andhra Pradesh	7829	0	168.6	72.2	0.3	410	0.0
	Telangana	9105	0	197.2	85.2	-0.4	405	0.0
SR	Karnataka	9565	0	186.2	37.6	0.3	546	0.0
310	Kerala	3481	0	71.6	49.9	1.7	301	0.0
	Tamil Nadu	13317	0	279.1	159.3	0.8	545	0.0
	Pondy	361	0	7.2	7.6	-0.5	29	0.0
	Bihar	4160	0	68.2	63.2	-1.7	260	0.0
	DVC	3079	0	63.7	-37.3	0.5	370	0.0
ER	Jharkhand	1204	0	24.3	17.1	-0.6	31	0.0
	Odisha	3944	0	74.8	8.8	0.1	415	0.0
	West Bengal	6410	0	112.6	30.7	1.9	510	0.0
	Sikkim	124	0	1.8	1.4	0.4	37	0.0
	Arunachal Pradesh	115	1	2.1	1.7	0.2	11	0.0
	Assam	1392	40	23.3	17.9	0.2	67	1.2
	Manipur	154	1	2.5	2.5	0.0	39	0.0
NER	Meghalaya	350	0	6.0	3.0	0.3	113	0.0
	Mizoram	101	1	2,2	0.8	0.1	24	0.0
	Nagaland	119	2	2.3	1.9	0.1	18	0.0
	Tripura	226	1	4.0	2.2	-0.1	47	0.0

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

<b>g</b> (****) <b>F</b> ***(****)							
	Bhutan	Nepal	Bangladesh				
Actual(MU)	11.9	-1.4	-13.4				
Day peak (MW)	842.5	-235.6	-791.0				

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	202.7	-194.8	102.1	-107.5	-2.2	0.3
Actual(MU)	219.3	-203.5	108.9	-114.1	-1.8	8.8
O/D/U/D(MU)	16.6	-8.7	6.8	-6.6	0.4	8.5

### F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	6123	16784	7522	2585	563	33578
State Sector	14428	17009	10173	5935	11	47556
Total	20551	33793	17695	8520	575	81134

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	434	1125	425	425	12	2420
Lignite	22	15	52	0	0	89
Hydro	127	46	97	47	11	328
Nuclear	28	28	55	0	0	111
Gas, Naptha & Diesel	21	61	15	0	25	123
RES (Wind, Solar, Biomass & Others)	61	50	164	2	0	278
Total	694	1325	808	473	49	3348
•						
Share of RES in total generation (%)	8.80	3.81	20.32	0.44	0.08	8.29
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	31.23	9.37	39.10	10.30	23.42	21.41

н	AII	India	Damand	Divorcity	Factor

111 111 India Bendad Biverbity Tuetor						
Based on Regional Max Demands	1.023					
Based on State Max Demands	1.068					

Diversity factor = Sum of regional or state-wise maximum demands / All India maximum demand

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

		<u>IN'</u>	TER-REGI	ONAL EXCH	ANGES	Date of l	Reporting :	22-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)	200		000			1
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	0	893 482	0.0	12.7 6.5	-12.7 -6.5
3	7001	GAYA-BALIA	S/C	0	472	0.0	7.9	-7.9
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5		PUSAULI B/B	S/C	0	196	0.0	4.9	-4.9
7	-	PUSAULI-VARANASI	S/C	0	138	0.0	2.4	-2.4 -2.2
8	-	PUSAULI -ALLAHABAD MUZAFFARPUR-GORAKHPUR	S/C D/C	0	142 1132	0.0	17.4	-2.2
9	400 kV	PATNA-BALIA	Q/C	0	1278	0.0	23.1	-23.1
10		BIHARSHARIFF-BALIA	D/C	0	481	0.0	7.6	-7.6
11		MOTIHARI-GORAKHPUR	D/C	3	7	0.0	0.0	0.0
12		BIHARSHARIFF-VARANASI	D/C	0	394	0.0	4.8	-4.8
13	220 kV	PUSAULI-SAHUPURI	S/C	0	93	0.0	1.4	-1.4
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.4	0.0	0.4
16		KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.0
17		KARMANASA-CHANDAULI	S/C	0	0 ER-NR	0.0 <b>0.4</b>	0.0	0.0 -90.5
Import/E	Export of	ER (With WR)			rk-NK	0.4	90.8	-90.5
	ZAPOL UI	<u> </u>	0/2	1250	0	20.0	0.0	20.0
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1359	0	20.0	0.0	20.0
19 20		NEW RANCHI-DHARAMJAIGARH	D/C	369	446	0.3	0.0	0.3
20	1	JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	D/C Q/C	84 99	170 245	0.0	1.3 0.9	-1.3 -0.9
22	400 kV	RANCHI-SIPAT	D/C	143	124	0.5	0.0	0.5
23	220 1-37	BUDHIPADAR-RAIGARH	S/C	0	115	0.0	1.9	-1.9
24	220 kV	BUDHIPADAR-KORBA	D/C	46	44	0.1	0.2	-0.1
					ER-WR	21.0	4.3	16.7
	· •	ER (With SR)						1
25		ANGUL-SRIKAKULAM	D/C	0.0	1847.0	0.0	37.9	-37.9
26	HVDC LINK	JEYPORE-GAZUWAKA B/B	D/C	0.0	739.0	0.0	12.7	-12.7
27	400 kV	TALCHER-KOLAR BIPOLE TALCHER-I/C	D/C D/C	0.0 546.0	2374.0 881.0	0.0	40.0	-40.0 -3.8
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
- 27	220 K V	D. ILLINIZZI I CI I ZX DIZZIXCO	D/ C	1.0	ER-SR	0.0	90.6	-90.6
Import/E	Export of	ER (With NER)						1
30	400 kV	BINAGURI-BONGAIGAON	D/C	280	8	4.4	0.0	4
31	400 KV	ALIPURDUAR-BONGAIGAON	D/C	371	0	6.6	0.0	7
32	220 kV	ALIPURDUAR-SALAKATI	D/C	36	0	0.6	0.0	1
					ER-NER	11.6	0.0	11.6
		NER (With NR)		270		0.2	0.0	1 02
33	HVDC	BISWANATH CHARIALI-AGRA	- 1	370	0 NER-NR	9.2 9.2	0.0	9.2
Import/F	Export of	WR (With NR)			NEK-NK	9.2	0.0	9.2
34				0	1504	0.0	29.7	-29.7
		CHAMPA-KURUKSHETRA	D/C					
35	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C D/C	452	0	7.2	0.0	7.2
35 36	HVDC			452 0	0 1364	7.2 0.0	0.0 32.4	7.2 -32.4
	HVDC	V'CHAL B/B	D/C					
36 37 38	HVDC	V'CHAL B/B APL -MHG	D/C D/C	0	1364	0.0	32.4	-32.4
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	0 0 0 618	1364 1847 1514 769	0.0 0.0 0.0 0.0	32.4 31.9 20.7 24.3	-32.4 -31.9 -20.7 -24.3
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	0 0 0 618 607	1364 1847 1514 769 0	0.0 0.0 0.0 0.0 9.6	32.4 31.9 20.7 24.3 0.0	-32.4 -31.9 -20.7 -24.3 9.6
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	0 0 0 618 607	1364 1847 1514 769 0 1355	0.0 0.0 0.0 0.0 9.6 0.0	32.4 31.9 20.7 24.3 0.0 27.9	-32.4 -31.9 -20.7 -24.3 9.6 -27.9
36 37 38 39 40 41 42		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 0 618 607 0 295	1364 1847 1514 769 0 1355 531	0.0 0.0 0.0 0.0 9.6 0.0	32.4 31.9 20.7 24.3 0.0 27.9 2.7	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7
36 37 38 39 40 41 42 43		V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATINA-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 S/C	0 0 0 618 607 0 295	1364 1847 1514 769 0 1355 531	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2
36 37 38 39 40 41 42 43 44		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	0 0 0 618 607 0 295 163 200	1364 1847 1514 769 0 1355 531 94 256	0.0 0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2 0.1
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	0 0 0 618 607 0 295 163 200 982	1364 1847 1514 769 0 1355 531 94 256 0	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2 0.1 22.4
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  V'CHAL -RIHAND  RAPP-SHUJALPUR	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	0 0 0 618 607 0 295 163 200	1364 1847 1514 769 0 1355 531 94 256 0 162	0.0 0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2 0.1
36 37 38 39 40 41 42 43 44 45	- 765 kV - 400 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	0 0 0 618 607 0 295 163 200 982 238	1364 1847 1514 769 0 1355 531 94 256 0	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2 0.1 22.4 -2
36 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 0 618 607 0 295 163 200 982 238 39	1364 1847 1514 769 0 1355 531 94 256 0 162 36	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4 0	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2	-32.4 -31.9 -20.7 -24.3 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1
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	0 0 0 618 607 0 295 163 200 982 238 39 55	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4 0 0.1	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 1.2 0.1 22.4 -2 -0.1 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	0 0 0 618 607 0 295 163 200 982 238 39 55	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.2	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 1.2 0.1 22.4 -2 -0.1 0.2 1.4
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	0 0 0 618 607 0 295 163 200 982 238 39 55 110	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.2	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2 0.1 22.4 -2 -0.1 0.2 1.4 0.3
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	765 kV 400 kV 220 kV 132kV	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-JURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)	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 0 618 607 0 295 163 200 982 238 39 55 110 56	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 172.7	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7
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	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 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 0.0 172.7	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3
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	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 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 172.7	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -128.7
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	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 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 9.6 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.0 0.0 172.7	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -128.7 -10.1 -0.0 -13.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>Import/F</b> 52 53	- 765 kV - 400 kV - 220 kV - 132kV - THYDC 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 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.0 0.0 172.7	-32.4 -31.9 -20.7 -24.3 9.6 -27.9 -2.7 1.2 0.1 22.4 -2 -0.1 0.2 1.4 0.3 0.0 -128.7
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	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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 13.8 43.4 0.0	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -0.0 -13.8 -43.4 -11.3
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Timport/F 52 53 54 55 56 57	- 765 kV - 400 kV - 220 kV - 132kV - THYDC LINK - 765 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-WORAK  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 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 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 172.7	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -10.0 -13.8 -43.4 -11.3 -0.0
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>Import/E</b> 52 53 54	- 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 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-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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 618 607 0 295 163 200 982 238 39 55 110 6 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 1.1 22.4 0 0.1 0.4 1.4 0.3 0.0 44.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	32.4 31.9 20.7 24.3 0.0 27.9 2.7 0.2 1.1 0.0 2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 13.8 43.4 0.0	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -10.1 -13.8 -43.4 -11.3
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>Import/F</b> 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 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-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	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 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	32.4 31.9 20.7 24.3 0.0 27.9 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 13.8 43.4 0.0 0.0 1.6 0.0 0.0 1.6 0.0 1.6 0.0 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -13.8 -43.4 -11.3 -0.0 -1.6 -1.7
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>Import/F</b> 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 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-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHANPURA-ILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	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 S	0 0 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	32.4 31.9 20.7 24.3 0.0 27.9 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 13.8 43.4 0.0 0.0 1.6	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -13.8 -43.4 -11.3 -0.0 -1.6
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 S2 53 54 55 56 57 58 59	- 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 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-WARAI  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  TI	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 S	0 0 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	32.4 31.9 20.7 24.3 0.0 27.9 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 13.8 43.4 0.0 0.0 1.6 0.0 0.0 1.6 0.0 1.6 0.0 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -13.8 -43.4 -11.3 -0.0 -1.6 -1.7 -55.8
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 <b>Import/F</b> 52 53 54 55 56 57 58	- 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 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-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHANPURA-ILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	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 S	0 0 0 618 607 0 295 163 200 982 238 39 55 110 56 0	1364 1847 1514 769 0 1355 531 94 256 0 162 36 54 0 13 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	32.4 31.9 20.7 24.3 0.0 27.9 0.2 1.1 0.0 2 0.2 0.2 0.2 0.0 0.0 172.7 10.1 0.0 13.8 43.4 0.0 0.0 1.6 0.0 0.0 1.6 0.0 1.6 0.0 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-32.4 -31.9 -20.7 -24.3 -9.6 -27.9 -2.7 -1.2 -0.1 -22.4 -2 -0.1 -0.2 -1.4 -0.3 -0.0 -128.7 -10.1 -13.8 -43.4 -11.3 -0.0 -1.6 -1.7