

# 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, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 25<sup>th</sup> Sept 2018

To,

- कार्यकारी निदेशक, पू.क्षे.भा.प्रे.के.,14, गोल्फ क्लब रोड, कोलकाता 700033
   Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, Kolkata, 700033
- 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 24.09.2018.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 24-सितंबर-2018 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 24<sup>th</sup> September 2018, 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 25-Sep-18

### A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 2000 hrs; from RLDCs)	41955	50097	43423	20080	2591	158146
Peak Shortage (MW)	719	0	253	1507	114	2593
Energy Met (MU)	872	1155	955	455	48	3485
Hydro Gen (MU)	309	57	111	109	25	611
Wind Gen (MU)	6	53	18			78
Solar Gen (MU)*	19.67	18.5	54.53	0.99	0.02	94
Energy Shortage (MU)	10.0	0.0	0.7	4.5	1.3	16.6
Maximum Demand Met during the day	43222	52852	43449	21444	2663	159347
(MW) & time (from NLDC SCADA)	19:32	18:39	18:54	20:50	19:04	18:39

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 0.090 1.90 20.57 74.81 2.60 16.06 4.62

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	4364	0	104.5	67.5	-1.6	181	0.0
	Haryana	5571	3	96.3	84.7	1.3	331	0.9
	Rajasthan	8496	0	181.5	48.5	0.3	618	0.0
	Delhi	4188	0	86.0	64.9	-1.9	46	0.0
NR	UP	14836	30	302.6	149.2	-0.5	364	0.0
	Uttarakhand	1925	0	34.1	23.8	0.6	547	0.4
	HP	1304	0	25.6	6.2	-2.7	52	0.0
	J&K	1966	491	37.9	25.5	-8.7	169	8.8
	Chandigarh	182	0	3.5	5.3	-1.8	33	0.0
	Chhattisgarh	4072	0	91.6	23.5	-1.3	188	0.0
Guj MP Mal Goa DD DNI	Gujarat	16625	0	360.4	109.8	7.5	699	0.0
	MP	8692	0	181.4	72.6	1.3	1029	0.0
	Maharashtra	22088	0	472.3	146.5	5.5	1054	0.0
	Goa	460	0	12.2	9.1	0.0	66	0.0
	DD	320	0	7.1	6.1	0.9	109	0.0
	DNH	790	0	18.5	17.4	1.1	175	0.0
	Essar steel	607	0	11.9	11.9	0.0	247	0.0
	Andhra Pradesh	7935	0	176.2	40.3	2.8	450	0.0
	Telangana	9752	0	208.6	96.2	5.6	646	0.0
SR	Karnataka	9446	0	193.6	43.5	0.9	831	0.0
эĸ	Kerala	3465	150	69.1	42.8	0.7	265	0.6
	Tamil Nadu	14106	0	299.8	159.3	2.7	756	0.0
	Pondy	340	20	7.5	7.1	0.4	52	0.1
	Bihar	4984	0	94.3	88.8	5.0	345	2.7
	DVC	2885	0	63.1	-15.9	3.5	402	1.3
ER	Jharkhand	1092	182	24.5	16.3	1.3	198	0.6
EK	Odisha	5007	0	105.0	36.5	5.9	385	0.0
	West Bengal	8582	0	167.1	68.5	1.9	445	0.0
	Sikkim	92	0	1.2	1.1	0.1	20	0.0
	Arunachal Pradesh	130	3	2.3	2.7	-0.4	54	0.0
	Assam	1642	90	29.7	24.0	-0.2	136	1.2
	Manipur	158	13	2.2	2.7	-0.5	28	0.0
NER	Meghalaya	280	3	5.0	2.0	-0.4	55	0.0
	Mizoram	58	5	1.6	1.2	0.0	2	0.0
	Nagaland	112	5	2.1	1.9	-0.1	17	0.0
	Tripura	273	8	4.6	4.7	-0.4	74	0.1

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	25.0	-4.9	-22.3
Day peak (MW)	1299.3	-228.0	-962.5

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	120.3	-177.3	61.2	-7.0	2.6	-0.1
Actual(MU)	90.0	-174.7	75.3	9.9	-1.6	-1.0
O/D/U/D(MU)	-30.3	2.6	14.1	16.9	-4.2	-0.9

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4114	14565	6442	1620	368	27109
State Sector	14430	13938	5540	6725	50	40683
Total	18544	28503	11982	8345	418	67792

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	419	1133	622	360	4	2537
Hydro	309	57	111	109	25	611
Nuclear	23	27	19	0	0	69
Gas, Naptha & Diesel	23	54	25	0	24	126
RES (Wind, Solar, Biomass & Others)	45	72	111	1	0	230
Total	818	1344	888	470	53	3573
Share of RES in total generation (%)	5.48	5.39	12.52	0.22	0.07	6.43
Share of Non-fossil fuel (Hydro Nuclear and						

Share of RES in total generation (%)	5.48	5.39	12.52	0.22	0.07	6.43
Share of Non-fossil fuel (Hydro, Nuclear and	46.00	11.69	27 17	23.47	47.46	25.48
RES) in total generation (%)	40.00	11.09	27.17	23.47	47.40	25.46

H. Diversity Factor All India Demand Diversity Factor

Diversity factor = Sum of regional maximum demands / All India maximum demand

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

		INTE	<u>K-KEGI</u>	ONAL EXO	CHANGES	Date of I	Reporting :	25-Sep-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 l	ER (With NR)	2.0	1	_			
2	765kV	GAYA-VARANASI	D/C S/C	491	0	7.4 10.3	0.0	7.4
3	703KV	SASARAM-FATEHPUR GAYA-BALIA	S/C	565 62	204	1.3	0.0	10.3
4	www.c	ALIPURDUAR-AGRA	-	0	1199	0.0	27.6	-27.6
5	HVDC	PUSAULI B/B	S/C	0	398	0.0	9.9	-9.9
6		PUSAULI-VARANASI	S/C	0	349	0.0	7.8	-7.8
7		PUSAULI -ALLAHABAD	S/C	0	116	0.0	1.9	-1.9
8	400 1-37	MUZAFFARPUR-GORAKHPUR	D/C	205	264	0.0	0.2	-0.2
9	400 kV	PATNA-BALIA	Q/C D/C	61 146	364 69	0.0 1.7	5.1 0.0	-5.1 1.7
10		BIHARSHARIFF-BALIA MOTIHARI-GORAKHPUR	D/C	313	0	5.7	0.0	5.7
12		BIHARSHARIFF-VARANASI	D/C	452	0	7.0	0.0	7.0
13	220 kV	PUSAULI-SAHUPURI	S/C	0	201	0.0	4.0	-4.0
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	122 1-37	GARWAH-RIHAND	S/C	35	0	0.6	0.0	0.6
16	132 kV	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
nnort/E	vnort of 1	ER (With WR)			ER-NR	34.0	56.6	-22.5
18	Ĺ	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	1764	0	35.0	0.0	35.0
	765 kV							
19 20	1	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-RAIGARH	D/C Q/C	1013 1296	0	16.7 23.2	0.0	16.7 23.2
21	400 kV	RANCHI-SIPAT	D/C	527	0	8.7	0.0	8.7
22	****	BUDHIPADAR-RAIGARH	S/C	0	1	0.0	0.0	0.0
23	220 kV	BUDHIPADAR-KORBA	D/C	269	0	4.9	0.0	4.9
	·	ED (Wid. CD)			ER-WR	88.4	0.0	88.4
24	765 kV	ER (With SR) ANGUL-SRIKAKULAM	D/C	0.0	1450.0	0.0	24.3	-24.3
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	469.0	0.0	11.2	-11.2
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1897.0	0.0	41.2	-41.2
27	400 kV	TALCHER-I/C	D/C	0.0	990.0	0.0	13.0	-13.0
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0	0.0	0.0	0.0
	·	ER (With NER)			ER-SR	0.0	76.6	-76.6
29	xport of	BINAGURI-BONGAIGAON	D/C	0	778	0.0	11.6	-12
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	145	592	0.0	0.3	0
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	164	0.0	2.0	-2
	220 111	TEM ORDONAL GREATHER			ER-NER	0.0	13.9	-13.9
	_	NER (With NR)						
32	HVDC	BISWANATH CHARIALI-AGRA	-	0	812	0.0	17.2	-17.2
mport/F	export of V	WR (With NR)			NER-NR	0.0	17.2	-17.2
33	Aport or	(VIIII III)	1	0	1300	0.0	6.0	-6.0
		CHAMPA-KURUKSHETRA	D/C					6.0
34	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B	D/C D/C	241	0	6.0	0.0	0.0
	HVDC		+			6.0 0.0	20.5	-20.5
34	HVDC	V'CHAL B/B	D/C	241	0			
34 35	HVDC	V'CHAL B/B APL -MHG	D/C D/C	241	0 1454	0.0	20.5	-20.5
34 35 36	HVDC 765 kV	VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI	D/C D/C D/C D/C D/C D/C	241 0 0 0 0 198	0 1454 791 853 338	0.0 0.0 0.0 0.0	20.5 19.6 10.4 2.6	-20.5 -19.6 -10.4 -2.6
34 35 36 37 38 39		VCHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI	D/C D/C D/C D/C D/C S/C	241 0 0 0 0 198 406	0 1454 791 853 338 0	0.0 0.0 0.0 0.0 6.2	20.5 19.6 10.4 2.6 0.0	-20.5 -19.6 -10.4 -2.6 6.2
34 35 36 37 38 39 40		VCHAL 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	241 0 0 0 198 406	0 1454 791 853 338 0 1583	0.0 0.0 0.0 0.0 6.2 0.0	20.5 19.6 10.4 2.6 0.0 31.6	-20.5 -19.6 -10.4 -2.6 6.2 -31.6
34 35 36 37 38 39 40 41		VCHAL B/B APL -MHG GWALIOR -AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI	D/C D/C D/C D/C D/C D/C S/C S/C S/C	241 0 0 0 198 406 0 417	0 1454 791 853 338 0 1583 6	0.0 0.0 0.0 0.0 6.2 0.0 7.6	20.5 19.6 10.4 2.6 0.0 31.6 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6
34 35 36 37 38 39 40 41 42		VCHAL B/B APL -MHG GWALIOR -AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C D/C S/C S/C S/C S/C	241 0 0 0 198 406 0 417 259	0 1454 791 853 338 0 1583 6	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0	20.5 19.6 10.4 2.6 0.0 31.6 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0
34 35 36 37 38 39 40 41 42 43	765 kV	VCHAL B/B  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 D/C S/C S/C S/C S/C S/C S/C	241 0 0 0 198 406 0 417 259 482	0 1454 791 853 338 0 1583 6 61	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0 9.7
34 35 36 37 38 39 40 41 42 43 44	765 kV	VCHAL B/B 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 D/C D/C S/C S/C S/C S/C S/C D/C	241 0 0 0 198 406 0 417 259 482 253	0 1454 791 853 338 0 1583 6 6 61	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0 9.7
34 35 36 37 38 39 40 41 42 43 44 45	765 kV	VCHAL B/B  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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 198 406 0 417 259 482 253 98	0 1454 791 853 338 0 1583 6 61 0	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0
34 35 36 37 38 39 40 41 42 43 44	765 kV	VCHAL B/B  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 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	241 0 0 0 198 406 0 417 259 482 253	0 1454 791 853 338 0 1583 6 6 61	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0 9.7 -1
34 35 36 37 38 39 40 41 42 43 44 45 46	765 kV	VCHAL B/B  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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 198 406 0 417 259 482 253 98 39	0 1454 791 853 338 0 1583 6 61 0 122	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0 9.7 -1 1.0 0.3
34 35 36 37 38 39 40 41 42 43 44 45 46 47	765 kV	VCHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -BHIAND  RAPP-SHUJALPUR  BADOD-MORAK  MEHGAON-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	241 0 0 0 198 406 0 417 259 482 253 98 39 68	0 1454 791 853 338 0 1583 6 61 0 122 0	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1 0.0 0.1	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0 9.7 -1 1.0 0.3 0.8
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV - 400 kV - 220 kV	VCHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  JABAL-PUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR	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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1 0.0 0.1 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0 -0.3 -0.8 -0.2
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV 400 kV 220 kV 132kV	VCHAL B/B  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)	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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 1 0.0 0.1 0.0 0.0 0.1 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0 -0.3 -0.8 -0.2 -0.0 -55.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV 400 kV 220 kV 132kV Export of V	VCHAL B/B  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  VR (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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1 0.0 0.1 0.0 0.0 91.8	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0 -0.3 -0.8 -0.2 -0.0 -55.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV 400 kV 220 kV 132kV	VCHAL B/B  APL -MHG  GWALIOR -AGRA  PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-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	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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 91.8	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -4.0 -9.7 -1 -1.0 -0.3 -0.8 -0.2 -0.0 -555.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	765 kV 400 kV 220 kV 132kV Export of V	VCHAL B/B  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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0 -0.3 -0.8 -0.2 -0.0 -55.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 15 50 51 52 53	765 kV  400 kV  220 kV  132kV  Export of V  HVDC LINK  765 kV	VCHAL B/B  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 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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0 -0.3 -55.9 -21.7 -0.0 -0.9 -25.6
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 15 15 15 15 15 15 15 15 15 15	765 kV 400 kV 220 kV 132kV Export of V HVDC LINK	VCHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  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 D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C S/C 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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 -9.7 -1 -1.0 -0.3 -0.8 -0.2 -0.0 -55.9 -21.7 -0.0 -0.9 -25.6 -15.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 9 50 51 52 53	765 kV  400 kV  220 kV  132kV  Export of V  HVDC LINK  765 kV	VCHAL B/B  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 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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 6.2 -31.6 7.6 4.0 9.7 -1 1.0 0.3 0.8 0.2 0.0 -55.9
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 15 15 15 15 15 15 15 15 15 15	765 kV 400 kV 220 kV 132kV Export of V HVDC LINK 765 kV 400 kV	VCHAL B/B  APL -MHG  GWALIOR-AGRA PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C D/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 4.0 9.7 -1 1.0 0.3 0.8 0.2 0.0 -55.9 -21.7 0.0 -0.9 -25.6 15.9 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 <b>Au Au A</b>	765 kV 400 kV 220 kV 132kV Export of V HVDC LINK 765 kV 400 kV	VCHAL B/B  APL -MHG  GWALIOR-AGRA PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  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  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 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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0 0 0 1014 0 1	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 15 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9 0.0 0.0 1.0 0.0 1.0 0.0	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 9.7 -1 1.0 0.3 0.8 0.2 0.0 -55.9  -21.7 0.0 -0.9 -25.6 15.9 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 50 51 52 53 54 55 56	765 kV 400 kV 220 kV 132kV Export of V HVDC LINK 765 kV 400 kV	VCHAL B/B  APL -MHG  GWALIOR-AGRA PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  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-LSILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI  XELIOR-SAWAI MADHOPUR	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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0 0 0 1014 0 1	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 155 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9 0.0 0.0 1.0 0.0 1.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 9.7 -1 1.0 0.3 0.8 0.2 0.0 -55.9  -21.7 0.0 -0.9 -25.6 15.9 0.0 0.0
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 49 50 51 52 53 54 55 56	765 kV 400 kV 220 kV 132kV Export of V HVDC LINK 765 kV 400 kV	VCHAL B/B  APL -MHG  GWALIOR-AGRA PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  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-LSILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI  XELIOR-SAWAI MADHOPUR	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	241 0 0 0 198 406 0 417 259 482 253 98 39 68 38 0 0 0 1014 0 1	0 1454 791 853 338 0 1583 6 61 0 122 0 29 0 155 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 6.2 0.0 7.6 4.0 9.7 0 1.0 0.4 0.8 0.2 0.0 35.9 0.0 0.0 1.0 0.0 1.9	20.5 19.6 10.4 2.6 0.0 31.6 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	-20.5 -19.6 -10.4 -2.6 -6.2 -31.6 -7.6 -4.0 9,7 -1 1.0 0.3 0.8 0.2 0.0 -55.9  -21.7 0.0 -0.9 -25.6 15.9 0.0 0.0