

## 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: 11<sup>th</sup> August 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
- 2. महाप्रबंधक, ऊ. क्षे. भा. प्रे. के., 18/ ए , शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 General Manager, 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. महाप्रबंधक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 General Manager, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 10.08.2018.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 10-अगस्त-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 10<sup>th</sup> August 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** 11-Aug-18

#### A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 2000 hrs; from RLDCs)	55802	47389	41116	21271	2702	168279
Peak Shortage (MW)	1682	0	0	0	149	1831
Energy Met (MU)	1282	1107	952	466	54	3860
Hydro Gen (MU)	289	21	139	112	24	586
Wind Gen (MU)	22	115	235			371
Solar Gen (MU)*	19.19	12.43	42.11	0.64	0.02	74
Energy Shortage (MU)	12.0	0.0	0.7	0.0	1.2	13.8
Maximum Demand Met during the day	58584	49669	42875	21847	2718	170273
(MW) & time (from NLDC SCADA)	22:59	11:49	07:28	21:21	18:41	19:58

B. Frequency Profile (%)

Region	FVI	<49.7	49.7-49.8	49.8-49.9	<49.9	49.9-50.05	> 50.05
All India	0.058	0.00	1.84	16.04	17.88	79.66	2.45

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	10682	0	241.3	132.0	-0.4	77	0.0
	Haryana	8877	0	188.4	140.8	0.1	170	0.0
	Rajasthan	10685	0	228.2	57.5	2.0	350	0.0
	Delhi	5731	0	120.7	99.3	-1.7	129	0.0
NR	UP	17965	0	391.0	190.6	0.7	499	0.0
	Uttarakhand	1821	75	38.6	19.8	1.5	142	2.5
	HP	1319	0	28.6	-4.9	5.0	540	0.0
	J&K	2001	500	39.8	18.1	-3.7	255	9.5
	Chandigarh	292	0	5.7	6.0	-0.3	28	0.0
	Chhattisgarh	3723	0	86.4	20.7	-1.4	614	0.0
	Gujarat	15922	0	353.4	94.3	1.6	748	0.0
	MP	7993	0	179.0	69.3	-1.6	350	0.0
WR	Maharashtra	20485	0	443.3	116.3	-1.9	556	0.0
WK	Goa	444	0	9.5	10.1	-1.2	57	0.0
	DD	341	0	7.6	6.6	1.0	108	0.0
	DNH	776	0	18.1	17.3	0.8	102	0.0
	Essar steel	525	0	9.2	8.8	0.4	289	0.0
	Andhra Pradesh	7862	0	176.1	10.5	-1.1	541	0.0
	Telangana	9649	0	201.5	97.0	0.9	459	0.0
SR	Karnataka	9464	0	189.3	42.6	0.2	439	0.0
311	Kerala	3198	0	63.2	23.9	0.3	235	0.7
	Tamil Nadu	14273	0	314.5	86.8	-2.0	424	0.0
	Pondy	354	0	7.6	7.6	0.0	36	0.0
	Bihar	4624	0	93.0	90.4	2.6	250	0.0
	DVC	2934	0	66.2	-24.7	2.6	270	0.0
ER	Jharkhand	1068	0	24.3	19.0	0.0	90	0.0
LIN	Odisha	5227	0	108.5	55.9	2.0	450	0.0
	West Bengal	8667	0	172.5	59.4	3.9	500	0.0
	Sikkim	87	0	1.1	1.6	-0.5	15	0.0
	Arunachal Pradesh	119	3	2.3	2.6	-0.3	0	0.0
	Assam	1733	106	34.7	28.1	2.2	185	1.0
	Manipur	172	3	2.3	2.4	-0.1	21	0.0
NER	Meghalaya	313	0	5.8	1.1	-0.2	25	0.0
	Mizoram	78	4	1.5	0.9	0.2	11	0.0
	Nagaland	118	3	2.5	1.9	0.2	26	0.0
	Tripura	271	2	4.5	5.1	-0.2	49	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	33.3	-6.3	-15.3
Day peak (MW)	1557.2	-325.3	-678.2

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	266.9	-234.5	15.2	-45.6	-1.9	0.1
Actual(MU)	269.9	-234.5	9.1	-39.3	-2.6	2.6
O/D/U/D(MU)	2.9	0.0	-6.0	6.3	-0.7	2.5

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5950	16323	10432	1715	113	34533
State Sector	6695	13976	10680	7435	50	38835
Total	12644	30299	21112	9150	163	73368

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	642	1155	455	410	11	2672
Hydro	289	21	139	112	24	586
Nuclear	27	28	24	0	0	79
Gas, Naptha & Diesel	28	44	25	0	25	121
RES (Wind, Solar, Biomass & Others)	54	127	331	1	0	513
Total	1041	1375	974	523	59	3972

Share of RES in total generation (%)	5.21	9.24	34.03	0.13	0.07	12.93
Share of Non-fossil fuel (Hydro, Nuclear and	35.65	12.78	50.79	21.60	40.90	29.67
RES) in total generation (%)	33.03	12.76	50.79	21.00	40.90	29.07

H. Diversity Factor
All India Demand Diversity Factor
1.032
Diversity factor = Sum of regional maximum demands / All India maximum demand

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

						Date of I	Reporting :	11-Aug-
								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		255	0.0		T
2	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	0 224	366 34	0.0 1.8	7.4	-7.4 1.8
3	7038 1	GAYA-BALIA	S/C	0	382	0.0	8.5	-8.5
4	HVDC	ALIPURDUAR-AGRA	-	0	591	0.0	12.6	-12.6
5	HVDC	PUSAULI B/B	S/C	0	200	0.0	3.4	-3.4
6	_	PUSAULI-VARANASI	S/C	0	68	0.0	0.0	0.0
7	1	PUSAULI -ALLAHABAD	S/C	0	87	0.0	0.0	0.0
9	400 PA	MUZAFFARPUR-GORAKHPUR PATNA-BALIA	D/C O/C	0	814 966	0.0	15.0	-15.0 -18.9
10	400 KV	BIHARSHARIFF-BALIA	D/C	0	292	0.0	5.5	-5.5
11	1	MOTIHARI-GORAKHPUR	D/C	119	0	5.3	0.0	5.3
12	1	BIHARSHARIFF-VARANASI	D/C	777	283	0.0	1.4	-1.4
13	220 kV	PUSAULI-SAHUPURI	S/C	0	130	0.0	3.7	-3.7
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	35	0	0.7	0.0	0.7
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
port/E	Export of	ER (With WR)			ER-NR	7.8	76.3	-68.5
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	875	0	15.0	0.0	15.0
19	ļ	NEW RANCHI-DHARAMJAIGARH	D/C	993	0	15.2	0.0	15.2
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	1129	0	19.7	0.0	19.7
21	<u> </u>	RANCHI-SIPAT	D/C S/C	484 209	0	8.6 3.4	0.0	8.6 3.4
23	220 kV	BUDHIPADAR-RAIGARH BUDHIPADAR-KORBA	D/C	209	0	4.0	0.0	4.0
		I	D/C	202	ER-WR	66.0	0.0	66.0
	<u> </u>	ER (With SR)			40000		4.50	1
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1329.8	0.0	16.2	-16.2
25 26	HVDC LINK	JEYPORE-GAZUWAKA B/B TALCHER-KOLAR BIPOLE	D/C D/C	0.0	414.1 1779.0	0.0	9.9	-9.9 -28.3
27	400 kV	TALCHER-I/C	D/C	971.8	0.6	0.0	15.3	-15.3
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	0.0	0.0	0.0	0.0	0.0
					ER-SR	0.0	54.4	-54.4
<b>1port/l</b> 29	Export of	ER (With NER)	D/C	0	505	0.0	7.8	-8
30	400 kV	BINAGURI-BONGAIGAON ALIPURDUAR-BONGAIGAON	D/C	106	308	0.0	3.2	-3
31	220 kV	ALIPURDUAR-SALAKATI	D/C	0	126	0.0	2.0	-2
		NED (W.d. ND)			ER-NER	0.0	13.0	-13.0
32		NER (With NR) BISWANATH CHARIALI-AGRA	_	0	700	0.0	17.1	-17.1
					NER-NR	0.0	17.1	-17.1
iport/I	Export of	WR (With NR)						
33		CHAMPA-KURUKSHETRA	D/C	0	0	0.0	40.2	-40.2
		CHI II I	D/C					
34	HVDC	V'CHAL B/B	D/C	0	0	6.0	0.0	6.0
35	HVDC	V'CHAL B/B APL -MHG	D/C D/C	0	0	0.0	42.5	-42.5
35 36	HVDC	V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0	0	0.0	42.5 58.9	-42.5 -58.9
35 36 37		V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 0 0	0 0 0	0.0 0.0 0.0	42.5 58.9 29.0	-42.5 -58.9 -29.0
35 36 37 38	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	0 0 0	0 0 0 0	0.0 0.0 0.0 0.0	42.5 58.9 29.0 27.1	-42.5 -58.9 -29.0 -27.1
35 36 37 38 39		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 0 0 0	0.0 0.0 0.0 0.0 8.9	42.5 58.9 29.0 27.1 0.0	-42.5 -58.9 -29.0 -27.1 8.9
35 36 37 38		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	0 0 0	0 0 0 0	0.0 0.0 0.0 0.0	42.5 58.9 29.0 27.1	-42.5 -58.9 -29.0 -27.1
35 36 37 38 39 40	765 kV	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 S/C	0 0 0 0 0	0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0	42.5 58.9 29.0 27.1 0.0 37.2	-42.5 -58.9 -29.0 -27.1 8.9 -37.2
35 36 37 38 39 40 41		V'CHAL 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 S/C S/C S/C	0 0 0 0 0 0	0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8	42.5 58.9 29.0 27.1 0.0 37.2 0.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8
35 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  ZERDA-KANKROLI  ZERDA -BHINMAL	D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4	42.5 58.9 29.0 27.1 0.0 37.2 0.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4
35 36 37 38 39 40 41 42 43	765 kV	V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  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	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4
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  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	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4 -2
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-RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  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	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4 -2 -0.5 -1.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48	765 kV 400 kV - 220 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	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 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4 -2 -0.5 -1.0 0.3
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-RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  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	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4 -2 -0.5 -1.0
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  JABALPUR-ORAI  GWALIOR-ORAI  SATNA-ORAI  ZERDA-KANKROLI  ZERDA -BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-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 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0	-42.5 -58.9 -29.0 -27.1 -37.2 -2.8 -1.4 -2.4 -2.1 -0.5 -1.0 -0.3 -0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	765 kV  400 kV  220 kV  132kV  Export of HVDC	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	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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 4.9	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0	-42.5 -58.9 -29.0 -27.1 -37.2 -2.8 -1.4 -2.4 -2.1 -0.5 -1.0 -0.3 -0.0
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)  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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0 0.0 2 38.5	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4 -2 -0.5 -1.0 0.3 0.0 -195.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 <b>port/I</b> 50 51 52	765 kV  400 kV  220 kV  132kV  Export of HVDC	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	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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0 0.0 238.5	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -1.4 -22.4 -2 -0.5 -1.0 0.3 -0.0 -195.5 -2.2 -0.0 -13.7
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 <b>port/</b> <i>I</i> 50 51 52 53	765 kV  400 kV  220 kV  132kV  Export of 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 43.0 4.9 0.0 13.7 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0 0.0 2 2 0.5 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -2.4 -2.4 -2.5 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 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  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 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 4.0 0.4 0.0 43.0 4.9 0.0 13.7 0.0 13.7	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0 0.0 2 2 0.0 0.0 0.0	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -1.4 -2.4 -2 -0.5 -1.0 0.3 0.0 -195.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 50 51 52 53 54 55	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  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI	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 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0 4.9 0.0 13.7 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 2 0.5 1.0 0.0 0.0 0.0 238.5 2.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -1.4 -2.4 -2 -0.5 -1.0 -1.0 -1.95.5 -1.0 -1.95.5
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 49 50 51 51 52 53 54 55 56	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  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 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0 4.9 0.0 13.7 0.0 0.0 13.7 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-42.5 -58.9 -29.0 -27.1 8.9 -37.2 2.8 1.4 22.4 -2 -0.5 -1.0 0.3 0.0 -195.5  2.2 0.0 13.7 -19.4 13.7 0.0 0.0
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 49 50 51 52 53 54 55	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  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI	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 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0 4.9 0.0 13.7 0.0 13.7 0.0 0.0 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -1.4 -22.4 -2.5 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0
35 36 37 38 39 40 41 42 44 44 45 46 47 48 49 <b>port/I</b> 52 53 54 55 56	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  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0 4.9 0.0 13.7 0.0 0.0 13.7 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -1.4 -22.4 -0.5 -1.0 -1.0 -1.95.5 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0
35 36 37 38 39 40 41 42 44 44 45 46 47 48 49 <b>port/I</b> 52 53 54 55 56	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  SATNA-ORAI  ZERDA-KANKROLI  ZERDA-BHINMAL  VCHAL -RIHAND  RAPP-SHUJALPUR  BADOD-KOTA  BADOD-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD  KOLHAPUR-KUDGI  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.0 0.0 0.0 0.0 8.9 0.0 2.8 1.4 22.4 0 0.1 0.0 1.0 0.4 0.0 43.0 4.9 0.0 13.7 0.0 13.7 0.0 0.0 0.0	42.5 58.9 29.0 27.1 0.0 37.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-42.5 -58.9 -29.0 -27.1 -8.9 -37.2 -2.8 -1.4 -22.4 -0.5 -1.0 -1.0 -1.95.5 -1.0 -1.0 -1.1 -1.0 -1.1 -1.0 -1.1 -1.0 -1.0