

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED

पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम)

B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016 बी-9, क़ुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 16th May 2018

To,

- 1. 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 15.05.2018.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 15-मई-2018 की अखिल भारतीय प्रणाली की दैनिक ग्रिड निष्पादन रिपोर्ट रा०भा०प्रे०के० 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 15th May 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

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 2000 hrs; from RLDCs)	46957	47911	40033	19788	1991	156680
Peak Shortage (MW)	699	71	0	0	420	1190
Energy Met (MU)	1072	1169	888	398	38	3564
Hydro Gen (MU)	186	42	53	57	14	351
Wind Gen (MU)	18	63	17			98
Solar Gen (MU)*	17.87	19.64	48.56	0.88	0.02	87
Energy Shortage (MU)	13.3	0.0	0.0	0.0	2.4	15.7
Maximum Demand Met during the day	49720	53055	41351	20199	1921	159026
(MW) & time (from NLDC SCADA)	22:21	15:29	19:31	20:40	20:09	19:57

B. Frequency Profile (%)

2011040000 110000	(/ 0)						
Region	FVI	<49.7	49.7-49.8	49.8-49.9	<49.9	49.9-50.05	> 50.05
All India	0.061	0.00	1.47	18.04	19.51	78.60	1.89

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	7152	0	155.8	77.1	-2.2	96	0.0
	Haryana	6852	190	139.1	76.5	3.7	306	0.9
	Rajasthan	9966	0	222.1	73.3	2.2	623	0.1
	Delhi	5289	0	105.9	84.1	-0.3	169	0.0
NR	UP	16573	0	336.1	161.6	3.0	547	0.0
	Uttarakhand	2016	0	39.4	19.9	1.4	345	1.7
	HP	1320	3	25.3	9.2	3.6	332	0.5
	J&K	2094	523	42.8	24.1	-0.7	282	10.1
	Chandigarh	257	0	5.0	4.9	0.1	47	0.0
	Chhattisgarh	3613	0	75.7	12.8	-0.7	142	0.0
	Gujarat	15891	0	353.2	148.2	3.5	703	0.0
	MP	8462	0	189.7	105.3	-1.8	344	0.0
NA/D	Maharashtra	23529	7	511.1	159.6	1.5	341	0.0
WR	Goa	544	0	10.9	10.7	-0.3	56	0.0
	DD	333	0	7.5	6.2	1.3	90	0.0
	DNH	762	0	17.8	17.4	0.4	52	0.0
	Essar steel	185	0	3.3	3.3	0.0	123	0.0
	Andhra Pradesh	8067	0	165.5	55.4	0.4	356	0.0
	Telangana	6736	0	134.5	40.7	-0.6	353	0.0
CD	Karnataka	8309	0	175.3	68.8	-1.8	441	0.0
SR	Kerala	3711	0	74.0	51.3	0.8	192	0.0
	Tamil Nadu	15039	0	330.7	184.0	1.1	444	0.0
	Pondy	382	0	8.3	8.4	-0.2	29	0.0
	Bihar	4566	0	78.1	77.0	-0.2	250	0.0
	DVC	2931	0	68.6	-52.6	4.4	400	0.0
ER	Jharkhand	1182	0	24.6	19.5	0.5	150	0.0
EK	Odisha	4086	0	76.7	30.0	-1.9	300	0.0
	West Bengal	7781	0	148.4	39.4	2.4	400	0.0
	Sikkim	90	0	1.2	0.9	0.3	35	0.0
	Arunachal Pradesh	109	6	1.5	1.9	-0.4	16	0.0
	Assam	1530	55	21.7	17.8	0.9	154	2.1
	Manipur	143	9	2.4	1.9	0.5	22	0.0
NER	Meghalaya	245	50	4.2	1.9	-0.1	58	0.0
	Mizoram	79	6	1.7	0.9	0.4	5	0.0
	Nagaland	111	23	1.8	1.7	0.1	29	0.0
	Tripura	198	10	4.5	2.6	1.4	58	0.3

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	7.9	-6.4	-14.4
Day peak (MW)	422.7	-467.5	-666.2

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	217.7	-206.6	71.7	-79.7	-3.0	0.0
Actual(MU)	225.6	-213.4	63.4	-74.5	-2.4	-1.3
O/D/U/D(MU)	8.0	-6.7	-8.3	5.2	0.6	-1.3

F. Generation Outage(MW)

_	NR	WR	SR	ER	NER	Total
Central Sector	4079	13216	6222	1500	211	25228
State Sector	8925	14707	4810	5235	50	33727
Total	13004	27923	11032	6735	260	58955

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Thermal (Coal & Lignite)	555	1203	621	441	8	2828
Hydro	186	42	55	57	14	352
Nuclear	27	18	46	0	0	90
Gas, Naptha & Diesel	35	53	17	0	21	126
RES (Wind, Solar, Biomass & Others)	60	83	102	1	0	246
Fotal	862	1398	840	499	43	3643

Share of RES in total generation (%)	6.98	5.91	12.08	0.27	0.07	6.75
Share of Non-fossil fuel (Hydro, Nuclear and	21 62	10.16	24.06	11 61	21 70	19.00
RES) in total generation (%)	31.63	10.16	24.06	11.61	31.78	18.90

H. Diversity Factor

 All India Demand Diversity Factor
 1.045

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

16-May-18

		INTER-REGIONAL EXCHANGES Date of Reporting:						
								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/I	Export of	ER (With NR)		,			, ,	, ,
$\frac{1}{2}$	765kV	GAYA-VARANASI SASARAM-FATEHPUR	D/C S/C	217	0 115	0.0	4.7 0.0	-4.7 0.0
3	/03KV	GAYA-BALIA	S/C S/C	0	540	0.0	10.9	-10.9
4	HVDC	ALIPURDUAR-AGRA	-	0	0	0.0	0.0	0.0
5	пувс	PUSAULI B/B	S/C	0	149	0.0	3.5	-3.5
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	146 98	0.0	0.0	0.0
8		MUZAFFARPUR-GORAKHPUR	D/C	5	642	0.0	9.5	-9.5
9	400 kV	PATNA-BALIA	Q/C	1	1198	0.0	20.8	-20.8
10		BIHARSHARIFF-BALIA	D/C	0	488	0.0	9.4	-9.4
11		MOTIHARI-GORAKHPUR	D/C	0	274	0.0	4.7	-4.7
12		BIHARSHARIFF-VARANASI	D/C	417	0	0.0	1.2	-1.2
13	220 kV	PUSAULI-SAHUPURI	S/C	0	184	0.0	3.5	-3.5
14		SONE NAGAR-RIHAND GARWAH-RIHAND	S/C S/C	10	0	0.0	0.0	0.0
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
<u> </u>					ER-NR	0.6	68.2	-67.6
Import/I	Export of	ER (With WR)						
18	765 kV	JHARSUGUDA-DHARAMJAIGARH S/C	D/C	839	59	7.0	0.0	7.0
19	_ /US KV	NEW RANCHI-DHARAMJAIGARH	D/C	540	176	3.5	0.0	3.5
20	400 kV	JHARSUGUDA-RAIGARH	Q/C	726	0	10.9	0.0	10.9
21	IOU A V	RANCHI-SIPAT	D/C	260	0	3.0	0.0	3.0
22	220 kV	BUDHIPADAR-RAIGARH	S/C	88	53	0.5	0.0	0.5
23		BUDHIPADAR-KORBA	D/C	89	0 ER-WR	1.4 26.3	0.0	1.4 26.3
Import/I	Export of	ER (With SR)			EK-WK	20.3	0.0	20.3
24	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1678.8	0.0	26.2	-26.2
25	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	190.2	0.0	8.7	-8.7
26	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1903.8	0.0	33.4	-33.4
27	400 kV	TALCHER-I/C	D/C	500.8	338.1	3.4	1.5	1.9
28	220 kV	BALIMELA-UPPER-SILERRU	S/C	0.0	0.0	0.0	0.0	0.0
Import/I	Export of	f ER (With NER)			ER-SR	0.0	68.3	-68.3
29		BINAGURI-BONGAIGAON	D/C	403	330	1.2	0.0	1
30	400 kV	ALIPURDUAR-BONGAIGAON	D/C	294	287	2.2	0.0	2
31	220 kV	ALIPURDUAR-SALAKATI	D/C	3	77	0.0	0.9	-1
Import/I	Export of	NER (With NR)			ER-NER	3.4	0.9	2.5
32	T -	BISWANATH CHARIALI-AGRA	-	0	0	0.0	0.0	0.0
Import/I					NER-NR	0.0	0.0	0.0
Impor a i	Export of	WR (With NR)			NER-NR	0.0	0.0	0.0
33		CHAMPA-KURUKSHETRA	D/C	20	1269	0.0	59.7	-59.7
33 34		CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	0	1269 250	0.0	59.7 5.9	-59.7 -5.9
33 34 35		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	0	1269 250 1721	0.0 0.0 0.0	59.7 5.9 28.7	-59.7 -5.9 -28.7
33 34 35 36		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	0 0 0	1269 250 1721 1371	0.0 0.0 0.0 0.0	59.7 5.9 28.7 29.4	-59.7 -5.9 -28.7 -29.4
33 34 35		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	0	1269 250 1721	0.0 0.0 0.0	59.7 5.9 28.7 29.4 33.4	-59.7 -5.9 -28.7 -29.4 -33.4
33 34 35 36 37	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR	D/C D/C D/C D/C	0 0 0 0	1269 250 1721 1371 1702	0.0 0.0 0.0 0.0 0.0	59.7 5.9 28.7 29.4	-59.7 -5.9 -28.7 -29.4
33 34 35 36 37 38	HVDC	CHAMPA-KURUKSHETRA 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	1269 250 1721 1371 1702 694	0.0 0.0 0.0 0.0 0.0 0.0	59.7 5.9 28.7 29.4 33.4 11.6	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6
33 34 35 36 37 38 39 40 41	HVDC	CHAMPA-KURUKSHETRA 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 0 445 0 454	1269 250 1721 1371 1702 694 0 1735	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3
33 34 35 36 37 38 39 40 41 42	HVDC	CHAMPA-KURUKSHETRA 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 0 445 0 454 430	1269 250 1721 1371 1702 694 0 1735 0	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4
33 34 35 36 37 38 39 40 41 42 43	HVDC 765 kV	CHAMPA-KURUKSHETRA 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 S/C S/C S/C S/C S/C	0 0 0 0 0 445 0 454 430 970	1269 250 1721 1371 1702 694 0 1735 0 0	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6
33 34 35 36 37 38 39 40 41 42 43 44	HVDC 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	0 0 0 0 0 445 0 454 430 970 26	1269 250 1721 1371 1702 694 0 1735 0 0 0 260	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1
33 34 35 36 37 38 39 40 41 42 43 44 45	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C	0 0 0 0 0 445 0 454 430 970 26 72	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7
33 34 35 36 37 38 39 40 41 42 43 44	HVDC 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C D/C	0 0 0 0 0 445 0 454 430 970 26	1269 250 1721 1371 1702 694 0 1735 0 0 0 260	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1
33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C	0 0 0 0 0 445 0 454 430 970 26 72 23	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 0.0 1 0.1 0.4	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA	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 0 445 0 454 430 970 26 72 23 30	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 0.0 1 0.1 0.4 0.1	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC 765 kV 400 kV 220 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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 0 445 0 445 0 454 430 970 26 72 23 30 26	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC 765 kV 400 kV 220 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA	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 0 445 0 445 0 454 430 970 26 72 23 30 26	1269 250 1721 1371 1702 694 0 1735 0 0 260 36 67 46 46 0	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	HVDC 765 kV 400 kV 220 kV 132kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	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 0 445 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 260 36 67 46 46 46 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 S/C S/C S/C S/C S/C S/C S/C S/C S/C -	0 0 0 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 260 36 67 46 46 46 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53	132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 S/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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 260 36 67 46 46 46 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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 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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46 46 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54 55	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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-CHIKODI	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 260 36 67 46 46 46 0 WR-NR 1000 0 1423 1807 0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2 0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54 55 56	132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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-CHIKODI PONDA-AMBEWADI	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46 46 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9 0.0 0.0 15.2 0.0 0.0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2 0.0 0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54 55	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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-CHIKODI	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 D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 454 430 970 26 72 23 30 26 0	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46 46 0 WR-NR 1000 0 1423 1807 0 0 0 0	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9 0.0 0.0 15.2 0.0 0.0 0.0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0 0.0 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2 0.0 0.0 1.5
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54 55 56	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 445 0 454 430 970 26 72 23 30 26 0 0 912 0 976 0 73	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46 46 0 WR-NR 1000 0 1423 1807 0 0 0 0 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9 0.0 0.0 15.2 0.0 0.0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2 0.0 0.0
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54 55 56 57	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -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-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 445 0 454 430 970 26 72 23 30 26 0 0 912 0 976 0 73	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46 46 0 WR-NR 1000 0 1423 1807 0 0 0 0	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9 0.0 0.0 15.2 0.0 0.0 0.0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0 0.0 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2 0.0 0.0 1.5 -27.6
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 Import/I 50 51 52 53 54 55 56	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 0 0 0 445 0 445 0 454 430 970 26 72 23 30 26 0 0 912 0 976 0 73	1269 250 1721 1371 1702 694 0 1735 0 0 0 260 36 67 46 46 46 0 WR-NR 1000 0 1423 1807 0 0 0 0 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 9.4 0.0 9.3 7.4 22.6 0 0.8 0.1 0.3 0.1 0.0 49.9 0.0 0.0 15.2 0.0 0.0 0.0	59.7 5.9 28.7 29.4 33.4 11.6 0.0 39.5 0.0 0.0 1 0.1 0.4 0.1 0.4 0.0 210.5 23.9 0.0 4.3 16.1 0.0 0.0 0.0 0.0	-59.7 -5.9 -28.7 -29.4 -33.4 -11.6 9.4 -39.5 9.3 7.4 22.6 -1 0.7 -0.3 0.2 -0.3 0.0 -160.6 -23.9 0.0 -4.3 -16.1 15.2 0.0 0.0 1.5