

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: 21st May 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. मुख्य महाप्रबंधक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Chief General Manager, 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 20.05.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 20-मई-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 20th May 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 21-May-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 2000 hrs; from RLDCs)	51707	51951	43436	22032	2591	171717
Peak Shortage (MW)	1305	0	66	0	74	1445
Energy Met (MU)	1165	1244	1034	484	44	3971
Hydro Gen (MU)	290	63	74	72	15	515
Wind Gen (MU)	10	66	42			118
Solar Gen (MU)*	28.72	25.30	85.55	2.32	0.04	142
Energy Shortage (MU)	15.3	0.0	0.0	0.0	1.2	16.5
Maximum Demand Met during the day	53878	55852	46624	23454	2612	176868
(MW) & time (from NLDC SCADA)	22:34	14:55	14:57	22:46	18:48	22:43

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 0.111

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	8046	0	146.2	79.7	-2.3	58	0.0
	Haryana	7860	0	158.0	125.9	-0.3	111	0.0
	Rajasthan	10412	0	226.8	63.8	0.8	292	0.0
	Delhi	5165	0	102.8	90.6	-0.5	161	0.0
	UP	19612	740	412.7	191.7	1.3	550	5.2
	Uttarakhand	2014	0	44.0	19.0	0.8	148	0.0
	HP	1337	9	27.9	5.2	0.4	104	0.1
	J&K	2260	565	41.8	22.0	-0.5	325	10.0
	Chandigarh	262	0	5.1	5.9	-0.7	2	0.0
	Chhattisgarh	4067	0	92.2	43.2	-2.3	330	0.0
	Gujarat	17741	0	382.1	73.5	5.0	494	0.0
	MP	9517	0	219.1	103.0	0.0	505	0.0
WR	Maharashtra	23119	0	507.0	107.5	2.3	610	0.0
WK	Goa	541	0	11.8	10.5	0.7	162	0.0
	DD	324	0	7.2	6.8	0.4	44	0.0
	DNH	773	0	17.7	17.9	-0.3	63	0.0
	Essar steel	318	0	6.7	6.3	0.4	271	0.0
	Andhra Pradesh	9485	0	193.1	59.9	0.8	593	0.0
	Telangana	8060	0	172.2	54.1	0.7	469	0.0
SR	Karnataka	11430	0	225.8	69.3	-1.4	468	0.0
JN.	Kerala	4125	0	85.2	59.9	1.1	227	0.0
	Tamil Nadu	15690	0	348.9	187.0	0.9	558	0.0
	Pondy	418	0	8.8	8.9	-0.1	43	0.0
	Bihar	5424	0	106.2	103.3	0.2	50	0.0
	DVC	3301	0	70.1	-47.1	0.6	250	0.0
ER	Jharkhand	1319	0	28.4	23.3	-0.6	90	0.0
EN	Odisha	4791	0	93.9	33.4	-0.9	410	0.0
	West Bengal	9175	0	184.1	67.1	-2.7	100	0.0
	Sikkim	89	0	1.1	1.5	-0.4	30	0.0
	Arunachal Pradesh	104	2	2.0	2.4	-0.4	12	0.0
	Assam	1621	23	26.0	21.4	0.7	134	0.8
	Manipur	176	3	2.3	2.2	0.1	44	0.0
NER	Meghalaya	293	0	5.2	3.1	0.3	65	0.4
	Mizoram	90	1	1.8	1.4	0.3	19	0.0
	Nagaland	107	2	2.1	2.1	-0.1	31	0.0
	Tripura	293	5	4.4	4.6	-0.1	59	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	6.2	-11.0	-26.2
Day peak (MW)	598.7	-599.0	-1126.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	208.2	-267.4	97.0	-28.4	-9.6	-0.2
Actual(MU)	199.6	-267.1	106.7	-29.5	-13.1	-3.4
O/D/U/D(MU)	-8.7	0.3	9.7	-1.1	-3.5	-3.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	4157	14925	6812	1620	85	27599
State Sector	9370	10847	3620	4005	50	27892
Total	13527	25772	10432	5625	135	55491

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	568	1255	584	484	17	2908
Lignite	24	15	52	0	0	91
Hydro	290	63	74	72	15	514
Nuclear	27	31	55	0	0	113
Gas, Naptha & Diesel	32	63	16	0	30	141
RES (Wind, Solar, Biomass & Others)	50	97	158	2	0	307
Total	992	1525	938	558	62	4075

Share of RES in total generation (%)	5.01	6.38	16.84	0.42	0.06	7.54
Share of Non-fossil fuel (Hydro, Nuclear and	37.01	12.51	30.58	13.40	24.83	22.94
RES) in total generation (%)	07101	12.01	20120	10110	2.1.00	

H. Diversity Factor All India Demand Diversity Factor

All India Demand Diversity Factor 1.031

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

 $[\]textbf{*\underline{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 1	Reporting :	21-May-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)					(4.20)	(,
1	7651-37	GAYA-VARANASI	D/C	134	177	0.0	0.0	0.0
3	765kV	SASARAM-FATEHPUR GAYA-BALIA	S/C S/C	117 0	133 200	0.4	3.0	-3.0
4	HVDC	ALIPURDUAR-AGRA	-	0	502	0.0	12.1	-12.1
5	HVDC	PUSAULI B/B	S/C	0	49	0.0	1.4	-1.4
6	_	PUSAULI-VARANASI	S/C	0	89	0.0	1.6	-1.6
7	4	PUSAULI -ALLAHABAD	S/C	31	24	0.4	0.0	0.4
9	400 kV	MUZAFFARPUR-GORAKHPUR	D/C Q/C	0	672 624	0.0	9.1	-9.1 -9.9
10	400 KV	PATNA-BALIA BIHARSHARIFF-BALIA	D/C	0	277	0.0	4.3	-4.3
11	1	MOTIHARI-GORAKHPUR	D/C	0	304	0.0	6.0	-6.0
12		BIHARSHARIFF-VARANASI	D/C	97	148	0.0	0.5	-0.5
13	220 kV	PUSAULI-SAHUPURI	S/C	0	211	0.0	4.2	-4.2
14		SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	132 kV	GARWAH-RIHAND	S/C	30	0	0.5	0.0	0.5
16	132 K	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
Innr -: 4/5	Permont A	ED (With WP)			ER-NR	1.4	52.1	-50.7
	export of	ER (With WR)	1					
18	g/2	JHARSUGUDA-DHARAMJAIGARH	Q/C	1702	0	30.2	0.0	30.2
19	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	911	0	14.7	0.0	14.7
20		JHARSUGUDA-DURG	D/C	173	39	2.2	0.0	2.2
21	400 kV	JHARSUGUDA-RAIGARH RANCHI-SIPAT	Q/C D/C	354 318	58	3.9 5.0	0.0	3.9 5.0
23		BUDHIPADAR-RAIGARH	S/C	0	86	0.0	1.0	-1.0
24	220 kV	BUDHIPADAR-KORBA	D/C	139	0	2.2	0.0	2.2
					ER-WR	58.2	1.0	57.2
Import/E	Export of	ER (With SR)						•
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	1603.0	0.0	26.9	-26.9
26	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0.0	735.0	0.0	14.9	-14.9
27	LINK	TALCHER-KOLAR BIPOLE	D/C	0.0	1785.0	0.0	40.5	-40.5
28	400 kV	TALCHER-I/C	D/C	309.0	205.0	0.1	0.0	0.1
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 82.4	0.0 -82.4
Import/F	Export of	ER (With NER)			ER-SK	0.0	82.4	-82.4
30	Ĺ	BINAGURI-BONGAIGAON	D/C	110	243	0.0	1.6	-2
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	402	0	5.5	0.0	5
32	220 kV	ALIPURDUAR-SALAKATI	D/C	48	37	0.2	0.0	0
					ER-NER	5.6	1.6	4.0
	vnort of	NER (With NR)						1
33				0				-8.7
	HVDC	BISWANATH CHARIALI-AGRA	-		403	0.0	8.7	
	HVDC	BISWANATH CHARIALI-AGRA	-		403 NER-NR	0.0	8.7 8.7	-8.7
Import/E	HVDC	BISWANATH CHARIALI-AGRA WR (With NR)	- D/C	0	NER-NR	0.0	8.7	-8.7
Import/E	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA	D/C	0 248	NER-NR 1004	0.0	8.7 23.8	- 8.7 -23.8
Import/E	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR)	D/C D/C D/C	0 248 0	NER-NR	0.0	8.7	-8.7
34 35	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B	D/C	248	1004 0	0.0 6.2	23.8 0.0	-8.7 -23.8 6.2
34 35 36	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL -MHG	D/C D/C	248 0	NER-NR 1004 0 1358	0.0 0.0 6.2 0.0	23.8 0.0 30.2	-8.7 -23.8 6.2 -30.2
34 35 36 37	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	248 0 0	NER-NR 1004 0 1358 2158	0.0 0.0 6.2 0.0 0.0	23.8 0.0 30.2 41.7	-8.7 -23.8 6.2 -30.2 -41.7
34 35 36 37 38 39 40	HVDC Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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	248 0 0 0 0 0 0 376	NER-NR 1004 0 1358 2158 945	0.0 6.2 0.0 0.0 0.0 0.0 0.0 7.3	23.8 0.0 30.2 41.7 16.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3
Import/E 34 35 36 37 38 39 40 41	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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	248 0 0 0 0 0 0 376 0	NER-NR 1004 0 1358 2158 945 736 0 1342	0.0 6.2 0.0 0.0 0.0 0.0 0.0 7.3	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1
34 35 36 37 38 39 40 41 42	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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	248 0 0 0 0 0 376 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457	0.0 6.2 0.0 0.0 0.0 0.0 0.0 7.3 0.0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7
34 35 36 37 38 39 40 41 42 43	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL 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 S/C S/C	248 0 0 0 0 0 376 0 0 95	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67	0.0 6.2 0.0 0.0 0.0 0.0 0.0 7.3 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3
34 35 36 37 38 39 40 41 42 43	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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	248 0 0 0 0 0 376 0 0 95 38	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170	0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 -27.1 6.7 0.3 -2.0
34 35 36 37 38 39 40 41 42 43 44	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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	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	248 0 0 0 0 0 376 0 0 95 38 971	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0	0.0 0.0 6.2 0.0 0.0 0.0 0.0 7.3 0.0 0.0 0.0 0.0 2.5	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 -27.1 6.7 0.3 -2.0 22.5
34 35 36 37 38 39 40 41 42 43 44 45	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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 S/C S	248 0 0 0 0 0 376 0 0 95 38 971 118	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193	0.0 0.0 6.2 0.0 0.0 0.0 0.0 7.3 0.0 0.0 0.0 0.0 2.5 0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA	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	248 0 0 0 0 376 0 0 95 38 971 118 42	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32	0.0 0.0 6.2 0.0 0.0 0.0 7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5
34 35 36 37 38 39 40 41 42 43 44 45	HVDC Export of HVDC - 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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 S/C S	248 0 0 0 0 0 376 0 0 95 38 971 118	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193	0.0 0.0 6.2 0.0 0.0 0.0 0.0 7.3 0.0 0.0 0.0 0.0 2.5 0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA -BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-KOTA BHANPURA-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	248 0 0 0 0 376 0 0 95 38 971 118 42 13	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70	0.0 0.0 6.2 0.0 0.0 0.0 0.0 7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0.0 0.1	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6
34 35 36 37 38 39 40 41 42 43 44 45 46 47	HVDC Export of HVDC - 765 kV - 400 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-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	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0.1 0.6 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-KOTA BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR -URAIYA GWALIOR-SAWAI MADHOPUR	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	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34	0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0.1 0.6 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 0 0.5 -0.6 0.4 -0.3
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR)	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	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 0.4 0.0 176.9	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA 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 D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 0.1 176.9	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA V'CHAL B/B APL-MHG GWALIOR-AGRA PHAGI-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-KANKROLI ZERDA-BHINMAL V'CHAL-RIHAND RAPP-SHUJALPUR BHANPURA-KOTA BHANPURA-WOTA MALANPUR-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	248 0 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 0.1 0.6 0.0 176.9	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of HVDC	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA VCHAL B/B APL-MHG GWALIOR-AGRA PHAGG-GWALIOR JABALPUR-ORAI GWALIOR-ORAI SATNA-ORAI CHITTORGARH-BANASKANTHA ZERDA-KANKROLI ZERDA-BHINMAL VCHAL -RIHAND RAPP-SHUJALPUR BHANPURA-KOTA BHANPURA-WOTA BHANPURA-WOTA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR	D/C	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 0.1 176.9	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-WOTA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD	D/C	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 0.4 0.0 176.9 21.9 0.0 25.2 25.3	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 0.5 -0.6 0.4 -0.3 0.0 -126.3
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-WOTA MALANPUR-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0 0 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0.1 0.6 0.0 0.4 0.0 176.9 21.9 0.0 25.2 25.3 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56 57	HVDC Export of HVDC - 765 kV - 400 kV - 220 kV - 132kV Export of HVDC LINK - 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-KOTA BHANPURA-WORAK MEHGAON-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHANBARWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-CHIKODI	D/C	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR 1002 0 1989 1674 192 0	0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0.1 0.6 0.0 0.4 0.0 176.9 21.9 0.0 25.2 25.3 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3 -21.9 0.0 -25.2 -25.3 3.0 0.0
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-WOTA MALANPUR-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C	248 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0 0 0	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR	0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0	23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 2.0 0.0 0.1 0.6 0.0 0.4 0.0 176.9 21.9 0.0 25.2 25.3 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 0.5 -0.6 0.4 -0.3 0.0 -126.3 -21.9 0.0 -25.2 -25.3 3.0
Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 Import/E 52 53 54 55 56	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-KOTA BHANPURA-WORAK 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	248 0 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0 0 177 57	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 8 34 0 WR-NR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 0.4 4.0 176.9 21.9 0.0 25.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3 -21.9 0.0 -25.2 -25.3 3.0 0.0 0.0
Import/E 34 35 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	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NICAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI	D/C	248 0 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0 0 177 57 467 0 1	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR 1002 0 1989 1674 1992 0 0 54 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 176.9 21.9 0.0 25.2 25.3 0.0 0.0 0.0 0.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3 -21.9 0.0 -25.2 -25.3 3.0 0.0 0.0 1.0
Import/E 34 35 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	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA 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-CHIKODI PONDA-AMBEWADI	D/C	248 0 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0 0 177 57	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR 1002 0 1989 1674 1992 0 0 54 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 176.9 21.9 0.0 25.2 25.3 0.0 0.0 0.0 0.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3 -21.9 0.0 -25.2 -25.3 3.0 0.0 0.0 1.0 -68.4
Import/E 34 35 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	HVDC Export of HVDC 765 kV 400 kV 132kV Export of HVDC LINK 765 kV	BISWANATH CHARIALI-AGRA WR (With NR) CHAMPA-KURUKSHETRA 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-KOTA BHANPURA-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NICAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI XELDEM-AMBEWADI	D/C	248 0 0 0 0 0 376 0 0 95 38 971 118 42 13 59 27 0 0 177 57 467 0 1	NER-NR 1004 0 1358 2158 945 736 0 1342 457 67 170 0 193 32 70 8 34 0 WR-NR 1002 0 1989 1674 1992 0 0 54 WR-SR	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8.7 23.8 0.0 30.2 41.7 16.0 28.3 0.0 27.1 6.7 0.0 0.0 0.1 0.6 0.0 176.9 21.9 0.0 25.2 25.3 0.0 0.0 0.0 0.0 0.0	-8.7 -23.8 6.2 -30.2 -41.7 -16.0 -28.3 7.3 -27.1 6.7 0.3 -2.0 22.5 0 0.5 -0.6 0.4 -0.3 0.0 -126.3 -21.9 0.0 -25.2 -25.3 3.0 0.0 0.0 1.0