

## National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

## POWER SYSTEM OPERATION CORPORATION LIMITED पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(Government of India Enterprise/ भारत सरकार का उद्यम)
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बी-9, कृतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 17<sup>th</sup> Dec 2019

To,

- कार्यकारी निदेशक, पू .क्षे .भा .प्रे .के.,14 , गोल्फ क्लब रोड , कोलकाता 700033
   Executive Director, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata, 700033
- 2. कार्यकारी निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए , शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi – 110016
- 3. कार्यकारी निदेशक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. कार्यकारी निदेशक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. कार्यकारी निदेशक , द .क्षे .भा .प्रे .के.,29 , रेस कोर्स क्रॉस रोड, बंगलुरु -560009 Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 16.12.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 16-दिसम्बर-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 16<sup>th</sup> Dec 2019, is available at the NLDC website.

धन्यवाद,

Report for previous day Date of Reporting

## A. Power Supply Position at All India and Regional level

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	45422	46915	38293	17296	2309	150235
Peak Shortage (MW)	650	0	0	0	23	673
Energy Met (MU)	866	1080	887	329	39	3200
Hydro Gen (MU)	128	45	83	34	9	300
Wind Gen (MU)	14	96	41			151
Solar Gen (MU)*	23.60	19.8	83.37	1.69	0.03	128
Energy Shortage (MU)	11.6	0.0	0.0	0.0	0.4	12.0
Maximum Demand Met during the day (MW) & time	45104	51698	42541	17472	2341	151942
(from NLDC SCADA)	18:56	09:47	07:44	18:55	17:31	18:40

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	0.075	0.21	1.45	7.13	8.78	55.37	35.84

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	5323	0	103.0	56.6	-0.9	78	0.0
	Haryana	6320	0	114.3	85.6	0.7	362	0.0
	Rajasthan	11761	83	217.9	56.4	2.2	443	0.0
NR	Delhi	3868	0	67.6	54.0	-0.3	346	0.0
	UP	13810	0	243.5	105.3	-0.7	484	0.0
	Uttarakhand	1951	0	37.1	21.1	0.6	205	0.0
	HP	1665	0	29.7	21.2	0.8	300	0.0
	J&K(UT) and Ladakh(UT)	2601	650	48.8	41.7	-1.0	397	11.6
	Chandigarh	246	0	4.2	3.9	0.3	56	0.0
	Chhattisgarh	3405	0	72.7	16.1	-1.1	543	0.0
	Gujarat	14695	0	307.5	75.1	-3.5	1088	0.0
	MP	12319	0	221.8	111.7	-3.1	363	0.0
WR	Maharashtra	21398	0	434.9	134.9	-4.3	540	0.0
WK	Goa	588	0	12.5	12.0	-0.1	327	0.0
	DD	318	0	6.9	6.2	0.7	63	0.0
	DNH	800	0	18.5	18.5	0.0	68	0.0
	Essar steel	283	0	5.2	5.7	-0.5	264	0.0
	Andhra Pradesh	7715	0	155.9	67.8	0.1	273	0.0
	Telangana	9940	0	204.5	108.7	2.4	727	0.0
SR	Karnataka	10806	0	195.5	34.0	0.6	669	0.0
JK.	Kerala	3535	0	68.7	55.3	1.1	189	0.0
	Tamil Nadu	13008	0	255.2	132.8	-1.4	596	0.0
	Pondy	357	0	6.8	7.2	-0.5	41	0.0
	Bihar	3907	0	64.1	63.1	-0.2	240	0.0
	DVC	3081	0	62.7	-27.9	-0.6	570	0.0
ER	Jharkhand	1251	0	22.4	14.9	-1.7	180	0.0
EN	Odisha	3643	0	68.4	11.5	-0.1	200	0.0
	West Bengal	6011	0	109.9	21.5	2.7	420	0.0
	Sikkim	100	0	1.7	1.4	0.3	35	0.0
	Arunachal Pradesh	115	2	2.1	1.6	0.3	61	0.0
	Assam	1270	8	20.9	16.7	0.2	201	0.3
	Manipur	189	2	2.5	2.9	-0.4	39	0.0
NER	Meghalaya	349	0	6.0	2.4	1.0	114	0.0
	Mizoram	101	1	1.8	0.8	0.4	23	0.0
	Nagaland	121	2	2.1	2.2	-0.3	23	0.0
	Tripura	221	0	3.4	1.2	0.0	60	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	6.1	-6.0	-6.9
Day peak (MW)	319.1	-371.0	-528.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	210.3	-215.4	117.4	-113.3	2.7	1.7
Actual(MU)	210.6	-230.5	129.3	-115.3	6.2	0.4
O/D/U/D(MU)	0.3	-15.2	11.9	-2.0	3.5	-1.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5561	18143	8552	1260	944	34459
State Sector	12422	15262	10350	4940	11	42985
Total	17983	33404	18902	6200	955	77444

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	All India
Coal	381	1072	422	420	10	2306
Lignite	24	13	41	0	0	78
Hydro	128	45	83	34	9	300
Nuclear	34	28	43	0	0	104
Gas, Naptha & Diesel	30	30	15	0	18	94
RES (Wind, Solar, Biomass & Others)	67	133	167	2	0	369
Total	664	1321	772	456	37	3250

Share of RES in total generation (%)	10.12	10.04	21.65	0.38	0.08	11.35
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	34.50	15.58	38.00	7.82	24.15	23.78

H. All India Demand Diversity Factor

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Based on Regional Max Demands	1.047
Based on State Max Demands	1.100

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

17-Dec-19

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

1		IN	TER-REGI	ONAL EXCH	ANGES	Date of l	Reporting :	17-Dec-19
								Import=(+ve) /Export =(-ve) for NET (MU)
Sl No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
	Export of	ER (With NR)	1					
5	HVDC	ALIPURDUAR-AGRA PUSAULI B/B	S/C	0	0 198	0.0	0.0 4.9	0.0 -4.9
1		GAYA-VARANASI	D/C	0	1378	0.0	15.4	-15.4
2	765kV	SASARAM-FATEHPUR	S/C	0	503	0.0	6.5	-6.5
3		GAYA-BALIA	S/C	0	490	0.0	4.3	-4.3
6 7		PUSAULI-VARANASI PUSAULI -ALLAHABAD	S/C S/C	0	142 157	0.0	2.4	-2.4 -2.3
8		MUZAFFARPUR-GORAKHPUR	D/C	0	1177	0.0	12.6	-12.6
9	400 kV	PATNA-BALIA	Q/C	0	1202	0.0	18.8	-18.8
10		BIHARSHARIFF-BALIA	D/C	0	554	0.0	7.7	-7.7
11		MOTIHARI-GORAKHPUR	D/C	0	5	0.0	0.0	0.0
12	220 kV	BIHARSHARIFF-VARANASI PUSAULI-SAHUPURI	D/C S/C	5	500 87	0.0	5.0	-5.0 -1.1
14	220 KV	SONE NAGAR-RIHAND	S/C	0	0	0.0	0.0	0.0
15	422.5	GARWAH-RIHAND	S/C	30	0	0.3	0.0	0.3
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
Import/F	vnest -P	ED (With WP)			ER-NR	0.3	76.0	-75.7
-	Aport of	ER (With WR)	0.7				0.5	
18	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	5431	123	12.9	0.0	12.9
19 20	/05 KV	NEW RANCHI-DHARAMJAIGARH JHARSUGUDA-DURG	D/C D/C	509 999933	545 161	0.0	1.4 0.0	-1.4 0.0
21		JHARSUGUDA-DURG JHARSUGUDA-RAIGARH	Q/C	314	135	2.8	0.0	2.8
22	400 kV	RANCHI-SIPAT	D/C	231	168	0.2	0.0	0.2
23	220 kV	BUDHIPADAR-RAIGARH	S/C	10	85	0.0	0.9	-0.9
24		BUDHIPADAR-KORBA	D/C	202	6 ER-WR	2.8	0.0	2.8
Import/E	Export of	ER (With SR)			ER-WK	18.7	2.3	16.3
26		JEYPORE-GAZUWAKA B/B	D/C	0.0	677.0	0.0	12.4	-12.4
27	HVDC	TALCHER-KOLAR BIPOLE	D/C	0.0	2465.0	0.0	49.5	-49.5
25	765 kV	ANGUL-SRIKAKULAM	D/C	0.0	2212.0	0.0	36.9	-36.9
28	400 kV	TALCHER-I/C	D/C	149.0	1135.0	0.0	11.8	-11.8
29	220 kV	BALIMELA-UPPER-SILERRU	S/C	1.0	0.0 ER-SR	0.0	0.0 98.8	0.0 -98.8
Import/E	Export of	ER (With NER)			ER-SK	0.0	98.8	-98.8
30	Ĺ	BINAGURI-BONGAIGAON	D/C	224	128	2.2	0.0	2
31	400 kV	ALIPURDUAR-BONGAIGAON	D/C	253	114	2.3	0.0	2
32	220 kV	ALIPURDUAR-SALAKATI	D/C	49	36	0.3	0.0	0
ı					•			
I	·	NIED (WALNE)			ER-NER	4.7	0.0	4.7
	_	NER (With NR)		487				
Import/E	Export of HVDC	NER (With NR) BISWANATH CHARIALI-AGRA	-	487	0	11.4	0.0	11.4
33	HVDC		- ]	487		11.4		
33	HVDC Export of	BISWANATH CHARIALI-AGRA	D/C	487	0	11.4	0.0	11.4
33 Import/E 34 35	HVDC	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  VCHAL B/B	D/C	0 450	0 NER-NR 2046 0	11.4 11.4 0.0 8.5	0.0 0.0 36.6 0.0	11.4 11.4 -36.6 8.5
33 Import/E 34 35 36	HVDC Export of	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  VCHAL B/B  APL -MHG	D/C D/C	0 450 0	0 NER-NR 2046 0 985	11.4 11.4 0.0 8.5 0.0	0.0 0.0 36.6 0.0 20.8	11.4 11.4 -36.6 8.5 -20.8
33 Import/E 34 35 36 37	HVDC Export of	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA	D/C D/C D/C	0 450 0 0	0 NER-NR 2046 0 985 2541	11.4 11.4 0.0 8.5 0.0 0.0	0.0 0.0 36.6 0.0 20.8 44.9	11.4 11.4 11.4 -36.6 8.5 -20.8 -44.9
33 Import/E 34 35 36	HVDC Export of HVDC	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  VCHAL B/B  APL -MHG	D/C D/C	0 450 0	0 NER-NR 2046 0 985	11.4 11.4 0.0 8.5 0.0	0.0 0.0 36.6 0.0 20.8	11.4 11.4 -36.6 8.5 -20.8
33 Import/E 34 35 36 37 38	HVDC Export of	BISWANATH CHARIALI-AGRA  WR (With NR)  CHAMPA-KURUKSHETRA  V'CHAL B/B  APL -MHG  GWALIOR-AGRA  PHAGI-GWALIOR	D/C D/C D/C D/C	0 450 0 0	0 NER-NR 2046 0 985 2541 1441	11.4 11.4 0.0 8.5 0.0 0.0	0.0 0.0 36.6 0.0 20.8 44.9 16.7	11.4 11.4 11.4 -36.6 8.5 -20.8 -44.9 -16.7
33 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	0 450 0 0 0 0 0 663	0 NER-NR  2046 0 985 2541 1441 844 0 1276	11.4 11.4 0.0 8.5 0.0 0.0 0.0 0.0 10.4	0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9	11.4 11.4 11.4 -36.6 8.5 -20.8 -44.9 -16.7 -25.7 10.4 -25.9
33 Import/E 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	0 450 0 0 0 0 0 663 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076	11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0	0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3	11.4 11.4
33  Import/E 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	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 450 0 0 0 0 0 663 0 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173	11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0	0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0	11.4 11.4
33  Import/E 34 35 36 37 38 39 40 41 42 43 44	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 D/C S/C S/C S/C S/C S/C	0 450 0 0 0 0 0 663 0 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076	11.4 11.4 0.0 8.5 0.0 0.0 0.0 0.0 10.4 0.0 0.0 0.0	0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5	11.4 11.4
33  Import/E 34 35 36 37 38 39 40 41 42 43	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	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C	0 450 0 0 0 0 0 663 0 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386	11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0	0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0	11.4 11.4
33 Import/E 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	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	0 450 0 0 0 0 663 0 0 21 0	0 NER-NR 2046 0 985 2541 1441 844 0 1276 1076 173 386 0	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 10.4	0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0	11.4 11.4 11.4 -36.6 8.5 -20.8 -44.9 -16.7 -25.7 10.4 -25.9 -9.3 -1.0 -3.5 21.1
33  Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	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-RANPUR  BHANPURA-MORAK	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 663 0 0 21 0 984 160 21	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0.0 0.0 1.0 1.0 1.0 1.0 1.0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.6
33  Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47	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  BHANPURA-RANPUR  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	0 450 0 0 0 0 663 0 0 21 0 984 160 21 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0.1 1.7 0.0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.6
33  Import/E 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	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-RANPUR  BHANPURA-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	0 450 0 0 0 0 663 0 0 21 0 984 160 21 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0.1 1.7 0.0 0.2	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  Import/E 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-RANPUR  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	0 450 0 0 0 0 663 0 0 21 0 984 160 21 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0 1.7 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	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-RANPUR  BHANPURA-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	0 450 0 0 0 0 663 0 0 21 0 984 160 21 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0.1 1.7 0.0 0.2	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  Import/E 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	HVDC Export of HVDC  765 kV  400 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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 663 0 0 21 0 984 160 21 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28	11.4 11.4 11.4 0.0 8.5 0.0 0.0 0.0 10.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0 1.7 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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	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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 0 0.1 1.7 0.0 0.2 0.0 1.8 0.0 1.8 1.8 0.0 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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  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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L SILERU  SOLAPUR-RAICHUR	D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0 1.7 0.0 0 0 1.8 1.0 1.0 1.0 1.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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 - 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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD	D/C D/C D/C D/C D/C D/C 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	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 1.17 0.0 0.1 1.17 0.0 0.1 1.17 0.0 0.1 1.17 0.0 0.17 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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	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-RANPUR  BHANPURA-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 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 S/C S/C S/C S/C S/C S	0 450 0 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 1.8 1.8 0.0 0.0 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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 - 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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RAICHUR  WARDHA-NIZAMABAD	D/C D/C D/C D/C D/C D/C 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	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 1.17 0.0 0.1 1.17 0.0 0.1 1.17 0.0 0.1 1.17 0.0 0.17 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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	HVDC  Export of  HVDC  - 765 kV  - 400 kV  - 132kV  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-RANPUR  BHANPURA-RANPUR  BHANPURA-WANDUR  GWALIOR-SAWAI MADHOPUR  WR (WITH SR)  BHANDURA-URAIYA  GWALIOR-SAWAI MADHOPUR  WR (WITH SR)  BHANGAWATI 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 S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 186.8 11.8 0.0 0.0 0.0 186.8	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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  - 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-RANPUR  BHANPURA-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 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 S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 186.8 11.8 0.0 23.9 43.9	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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  - 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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RICHUR  WARDHA-NIZAMABAD  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR  502 0 2059 2837 0 0 0 75 84 WR-SR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 186.8 11.8 0.0 23.9 43.9 10.0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4
33  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  - 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-RANPUR  BHANPURA-MORAK  MEHGAON-AURAIYA  MALANPUR-AURAIYA  GWALIOR-SAWAI MADHOPUR  WR (With SR)  BHADRAWATI B/B  BARSUR-L.SILERU  SOLAPUR-RICHUR  WARDHA-NIZAMABAD  KOLHAPUR-CHIKODI  PONDA-AMBEWADI  XELDEM-AMBEWADI	D/C D/C D/C D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C D/C S/C S/C S/C S/C S/C S/C S/C S/C S/C S	0 450 0 0 0 0 0 663 0 0 21 0 984 160 21 0 96 49 0	0 NER-NR  2046 0 985 2541 1441 844 0 1276 1076 173 386 0 267 72 148 4 28 0 WR-NR  502 0 2059 2837 0 0 0 75 84 WR-SR	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4	0.0 0.0 0.0 36.6 0.0 20.8 44.9 16.7 25.7 0.0 25.9 9.3 1.0 3.5 0.0 0 0.1 1.7 0.0 0.2 0.0 186.8 11.8 0.0 23.9 43.9 10.0	11.4 11.4 11.4 11.4 11.4 11.4 11.4 11.4