

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: 17th Jan 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 16.01.2018.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 16-जनवरी - 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 16th January 2018, is available at the NLDC website.

धन्यवाद,

पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

Report for previous day 17-Jan-18

A. Maximum Demand

	NR	WR	SR	ER	NER	Total
Demand Met during Evening Peak hrs(MW) (at 1900 hrs; from RLDCs)	44671	46100	37510	18402	2377	149060
Peak Shortage (MW)	546	46	0	0	49	640
Energy Met (MU)	909	1075	860	357	43	3244
Hydro Gen(MU)	106	36	73	26	9	249
Wind Gen(MU)	11	16	21			49
Solar Gen (MU)*	2.96	16.97	39.27	0.70	0.01	60
Energy Shortage (MU)	14.9	0.0	0.8	0.0	0.3	16.0
Maximum Demand Met during the day (MW) (from NLDC SCADA)	46812	51174	40208	18485	2330	151150

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	0.032	0.00	0.00	6.84	6.84	83.98	9.18

C. Power Supply Position in States

RegionRegion	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	5509	0	106.5	19.2	1.3	173	0.0
	Haryana	6796	174	125.6	71.5	1.3	166	0.0
NR	Rajasthan	10808	349	187.4	70.6	3.7	454	2.6
	Delhi	3839	0	65.5	48.4	-1.7	103	0.0
NR	UP	14100	0	306.0	107.2	1.6	473	1.1
	Uttarakhand	2125	0	39.6	29.2	0.3	155	0.0
	HP	1521	0	27.8	22.0	1.6	209	0.1
	J&K	2199	550	46.8	43.4	-0.5	117	11.1
	Chandigarh	221	0	3.6	3.7	-0.1	19	0.0
	Chhattisgarh	3405	0	74.1	4.6	-0.9	108	0.0
	Gujarat	13916	0	300.5	101.4	3.2	640	0.0
	MP	11639	0	219.2	133.2	-1.1	494	0.0
WR	Maharashtra	21514	0	438.4	151.2	1.9	476	0.0
VVK	Goa	482	0	9.9	9.3	0.3	49	0.0
	DD	296	0	5.3	5.0	0.4	63	0.0
	DNH	750	0	17.6	16.8	0.8	80	0.0
	Essar steel	508	0	9.8	9.6	0.3	182	0.0
	Andhra Pradesh	7880	0	155.8	45.5	5.7	513	0.1
	Telangana	8477	0	171.8	66.7	-0.6	333	0.1
SR	Karnataka	10118	0	210.5	92.1	1.6	483	0.2
JK .	Kerala	3543	0	67.1	52.1	0.5	186	0.1
	Tamil Nadu	11924	0	249.8	134.1	10.3	525	0.3
	Pondy	260	0	5.2	5.8	-0.6	38	0.0
	Bihar	4301	0	73.7	71.5	-1.1	220	0.0
	DVC	3017	0	70.5	-43.7	-0.8	225	0.0
ER	Jharkhand	1144	0	24.4	14.7	-0.1	60	0.0
L I1	Odisha	4260	0	77.6	27.3	1.3	250	0.0
	West Bengal	6404	0	109.5	18.8	0.9	225	0.0
	Sikkim	102	0	1.7	1.8	-0.2	10	0.0
	Arunachal Pradesh	110	3	2.3	1.9	0.3	39	0.0
	Assam	1421	16	23.5	19.6	1.4	135	0.2
	Manipur	181	4	2.9	2.9	0.0	25	0.0
NER	Meghalaya	320	0	6.7	4.4	0.0	45	0.0
NEN	Mizoram	88	3	1.8	1.2	-0.1	22	0.0
	Nagaland	108	7	2.0	1.9	0.0	38	0.1
	Tripura	224	1	3.5	3.6	0.4	55	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	2.6	-9.4	-11.5
Day peak (MW)	127.2	-291.5	-631.3

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	185.9	-203.8	85.8	-73.3	4.4	-1.1
Actual(MU)	182.5	-207.5	83.4	-69.5	3.8	-7.4
O/D/U/D(MU)	-3.4	-3.8	-2.4	3.8	-0.6	-6.4

F. Generation Outage(MW)

T. Generation Outage(IVI VV)						
	NR	WR	SR	ER	NER	Total
Central Sector	4221	12186	6152	1745	248	24552
State Sector	10150	17027	7784	4715	50	39726
Total	14371	29213	13936	6460	298	64278

G. Sourcewise generation (MU)

	NR	WR	SR	ER	NER	Total
Thermal (Coal & Lignite)	554	1170	520	421	8	2673
Hydro	106	34	73	26	9	247
Nuclear	29	24	60	0	0	112
Gas, Naptha & Diesel	28	47	19	0	25	119
RES (Wind, Solar, Biomass & Others)	39	33	102	2	0	176
Total	756	1307	773	449	42	3327

State Stat							Date of 1	Reporting	: 17-Jan
No.									Import=(+ve) /Export =(-ve)
No. Lone L		Voltage		T 1	Max			Evnort	, ,
1	Sl No		Line Details	Circuit	_	Max Export (MW)	Import (MU)	_	
2	nport/E	xport of							T
CAYABAJI A	2	765kV							
1		TUSKV							
5		HVDC	ALIPURDUAR-AGRA	-	0		0.0	0.0	0.0
Table Part		пувс		+					
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9	-				_				
100 101 101 101 101 101 101 101 101 101 102 101 102 101 102 101 102 101 102 101 102 101 102 101 102 101 102 101 102 101 102 101 102 101 102 102 102 103		400 kV							
BIASCHARMANSI		loo k		_ `	_				
18	11	1	MOTIHARI-GORAKHPUR	D/C	0	0	0.0	6.3	-6.3
	12		BIHARSHARIFF-VARANASI	D/C	0	315	0.4	0.0	0.4
15		220 kV	PUSAULI-SAHUPURI		0	0		0.0	0.0
					_	<u> </u>			
17		132 kV			_				
POPUTES POPU					_				
Page	1 /	<u> </u>	NANWANASA-UHANDAULI	S/C	U	L			
18	port/F	Export of	ER (With WR)			ER-NK	⊿. 1	77.4	-40.3
19	_			D/C	n	0	7 0	0.0	7 0
		765 kV			_	-			
Marchistary	-								
220 V		400 kV		 					+
SIGN BIO DOC O	22	220 1-77	BUDHIPADAR-RAIGARH	S/C	0	228	0.0	2.6	-2.6
Profest Free Free	23	220 K V	BUDHIPADAR-KORBA	D/C	0	11	0.0	2.5	-2.5
						ER-WR	14.3	5.3	9.0
STATE STATE	_	_				T			T
20									_
22									
20 V				+					_
Page									
MORE					0.0	1			+
30 30 30 31 320 32	iport/E	Export of	ER (With NER)						
A PICK PIC		400 kV		+					
Part									
Note	31	220 kV	ALIPURDUAR-SALAKATI	D/C	0				_
Net	mort/F	'yport of	NFR (With NR)			EK-NEK	0.0	10.2	-10.2
NER-NR No. NER-NR No. NER-NR NER-NR				T - T	144	500	0.0	6.2	-6.2
Hydro Hydr		11,20	212 1111 011111111111111111111111111111		1	200			+
HVDC VCHAL B/B						NER-NR	U.U	U. <i>Z</i>	
APL -MHG	nport/E	Export of	WR (With NR)			NER-NR	0.0	0.2	0.2
Test		Export of		D/C	0				
765 kV PHAGI-GWALIOR	33 34		CHAMPA-KURUKSHETRA V'CHAL B/B	D/C	250	1307 250	0.0	48.5 0.7	-48.5 2.4
STEAMS PHAGI-GWALIOR D/C 485 0 0.0 29.9 -29.9 -29.9 3.1 0.0 5.1 0.0 5.1 0.0 5.1 0.0	33 34 35		CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG	D/C D/C	250	1307 250 2015	0.0 3.1 0.0	48.5 0.7 37.4	-48.5 2.4 -37.4
Mathematical Registration	33 34 35 36	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA	D/C D/C D/C	250 0 0	1307 250 2015 2634	0.0 3.1 0.0 0.0	48.5 0.7 37.4 51.8	-48.5 2.4 -37.4 -51.8
40 40 40 40 40 40 40 40	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	250 0 0 485	1307 250 2015 2634 0	0.0 3.1 0.0 0.0 0.0	48.5 0.7 37.4 51.8 29.9	-48.5 2.4 -37.4 -51.8 -29.9
RAPP-SHUJALPUR	33 34 35 36 37 38	HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI	D/C D/C D/C D/C S/C	250 0 0 485 305	1307 250 2015 2634 0	0.0 3.1 0.0 0.0 0.0 5.1	48.5 0.7 37.4 51.8 29.9 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1
S/C 90 0 1.4 0.0 1.4 1.4 1.5 1	33 34 35 36 37 38 39	HVDC 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL	D/C D/C D/C D/C S/C S/C	250 0 0 485 305 309	1307 250 2015 2634 0 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1	48.5 0.7 37.4 51.8 29.9 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1
BADOD-MORAK S/C 40 26 0.3 0.1 0.2	33 34 35 36 37 38 39 40	HVDC 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND	D/C D/C D/C C S/C S/C S/C	250 0 0 485 305 309 483	1307 250 2015 2634 0 0 9	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3
MEHGAON-AURAIYA S/C 100 0 1.8 0.0 1.8 45	33 34 35 36 37 38 39 40 41	HVDC 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR	D/C D/C D/C S/C S/C S/C D/C	250 0 0 485 305 309 483 0	1307 250 2015 2634 0 0 9 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2
Martial Reserve Martial Re	33 34 35 36 37 38 39 40 41 42	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA	D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C D/C	250 0 0 485 305 309 483 0 90	1307 250 2015 2634 0 0 9 0 1574	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4
WR-NR 37.8 170.4 -132.6	33 34 35 36 37 38 39 40 41 42 43	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK	D/C D/C D/C D/C S/C S/C S/C S/C S/C S/C S/C S/C	250 0 0 485 305 309 483 0 90 40	1307 250 2015 2634 0 0 9 0 1574 0 26	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2
Nort/Export of WR (With SR)	33 34 35 36 37 38 39 40 41 42 43 44	HVDC 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA	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	250 0 0 485 305 309 483 0 90 40 100	1307 250 2015 2634 0 0 9 0 1574 0 26	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8
HVDC BHADRAWATI B/B - 0 1000 0.0 20.0 -20.0	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 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	250 0 0 485 305 309 483 0 90 40 100 54	1307 250 2015 2634 0 0 9 0 1574 0 26 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1 0.0 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0
LINK BARSUR-L.SILERU	33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV 400 kV 220 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	250 0 0 485 305 309 483 0 90 40 100 54	1307 250 2015 2634 0 0 9 0 1574 0 26 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1 0.0 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8
A9	33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV 400 kV 220 kV 132kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	250 0 0 485 305 309 483 0 90 40 100 54 0	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 WR-NR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1 0.0 0.0 0.0 170.4	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6
TRANSNATIONAL EXCHANGE Table Table Table Transnational Exchange Table Transnational Exchange Table Transnational Exchange Table Transnational Exchange Table Table Transnational Exchange Table Table	33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	250 0 0 485 305 309 483 0 90 40 100 54 0	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 WR-NR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1 0.0 0.0 170.4	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6
51 400 kV KOLHAPUR-KUDGI D/C 500 85 4.1 0.1 4.0 52 KOLHAPUR-CHIKODI D/C 0 0 0.0 0.0 0.0 53 PONDA-AMBEWADI S/C 0 0 0.0 0.0 0.0 54 XELDEM-AMBEWADI S/C 73 0 1.5 0.0 1.5 WR-SR 5.6 68.2 -62.6	33 34 35 36 37 38 39 40 41 42 43 44 45 46	HVDC 765 kV 400 kV 220 kV 220 kV Export of HVDC LINK	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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	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	250 0 0 485 305 309 483 0 90 40 100 54 0	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 WR-NR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 2 0.0 0.1 0.0 0.0 0.0 170.4	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6
52 KOLHAPUR-CHIKODI D/C 0 0 0.0 0.0 0.0 53 220 kV PONDA-AMBEWADI S/C 0 0 0.0 0.0 0.0 54 XELDEM-AMBEWADI S/C 73 0 1.5 0.0 1.5 WR-SR 5.6 68.2 -62.6 TRANSNATIONAL EXCHANGE	33 34 35 36 37 38 39 40 41 42 43 44 45 46 aport/E 47 48 49	HVDC 765 kV 400 kV 220 kV 220 kV Export of HVDC LINK	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR ZERDA-KANKROLI ZERDA -BHINMAL V'CHAL -RIHAND RAPP-SHUJALPUR BADOD-KOTA BADOD-MORAK MEHGAON-AURAIYA MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR WR (With SR) BARSUR-L.SILERU SOLAPUR-RAICHUR	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	250 0 0 485 305 309 483 0 90 40 100 54 0	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 WR-NR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 2 0.0 0.1 0.0 0.0 0.0 170.4	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6
53 220 kV PONDA-AMBEWADI S/C 0 0 0.0 0.0 0.0 54 XELDEM-AMBEWADI S/C 73 0 1.5 0.0 1.5 WR-SR 5.6 68.2 -62.6 TRANSNATIONAL EXCHANGE	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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	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	250 0 0 485 305 309 483 0 90 40 100 54 0 0 157 0	1307 250 2015 2634 0 0 0 9 0 1574 0 26 0 0 WR-NR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 0.1 0.0 0.0 170.4 20.0 0.0 15.3 32.8	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6 -20.0 0.0 -15.3 -32.8
WR-SR 5.6 68.2 -62.6 TRANSNATIONAL EXCHANGE	33 34 35 36 37 38 39 40 41 42 43 44 45 46 apport/E 47 48 49 50 51	HVDC 765 kV 400 kV 220 kV 132kV Export of HVDC LINK 765 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	250 0 0 485 305 309 483 0 90 40 100 54 0 0 0 157 0 500	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 0 WR-NR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 0.1 0.0 0.0 0.0 170.4 20.0 0.0 15.3 32.8 0.1	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6 -20.0 0.0 -15.3 -32.8 4.0
TRANSNATIONAL EXCHANGE	33 34 35 36 37 38 39 40 41 42 43 44 45 46 apport/E 47 48 49 50 51 52	HVDC 765 kV 400 kV 220 kV 220 kV Apport of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 S/C S/C S/C S/C S/C S/C S/C S/C S/C S	250 0 0 485 305 309 483 0 90 40 100 54 0 0 157 0 500 0	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 WR-NR 1000 0 1248 2018 85 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 2 0.0 0.1 0.0 0.0 170.4 20.0 0.0 15.3 32.8 0.1 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6 -20.0 0.0 -15.3 -32.8 4.0 0.0
	33 34 35 36 37 38 39 40 41 42 43 44 45 46 Aport/E 47 48 49 50 51 52 53	HVDC 765 kV 400 kV 220 kV 220 kV Apport of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 KOLHAPUR-CHIKODI PONDA-AMBEWADI	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	250 0 0 485 305 309 483 0 90 40 100 54 0 0 157 0 500 0	1307 250 2015 2634 0 0 0 9 0 1574 0 26 0 0 WR-NR 1000 0 1248 2018 85 0 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 2 0.0 0.1 0.0 0.0 170.4 20.0 0.0 15.3 32.8 0.1 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6 -20.0 0.0 -15.3 -32.8 4.0 0.0 0.0
55 BHUTAN	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	HVDC 765 kV 400 kV 220 kV 220 kV Apport of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 KOLHAPUR-CHIKODI PONDA-AMBEWADI	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	250 0 0 485 305 309 483 0 90 40 100 54 0 0 157 0 500 0	1307 250 2015 2634 0 0 0 9 0 1574 0 26 0 0 WR-NR 1000 0 1248 2018 85 0 0 0	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 0.1 0.0 0.0 170.4 20.0 0.0 15.3 32.8 0.1 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6 -20.0 0.0 -15.3 -32.8 4.0 0.0 0.0 1.5
	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	HVDC 765 kV 400 kV 220 kV 220 kV Apport of HVDC LINK 765 kV 400 kV	CHAMPA-KURUKSHETRA V'CHAL B/B APL -MHG GWALIOR-AGRA PHAGI-GWALIOR 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 KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	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	250 0 0 485 305 309 483 0 90 40 100 54 0 0 0 157 0 500 0 0 73	1307 250 2015 2634 0 0 9 0 1574 0 26 0 0 WR-NR 1000 0 1248 2018 85 0 0 0 WR-SR	0.0 3.1 0.0 0.0 0.0 5.1 3.1 22.3 0 1.4 0.3 1.8 0.8 0.0 37.8	48.5 0.7 37.4 51.8 29.9 0.0 0.0 0.0 0.1 0.0 0.0 170.4 20.0 0.0 15.3 32.8 0.1 0.0 0.0	-48.5 2.4 -37.4 -51.8 -29.9 5.1 3.1 22.3 -2 1.4 0.2 1.8 0.8 0.0 -132.6 -20.0 0.0 -15.3 -32.8 4.0 0.0 0.0 1.5