

National Load Despatch Centre राष्ट्रीय भार प्रेषण केंद्र

POWER SYSTEM OPERATION CORPORATION LIMITED पाँवर 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: 13th Mar 2020

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 12.03.2020.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 12-मार्च-2020 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 12th Mar 2020, 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)	37453	47493	45354	15831	2403	148534
Peak Shortage (MW)	522	0	0	0	42	564
Energy Met (MU)	748	1130	1123	349	41	3391
Hydro Gen (MU)	135	54	91	30	7	317
Wind Gen (MU)	35	61	23	-	-	119
Solar Gen (MU)*	33.56	30.60	87.34	1.47	0.04	153
Energy Shortage (MU)	8.6	0.0	0.0	0.0	0.5	9
Maximum Demand Met during the day (MW) & time	40554	53335	53110	18474	2415	157715
(from NLDC SCADA)	09:22	11:25	09:26	18:40	18:07	10:39

B. Frequency Profile (%)
Region
All India FVI 49.8-49.9 5.71 49.9-50.05 75.51 <49.7 49.7-49.8 <49.9 0.035 0.00 0.15 5.86

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	4603	0	91.1	69.7	-0.6	164	0.0
	Haryana	5155	0	92.6	85.0	1.1	209	0.0
	Rajasthan	10958	0	193.0	50.7	-2.2	439	0.0
	Delhi	3419	0	58.8	47.3	-0.6	192	0.0
NR	UP	12996	0	214.0	105.4	1.4	1118	0.0
	Uttarakhand	1607	0	30.0	17.0	0.0	160	0.0
	HP	1401	0	24.3	19.1	-2.0	21	0.0
	J&K(UT) and Ladakh(UT)	2149	537	41.4	37.9	-1.8	371	8.6
	Chandigarh	208	0	3.3	3.3	0.0	19	0.0
	Chhattisgarh	3721	0	81.3	30.5	-0.2	275	0.0
	Gujarat	15067	0	323.3	92.2	4.9	1260	0.0
	MP	10397	0	202.6	100.6	-2.9	406	0.0
WR	Maharashtra	23089	0	482.4	148.1	-0.1	560	0.0
WK	Goa	485	0	10.4	10.2	-0.3	31	0.0
	DD	322	0	7.1	6.8	0.3	42	0.0
	DNH	793	0	17.9	17.8	0.1	60	0.0
	Essar steel	775	0	5.0	5.1	-0.1	219	0.0
	Andhra Pradesh	9694	0	197.4	89.6	1.0	621	0.0
	Telangana	11856	0	235.4	142.1	0.0	1242	0.0
SR	Karnataka	12845	0	257.9	83.2	1.0	749	0.0
JK.	Kerala	4015	0	82.9	62.8	1.4	209	0.0
	Tamil Nadu	15248	0	340.6	183.8	0.2	566	0.0
	Pondy	401	0	8.4	8.4	0.0	36	0.0
	Bihar	4053	0	69.3	63.9	-1.8	200	0.0
	DVC	2777	0	56.9	-40.6	0.0	250	0.0
ER	Jharkhand	1175	0	22.2	17.8	-0.9	125	0.0
LIX	Odisha	3766	0	75.8	4.3	-0.7	240	0.0
	West Bengal	6982	0	123.8	33.7	0.0	425	0.0
	Sikkim	124	0	1.4	1.8	-0.4	20	0.0
	Arunachal Pradesh	118	1	2.0	2.7	-0.7	15	0.0
	Assam	1401	21	23.3	18.7	0.1	96	0.3
	Manipur	180	2	2.6	2.5	0.1	19	0.0
NER	Meghalaya	376	0	5.4	4.2	0.2	55	0.1
	Mizoram	101	0	1.7	1.5	-0.1	9	0.0
	Nagaland	122	2	2.1	2.1	-0.1	11	0.0
	Tripura	234	1	3.8	2.4	-0.1	31	0.0

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

	Bhutan	Nepal	Bangladesh
Actual(MU)	3.0	-8.5	-17.1
Day peak (MW)	317.0	-535.0	-1077.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	174.6	-260.4	196.7	-120.6	9.1	-0.7
Actual(MU)	153.1	-260.8	216.5	-129.7	9.5	-11.5
O/D/U/D(MU)	-21.5	-0.4	19.8	-9.0	0.4	-10.7

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	Total
Central Sector	5876	13952	6212	1170	790	28000
State Sector	21175	16047	7915	5262	11	50410
Total	27051	29998	14127	6432	802	78410

G. Sourcewise generation (MII)

	NR	WR	SR	ER	NER	All India
Coal	315	1134	562	479	11	2501
Lignite	19	14	51	0	0	84
Hydro	135	54	91	30	7	317
Nuclear	24	37	45	0	0	105
Gas, Naptha & Diesel	23	46	18	0	18	105
RES (Wind, Solar, Biomass & Others)	95	106	148	2	0	350
Total	611	1390	914	510	37	3463

Share of RES in total generation (%)	15.56	7.61	16.14	0.30	0.11	10.11
Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%)	41.56	14.13	30.97	6.12	19.65	22.30

H. All India Demand Diversity Factor

111 111 India Demand Diversity Tuctor	
Based on Regional Max Demands	1.065
Based on State Max Demands	1.094

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

13-Mar-2020

> 50.05

18.63

 $[\]textbf{*Source:} \ RLDCs \ for \ solar \ connected \ to \ ISTS; \ SLDCs \ for \ embedded \ solar. \ Limited \ visibility \ of \ embedded \ solar \ data.$

INTER-REGIONAL EXCHANGES

Import=(+ve) /Export =(-ve) for NET (MU)
Date of Reporting: 13-Mar-2020

							Date of Reporting:	13-Mar-2020
SI No	Voltage Level	Line Details	Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
	ort/Export of ER	(With NR)	ı	ı			I	
1	HVDC	ALIPURDUAR-AGRA	-	0	501	0.0	5.5	-5.5
2	HVDC	PUSAULI B/B	S/C	0	249	0.0	6.3	-6.3
3	765 kV	GAYA-VARANASI	D/C	75	636	0.0	8.2	-8.2
4	765 kV	SASARAM-FATEHPUR	S/C	95	325	0.0	3.8	-3.8
5	765 kV	GAYA-BALIA	S/C	0	379	0.0	6.0	-6.0
6	400 kV	PUSAULI-VARANASI	S/C	0	212	0.0	4.4	-4.4
7	400 kV	PUSAULI -ALLAHABAD	S/C	0	108	0.0	1.7	-1.7
8	400 kV	MUZAFFARPUR-GORAKHPUR	D/C	111	435	0.0	5.0	-5.0
9	400 kV	PATNA-BALIA	Q/C	0	828	0.0	13.5	-13.5
10	400 kV	BIHARSHARIFF-BALIA	D/C	12	256	0.0	3.5	-3.5
11	400 kV	MOTIHARI-GORAKHPUR	D/C	0	340	0.0	5.9	-5.9
12	400 kV	BIHARSHARIFF-VARANASI	D/C	204	193	0.0	0.4	-0.4
13	220 kV	PUSAULI-SAHUPURI SONE NAGAR-RIHAND	S/C	0	131	0.0	2.1	-2.1
15	132 kV 132 kV	GARWAH-RIHAND	S/C S/C	30	0	0.0	0.0	0.0
16	132 kV	KARMANASA-SAHUPURI	S/C	0	0	0.0	0.0	0.3
17	132 kV	KARMANASA-CHANDAULI	S/C	0	0	0.0	0.0	0.0
				-	ER-NR	0.3	66.4	-66.0
Impo	ort/Export of ER	(With WR)						
1	765 kV	JHARSUGUDA-DHARAMJAIGARH	Q/C	1778	0	32.7	0.0	32.7
2	765 kV	NEW RANCHI-DHARAMJAIGARH	D/C	380	523	0.0	0.2	-0.2
3	765 kV	JHARSUGUDA-DURG	D/C	12	209	0.0	1.9	-1.9
4	400 kV	JHARSUGUDA-RAIGARH	Q/C	152	246	0.0	2.2	-2.2
5	400 kV	RANCHI-SIPAT	D/C	191	153	0.8	0.0	0.8
6	220 kV	BUDHIPADAR-RAIGARH	S/C	1	105	0.0	1.3	-1.3
7	220 kV	BUDHIPADAR-KORBA	D/C	97	0 ER-WR	1.3	0.0	1.3
lmno	ort/Export of ER	(With SR)			EK-WR	34.8	5.6	29.2
impo 1	HVDC	JEYPORE-GAZUWAKA B/B	D/C	0	683	0.0	15.9	-15.9
3	HVDC 765 kV	TALCHER-KOLAR BIPOLE ANGUL-SRIKAKULAM	D/C D/C	0	2475 3335	0.0	51.3 67.4	-51.3 -67.4
4	765 kV 400 kV	TALCHER-I/C	D/C D/C	0	3335 1049	0.0	67.4 12.9	-67.4 -12.9
5	220 kV	BALIMELA-UPPER-SILERRU	S/C	1	1049	0.0	0.0	0.0
<u> </u>	220 KV	BALIMELA-OFFER-SILERRO	3/0		ER-SR	0.0	134.6	-134.6
Impo	ort/Export of ER	(With NER)						
1	400 kV	BINAGURI-BONGAIGAON	D/C	136	346	0.5	2.7	-2.2
2	400 kV	ALIPURDUAR-BONGAIGAON	D/C	227	316	0.5	1.3	-0.8
3	220 kV	ALIPURDUAR-SALAKATI	D/C	40	77	0.0	0.5	-0.5
	•		•		ER-NER	1.0	4.5	-3.5
Impo	ort/Export of NEI	R (With NR)						
1	HVDC	BISWANATH CHARIALI-AGRA	-	469	0	6.5	0.0	6.5
					NER-NR	6.5	0.0	6.5
Impo	ort/Export of WR							
1	HVDC	CHAMPA-KURUKSHETRA	D/C	0	472	0.0	8.9	-8.9
2	HVDC	V'CHAL B/B	D/C	448	0	11.6	0.0	11.6
3	HVDC	APL -MHG	D/C	0	1270	0.0	26.7	-26.7
4	765 kV	GWALIOR-AGRA	D/C	0	2207	0.0	34.6	-34.6
5	765 kV	PHAGI-GWALIOR	D/C	0	1440	0.0	23.5	-23.5
6	765 kV	JABALPUR-ORAI	D/C	0	740	0.0	21.4	-21.4
7	765 kV	GWALIOR-ORAI	S/C	662	0	7.6	0.0	7.6
8	765 kV	SATNA-ORAI	S/C	0	1286	0.0	25.1	-25.1
9	765 kV	CHITORGARH-BANASKANTHA	D/C	41	881	0.0	7.2	-7.2
10	400 kV	ZERDA-KANKROLI	S/C	159	70	1.4	0.0	1.4
11	400 kV	ZERDA -BHINMAL	S/C	421	96	4.1	0.0	4.1
12	400 kV	V'CHAL -RIHAND	S/C	974	0	21.0	0.0	21.0
13 14	400 kV 220 kV	RAPP-SHUJALPUR	D/C S/C	183 40	295 68	0.8	0.0	0.8
		BHANPURA-RANPUR				0.1	1.3	-1.2
15 16	220 kV 220 kV	BHANPURA-MORAK MEHGAON-AURAIYA	S/C S/C	5 102	126 4	0.0	1.8	-1.8
16	220 kV 220 kV	MEHGAON-AURAIYA MALANPUR-AURAIYA	S/C S/C	102 68	24	1.1 0.5	0.0	0.4
17	132 kV	MALANPUR-AURAIYA GWALIOR-SAWAI MADHOPUR	S/C S/C	68	0	0.5		0.4
ıó	132 KV	OTTALION-SAWAI MADHUPUK	3/0	U	U			
Impo	at/Eurapt of MD				WR-ND		0.0 150.3	
_	DIVEXPORT OF WA	(With SR)			WR-NR	48.1	0.0 150.3	-102.1
1	HVDC	(With SR) BHADRAWATI B/B	-	0	WR-NR 1012			
2			-	0		48.1	150.3	-102.1
	HVDC	BHADRAWATI B/B	- - D/C		1012	48.1 0.0	150.3	-102.1 -20.8
2	HVDC	BHADRAWATI B/B BARSUR-L.SILERU		0	1012 0	0.0 0.0	20.8 0.0	-102.1 -20.8 0.0
3	HVDC HVDC 765 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR	D/C	0	1012 0 2576	0.0 0.0 0.0	150.3 20.8 0.0 44.8	-102.1 -20.8 0.0 -44.8
3	HVDC HVDC 765 kV 765 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C	0 0 0	1012 0 2576 3452	0.0 0.0 0.0 0.0	20.8 0.0 44.8 68.3	-102.1 -20.8 0.0 -44.8 -68.3
2 3 4 5	HVDC HVDC 765 kV 765 kV 400 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI	D/C D/C D/C	0 0 0 748	1012 0 2576 3452 0	0.0 0.0 0.0 0.0 0.0 11.0	20.8 0.0 44.8 68.3 0.0	-102.1 -20.8 0.0 -44.8 -68.3 11.0
2 3 4 5	HVDC HVDC 765 kV 765 kV 400 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI	D/C D/C D/C D/C	0 0 0 748	1012 0 2576 3452 0 0 67	48.1 0.0 0.0 0.0 0.0 11.0 0.0 0.0	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV	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	0 0 0 748 0	1012 0 2576 3452 0 0	48.1 0.0 0.0 0.0 0.0 11.0 0.0 0.0	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV	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	0 0 0 748 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 0.0	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C S/C S/C S/C	0 0 0 748 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 0.0	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region	D/C D/C D/C D/C S/C S/C S/C INTER	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU)
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI	D/C D/C D/C D/C D/C S/C S/C S/C	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 0.0	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU)
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW)	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6
2 3 4 5 6 7	HVDC HVDC 765 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2*6: CHUKA (4*84) E	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW)	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 1.3 Avg (MW)	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU)
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) E MANGDECHHU (4 ALIPURDUAR RE	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW)	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER	D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) § MANGDECHHU (4 ALIPURDUAR RE TALA (6 * 170) B	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES Max (MW) 0 0	48.1 0.0 0.0 0.0 0.0 11.0 0.0 12.8 Min (MW) 0 102	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) E MANGDECHHU (4 ALIPURDUAR RE	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES Max (MW) 0	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 102	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2 Avg (MW) 0 -25	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER	D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) § MANGDECHHU (4 ALIPURDUAR RE TALA (6 * 170) B	0 0 748 0 0 748 0 0 0 NATIONAL EXCHAN Name 3) SIRPARA RECEIPT 1× 180) CEIPT INAGURI RECEIPT 1- GELEPHU	1012 0 2576 3452 0 0 67 96 WR-SR IGES Max (MW) 0 0	48.1 0.0 0.0 0.0 0.0 11.0 0.0 12.8 Min (MW) 0 102	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER ER NER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) E MANGDECHHU (ALIPURDUAR RE TALA (6 * 170) B 132KV-SALAKAT 132KV-RANGIA - 1 132KV-Tanakpur(0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES Max (MW) 0 0 103 98 27	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 102 68 0	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU 0.0 -0.6 2.4 1.7 -0.3 -0.3
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER ER NER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) E MANGDECHHU (4 ALIPURDUAR RE TALA (6 * 170) B 132KV-SALAKAT 132KV-RANGIA -	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR GES Max (MW) 0 0	48.1 0.0 0.0 0.0 0.0 11.0 0.0 12.8 Min (MWV) 0 102 68	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4 1.7 -0.3
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER ER NER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) E MANGDECHHU (ALIPURDUAR RE TALA (6 * 170) B 132KV-SALAKAT 132KV-RANGIA - 1 132KV-Tanakpur(0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES Max (MW) 0 0 103 98 27	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 102 68 0	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4 1.7 -0.3 -0.3
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV BHUTAN	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER ER NER NER NER	DIC DIC DIC DIC DIC SIC SIC SIC SIC NTER Line DAGACHU (2 * 6: CHUKA (4 * 84); ALIPURDUAR RE TALA (6 * 170) B 132KV-SALAKAT 132KV-Tanakpur(Mahendranagar (F Makendranagar (F) 122KV-MUZAFFA	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES 103 98 27 23 0 -215	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 0 102 68 0 0 -1	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10 0 -72	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4 1.7 -0.3 -0.3 -1.0 -1.7
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV BHUTAN	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER ER NER NER	D/C D/C D/C D/C D/C S/C S/C S/C INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) B MANGDECHHU (ALIPURDUAR RE 132KV-SALAKAT 132KV-RANGIA - 1 132KV-BIHAR - N	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES 103 98 27 23 0	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 102 68 0 0	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10 0	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4 1.7 -0.3 -0.3 -1.0
2 3 4 5 6 7	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV BHUTAN	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER ER NER NER NER	DIC DIC DIC DIC DIC SIC SIC SIC SIC NTER Line DAGACHU (2 * 6: CHUKA (4 * 84); ALIPURDUAR RE TALA (6 * 170) B 132KV-SALAKAT 132KV-Tanakpur(Mahendranagar (F Makendranagar (F) 122KV-MUZAFFA	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 0 67 96 WR-SR IGES 103 98 27 23 0 -215	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 0 102 68 0 0 -1	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10 0 -72	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4 1.7 -0.3 -0.3 -1.0 -1.7
2 3 4 5 6 7 8	HVDC HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV State	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMBAD KOLHAPUR-KUDGI KOLHAPUR-CHIKODI PONDA-AMBEWADI Region ER ER ER ER NER NER NER NER ER E	DIC DIC DIC DIC DIC SIC SIC SIC SIC INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) E MANGDECHHU (ALIPURDUAR RE TALA (6 * 170) B 132KV-SALAKAT 132KV-Tanakpur(Mahendranagar(F) 132KV-BHAR - N 220KV-MUZAFFA DHALKEBAR DC 132KV-SURAJMA	0 0 0 748 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1012 0 2576 3452 0 67 96 WR-SR IGES Max (MW) 0 103 98 27 23 0 -215 -268	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 0 102 68 0 0 -1 -200	150.3 20.8 0.0 44.8 68.3 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10 0 -72 -244 -601	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU) 0.0 -0.6 2.4 1.7 -0.3 -0.3 -1.0 -1.7 -5.9 -14.4
2 3 4 5 6 7 8	HVDC HVDC T65 kV 765 kV 400 kV 220 kV 220 kV 220 kV BHUTAN	BHADRAWATI B/B BARSUR-L.SILERU SOLAPUR-RAICHUR WARDHA-NIZAMABAD KOLHAPUR-CHIKODI PONDA-AMBEWADI XELDEM-AMBEWADI Region ER ER ER ER NER NER NER NER ER E	DIC DIC DIC DIC DIC SIC SIC SIC SIC INTER Line DAGACHU (2 * 6: CHUKA (4 * 84) I MANGDECHHU (ALIPURDUAL TALA (6 * 170) B 132KV-RANGIA - 132KV-RANGIA - 132KV-RANGIA - 132KV-BIHAR - N 220KV-MUZAFFA DHALKEBAR DC Bheramara HVDC	0 0 748 0 0 748 0 0 0 NATIONAL EXCHAN Name 3 IX 180) CEIPT INAGURI RECEIPT I- GELEPHU DECTHANG NH) - GG) EPAL RPUR - (Bangladesh) NI NAGAR - ADESH)-1	1012 0 2576 3452 0 67 96 WR-SR IGES Max (MW) 0 103 98 27 23 0 -215	48.1 0.0 0.0 0.0 0.0 11.0 0.0 1.8 12.8 Min (MW) 0 0 102 68 0 0 -1 -200	150.3 20.8 0.0 44.8 68.3 0.0 0.0 1.3 0.0 135.2 Avg (MW) 0 -25 100 71 -13 -10 0 -72 -244	-102.1 -20.8 0.0 -44.8 -68.3 11.0 0.0 -1.3 1.8 -122.4 Energy Exchange (MU 0.0 -0.6 2.4 1.7 -0.3 -0.3 -1.0 -1.7 -5.9