

National Load Despatch Centre
राष्ट्रीय भार प्रेषण केंद्र
GRID CONTROLLER OF INDIA LIMITED
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(Government of India Enterprise/ भारत सरकार का उद्यम)
B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016
बी-9, कुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 21st December 2023

To,

- कार्यकारी निदेशक, पू.क्षे.भा.प्रे.के., 14, गोल्फ क्लब रोड, कोलकाता - 700033
Executive Director, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata, 700033
- 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
- 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
- कार्यकारी निदेशक, ऊ.पू.क्षे.भा.प्रे.के., डोंगतेह, लोअर नोंग्रह, लापालंग, शिलोंग - 793006
Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 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 20.12.2023.

महोदय/Dear Sir,

आईंईंजींसीं-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 20-दिसम्बर-2023 की अखिल भारतीय प्रणाली की दैनिक ग्रिड निष्पादन रिपोर्ट रांभांप्रेंकें की वेबसाइट पर उपलब्ध 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 December 2023, is available at the NLDC website.

धन्यवाद,

Report for previous day

Date of Reporting: 21-Dec-2023

A. Power Supply Position at All India and Regional level

	NR	WR	SR	ER	NER	TOTAL
Demand Met during Evening Peak hrs(MW) (at 19:00 hrs; from RLDCs)	55268	58649	44029	20337	2644	180927
Peak Shortage (MW)	14	0	0	379	0	393
Energy Met (MU)	1185	1411	1073	422	48	4139
Hydro Gen (MU)	115	29	52	17	11	224
Wind Gen (MU)	9	120	70	-	-	199
Solar Gen (MU)*	105.29	56.63	89.00	5.55	1.17	258
Energy Shortage (MU)	0.88	0.00	0.00	2.19	0.23	3.30
Maximum Demand Met During the Day (MW) (From NLDC SCADA)	61967	71051	53458	21312	2787	207427
Time Of Maximum Demand Met	10:15	10:21	09:49	17:45	17:10	10:21

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	0.047	0.13	0.75	7.16	8.04	73.29	18.67

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)
NR	Punjab	7774	0	147.9	40.3	0.8	180	0.00
	Haryana	8080	0	152.8	93.9	-0.1	176	0.00
	Rajasthan	17327	0	319.7	129.1	-3.1	288	0.00
	Delhi	4338	0	74.6	65.7	-0.7	222	0.00
	UP	18391	57	339.9	110.7	-0.6	1343	0.20
	Uttarakhand	2378	0	44.4	30.8	0.3	182	0.00
	HP	2103	0	37.7	30.8	0.1	247	0.06
	J&K(UT) & Ladakh(UT)	2860	0	60.6	55.8	0.0	165	0.62
	Chandigarh	257	0	4.3	3.9	0.4	73	0.00
Railways NR ISTS	175	0	3.4	3.4	0.0	18	0.00	
WR	Chhattisgarh	4507	0	90.8	26.7	-1.0	152	0.00
	Gujarat	20174	0	384.1	159.5	-0.2	1242	0.00
	MP	17134	0	322.6	197.3	-4.8	578	0.00
	Maharashtra	26716	0	541.9	162.6	-1.7	702	0.00
	Goa	681	0	13.6	13.3	-0.3	184	0.00
	DNHDDPDCL	1268	0	28.5	28.3	0.2	80	0.00
	AMNSIL	789	0	17.1	8.3	0.0	226	0.00
	BALCO	523	0	12.4	12.5	-0.1	1	0.00
SR	Andhra Pradesh	10220	0	195.4	67.4	0.0	825	0.00
	Telangana	12126	0	221.7	91.3	0.2	965	0.00
	Karnataka	14357	0	260.6	105.1	0.1	707	0.00
	Kerala	4240	0	83.7	64.5	1.1	342	0.00
	Tamil Nadu	14911	0	303.4	175.9	-0.2	619	0.00
	Puducherry	373	0	8.4	8.0	-0.3	50	0.00
ER	Bihar	4667	0	85.6	79.3	0.0	226	0.14
	DVC	3427	0	72.5	-42.8	-0.3	439	0.00
	Jharkhand	1781	161	31.2	24.4	-1.4	273	2.05
	Odisha	4924	0	95.7	26.2	-2.6	268	0.00
	West Bengal	6729	0	135.0	21.6	-2.3	165	0.00
	Sikkim	107	0	1.9	1.9	-0.1	16	0.00
Railways ER ISTS	18	0	0.1	0.1	0.0	0	0.00	
NER	Arunachal Pradesh	169	0	2.9	2.7	0.1	33	0.00
	Assam	1572	0	26.7	21.2	0.4	107	0.00
	Manipur	221	15	3.2	3.1	0.2	34	0.23
	Meghalaya	358	0	6.6	4.9	-0.1	107	0.00
	Mizoram	139	0	2.0	1.8	-0.4	19	0.00
	Nagaland	168	0	2.4	2.5	-0.2	21	0.00
Tripura	234	0	3.9	2.9	-0.1	18	0.00	

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

	Bhutan	Nepal	Bangladesh	Godda -> Bangladesh
Actual (MU)	-7.8	-5.1	-19.5	-15.0
Day Peak (MW)	-537.0	-405.0	-1008.0	-755.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	254.2	-256.5	152.2	-151.6	1.6	0.0
Actual(MU)	244.0	-258.7	167.0	-157.7	0.9	-4.6
O/D/U/D(MU)	-10.1	-2.3	14.7	-6.1	-0.8	-4.6

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	TOTAL	% Share
Central Sector	8063	11981	8818	5131	355	34348	53
State Sector	8556	11120	7040	3456	190	30361	47
Total	16619	23101	15858	8587	545	64709	100

G. Sourcewise generation (Gross) (MU)

	NR	WR	SR	ER	NER	All India	% Share
Coal	702	1532	596	635	15	3480	77
Lignite	29	18	49	0	0	96	2
Hydro	115	29	52	17	11	224	5
Nuclear	21	47	76	0	0	143	3
Gas, Naptha & Diesel	15	20	7	0	25	67	1
RES (Wind, Solar, Biomass & Others)	138	179	194	8	1	520	11
Total	1020	1824	974	659	52	4528	100

Share of RES in total generation (%)	13.57	9.79	19.90	1.16	2.23	11.47
Share of Non-fossil fuel (Hydro,Nuclear and RES) in total generation(%)	27.00	13.96	33.07	3.69	23.22	19.62

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.015
Based on State Max Demands	1.042

I. All India Peak Demand and shortage at Solar and Non-Solar Hour

	Max Demand Met(MW)	Time	Shortage(MW)
Solar hr	207427	10:21	129
Non-Solar hr	189545	18:41	532

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

**Note: All generation MU figures are gross

***Godda (Jharkhand) -> Bangladesh power exchange is through the radial connection (isolated from Indian Grid)

Solar Hours -> 06:00 to 18:00hrs and rest are Non-Solar Hours

*Source: RLDCs for solar connected to ISTS; SLDCs for embedded solar. Limited visibility of embedded solar data.

Executive Director-NLDC

INTER-REGIONAL EXCHANGES

Import=(+ve) /Export =(-ve) for NET (MU)

Date of Reporting: 21-Dec-2023

Sl No	Voltage Level	Line Details	No. of Circuit	Max Import (MW)	Max Export (MW)	Import (MU)	Export (MU)	NET (MU)
Import/Export of ER (With NR)								
1	HVDC	ALIPURDUAR-AGRA	2	0	0	0.0	0.0	0.0
2	HVDC	PUSAULI B/B	-	2	49	0.0	1.2	-1.2
3	765 kV	GAYA-VARANASI	2	0	1008	0.0	15.0	-15.0
4	765 kV	SASARAM-FATEHPUR	1	0	510	0.0	8.4	-8.4
5	765 kV	GAYA-BALIA	1	0	927	0.0	15.2	-15.2
6	400 kV	PUSAULI-VARANASI	1	50	6	0.3	0.0	0.3
7	400 kV	PUSAULI-ALLAHABAD	1	0	93	0.0	1.5	-1.5
8	400 kV	MUZAFFARPUR-GORAKHPUR	2	0	742	0.0	9.1	-9.1
9	400 kV	PATNA-BALIA	2	0	0	0.0	0.0	0.0
10	400 kV	NAUBATPUR-BALIA	2	0	893	0.0	14.9	-14.9
11	400 kV	BIHARSHARIF-BALIA	2	0	420	0.0	6.4	-6.4
12	400 kV	MOTIHARI-GORAKHPUR	2	0	602	0.0	10.0	-10.0
13	400 kV	BIHARSHARIF-VARANASI	2	0	527	0.0	8.1	-8.1
14	220 kV	SAHUPURI-KARAMNANA	1	0	110	0.0	1.2	-1.2
15	132 kV	NAGAR UNTARI-RIHAND	1	0	0	0.0	0.0	0.0
16	132 kV	GARWAH-RIHAND	1	30	0	0.0	0.0	0.0
17	132 kV	KARMANASA-SAHUPURI	1	0	0	0.0	0.0	0.0
18	132 kV	KARMANASA-CHANDAULI	1	0	0	0.0	0.0	0.0
ER-NR						0.3	91.0	-90.7
Import/Export of ER (With WR)								
1	765 kV	JHARSUGUDA-DHARAMJAIGARH	4	92	1035	0.0	13.0	-13.0
2	765 kV	NEW RANCHI-DHARAMJAIGARH	2	281	1079	0.0	3.9	-3.9
3	765 kV	JHARSUGUDA-DURG	2	0	761	0.0	13.7	-13.7
4	400 kV	JHARSUGUDA-RAIGARH	4	0	489	0.0	6.6	-6.6
5	400 kV	RANCHI-SIPAT	2	111	342	0.0	1.2	-1.2
6	220 kV	BUDHIPADAR-RAIGARH	1	45	131	0.0	1.2	-1.2
7	220 kV	BUDHIPADAR-KORBA	2	149	18	1.7	0.0	1.7
ER-WR						1.7	39.7	-38.0
Import/Export of ER (With SR)								
1	HVDC	JEYPORE-GAZUWAKA B/B	2	0	21	0.0	0.0	0.0
2	HVDC	TALCHER-KOLAR BIPOLE	2	0	1644	0.0	39.7	-39.7
3	765 kV	ANGUL-SRIKAKULAM	2	0	2645	0.0	48.7	-48.7
4	400 kV	TALCHER-I/C	2	271	587	4.5	0.0	4.5
5	220 kV	BALIMELA-UPPER-SILERRU	1	0	0	0.0	0.0	0.0
ER-SR						0.0	88.4	-88.4
Import/Export of ER (With NER)								
1	400 kV	BINAGURI-BONGAIGAON	2	216	0	2.5	0.0	2.5
2	400 kV	ALIPURDUAR-BONGAIGAON	2	726	0	9.9	0.0	9.9
3	220 kV	ALIPURDUAR-SALAKATI	2	142	0	2.3	0.0	2.3
ER-NER						14.6	0.0	14.6
Import/Export of NER (With NR)								
1	HVDC	BISWANATH CHARIAL-AGRA	2	667	0	16.2	0.0	16.2
NER-NR						16.2	0.0	16.2
Import/Export of WR (With NR)								
1	HVDC	CHAMPA-KIRUKSHETRA	2	1	0	0.0	0.0	0.0
2	HVDC	VINDHYACHAL B/B	-	226	101	2.5	1.4	1.1
3	HVDC	MUNDRA-MOHINDERGARH	2	0	980	0.0	19.2	-19.2
4	765 kV	GWALIOR-AGRA	2	0	2351	0.0	40.8	-40.8
5	765 kV	GWALIOR-PHAGI	2	0	2136	0.0	36.2	-36.2
6	765 kV	JABALPUR-ORAI	2	0	1073	0.0	36.5	-36.5
7	765 kV	GWALIOR-ORAI	1	1027	0	17.9	0.0	17.9
8	765 kV	SATNA-ORAI	1	0	1152	0.0	23.3	-23.3
9	765 kV	BANASKANTHA-CHITORGARH	2	1065	1073	4.3	5.9	-1.6
10	765 kV	VINDHYACHAL-VARANASI	2	0	2773	0.0	48.5	-48.5
11	400 kV	ZERDA-KANKROLI	1	152	144	0.0	0.1	-0.1
12	400 kV	ZERDA-BHINMAL	1	478	394	2.2	2.8	-0.5
13	400 kV	VINDHYACHAL-RIHAND	1	972	0	21.4	0.0	21.4
14	400 kV	RAPP-SHUALPUR	2	168	476	0.2	4.3	-4.1
15	220 kV	BHANPURA-RANPUR	1	0	157	0.0	2.6	-2.6
16	220 kV	BHANPURA-MORAK	1	0	30	0.0	0.7	-0.7
17	220 kV	MEHGAON-AURAIYA	1	111	4	0.8	0.0	0.7
18	220 kV	MALANPUR-AURAIYA	1	76	24	0.4	0.1	0.3
19	132 kV	GWALIOR-SAWAI MADHOPUR	1	0	0	0.0	0.0	0.0
20	132 kV	RAJGHAT-LALITPUR	2	0	0	0.0	0.0	0.0
WR-NR						49.6	222.3	-172.7
Import/Export of WR (With SR)								
1	HVDC	BHADRAWATI B/B	-	0	1013	0.0	16.4	-16.4
2	HVDC	RAIGARH-PUGALUR	2	0	5011	0.0	79.5	-79.5
3	765 kV	SOLAPUR-RAICHUR	2	1286	1195	5.9	2.7	3.2
4	765 kV	WARDHA-NIZAMABAD	2	0	2129	0.0	26.7	-26.7
5	765 kV	WARORA-WARANGAL(NEW)	2	0	2290	0.0	29.8	-29.8
6	400 kV	KOLHAPUR-KUDGI	2	1433	0	22.9	0.0	22.9
7	220 kV	KOLHAPUR-CHIKODI	2	0	0	0.0	0.0	0.0
8	220 kV	PONDA-AMBEWADI	1	0	0	0.0	0.0	0.0
9	220 kV	XELDEM-AMBEWADI	1	0	104	2.1	0.0	2.1
WR-SR						30.8	155.1	-124.3

INTERNATIONAL EXCHANGES

Import(+ve)/Export(-ve)

State	Region	Line Name	Max (MW)	Min (MW)	Avg (MW)	Energy Exchange (MU)
BHUTAN	ER	400kV MANGDECHHU-ALIPURDUAR 1,2&3 i.e. ALIPURDUAR RECEIPT (from MANGDECHHU HEP 4*180MW)	-205	-30	-108	-2.58
	ER	400kV TALA-BINAGURI 1,2,4 (& 400kV MALBASE - BINAGURI) i.e. BINAGURI RECEIPT (from TALA HEP 6*170MW)	376	-96	50	1.21
	ER	220kV CHUKHA-BIRPARA 1&2 (& 220kV MALBASE - BIRPARA) i.e. BIRPARA RECEIPT (from CHUKHA HEP 4*84MW)	-297	-174	-243	-5.84
	NER	132kV GELEPHU-SALAKATI	-33	-16	-23	-0.56
	NER	132kV MOTANGA-RANGIA	19	-13	0	0.01
NEPAL	NR	132kV MAHENDRANAGAR-TANAKPUR(NHPC)	-66	0	-18	-0.44
	ER	NEPAL IMPORT (FROM BIHAR)	0	0	0	0.00
	ER	400kV DHALKEBAR-MUZAFFARPUR 1&2	-405	-48	-194	-4.65
BANGLADESH	ER	BHERAMARA B/B HVDC (B'DESH)	-912	-487	-730	-17.52
	ER (Isolated from Indian Grid)	400kV GODDA_TPS-RAHANPUR (B'DESH) D/C	-755	-407	-626	-15.02
	NER	132kV COMILLA-SURAJMANI NAGAR 1&2	-96	0	-83	-1.98

CROSS BORDER EXCHANGE SCHEDULE

Date of Reporting: 21-Dec-2023

Export From India (in MU)

Country	GNA (ISGS/PPA)	T-GNA							TOTAL
		BILATERAL TOTAL	COLLECTIVE						
			IDAM			RTM			
		IEX	PXIL	HPX	IEX	PXIL	HPX		
Bhutan	0.00	0.00	8.74	0.00	0.00	0.00	0.00	0.00	8.74
Nepal	0.34	0.00	4.12	0.00	0.00	0.22	0.00	0.00	4.68
Bangladesh	17.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.63
Myanmar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Export	17.97	0.00	12.86	0.00	0.00	0.22	0.00	0.00	31.05

Import by India(in MU)

Country	GNA (ISGA/PPA)	T-GNA							TOTAL
		BILATERAL TOTAL	COLLECTIVE						
			IDAM			RTM			
		IEX	PXIL	HPX	IEX	PXIL	HPX		
Bhutan	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
Nepal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bangladesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Myanmar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Import	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62

Net from India(in MU)

-ve : Export / +ve : Import

Country	GNA (ISGS/PPA)	T-GNA							TOTAL
		BILATERAL TOTAL	COLLECTIVE						
			IDAM			RTM			
		IEX	PXIL	HPX	IEX	PXIL	HPX		
Bhutan	0.62	0.00	-8.74	0.00	0.00	0.00	0.00	0.00	-8.12
Nepal	-0.34	0.00	-4.12	0.00	0.00	-0.22	0.00	0.00	-4.68
Bangladesh	-17.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-17.63
Myanmar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Net	-17.35	0.00	-12.86	0.00	0.00	-0.22	0.00	0.00	-30.43