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, क़ुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराये, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 23rd July 2023

To,

1. 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 22.07.2023.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 22-जुलाई-2023 की अखिल भारतीय प्रणाली की दैनिक ग्रिड निष्पादन रिपोर्ट रा०भा०प्रे०के० 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 22nd July 2023, is available at the NLDC website.

धन्यवाद,

ग्रिड कंट्रलर ऑफ इंडिया लिमिटेड
राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

Report for previous day **Date of Reporting: 23-Jul-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 20:00 hrs; from RLDCs)	70987	53089	43960	27444	3173	198653
Peak Shortage (MW)	25	0	0	113	36	174
Energy Met (MU)	1617	1253	1034	590	66	4560
Hydro Gen (MU)	374	57	64	137	29	662
Wind Gen (MU)	7	129	298	-	-	433
Solar Gen (MU)*	108.18	31.09	82.55	2.64	1.11	226
Energy Shortage (MU)	0.34	0.37	0.00	3.22	0.61	4.54
Maximum Demand Met During the Day (MW) (From NLDC SCADA)	74022	55808	48472	28212	3197	198788
Time Of Maximum Demand Met	00:00	09:36	10:11	23:13	19:10	10:20

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	0.028	0.00	0.08	3.47	3.55	77.49	18.96

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	12167	0	261.2	149.7	-4.5	204	0.00
	Haryana	11125	0	239.0	185.7	-0.8	265	0.00
	Rajasthan	13032	0	281.2	117.1	-2.3	416	0.00
	Delhi	6924	0	142.8	131.2	-1.9	210	0.00
	UP	26905	0	552.0	285.1	-2.2	163	0.00
	Uttarakhand	2172	0	48.3	31.0	0.9	219	0.25
	HP	1618	0	33.3	3.0	-0.1	115	0.00
	J&K(UT) & Ladakh(UT)	2389	0	49.8	23.0	0.7	110	0.09
	Chandigarh	327	0	6.4	6.7	-0.3	24	0.00
	Railways_NR ISTS	161	0	3.3	3.5	-0.1	11	0.00
WR	Chhattisgarh	4563	0	103.7	60.2	-0.4	452	0.37
	Gujarat	16701	0	366.8	169.9	0.0	1495	0.00
	MP	11083	0	235.5	127.5	-3.0	417	0.00
	Maharashtra	21601	0	473.8	160.7	-3.6	493	0.00
	Goa	567	0	11.9	11.7	-0.2	48	0.00
	DNHDDPDCL	1289	0	29.9	29.8	0.1	111	0.00
	AMNSIL	851	0	18.5	9.4	-0.1	250	0.00
	BALCO	520	0	12.4	12.5	-0.1	42	0.00
SR	Andhra Pradesh	9317	0	197.0	22.9	-1.1	810	0.00
	Telangana	8946	0	184.4	67.3	0.6	891	0.00
	Karnataka	10120	0	193.6	36.9	-2.2	619	0.00
	Kerala	3608	0	75.9	57.3	1.0	361	0.00
	Tamil Nadu	17488	0	373.3	147.8	-2.1	534	0.00
	Puducherry	439	0	10.1	9.5	-0.2	40	0.00
ER	Bihar	6998	208	148.0	137.4	-0.3	306	3.22
	DVC	3416	0	74.9	-36.5	-0.1	380	0.00
	Jharkhand	1679	0	36.6	31.0	0.8	110	0.00
	Odisha	6557	0	117.4	38.7	-2.0	517	0.00
	West Bengal	9681	0	212.0	99.4	-2.0	217	0.00
	Sikkim	80	0	1.1	1.1	0.0	28	0.00
	Railways_ER ISTS	16	0	0.3	0.4	-0.1	2	0.00
NER	Arunachal Pradesh	150	0	2.6	2.3	0.1	48	0.00
	Assam	2176	0	44.0	36.4	0.3	223	0.00
	Manipur	189	0	2.7	2.6	0.1	46	0.00
	Meghalaya	324	0	5.5	0.3	-0.1	112	0.61
	Mizoram	115	0	1.9	1.6	-0.1	26	0.00
	Nagaland	151	0	2.8	2.6	0.0	13	0.00
	Tripura	330	0	6.2	5.6	0.2	56	0.00

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

	Bhutan	Nepal	Bangladesh	Godda -> Bangladesh
Actual (MU)	39.7	6.9	-25.2	-17.8
Day Peak (MW)	1820.0	444.0	-1084.0	-771.2

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	378.1	-284.8	-8.0	-83.6	-1.7	0.0
Actual(MU)	372.1	-286.1	-6.3	-86.4	-0.5	-7.3
O/D/U/D(MU)	-6.0	-1.3	1.7	-2.9	1.3	-7.3

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	TOTAL	% Share
Central Sector	2886	11214	6218	2380	271	22969	42
State Sector	6685	14616	7703	3120	241	32364	58
Total	9570	25829	13921	5500	512	55333	100

G. Sourcewise generation (Gross) (MU)

	NR	WR	SR	ER	NER	All India	% Share
Coal	747	1351	522	604	14	3238	66
Lignite	29	10	53	0	0	92	2
Hydro	374	57	64	137	29	662	13
Nuclear	29	52	50	0	0	131	3
Gas, Naptha & Diesel	34	24	7	0	28	93	2
RES (Wind, Solar, Biomass & Others)	122	161	413	4	1	701	14
Total	1334	1655	1108	746	73	4917	100

Share of RES in total generation (%)	9.15	9.70	37.26	0.58	1.51	14.25
Share of Non-fossil fuel (Hydro,Nuclear and RES) in total generation(%)	39.35	16.30	47.52	19.00	41.54	30.38

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.054
Based on State Max Demands	1.085

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

	Max Demand Met(MW)	Time	Shortage(MW)
Solar hr	198788	10:20	15
Non-Solar hr	198587	19:50	105

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: 23-Jul-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	1250	0.0	24.3	-24.3
2	HVDC	PUSAULI B/B	-	0	108	0.0	2.6	-2.6
3	765 kV	GAYA-VARANASI	2	650	461	0.0	2.2	-2.2
4	765 kV	SASARAM-FATEHPUR	1	148	312	0.0	4.1	-4.1
5	765 kV	GAYA-BALIA	1	0	675	0.0	11.5	-11.5
6	400 kV	PUSAULI-VARANASI	1	0	109	0.0	1.4	-1.4
7	400 kV	PUSAULI -ALLAHABAD	1	0	90	0.0	1.2	-1.2
8	400 kV	MUZAFFARPUR-GORAKHPUR	2	0	775	0.0	14.0	-14.0
9	400 kV	PATNA-BALIA	2	0	426	0.0	7.9	-7.9
10	400 kV	NAUBATPUR-BALIA	2	0	431	0.0	7.6	-7.6
11	400 kV	BIHARSHARIFF-BALIA	2	90	262	0.0	4.0	-4.0
12	400 kV	MOTIHARI-GORAKHPUR	2	0	478	0.0	9.1	-9.1
13	400 kV	BIHARSHARIFF-VARANASI	2	239	230	0.0	2.0	-2.0
14	220 kV	SAHUPURI-KARAMNASA	1	18	99	0.0	1.3	-1.3
15	132 kV	NAGAR UNTARI-RIHAND	1	0	0	0.0	0.0	0.0
16	132 kV	GARWAH-RIHAND	1	30	0	0.8	0.0	0.8
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	0.8	93.1	-92.3
Import/Export of ER (With WR)								
1	765 kV	JHARSUGUDA-DHARAMJAIGARH	4	1150	239	14.9	0.0	14.9
2	765 kV	NEW RANCHI-DHARAMJAIGARH	2	1636	0	24.4	0.0	24.4
3	765 kV	JHARSUGUDA-DURG	2	335	230	1.4	0.0	1.4
4	400 kV	JHARSUGUDA-RAIGARH	4	154	323	0.0	2.4	-2.4
5	400 kV	RANCHI-SIPAT	2	428	10	5.2	0.0	5.2
6	220 kV	BUDHIPADAR-RAIGARH	1	0	44	0.0	2.2	-2.2
7	220 kV	BUDHIPADAR-KORBA	2	79	4	0.0	0.2	-0.2
					ER-WR	45.8	4.7	41.1
Import/Export of ER (With SR)								
1	HVDC	JEYPORE-GAZUWAKA B/B	2	189	0	4.9	0.0	4.9
2	HVDC	TALCHER-KOLAR BIPOLE	2	0	1633	0.0	32.9	-32.9
3	765 kV	ANGUL-SRIKAKULAM	2	0	2123	0.0	30.1	-30.1
4	400 kV	TALCHER-I/C	2	231	475	0.0	1.3	-1.3
5	220 kV	BALIMELA-UPPER-SILERRU	1	0	0	0.0	0.0	0.0
					ER-SR	4.9	62.9	-58.0
Import/Export of ER (With NER)								
1	400 kV	BINAGURI-BONGAIGAON	2	0	388	0.0	5.0	-5.0
2	400 kV	ALIPURDUAR-BONGAIGAON	2	188	415	0.0	3.4	-3.4
3	220 kV	ALIPURDUAR-SALAKATI	2	0	118	0.0	1.3	-1.3
					ER-NER	0.0	9.7	-9.7
Import/Export of NER (With NR)								
1	HVDC	BISWANATH CHARIALI-AGRA	2	0	503	0.0	12.1	-12.1
					NER-NR	0.0	12.1	-12.1
Import/Export of WR (With NR)								
1	HVDC	CHAMPA-KURUKSHETRA	2	0	5049	0.0	91.0	-91.0
2	HVDC	VINDHYACHAL B/B	-	0	486	0.0	9.5	-9.5
3	HVDC	MUNDRA-MOHINDERGARH	2	0	0	0.0	0.0	0.0
4	765 kV	GWALIOR-AGRA	2	0	2541	0.0	39.2	-39.2
5	765 kV	GWALIOR-PHAGI	2	0	1661	0.0	27.8	-27.8
6	765 kV	JABALPUR-ORAI	2	0	1140	0.0	36.8	-36.8
7	765 kV	GWALIOR-ORAI	1	801	0	12.5	0.0	12.5
8	765 kV	SATNA-ORAI	1	0	1116	0.0	22.1	-22.1
9	765 kV	BANASKANTHA-CHITORGARH	2	930	1368	3.8	11.3	-7.6
10	765 kV	VINDHYACHAL-VARANASI	2	0	3442	0.0	64.9	-64.9
11	400 kV	ZERDA-KANKROLI	1	173	234	0.8	1.9	-1.2
12	400 kV	ZERDA -BHINMAL	1	428	357	2.3	2.7	-0.5
13	400 kV	VINDHYACHAL -RIHAND	1	961	0	22.1	0.0	22.1
14	400 kV	RAPP-SHUJALPUR	2	50	727	0.0	9.0	-9.0
15	220 kV	BHANPURA-RANPUR	1	0	0	0.0	0.0	0.0
16	220 kV	BHANPURA-MORAK	1	0	30	0.0	2.3	-2.3
17	220 kV	MEHGAON-AURAIYA	1	116	0	1.2	0.0	1.2
18	220 kV	MALANPUR-AURAIYA	1	83	0	0.8	0.0	0.8
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	43.5	318.6	-275.1
Import/Export of WR (With SR)								
1	HVDC	BHADRAWATI B/B	-	509	0	11.1	0.0	11.1
2	HVDC	RAIGARH-PUGALUR	2	0	2003	0.0	24.4	-24.4
3	765 kV	SOLAPUR-RAICHUR	2	1870	280	24.8	0.1	24.7
4	765 kV	WARDHA-NIZAMABAD	2	252	1781	0.4	12.8	-12.5
5	400 kV	KOLHAPUR-KUDGI	2	1588	0	29.6	0.0	29.6
6	220 kV	KOLHAPUR-CHIKODI	2	0	0	0.0	0.0	0.0
7	220 kV	PONDA-AMBEWADI	1	0	0	0.0	0.0	0.0
8	220 kV	XELDEM-AMBEWADI	1	0	87	1.7	0.0	1.7
					WR-SR	67.5	37.4	30.1

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 MANGDECHU HEP 4*180MW)	624	0	569	13.67
	ER	400kV TALA-BINAGURI 1,2,4 (& 400kV MALBASE - BINAGURI) i.e. BINAGURI RECEIPT (from TALA HEP 6*170MW)	1049	0	997	23.93
	ER	220kV CHUKHA-BIRPARA 1&2 (& 220kV MALBASE - BIRPARA) i.e. BIRPARA RECEIPT (from CHUKHA HEP 4*84MW)	206	114	161	3.86
	NER	132kV GELEPHU-SALAKATI	-33	-21	-24	-0.57
	NER	132kV MOTANGA-RANGIA	-58	-27	-48	-1.15
NEPAL	NR	132kV MAHENDRANAGAR-TANAKPUR(NHPC)	-54	0	-25	-0.59
	ER	NEPAL IMPORT (FROM BIHAR)	0	0	0	0.00
	ER	400kV DHALKEBAR-MUZAFFARPUR 1&2	498	197	312	7.48
BANGLADESH	ER	BHERAMARA B/B HVDC (B'DESH)	-936	-866	-918	-22.03
	ER (Isolated from Indian Grid)	400kV GODDA_TPS-RAHANPUR (B'DESH) D/C	-771	-654	-742	-17.81
	NER	132kV COMILLA-SURAJMANI NAGAR 1&2	-148	0	-130	-3.12