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: 21th 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 20.07.2023.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 20-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 20th 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: 21-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)	73774	54831	44320	26378	3367	202670
Peak Shortage (MW)	1533	0	0	732	32	2297
Energy Met (MU)	1659	1282	1024	609	69	4643
Hydro Gen (MU)	380	46	79	137	32	674
Wind Gen (MU)	4	144	295	-	-	443
Solar Gen (MU)*	117.65	40.67	80.83	5.01	1.08	245
Energy Shortage (MU)	7.48	0.00	0.00	3.99	0.58	12.05
Maximum Demand Met During the Day (MW) (From NLDC SCADA)	75076	57127	47876	28962	3376	205282
Time Of Maximum Demand Met	23:38	19:42	09:44	23:16	20:09	19:55

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	0.026	0.00	0.00	2.89	2.89	79.99	17.12

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	13908	0	300.8	162.0	-0.2	353	0.00
	Haryana	10934	265	235.6	176.1	-0.2	274	0.45
	Rajasthan	13286	0	283.6	111.5	-0.3	585	3.45
	Delhi	7018	0	140.6	130.7	-2.1	126	0.00
	UP	27105	0	557.4	270.5	-1.3	302	1.97
	Uttarakhand	2200	0	46.4	27.1	0.4	201	1.40
	HP	1648	0	33.3	1.4	0.7	176	0.11
	J&K(UT) & Ladakh(UT)	2516	0	50.8	26.4	-1.8	171	0.10
	Chandigarh	380	0	7.5	7.2	0.3	41	0.00
	Railways_NR ISTS	152	0	3.1	3.4	-0.3	8	0.00
WR	Chhattisgarh	4896	0	108.2	59.0	-1.2	367	0.00
	Gujarat	16767	0	364.8	169.5	-8.2	828	0.00
	MP	11617	0	253.5	153.0	-2.8	459	0.00
	Maharashtra	22246	0	482.3	160.7	-3.4	710	0.00
	Goa	587	0	11.9	11.7	-0.2	103	0.00
	DNHDDPDCL	1297	0	30.1	30.0	0.1	92	0.00
	AMNSIL	888	0	18.7	10.3	-0.1	236	0.00
	BALCO	520	0	12.4	12.5	-0.1	3	0.00
SR	Andhra Pradesh	9013	0	191.3	22.1	-1.7	709	0.00
	Telangana	8984	0	175.2	64.1	-1.5	451	0.00
	Karnataka	10512	0	195.9	24.3	-2.4	511	0.00
	Kerala	3961	0	88.0	55.5	1.7	282	0.00
	Tamil Nadu	17070	0	363.5	145.1	-5.7	449	0.00
	Puducherry	452	0	10.0	9.1	0.2	48	0.00
ER	Bihar	6988	414	153.4	142.2	0.3	253	3.99
	DVC	3404	0	76.9	-37.9	0.0	513	0.00
	Jharkhand	1760	0	36.0	35.5	-0.8	159	0.00
	Odisha	6505	0	113.3	35.9	-1.1	498	0.00
	West Bengal	10289	0	228.2	109.0	-0.3	330	0.00
	Sikkim	89	0	1.3	1.2	0.2	37	0.00
	Railways_ER ISTS	21	0	0.2	0.4	-0.1	0	0.00
NER	Arunachal Pradesh	158	0	2.7	2.4	0.0	57	0.00
	Assam	2304	0	47.1	39.8	0.2	339	0.00
	Manipur	173	0	2.6	2.7	-0.1	21	0.00
	Meghalaya	342	0	5.8	0.4	0.0	42	0.58
	Mizoram	109	0	1.9	1.7	-0.2	12	0.00
	Nagaland	164	0	2.8	2.6	-0.1	16	0.00
	Tripura	325	0	6.2	5.8	0.1	60	0.00

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

	Bhutan	Nepal	Bangladesh	Godda -> Bangladesh
Actual (MU)	42.8	5.7	-24.9	-17.1
Day Peak (MW)	1996.0	246.0	-1063.0	-744.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	358.1	-272.2	-24.3	-59.6	-2.0	0.0
Actual(MU)	350.7	-267.8	-31.4	-55.1	-0.4	-4.0
O/D/U/D(MU)	-7.4	4.4	-7.1	4.5	1.7	-4.0

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	TOTAL	% Share
Central Sector	3187	10184	7818	3680	271	25140	44
State Sector	6395	14606	7443	3580	212	32235	56
Total	9582	24789	15261	7260	483	57375	100

G. Sourcewise generation (Gross) (MU)

	NR	WR	SR	ER	NER	All India	% Share
Coal	800	1365	547	591	16	3319	66
Lignite	28	11	54	0	0	93	2
Hydro	380	46	79	137	32	674	13
Nuclear	29	52	46	0	0	127	3
Gas, Naptha & Diesel	33	22	7	0	29	89	2
RES (Wind, Solar, Biomass & Others)	129	186	390	7	1	712	14
Total	1398	1681	1123	734	77	5014	100

Share of RES in total generation (%)	9.19	11.04	34.76	0.93	1.40	14.21
Share of Non-fossil fuel (Hydro,Nuclear and RES) in total generation(%)	38.44	16.85	45.91	19.52	42.58	30.17

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.034
Based on State Max Demands	1.074

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

	Max Demand Met(MW)	Time	Shortage(MW)
Solar hr	203181	11:56	20
Non-Solar hr	205282	19:55	1525

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-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	1000	0.0	24.0	-24.0
2	HVDC	PUSAULI B/B	-	0	107	0.0	2.8	-2.8
3	765 kV	GAYA-VARANASI	2	279	388	0.0	0.5	-0.5
4	765 kV	SASARAM-FATEHPUR	1	0	250	0.0	2.6	-2.6
5	765 kV	GAYA-BALIA	1	0	686	0.0	11.3	-11.3
6	400 kV	PUSAULI-VARANASI	1	0	104	0.0	1.8	-1.8
7	400 kV	PUSAULI -ALLAHABAD	1	0	77	0.0	0.8	-0.8
8	400 kV	MUZAFFARPUR-GORAKHPUR	2	0	686	0.0	11.6	-11.6
9	400 kV	PATNA-BALIA	2	0	392	0.0	7.5	-7.5
10	400 kV	NAUBATPUR-BALIA	2	0	388	0.0	7.1	-7.1
11	400 kV	BIHARSHARIFF-BALIA	2	35	188	0.0	2.3	-2.3
12	400 kV	MOTIHARI-GORAKHPUR	2	0	446	0.0	8.2	-8.2
13	400 kV	BIHARSHARIFF-VARANASI	2	161	185	0.0	0.4	-0.4
14	220 kV	SAHUPURI-KARAMNASA	1	9	118	0.0	1.8	-1.8
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	12	0.0	0.0	0.0
18	132 kV	KARMANASA-CHANDAULI	1	0	0	0.0	0.0	0.0
					ER-NR	0.8	82.5	-81.6
Import/Export of ER (With WR)								
1	765 kV	JHARSUGUDA-DHARAMJAIGARH	4	1785	0	23.1	0.0	23.1
2	765 kV	NEW RANCHI-DHARAMJAIGARH	2	1650	0	27.8	0.0	27.8
3	765 kV	JHARSUGUDA-DURG	2	356	103	3.3	0.0	3.3
4	400 kV	JHARSUGUDA-RAIGARH	4	122	302	0.0	2.1	-2.1
5	400 kV	RANCHI-SIPAT	2	373	0	5.6	0.0	5.6
6	220 kV	BUDHIPADAR-RAIGARH	1	0	149	0.0	2.9	-2.9
7	220 kV	BUDHIPADAR-KORBA	2	80	15	0.5	0.0	0.5
					ER-WR	60.4	5.0	55.4
Import/Export of ER (With SR)								
1	HVDC	JEYPORE-GAZUWAKA B/B	2	193	0	4.9	0.0	4.9
2	HVDC	TALCHER-KOLAR BIPOLE	2	0	1637	0.0	29.7	-29.7
3	765 kV	ANGUL-SRIKAKULAM	2	0	2019	0.0	27.0	-27.0
4	400 kV	TALCHER-I/C	2	489	344	2.4	0.0	2.4
5	220 kV	BALIMELA-UPPER-SILERRU	1	0	0	0.0	0.0	0.0
					ER-SR	4.9	56.7	-51.8
Import/Export of ER (With NER)								
1	400 kV	BINAGURI-BONGAIGAON	2	0	360	0.0	5.2	-5.2
2	400 kV	ALIPURDUAR-BONGAIGAON	2	70	379	0.0	3.6	-3.6
3	220 kV	ALIPURDUAR-SALAKATI	2	0	91	0.0	1.3	-1.3
					ER-NER	0.0	10.1	-10.1
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	5041	0.0	79.8	-79.8
2	HVDC	VINDHYACHAL B/B	-	435	0	0.0	2.6	-2.6
3	HVDC	MUNDRA-MOHINDERGARH	2	260	0	5.9	0.0	5.9
4	765 kV	GWALIOR-AGRA	2	0	2415	0.0	38.3	-38.3
5	765 kV	GWALIOR-PHAGI	2	0	1606	0.0	27.4	-27.4
6	765 kV	JABALPUR-ORAI	2	0	1251	0.0	41.7	-41.7
7	765 kV	GWALIOR-ORAI	1	639	0	12.9	0.0	12.9
8	765 kV	SATNA-ORAI	1	0	1087	0.0	21.8	-21.8
9	765 kV	BANASKANTHA-CHITORGARH	2	674	1474	2.5	13.0	-10.5
10	765 kV	VINDHYACHAL-VARANASI	2	0	3621	0.0	67.5	-67.5
11	400 kV	ZERDA-KANKROLI	1	146	268	0.5	2.4	-1.8
12	400 kV	ZERDA -BHINMAL	1	302	392	1.4	3.0	-1.6
13	400 kV	VINDHYACHAL -RIHAND	1	957	0	21.9	0.0	21.9
14	400 kV	RAPP-SHUJALPUR	2	49	714	0.0	8.4	-8.3
15	220 kV	BHANPURA-RANPUR	1	0	0	0.0	0.0	0.0
16	220 kV	BHANPURA-MORAK	1	0	30	0.0	2.5	-2.5
17	220 kV	MEHGAON-AURAIYA	1	115	0	1.8	0.0	1.8
18	220 kV	MALANPUR-AURAIYA	1	86	0	1.1	0.0	1.1
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	48.0	308.4	-260.4
Import/Export of WR (With SR)								
1	HVDC	BHADRAWATI B/B	-	997	0	21.7	0.0	21.7
2	HVDC	RAIGARH-PUGALUR	2	0	2003	0.0	17.2	-17.2
3	765 kV	SOLAPUR-RAICHUR	2	2316	478	24.8	0.3	24.5
4	765 kV	WARDHA-NIZAMABAD	2	445	1692	1.1	12.4	-11.3
5	400 kV	KOLHAPUR-KUDGI	2	1684	0	29.9	0.0	29.9
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	101	1.8	0.0	1.8
					WR-SR	79.2	29.9	49.3

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 MANGDECHU HEP 4*180MW)	712	557	576	13.82
	ER	400kV TALA-BINAGURI 1,2,4 (& 400kV MALBASE - BINAGURI) i.e. BINAGURI RECEIPT (from TALA HEP 6*170MW)	1030	0	981	23.53
	ER	220kV CHUKHA-BIRPARA 1&2 (& 220kV MALBASE - BIRPARA) i.e. BIRPARA RECEIPT (from CHUKHA HEP 4*84MW)	187	71	150	3.59
	NER	132kV GELEPHU-SALAKATI	26	19	21	0.51
	NER	132kV MOTANGA-RANGIA	69	25	55	1.32
NEPAL	NR	132kV MAHENDRANAGAR-TANAKPUR(NHPC)	-75	0	-34	-0.82
	ER	NEPAL IMPORT (FROM BIHAR)	0	0	0	0.00
	ER	400kV DHALKEBAR-MUZAFFARPUR 1&2	321	120	272	6.52
BANGLADESH	ER	BHERAMARA B/B HVDC (B'DESH)	-921	-798	-906	-21.73
	ER (Isolated from Indian Grid)	400kV GODDA_TPS-RAHANPUR (B'DESH) D/C	-744	-681	-711	-17.07
	NER	132kV COMILLA-SURAJMANI NAGAR 1&2	-142	0	-132	-3.17