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: 22th 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 21.07.2023.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 21-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 21th 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: 22-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)	73272	54258	45012	26271	3337	202150
Peak Shortage (MW)	2271	0	0	149	56	2476
Energy Met (MU)	1731	1278	1028	601	63	4702
Hydro Gen (MU)	380	46	80	140	31	676
Wind Gen (MU)	9	126	298	-	-	433
Solar Gen (MU)*	115.44	39.91	76.06	5.02	0.93	237
Energy Shortage (MU)	9.31	0.00	0.00	2.60	0.51	12.42
Maximum Demand Met During the Day (MW) (From NLDC SCADA)	77569	56958	48255	28573	3347	208825
Time Of Maximum Demand Met	14:25	09:43	10:21	00:00	19:40	11:45

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	0.029	0.00	0.10	6.02	6.12	83.47	10.40

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	14758	0	319.3	174.9	-1.2	139	0.00
	Haryana	11733	0	252.5	191.8	-1.2	151	0.00
	Rajasthan	13738	0	291.7	118.1	-0.5	296	2.82
	Delhi	7344	0	149.4	137.2	-2.8	111	0.00
	UP	27107	120	569.4	281.7	-1.6	577	4.88
	Uttarakhand	2311	0	49.5	30.0	0.7	251	1.00
	HP	1775	0	36.0	3.4	0.4	209	0.00
	J&K(UT) & Ladakh(UT)	2412	0	51.9	24.3	1.4	181	0.61
	Chandigarh	381	0	7.9	7.4	0.5	57	0.00
	Railways_NR ISTS	157	0	3.3	3.5	-0.2	9	0.00
WR	Chhattisgarh	4681	0	105.0	60.8	-0.5	372	0.00
	Gujarat	16296	0	364.3	179.3	-5.1	1092	0.00
	MP	11265	0	252.1	143.9	-4.6	401	0.00
	Maharashtra	22298	0	481.8	165.8	-3.0	748	0.00
	Goa	606	0	12.0	12.1	-0.5	50	0.00
	DNHDDPDCL	1297	0	30.1	30.0	0.1	64	0.00
	AMNSIL	901	0	20.2	11.5	-0.2	230	0.00
	BALCO	522	0	12.4	11.9	0.5	3	0.00
SR	Andhra Pradesh	8858	0	195.0	19.0	-0.2	485	0.00
	Telangana	8029	0	165.4	51.7	2.0	743	0.00
	Karnataka	10808	0	202.4	38.9	2.0	926	0.00
	Kerala	3929	0	80.6	57.1	1.6	248	0.00
	Tamil Nadu	17190	0	374.9	146.4	-1.4	667	0.00
	Puducherry	452	0	10.1	9.4	0.0	51	0.00
ER	Bihar	7133	116	151.6	142.2	-1.7	259	1.94
	DVC	3427	0	75.8	-45.2	-0.8	267	0.00
	Jharkhand	1697	0	36.1	33.2	-0.3	156	0.67
	Odisha	6390	0	114.3	36.9	-1.7	318	0.00
	West Bengal	10089	0	222.1	104.7	-2.9	251	0.00
	Sikkim	80	0	1.1	1.1	0.0	29	0.00
	Railways_ER ISTS	17	0	0.2	0.4	-0.2	0	0.00
NER	Arunachal Pradesh	155	0	2.9	2.3	0.3	47	0.00
	Assam	2270	0	41.4	34.2	0.1	218	0.00
	Manipur	198	0	2.7	2.6	0.1	30	0.00
	Meghalaya	330	0	5.6	0.4	-0.1	45	0.51
	Mizoram	106	0	1.8	1.6	-0.2	10	0.00
	Nagaland	167	0	3.0	2.7	0.1	10	0.00
	Tripura	297	0	5.9	5.5	0.1	46	0.00

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

	Bhutan	Nepal	Bangladesh	Godda -> Bangladesh
Actual (MU)	43.0	6.1	-25.3	-17.8
Day Peak (MW)	1968.0	351.0	-1082.0	-770.0

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

	NR	WR	SR	ER	NER	TOTAL
Schedule(MU)	396.7	-281.3	-23.1	-85.3	-7.1	0.0
Actual(MU)	401.1	-289.8	-17.8	-92.2	-8.1	-6.8
O/D/U/D(MU)	4.4	-8.5	5.3	-6.9	-1.0	-6.8

F. Generation Outage(MW)

	NR	WR	SR	ER	NER	TOTAL	% Share
Central Sector	2946	10549	7818	3180	306	24799	43
State Sector	7230	13561	8453	3160	175	32578	57
Total	10175	24109	16271	6340	481	57377	100

G. Sourcewise generation (Gross) (MU)

	NR	WR	SR	ER	NER	All India	% Share
Coal	818	1394	526	619	17	3373	67
Lignite	29	11	55	0	0	94	2
Hydro	380	46	80	140	31	676	13
Nuclear	29	52	46	0	0	127	3
Gas, Naptha & Diesel	35	21	7	0	29	92	2
RES (Wind, Solar, Biomass & Others)	131	166	401	7	1	707	14
Total	1422	1690	1114	765	78	5070	100

Share of RES in total generation (%)	9.22	9.84	36.03	0.89	1.19	13.94
Share of Non-fossil fuel (Hydro,Nuclear and RES) in total generation(%)	37.97	15.65	47.32	19.13	41.12	29.79

H. All India Demand Diversity Factor

Based on Regional Max Demands	1.028
Based on State Max Demands	1.059

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

	Max Demand Met(MW)	Time	Shortage(MW)
Solar hr	208825	11:45	0
Non-Solar hr	204429	19:43	1753

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: 22-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	24.6	-24.6
2	HVDC	PUSAULI B/B	-	0	107	0.0	2.6	-2.6
3	765 kV	GAYA-VARANASI	2	43	698	0.0	7.0	-7.0
4	765 kV	SASARAM-FATEHPUR	1	0	424	0.0	5.5	-5.5
5	765 kV	GAYA-BALIA	1	0	722	0.0	13.5	-13.5
6	400 kV	PUSAULI-VARANASI	1	0	94	0.0	1.3	-1.3
7	400 kV	PUSAULI -ALLAHABAD	1	0	90	0.0	1.3	-1.3
8	400 kV	MUZAFFARPUR-GORAKHPUR	2	0	832	0.0	15.2	-15.2
9	400 kV	PATNA-BALIA	2	0	475	0.0	9.7	-9.7
10	400 kV	NAUBATPUR-BALIA	2	0	482	0.0	9.6	-9.6
11	400 kV	BIHARSHARIFF-BALIA	2	0	303	0.0	5.2	-5.2
12	400 kV	MOTIHARI-GORAKHPUR	2	0	544	0.0	10.2	-10.2
13	400 kV	BIHARSHARIFF-VARANASI	2	0	300	0.0	3.6	-3.6
14	220 kV	SAHUPURI-KARAMNASA	1	0	123	0.0	2.0	-2.0
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	36	0.0	0.0	0.0
18	132 kV	KARMANASA-CHANDAULI	1	0	0	0.0	0.0	0.0
					ER-NR	0.8	111.3	-110.5
Import/Export of ER (With WR)								
1	765 kV	JHARSUGUDA-DHARAMJAIGARH	4	1666	0	20.9	0.0	20.9
2	765 kV	NEW RANCHI-DHARAMJAIGARH	2	1629	0	24.8	0.0	24.8
3	765 kV	JHARSUGUDA-DURG	2	317	162	1.6	0.0	1.6
4	400 kV	JHARSUGUDA-RAIGARH	4	33	418	0.0	4.7	-4.7
5	400 kV	RANCHI-SIPAT	2	356	49	4.4	0.0	4.4
6	220 kV	BUDHIPADAR-RAIGARH	1	0	44	0.0	2.5	-2.5
7	220 kV	BUDHIPADAR-KORBA	2	58	3	0.0	0.5	-0.5
					ER-WR	51.8	7.7	44.0
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	1587	0.0	28.5	-28.5
3	765 kV	ANGUL-SRIKAKULAM	2	0	2374	0.0	32.4	-32.4
4	400 kV	TALCHER-I/C	2	489	463	3.2	0.0	3.2
5	220 kV	BALIMELA-UPPER-SILERRU	1	0	0	0.0	0.0	0.0
					ER-SR	4.9	60.9	-56.0
Import/Export of ER (With NER)								
1	400 kV	BINAGURI-BONGAIGAON	2	44	265	0.1	2.6	-2.5
2	400 kV	ALIPURDUAR-BONGAIGAON	2	239	229	0.5	0.0	0.5
3	220 kV	ALIPURDUAR-SALAKATI	2	42	72	0.0	0.5	-0.5
					ER-NER	0.6	3.1	-2.5
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	5042	0.0	76.1	-76.1
2	HVDC	VINDHYACHAL B/B	-	435	486	0.0	12.0	-12.0
3	HVDC	MUNDRA-MOHINDERGARH	2	260	0	4.6	0.0	4.6
4	765 kV	GWALIOR-AGRA	2	0	2392	0.0	42.6	-42.6
5	765 kV	GWALIOR-PHAGI	2	0	2003	0.0	34.0	-34.0
6	765 kV	JABALPUR-ORAI	2	0	1213	0.0	46.0	-46.0
7	765 kV	GWALIOR-ORAI	1	722	0	13.8	0.0	13.8
8	765 kV	SATNA-ORAI	1	0	1156	0.0	24.0	-24.0
9	765 kV	BANASKANTHA-CHITORGARH	2	688	1513	2.3	14.2	-11.9
10	765 kV	VINDHYACHAL-VARANASI	2	0	3611	0.0	65.2	-65.2
11	400 kV	ZERDA-KANKROLI	1	119	241	0.4	2.3	-1.9
12	400 kV	ZERDA -BHINMAL	1	288	352	1.3	2.8	-1.5
13	400 kV	VINDHYACHAL -RIHAND	1	959	0	22.1	0.0	22.1
14	400 kV	RAPP-SHUJALPUR	2	0	716	0.0	10.9	-10.9
15	220 kV	BHANPURA-RANPUR	1	0	0	0.0	0.0	0.0
16	220 kV	BHANPURA-MORAK	1	0	30	0.0	2.6	-2.6
17	220 kV	MEHGAON-AURAIYA	1	118	0	1.8	0.0	1.8
18	220 kV	MALANPUR-AURAIYA	1	83	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	47.3	332.9	-285.6
Import/Export of WR (With SR)								
1	HVDC	BHADRAWATI B/B	-	996	0	17.9	0.0	17.9
2	HVDC	RAIGARH-PUGALUR	2	0	901	0.0	15.4	-15.4
3	765 kV	SOLAPUR-RAICHUR	2	2098	710	22.2	0.9	21.3
4	765 kV	WARDHA-NIZAMABAD	2	623	1900	1.7	16.2	-14.5
5	400 kV	KOLHAPUR-KUDGI	2	1465	0	28.8	0.0	28.8
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	98	1.8	0.0	1.8
					WR-SR	72.4	32.6	39.9

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)	633	566	597	14.32
	ER	400kV TALA-BINAGURI 1,2,4 (& 400kV MALBASE - BINAGURI) i.e. BINAGURI RECEIPT (from TALA HEP 6*170MW)	1080	920	989	23.74
	ER	220kV CHUKHA-BIRPARA 1&2 (& 220kV MALBASE - BIRPARA) i.e. BIRPARA RECEIPT (from CHUKHA HEP 4*84MW)	183	113	142	3.42
	NER	132kV GELEPHU-SALAKATI	24	19	21	0.50
	NER	132kV MOTANGA-RANGIA	61	22	41	0.99
NEPAL	NR	132kV MAHENDRANAGAR-TANAKPUR(NHPC)	-66	0	-31	-0.75
	ER	NEPAL IMPORT (FROM BIHAR)	0	0	0	0.00
	ER	400kV DHALKEBAR-MUZAFFARPUR 1&2	417	175	287	6.89
BANGLADESH	ER	BHERAMARA B/B HVDC (B'DESH)	-937	-874	-922	-22.12
	ER (Isolated from Indian Grid)	400kV GODDA_TPS-RAHANPUR (B'DESH) D/C	-770	-701	-741	-17.78
	NER	132kV COMILLA-SURAJMANI NAGAR 1&2	-145	0	-131	-3.14