

# 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: 21st Mar 2019

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. मुख्य महाप्रबंधक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह , लापलंग, शिलोंग 793006 Chief General Manager, 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 20.03.2019.

महोदय/Dear Sir,

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 20-मार्च-2019 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 20<sup>th</sup> March 2019, is available at the NLDC website.

धन्यवाद,

### पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

Report for previous day Date of Reporting 21-Mar-19

#### A. Maximum Demand

|   | NR    | WR    | SR    | ER    | NER   | Total  |
|---|-------|-------|-------|-------|-------|--------|
| Demand Met during Evening Peak hrs(MW)<br>(at 1900 hrs; from RLDCs) | 40425 | 44818 | 47047 | 19856 | 2452  | 154598 |
| Peak Shortage (MW)  | 531   | 20    | 0     | 0     | 55    | 606    |
| Energy Met (MU)   | 920   | 1128  | 1121  | 403   | 42    | 3614   |
| Hydro Gen (MU)  | 152   | 27    | 79    | 35    | 3     | 296    |
| Wind Gen (MU)   | 14    | 52    | 30    |       |       | 95     |
| Solar Gen (MU)*   | 24.82 | 25.59 | 76.48 | 1.09  | 0.04  | 128    |
| Energy Shortage (MU)  | 10.7  | 0.3   | 0.0   | 0.0   | 0.8   | 11.9   |
| Maximum Demand Met during the day                                   | 42737 | 53191 | 48650 | 20202 | 2469  | 160811 |
| (MW) & time (from NLDC SCADA)                                       | 08:43 | 10:58 | 09:45 | 18:48 | 18:11 | 10:44  |

B. Frequency Profile (%)
Region
All India FVI <49.7 49.7-49.8 49.8-49.9 49.9-50.05 > 50.05 0.038 0.00 0.12 7.31 7.43 74.09 18.48

| Region | States            | Max. Demand<br>Met during the<br>day (MW) | Shortage during<br>maximum<br>Demand (MW) | Energy Met (MU) | Drawal<br>Schedule (MU) | OD(+)/UD(-)<br>(MU) | Max OD<br>(MW) | Energy<br>Shortage (MU |
|--------|-------------------|---|---|-----------------|-------------------------|---------------------|----------------|------------------------|
|        | Punjab            | 6104                                      | 0   | 124.2           | 60.6                    | -1.7                | 59             | 0.0                    |
|        | Harvana           | 6047                                      | 0   | 121.7           | 77.5                    | -0.4                | 141            | 0.0                    |
|        | Rajasthan         | 10534                                     | 0   | 211.7           | 64.0                    | -2.0                | 237            | 0.0                    |
| NR     | Delhi             | 3505                                      | 0   | 60.1            | 44.5                    | -0.8                | 217            | 0.0                    |
|        | UP                | 14452                                     | 0   | 295.8           | 126.7                   | -2.2                | 372            | 0.0                    |
|        | Uttarakhand       | 1707                                      | 0   | 32.1            | 18.4                    | -0.2                | 81             | 0.0                    |
|        | HP                | 1447                                      | 0   | 26.4            | 17.3                    | -0.4                | 128            | 0.0                    |
|        | J&K               | 2146                                      | 536                                       | 45.2            | 37.8                    | -1.1                | 146            | 10.7                   |
|        | Chandigarh        | 184                                       | 0   | 3.1             | 3.5                     | -0.4                | 11             | 0.0                    |
|        | Chhattisgarh      | 3976                                      | 0   | 87.0            | 27.6                    | -1.8                | 353            | 0.2                    |
|        | Gujarat           | 14760                                     | 0   | 326.8           | 104.4                   | 1.5                 | 605            | 0.0                    |
|        | MP                | 10579                                     | 0   | 205.1           | 76.8                    | -0.2                | 571            | 0.0                    |
| WR     | Maharashtra       | 21845                                     | 0   | 462.2           | 144.2                   | -0.8                | 655            | 0.0                    |
| WK     | Goa               | 499                                       | 20  | 10.9            | 10.1                    | 0.8                 | 56             | 0.1                    |
|        | DD                | 325                                       | 0   | 7.4             | 7.0                     | 0.4                 | 60             | 0.0                    |
|        | DNH               | 781                                       | 0   | 18.2            | 18.3                    | 0.0                 | 98             | 0.0                    |
|        | Essar steel       | 511                                       | 0   | 10.6            | 10.3                    | 0.4                 | 306            | 0.0                    |
|        | Andhra Pradesh    | 8879                                      | 0   | 197.8           | 68.6                    | 0.1                 | 427            | 0.0                    |
|        | Telangana         | 10303                                     | 0   | 231.2           | 101.9                   | 0.1                 | 480            | 0.0                    |
| SR     | Karnataka         | 12088                                     | 0   | 250.4           | 77.9                    | -0.7                | 526            | 0.0                    |
| JI.    | Kerala            | 3973                                      | 0   | 83.3            | 57.7                    | 0.7                 | 280            | 0.0                    |
|        | Tamil Nadu        | 15681                                     | 0   | 349.7           | 193.6                   | -0.4                | 438            | 0.0                    |
|        | Pondy             | 396                                       | 0   | 8.4             | 8.6                     | -0.2                | 44             | 0.0                    |
|        | Bihar             | 4133                                      | 0   | 76.4            | 70.1                    | 0.7                 | 460            | 0.0                    |
|        | DVC               | 3086                                      | 0   | 67.5            | -51.3                   | 0.1                 | 396            | 0.0                    |
| ER     | Jharkhand         | 1085                                      | 0   | 23.6            | 17.5                    | 0.3                 | 169            | 0.0                    |
| LIV    | Odisha            | 4257                                      | 0   | 85.1            | 34.3                    | 1.4                 | 267            | 0.0                    |
|        | West Bengal       | 7787                                      | 0   | 148.9           | 41.9                    | 1.4                 | 309            | 0.0                    |
|        | Sikkim            | 92  | 0   | 1.2             | 1.5                     | -0.3                | 18             | 0.0                    |
| NER    | Arunachal Pradesh | 113                                       | 3   | 2.1             | 2.1                     | 0.0                 | 22             | 0.0                    |
|        | Assam             | 1446                                      | 34  | 23.4            | 19.7                    | 0.4                 | 109            | 0.8                    |
|        | Manipur           | 176                                       | 2   | 2.4             | 2.2                     | 0.2                 | 26             | 0.0                    |
|        | Meghalaya         | 359                                       | 0   | 5.9             | 5.2                     | -0.1                | 50             | 0.0                    |
|        | Mizoram           | 97  | 1   | 1.8             | 1.4                     | 0.3                 | 8              | 0.0                    |
|        | Nagaland          | 125                                       | 2   | 2.2             | 1.8                     | 0.2                 | 21             | 0.0                    |
|        | Tripura           | 233                                       | 1   | 3,9             | 2.9                     | -0.3                | 32             | 0.0                    |

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

|               | Bhutan | Nepal  | Bangladesh |
|---------------|--------|--------|------------|
| Actual(MU)    | -0.2   | -7.2   | -21.4      |
| Day peak (MW) | 60.1   | -477.9 | -1104.0    |

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

|              | NR    | WR     | SR    | ER    | NER  | TOTAL |
|--------------|-------|--------|-------|-------|------|-------|
| Schedule(MU) | 194.4 | -277.5 | 159.3 | -80.7 | 4.1  | -0.4  |
| Actual(MU)   | 204.1 | -295.8 | 162.0 | -68.3 | 2.0  | 4.0   |
| O/D/U/D(MU)  | 9.7   | -18.3  | 2.7   | 12.4  | -2,2 | 4.4   |

F. Generation Outage(MW)

|                | NR    | WR    | SR   | ER   | NER | Total |
|----------------|-------|-------|------|------|-----|-------|
| Central Sector | 5961  | 12892 | 5472 | 810  | 501 | 25636 |
| State Sector   | 13105 | 14775 | 4190 | 3315 | 50  | 35435 |
| Total          | 19066 | 27667 | 9662 | 4125 | 551 | 61070 |

G. Sourcewise generation (MU)

|                                      | NR   | WR   | SR    | ER   | NER  | All India |
|--------------------------------------|------|------|-------|------|------|-----------|
| Coal                                 | 496  | 1235 | 645   | 465  | 8    | 2848      |
| Lignite                              | 24   | 19   | 52    | 0    | 0    | 94        |
| Hydro                                | 152  | 27   | 79    | 35   | 3    | 296       |
| Nuclear                              | 23   | 30   | 32    | 0    | 0    | 85        |
| Gas, Naptha & Diesel                 | 28   | 41   | 16    | 0    | 29   | 114       |
| RES (Wind, Solar, Biomass & Others)  | 71   | 82   | 146   | 1    | 0    | 300       |
| Total                                | 793  | 1433 | 970   | 502  | 40   | 3738      |
|                                      |      |      |       |      |      |           |
| Share of RES in total generation (%) | 8 03 | 5.73 | 15.08 | 0.23 | 0.10 | 8.03      |

| Share of RES in total generation (%)                                      | 8.93  | 5.73 | 15.08 | 0.23 | 0.10 | 8.03  |
|---|-------|------|-------|------|------|-------|
| Share of Non-fossil fuel (Hydro, Nuclear and RES) in total generation (%) | 30.97 | 9.71 | 26.47 | 7.27 | 8.50 | 18.23 |

H. Diversity Factor
All India Demand Diversity Factor
1.040
Diversity factor = Sum of regional maximum demands / All India maximum demand

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

| INTER-REGIONAL EXCHANGES |                  |  |              |                    |                 |             |                     |  |
|--------------------------|------------------|--|--------------|--------------------|-----------------|-------------|---------------------|--|
|                          |                  |  |              |                    |                 | Date of 1   | Reporting :         | 21-Mar-19                                      |
|                          |                  |  |              |                    |                 |             |                     | Import=(+ve)<br>/Export =(-ve)<br>for NET (MU) |
| Sl No                    | Voltage<br>Level | Line Details                                   | Circuit      | Max Import<br>(MW) | Max Export (MW) | Import (MU) | Export<br>(MU)      | NET<br>(MU)                                    |
|                          | xport of         | ER (With NR)                                   | D/G          | 0                  |                 | 0.0         | 0.2                 | 0.2  |
| 2                        | 765kV            | GAYA-VARANASI<br>SASARAM-FATEHPUR              | D/C<br>S/C   | 0                  | 664<br>228      | 0.0         | 9.2                 | -9.2<br>-3.8                                   |
| 3                        |                  | GAYA-BALIA                                     | S/C          | 0                  | 408             | 0.0         | 7.2                 | -7.2   |
| 5                        | HVDC             | ALIPURDUAR-AGRA                                | - S/C        | 0                  | 0               | 0.0         | 0.0                 | 0.0  |
| 6                        |                  | PUSAULI B/B<br>PUSAULI-VARANASI                | S/C<br>S/C   | 4<br>66            | 0<br>44         | 0.0         | 0.0                 | 0.0  |
| 7                        | 1                | PUSAULI -ALLAHABAD                             | S/C          | 33                 | 24              | 0.1         | 0.0                 | 0.1  |
| 8                        |                  | MUZAFFARPUR-GORAKHPUR                          | D/C          | 0                  | 727             | 0.0         | 9.2                 | -9.2   |
| 9                        | 400 kV           | PATNA-BALIA                                    | Q/C          | 0                  | 1011            | 0.0         | 17.9                | -17.9  |
| 10                       |                  | BIHARSHARIFF-BALIA                             | D/C          | 0                  | 433             | 0.0         | 7.4                 | -7.4   |
| 11                       |                  | MOTIHARI-GORAKHPUR<br>BIHARSHARIFF-VARANASI    | D/C<br>D/C   | 0<br>115           | 342<br>278      | 0.0         | 6.6<br>2.4          | -6.6<br>-2.4                                   |
| 13                       | 220 kV           | PUSAULI-SAHUPURI                               | S/C          | 0                  | 125             | 0.0         | 2.5                 | -2.5   |
| 14                       |                  | SONE NAGAR-RIHAND                              | S/C          | 0                  | 0               | 0.0         | 0.0                 | 0.0  |
| 15                       | 132 kV           | GARWAH-RIHAND                                  | S/C          | 30                 | 0               | 0.7         | 0.0                 | 0.7  |
| 16                       | 102 11 1         | KARMANASA-SAHUPURI                             | S/C          | 0                  | 0               | 0.0         | 0.0                 | 0.0  |
| 17                       |                  | KARMANASA-CHANDAULI                            | S/C          | 1                  | 0<br>ER-NR      | 0.0         | 0.0                 | 0.0  |
| Import/E                 | export of        | ER (With WR)                                   |              |                    | ER-NR           | 1.1         | 66.1                | -65.0  |
| 18                       | Î                | JHARSUGUDA-DHARAMJAIGARH S/C                   | D/C          | 2453               | 0               | 37.4        | 0.0                 | 37.4   |
| 18                       | 765 kV           |  | D/C<br>D/C   | 552                | 138             | 3.0         | 0.0                 | 3.0  |
| 20                       |                  | NEW RANCHI-DHARAMJAIGARH<br>JHARSUGUDA-RAIGARH | Q/C          | 390                | 134             | 2.2         | 0.0                 | 2.2  |
| 21                       | 400 kV           | RANCHI-SIPAT                                   | D/C          | 252                | 0               | 3.1         | 0.0                 | 3.1  |
| 22                       | 220 kV           | BUDHIPADAR-RAIGARH                             | S/C          | 31                 | 113             | 0.0         | 1.6                 | -1.6   |
| 23                       |                  | BUDHIPADAR-KORBA                               | D/C          | 195                | 0               | 3.4         | 0.0                 | 3.4  |
| Import/E                 | xport of         | ER (With SR)                                   |              |                    | ER-WR           | 49.1        | 1.6                 | 47.5   |
| 24                       | 765 kV           | ANGUL-SRIKAKULAM                               | D/C          | 0.0                | 1957.0          | 0.0         | 38.8                | -38.8  |
| 25                       | HVDC             | JEYPORE-GAZUWAKA B/B                           | D/C          | 0.0                | 617.0           | 0.0         | 14.8                | -14.8  |
| 26                       | LINK             | TALCHER-KOLAR BIPOLE                           | D/C          | 0.0                | 2457.0          | 0.0         | 51.4                | -51.4  |
| 27                       | 400 kV           | TALCHER-I/C                                    | D/C          | 0.0                | 987.0           | 0.0         | 7.8                 | -7.8   |
| 28                       | 220 kV           | BALIMELA-UPPER-SILERRU                         | S/C          | 1.0                | 0.0<br>ER-SR    | 0.0         | 0.0<br><b>104.9</b> | 0.0<br>- <b>104.9</b>                          |
| Import/E                 | export of        | ER (With NER)                                  |              |                    | ER-5R           | 0.0         | 104.9               | -104.9   |
| 29                       | 400 kV           | BINAGURI-BONGAIGAON                            | D/C          | 329                | 127             | 3.5         | 0.0                 | 4  |
| 30                       | 400 KV           | ALIPURDUAR-BONGAIGAON                          | D/C          | 449                | 27              | 6.1         | 0.0                 | 6  |
| 31                       | 220 kV           | ALIPURDUAR-SALAKATI                            | D/C          | 71                 | 46              | 0.7         | 0.0                 | 1  |
| Import/E                 | 'xnort of        | NER (With NR)                                  |              |                    | ER-NER          | 10.3        | 0.0                 | 10.3   |
| 32                       |                  | BISWANATH CHARIALI-AGRA                        | -            | 658                | 0               | 12.5        | 0.0                 | 12.5   |
|                          |                  |  |              |                    | NER-NR          | 12.5        | 0.0                 | 12.5   |
| Import/E                 | xport of         | WR (With NR)                                   |              | •                  |                 |             |                     |  |
| 33                       |                  | CHAMPA-KURUKSHETRA                             | D/C          | 0                  | 3008            | 0.0         | 24.9                | -24.9  |
| 34                       | HVDC             | V'CHAL B/B<br>APL -MHG                         | D/C<br>D/C   | 243<br>0           | 0<br>1919       | 6.1<br>0.0  | 0.0<br>46.2         | 6.1<br>-46.2                                   |
| 36                       |                  | GWALIOR-AGRA                                   | D/C          | 0                  | 2280            | 0.0         | 41.6                | -40.2  |
| 37                       | 1                | PHAGI-GWALIOR                                  | D/C          | 0                  | 1128            | 0.0         | 19.6                | -19.6  |
| 38                       | 765 kV           | JABALPUR-ORAI                                  | D/C          | 0                  | 688             | 0.0         | 26.0                | -26.0  |
| 39                       | 700 111          | GWALIOR-ORAI                                   | S/C          | 560                | 0               | 10.4        | 0.0                 | 10.4   |
| 40                       |                  | SATNA-ORAL                                     | S/C          | 0                  | 1321            | 0.0         | 28.0                | -28.0  |
| 41                       |                  | CHITORGARH-BANASKANTHA<br>ZERDA-KANKROLI       | D/C<br>S/C   | 0<br>186           | 0               | 0.9<br>2.3  | 0.0                 | 0.9<br>2.3                                     |
| 43                       | 45-              | ZERDA-KANKKOLI<br>ZERDA -BHINMAL               | S/C          | 137                | 109             | 0.4         | 0.0                 | 0.4  |
| 44                       | 400 kV           | V'CHAL -RIHAND                                 | S/C          | 961                | 0               | 21.5        | 0.0                 | 21.5   |
| 45                       |                  | RAPP-SHUJALPUR                                 | D/C          | 76                 | 206             | 1           | 0                   | 1  |
| 46                       |                  | BADOD-KOTA                                     | S/C          | 21                 | 45              | 0.0         | 1.3                 | -1.3   |
| 47                       | 220 kV           | BADOD-MORAK                                    | S/C          | 0                  | 124             | 0.0         | 1.8                 | -1.8   |
| 48                       | 1                | MEHGAON-AURAIYA<br>MALANPUR-AURAIYA            | S/C<br>S/C   | 97<br>39           | 0<br>12         | 0.3         | 0.0                 | 0.3  |
| 50                       | 132kV            | GWALIOR-SAWAI MADHOPUR                         | S/C          | 0                  | 0               | 0.0         | 0.0                 | 0.0  |
|                          |                  |  |              |                    | WR-NR           | 43.9        | 189.3               | -145.4   |
|                          |                  | WR (With SR)                                   |              |                    |                 | -           | -                   |  |
| 51                       |                  | BHADRAWATI B/B                                 | -            | 0                  | 995             | 0.0         | 23.9                | -23.9  |
| 52<br>53                 | LINK             | BARSUR-L.SILERU<br>SOLAPUR-RAICHUR             | D/C          | 0                  | 0<br>2378       | 0.0         | 0.0<br>39.5         | 0.0<br>-39.5                                   |
| 53                       | 765 kV           | WARDHA-NIZAMABAD                               | D/C<br>D/C   | 0                  | 2569            | 0.0         | 47.9                | -39.3<br>-47.9                                 |
| 55                       | 400 kV           | KOLHAPUR-KUDGI                                 | D/C          | 670                | 0               | 8.9         | 0.0                 | 8.9  |
| 56                       |                  | KOLHAPUR-CHIKODI                               | D/C          | 0                  | 0               | 0.0         | 0.0                 | 0.0  |
| 57                       | 220 kV           | PONDA-AMBEWADI                                 | S/C          | 1                  | 0               | 0.0         | 0.0                 | 0.0  |
| 58                       |                  | XELDEM-AMBEWADI                                | S/C          | 1                  | 56              | 1.0         | 0.0                 | 1.0  |
|                          |                  |  | . NTCS 7 : - |                    | WR-SR           | 9.9         | 111.3               | -101.4   |
| £0                       |                  |  | ANSNAT       | IONAL EXC          | HANGE           |             |                     |  |
| 59<br>60                 |                  | BHUTAN<br>NEPAL                                |              |                    |                 |             |                     | -0.2<br>-7.2                                   |
| 61                       |                  | BANGLADESH                                     |              |                    |                 |             |                     | -21.4  |
|                          |                  |  |              |                    |                 |             |                     |  |