

## 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 सराय, न्यू दिल्ली-110016

Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 19<sup>th</sup> July 2018

To,

- 1. महाप्रबंधक, पू .क्षे .भा .प्रे .के., 14 , गोल्फ क्लब रोड , कोलकाता 700033 General Manager, ERLDC, 14 Golf Club Road, Tolleygunge, Kolkata, 700033
- 2. महाप्रबंधक, ऊ. क्षे. भा. प्रे. के., 18/ ए, शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली 110016 General Manager, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi 110016
- 3. महाप्रबंधक, प .क्षे .भा .प्रे .के., एफ3-, एम आई डी सी क्षेत्र , अंधेरी, मुंबई -400093 General Manager, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
- 4. महाप्रबंधक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिएह, लोअर नोंग्रह, लापलंग, शिलोंग ७९३००६ General Manager, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
- 5. अपर महाप्रबंधक , द .क्षे .भा .प्रे .के., २९ , रेस कोर्स क्रॉस रोड, बंगलुरु –५६०००९ Additional General Manager, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Daily PSP Report for the date 18.07.2018.

महोदय/Dear Sir.

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 18 जुलाई 2018 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 18<sup>th</sup> July 2018, 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** 19-Jul-18

#### A. Maximum Demand

|   | NR    | WR    | SR    | ER    | NER   | Total  |
|---|-------|-------|-------|-------|-------|--------|
| Demand Met during Evening Peak hrs(MW)<br>(at 2000 hrs; from RLDCs) | 53510 | 41704 | 40110 | 21068 | 2694  | 159086 |
| Peak Shortage (MW)  | 1068  | 153   | 0     | 300   | 202   | 1723   |
| Energy Met (MU)   | 1277  | 937   | 888   | 454   | 54    | 3609   |
| Hydro Gen (MU)  | 322   | 17    | 96    | 105   | 24    | 565    |
| Wind Gen (MU)   | 3     | 98    | 231   |       |       | 332    |
| Solar Gen (MU)*   | 13.84 | 10.56 | 48.13 | 0.61  | 0.02  | 73     |
| Energy Shortage (MU)  | 12.4  | 0.2   | 0.0   | 0.9   | 1.4   | 14.9   |
| Maximum Demand Met during the day                                   | 56622 | 42969 | 41215 | 22232 | 2673  | 162908 |
| (MW) & time (from NLDC SCADA)                                       | 00:18 | 19:53 | 19:25 | 20:22 | 18:49 | 19:59  |

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 | 0.069 | 0.86  | 2.20      | 15.38     | 18.44 | 75.79      | 5.78    |

| Region | States            | Max. Demand Met<br>during the day<br>(MW) | Shortage during<br>maximum Demand<br>(MW) | Energy Met (MU) | Drawal<br>Schedule (MU) | OD(+)/UD(-)<br>(MU) | Max OD<br>(MW) | Energy<br>Shortage (MU |
|--------|-------------------|---|---|-----------------|-------------------------|---------------------|----------------|------------------------|
|        | Punjab            | 10409                                     | 0   | 227.7           | 136.4                   | -1.3                | 147            | 0.0                    |
|        | Haryana           | 8837                                      | 0   | 192.2           | 147.5                   | -0.6                | 165            | 0.0                    |
|        | Rajasthan         | 8363                                      | 0   | 186.3           | 74.5                    | -0.6                | 393            | 0.0                    |
|        | Delhi             | 6270                                      | 0   | 127.9           | 102.5                   | -1.7                | 128            | 0.0                    |
| NR     | UP                | 19353                                     | 360                                       | 425.4           | 206.4                   | -0.1                | 338            | 0.0                    |
|        | Uttarakhand       | 2143                                      | 0   | 42.7            | 27.3                    | 1.3                 | 386            | 2.8                    |
|        | HP                | 1417                                      | 0   | 28.6            | -0.4                    | 4.3                 | 314            | 0.0                    |
|        | J&K               | 2004                                      | 501                                       | 40.4            | 19.4                    | -4.6                | 148            | 9.6                    |
|        | Chandigarh        | 280                                       | 0   | 5.4             | 6.2                     | -0.8                | 13             | 0.0                    |
|        | Chhattisgarh      | 3451                                      | 0   | 76.8            | 10.6                    | -1.6                | 217            | 0.2                    |
|        | Gujarat           | 12291                                     | 0   | 266.5           | 81.5                    | 4.8                 | 702            | 0.0                    |
|        | MP                | 7245                                      | 0   | 159.5           | 78.7                    | -1.9                | 425            | 0.0                    |
| WR     | Maharashtra       | 17850                                     | 0   | 389.2           | 92.6                    | -1.0                | 539            | 0.0                    |
| WK     | Goa               | 351                                       | 0   | 9.5             | 8.7                     | 0.1                 | 73             | 0.0                    |
|        | DD                | 333                                       | 0   | 7.4             | 6.1                     | 1.3                 | 109            | 0.0                    |
|        | DNH               | 764                                       | 0   | 17.9            | 16.8                    | 1.1                 | 119            | 0.0                    |
|        | Essar steel       | 478                                       | 0   | 10.0            | 9.6                     | 0.4                 | 255            | 0.0                    |
|        | Andhra Pradesh    | 7451                                      | 0   | 165.7           | 21.3                    | 2.5                 | 392            | 0.0                    |
|        | Telangana         | 8134                                      | 0   | 166.8           | 76.3                    | -1.0                | 490            | 0.0                    |
| SR     | Karnataka         | 8141                                      | 0   | 169.4           | 40.5                    | -0.2                | 413            | 0.0                    |
| 3N     | Kerala            | 2972                                      | 0   | 58.3            | 27.1                    | 1.0                 | 309            | 0.0                    |
|        | Tamil Nadu        | 14717                                     | 0   | 320.0           | 102.8                   | -1.9                | 449            | 0.0                    |
|        | Pondy             | 382                                       | 0   | 8.1             | 7.8                     | 0.3                 | 115            | 0.0                    |
|        | Bihar             | 5034                                      | 0   | 96.2            | 90.9                    | 2.9                 | 400            | 0.0                    |
|        | DVC               | 3269                                      | 0   | 68.8            | -26.6                   | -0.3                | 250            | 0.0                    |
| ER     | Jharkhand         | 1129                                      | 0   | 24.0            | 18.6                    | 0.5                 | 120            | 0.0                    |
| EN     | Odisha            | 4366                                      | 0   | 86.3            | 36.4                    | 4.8                 | 600            | 0.9                    |
|        | West Bengal       | 8858                                      | 0   | 177.4           | 52.5                    | 5.3                 | 550            | 0.0                    |
|        | Sikkim            | 89  | 0   | 1.2             | 1.3                     | -0.1                | 8              | 0.0                    |
| NER    | Arunachal Pradesh | 115                                       | 3   | 2.3             | 2.2                     | 0.1                 | 11             | 0.0                    |
|        | Assam             | 1684                                      | 170                                       | 33.4            | 27.7                    | 0.8                 | 114            | 1.3                    |
|        | Manipur           | 155                                       | 2   | 2.4             | 2.3                     | 0.2                 | 10             | 0.0                    |
|        | Meghalaya         | 321                                       | 0   | 6.4             | 0.7                     | 0.0                 | 35             | 0.0                    |
|        | Mizoram           | 91  | 2   | 1.5             | 0.6                     | 0.2                 | 12             | 0.0                    |
|        | Nagaland          | 115                                       | 1   | 2.2             | 1.8                     | 0.0                 | 16             | 0.0                    |
|        | Tripura           | 291                                       | 9   | 5.3             | 4.0                     | -0.1                | 18             | 0.0                    |

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

|               | Bhutan | Nepal  | Bangladesh |
|---------------|--------|--------|------------|
| Actual(MU)    | 32.4   | -6.8   | -14.2      |
| Day peak (MW) | 1420.2 | -418.0 | -613.5     |

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

|              | NR    | WR     | SR   | ER    | NER  | TOTAL |
|--------------|-------|--------|------|-------|------|-------|
| Schedule(MU) | 316.2 | -287.7 | 19.9 | -48.2 | -0.1 | 0.1   |
| Actual(MU)   | 308.0 | -289.8 | 10.5 | -34.0 | -1.7 | -6.9  |
| O/D/U/D(MU)  | -8.2  | -2.0   | -9.4 | 14.2  | -1.6 | -7.0  |

F. Generation Outage(MW)

|                | NR    | WR    | SR    | ER   | NER | Total |
|----------------|-------|-------|-------|------|-----|-------|
| Central Sector | 4354  | 13284 | 9262  | 1880 | 77  | 28857 |
| State Sector   | 8315  | 18131 | 11723 | 5705 | 50  | 43924 |
| Total          | 12669 | 31415 | 20985 | 7585 | 127 | 72780 |

G. Sourcewise generation (MU)

|                                     | NR  | WR   | SR  | ER  | NER | All India |
|-------------------------------------|-----|------|-----|-----|-----|-----------|
| Thermal (Coal & Lignite)            | 590 | 1038 | 408 | 402 | 9   | 2447      |
| Hydro                               | 322 | 18   | 98  | 105 | 24  | 567       |
| Nuclear                             | 27  | 29   | 45  | 0   | 0   | 101       |
| Gas, Naptha & Diesel                | 26  | 44   | 23  | 0   | 25  | 118       |
| RES (Wind, Solar, Biomass & Others) | 28  | 108  | 314 | 1   | 0   | 451       |
| Total                               | 993 | 1236 | 888 | 508 | 58  | 3683      |

| Share of RES in total generation (%)         | 2.81  | 8.74  | 35.34 | 0.18  | 0.08  | 12.24 |
|--|-------|-------|-------|-------|-------|-------|
| Share of Non-fossil fuel (Hydro, Nuclear and | 37.97 | 12.48 | 51 30 | 20.88 | 41.69 | 30.35 |
| RES) in total generation (%)                 | 31.91 | 12.48 | 51.39 | 20.88 | 41.09 | 30.35 |

H. Diversity Factor
All India Demand Diversity Factor
1.017
Diversity factor = Sum of regional maximum demands / All India maximum demand

 $<sup>\</sup>textbf{*Source:} \ RLDCs \ for \ solar \ connected \ to \ ISTS; \ SLDCs \ for \ embedded \ solar. \ Limited \ visibility \ of \ embedded \ solar \ data.$ 

|          | INTER-REGIONAL EXCHANGES |   |            |                       |                 | Date of 1   | Reporting :    | : 19-Jul-18                              |  |
|----------|--------------------------|---|------------|-----------------------|-----------------|-------------|----------------|--|--|
|          |                          |   |            |                       |                 |             |                | Import=(+ve) /Export =(-ve) for NET (MU) |  |
| Sl No    | Voltage<br>Level         | Line Details                                | Circuit    | Max<br>Import<br>(MW) | Max Export (MW) | Import (MU) | Export<br>(MU) | NET<br>(MU)                              |  |
| Import/E | xport of                 | ER (With NR)                                |            |                       |                 |             |                |  |  |
| 1        | 765kV                    | GAYA-VARANASI                               | D/C        | 0                     | 526             | 0.0         | 7.7            | -7.7                                     |  |
| 3        | /65KV                    | SASARAM-FATEHPUR<br>GAYA-BALIA              | S/C<br>S/C | 257<br>0              | 9<br>411        | 2.9<br>0.0  | 0.0<br>8.1     | 2.9<br>-8.1                              |  |
| 4        | HVDC                     | ALIPURDUAR-AGRA                             | -          | 0                     | 1019            | 0.0         | 16.5           | -16.5                                    |  |
| 5        | nvbc                     | PUSAULI B/B                                 | S/C        | 0                     | 147             | 0.0         | 2.7            | -2.7                                     |  |
| 6        |                          | PUSAULI-VARANASI                            | S/C        | 0                     | 146             | 0.0         | 0.0            | 0.0                                      |  |
| 7<br>8   |                          | PUSAULI -ALLAHABAD<br>MUZAFFARPUR-GORAKHPUR | S/C<br>D/C | 2                     | 78<br>852       | 0.0         | 0.0<br>15.8    | 0.0<br>-15.8                             |  |
| 9        | 400 kV                   |   | Q/C        | 0                     | 929             | 0.0         | 16.6           | -16.6                                    |  |
| 10       |                          | BIHARSHARIFF-BALIA                          | D/C        | 0                     | 337             | 0.0         | 5.4            | -5.4                                     |  |
| 11       |                          | MOTIHARI-GORAKHPUR                          | D/C        | 317                   | 1               | 5.1         | 0.0            | 5.1                                      |  |
| 12       |                          | BIHARSHARIFF-VARANASI                       | D/C        | 702                   | 0               | 0.0         | 0.8            | -0.8                                     |  |
| 13       | 220 kV                   | PUSAULI-SAHUPURI                            | S/C        | 0                     | 204             | 0.0         | 3.9            | -3.9                                     |  |
| 14       |                          | SONE NAGAR-RIHAND                           | S/C<br>S/C | 35                    | 0               | 0.0         | 0.0            | 0.0                                      |  |
| 16       | 132 kV                   | GARWAH-RIHAND<br>KARMANASA-SAHUPURI         | S/C<br>S/C | 0                     | 0               | 0.4         | 0.0            | 0.4                                      |  |
| 17       |                          | KARMANASA-CHANDAULI                         | S/C        | 0                     | 0               | 0.0         | 0.0            | 0.0                                      |  |
|          |                          |   |            |                       | ER-NR           | 8.4         | 77.5           | -69.0                                    |  |
| Import/E | xport of                 | ER (With WR)                                |            |                       | T               |             |                | 1  |  |
| 18       | 765 kV                   | JHARSUGUDA-DHARAMJAIGARH S/C                | D/C        | 696                   | 1               | 10.2        | 0.0            | 10.2                                     |  |
| 19       |                          | NEW RANCHI-DHARAMJAIGARH                    | D/C        | 1030                  | 0               | 19.7        | 0.0            | 19.7                                     |  |
| 20       | 400 kV                   | JHARSUGUDA-RAIGARH                          | Q/C        | 1085                  | 0               | 18.5        | 0.0            | 18.5                                     |  |
| 21       |                          | RANCHI-SIPAT                                | D/C        | 504                   | 0               | 9.8         | 0.0            | 9.8                                      |  |
| 22       | 220 kV                   | BUDHIPADAR-RAIGARH<br>BUDHIPADAR-KORBA      | S/C<br>D/C | 153<br>201            | 0               | 3.2         | 0.0            | 2.1<br>3.2                               |  |
| 23       |                          | BUDIIII ADAK-KOKBA                          | D/C        | 201                   | ER-WR           | 63.6        | 0.0            | 63.6                                     |  |
| Import/E | xport of                 | ER (With SR)                                |            |                       |                 |             |                |  |  |
| 24       | 765 kV                   | ANGUL-SRIKAKULAM                            | D/C        | 97.0                  | 744.9           | 0.0         | 8.2            | -8.2                                     |  |
| 25       | HVDC                     | JEYPORE-GAZUWAKA B/B                        | D/C        | 0.0                   | 476.8           | 0.0         | 9.1            | -9.1                                     |  |
| 26       | LINK                     | TALCHER-KOLAR BIPOLE                        | D/C        | 0.0                   | 1288.5          | 0.0         | 18.1           | -18.1                                    |  |
| 27       | 400 kV                   | TALCHER-I/C                                 | D/C        | 936.7                 | 0.6             | 0.0         | 17.3           | -17.3                                    |  |
| 28       | 220 kV                   | BALIMELA-UPPER-SILERRU                      | S/C        | 0.0                   | 0.0<br>ER-SR    | 0.0         | 0.0<br>35.4    | 0.0<br>-35.4                             |  |
| Import/E | xport of                 | ER (With NER)                               |            |                       |                 |             |                |  |  |
| 29       | 400 kV                   | BINAGURI-BONGAIGAON                         | D/C        | 0                     | 522             | 0.0         | 9.8            | -10                                      |  |
| 30       | 400 K                    | ALIPURDUAR-BONGAIGAON                       | D/C        | 116                   | 236             | 0.0         | 1.9            | -2                                       |  |
| 31       | 220 kV                   | ALIPURDUAR-SALAKATI                         | D/C        | 0                     | 119             | 0.0         | 3.4            | -3                                       |  |
| Import/F | vnort of                 | NER (With NR)                               |            |                       | ER-NER          | 0.0         | 15.1           | -15.1                                    |  |
| 32       | _                        | BISWANATH CHARIALI-AGRA                     | -          | 0                     | 701             | 0.0         | 16.8           | -16.8                                    |  |
|          |                          |   |            |                       | NER-NR          | 0.0         | 16.8           | -16.8                                    |  |
| Import/E | xport of                 | WR (With NR)                                |            |                       |                 |             |                |  |  |
| 33       |                          | CHAMPA-KURUKSHETRA                          | D/C        | 0                     | 2505            | 0.0         | 52.9           | -52.9                                    |  |
| 34       | HVDC                     | V'CHAL B/B                                  | D/C        | 241                   | 0               | 4.0         | 0.0            | 4.0                                      |  |
| 35<br>36 |                          | APL -MHG<br>GWALIOR-AGRA                    | D/C<br>D/C | 0                     | 1898<br>1520    | 0.0         | 40.7<br>60.6   | -40.7<br>-60.6                           |  |
| 37       |                          | PHAGI-GWALIOR                               | D/C        | 0                     | 1712            | 0.0         | 31.8           | -31.8                                    |  |
| 38       | 765 kV                   | JABALPUR-ORAI                               | D/C        | 0                     | 675             | 0.0         | 27.8           | -27.8                                    |  |
| 39       |                          | GWALIOR-ORAI                                | S/C        | 739                   | 0               | 12.1        | 0.0            | 12.1                                     |  |
| 40       |                          | SATNA-ORAI                                  | S/C        | 0                     | 1802            | 0.0         | 40.3           | -40.3                                    |  |
| 41       |                          | ZERDA-KANKROLI                              | S/C        | 69                    | 194             | 0.0         | 1.7            | -1.7                                     |  |
| 42       | 400 kV                   | ZERDA -BHINMAL                              | S/C        | 72                    | 216<br>0        | 0.0<br>22.6 | 0.0            | -2.0                                     |  |
| 43       |                          | V'CHAL -RIHAND<br>RAPP-SHUJALPUR            | S/C<br>D/C | 966<br>0              | 446             | 0           | 3              | 22.6<br>-3                               |  |
| 45       |                          | BADOD-KOTA                                  | S/C        | 18                    | 63              | 0.0         | 0.8            | -0.8                                     |  |
| 46       | 220                      | BADOD-MORAK                                 | S/C        | 0                     | 60              | 0.0         | 1.5            | -1.5                                     |  |
| 47       | 220 kV                   | MEHGAON-AURAIYA                             | S/C        | 21                    | 44              | 0.0         | 0.4            | -0.4                                     |  |
| 48       |                          | MALANPUR-AURAIYA                            | S/C        | 0                     | 65              | 0.0         | 1.0            | -1.0                                     |  |
| 49       | 132kV                    | GWALIOR-SAWAI MADHOPUR                      | S/C        | 0                     | 0               | 0.0         | 0.0            | 0.0                                      |  |
| Import/F | xport of                 | WR (With SR)                                |            |                       | WR-NR           | 38.7        | 264.4          | -225.7                                   |  |
| 50       | _                        | BHADRAWATI B/B                              | -          | 479                   | 705             | 0.1         | 5.7            | -5.6                                     |  |
| 51       |                          | BARSUR-L.SILERU                             | -          | 0                     | 0               | 0.0         | 0.0            | 0.0                                      |  |
| 52       | 765 kV                   | SOLAPUR-RAICHUR                             | D/C        | 1208                  | 411             | 8.2         | 0.0            | 8.2                                      |  |
| 53       |                          | WARDHA-NIZAMABAD                            | D/C        | 140                   | 1402            | 0.0         | 13.7           | -13.7                                    |  |
| 54       | 400 kV                   | KOLHAPUR-KUDGI                              | D/C        | 863                   | 0               | 12.3        | 0.0            | 12.3                                     |  |
| 55<br>56 | 220 1-37                 | KOLHAPUR-CHIKODI<br>PONDA-AMBEWADI          | D/C<br>S/C | 0                     | 0               | 0.0         | 0.0            | 0.0                                      |  |
| 56       | 220 kV                   | YELDEM-AMBEWADI                             | S/C<br>S/C | 0                     | 0               | 0.0         | 0.0            | 0.0                                      |  |
| 31       |                          | ALEDEN MIDEWADI                             | 5/0        | U                     | WR-SR           | 20.6        | 19.3           | 1.3                                      |  |
|          |                          | TRA   | NSNATI     | ONAL EXC              |                 | 20.0        | 17.03          | 1  |  |
| 58       |                          | BHUTAN                                      |            | . J IL EAN            |                 |             |                | 32.4                                     |  |
| 59       |                          | NEPAL                                       |            |                       |                 |             |                | -6.8                                     |  |
| 60       |                          | BANGLADESH                                  |            |                       |                 |             |                | -14.2                                    |  |