

## 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)

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Ref: POSOCO/NLDC/SO/Daily PSP Report

दिनांक: 11<sup>th</sup> Sept 2018

Τо

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Sub: Daily PSP Report for the date 10.09.2018.

महोदय/Dear Sir.

आई॰ई॰जी॰सी॰-2010 की धारा स.-5.5.1 के प्रावधान के अनुसार, दिनांक 10-सितंबर-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 10<sup>th</sup> September 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** 11-Sep-18

#### A. Maximum Demand

|   | NR    | WR    | SR    | ER    | NER   | Total  |
|---|-------|-------|-------|-------|-------|--------|
| Demand Met during Evening Peak hrs(MW)<br>(at 2000 hrs; from RLDCs) | 50229 | 47731 | 42453 | 20513 | 2564  | 163490 |
| Peak Shortage (MW)  | 809   | 34    | 270   | 770   | 118   | 2001   |
| Energy Met (MU)   | 1078  | 1110  | 997   | 441   | 48    | 3673   |
| Hydro Gen (MU)  | 333   | 75    | 148   | 123   | 27    | 705    |
| Wind Gen (MU)   | 23    | 38    | 29    |       |       | 90     |
| Solar Gen (MU)*   | 18.95 | 12.14 | 52.27 | 0.58  | 0.01  | 84     |
| Energy Shortage (MU)  | 11.9  | 0.1   | 0.6   | 2.3   | 1.7   | 16.5   |
| Maximum Demand Met during the day                                   | 50934 | 50344 | 44492 | 20930 | 2589  | 164377 |
| (MW) & time (from NLDC SCADA)                                       | 19-19 | 11.03 | 17:08 | 20:00 | 10.33 | 19-46  |

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 0.072 0.00 23.92 3.03 20.89 73.44 2.64

| Region | States            | Max. Demand<br>Met during the<br>day (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            | 8996                                      | 0   | 199.9           | 119.5                   | -0.7                | 92             | 0.0                    |
|        | Harvana           | 8056                                      | 0   | 157.2           | 136.2                   | 0.6                 | 247            | 0.6                    |
|        | Rajasthan         | 8352                                      | 0   | 182.3           | 45.5                    | 0.7                 | 592            | 0.0                    |
|        | Delhi             | 4669                                      | 0   | 98.1            | 77.0                    | -0.8                | 109            | 0.0                    |
| NR     | UP                | 15712                                     | 190                                       | 336.7           | 144.9                   | -0.1                | 240            | 0.2                    |
|        | Uttarakhand       | 1816                                      | 75  | 39.9            | 16.9                    | 0.6                 | 115            | 1.4                    |
|        | HP                | 1324                                      | 0   | 18.8            | -3.3                    | 2.8                 | 215            | 0.1                    |
|        | J&K               | 1962                                      | 490                                       | 40.1            | 19.3                    | -3.3                | 75             | 9.5                    |
|        | Chandigarh        | 270                                       | 0   | 5.2             | 5.3                     | -0.1                | 39             | 0.0                    |
|        | Chhattisgarh      | 3883                                      | 34  | 88.9            | 17.1                    | -0.7                | 209            | 0.1                    |
|        | Gujarat           | 15276                                     | 0   | 336.1           | 93.2                    | 5.9                 | 1236           | 0.0                    |
|        | MP                | 7932                                      | 0   | 166.9           | 62.1                    | 2.0                 | 930            | 0.0                    |
| WR     | Maharashtra       | 21977                                     | 0   | 467.7           | 156.3                   | -0.9                | 692            | 0.0                    |
| WK     | Goa               | 472                                       | 0   | 12.6            | 9.0                     | 0.3                 | 68             | 0.0                    |
|        | DD                | 356                                       | 0   | 7.7             | 6.2                     | 1.4                 | 88             | 0.0                    |
|        | DNH               | 812                                       | 0   | 18.7            | 17.6                    | 1.2                 | 91             | 0.0                    |
|        | Essar steel       | 525                                       | 0   | 11.3            | 11.2                    | 0.1                 | 255            | 0.0                    |
|        | Andhra Pradesh    | 9416                                      | 0   | 196.8           | 62.8                    | 2.4                 | 680            | 0.0                    |
|        | Telangana         | 10749                                     | 0   | 230.6           | 106.3                   | 2.0                 | 554            | 0.0                    |
| SR     | Karnataka         | 9314                                      | 0   | 201.3           | 52.0                    | 1.1                 | 570            | 0.0                    |
| 3N     | Kerala            | 3262                                      | 0   | 63.1            | 31.6                    | 0.6                 | 197            | 0.6                    |
|        | Tamil Nadu        | 13573                                     | 0   | 297.7           | 134.3                   | 6.5                 | 1083           | 0.0                    |
|        | Pondy             | 344                                       | 0   | 7.4             | 7.4                     | -0.1                | 44             | 0.1                    |
|        | Bihar             | 4792                                      | 0   | 93.1            | 92.7                    | 0.1                 | 50             | 0.2                    |
|        | DVC               | 2897                                      | -2  | 57.9            | -29.8                   | 5.3                 | 510            | 1.6                    |
| ER     | Jharkhand         | 995                                       | 0   | 22.2            | 16.9                    | -1.8                | 20             | 0.0                    |
| EN     | Odisha            | 4739                                      | -1  | 99.2            | 34.7                    | 1.6                 | 480            | 0.6                    |
|        | West Bengal       | 8159                                      | 0   | 161.9           | 63.6                    | 3.6                 | 250            | 0.0                    |
|        | Sikkim            | 82  | 0   | 1.1             | 1.1                     | 0.0                 | 10             | 0.0                    |
| NER    | Arunachal Pradesh | 120                                       | 3   | 2.3             | 2.9                     | -0.6                | 0              | 0.0                    |
|        | Assam             | 1607                                      | 61  | 29.2            | 22.9                    | 0.6                 | 234            | 1.5                    |
|        | Manipur           | 170                                       | 2   | 2.2             | 2.5                     | -0.4                | 38             | 0.0                    |
|        | Meghalaya         | 298                                       | 0   | 5.3             | -0.1                    | -0.2                | 22             | 0.0                    |
|        | Mizoram           | 78  | 2   | 1.5             | 1.2                     | 0.0                 | 5              | 0.0                    |
|        | Nagaland          | 117                                       | 3   | 2.3             | 2.1                     | -0.2                | 0              | 0.1                    |
|        | Tripura           | 267                                       | 5   | 4.6             | 4.1                     | -0.1                | 78             | 0.0                    |

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

|               | Bhutan | Nepal | Bangladesh |
|---------------|--------|-------|------------|
| Actual(MU)    | 36.2   | -5.7  | -21.9      |
| Day peak (MW) | 1456.5 | 321.2 | -971.2     |

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

|              | NR    | WR     | SR    | ER    | NER  | TOTAL |
|--------------|-------|--------|-------|-------|------|-------|
| Schedule(MU) | 185.2 | -231.7 | 100.1 | -54.7 | 2.5  | 1.4   |
| Actual(MU)   | 156.1 | -208.8 | 97.8  | -46.3 | -2.9 | -4.1  |
| O/D/U/D(MU)  | -29.1 | 22.9   | -2.3  | 8.4   | -5.4 | -5.5  |

F. Generation Outage(MW)

|                | NR    | WR    | SR    | ER   | NER | Total |
|----------------|-------|-------|-------|------|-----|-------|
| Central Sector | 4756  | 14597 | 9082  | 1120 | 755 | 30311 |
| State Sector   | 11285 | 15809 | 6413  | 6195 | 50  | 39752 |
| Total          | 16041 | 30406 | 15495 | 7315 | 805 | 70062 |

G. Sourcewise generation (MU)

|                                     | NR  | WR   | SR  | ER  | NER | All India |
|-------------------------------------|-----|------|-----|-----|-----|-----------|
| Thermal (Coal & Lignite)            | 519 | 1155 | 585 | 386 | 7   | 2653      |
| Hydro                               | 333 | 75   | 148 | 123 | 27  | 705       |
| Nuclear                             | 22  | 0    | 19  | 0   | 0   | 42        |
| Gas, Naptha & Diesel                | 24  | 17   | 21  | 0   | 19  | 81        |
| RES (Wind, Solar, Biomass & Others) | 46  | 50   | 123 | 1   | 0   | 220       |
| Total                               | 945 | 1297 | 896 | 509 | 53  | 3700      |

| Share of RES in total generation (%)         | 4.86  | 3.86 | 13.77 | 0.12  | 0.03  | 5.95  |
|--|-------|------|-------|-------|-------|-------|
| Share of Non-fossil fuel (Hydro, Nuclear and | 42.45 | 0.62 | 22.20 | 24.19 | 50.98 | 26.12 |
| RES) in total generation (%)                 | 42.45 | 9.62 | 32.36 | 24.19 | 50.96 | 20.12 |

H. Diversity Factor
All India Demand Diversity Factor
1.030
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                     |            |                       |                 |             | Reporting :  | 11-Sep-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 (MU)  | NET (MU)                                 |
| Import/E | xport of         | ER (With NR)                                 |            |                       |                 |             |              |  |
| 1        | ECELS!           | GAYA-VARANASI                                | D/C        | 275                   | 130             | 2.4         | 0.0          | 2.4                                      |
| 3        | 765kV            | SASARAM-FATEHPUR<br>GAYA-BALIA               | S/C<br>S/C | 369<br>70             | 0<br>172        | 6.0<br>0.0  | 1.3          | 6.0<br>-1.3                              |
| 4        |                  | ALIPURDUAR-AGRA                              | -          | 0                     | 1998            | 0.0         | 40.9         | -40.9                                    |
| 5        | HVDC             | PUSAULI B/B                                  | S/C        | 0                     | 148             | 0.0         | 3.8          | -3.8                                     |
| 6        |                  | PUSAULI-VARANASI                             | S/C        | 0                     | 184             | 0.0         | 3.9          | -3.9                                     |
| 7        |                  | PUSAULI -ALLAHABAD                           | S/C        | 24                    | 24              | 0.3         | 0.0          | 0.3                                      |
| 8        |                  | MUZAFFARPUR-GORAKHPUR                        | D/C        | 58                    | 403             | 0.0         | 4.4          | -4.4                                     |
| 9        | 400 kV           | PATNA-BALIA                                  | Q/C        | 0                     | 630             | 0.0         | 12.1         | -12.1                                    |
| 10<br>11 |                  | BIHARSHARIFF-BALIA                           | D/C<br>D/C | 59<br>0               | 148<br>0        | 0.0<br>5.1  | 0.0          | -2.1<br>5.1                              |
| 12       |                  | MOTIHARI-GORAKHPUR<br>BIHARSHARIFF-VARANASI  | D/C<br>D/C | 279                   | 0               | 3.9         | 0.0          | 3.9                                      |
| 13       | 220 kV           | PUSAULI-SAHUPURI                             | S/C        | 0                     | 159             | 0.0         | 3.2          | -3.2                                     |
| 14       | 220 111          | SONE NAGAR-RIHAND                            | S/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| 15       | 400 1 77         | GARWAH-RIHAND                                | S/C        | 35                    | 0               | 0.4         | 0.0          | 0.4                                      |
| 16       | 132 kV           | KARMANASA-SAHUPURI                           | S/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| 17       |                  | KARMANASA-CHANDAULI                          | S/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| Import/E | xport of         | ER (With WR)                                 |            |                       | ER-NR           | 18.0        | 71.5         | -53.6                                    |
| 18       |                  | JHARSUGUDA-DHARAMJAIGARH S/C                 | D/C        | 1371                  | 0               | 25.9        | 0.0          | 25.9                                     |
| 19       | 765 kV           | NEW RANCHI-DHARAMJAIGARH                     | D/C        | 914                   | 93              | 11.7        | 0.0          | 11.7                                     |
| 20       |                  | JHARSUGUDA-RAIGARH                           | Q/C        | 1122                  | 0               | 18.5        | 0.0          | 18.5                                     |
| 21       | 400 kV           | RANCHI-SIPAT                                 | D/C        | 458                   | 0               | 6.5         | 0.0          | 6.5                                      |
| 22       | 220 kV           | BUDHIPADAR-RAIGARH                           | S/C        | 0                     | 1               | 0.0         | 0.0          | 0.0                                      |
| 23       | 220 11 1         | BUDHIPADAR-KORBA                             | D/C        | 348                   | 0               | 6.5         | 0.0          | 6.5                                      |
|          |                  |  |            |                       | ER-WR           | 69.2        | 0.0          | 69.2                                     |
|          | _                | ER (With SR)                                 |            |                       |                 |             |              | T  |
| 24       | 765 kV           | ANGUL-SRIKAKULAM                             | D/C        | 0.0                   | 1630.0          | 0.0         | 26.8         | -26.8                                    |
| 25       | HVDC<br>LINK     | JEYPORE-GAZUWAKA B/B<br>TALCHER-KOLAR BIPOLE | D/C        | 0.0                   | 579.0<br>1897.0 | 0.0         | 13.8<br>43.1 | -13.8<br>-43.1                           |
| 26<br>27 | 400 kV           | TALCHER-KOLAR BIPOLE TALCHER-I/C             | D/C<br>D/C | 0.0                   | 934.0           | 0.0         | 13.4         | -43.1                                    |
| 28       | 220 kV           | BALIMELA-UPPER-SILERRU                       | S/C        | 1.0                   | 0.0             | 0.0         | 0.0          | 0.0                                      |
|          | 220111           |  |            | 1.0                   | ER-SR           | 0.0         | 83.6         | -83.6                                    |
| Import/E | export of        | ER (With NER)                                |            |                       |                 |             |              | •  |
| 29       | 400 kV           | BINAGURI-BONGAIGAON                          | D/C        | 0                     | 768             | 0.0         | 10.3         | -10                                      |
| 30       | 400 K V          | ALIPURDUAR-BONGAIGAON                        | D/C        | 474                   | 125             | 3.2         | 0.0          | 3  |
| 31       | 220 kV           | ALIPURDUAR-SALAKATI                          | D/C        | 0                     | 143             | 0.0         | 2.1          | -2                                       |
|          |                  |  |            |                       | ER-NER          | 3.2         | 12.3         | -9.1                                     |
|          |                  | NER (With NR)                                | 1          |                       |                 |             | 440          | 1.0                                      |
| 32       | HVDC             | BISWANATH CHARIALI-AGRA                      | -          | 0                     | 701<br>NER-NR   | 0.0         | 16.9         | -16.9<br>-16.9                           |
| Import/F | vnort of         | WR (With NR)                                 |            |                       | NEX-NX          | 0.0         | 16.9         | -10.9                                    |
| 33       | aport or         | CHAMPA-KURUKSHETRA                           | D/C        | 0                     | 0               | 18.5        | 0.0          | 18.5                                     |
| 34       | HVDC             | V'CHAL B/B                                   | D/C        | 0                     | 0               | 6.0         | 0.0          | 6.0                                      |
| 35       |                  | APL -MHG                                     | D/C        | 0                     | 0               | 0.0         | 14.6         | -14.6                                    |
| 36       |                  | GWALIOR-AGRA                                 | D/C        | 0                     | 0               | 0.0         | 34.5         | -34.5                                    |
| 37       |                  | PHAGI-GWALIOR                                | D/C        | 0                     | 0               | 0.0         | 22.0         | -22.0                                    |
| 38       | 765 kV           | JABALPUR-ORAI                                | D/C        | 0                     | 0               | 0.0         | 8.0          | -8.0                                     |
| 39       |                  | GWALIOR-ORAI                                 | S/C        | 0                     | 0               | 6.3         | 0.0          | 6.3                                      |
| 40       |                  | SATNA-ORAI                                   | S/C        | 0                     | 0               | 0.0         | 41.1         | -41.1                                    |
| 41       |                  | ZERDA BUINMAL                                | S/C        | 0                     | 0               | 4.8         | 0.0          | 4.8                                      |
| 42       | 400 kV           | ZERDA -BHINMAL                               | S/C<br>S/C | 0                     | 0               | 3.3<br>22.2 | 0.0          | 3.3<br>22.2                              |
| 43<br>44 |                  | V'CHAL -RIHAND<br>RAPP-SHUJALPUR             | D/C        | 0                     | 0               | 0           | 0.0          | 0  |
| 45       |                  | BADOD-KOTA                                   | S/C        | 0                     | 0               | 0.9         | 0.0          | 0.9                                      |
| 46       |                  | BADOD-KOTA<br>BADOD-MORAK                    | S/C        | 0                     | 0               | 0.3         | 0.0          | 0.2                                      |
| 47       | 220 kV           | MEHGAON-AURAIYA                              | S/C        | 0                     | 0               | 0.2         | 0.1          | 0.2                                      |
| 48       |                  | MALANPUR-AURAIYA                             | S/C        | 0                     | 0               | 0.1         | 0.4          | -0.4                                     |
| 49       | 132kV            | GWALIOR-SAWAI MADHOPUR                       | S/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| Import/E | xport of         | WR (With SR)                                 |            |                       | WR-NR           | 62.6        | 121.0        | -58.4                                    |
| 50       | _                | BHADRAWATI B/B                               | -          | 0                     | 0               | 19.5        | 0.0          | 19.5                                     |
| 51       | LINK             | BARSUR-L.SILERU                              | -          | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| 52       |                  | SOLAPUR-RAICHUR                              | D/C        | 0                     | 0               | 8.3         | 0.0          | 8.3                                      |
| 53       | 765 kV           | WARDHA-NIZAMABAD                             | D/C        | 0                     | 0               | 35.1        | 0.0          | 35.1                                     |
| 54       | 400 kV           | KOLHAPUR-KUDGI                               | D/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| 55       |                  | KOLHAPUR-CHIKODI                             | D/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| 56       | 220 kV           | PONDA-AMBEWADI                               | S/C        | 0                     | 0               | 0.0         | 0.0          | 0.0                                      |
| 57       |                  | XELDEM-AMBEWADI                              | S/C        | 0                     | 0               | 1.8         | 0.0          | 1.8                                      |
|          |                  |  |            |                       | WR-SR           | 64.8        | 0.0          | 64.8                                     |
|          |                  | TRA  | NSNATI     | ONAL EXC              | CHANGE          |             |              |  |
| 58       |                  | BHUTAN                                       |            |                       | <del>-</del>    |             | -            | 36.2                                     |
| 59<br>60 |                  | NEPAL<br>BANGLADESH                          | 1          |                       |                 |             |              | -5.7<br>-21.9                            |
| 00       |                  | PURICEOUPEOU                                 | 1          |                       |                 |             |              | -21.9                                    |