

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(भारत सरकार का उद्यम)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 30.01.2017

Date of Reporting : 31.01.2017



### I. Regional Availability/Demand:

| Evening Peak (19:00 Hrs) MW |          |             |            | Off Peak (03:00 Hrs) MW |          |             |            | Day Energy (Net MU) |          |
|-----------------------------|----------|-------------|------------|-------------------------|----------|-------------|------------|---------------------|----------|
| Demand Met                  | Shortage | Requirement | Freq* (Hz) | Demand Met              | Shortage | Requirement | Freq* (Hz) | Demand Met          | Shortage |
| 40317                       | 506      | 40822       | 49.98      | 26655                   | 404      | 27058       | 49.99      | 811.88              | 11.21    |

\* Half hourly (two 15 minutes block-one block each before and after the designated time) average frequency

### II. A. State's Load Details (At States periphery) in MUs:

UI [OD:(+ve), UD: (-ve)]

| State        | State's Control Area Generation (Net MU) |              |                     |               | Drawal Schedule (Net MU) | Actual Drawal (Net MU) | UI (Net MU) | Consumption (Net MU) | Shortages * (MU) |
|--------------|--|--------------|---------------------|---------------|--------------------------|------------------------|-------------|----------------------|------------------|
|              | Thermal                                  | Hydro        | Renewable/others \$ | Total         |                          |                        |             |                      |                  |
| Punjab       | 48.94                                    | 7.13         | 0.31                | 56.38         | 33.95                    | 33.36                  | -0.60       | 89.74                | 0.00             |
| Haryana      | 35.20                                    | 0.35         | 0.00                | 35.56         | 64.07                    | 62.41                  | -1.67       | 97.96                | 0.00             |
| Rajasthan    | 107.87                                   | 3.84         | 7.43                | 119.14        | 70.87                    | 74.81                  | 3.94        | 193.95               | 0.00             |
| Delhi        | 11.87                                    |              | 0.00                | 11.87         | 51.81                    | 48.37                  | -3.45       | 60.23                | 0.09             |
| UP           | 161.16                                   | 4.10         | 0.00                | 165.26        | 93.93                    | 96.11                  | 2.18        | 261.36               | 0.00             |
| Uttarakhand  |  | 6.65         | 0.00                | 13.83         | 20.61                    | 21.07                  | 0.46        | 34.90                | 0.08             |
| HP           |  | 5.24         | 2.11                | 5.24          | 19.98                    | 20.66                  | 0.68        | 25.89                | 0.00             |
| J & K        |  | 4.74         | 0.00                | 4.74          | 39.11                    | 39.43                  | 0.32        | 44.17                | 11.04            |
| Chandigarh   |  |              |                     | 0.00          | 3.75                     | 3.67                   | -0.08       | 3.67                 | 0.00             |
| <b>Total</b> | <b>365.04</b>                            | <b>32.05</b> | <b>9.85</b>         | <b>412.01</b> | <b>398.09</b>            | <b>399.87</b>          | <b>1.78</b> | <b>811.88</b>        | <b>11.21</b>     |

\* Shortage furnished by the respective constituent's Others include UP Co-generation and JK Diesel

### II. B. State's Demand Met in MWs:

UI/OA/PX [OD/Import: (+ve), UD/Export: (-ve)]

| State        | Evening Peak (19:00 Hrs) MW |            |             |                     | Off Peak (03:00 Hrs) MW |            |            |                     | Maximum Demand Met (MW) and Time(Hrs) | Shortage (MW) |            |
|--------------|-----------------------------|------------|-------------|---------------------|-------------------------|------------|------------|---------------------|---------------------------------------|---------------|------------|
|              | Demand Met                  | Shortage   | UI          | STOA/PX transaction | Demand Met              | Shortage   | UI         | STOA/PX transaction |                                       |               |            |
| Punjab       | 4736                        | 0          | -162        | -918                | 2739                    | 0          | 79         | -536                | 4853                                  | 8:00          | 0          |
| Haryana      | 5895                        | 0          | -65         | -297                | 2199                    | 0          | 203        | -977                | 5895                                  | 19:00         | 0          |
| Rajasthan    | 8497                        | 0          | -18         | 267                 | 6860                    | 0          | 272        | 357                 | 9305                                  | 9:00          | 0          |
| Delhi        | 2801                        | 0          | -363        | -70                 | 1451                    | 0          | 10         | -617                | 3761                                  | 11:00         | 0          |
| UP           | 13060                       | 0          | 171         | -223                | 9887                    | 0          | 166        | 86                  | 13060                                 | 19:00         | 0          |
| Uttarakhand  | 1848                        | 0          | 74          | 194                 | 1085                    | 0          | -54        | 322                 | 1903                                  | 8:00          | 0          |
| HP           | 1269                        | 0          | 68          | 251                 | 731                     | 0          | 7          | 420                 | 1418                                  | 9:00          | 0          |
| J&K          | 2023                        | 506        | 48          | 596                 | 1614                    | 404        | -80        | 614                 | 2047                                  | 20:00         | 512        |
| Chandigarh   | 189                         | 0          | -14         | 0                   | 89                      | 0          | -2         | 0                   | 219                                   | 9:00          | 0          |
| <b>Total</b> | <b>40317</b>                | <b>506</b> | <b>-261</b> | <b>-200</b>         | <b>26655</b>            | <b>404</b> | <b>601</b> | <b>-331</b>         | <b>40317</b>                          | <b>19:00</b>  | <b>506</b> |

\* STOA figures are at seller's boundary & PX figures are at regional boundary. # figures may not be at simultaneous hour.

Diversity is 1.05

UI [OD:(+ve), UG: (-ve)]

### III. Regional Entities :

| Station/<br>Constituent                 | Inst. Capacity<br>(Effective) MW | Declared<br>Capacity(MW) | Peak MW      | Off Peak MW | Energy        | Average      | Schedule      | UI           |
|---|----------------------------------|--------------------------|--------------|-------------|---------------|--------------|---------------|--------------|
|   |                                  |                          | (Gross)      | (Gross)     | (Net MU)      | Sentout(MW)  | Net MU        | Net MU       |
| <b>A. NTPC</b>                          |                                  |                          |              |             |               |              |               |              |
| Singrauli STPS (5*200+2*500)            | 2000                             | 1869                     | 1975         | 1542        | 43.14         | 1797         | 42.80         | 0.33         |
| Rihand I STPS (2*500)                   | 1000                             | 475                      | 487          | 346         | 10.26         | 428          | 10.32         | -0.06        |
| Rihand II STPS (2*500)                  | 1000                             | 960                      | 994          | 697         | 20.91         | 871          | 20.97         | -0.06        |
| Rihand III STPS (2*500)                 | 1000                             | 965                      | 991          | 727         | 21.13         | 880          | 21.38         | -0.25        |
| Dadri I STPS (4*210)                    | 840                              | 815                      | 185          | 143         | 3.68          | 153          | 3.72          | -0.04        |
| Dadri II STPS (2*490)                   | 980                              | 980                      | 442          | 328         | 8.65          | 360          | 9.22          | -0.57        |
| Unchahar I TPS (2*210)                  | 420                              | 407                      | 400          | 285         | 7.02          | 293          | 7.53          | -0.51        |
| Unchahar II TPS (2*210)                 | 420                              | 405                      | 411          | 281         | 6.75          | 281          | 7.49          | -0.75        |
| Unchahar III TPS (1*210)                | 210                              | 203                      | 206          | 153         | 3.53          | 147          | 3.71          | -0.18        |
| ISTPP (Jhajjar) (3*500)                 | 1500                             | 1440                     | 0            | 0           | 0.00          | 0            | 0.00          | 0.00         |
| Dadri GPS (4*130.19+2*154.51)           | 830                              | 796                      | 202          | 155         | 4.00          | 167          | 4.44          | -0.44        |
| Anta GPS (3*88.71+1*153.2)              | 419                              | 420                      | 0            | 0           | 0.00          | 0            | 0.00          | 0.00         |
| Auraiya GPS (4*111.19+2*109.30)         | 663                              | 644                      | 0            | 0           | 0.00          | 0            | 0.00          | 0.00         |
| Dadri Solar(5)                          | 5                                | 1                        | 0            | 0           | 0.02          | 1            | 0.02          | 0.00         |
| Unchahar Solar(10)                      | 10                               | 1                        | 0            | 0           | 0.04          | 1            | 0.04          | 0.00         |
| Singrauli Solar(15)                     | 15                               | 1                        | 0            | 0           | 0.06          | 3            | 0.03          | 0.03         |
| KHEP(4*200)                             | 800                              | 872                      | 860          | 0           | 2.80          | 117          | 2.62          | 0.19         |
| <b>Sub Total (A)</b>                    | <b>12112</b>                     | <b>11255</b>             | <b>7153</b>  | <b>4657</b> | <b>132</b>    | <b>5500</b>  | <b>134</b>    | <b>-2.30</b> |
| <b>B. NPC</b>                           |                                  |                          |              |             |               |              |               |              |
| NAPS (2*220)                            | 440                              | 414                      | 450          | 454         | 9.94          | 414          | 9.94          | 0.00         |
| RAPS- B (2*220)                         | 440                              | 404                      | 444          | 450         | 9.66          | 402          | 9.70          | -0.04        |
| RAPS- C (2*220)                         | 440                              | 405                      | 445          | 451         | 9.78          | 408          | 9.72          | 0.06         |
| <b>Sub Total (B)</b>                    | <b>1320</b>                      | <b>1223</b>              | <b>1339</b>  | <b>1355</b> | <b>29.38</b>  | <b>1224</b>  | <b>29.35</b>  | <b>0.03</b>  |
| <b>C. NHPC</b>                          |                                  |                          |              |             |               |              |               |              |
| Chamera I HPS (3*180)                   | 540                              | 540                      | 555          | 0           | 3.28          | 136          | 3.00          | 0.28         |
| Chamera II HPS (3*100)                  | 300                              | 301                      | 310          | 0           | 1.89          | 79           | 1.70          | 0.19         |
| Chamera III HPS (3*77)                  | 231                              | 234                      | 221          | 0           | 1.02          | 42           | 0.95          | 0.07         |
| Bairasuli HPS(3*60)                     | 180                              | 120                      | 125          | 0           | 1.06          | 44           | 1.01          | 0.05         |
| Salal-HPS (6*115)                       | 690                              | 154                      | 327          | 139         | 4.26          | 177          | 3.69          | 0.57         |
| Tanakpur-HPS (3*31.4)                   | 94                               | 17                       | 19           | 19          | 0.54          | 23           | 0.40          | 0.15         |
| Uri-I HPS (4*120)                       | 480                              | 318                      | 358          | 330         | 8.05          | 335          | 7.64          | 0.41         |
| Uri-II HPS (4*60)                       | 240                              | 178                      | 181          | 181         | 4.31          | 179          | 4.28          | 0.03         |
| Dhauliganga-HPS (4*70)                  | 280                              | 140                      | 139          | 0           | 0.78          | 33           | 0.74          | 0.05         |
| Dulhasti-HPS (3*130)                    | 390                              | 257                      | 267          | 0           | 2.70          | 112          | 2.50          | 0.20         |
| Sewa-II HPS (3*40)                      | 120                              | 119                      | 121          | 125         | 2.87          | 119          | 2.87          | 0.00         |
| Parbati 3 (4*130)                       | 520                              | 130                      | 133          | 0           | 0.40          | 17           | 0.39          | 0.01         |
| <b>Sub Total (C)</b>                    | <b>4065</b>                      | <b>2509</b>              | <b>2757</b>  | <b>793</b>  | <b>31</b>     | <b>1298</b>  | <b>29</b>     | <b>1.99</b>  |
| <b>D.SJVNL</b>                          |                                  |                          |              |             |               |              |               |              |
| NJPC (6*250)                            | 1500                             | 1615                     | 1443         | 0           | 5.31          | 221          | 5.31          | 0.00         |
| Rampur HEP (6*88.67)                    | 412                              | 375                      | 375          | 0           | 1.45          | 60           | 1.42          | 0.03         |
| <b>Sub Total (D)</b>                    | <b>1912</b>                      | <b>1990</b>              | <b>1818</b>  | <b>0</b>    | <b>6.76</b>   | <b>281</b>   | <b>6.73</b>   | <b>0.03</b>  |
| <b>E. THDC</b>                          |                                  |                          |              |             |               |              |               |              |
| Tehri HPS (4*250)                       | 1000                             | 767                      | 922          | 0           | 9.08          | 378          | 9.01          | 0.06         |
| Koteshwar HPS (4*100)                   | 400                              | 133                      | 398          | 65          | 3.24          | 135          | 3.20          | 0.04         |
| <b>Sub Total (E)</b>                    | <b>1400</b>                      | <b>900</b>               | <b>1320</b>  | <b>65</b>   | <b>12.32</b>  | <b>513</b>   | <b>12.21</b>  | <b>0.10</b>  |
| <b>F. BBMB</b>                          |                                  |                          |              |             |               |              |               |              |
| Bhakra HPS (2*108+3*126+5*157)          | 1379                             | 509                      | 930          | 397         | 12.70         | 529          | 12.20         | 0.49         |
| Dehar HPS (6*165)                       | 990                              | 140                      | 495          | 0           | 3.39          | 141          | 3.47          | -0.08        |
| Pong HPS (6*66)                         | 396                              | 149                      | 330          | 0           | 3.54          | 148          | 3.57          | -0.03        |
| <b>Sub Total (F)</b>                    | <b>2765</b>                      | <b>797</b>               | <b>1755</b>  | <b>397</b>  | <b>19.63</b>  | <b>818</b>   | <b>19.25</b>  | <b>0.38</b>  |
| <b>G. IPP(s)/JV(s)</b>                  |                                  |                          |              |             |               |              |               |              |
| ALLAIN DUHANGAN HPS(IPP) (2*96)         | 192                              | 0                        | 0            | 0           | 0.36          | 15           | 0.35          | 0.02         |
| KARCHAM WANGTOO HPS(IPP) (4*250)        | 1000                             | 0                        | 545          | 0           | 3.08          | 128          | 3.08          | 0.00         |
| Malana Stg-II HPS (2*50)                | 100                              | 0                        | 0            | 0           | 0.18          | 7            | 0.18          | 0.00         |
| Shree Cement TPS (2*150)                | 300                              | 0                        | 296          | 168         | 5.80          | 242          | 6.03          | -0.23        |
| Budhil HPS(IPP) (2*35)                  | 70                               | 0                        | 0            | 0           | 0.25          | 10           | 0.26          | -0.02        |
| <b>Sub Total (G)</b>                    | <b>1662</b>                      | <b>0</b>                 | <b>841</b>   | <b>168</b>  | <b>9.66</b>   | <b>403</b>   | <b>9.90</b>   | <b>-0.24</b> |
| <b>H. Total Regional Entities (A-G)</b> | <b>25237</b>                     | <b>18674</b>             | <b>16982</b> | <b>7435</b> | <b>240.88</b> | <b>10037</b> | <b>240.89</b> | <b>-0.01</b> |

| I. State Entities | Station                                       | Effective Installed Capacity (MW) | Peak MW | Off Peak MW | Energy(MU) | Average(Sentout MW) |
|-------------------|---|-----------------------------------|---------|-------------|------------|---------------------|
| Punjab            | Guru Gobind Singh TPS (Ropar) (6*210)         | 1260                              | 0       | 0           | -0.13      | -5                  |
|                   | Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)    | 460                               | 0       | 0           | -0.02      | -1                  |
|                   | Guru Hargobind Singh TPS(L.mbt) (2*210+2*250) | 920                               | 0       | 0           | -0.11      | -5                  |
|                   | Goidwal(GVK) (2*270)                          | 540                               | 0       | 0           | -0.02      | -1                  |

|   |  |                              |             |             |               |             |
|---|--|------------------------------|-------------|-------------|---------------|-------------|
|   | Rajpura (2*700)                                    | 1400                         | 1320        | 660         | 25.15         | 1048        |
|   | Talwandi Saboo (3*660)                             | 1980                         | 916         | 924         | 24.07         | 1003        |
|   | <b>Thermal (Total)</b>                             | <b>6560</b>                  | <b>2236</b> | <b>1584</b> | <b>48.94</b>  | <b>2039</b> |
|   | Total Hydro  | 1000                         | 300         | 183         | 7.13          | 297         |
|   | Wind Power   | 0                            | 0           | 0           | 0.00          | 0           |
|   | Biomass  | 288                          | 0           | 0           | 0.25          | 10          |
|   | Solar  | 560                          | 0           | 0           | 0.06          | 2           |
|   | <b>Renewable(Total)</b>                            | <b>848</b>                   | <b>0</b>    | <b>0</b>    | <b>0.31</b>   | <b>13</b>   |
|   | <b>Total Punjab</b>                                | <b>8408</b>                  | <b>2536</b> | <b>1767</b> | <b>56.38</b>  | <b>2349</b> |
| Haryana   | Panipat TPS (2*210+2*250)                          | 920                          | 0           | 0           | 0.00          | 0           |
|   | DCRTPP (Yamuna nagar) (2*300)                      | 600                          | 0           | 0           | 0.00          | 0           |
|   | Faridabad GPS (NTPC)(2*137.75+1*156)               | 432                          | 199         | 156         | 4.21          | 176         |
|   | RGTPP (khedar) (IPP) (2*600)                       | 1200                         | 1153        | 773         | 21.16         | 882         |
|   | Magnum Diesel (IPP)                                | 25                           | 0           | 0           | 0.00          | 0           |
|   | Jhajjar(CLP) (2*660)                               | 1320                         | 602         | 367         | 9.83          | 410         |
|   | <b>Thermal (Total)</b>                             | <b>4497</b>                  | <b>1954</b> | <b>1296</b> | <b>35.20</b>  | <b>1467</b> |
|   | Total Hydro  | 62                           | 7           | 8           | 0.35          | 15          |
|   | Wind Power   | 0                            | 0           | 0           | 0.00          | 0           |
|   | Biomass  | 40                           | 0           | 0           | 0.00          | 0           |
|   | Solar  | 0                            | 0           | 0           | 0.00          | 0           |
|   | <b>Renewable(Total)</b>                            | <b>40</b>                    | <b>0</b>    | <b>0</b>    | <b>0.00</b>   | <b>0</b>    |
|   | <b>Total Haryana</b>                               | <b>4599</b>                  | <b>1961</b> | <b>1304</b> | <b>35.56</b>  | <b>1482</b> |
|   | Rajasthan  | kota TPS (2*110+2*195+3*210) | 1240        | 90          | 91            | 2.18        |
| suratgarh TPS (6*250)                             |  | 1500                         | 179         | 186         | 4.74          | 197         |
| Chabra TPS (4*250)                                |  | 1000                         | 774         | 776         | 19.89         | 829         |
| Dholpur GPS (3*110)                               |  | 330                          | 0           | 0           | 0.00          | 0           |
| Ramgarh GPS(1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50) |  | 271                          | 151         | 165         | 4.01          | 167         |
| RAPS A (NPC) (1*100+1*200)                        |  | 300                          | 190         | 190         | 4.39          | 183         |
| Barsingar (NLC) (2*125)                           |  | 250                          | 226         | 226         | 5.34          | 222         |
| Giral LTPS (2*125)                                |  | 250                          | 0           | 0           | 0.00          | 0           |
| Rajwest LTPS (IPP) (8*135)                        |  | 1080                         | 743         | 498         | 18.12         | 755         |
| VS LIGNITE LTPS (IPP) (1*135)                     |  | 135                          | 0           | 0           | 0.00          | 0           |
| Kalisindh Thermal(2*600)                          |  | 1200                         | 1024        | 821         | 22.96         | 957         |
| Kawai(Adani) (2*660)                              |  | 1320                         | 1182        | 864         | 26.25         | 1094        |
| <b>Thermal (Total)</b>                            |  | <b>8876</b>                  | <b>4559</b> | <b>3817</b> | <b>107.87</b> | <b>4495</b> |
| Total Hydro                                       |  | 550                          | 157         | 80          | 3.84          | 160         |
| Wind power  |  | 4017                         | 346         | 153         | 6.55          | 273         |
| Biomass   |  | 99                           | 7           | 7           | 0.16          | 7           |
| Solar   |  | 1295                         | 13          | 0           | 0.72          | 30          |
| Renewable/Others (Total)                          |  | 5411                         | 366         | 160         | 7.43          | 309         |
| <b>Total Rajasthan</b>                            |  | <b>14837</b>                 | <b>5082</b> | <b>4057</b> | <b>119.14</b> | <b>4964</b> |
| UP  |  | Anpara TPS (3*210+2*500)     | 1630        | 1693        | 1083          | 32.50       |
|   | Obra TPS (2*50+2*94+5*200)                         | 1194                         | 687         | 559         | 14.90         | 621         |
|   | Paricha TPS (2*110+2*220+2*250)                    | 1160                         | 0           | 0           | 0.00          | 0           |
|   | Panki TPS (2*105)                                  | 210                          | 0           | 0           | 0.00          | 0           |
|   | Harduaqanj TPS (1*60+1*105+2*250)                  | 665                          | 99          | 99          | 2.20          | 92          |
|   | Tanda TPS (NTPC) (4*110)                           | 440                          | 360         | 276         | 7.66          | 319         |
|   | Roza TPS (IPP) (4*300)                             | 1200                         | 194         | 189         | 4.70          | 196         |
|   | Anpara-C (IPP) (2*600)                             | 1200                         | 1080        | 846         | 24.70         | 1029        |
|   | Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)              | 450                          | 0           | 0           | 0.00          | 0           |
|   | Anpara-D(2*500)                                    | 1000                         | 409         | 311         | 9.30          | 388         |
|   | Lalitpur TPS(3*660)                                | 1980                         | 1091        | 734         | 22.90         | 954         |
|   | Bara(2*660)  | 1320                         | 1060        | 719         | 21.90         | 913         |
|   | <b>Thermal (Total)</b>                             | <b>12449</b>                 | <b>6673</b> | <b>4816</b> | <b>140.76</b> | <b>5865</b> |
|   | Vishnuparyag HPS (IPP)(4*110)                      | 440                          | 68          | 68          | 1.60          | 67          |
|   | Alakanada(4*82.5)                                  | 330                          | 76          | 0           | 1.10          | 46          |
|   | Other Hydro  | 527                          | 34          | 4           | 1.40          | 58          |
|   | Cogeneration                                       | 981                          | 850         | 850         | 20.40         | 850         |
|   | Wind Power   | 0                            | 0           | 0           | 0.00          | 0           |
|   | Biomass  | 26                           | 0           | 0           | 0.00          | 0           |
|   | Solar  | 102                          | 0           | 0           | 0.00          | 0           |
|   | <b>Renewable(Total)</b>                            | <b>128</b>                   | <b>0</b>    | <b>0</b>    | <b>0.00</b>   | <b>0</b>    |
|   | <b>Total UP</b>                                    | <b>14855</b>                 | <b>7701</b> | <b>5738</b> | <b>165.26</b> | <b>6886</b> |
|   | Uttarakhand  | Other Hydro                  | 1250        | 365         | 174           | 6.65        |
| Total Gas   |  | 225                          | 300         | 365         | 7.13          | 297         |
| Wind Power  |  | 0                            | 0           | 0           | 0.00          | 0           |
| Biomass   |  | 127                          | 0           | 0           | 0.00          | 0           |
| Solar   |  | 20                           | 0           | 0           | 0.05          | 2           |
| Small Hydro (< 25 MW)                             |  | 180                          | 0           | 0           | 0.00          | 0           |
| <b>Renewable(Total)</b>                           |  | <b>327</b>                   | <b>0</b>    | <b>0</b>    | <b>0.05</b>   | <b>2</b>    |
| <b>Total Uttarakhand</b>                          |  | <b>1802</b>                  | <b>665</b>  | <b>539</b>  | <b>13.83</b>  | <b>576</b>  |
| Delhi   | Rajghat TPS (2*67.5)                               | 135                          | 0           | 0           | 0.00          | 0           |
|   | Delhi Gas Turbine (6x30 + 3x34)                    | 282                          | 75          | 76          | 1.94          | 81          |
|   | Pragati Gas Turbine (2x104+ 1x122)                 | 330                          | 161         | 148         | 3.88          | 162         |
|   | Rithala GPS (3*36)                                 | 95                           | 0           | 0           | 0.00          | 0           |
|   | Bawana GPS (4*216+2*253)                           | 1370                         | 252         | 280         | 6.05          | 252         |
|   | Badarpur TPS (NTPC) (3*95+2*210)                   | 705                          | 0           | 0           | 0.00          | 0           |
|   | <b>Thermal (Total)</b>                             | <b>2917</b>                  | <b>488</b>  | <b>504</b>  | <b>11.87</b>  | <b>495</b>  |
|   | Wind Power   | 0                            | 0           | 0           | 0.00          | 0           |
|   | Biomass  | 16                           | 0           | 0           | 0.00          | 0           |
|   | Solar  | 2                            | 0           | 0           | 0.00          | 0           |
|   | <b>Renewable(Total)</b>                            | <b>18</b>                    | <b>0</b>    | <b>0</b>    | <b>0.00</b>   | <b>0</b>    |
|   | <b>Total Delhi</b>                                 | <b>2935</b>                  | <b>488</b>  | <b>504</b>  | <b>11.87</b>  | <b>495</b>  |
|   | HP   | Baspa HPS (IPP) (3*100)      | 300         | 0           | 0             | 0.98        |
| Malana HPS (IPP) (2*43)                           |  | 86                           | 0           | 0           | 0.22          | 9           |
| Other Hydro                                       |  | 372                          | 70          | 16          | 1.93          | 80          |
| Wind Power  |  | 0                            | 0           | 0           | 0.00          | 0           |
| Biomass   |  | 0                            | 0           | 0           | 0.00          | 0           |
| Solar   |  | 0                            | 0           | 0           | 0.00          | 0           |
| Small Hydro (< 25 MW)                             |  | 486                          | 95          | 82          | 2.11          | 88          |
| <b>Renewable(Total)</b>                           |  | <b>486</b>                   | <b>95</b>   | <b>82</b>   | <b>2.11</b>   | <b>88</b>   |
| <b>Total HP</b>                                   |  | <b>1244</b>                  | <b>165</b>  | <b>98</b>   | <b>5.24</b>   | <b>218</b>  |
| J & K   | Baqilhar HPS (IPP) (3*150+3*150)                   | 900                          | 142         | 142         | 3.41          | 142         |
|   | Other Hydro/IPP(including 98 MW Small Hydro)       | 308                          | 94          | 39          | 1.33          | 55          |
|   | Gas/Diesel/Others                                  | 190                          | 0           | 0           | 0.00          | 0           |
|   | Wind Power   | 0                            | 0           | 0           | 0.00          | 0           |
|   | Biomass  | 0                            | 0           | 0           | 0.00          | 0           |
|   | Solar  | 0                            | 0           | 0           | 0.00          | 0           |
|   | Small Hydro (< 25 MW)Included in Other Hydro Above | 98                           | 0           | 0           | 0.00          | 0           |
|   | <b>Renewable(Total)</b>                            | <b>98</b>                    | <b>0</b>    | <b>0</b>    | <b>0.00</b>   | <b>0</b>    |
|   | <b>Total J &amp; K</b>                             | <b>1398</b>                  | <b>236</b>  | <b>181</b>  | <b>5</b>      | <b>197</b>  |

|  |       |       |       |        |       |
|--|-------|-------|-------|--------|-------|
| Total State Control Area Generation                        | 50078 | 18834 | 14188 | 412.01 | 17167 |
| J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)] |       | 6693  | 6030  | 184.08 | 7670  |
| Total Regional Availability(Gross)                         | 75315 | 42509 | 27653 | 836.97 | 34874 |

**IV. Total Hydro Generation:**

|                          |       |       |      |        |      |
|--------------------------|-------|-------|------|--------|------|
| Regional Entities Hydro  | 12234 | 9054  | 1255 | 76.26  | 3178 |
| State Control Area Hydro | 7163  | 1708  | 1161 | 32.05  | 1634 |
| Total Regional Hydro     | 19397 | 10762 | 2416 | 108.31 | 4812 |

**V. Total Renewable Generation:**

|                              |      |     |     |       |     |
|------------------------------|------|-----|-----|-------|-----|
| Regional Entities Renewable  | 30   | 0   | 0   | 0.12  | 5   |
| State Control Area Renewable | 7356 | 461 | 242 | 9.90  | 412 |
| Total Regional Renewable     | 7386 | 461 | 242 | 10.01 | 417 |

**VI(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]**

| Element                            | Peak(19:00 Hrs)<br>MW | Off Peak(03:00 Hrs)<br>MW | Maximum Interchange (MW) |        | Energy (MU)   |              | Net Energy<br>MU |
|------------------------------------|-----------------------|---------------------------|--------------------------|--------|---------------|--------------|------------------|
|                                    |                       |                           | Import                   | Export | Import        | Export       |                  |
| Vindhychal(HVDC B/B)               | -300                  | -500                      | 0                        | 500    | 0.00          | 8.41         | -8.41            |
| 765 KV Gwalior-Agra (D/C)          | 2240                  | 2008                      | 2751                     | 0      | 58.20         | 0.00         | 58.20            |
| 400 KV Zerda-Kankroli              | -12                   | -80                       | 87                       | 80     | 0.00          | 0.17         | -0.17            |
| 400 KV Zerda-Bhinmal               | 88                    | 51                        | 218                      | 6      | 2.30          | 0.00         | 2.30             |
| 220 KV Auraiya-Malanpur            | -23                   | -20                       | 0                        | 41     | 0.00          | 0.37         | -0.37            |
| 220 KV Badod-Kota/Morak            | 19                    | 28                        | 31                       | 2      | 0.83          | 0.00         | 0.83             |
| Mundra-Mohinderghar(HVDC Bipole)   | 1999                  | 1600                      | 2306                     | 0.00   | 48.02         | 0.00         | 48.02            |
| 400 KV RAPPCC-Sujalpur             | 350                   | 235                       | 420                      | 0      | 7.00          | 0.00         | 7.00             |
| 400 KV Vindhychal-Rihand           | 0                     | 0                         | 0                        | 0      | 0.00          | 0.00         | 0.00             |
| 765 kV Phagi-Gwalior (D/C)         | 1029                  | 1029                      | 1522                     | 0      | 29.62         | 0.00         | 29.62            |
| Champa-Kurushetra HVDC             | 0                     | 0                         | 0                        | 0      | 0.00          | 0.00         | 0.00             |
| <b>Sub Total WR</b>                | <b>5390</b>           | <b>4351</b>               |                          |        | <b>145.95</b> | <b>8.95</b>  | <b>137.01</b>    |
| 400 kV Sasaram - Varanasi          | 197                   | 192                       | 211                      | 0      | 7.15          | 0.00         | 7.15             |
| 400 kV Sasaram - Allahabad         | 49                    | 52                        | 65                       | 0      | 1.14          | 0.00         | 1.14             |
| 400 KV MZP- GKP (D/C)              | 86                    | 217                       | 394                      | 0      | 5.00          | 0.00         | 5.00             |
| 400 KV Patna-Balia(D/C) X 2        | 765                   | 688                       | 947                      | 0      | 18.10         | 0.00         | 18.10            |
| 400 KV B'Sharif-Balia (D/C)        | 2                     | 75                        | 168                      | 0      | 2.04          | 0.00         | 2.04             |
| 765 KV Gaya-Balia                  | 206                   | 223                       | 308                      | 0      | 5.89          | 0.00         | 5.89             |
| 765 KV Gaya-Varanasi (D/C)         | 356                   | 247                       | 622                      | 0      | 9.96          | 0.00         | 9.96             |
| 220 KV Pusauli-Sahupuri            | 170                   | 126                       | 175                      | 0      | 3.24          | 0.00         | 3.24             |
| 132 KV K'nasa-Sahupuri             | 0                     | 0                         | 0                        | 0      | 0.00          | 0.41         | -0.41            |
| 132 KV Son Ngr-Rihand              | -33                   | -30                       | 0                        | -40    | 0.00          | 0.65         | -0.65            |
| 132 KV Garhwa-Rihand               | 0                     | 0                         | 0                        | 0      | 0.00          | 0.00         | 0.00             |
| 765 KV Sasaram - Fatehpur          | -262                  | -134                      | 42                       | 276    | 0.00          | 2.55         | -2.55            |
| 400 KV Barh -GKP (D/C)             | 338                   | 494                       | 528                      | 0      | 9.63          | 0.00         | 9.63             |
| 400 kV B'Sharif - Varanasi (D/C)   | -69                   | 27                        | 123                      | 125    | 0.00          | 0.37         | -0.37            |
| <b>Sub Total ER</b>                | <b>1805</b>           | <b>2177</b>               |                          |        | <b>62.15</b>  | <b>3.98</b>  | <b>58.17</b>     |
| +/- 800 KV Biswanath Chariali-Agra | -502                  | -498                      | 0                        | 502.00 | 0.00          | 11.09        | -11.09           |
| <b>Sub Total NER</b>               | <b>-502</b>           | <b>-498</b>               |                          |        | <b>0.00</b>   | <b>11.09</b> | <b>-11.09</b>    |
| <b>Total IR Exch</b>               | <b>6693</b>           | <b>6030</b>               |                          |        | <b>208.10</b> | <b>24.02</b> | <b>184.08</b>    |

**VI(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]**

| ER    | ISGS/LT Schedule (MU) |       | Bilateral Schedule (MU) |            | Power Exchange Shdl (MU) |            | Wheeling (MU) |            |
|-------|-----------------------|-------|-------------------------|------------|--------------------------|------------|---------------|------------|
|       | Bhutan                | Total | Through ER              | Through WR | Through ER               | Through WR | Through ER    | Through WR |
| 36.88 | 0.41                  | 37.28 | -1.42                   | -6.71      | 9.74                     | 0.00       | 0.00          | 0.00       |

| Total IR Schedule (MU) |                        |        | Total IR Actual (MU)      |            |        | Net IR UI (MU)             |            |       |
|------------------------|------------------------|--------|---------------------------|------------|--------|----------------------------|------------|-------|
| Through ER             | Through WR Incls Mndra | Total  | Through ER(including NER) | Through WR | Total  | Through ER (including NER) | Through WR | Total |
| 45.59                  | 139.47                 | 185.06 | 47.08                     | 137.01     | 184.08 | 1.48                       | -2.46      | -0.98 |

**VI(C). Inter National Exchange with Nepal [Import (+ve)/Export (-ve)] [Linkwise]**

| Element                         | Peak(19:00 Hrs)<br>MW | Off Peak(03:00 Hrs)<br>MW | Maximum Interchange (MW) |        | Energy (MU) |        | Net Energy<br>MU |
|---------------------------------|-----------------------|---------------------------|--------------------------|--------|-------------|--------|------------------|
|                                 |                       |                           | Import                   | Export | Import      | Export |                  |
| 132 KV Tanakpur - Mahendarnagar | -38                   | -36                       | 0                        | 38     | 0           | 1      | -0.86            |

**VII. Frequency Profile <----- % of Time Frequency ----->**

| <49.2 | <49.7 | <49.8 | <49.9 | <50.0 | 49.9-50.05 | 50.05-50.10 | 50.10-50.20 | >50.20 | >50.50 |
|-------|-------|-------|-------|-------|------------|-------------|-------------|--------|--------|
| 0.00  | 0.00  | 0.00  | 3.63  | 47.65 | 80.14      | 12.88       | 3.38        | 0.01   | 0.00   |

| <----- Frequency (Hz) -----> |       |         |      | Average<br>Frequency | Frequency<br>Variation<br>Index | Std. Dev. | Frequency in 15 Min Block |             | Freq Dev<br>Index (%<br>of Time) |
|------------------------------|-------|---------|------|----------------------|---------------------------------|-----------|---------------------------|-------------|----------------------------------|
| Maximum                      |       | Minimum |      |                      |                                 |           | MAX<br>(Hz)               | MIN<br>(Hz) |                                  |
| 50.20                        | 13.01 | 49.82   | 7.14 | 50.00                | 0.030                           | 0.055     | 0.00                      | 0.00        | 19.86                            |

**VIII(A). Voltage profile 400 kV**

| Station           | Voltage Level (kV) | Maximum     |       | Minimum      |       | Voltage (in % of Time) |         |         |         | Volta<br>ge<br>Deviat |
|-------------------|--------------------|-------------|-------|--------------|-------|------------------------|---------|---------|---------|-----------------------|
|                   |                    | Voltage(KV) | Time  | Voltage (KV) | Time  | <380 kV                | <390 kV | >420 kV | >430 kV |                       |
| Rihand            | 400                | 409         | 2:40  | 401          | 8:13  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |
| Gorakhpur         | 400                | 422         | 13:34 | 406          | 19:01 | 0.0                    | 0.0     | 6.2     | 0.0     | 6.2                   |
| Bareilly(PG)400kV | 400                | 420         | 2:54  | 402          | 18:20 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |
| Kanpur            | 400                | 418         | 0:44  | 404          | 8:45  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |
| Dadri             | 400                | 429         | 2:54  | 408          | 18:44 | 0.0                    | 0.0     | 28.5    | 0.0     | 28.5                  |
| Ballabgarh        | 400                | 424         | 0:12  | 406          | 8:45  | 0.0                    | 0.0     | 20.5    | 0.0     | 20.5                  |
| Bawana            | 400                | 428         | 0:11  | 409          | 8:46  | 0.0                    | 0.0     | 31.1    | 0.0     | 31.1                  |
| Bassi             | 400                | 425         | 2:55  | 404          | 8:46  | 0.0                    | 0.0     | 20.6    | 0.0     | 20.6                  |
| Hissar            | 400                | 423         | 0:09  | 406          | 8:45  | 0.0                    | 0.0     | 15.6    | 0.0     | 15.6                  |
| Moga              | 400                | 423         | 2:30  | 407          | 8:49  | 0.0                    | 0.0     | 13.5    | 0.0     | 13.5                  |
| Abdullapur        | 400                | 430         | 0:11  | 412          | 18:44 | 0.0                    | 0.0     | 50.7    | 0.0     | 50.7                  |
| Nalagarh          | 400                | 432         | 13:30 | 416          | 5:56  | 0.0                    | 0.0     | 67.9    | 1.3     | 67.9                  |
| Kishenpur         | 400                | 420         | 13:01 | 403          | 6:57  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |
| Wagoora           | 400                | 405         | 15:11 | 379          | 19:24 | 0.0                    | 59.4    | 0.0     | 0.0     | 0.0                   |
| Amritsar          | 400                | 425         | 2:57  | 407          | 7:16  | 0.0                    | 0.0     | 29.6    | 0.0     | 29.6                  |
| Kashipur          | 400                | 0           | 0:00  | 0            | 0:00  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |
| Hamirpur          | 400                | 423         | 2:59  | 411          | 8:16  | 0.0                    | 0.0     | 27.3    | 0.0     | 27.3                  |
| Rishikesh         | 400                | 0           | 0:00  | 0            | 0:00  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |

**VIII(B). Voltage profile 765 kV**

| Station  | Voltage Level (kV) | Maximum     |       | Minimum      |       | Voltage (in % of Time) |         |         |         | Volta<br>ge<br>Deviat |
|----------|--------------------|-------------|-------|--------------|-------|------------------------|---------|---------|---------|-----------------------|
|          |                    | Voltage(KV) | Time  | Voltage (KV) | Time  | <728 kV                | <742 kV | >800 kV | >820 kV |                       |
| Fatehpur | 765                | 778         | 13:03 | 741          | 8:46  | 0.0                    | 0.1     | 0.0     | 0.0     | 0.0                   |
| Balia    | 765                | 792         | 0:46  | 764          | 18:25 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0                   |

|                 |     |     |       |     |       |      |      |      |     |      |
|-----------------|-----|-----|-------|-----|-------|------|------|------|-----|------|
| Moga            | 765 | 804 | 13:02 | 770 | 8:46  | 0.0  | 0.0  | 2.6  | 0.0 | 2.6  |
| Agra            | 765 | 790 | 13:21 | 756 | 8:46  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  |
| Bhiwani         | 765 | 808 | 0:09  | 777 | 8:44  | 0.0  | 0.0  | 31.1 | 0.0 | 31.1 |
| Unnao           | 765 | 778 | 2:32  | 747 | 18:20 | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  |
| Lucknow         | 765 | 800 | 3:58  | 765 | 18:25 | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  |
| Meerut          | 765 | 808 | 21:10 | 767 | 6:38  | 37.1 | 37.1 | 7.5  | 0.0 | 44.6 |
| Jhatikara       | 765 | 809 | 0:12  | 770 | 6:38  | 0.0  | 0.0  | 10.3 | 0.0 | 10.3 |
| Bareilly 765 kV | 765 | 801 | 2:58  | 767 | 18:23 | 0.0  | 0.0  | 0.1  | 0.0 | 0.1  |
| Anta            | 765 | 798 | 3:00  | 768 | 8:45  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  |
| Phagi           | 765 | 803 | 2:05  | 770 | 8:45  | 0.0  | 0.0  | 8.4  | 0.0 | 8.4  |

Note : '0' in Max / Min Col -> Telemetry Outage

**IX. Reservoir Parameters:**

| Name of Reservoir | Parameters |          | Present Parameters |             | Last Year |             | Last day                   |                           |
|-------------------|------------|----------|--------------------|-------------|-----------|-------------|----------------------------|---------------------------|
|                   | FRL (m)    | MDDL (m) | Level (m)          | Energy (MU) | Level (m) | Energy (MU) | Inflow (m <sup>3</sup> /s) | Usage (m <sup>3</sup> /s) |
| Bhakra            | 513.59     | 445.62   | 482.43             | 519.70      | 495.68    | 926.03      | 155.69                     | 385.39                    |
| Pong              | 426.72     | 384.05   | 405.03             | 344.07      | 405.63    | 361.16      | 80.56                      | 249.07                    |
| Tehri             | 829.79     | 740.04   | 795.55             | 537.67      | 788.50    | 432.44      | 36.91                      | 227.00                    |
| Koteshwar         | 612.50     | 598.50   | 609.51             | 4.32        | 610.40    | 4.69        | 227.00                     | 213.40                    |
| Chamera-I         | 760.00     | 748.75   | 759.14             | 0.00        | 0.00      | 0.00        | 86.83                      | 114.98                    |
| Rihand            | 268.22     | 252.98   | 0.00               | 0.00        | 0.00      | 0.00        | 0.00                       | 0.00                      |
| RPS               | 352.80     | 343.81   | 0.00               | 0.00        | 0.00      | 0.00        | 0.00                       | 0.00                      |
| Jawahar Sagar     | 298.70     | 295.78   | 0.00               | 0.00        | 0.00      | 0.00        | 0.00                       | 0.00                      |
| RSD               | 527.91     | 487.91   | 503.43             | 1.36        | 495.65    | 0.22        | 138.22                     | 80.82                     |

\* NA: Not Available

**X(A). Short-Term Open Access Details:**

| State       | Off- Peak Hours (03:00 Hrs) |          |           | Peak Hours (19:00 Hrs) |          |           | Day Energy (MU) |                 |            |
|-------------|-----------------------------|----------|-----------|------------------------|----------|-----------|-----------------|-----------------|------------|
|             | Bilateral (MW)              | IEX (MW) | PXIL (MW) | Bilateral (MW)         | IEX (MW) | PXIL (MW) | Bilateral (MU)  | IEX / PXIL (MU) | Total (MU) |
| Punjab      | -539                        | 2        | 0         | -612                   | -306     | 0         | -18.28          | -2.72           | -21.00     |
| Delhi       | -118                        | -499     | 0         | -299                   | 229      | 0         | -4.42           | 3.81            | -0.60      |
| Haryana     | -835                        | -143     | 0         | -503                   | 206      | 0         | -14.85          | 2.47            | -12.38     |
| HP          | 436                         | -16      | 0         | 351                    | -99      | 0         | 11.94           | -2.19           | 9.75       |
| J&K         | 614                         | 0        | 0         | 611                    | -15      | 0         | 14.54           | 1.42            | 15.96      |
| CHD         | 0                           | 0        | 0         | 0                      | 0        | 0         | 0.00            | 0.27            | 0.27       |
| Rajasthan   | 33                          | 324      | 0         | -7                     | 274      | 0         | 7.87            | 6.83            | 14.69      |
| UP          | 86                          | 0        | 0         | -123                   | -100     | 0         | -7.91           | -1.80           | -9.71      |
| Uttarakhand | 312                         | 10       | 0         | 0                      | 194      | 0         | 3.74            | 4.53            | 8.28       |
| Total       | -9                          | -322     | 0         | -583                   | 383      | 0         | -7.36           | 12.62           | 5.26       |

**X(B). Short-Term Open Access Details:**

| State       | Bilateral (MW) |         | IEX (MW) |         | PXIL (MW) |         |
|-------------|----------------|---------|----------|---------|-----------|---------|
|             | Maximum        | Minimum | Maximum  | Minimum | Maximum   | Minimum |
| Punjab      | -529           | -1252   | 196      | -765    | 0         | 0       |
| Delhi       | -38            | -310    | 876      | -503    | 0         | 0       |
| Haryana     | -406           | -835    | 251      | -273    | 0         | 0       |
| HP          | 736            | 243     | 62       | -570    | 0         | 0       |
| J&K         | 614            | 596     | 216      | -275    | 0         | 0       |
| CHD         | 0              | 0       | 49       | -20     | 0         | 0       |
| Rajasthan   | 918            | -7      | 661      | 23      | 0         | 0       |
| UP          | 143            | -891    | 0        | -100    | 0         | 0       |
| Uttarakhand | 312            | 0       | 500      | 3       | 0         | 0       |

**XI. System Reliability Indices (Violation of TTC and ATC):**

(i) %age of times N-1 Criteria was violated in the inter - regional corridors

|              |       |
|--------------|-------|
| WR           | 0.00% |
| ER           | 0.00% |
| Simultaneous | 0.00% |

(ii) %age of times ATC violated on the inter-regional corridors

|              |       |
|--------------|-------|
| WR           | 6.60% |
| ER           | 0.00% |
| Simultaneous | 2.08% |

(iii) %age of times Angular Difference on Important Buses was beyond permissible limits(40 deg.)

|                |       |
|----------------|-------|
| Rihand - Dadri | 0.00% |
|----------------|-------|

**XII. Zero Crossing Violations**

| State       | No. of violations(Maximum 8 in a day) | Maximum number of continuous blocks without sign change |
|-------------|---------------------------------------|---|
| Punjab      | 1                                     | 16  |
| Haryana     | 4                                     | 23  |
| Rajasthan   | 1                                     | 15  |
| Delhi       | 3                                     | 30  |
| UP          | 1                                     | 20  |
| Uttarakhand | 2                                     | 21  |
| HP          | 1                                     | 20  |
| J & K       | 3                                     | 26  |
| Chandigarh  | 3                                     | 17  |

**XIII. System Constraints:**

**XIV. Grid Disturbance / Any Other Significant Event:**

**XV. Weather Conditions For 30.01.2017 :**

**XVI. Synchronisation of new generating units :**

**XVII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / /substation :**

1. 6 no. 400/316kV 281 MVA Converter Transformers of HVDC Agra-BNC-3 at Agra first time charged at 2012Hrs of 30.01.17  
0.00  
0  
0  
0.00

**XVIII. Tripping of lines in pooling stations :**

**XIX. Complete generation loss in a generating station :**

Note: Data(regarding drawal,generation, shortage , inter-regional flows and reservoir levels)of the constituents filled in the report are as per last furnished data by the respective state/constituent to NRLDC.

Report for : 30.01.2017

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER