

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पारशिष्ट की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 19.08.2016  
Date of Reporting : 20.08.2016



### I. Regional Availability/Demand:

| Evening Peak (20:00 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 |
| 45928                       | 1124     | 47052       | 0.00       | 40416                   | 289      | 40705       | 50.07      | 1025.9              | 14.16    |

\*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:

| 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       | 80.07                                    | 17.97         |                     | 98.04         | 128.81                   | 128.21                 | -0.60        | 226.25               | 0.00             |
| Haryana      | 29.53                                    | 0.90          |                     | 30.43         | 136.61                   | 134.22                 | -2.39        | 164.65               | 3.16             |
| Rajasthan    | 85.26                                    | 1.83          | 16.70               | 103.78        | 70.53                    | 71.08                  | 0.54         | 174.86               | 0.00             |
| Delhi        | 17.83                                    |               |                     | 17.83         | 84.50                    | 84.91                  | 0.41         | 102.74               | 0.14             |
| UP           | 98.28                                    | 22.06         |                     | 120.33        | 133.13                   | 133.40                 | 0.27         | 253.73               | 1.67             |
| Uttarakhand  |  | 19.84         |                     | 19.98         | 14.83                    | 16.05                  | 1.22         | 36.03                | 0.17             |
| HP           |  | 24.79         |                     | 24.79         | 0.48                     | 1.02                   | 0.54         | 25.80                | 0.12             |
| J & K        |  | 21.97         | 0.00                | 21.97         | 16.91                    | 13.66                  | -3.25        | 35.62                | 8.91             |
| Chandigarh   |  |               |                     | 0.00          | 6.62                     | 6.21                   | -0.42        | 6.21                 | 0.00             |
| <b>Total</b> | <b>310.96</b>                            | <b>109.34</b> | <b>16.70</b>        | <b>437.14</b> | <b>592.43</b>            | <b>588.75</b>          | <b>-3.68</b> | <b>1025.89</b>       | <b>14.16</b>     |

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

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

| State        | Evening Peak (20:00 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       | 9636                        | 0           | 68         | 1387                | 8426                    | 0          | -81         | 1597                | 9946                                  | 17:00         | 0          |
| Haryana      | 7703                        | 73          | -133       | 2097                | 6448                    | 0          | -64         | 2332                | 8397                                  | 22:00         | 50         |
| Rajasthan    | 7313                        | 0           | -120       | 333                 | 7079                    | 0          | 146         | 354                 | 7865                                  | 23:00         | 0          |
| Delhi        | 4569                        | 0           | -64        | 372                 | 3896                    | 0          | -1          | 182                 | 5182                                  | 24:00         | 0          |
| UP           | 11752                       | 520         | 207        | 636                 | 11000                   | 0          | -22         | 1343                | 12688                                 | 23:00         | 0          |
| Uttarakhand  | 1714                        | 75          | 169        | -206                | 1306                    | 0          | -23         | -277                | 1714                                  | 20:00         | 75         |
| HP           | 1112                        | 9           | 121        | -1719               | 881                     | 0          | 21          | -1664               | 1238                                  | 11:00         | 10         |
| J&K          | 1789                        | 447         | -21        | -688                | 1155                    | 289        | -113        | -1082               | 1789                                  | 20:00         | 447        |
| Chandigarh   | 281                         | 0           | 10         | -40                 | 224                     | 0          | -24         | -25                 | 312                                   | 16:00         | 0          |
| <b>Total</b> | <b>45928</b>                | <b>1124</b> | <b>238</b> | <b>2172</b>         | <b>40416</b>            | <b>289</b> | <b>-161</b> | <b>2761</b>         | <b>47547</b>                          | <b>23:00</b>  | <b>342</b> |

\$ STOA figures are at sellers boundary & PX figures are at regional boundary. # figures may not be at simultaneous hour.

Diversity is: 1.03

### III. Regional Entities :

| Station/<br>Constituent                 | Inst. Capacity | Declared     | Peak MW      | Off Peak MW  | Energy        | Average      | Schedule      | UI           |
|---|----------------|--------------|--------------|--------------|---------------|--------------|---------------|--------------|
|   | (Effective) MW | Capacity(MW) | (Gross)      | (Gross)      | (Net MU)      | Sentout(MW)  | Net MU        | Net MU       |
| <b>A. NTPC</b>                          |                |              |              |              |               |              |               |              |
| Singrauli STPS (5*200+2*500)            | 2000           | 1446         | 1336         | 1757         | 32.96         | 1373         | 31.63         | 1.33         |
| Rihand I STPS (2*500)                   | 1000           | 936          | 938          | 778          | 19.21         | 800          | 19.35         | -0.14        |
| Rihand II STPS (2*500)                  | 1000           | 966          | 1008         | 780          | 19.13         | 797          | 18.22         | 0.92         |
| Rihand III STPS (2*500)                 | 1000           | 964          | 970          | 806          | 19.32         | 805          | 18.55         | 0.77         |
| Dadri I STPS (4*210)                    | 840            | 805          | 208          | 164          | 4.08          | 170          | 4.26          | -0.18        |
| Dadri II STPS (2*490)                   | 980            | 960          | 973          | 688          | 16.95         | 706          | 17.51         | -0.56        |
| Unchahar I TPS (2*210)                  | 420            | 400          | 420          | 295          | 7.14          | 297          | 7.23          | -0.09        |
| Unchahar II TPS (2*210)                 | 420            | 400          | 417          | 280          | 6.90          | 288          | 7.11          | -0.21        |
| Unchahar III TPS (1*210)                | 210            | 200          | 214          | 133          | 3.44          | 143          | 3.58          | -0.14        |
| ISTPP (Jhajjar) (3*500)                 | 1500           | 1425         | 816          | 608          | 14.83         | 618          | 15.13         | -0.30        |
| Dadri GPS (4*130.19+2*154.51)           | 830            | 593          | 180          | 168          | 4.00          | 167          | 4.16          | -0.16        |
| Anta GPS (3*88.71+1*153.2)              | 419            | 344          | 226          | 274          | 5.99          | 250          | 5.91          | 0.08         |
| Auraiya GPS (4*111.19+2*109.30)         | 663            | 634          | 143          | 147          | 3.39          | 141          | 3.37          | 0.02         |
| Dadri Solar(5)                          | 5              | 1            | 0            | 0            | 0.02          | 1            | 0.02          | -0.01        |
| Unchahar Solar(10)                      | 10             | 1            | 0            | 0            | 0.02          | 1            | 0.03          | -0.01        |
| Singrauli Solar(15)                     | 15             | 1            | 0            | 0            | 0.03          | 1            | 0.02          | 0.01         |
| KHEP(4*200)                             | 800            | 855          | 853          | 853          | 20.59         | 858          | 20.52         | 0.07         |
| <b>Sub Total (A)</b>                    | <b>12112</b>   | <b>10929</b> | <b>8702</b>  | <b>7731</b>  | <b>178</b>    | <b>7417</b>  | <b>177</b>    | <b>1.40</b>  |
| <b>B. NPC</b>                           |                |              |              |              |               |              |               |              |
| NAPS (2*220)                            | 440            | 386          | 424          | 427          | 9.17          | 382          | 9.26          | -0.10        |
| RAPS- B (2*220)                         | 440            | 179          | 205          | 204          | 4.29          | 179          | 4.30          | -0.01        |
| RAPS- C (2*220)                         | 440            | 405          | 436          | 436          | 9.35          | 389          | 9.72          | -0.37        |
| <b>Sub Total (B)</b>                    | <b>1320</b>    | <b>970</b>   | <b>1065</b>  | <b>1067</b>  | <b>22.80</b>  | <b>950</b>   | <b>23.28</b>  | <b>-0.48</b> |
| <b>C. NHPC</b>                          |                |              |              |              |               |              |               |              |
| Chamera I HPS (3*180)                   | 540            | 540          | 548          | 539          | 13.09         | 545          | 12.96         | 0.13         |
| Chamera II HPS (3*100)                  | 300            | 301          | 309          | 303          | 7.28          | 303          | 7.22          | 0.06         |
| Chamera III HPS (3*77)                  | 231            | 229          | 231          | 232          | 5.52          | 230          | 5.50          | 0.02         |
| Bairasuli HPS(3*60)                     | 180            | 179          | 183          | 123          | 2.80          | 117          | 2.72          | 0.08         |
| Salal-HPS (6*115)                       | 690            | 662          | 670          | 670          | 16.16         | 673          | 15.89         | 0.28         |
| Tanakpur-HPS (3*31.4)                   | 94             | 88           | 92           | 94           | 2.22          | 93           | 2.11          | 0.11         |
| Uri-I HPS (4*120)                       | 480            | 404          | 426          | 360          | 9.95          | 415          | 9.69          | 0.26         |
| Uri-II HPS (4*60)                       | 240            | 226          | 242          | 241          | 5.57          | 232          | 5.42          | 0.15         |
| Dhauliganga-HPS (4*70)                  | 280            | 280          | 281          | 279          | 6.72          | 280          | 6.72          | 0.00         |
| Dulhasti-HPS (3*130)                    | 390            | 383          | 394          | 391          | 9.25          | 385          | 9.18          | 0.07         |
| Sewa-II HPS (3*40)                      | 120            | 119          | 126          | 122          | 2.18          | 91           | 2.10          | 0.08         |
| Parbati 3 (4*130)                       | 520            | 444          | 265          | 0            | 4.35          | 181          | 4.36          | 0.00         |
| <b>Sub Total (C)</b>                    | <b>4065</b>    | <b>3854</b>  | <b>3767</b>  | <b>3353</b>  | <b>85</b>     | <b>3545</b>  | <b>84</b>     | <b>1.23</b>  |
| <b>D. SJVNL</b>                         |                |              |              |              |               |              |               |              |
| NJPC (6*250)                            | 1500           | 1605         | 1610         | 1613         | 38.52         | 1605         | 38.52         | 0.00         |
| Rampur HEP (6*68.67)                    | 412            | 442          | 447          | 443          | 10.68         | 445          | 10.61         | 0.07         |
| <b>Sub Total (D)</b>                    | <b>1912</b>    | <b>2047</b>  | <b>2057</b>  | <b>2056</b>  | <b>49.20</b>  | <b>2050</b>  | <b>49.13</b>  | <b>0.08</b>  |
| <b>E. THDC</b>                          |                |              |              |              |               |              |               |              |
| Tehri HPS (4*250)                       | 1000           | 1041         | 1029         | 1035         | 24.98         | 1041         | 24.99         | -0.01        |
| Koteshwar HPS (4*100)                   | 400            | 358          | 403          | 365          | 8.76          | 365          | 8.50          | 0.26         |
| <b>Sub Total (E)</b>                    | <b>1400</b>    | <b>1399</b>  | <b>1432</b>  | <b>1400</b>  | <b>33.74</b>  | <b>1406</b>  | <b>33.49</b>  | <b>0.25</b>  |
| <b>F. BBMB</b>                          |                |              |              |              |               |              |               |              |
| Bhakra HPS (2*108+3*126+5*157)          | 1379           | 870          | 1021         | 667          | 20.58         | 857          | 20.89         | -0.31        |
| Dehar HPS (6*165)                       | 990            | 608          | 825          | 570          | 14.79         | 616          | 14.58         | 0.21         |
| Pong HPS (6*66)                         | 396            | 295          | 396          | 198          | 6.98          | 291          | 7.08          | -0.09        |
| <b>Sub Total (F)</b>                    | <b>2765</b>    | <b>1773</b>  | <b>2242</b>  | <b>1435</b>  | <b>42.35</b>  | <b>1765</b>  | <b>42.55</b>  | <b>-0.20</b> |
| <b>G. IPP(s)/JV(s)</b>                  |                |              |              |              |               |              |               |              |
| ALLAIN DUHANGAN HPS(IPP) (2*96)         | 192            | 0            | 200          | 185          | 4.36          | 182          | 4.13          | 0.23         |
| KARCHAM WANGTOO HPS(IPP) (4*250)        | 1000           | 0            | 1100         | 1100         | 26.38         | 1099         | 26.08         | 0.30         |
| Malana Stg-II HPS (2*50)                | 100            | 0            | 111          | 90           | 0.00          | 0            | 2.16          | -2.16        |
| Shree Cement TPS (2*150)                | 300            | 0            | 280          | 215          | 5.84          | 243          | 5.72          | 0.12         |
| Budhil HPS(IPP) (2*35)                  | 70             | 0            | 75           | 74           | 1.77          | 74           | 1.75          | 0.01         |
| <b>Sub Total (G)</b>                    | <b>1662</b>    | <b>0</b>     | <b>1766</b>  | <b>1664</b>  | <b>38.35</b>  | <b>1598</b>  | <b>39.84</b>  | <b>-1.49</b> |
| <b>H. Total Regional Entities (A-G)</b> | <b>25237</b>   | <b>20972</b> | <b>21031</b> | <b>18706</b> | <b>449.52</b> | <b>18730</b> | <b>448.74</b> | <b>0.78</b>  |

| I. State Entities   | Station   | Effective Installed Capacity (MW) | Peak MW      | Off Peak MW  | Energy(MU)     | Average(Sent out MW) |
|---|---|-----------------------------------|--------------|--------------|----------------|----------------------|
| Punjab  | Guru Gobind Singh TPS (Ropar) (6*210)             | 1260                              | 420          | 320          | 7.91           | 330                  |
|   | Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)        | 460                               | 220          | 170          | 3.84           | 160                  |
|   | Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)     | 920                               | 678          | 537          | 13.18          | 549                  |
|   | Goindwal(GVK) (2*270)                             | 540                               | 0            | 246          | 2.42           | 101                  |
|   | Rajpura (2*700)                                   | 1400                              | 1320         | 920          | 29.05          | 1211                 |
|   | Talwandi Saboo (3*660)                            | 1980                              | 1228         | 616          | 23.67          | 986                  |
|   | <b>Thermal (Total)</b>                            | <b>6560</b>                       | <b>3866</b>  | <b>2809</b>  | <b>80.07</b>   | <b>3336</b>          |
|   | Total Hydro                                       | 1000                              | 787          | 791          | 17.97          | 749                  |
|   | <b>Total Punjab</b>                               | <b>7560</b>                       | <b>4653</b>  | <b>3600</b>  | <b>98.04</b>   | <b>4085</b>          |
|   | Haryana   | Panipat TPS (2*210+2*250)         | 920          | 0            | 0              | 0.00                 |
| DCRTPP (Yamuna nagar) (2*300)                                     |   | 600                               | 239          | 241          | 5.71           | 238                  |
| Faridabad GPS (NTPC)(2*137.75+1*156)                              |   | 432                               | 170          | 168          | 4.03           | 168                  |
| RGTPP (khedar) (IPP) (2*600)                                      |   | 1200                              | 0            | 0            | 0.00           | 0                    |
| Magnum Diesel (IPP)   |   | 25                                | 0            | 0            | 0.00           | 0                    |
| Jhajjar(CLP) (2*660)  |   | 1320                              | 759          | 743          | 19.79          | 825                  |
| <b>Thermal (Total)</b>  |   | <b>4497</b>                       | <b>1168</b>  | <b>1152</b>  | <b>29.53</b>   | <b>1230</b>          |
| Total Hydro   |   | 62                                | 42           | 37           | 0.90           | 38                   |
| <b>Total Haryana</b>  |   | <b>4559</b>                       | <b>1210</b>  | <b>1189</b>  | <b>30.43</b>   | <b>1268</b>          |
| Rajasthan   |   | kota TPS (2*110+2*195+3*210)      | 1240         | 351          | 310            | 8.14                 |
|   | suratgarh TPS (6*250)                             | 1500                              | 0            | 0            | 0.00           | 0                    |
|   | Chabra TPS (4*250)                                | 1000                              | 565          | 508          | 12.12          | 505                  |
|   | 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                               | 149          | 149          | 3.68           | 153                  |
|   | RAPS A (NPC) (1*100+1*200)                        | 300                               | 132          | 132          | 3.34           | 139                  |
|   | Barsingar (NLC) (2*125)                           | 250                               | 188          | 184          | 4.65           | 194                  |
|   | Giral LTPS (2*125)                                | 250                               | 0            | 0            | 0.00           | 0                    |
|   | Rajwest LTPS (IPP) (8*135)                        | 1080                              | 714          | 491          | 17.08          | 712                  |
|   | VS LIGNITE LTPS (IPP) (1*135)                     | 135                               | 0            | 0            | 0.00           | 0                    |
|   | Kalisindh Thermal(2*600)                          | 1200                              | 508          | 407          | 10.49          | 437                  |
|   | Kawai(Adani) (2*660)                              | 1320                              | 1071         | 872          | 25.78          | 1074                 |
|   | <b>Thermal (Total)</b>                            | <b>8876</b>                       | <b>3678</b>  | <b>3053</b>  | <b>85</b>      | <b>3552</b>          |
|   | Total Hydro                                       | 550                               | 50           | 50           | 1.83           | 76                   |
|   | Wind power  | 3214                              | 508          | 788          | 16.08          | 670                  |
|   | Biomass   | 99                                | 26           | 26           | 0.61           | 26                   |
|   | Solar   | 730                               | 0            | 0            | 0.00           | 0                    |
|   | Renewable/Others (Total)                          | 4043                              | 534          | 814          | 16.70          | 696                  |
|   | <b>Total Rajasthan</b>                            | <b>13469</b>                      | <b>4262</b>  | <b>3917</b>  | <b>103.78</b>  | <b>4324</b>          |
|   | UP  | Anpara TPS (3*210+2*500)          | 1630         | 887          | 918            | 21.17                |
| Obra TPS (2*50+2*94+5*200)  |   | 1194                              | 230          | 240          | 5.55           | 231                  |
| Paricha TPS (2*110+2*220+2*250)                                   |   | 1160                              | 576          | 581          | 14.15          | 590                  |
| Panki TPS (2*105)   |   | 210                               | 135          | 131          | 3.18           | 133                  |
| Harduaganj TPS (1*60+1*105+2*250)                                 |   | 665                               | 312          | 320          | 7.75           | 323                  |
| Tanda TPS (NTPC) (4*110)  |   | 440                               | 390          | 275          | 7.24           | 302                  |
| Roza TPS (IPP) (4*300)  |   | 1200                              | 959          | 756          | 19.91          | 829                  |
| Anpara-C (IPP) (2*600)  |   | 1200                              | 648          | 320          | 14.13          | 589                  |
| Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)                             |   | 450                               | 171          | 170          | 4.01           | 167                  |
| Anpara-D(2*500)   |   | 1000                              | 0            | 0            | 0.00           | 0                    |
| Lalitpur TPS(3*660)   |   | 1980                              | 0            | 0            | 0.00           | 0                    |
| Bara(2*660)   |   | 1320                              | 0            | 0            | 0.00           | 0                    |
| <b>Thermal (Total)</b>  |   | <b>12449</b>                      | <b>4308</b>  | <b>3711</b>  | <b>97</b>      | <b>4045</b>          |
| Vishnuparyag HPS (IPP)(4*110)                                     |   | 440                               | 435          | 435          | 9.37           | 390                  |
| Alaknanda(4*82.5)   |   | 330                               | 330          | 253          | 6.60           | 275                  |
| Other Hydro   |   | 527                               | 279          | 301          | 6.09           | 254                  |
| Cogeneration  |   | 981                               | 50           | 50           | 1.20           | 50                   |
| <b>Total UP</b>   |   | <b>14727</b>                      | <b>5402</b>  | <b>4750</b>  | <b>120</b>     | <b>5014</b>          |
| Uttarakhand   | Total Hydro                                       | 1398                              | 865          | 807          | 19.84          | 827                  |
|   | Total Gas   | 225                               | 20           | 100          | 0.14           | 6                    |
|   | <b>Total Uttarakhand</b>                          | <b>1623</b>                       | <b>885</b>   | <b>907</b>   | <b>20</b>      | <b>833</b>           |
| Delhi   | Rajghat TPS (2*67.5)                              | 135                               | 0            | 0            | 0.00           | 0                    |
|   | Delhi Gas Turbine (6x30 + 3x34)                   | 282                               | 73           | 75           | 1.15           | 48                   |
|   | Pragati Gas Turbine (2x104+ 1x122)                | 330                               | 149          | 150          | 3.61           | 151                  |
|   | Rithala GPS (3*36)                                | 95                                | 0            | 0            | 0.00           | 0                    |
|   | Bawana GPS (4*216+2*253)                          | 1370                              | 250          | 250          | 6.07           | 253                  |
|   | Badarpur TPS (NTPC) (3*95+2*210)                  | 705                               | 330          | 330          | 7.01           | 292                  |
|   | <b>Thermal (Total)</b>                            | <b>2917</b>                       | <b>802</b>   | <b>805</b>   | <b>17.83</b>   | <b>743</b>           |
|   | <b>Total Delhi</b>                                | <b>2917</b>                       | <b>802</b>   | <b>805</b>   | <b>17.83</b>   | <b>743</b>           |
| HP  | Baspa HPS (IPP) (3*100)                           | 300                               | 330          | 300          | 7.75           | 323                  |
|   | Malana HPS (IPP) (2*43)                           | 86                                | 96           | 84           | 2.05           | 85                   |
|   | Other Hydro                                       | 878                               | 603          | 659          | 14.99          | 625                  |
|   | <b>Total HP</b>                                   | <b>1264</b>                       | <b>1029</b>  | <b>1043</b>  | <b>24.79</b>   | <b>1033</b>          |
| J & K   | Baglihar HPS (IPP) (3*150+2*150)                  | 750                               | 733          | 733          | 17.59          | 733                  |
|   | Other Hydro/IPP                                   | 560                               | 181          | 185          | 4.38           | 182                  |
|   | Gas/Diesel/Others                                 | 190                               | 0            | 0            | 0.00           | 0                    |
|   | <b>Total J &amp; K</b>                            | <b>1500</b>                       | <b>914</b>   | <b>918</b>   | <b>21.97</b>   | <b>915</b>           |
| <b>Total State Control Area Generation</b>                        |   | <b>47619</b>                      | <b>19157</b> | <b>17129</b> | <b>437.14</b>  | <b>18214</b>         |
| <b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b> |   |                                   | <b>7775</b>  | <b>5879</b>  | <b>154.54</b>  | <b>6439</b>          |
| <b>Total Regional Availability(Gross)</b>                         |   | <b>72856</b>                      | <b>47962</b> | <b>41713</b> | <b>1041.21</b> | <b>43384</b>         |
| <b>IV. Total Hydro Generation:</b>                                |   |                                   |              |              |                |                      |
| <b>Regional Entities Hydro</b>                                    |   | <b>12234</b>                      | <b>11762</b> | <b>10472</b> | <b>261.70</b>  | <b>10904</b>         |
| <b>State Control Area Hydro</b>                                   |   | <b>7106</b>                       | <b>4751</b>  | <b>4735</b>  | <b>109.49</b>  | <b>4562</b>          |
| <b>Total Regional Hydro</b>                                       |   | <b>19340</b>                      | <b>16513</b> | <b>15207</b> | <b>371.19</b>  | <b>15466</b>         |

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

| Element                            | Peak(20:00 Hrs) | Off Peak(03:00 Hrs) | Maximum Interchange (MW) |        | Energy (MU)   |              | Net Energy MU |
|------------------------------------|-----------------|---------------------|--------------------------|--------|---------------|--------------|---------------|
|                                    | MW              | MW                  | Import                   | Export | Import        | Export       |               |
| Vindhychal(HVDC B/B)               | -500            | -500                | 0                        | 500    | 0.00          | 12.21        | -12.21        |
| 765 KV Gwalior-Agra (D/C)          | 2344            | 1519                | 2390                     | 0      | 41.46         | 0.00         | 41.46         |
| 400 KV Zerda-Kankroli              | 174             | 51                  | 209                      | 54     | 1.95          | 0.00         | 1.95          |
| 400 KV Zerda-Bhinmal               | 185             | 91                  | 284                      | 36     | 3.11          | 0.00         | 3.11          |
| 220 KV Auraiya-Malanpur            | 38              | -23                 | 38                       | 0      | 0.15          | 0.00         | 0.15          |
| 220 KV Badod-Kota/Morak            | 240             | 114                 | 253                      | 0      | 3.81          | 0.00         | 3.81          |
| Mundra-Mohindergarh(HVDC Bipole)   | 1497            | 1498                | 1804                     | 0.00   | 34.95         | 0.00         | 34.95         |
| 400 KV Vindhychal - Rihand         | 0               | 0                   | 0                        | 0      | 0.00          | 0.00         | 0.00          |
| 765 kV Phagi-Gwalior (D/C)         | 909             | 717                 | 948                      | 0      | 17.91         | 0.00         | 17.91         |
| <b>Sub Total WR</b>                | <b>4887</b>     | <b>3467</b>         |                          |        | <b>103.35</b> | <b>12.21</b> | <b>91.14</b>  |
| Pusauli Bypass/HVDC                | -208            | -241                | 0                        | 311    | 0.00          | 5.74         | -5.74         |
| 400 KV MZP- GKP (D/C)              | 206             | 160                 | 398                      | 0      | 5.82          | 0.00         | 5.82          |
| 400 KV Patna-Balia(D/C) X 2        | 453             | 331                 | 566                      | 0      | 10.82         | 0.00         | 10.82         |
| 400 KV B'Sharif-Balia (D/C)        | 135             | 89                  | 208                      | 0      | 3.34          | 0.00         | 3.34          |
| 765 KV Gaya-Balia                  | 190             | 243                 | 324                      | 0      | 2.93          | 0.00         | 2.93          |
| 765 KV Gaya-Varanasi (D/C)         | 468             | 299                 | 548                      | 0      | 8.82          | 0.00         | 8.82          |
| 220 KV Pusauli-Sahupuri            | 148             | 83                  | 193                      | 0      | 2.78          | 0.00         | 2.78          |
| 132 KV K'nasa-Sahupuri             | -20             | 0                   | 0                        | 24     | 0.00          | 0.27         | -0.27         |
| 132 KV Son Ngr-Rihand              | -14             | -10                 | 0                        | 27     | 0.00          | 0.32         | -0.32         |
| 132 KV Garhwa-Rihand               | 0               | 0                   | 0                        | 0      | 0.00          | 0.00         | 0.00          |
| 765 KV Sasaram - Fatehpur          | 11              | 41                  | 118                      | 6      | 1.55          | 0.00         | 1.55          |
| 400 KV Barh -GKP (D/C)             | 434             | 410                 | 468                      | 0      | 9.34          | 0.00         | 9.34          |
| 400 kV B'Sharif - Varanasi (D/C)   | 85              | 7                   | 120                      | 21     | 1.48          | 0.00         | 1.48          |
| <b>Sub Total ER</b>                | <b>1888</b>     | <b>1412</b>         |                          |        | <b>46.87</b>  | <b>6.33</b>  | <b>40.54</b>  |
| +/- 800 KV BiswanathCharialli-Agra | 1000            | 1000                | 1000                     | 0.00   | 22.87         | 0.00         | 22.87         |
| <b>Sub Total NER</b>               | <b>1000</b>     | <b>1000</b>         |                          |        | <b>22.87</b>  | <b>0.00</b>  | <b>22.87</b>  |
| <b>Total IR Exch</b>               | <b>7775</b>     | <b>5879</b>         |                          |        | <b>173.08</b> | <b>18.54</b> | <b>154.54</b> |

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

| ISGS/LT Schedule (MU) |        |       | Bilateral Schedule (MU) |            | Power Exchange Shdl (MU) |            | Wheeling (MU) |            |
|-----------------------|--------|-------|-------------------------|------------|--------------------------|------------|---------------|------------|
| ER                    | Bhutan | Total | Through ER              | Through WR | Through ER               | Through WR | Through ER    | Through WR |
| 31.18                 | 3.69   | 34.87 | 42.29                   | 11.66      | -8.72                    | -3.58      | 0.00          | 0.00       |

| Total IR Schedule (MU) |                         |        | Total IR Actual (MU)      |            |        | Net IR UI (MU)             |            |       |
|------------------------|-------------------------|--------|---------------------------|------------|--------|----------------------------|------------|-------|
| Through ER             | Through WR Inclds Mndra | Total  | Through ER(including NER) | Through WR | Total  | Through ER (including NER) | Through WR | Total |
| 68.43                  | 95.32                   | 163.76 | 63.41                     | 91.14      | 154.54 | -5.03                      | -4.19      | -9.21 |

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

| Element                         | Peak(20:00 Hrs) | Off Peak(03:00 Hrs) | Maximum Interchange (MW) |        | Energy (MU) |        | Net Energy MU |
|---------------------------------|-----------------|---------------------|--------------------------|--------|-------------|--------|---------------|
|                                 | MW              | MW                  | Import                   | Export | Import      | Export |               |
| 132 KV Tanakpur - Mahendarnagar | -23             | -11                 | 0                        | 31     | 0           | 1      | -0.56         |

VI. 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  | 0.15  | 2.12  | 16.48 | 66.83 | 74.34      | 7.70        | 1.52        | 0.00   | 0.00   |

| <----- Frequency (Hz) -----> |       |         |       | Average Frequency | Frequency Variation | Std. Dev. | Frequency in 15 Min Block |       | Freq Dev Index (% of Time) |
|------------------------------|-------|---------|-------|-------------------|---------------------|-----------|---------------------------|-------|----------------------------|
| Maximum                      |       | Minimum |       |                   |                     |           | MAX                       | MIN   |                            |
| Freq                         | Time  | Freq    | Time  | Hz                | Index               | (Hz)      | (Hz)                      |       |                            |
| 50.15                        | 13.04 | 49.68   | 11.11 | 49.97             | 0.060               | 50.16     | 0.00                      | 25.66 |                            |

VII. Voltage profile 400 kV

| Station           | Voltage Level (kV) | Maximum     |      | Minimum      |       | Voltage (in % of Time) |         |         |         | Voltage Deviat |
|-------------------|--------------------|-------------|------|--------------|-------|------------------------|---------|---------|---------|----------------|
|                   |                    | Voltage(KV) | Time | Voltage (KV) | Time  | <380 kV                | <390 kV | >420 kV | >430 kV |                |
| Rihand            | 400                | 410         | 0:00 | 406          | 11:19 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Gorakhpur         | 400                | 425         | 6:02 | 406          | 22:11 | 0.0                    | 0.0     | 5.9     | 0.0     | 5.9            |
| Bareilly(PG)400kV | 400                | 420         | 6:03 | 399          | 11:16 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Kanpur            | 400                | 423         | 6:01 | 409          | 0:16  | 0.0                    | 0.0     | 3.8     | 0.0     | 3.8            |
| Dadri             | 400                | 416         | 6:02 | 402          | 20:29 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Ballabgarh        | 400                | 424         | 6:01 | 408          | 20:23 | 0.0                    | 0.0     | 8.0     | 0.0     | 8.0            |
| Bawana            | 400                | 419         | 6:02 | 404          | 20:31 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Bassi             | 400                | 422         | 6:00 | 403          | 22:09 | 0.0                    | 0.0     | 1.1     | 0.0     | 1.1            |
| Hissar            | 400                | 414         | 6:03 | 398          | 19:39 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Moga              | 400                | 413         | 6:02 | 399          | 20:28 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Abdullapur        | 400                | 412         | 6:01 | 398          | 19:38 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Nalagarh          | 400                | 417         | 6:09 | 406          | 19:45 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Kishenpur         | 400                | 412         | 3:26 | 402          | 19:48 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Wagoora           | 400                | 408         | 3:55 | 389          | 20:07 | 0.0                    | 0.1     | 0.0     | 0.0     | 0.0            |
| Amritsar          | 400                | 418         | 6:00 | 404          | 20:16 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Kashipur          | 400                | 418         | 0:00 | 418          | 0:00  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Hamirpur          | 400                | 418         | 6:02 | 405          | 20:22 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Rishikesh         | 400                | 413         | 6:03 | 400          | 12:19 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |

VIII. Voltage profile 765 kV

| Station         | Voltage Level (kV) | Maximum     |      | Minimum      |       | Voltage (in % of Time) |         |         |         | Voltage Deviat |
|-----------------|--------------------|-------------|------|--------------|-------|------------------------|---------|---------|---------|----------------|
|                 |                    | Voltage(KV) | Time | Voltage (KV) | Time  | <728 kV                | <742 kV | >800 kV | >820 kV |                |
| Fatehpur        | 765                | 791         | 6:03 | 760          | 20:31 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Balia           | 765                | 801         | 6:02 | 770          | 22:07 | 0.0                    | 0.0     | 0.3     | 0.0     | 0.3            |
| Moga            | 765                | 802         | 6:01 | 773          | 20:23 | 0.0                    | 0.0     | 0.7     | 0.0     | 0.7            |
| Agra            | 765                | 797         | 6:03 | 758          | 20:30 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Bhiwani         | 765                | 0           | 0:00 | 0            | 0:00  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Unnao           | 765                | 781         | 6:05 | 755          | 20:25 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Lucknow         | 765                | 800         | 6:05 | 769          | 22:10 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Meerut          | 765                | 813         | 6:03 | 779          | 20:30 | 0.0                    | 0.0     | 25.2    | 0.0     | 25.2           |
| Jhatikara       | 765                | 801         | 6:03 | 769          | 20:30 | 0.0                    | 0.0     | 0.2     | 0.0     | 0.2            |
| Bareilly 765 kV | 765                | 0           | 0:00 | 0            | 0:00  | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |
| Anta            | 765                | 0           | 0:00 | 0            | 0:00  | 100.0                  | 100.0   | 0.0     | 0.0     | 100.0          |
| Phagi           | 765                | 795         | 6:00 | 767          | 20:20 | 0.0                    | 0.0     | 0.0     | 0.0     | 0.0            |

**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   | 497.54             | 994.96      | 509.29    | 1515.08     | 1125.74                    | 641.97                    |
| Pong              | 426.72     | 384.05   | 414.94             | 668.52      | 421.86    | 975.89      | 676.01                     | 430.50                    |
| Tehri             | 829.79     | 740.04   | 811.45             | 822.28      | 814.35    | 882.26      | 574.16                     | 578.00                    |
| Koteshwar         | 612.50     | 598.50   | 610.40             | 4.75        | 610.21    | 4.95        | 578.00                     | 577.80                    |
| Chamera-I         | 760.00     | 748.75   | 757.28             | 0.00        | 0.00      | 0.00        | 371.27                     | 358.07                    |
| 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   | 518.60             | 6.59        | 523.10    | 14.26       | 422.85                     | 201.88                    |

\* NA: Not Available

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

| State       | Off- Peak Hours (03:00 Hrs) |          |           | Peak Hours (20:00 Hrs) |          |           | Day Energy (MU) |                 |            |
|-------------|-----------------------------|----------|-----------|------------------------|----------|-----------|-----------------|-----------------|------------|
|             | Bilateral (MW)              | IEX (MW) | PXIL (MW) | Bilateral (MW)         | IEX (MW) | PXIL (MW) | Bilateral (MU)  | IEX / PXIL (MU) | Total (MU) |
| Punjab      | 1532                        | 65       | 0         | 1319                   | 68       | 0         | 38.67           | 3.45            | 42.12      |
| Delhi       | 482                         | -301     | 0         | 690                    | -318     | 0         | 17.05           | -7.54           | 9.51       |
| Haryana     | 2038                        | 281      | 13        | 1795                   | 289      | 13        | 44.39           | 4.10            | 48.49      |
| HP          | -1379                       | -284     | 0         | -1384                  | -335     | 0         | -30.42          | -7.70           | -38.13     |
| J&K         | -583                        | -499     | 0         | -674                   | -15      | 0         | -15.90          | -3.94           | -19.83     |
| CHD         | 0                           | -25      | 0         | 0                      | -40      | 0         | 0.36            | -0.57           | -0.21      |
| Rajasthan   | -129                        | 482      | 0         | -129                   | 461      | 0         | -3.09           | 10.93           | 7.84       |
| UP          | 951                         | 393      | 0         | 636                    | 0        | 0         | 16.65           | 3.28            | 19.93      |
| Uttarakhand | -117                        | -160     | 0         | -117                   | -89      | 0         | -2.82           | -0.87           | -3.68      |
| Total       | 2795                        | -47      | 13        | 2137                   | 22       | 13        | 64.90           | 1.14            | 66.05      |

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

| State       | Bilateral (MW) |         | IEX (MW) |         | PXIL (MW) |         |
|-------------|----------------|---------|----------|---------|-----------|---------|
|             | Maximum        | Minimum | Maximum  | Minimum | Maximum   | Minimum |
| Punjab      | 1957           | 1071    | 686      | 9       | 0         | 0       |
| Delhi       | 909            | 482     | -48      | -719    | 0         | 0       |
| Haryana     | 2068           | 1663    | 319      | -634    | 13        | 13      |
| HP          | -1101          | -1384   | -273     | -419    | 0         | 0       |
| J&K         | -583           | -769    | 0        | -499    | 0         | 0       |
| CHD         | 44             | 0       | 0        | -45     | 0         | 0       |
| Rajasthan   | -129           | -129    | 497      | -47     | 0         | 0       |
| UP          | 962            | 546     | 589      | 0       | 0         | 0       |
| Uttarakhand | -117           | -117    | 74       | -171    | 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           | 0.00% |
| ER           | 0.00% |
| Simultaneous | 5.56% |

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

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

**XII. System Constraints:**

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

**XIV. Weather Conditions For 19.08.2016 :**

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

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

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

**XVIII. 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.