

पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पॉवरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 20.08.2016  
Date of Reporting : 21.08.2016



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 |
| 44114                       | 1303     | 45417       | 49.98      | 43927                   | 286      | 44213       | 50.06      | 1035.1              | 16.79    |

\* 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       | 72.34                                    | 16.59         |                     | 88.93         | 121.13                   | 119.75                 | -1.38        | 208.68               | 0.00             |
| Haryana      | 27.72                                    | 0.66          |                     | 28.38         | 142.37                   | 140.32                 | -2.04        | 168.71               | 0.02             |
| Rajasthan    | 82.31                                    | 4.75          | 14.98               | 102.04        | 69.07                    | 70.15                  | 1.09         | 172.19               | 2.08             |
| Delhi        | 15.56                                    |               |                     | 15.56         | 85.65                    | 86.11                  | 0.47         | 101.67               | 0.01             |
| UP           | 112.98                                   | 22.69         |                     | 135.67        | 142.94                   | 144.30                 | 1.36         | 279.97               | 5.49             |
| Uttarakhand  | 19.75                                    | 19.75         |                     | 19.80         | 15.89                    | 17.82                  | 1.94         | 37.62                | 0.15             |
| HP           |  | 24.85         |                     | 24.85         | -0.26                    | 0.06                   | 0.32         | 24.91                | 0.09             |
| J & K        |  | 21.97         | 0.00                | 21.97         | 15.72                    | 13.86                  | -1.85        | 35.83                | 8.96             |
| Chandigarh   |  |               |                     | 0.00          | 5.89                     | 5.50                   | -0.40        | 5.50                 | 0.00             |
| <b>Total</b> | <b>310.91</b>                            | <b>111.26</b> | <b>14.98</b>        | <b>437.19</b> | <b>598.37</b>            | <b>597.87</b>          | <b>-0.50</b> | <b>1035.06</b>       | <b>16.79</b>     |

\* Shortage furnished by the respective constituent.\$ 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 (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       | 8026                        | 0           | 14         | 1113                | 8850                    | 0          | 19          | 1562                | 9162                                  | 10:00         | 0          |
| Haryana      | 7526                        | 0           | -321       | 2439                | 7488                    | 0          | -83         | 2407                | 8117                                  | 21:00         | 0          |
| Rajasthan    | 6795                        | 204         | 11         | 354                 | 7390                    | 0          | 4           | 405                 | 7648                                  | 1:00          | 0          |
| Delhi        | 4485                        | 0           | -12        | 361                 | 4385                    | 0          | 76          | 204                 | 5032                                  | 24:00         | 0          |
| UP           | 12471                       | 560         | 223        | 635                 | 12063                   | 0          | -112        | 976                 | 12559                                 | 1:00          | 0          |
| Uttarakhand  | 1693                        | 80          | 195        | -214                | 1463                    | 0          | 88          | -345                | 1720                                  | 10:00         | 0          |
| HP           | 1030                        | 0           | 54         | -1800               | 918                     | 0          | -1          | -1673               | 1235                                  | 8:00          | 0          |
| J&K          | 1837                        | 459         | 121        | -749                | 1144                    | 286        | -101        | -1082               | 1837                                  | 20:00         | 459        |
| Chandigarh   | 251                         | 0           | -21        | -30                 | 226                     | 0          | 7           | -20                 | 257                                   | 12:00         | 0          |
| <b>Total</b> | <b>44114</b>                | <b>1303</b> | <b>265</b> | <b>2109</b>         | <b>43927</b>            | <b>286</b> | <b>-104</b> | <b>2435</b>         | <b>46098</b>                          | <b>1:00</b>   | <b>305</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 :

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

| A. NTPC                                 | Station/<br>Constituent          | Inst. Capacity<br>(Effective) MW | Declared<br>Capacity(MW) | Peak MW<br>(Gross) | Off Peak MW<br>(Gross) | Energy<br>(Net MU) | Average<br>Sentout(MW) | Schedule<br>Net MU | UI<br>Net MU |
|---|----------------------------------|----------------------------------|--------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|--------------|
|   |                                  | Singrauli STPS (5*200+2*500)     | 2000                     | 1200               | 1341                   | 1303               | 29.45                  | 1227               | 28.38        |
|   | Rihand I STPS (2*500)            | 1000                             | 761                      | 886                | 931                    | 17.63              | 735                    | 17.81              | -0.17        |
|   | Rihand II STPS (2*500)           | 1000                             | 658                      | 507                | 978                    | 15.03              | 626                    | 14.35              | 0.68         |
|   | Rihand III STPS (2*500)          | 1000                             | 963                      | 1029               | 937                    | 21.95              | 915                    | 21.57              | 0.38         |
|   | Dadri I STPS (4*210)             | 840                              | 805                      | 208                | 214                    | 4.51               | 188                    | 4.65               | -0.14        |
|   | Dadri II STPS (2*490)            | 980                              | 960                      | 979                | 757                    | 18.34              | 764                    | 19.58              | -1.23        |
|   | Unchahar I TPS (2*210)           | 420                              | 400                      | 429                | 432                    | 8.50               | 354                    | 8.63               | -0.13        |
|   | Unchahar II TPS (2*210)          | 420                              | 400                      | 430                | 421                    | 8.01               | 334                    | 8.20               | -0.19        |
|   | Unchahar III TPS (1*210)         | 210                              | 200                      | 217                | 196                    | 3.93               | 164                    | 4.05               | -0.12        |
|   | ISTPP (Jhajjar) (3*500)          | 1500                             | 1425                     | 697                | 584                    | 14.30              | 596                    | 14.57              | -0.28        |
|   | Dadri GPS (4*130.19+2*154.51)    | 830                              | 593                      | 188                | 162                    | 3.98               | 166                    | 4.13               | -0.15        |
|   | Anta GPS (3*88.71+1*153.2)       | 419                              | 270                      | 257                | 188                    | 5.33               | 222                    | 5.24               | 0.09         |
|   | Auraiya GPS (4*111.19+2*109.30)  | 663                              | 634                      | 137                | 124                    | 3.22               | 134                    | 3.22               | 0.00         |
|   | Dadri Solar(5)                   | 5                                | 1                        | 0                  | 0                      | 0.02               | 1                      | 0.02               | 0.00         |
|   | Unchahar Solar(10)               | 10                               | 2                        | 0                  | 0                      | 0.04               | 2                      | 0.05               | -0.01        |
|   | Singrauli Solar(15)              | 15                               | 2                        | 0                  | 0                      | 0.07               | 3                      | 0.06               | 0.02         |
|   | KHEP(4*200)                      | 800                              | 855                      | 853                | 853                    | 20.51              | 854                    | 20.52              | -0.01        |
|   | <b>Sub Total (A)</b>             | <b>12112</b>                     | <b>10129</b>             | <b>8158</b>        | <b>8080</b>            | <b>175</b>         | <b>7284</b>            | <b>175</b>         | <b>-0.21</b> |
| B. NPC                                  | NAPS (2*220)                     | 440                              | 385                      | 414                | 423                    | 9.15               | 381                    | 9.24               | -0.09        |
|   | RAPS- B (2*220)                  | 440                              | 179                      | 204                | 203                    | 4.25               | 177                    | 4.30               | -0.04        |
|   | RAPS- C (2*220)                  | 440                              | 405                      | 437                | 436                    | 9.39               | 391                    | 9.72               | -0.33        |
|   | <b>Sub Total (B)</b>             | <b>1320</b>                      | <b>969</b>               | <b>1055</b>        | <b>1062</b>            | <b>22.79</b>       | <b>950</b>             | <b>23.26</b>       | <b>-0.47</b> |
| C. NHPC                                 | Chamera I HPS (3*180)            | 540                              | 540                      | 549                | 548                    | 13.11              | 546                    | 12.96              | 0.15         |
|   | Chamera II HPS (3*100)           | 300                              | 301                      | 308                | 304                    | 7.29               | 304                    | 7.22               | 0.07         |
|   | Chamera III HPS (3*77)           | 231                              | 229                      | 231                | 232                    | 5.49               | 229                    | 5.50               | -0.01        |
|   | Bairasuil HPS(3*60)              | 180                              | 179                      | 183                | 61                     | 2.77               | 116                    | 2.70               | 0.07         |
|   | Salal-HPS (6*115)                | 690                              | 662                      | 670                | 670                    | 16.15              | 673                    | 15.89              | 0.26         |
|   | Tanakpur-HPS (3*31.4)            | 94                               | 88                       | 92                 | 93                     | 2.22               | 92                     | 2.10               | 0.11         |
|   | Uri-I HPS (4*120)                | 480                              | 383                      | 408                | 411                    | 9.53               | 397                    | 9.19               | 0.34         |
|   | Uri-II HPS (4*60)                | 240                              | 207                      | 241                | 230                    | 5.21               | 217                    | 4.96               | 0.25         |
|   | Dhauliganga-HPS (4*70)           | 280                              | 268                      | 284                | 274                    | 6.54               | 272                    | 6.49               | 0.04         |
|   | Dulhasti-HPS (3*130)             | 390                              | 383                      | 397                | 392                    | 9.26               | 386                    | 9.18               | 0.07         |
|   | Sewa-II HPS (3*40)               | 120                              | 119                      | 127                | 122                    | 2.05               | 86                     | 2.00               | 0.06         |
|   | Parbati 3 (4*130)                | 520                              | 311                      | 394                | 0                      | 4.29               | 179                    | 4.19               | 0.10         |
|   | <b>Sub Total (C)</b>             | <b>4065</b>                      | <b>3670</b>              | <b>3883</b>        | <b>3337</b>            | <b>84</b>          | <b>3496</b>            | <b>82</b>          | <b>1.52</b>  |
| D.SJVNL                                 | NJPC (6*250)                     | 1500                             | 1605                     | 1628               | 1608                   | 38.54              | 1606                   | 38.52              | 0.03         |
|   | Rampur HEP (6*68.67)             | 412                              | 442                      | 446                | 449                    | 10.71              | 446                    | 10.61              | 0.10         |
|   | <b>Sub Total (D)</b>             | <b>1912</b>                      | <b>2047</b>              | <b>2074</b>        | <b>2057</b>            | <b>49.26</b>       | <b>2052</b>            | <b>49.13</b>       | <b>0.13</b>  |
| E. THDC                                 | Tehri HPS (4*250)                | 1000                             | 1046                     | 1044               | 266                    | 20.52              | 855                    | 20.00              | 0.52         |
|   | Koteshwar HPS (4*100)            | 400                              | 292                      | 404                | 277                    | 7.06               | 294                    | 7.00               | 0.06         |
|   | <b>Sub Total (E)</b>             | <b>1400</b>                      | <b>1338</b>              | <b>1448</b>        | <b>543</b>             | <b>27.59</b>       | <b>1149</b>            | <b>27.00</b>       | <b>0.59</b>  |
| F. BBMB                                 | Bhakra HPS (2*108+3*126+5*157)   | 1379                             | 910                      | 1172               | 824                    | 21.74              | 906                    | 21.84              | -0.11        |
|   | Dehar HPS (6*165)                | 990                              | 615                      | 825                | 560                    | 15.01              | 625                    | 14.75              | 0.26         |
|   | Pong HPS (6*66)                  | 396                              | 290                      | 396                | 198                    | 6.86               | 286                    | 6.96               | -0.10        |
|   | <b>Sub Total (F)</b>             | <b>2765</b>                      | <b>1815</b>              | <b>2393</b>        | <b>1582</b>            | <b>43.61</b>       | <b>1817</b>            | <b>43.56</b>       | <b>0.05</b>  |
| G. IPP(s)/JV(s)                         | ALLAIN DUHANGAN HPS(IPP) (2*96)  | 192                              | 0                        | 201                | 174                    | 4.05               | 169                    | 4.13               | -0.08        |
|   | KARCHAM WANGTOO HPS(IPP) (4*250) | 1000                             | 0                        | 1100               | 1100                   | 26.37              | 1099                   | 26.08              | 0.28         |
|   | Malana Stg-II HPS (2*50)         | 100                              | 0                        | 112                | 90                     | 2.35               | 98                     | 2.17               | 0.18         |
|   | Shree Cement TPS (2*150)         | 300                              | 0                        | 283                | 262                    | 5.98               | 249                    | 5.93               | 0.05         |
|   | Budhil HPS(IPP) (2*35)           | 70                               | 0                        | 74                 | 74                     | 1.71               | 71                     | 1.75               | -0.04        |
|   | <b>Sub Total (G)</b>             | <b>1662</b>                      | <b>0</b>                 | <b>1770</b>        | <b>1701</b>            | <b>40.45</b>       | <b>1685</b>            | <b>40.06</b>       | <b>0.39</b>  |
| <b>H. Total Regional Entities (A-G)</b> |                                  | <b>25237</b>                     | <b>19968</b>             | <b>20781</b>       | <b>18362</b>           | <b>442.42</b>      | <b>18434</b>           | <b>440.42</b>      | <b>2.00</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                              | 500          | 320          | 9.97           | 416                 |
|   | Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)        | 460                               | 210          | 170          | 3.85           | 161                 |
|   | Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)     | 920                               | 213          | 557          | 8.63           | 360                 |
|   | Goindwal(GVK) (2*270)                             | 540                               | 0            | 0            | -0.09          | -4                  |
|   | Rajpura (2*700)                                   | 1400                              | 760          | 1320         | 25.44          | 1060                |
|   | Talwandi Saboo (3*660)                            | 1980                              | 716          | 1228         | 24.53          | 1022                |
|   | <b>Thermal (Total)</b>                            | <b>6560</b>                       | <b>2399</b>  | <b>3595</b>  | <b>72.34</b>   | <b>3014</b>         |
|   | Total Hydro                                       | 1000                              | 792          | 731          | 16.59          | 691                 |
|   | <b>Total Punjab</b>                               | <b>7560</b>                       | <b>3191</b>  | <b>4326</b>  | <b>88.93</b>   | <b>3705</b>         |
| Haryana   | Panipat TPS (2*210+2*250)                         | 920                               | 0            | 0            | 0.00           | 0                   |
|   | DCRTPP (Yamuna nagar) (2*300)                     | 600                               | 287          | 240          | 5.49           | 229                 |
|   | Faridabad GPS (NTPC)(2*137.75+1*156)              | 432                               | 189          | 170          | 4.08           | 170                 |
|   | 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                              | 749          | 746          | 18.16          | 757                 |
|   | <b>Thermal (Total)</b>                            | <b>4497</b>                       | <b>1225</b>  | <b>1156</b>  | <b>27.72</b>   | <b>1155</b>         |
|   | Total Hydro                                       | 62                                | 41           | 0            | 0.66           | 28                  |
|   | <b>Total Haryana</b>                              | <b>4559</b>                       | <b>1266</b>  | <b>1156</b>  | <b>28.38</b>   | <b>1183</b>         |
| Rajasthan   | kota TPS (2*110+2*195+3*210)                      | 1240                              | 330          | 314          | 7.73           | 322                 |
|   | suratgarh TPS (6*250)                             | 1500                              | 0            | 0            | 0.00           | 0                   |
|   | Chabra TPS (4*250)                                | 1000                              | 378          | 456          | 9.05           | 377                 |
|   | 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                               | 141          | 148          | 3.55           | 148                 |
|   | RAPS A (NPC) (1*100+1*200)                        | 300                               | 161          | 131          | 3.94           | 164                 |
|   | Barsingsar (NLC) (2*125)                          | 250                               | 226          | 225          | 5.33           | 222                 |
|   | Giral LTPS (2*125)                                | 250                               | 0            | 0            | 0.00           | 0                   |
|   | Rajwest LTPS (IPP) (8*135)                        | 1080                              | 736          | 536          | 17.72          | 738                 |
|   | VS LIGNITE LTPS (IPP) (1*135)                     | 135                               | 0            | 0            | 0.00           | 0                   |
|   | Kalisindh Thermal(2*600)                          | 1200                              | 485          | 406          | 10.61          | 442                 |
|   | Kawai(Adani) (2*660)                              | 1320                              | 865          | 869          | 24.37          | 1015                |
|   | <b>Thermal (Total)</b>                            | <b>8876</b>                       | <b>3322</b>  | <b>3085</b>  | <b>82</b>      | <b>3429</b>         |
|   | Total Hydro                                       | 550                               | 256          | 91           | 4.75           | 198                 |
|   | Wind power  | 3214                              | 82           | 1632         | 14.57          | 607                 |
|   | Biomass   | 99                                | 17           | 17           | 0.41           | 17                  |
|   | Solar   | 730                               | 0            | 0            | 0.00           | 0                   |
|   | Renewable/Others (Total)                          | 4043                              | 99           | 1649         | 14.98          | 624                 |
|   | <b>Total Rajasthan</b>                            | <b>13469</b>                      | <b>3677</b>  | <b>4825</b>  | <b>102.04</b>  | <b>4252</b>         |
| UP  | Anpara TPS (3*210+2*500)                          | 1630                              | 885          | 921          | 20.65          | 860                 |
|   | Obra TPS (2*50+2*94+5*200)                        | 1194                              | 244          | 227          | 5.58           | 232                 |
|   | Paricha TPS (2*110+2*220+2*250)                   | 1160                              | 810          | 753          | 16.85          | 702                 |
|   | Panki TPS (2*105)                                 | 210                               | 140          | 135          | 3.37           | 140                 |
|   | Harduaganj TPS (1*60+1*105+2*250)                 | 665                               | 429          | 434          | 8.84           | 368                 |
|   | Tanda TPS (NTPC) (4*110)                          | 440                               | 385          | 373          | 8.64           | 360                 |
|   | Roza TPS (IPP) (4*300)                            | 1200                              | 1098         | 1089         | 24.80          | 1033                |
|   | Anpara-C (IPP) (2*600)                            | 1200                              | 783          | 1013         | 18.69          | 779                 |
|   | Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)             | 450                               | 243          | 170          | 4.37           | 182                 |
|   | 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>5017</b>  | <b>5115</b>  | <b>112</b>     | <b>4657</b>         |
|   | Vishnuparyag HPS (IPP)(4*110)                     | 440                               | 435          | 0            | 8.29           | 345                 |
|   | Alaknanda(4*82.5)                                 | 330                               | 334          | 335          | 8.03           | 334                 |
|   | Other Hydro                                       | 527                               | 289          | 279          | 6.38           | 266                 |
|   | Cogeneration                                      | 981                               | 50           | 50           | 1.20           | 50                  |
| <b>Total UP</b>   | <b>14727</b>                                      | <b>6125</b>                       | <b>5779</b>  | <b>136</b>   | <b>5653</b>    |                     |
| Uttarakhand   | Total Hydro                                       | 1398                              | 789          | 860          | 19.75          | 823                 |
|   | Total Gas   | 225                               | 0            | 51           | 0.04           | 2                   |
|   | <b>Total Uttarakhand</b>                          | <b>1623</b>                       | <b>789</b>   | <b>911</b>   | <b>20</b>      | <b>825</b>          |
| Delhi   | Rajghat TPS (2*67.5)                              | 135                               | 0            | 0            | 0.00           | 0                   |
|   | Delhi Gas Turbine (6x30 + 3x34)                   | 282                               | 33           | 66           | 1.44           | 60                  |
|   | Pragati Gas Turbine (2x104+ 1x122)                | 330                               | 146          | 263          | 4.09           | 170                 |
|   | Rithala GPS (3*36)                                | 95                                | 0            | 0            | 0.00           | 0                   |
|   | Bawana GPS (4*216+2*253)                          | 1370                              | 63           | 252          | 3.07           | 128                 |
|   | Badarpur TPS (NTPC) (3*95+2*210)                  | 705                               | 313          | 313          | 6.96           | 290                 |
|   | Thermal (Total)                                   | 2917                              | 555          | 894          | 15.56          | 648                 |
|   | <b>Total Delhi</b>                                | <b>2917</b>                       | <b>555</b>   | <b>894</b>   | <b>15.56</b>   | <b>648</b>          |
| HP  | Baspa HPS (IPP) (3*100)                           | 300                               | 334          | 334          | 7.78           | 324                 |
|   | Malana HPS (IPP) (2*43)                           | 86                                | 95           | 80           | 2.07           | 86                  |
|   | Other Hydro                                       | 878                               | 600          | 662          | 15.01          | 625                 |
|   | <b>Total HP</b>                                   | <b>1264</b>                       | <b>1029</b>  | <b>1076</b>  | <b>24.85</b>   | <b>1035</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>17546</b> | <b>19885</b> | <b>437.19</b>  | <b>18216</b>        |
| <b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b> |   |                                   | <b>7866</b>  | <b>7361</b>  | <b>173.45</b>  | <b>7227</b>         |
| <b>Total Regional Availability(Gross)</b>                         |   | <b>72856</b>                      | <b>46193</b> | <b>45607</b> | <b>1053.07</b> | <b>43878</b>        |
| <b>IV. Total Hydro Generation:</b>                                |   |                                   |              |              |                |                     |
| <b>Regional Entities Hydro</b>                                    |   | <b>12234</b>                      | <b>12064</b> | <b>9736</b>  | <b>257.64</b>  | <b>10735</b>        |
| <b>State Control Area Hydro</b>                                   |   | <b>7106</b>                       | <b>4879</b>  | <b>4341</b>  | <b>111.31</b>  | <b>4638</b>         |
| <b>Total Regional Hydro</b>                                       |   | <b>19340</b>                      | <b>16943</b> | <b>14077</b> | <b>368.94</b>  | <b>15373</b>        |



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

| Element                            | Peak(20:00 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)               | -500                  | -500                      | 50                       | 500    | 0.20          | 8.54         | -8.33            |
| 765 KV Gwalior-Agra (D/C)          | 2605                  | 2228                      | 2605                     | 0      | 49.36         | 0.00         | 49.36            |
| 400 KV Zerda-Kankroli              | 224                   | 72                        | 224                      | 61     | 2.39          | 0.00         | 2.39             |
| 400 KV Zerda-Bhinmal               | 258                   | 75                        | 308                      | 37     | 3.57          | 0.00         | 3.57             |
| 220 KV Auraiya-Malanpur            | 9                     | 46                        | 0                        | 23     | 0.47          | 0.00         | 0.47             |
| 220 KV Badod-Kota/Morak            | 171                   | 211                       | 264                      | 0      | 4.90          | 0.00         | 4.90             |
| Mundra-Mohindergarh(HVDC Bipole)   | 1401                  | 1803                      | 1803                     | 0.00   | 36.60         | 0.00         | 36.60            |
| 400 KV Vindhychal - Rihand         | 0                     | 0                         | 0                        | 0      | 0.00          | 0.00         | 0.00             |
| 765 kV Phagi-Gwalior (D/C)         | 1012                  | 863                       | 1179                     | 0      | 19.61         | 0.00         | 19.61            |
| <b>Sub Total WR</b>                | <b>5180</b>           | <b>4798</b>               |                          |        | <b>117.10</b> | <b>8.54</b>  | <b>108.56</b>    |
| Pusauli Bypass/HVDC                | 250                   | -325                      | 250                      | 329    | 1.69          | 4.78         | -3.08            |
| 400 KV MZP- GKP (D/C)              | 90                    | 186                       | 406                      | 32     | 5.35          | 0.00         | 5.35             |
| 400 KV Patna-Balia(D/C) X 2        | 320                   | 438                       | 703                      | 0      | 11.55         | 0.00         | 11.55            |
| 400 KV B'Sharif-Balia (D/C)        | 63                    | 102                       | 219                      | 0      | 2.69          | 0.00         | 2.69             |
| 765 KV Gaya-Balia                  | 266                   | 221                       | 372                      | 0      | 3.14          | 0.00         | 3.14             |
| 765 KV Gaya-Varanasi (D/C)         | 506                   | 389                       | 642                      | 0      | 10.61         | 0.00         | 10.61            |
| 220 KV Pusauli-Sahupuri            | 179                   | 172                       | 192                      | 0      | 3.70          | 0.00         | 3.70             |
| 132 KV K'nasa-Sahupuri             | -24                   | -22                       | 0                        | 28     | 0.00          | 0.43         | -0.43            |
| 132 KV Son Ngr-Rihand              | -34                   | -27                       | 0                        | 36     | 0.00          | 0.56         | -0.56            |
| 132 KV Garhwa-Rihand               | 0                     | 0                         | 0                        | 0      | 0.00          | 0.00         | 0.00             |
| 765 KV Sasaram - Fatehpur          | -300                  | -13                       | 43                       | 317    | 0.00          | 1.74         | -1.74            |
| 400 KV Barh -GKP (D/C)             | 350                   | 426                       | 488                      | 0      | 9.21          | 0.00         | 9.21             |
| 400 KV B'Sharif - Varanasi (D/C)   | 20                    | 16                        | 177                      | 0      | 1.31          | 0.00         | 1.31             |
| <b>Sub Total ER</b>                | <b>1686</b>           | <b>1563</b>               |                          |        | <b>49.26</b>  | <b>7.50</b>  | <b>41.76</b>     |
| +/- 800 KV BiswanathCharialli-Agra | 1000                  | 1000                      | 1000                     | 0.00   | 23.13         | 0.00         | 23.13            |
| <b>Sub Total NER</b>               | <b>1000</b>           | <b>1000</b>               |                          |        | <b>23.13</b>  | <b>0.00</b>  | <b>23.13</b>     |
| <b>Total IR Exch</b>               | <b>7866</b>           | <b>7361</b>               |                          |        | <b>189.49</b> | <b>16.04</b> | <b>173.45</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 |
| 38.67                 | 3.95   | 42.61 | 42.14                   | 11.80      | -11.40                   | -4.54      | 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 |
| 73.36                  | 104.72                 | 178.08 | 64.89                     | 108.56     | 173.45 | -8.47                      | 3.85       | -4.62 |

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

| Element                         | Peak(20:00 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 | -28                   | -21                       | 0                        | 29     | 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  | 0.00  | 1.64  | 20.25 | 72.55 | 71.72      | 6.67        | 1.35        | 0.00   | 0.00   |

| <----- Frequency (Hz) -----> |      |         |       | Average<br>Frequency | Frequency<br>Variation | Std. Dev. | Frequency in 15 Min Block |       | Freq Dev<br>Index (% of<br>Time) |
|------------------------------|------|---------|-------|----------------------|------------------------|-----------|---------------------------|-------|----------------------------------|
| Maximum                      |      | Minimum |       |                      |                        |           | MAX                       | MIN   |                                  |
| Freq                         | Time | Freq    | Time  | Hz                   | Index                  | (Hz)      | (Hz)                      |       |                                  |
| 50.19                        | 6.02 | 49.73   | 19.50 | 49.96                | 0.064                  | 50.06     | 49.82                     | 28.28 |                                  |

VII. Voltage profile 400 kV

| Station           | Voltage Level (kV) | Maximum     |      | Minimum      |       | Voltage (in % of Time) |         |         |         | Voltage<br>e<br>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<br>e<br>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   | 497.84             | 1006.54     | 509.36    | 1515.08     | 1149.69                    | 693.31                    |
| Pong              | 426.72     | 384.05   | 415.01             | 680.86      | 422.02    | 990.81      | 609.09                     | 423.11                    |
| Tehri             | 829.79     | 740.04   | 811.95             | 842.28      | 814.65    | 895.00      | 550.50                     | 473.00                    |
| Koteshwar         | 612.50     | 598.50   | 610.83             | 4.95        | 610.15    | 4.69        | 473.00                     | 465.62                    |
| Chamera-I         | 760.00     | 748.75   | 757.29             | 0.00        | 0.00      | 0.00        | 360.13                     | 359.25                    |
| Rihand            | 268.22     | 252.98   | 0.00               | 0.00        | 0.00      | 0.00        | 0.00                       | 0.00                      |
| RPS               | 352.80     | 343.81   | 1157.00            | 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   | 518.75             | 5.60        | 522.86    | 14.09       | 346.12                     | 265.33                    |

\* 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       | 1548                        | 15          | 0         | 1087                   | 26         | 0         | 38.00           | 3.42            | 41.42        |
| Delhi        | 482                         | -278        | 0         | 750                    | -389       | 0         | 16.47           | -7.99           | 8.47         |
| Haryana      | 2037                        | 358         | 13        | 2083                   | 343        | 13        | 46.23           | 5.30            | 51.53        |
| HP           | -1371                       | -303        | 0         | -1426                  | -374       | 0         | -30.73          | -8.07           | -38.80       |
| J&K          | -583                        | -499        | 0         | -734                   | -15        | 0         | -15.98          | -3.83           | -19.82       |
| CHD          | 0                           | -20         | 0         | 0                      | -30        | 0         | 0.36            | -0.61           | -0.26        |
| Rajasthan    | -129                        | 534         | 0         | -129                   | 483        | 0         | -3.09           | 11.27           | 8.18         |
| UP           | 976                         | 0           | 0         | 635                    | 0          | 0         | 16.83           | 0.00            | 16.83        |
| Uttarakhand  | -126                        | -220        | 0         | -126                   | -88        | 0         | -3.02           | -2.02           | -5.04        |
| <b>Total</b> | <b>2835</b>                 | <b>-413</b> | <b>13</b> | <b>2140</b>            | <b>-44</b> | <b>13</b> | <b>65.06</b>    | <b>-2.54</b>    | <b>62.52</b> |

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

| State       | Bilateral (MW) |         | IEX (MW) |         | PXIL (MW) |         |
|-------------|----------------|---------|----------|---------|-----------|---------|
|             | Maximum        | Minimum | Maximum  | Minimum | Maximum   | Minimum |
| Punjab      | 1863           | 1087    | 858      | 1       | 0         | 0       |
| Delhi       | 1003           | 482     | -65      | -594    | 0         | 0       |
| Haryana     | 2115           | 1731    | 389      | -752    | 13        | 13      |
| HP          | -1092          | -1426   | -265     | -468    | 0         | 0       |
| J&K         | -583           | -835    | 0        | -499    | 0         | 0       |
| CHD         | 44             | 0       | 0        | -50     | 0         | 0       |
| Rajasthan   | -129           | -129    | 550      | -108    | 0         | 0       |
| UP          | 998            | 567     | 0        | 0       | 0         | 0       |
| Uttarakhand | -126           | -126    | 15       | -250    | 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           | 0.69%  |
| ER           | 0.00%  |
| Simultaneous | 11.11% |

(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 20.08.2016 :

## 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.