# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

**Power Supply Position in Northern Region for 21.02.2016**
**Date of Reporting : 22.02.2016**

### I. Regional Availability/Demand:

| Evening Peak (19:00 Hrs) MW | | | | Off Peak (03:00 Hrs) MW | | | | Day Energy (Net MU) | |
|---|---|---|---|---|---|---|---|---|---|
| Demand Met | Shortage | Requirement | Freq* (Hz) | Demand Met | Shortage | Requirement | Freq* (Hz) | Demand Met | Shortage |
| 33269 | 1331 | 34601 | 50.09 | 28848 | 1220 | 30068 | 50.12 | 767.4 | 44.16 |

* 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:

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

| State | State's Control Area Generation (Net MU) | | | | Drawal Schedule | Actual Drawal | UI | Consumption | Shortages * |
|---|---|---|---|---|---|---|---|---|---|
| | Thermal | Hydro | Renewable/others $ | Total | (Net MU) | (Net MU) | (Net MU) | (Net MU) | (MU) |
| Punjab | 28.86 | 6.83 | | 35.69 | 53.52 | 53.42 | -0.10 | 89.11 | 0.00 |
| Haryana | 30.68 | 0.29 | | 30.97 | 71.80 | 69.54 | -2.27 | 100.51 | 0.00 |
| Rajasthan | 125.28 | 4.56 | 3.29 | 133.13 | 71.16 | 73.02 | 1.85 | 206.15 | 0.00 |
| Delhi | 13.85 | | | 13.85 | 40.09 | 38.41 | -1.68 | 52.25 | 0.00 |
| UP | 112.74 | 2.40 | | 115.14 | 106.12 | 106.41 | 0.29 | 221.55 | 33.92 |
| Uttarakhand | | 10.38 | | 10.38 | 21.06 | 21.43 | 0.37 | 31.81 | 0.00 |
| HP | | 3.26 | | 3.26 | 19.71 | 18.76 | -0.95 | 22.02 | 0.61 |
| J & K | | 6.12 | 0.00 | 6.12 | 37.06 | 34.80 | -2.26 | 40.92 | 9.64 |
| Chandigarh | | | | 0.00 | 3.27 | 3.11 | 0.27 | 3.11 | 0.00 |
| | | | | | | | | | |
| **Total** | **311.40** | **33.84** | **3.29** | **348.53** | **423.79** | **418.89** | **-4.47** | **767.42** | **44.16** |

* 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 (19:00 Hrs) MW | | | | Off Peak (03:00 Hrs) MW | | | | # Max(hourly) Demand Met of Day (MW) |
|---|---|---|---|---|---|---|---|---|---|
| | Demand Met | Shortage | UI | STOA/PX transaction | Demand Met | Shortage | UI | STOA/PX transaction | |
| Punjab | 4276 | 0 | 243 | -25 | 2940 | 0 | -15 | 241 | 4648 |
| Haryana | 5065 | 0 | -555 | -158 | 3021 | 0 | -4 | -334 | 5339 |
| Rajasthan | 7881 | 0 | -239 | 589 | 8471 | 0 | 71 | 630 | 9704 |
| Delhi | 2304 | 0 | -432 | -727 | 1388 | 0 | -5 | -1596 | 3073 |
| UP | 9333 | 890 | 12 | -539 | 9440 | 940 | -24 | 130 | 10264 |
| Uttarakhand | 1572 | 0 | -51 | 507 | 1136 | 0 | 61 | 305 | 1656 |
| HP | 913 | 0 | -246 | 207 | 773 | 0 | 21 | 315 | 1241 |
| J&K | 1766 | 441 | -231 | 767 | 1587 | 280 | -146 | 724 | 1903 |
| Chandigarh | 159 | 0 | -8 | -15 | 92 | 0 | 2 | -30 | 176 |
| **Total** | **33269** | **1331** | **-1506** | **604** | **28848** | **1220** | **-39** | **385** | **36146** |

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

Diversity is 1.05

### III. Regional Entities :

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

| | Station/ Constituent | Inst. Capacity (Effective) MW | Declared Capacity(MW) | Peak MW (Gross) | Off Peak MW (Gross) | Energy (Net MU) | Average Sentout(MW) | Schedule Net MU | UI Net MU |
|---|---|---|---|---|---|---|---|---|---|
| **A. NTPC** | Singrauli STPS (5*200+2*500) | 2000 | 1884 | 1795 | 1849 | 42.94 | 1789 | 42.97 | -0.03 |
| | Rihand I STPS (2*500) | 1000 | 863 | 701 | 687 | 16.81 | 701 | 16.57 | 0.25 |
| | Rihand II STPS (2*500) | 1000 | 963 | 1021 | 813 | 19.37 | 807 | 19.41 | -0.05 |
| | Rihand III STPS (2*500) | 1000 | 974 | 1021 | 815 | 19.78 | 824 | 20.05 | -0.26 |
| | Dadri I STPS (4*210) | 840 | 815 | 552 | 559 | 13.20 | 550 | 13.70 | -0.50 |
| | Dadri II STPS (2*490) | 980 | 980 | 669 | 668 | 16.16 | 674 | 16.57 | -0.41 |
| | Unchahar I TPS (2*210) | 420 | 406 | 323 | 317 | 7.49 | 312 | 7.67 | -0.18 |
| | Unchahar II TPS (2*210) | 420 | 404 | 325 | 304 | 7.09 | 295 | 7.19 | -0.11 |
| | Unchahar III TPS (1*220) | 210 | 202 | 172 | 152 | 3.52 | 147 | 3.61 | -0.09 |
| | ISTPP (Jhajjhar) (3*500) | 1500 | 950 | 614 | 623 | 14.04 | 585 | 14.36 | -0.32 |
| | Dadri GPS (4*130.19+2*154.51) | 830 | 816 | 491 | 486 | 11.51 | 479 | 11.72 | -0.22 |
| | Anta GPS (3*88.71+1*153.2) | 419 | 415 | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 |
| | Auraiya GPS (4*111.19+2*109.30) | 663 | 656 | 306 | 301 | 6.95 | 289 | 7.11 | -0.17 |
| | Dadri Solar | 5 | 1 | 0 | 0 | 0.02 | 1 | 0.02 | 0.00 |
| | Unchahar Solar | 10 | 1 | 0 | 0 | 0.00 | 0 | 0.02 | -0.02 |
| | Singrauli Solar | 15 | 2 | 0 | 0 | 0.05 | 2 | 0.04 | 0.01 |
| | KHEP | 800 | 435 | 435 | 0 | 2.54 | 106 | 2.30 | 0.24 |
| | **Sub Total (A)** | **12112** | **10766** | **8425** | **7574** | **181** | **7562** | **183** | **-2** |
| **B. NPC** | NAPS (2*220) | 440 | 405 | 445 | 448 | 9.79 | 408 | 9.72 | 0.06 |
| | RAPS- B (2*220) | 440 | 379 | 427 | 427 | 9.24 | 385 | 9.10 | 0.15 |
| | RAPS- C (2*220) | 440 | 425 | 458 | 455 | 9.90 | 412 | 10.20 | -0.30 |
| | **Sub Total (B)** | **1320** | **1209** | **1330** | **1330** | **28.93** | **1205** | **29.02** | **-0.09** |
| **C. NHPC** | Chamera I HPS (3*180) | 540 | 360 | 367 | 0 | 2.50 | 104 | 2.20 | 0.30 |
| | Chamera II HPS (3*100) | 300 | 200 | 204 | 0 | 1.55 | 64 | 1.37 | 0.17 |
| | Chamera III HPS (3*77) | 231 | 201 | 232 | 0 | 0.74 | 31 | 0.69 | 0.06 |
| | Bairasuil HPS(3*60) | 180 | 182 | 184 | 0 | 1.41 | 59 | 1.23 | 0.18 |
| | Salal-HPS (6*115) | 690 | 148 | 317 | 200 | 4.05 | 169 | 3.52 | 0.52 |
| | Tanakpur-HPS (3*40) | 94 | 16 | 31 | 14 | 0.44 | 18 | 0.39 | 0.05 |
| | Uri-I HPS (4*120) | 480 | 343 | 350 | 350 | 8.60 | 358 | 8.14 | 0.45 |
| | Uri-II HPS (4*60) | 240 | 175 | 178 | 178 | 4.20 | 175 | 4.18 | 0.02 |
| | Dhauliganga-HPS (4*70) | 280 | 280 | 286 | 0 | 0.96 | 40 | 0.83 | 0.13 |
| | Dulhasti-HPS (3*130) | 390 | 387 | 403 | 0 | 3.00 | 125 | 2.69 | 0.31 |
| | Sewa-II HPS (3*40) | 120 | 119 | 124 | 0 | 1.03 | 43 | 0.98 | 0.05 |
| | Parbati 3 (4*130) | 520 | 130 | 131 | 0 | 0.40 | 16 | 0.38 | 0.02 |
| | **Sub Total (C )** | **4065** | **2541** | **2808** | **742** | **29** | **1203** | **27** | **2** |
| **D.SJVNL** | NJPC (6*250) | 1500 | 1605 | 1590 | 0 | 6.25 | 260 | 6.26 | -0.02 |
| | Rampur HEP (6*68.67) | 412 | 442 | 442 | 0 | 1.76 | 73 | 1.75 | 0.02 |
| | **Sub Total (D)** | **1912** | **2047** | **2032** | **0** | **8.01** | **334** | **8.01** | **0.00** |
| **E. THDC** | Tehri HPS (4*250) | 1000 | 760 | 768 | 0 | 7.66 | 319 | 7.50 | 0.16 |
| | Koteshwar HPS (4*100) | 400 | 130 | 400 | 90 | 3.15 | 131 | 3.13 | 0.02 |
| | **Sub Total (E)** | **1400** | **890** | **1168** | **90** | **10.81** | **451** | **10.63** | **0.18** |
| **F. BBMB** | Bhakra HPS (2*108+3*126+5*157) | 1379 | 663 | 1204 | 386 | 15.90 | 663 | 15.91 | -0.01 |
| | Dehar HPS (6*165) | 990 | 268 | 495 | 165 | 6.56 | 273 | 6.44 | 0.12 |
| | Pong HPS (6*66) | 396 | 196 | 300 | 60 | 4.43 | 184 | 4.70 | -0.27 |
| | **Sub Total (F)** | **2765** | **1127** | **1999** | **611** | **26.89** | **1120** | **27.05** | **-0.16** |
| **G. IPP(s)/JV(s)** | ALLAIN DUHANGAN HPS(IPP) (2*96) | 192 | 0 | 0 | 0 | 0.40 | 17 | 0.38 | 0.02 |
| | KARCHAM WANGTOO HPS(IPP) (4*250 | 1000 | 0 | 630 | 0 | 3.38 | 141 | 3.60 | -0.22 |
| | Malana Stg-II HPS (2*50) | 100 | 0 | 0 | 0 | 0.16 | 7 | 0.16 | 0.01 |
| | Shree Cement TPS (2*150) | 300 | 0 | 144 | 148 | 3.47 | 145 | 3.55 | -0.08 |
| | Budhil HPS(IPP) (2*35) | 70 | 0 | 35 | 0 | 0.14 | 6 | 0.14 | 0.00 |
| | Sub Total (G ) | 1662 | 0 | 809 | 148 | 7.56 | 315 | 7.83 | -0.28 |
| **H. Total Regional Entities (A-G)** | | **25237** | **18580** | **18571** | **10495** | **292.54** | **12189** | **292.48** | **0.06** |

| 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 | 210 | 160 | 3.77 | 157 |
| | Guru Nanak Dev TPS(Bhatinda) (2*110+2*120) | 460 | 0 | 0 | -0.02 | -1 |
| | Guru Hargobind Singh TPS(L.mbt) (2*210+2*250) | 920 | 0 | 0 | -0.08 | -3 |
| | Goindwal(GVK) | | 0 | 0 | 0.00 | 0 |
| | Rajpura (2*700) | 1400 | 775 | 700 | 17.75 | 740 |
| | Talwandi Saboo (2*660) | 1320 | 342 | 330 | 7.43 | 309 |
| | **Thermal (Total)** | **5360** | **1327** | **1190** | **28.86** | **1202** |
| | Total Hydro | 1000 | 271 | 268 | 6.83 | 285 |
| | **Total Punjab** | **6360** | **1598** | **1458** | **35.69** | **1487** |
| **Haryana** | Panipat TPS (4*110+2*210+2*250) | 1367 | 235 | 217 | 5.15 | 214 |
| | DCRTPP (Yamuna nagar) (2*300) | 600 | 554 | 456 | 11.24 | 468 |
| | Faridabad GPS (NTPC) | 432 | 197 | 164 | 4.20 | 175 |
| | 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 | 582 | 368 | 10.09 | 421 |
| | **Thermal (Total)** | **4944** | **1568** | **1205** | **30.68** | **1278** |
| | Total Hydro | 62 | 7 | 15 | 0.29 | 12 |
| | **Total Haryana** | **5006** | **1575** | **1220** | **30.97** | **1291** |
| **Rajasthan** | kota TPS (2*110+2*195+3*210) | 1240 | 852 | 863 | 21.56 | 898 |
| | suratgarh TPS (6*250) | 1500 | 574 | 569 | 14.46 | 603 |
| | Chabra TPS (4*250) | 1000 | 600 | 639 | 14.64 | 610 |
| | 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 | 84 | 80 | 2.66 | 111 |
| | RAPS A (NPC) (1*100+1*200) | 300 | 0 | 0 | 0.00 | 0 |
| | Barsingsar (NLC) (2*125) | 250 | 91 | 91 | 2.04 | 85 |
| | Giral LTPS (2*125) | 250 | 0 | 0 | 0.00 | 0 |
| | Rajwest LTPS (IPP) (8*135) | 1080 | 532 | 964 | 21.57 | 899 |
| | VS LIGNITE LTPS (IPP) (1*135) | 135 | 0 | 0 | 0.00 | 0 |
| | Kalisindh Thermal(2*600) | 1200 | 847 | 1096 | 21.96 | 915 |
| | Kawai(Adani) (2*660) | 1320 | 868 | 1175 | 26.39 | 1100 |
| | **Thermal (Total)** | **8876** | **4448** | **5477** | **125** | **5220** |
| | Total Hydro | 550 | 207 | 163 | 4.56 | 190 |
| | Wind power | 3214 | 29 | 145 | 1.99 | 83 |
| | Biomass | 99 | 28 | 28 | 0.67 | 28 |
| | Solar | 730 | 12 | 0 | 0.63 | 26 |
| | Renewable/Others (Total) | 4043 | 69 | 173 | 3.29 | 137 |
| | **Total Rajasthan** | **13469** | **4724** | **5813** | **133.13** | **5547** |
| **UP** | Anpara TPS (3*210+2*500) | 1630 | 1236 | 1348 | 30.00 | 1250 |
| | Obra TPS (2*50+2*94+5*200) | 1194 | 434 | 432 | 9.90 | 413 |
| | Paricha TPS (2*110+2*220+2*250) | 1140 | 338 | 324 | 8.50 | 354 |
| | Panki TPS (2*105) | 210 | 0 | 0 | 0.00 | 0 |
| | Harduaganj TPS (1*60+1*105+2*250) | 665 | 173 | 216 | 4.90 | 204 |
| | Tanda TPS (NTPC) (4*110) | 440 | 384 | 379 | 9.24 | 385 |
| | Roza TPS (IPP) (4*300) | 1200 | 707 | 824 | 18.20 | 758 |
| | Anpara-C (IPP) (2*600) | 1200 | 536 | 536 | 12.80 | 533 |
| | Bajaj Energy Pvt.Ltd(IPP) TPS (10*45) | 450 | 0 | 0 | 0.00 | 0 |
| | Anpara-D(1*500) | 500 | 0 | 0 | 0.00 | 0 |
| | Lalitpur TPS(2*660) | 1320 | 0 | 0 | 0.00 | 0 |
| | Bara(2*660) | 1320 | 0 | 0 | 0.00 | 0 |
| | **Thermal (Total)** | **11269** | **3808** | **4059** | **94** | **3898** |
| | Vishnuparyag HPS (IPP)(4*110) | 440 | 0 | 0 | 0.00 | 0 |
| | Alaknanada(4*82.5) | 330 | 0 | 0 | 0.00 | 0 |
| | Other Hydro | 527 | 115 | 16 | 2.40 | 100 |
| | Cogeneration | 981 | 800 | 800 | 19.20 | 800 |
| | **Total UP** | **13547** | **4723** | **4875** | **115** | **4798** |
| **Uttarakhand** | Total Hydro | 1398 | 567 | 303 | 10.38 | 432 |
| | **Total Uttarakhand** | **1398** | **567** | **303** | **10.38** | **432** |
| **Delhi** | Rajghat TPS (2*67.5) | 135 | 0 | 0 | 0.00 | 0 |
| | Delhi Gas Turbine (6x30 + 3x34) | 282 | 39 | 39 | 0.92 | 38 |
| | Pragati Gas Turbine (2x104+ 1x122) | 330 | 138 | 141 | 3.37 | 140 |
| | Rithala GPS (3*36) | 95 | 0 | 0 | 0.00 | 0 |
| | Bawana GPS (4*216+2*253) | 1370 | 251 | 251 | 6.03 | 251 |
| | Badarpur TPS (NTPC) (3*95+2*210) | 705 | 162 | 161 | 3.53 | 147 |
| | Thermal (Total) | 2917 | 590 | 591 | 13.85 | 577 |
| | **Total Delhi** | **2917** | **590** | **591** | **13.85** | **577** |
| **HP** | Baspa HPS (IPP) (3*100) | 300 | 0 | 0 | 0.00 | 0 |
| | Malana HPS (IPP) (2*43) | 86 | 0 | 0 | 0.21 | 9 |
| | Other Hydro | 878 | 151 | 84 | 3.05 | 127 |
| | **Total HP** | **1264** | **151** | **84** | **3.26** | **136** |
| **J & K** | Baglihar HPS (IPP) (3*150) | 450 | 251 | 144 | 4.15 | 173 |
| | Other Hydro/IPP | 560 | 107 | 63 | 1.97 | 82 |
| | Gas/Diesel/Others | 190 | 0 | 0 | 0.00 | 0 |
| | **Total J & K** | **1200** | **358** | **207** | **6.12** | 255 |
| **Total State Control Area Generation** | | **45161** | **14286** | **14551** | **348.53** | **14522** |
| **J. Net Inter Regional Exchange** [Import (+ve)/Export (-ve)] | | | **5237** | **6024** | **143.52** | **5980** |
| **Total Regional Availability(Gross)** | | **70398** | **38093** | **31070** | **784.60** | **32692** |

**IV. Total Hydro Generation:**

| | | | | | |
|---|---|---|---|---|---|
| **Regional Entities Hydro** | **12234** | **9072** | **1443** | **81.06** | **3377** |
| **State Control Area Hydro** | **6581** | **1676** | **1056** | **34** | **1410** |
| **Total Regional Hydro** | **18815** | **10748** | **2499** | **114.90** | **4788** |

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

| Element | Peak(19:00 Hrs) | Off Peak(03:00 Hrs) | Maximum Interchange (MW) | | Energy (MU) | | Net Energy |
|---|---|---|---|---|---|---|---|
| | MW | MW | Import | Export | Import | Export | MU |
| Vindhychal(HVDC B/B) | -400 | -400 | 0 | 400 | 0.00 | 9.45 | -9.45 |
| 765 KV Gwalior-Agra (D/C) | 2027 | 2653 | 2976 | 0 | 60.64 | 0.00 | 60.64 |
| 400 KV Zerda-Kankroli | -18 | -109 | 85 | 159 | 0.00 | 1.10 | -1.10 |
| 400 KV Zerda-Bhinmal | 98 | -30 | 202 | 97 | 1.04 | 0.00 | 1.04 |
| 220 KV Auraiya-Malanpur | -107 | -75 | 0 | 128 | 0.00 | 2.14 | -2.14 |
| 220 KV Badod-Kota/Morak | 13 | -19 | 36 | 25 | 0.17 | 0.00 | 0.17 |
| Mundra-Mohindergarh(HVDC Bipole) | 1902 | 1897 | 2206 | 0 | 45.57 | 0.00 | 45.57 |
| 400 KV Vindhyachal - Rihand | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| 765 kV Phagi-Gwalior (D/C) | 782 | 714 | 613 | 0 | 22.33 | 0.00 | 22.33 |
| **Sub Total WR** | **4297** | **4631** | | | **129.75** | **12.69** | **117.05** |
| Pusauli Bypass/HVDC | 200 | 100 | 200 | 335 | 2.49 | 1.48 | 1.01 |
| 400 KV MZP- GKP (D/C) | 308 | 310 | 310 | 392 | 0.00 | 3.67 | -3.67 |
| 400 KV Patna-Balia(D/C) X 2 | 147 | 418 | 581 | 0 | 10.38 | 0.00 | 10.38 |
| 400 KV B'Sharif-Balia (D/C) | -101 | -67 | 184 | -102 | 0.18 | 0.00 | 0.18 |
| 765 KV Gaya-Balia | 120 | 186 | 253 | 0 | 1.85 | 0.00 | 1.85 |
| 765 KV Gaya-Fatehpur | 78 | 47 | 414 | 0 | 4.66 | 0.00 | 4.66 |
| 220 KV Pusauli-Sahupuri | 157 | 177 | 182 | 0 | 3.51 | 0.00 | 3.51 |
| 132 KV K'nasa-Sahupuri | 0 | 0 | 0 | 0 | 0.96 | 0.00 | 0.96 |
| 132 KV Son Ngr-Rihand | -36 | -32 | 0 | 42 | 0.00 | 0.88 | -0.88 |
| 132 KV Garhwa-Rihand | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| 765 KV Sasaram - Fatehpur | -125 | -146 | 316 | 147 | 0.00 | 0.46 | -0.46 |
| 400 KV Barh -GKP (D/C) | 192 | 400 | 466 | 0 | 8.94 | 0.00 | 8.94 |
| **Sub Total ER** | **940** | **1393** | | | **32.95** | **6.48** | **26.47** |
| +/- 800 KV BiswanathCharialli-Agra | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| **Sub Total NER** | **0** | **0** | | | **0.00** | **0.00** | **0.00** |
| **Total IR Exch** | **5237** | **6024** | | | **162.70** | **19.18** | **143.52** |

**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 |
| 29.25 | 0.11 | 29.35 | 3.13 | -1.69 | 0.04 | 19.63 | 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 |
| 32.52 | 123.56 | 156.08 | 26.47 | 117.05 | 143.52 | -6.05 | -6.50 | -12.56 |

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

| Element | Peak(19:00 Hrs) | Off Peak(03:00 Hrs) | Maximum Interchange (MW) | | Energy (MU) | | Net Energy |
|---|---|---|---|---|---|---|---|
| | MW | MW | Import | Export | Import | Export | MU |
| 132 KV Tanakpur - Mahendarnagar | -30 | -30 | 0 | 32 | 0 | 1 | -0.60 |

**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 | 0.00 | 3.32 | 41.90 | 70.01 | 19.18 | 7.19 | 0.30 | 0.00 |

| <---------- Frequency (Hz) ----------> | | | | Average Frequency | Frequency Variation Index | Std. Dev. | Frequency in 15 Min Block | | Freq Dev Index (% of Time) |
|---|---|---|---|---|---|---|---|---|---|
| Maximum | | Minimum | | | | | MAX | MIN | |
| Freq | Time | Freq | Time | Hz | | | (Hz) | (Hz) | |
| 50.25 | . | 49.82 | 2207.00 | 50.01 | 0.039 | 0.061 | 0.00 | 0.00 | 29.99 |

**VII. Voltage profile 400 kV**

| Station | Voltage Level (kV) | Maximum | | Minimum | | Voltage (in % of Time) | | | | Voltage Deviation Index (% of Time) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Voltage(KV) | Time | Voltage (KV) | Time | <380 kV | <390 kV | >420 kV | >430 kV | |
| Rihand | 400 | 406 | 03:01 | 399 | 09:19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gorakhpur | 400 | 416 | 21:43 | 388 | 01:11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bareilly(PG)400kV | 400 | 419 | 21:20 | 398 | 10:07 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kanpur | 400 | 416 | 21:20 | 401 | 10:06 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dadri | 400 | 423 | 01:59 | 401 | 10:07 | 0.0 | 0.0 | 11.1 | 0.0 | 11.1 |
| Ballabhgarh | 400 | 431 | 02:59 | 406 | 09:13 | 0.0 | 0.0 | 32.9 | 0.0 | 32.9 |
| Bawana | 400 | 431 | 21:20 | 406 | 09:14 | 0.0 | 0.0 | 37.4 | 0.3 | 37.4 |
| Bassi | 400 | 425 | 21:19 | 393 | 08:49 | 0.0 | 0.0 | 3.9 | 0.0 | 3.9 |
| Hissar | 400 | 424 | 21:20 | 396 | 08:50 | 0.0 | 0.0 | 2.4 | 0.0 | 2.4 |
| Moga | 400 | 424 | 02:02 | 399 | 09:15 | 0.0 | 0.0 | 10.6 | 0.0 | 10.6 |
| Abdullapur | 400 | 427 | 21:19 | 399 | 08:51 | 0.0 | 0.0 | 13.5 | 0.0 | 13.5 |
| Nalagarh | 400 | 437 | 21:20 | 405 | 09:13 | 0.0 | 0.0 | 59.8 | 5.5 | 59.8 |
| Kishenpur | 400 | 424 | 02:01 | 395 | 07:41 | 0.0 | 0.0 | 14.9 | 0.0 | 14.9 |
| Wagoora | 400 | 397 | 23:52 | 368 | 07:41 | 38.5 | 78.4 | 0.0 | 0.0 | 38.5 |
| Amritsar | 400 | 430 | 21:19 | 401 | 09:13 | 0.0 | 0.0 | 33.9 | 0.0 | 33.9 |
| Kashipur | 400 | 420 | 02:01 | 410 | 09:16 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Hamirpur | 400 | 424 | 21:00 | 401 | 07:01 | 0.0 | 0.0 | 5.2 | 0.0 | 5.2 |
| Rishikesh | 400 | 415 | 21:25 | 389 | 09:09 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |

**VIII. Voltage profile 765 kV**

| Station | Voltage Level (kV) | Maximum | | Minimum | | Voltage (in % of Time) | | | | Voltage Deviation Index (% of Time) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Voltage(KV) | Time | Voltage (KV) | Time | <728 kV | <742 kV | >800 kV | >820 kV | |
| Fatehpur | 765 | 772 | 02:03 | 737 | 08:50 | 0.0 | 3.8 | 0.0 | 0.0 | 0.0 |
| Balia | 765 | 764 | 21:55 | 739 | 10:09 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 |
| Moga | 765 | 808 | 21:20 | 760 | 08:49 | 0.0 | 0.0 | 11.5 | 0.0 | 11.5 |
| Agra | 765 | 789 | 02:01 | 746 | 08:49 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bhiwani | 765 | 806 | 21:16 | 768 | 12:05 | 0.0 | 0.0 | 5.2 | 0.0 | 5.2 |
| Unnao | 765 | 766 | 03:01 | 738 | 10:07 | 0.0 | 1.8 | 0.0 | 0.0 | 0.0 |
| Lucknow | 765 | 782 | 21:54 | 752 | 10:07 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Meerut | 765 | 817 | 21:21 | 764 | 08:49 | 0.0 | 0.0 | 21.0 | 0.0 | 21.0 |
| Jhatikara | 765 | | | | | 0.0 | 0.0 | 30.4 | 0.0 | 30.4 |
| Bareilly 765 kV | 765 | 787 | 21:25 | 751 | 09:13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Anta | 765 | 778 | 21:22 | 757 | 08:40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Phagi | 765 | 788 | 21:20 | 746 | 08:45 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**IX. Reservior Parameters:**

| Name of Reservior | Parameters | | Present Parameters | | Last Year | | Last day | |
|---|---|---|---|---|---|---|---|---|
| | FRL (m) | MDDL (m) | Level (m) | Energy (MU) | Level (m) | Energy (MU) | Inflow ($m^3$/s) | Usage ($m^3$/s) |
| Bhakra | 513.59 | 445.62 | 489.90 | 729.18 | 484.46 | 569.03 | 177.97 | 488.55 |
| Pong | 426.72 | 384.05 | 400.28 | 223.85 | 399.25 | 203.01 | 36.56 | 320.60 |
| Tehri | 829.79 | 740.04 | 776.95 | 285.56 | 787.60 | 425.58 | 40.22 | 227.00 |
| Koteshwar | 612.50 | 598.50 | 611.09 | 5.12 | 610.66 | 4.95 | 227.00 | 207.69 |
| Chamera-I | 760.00 | 748.75 | 757.53 | 0.00 | 0.00 | 0.00 | 79.56 | 67.24 |
| Rihand | 268.22 | 252.98 | 846.00 | 203.00 | 848.00 | 231.00 | 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 | 495.94 | 0.00 | 500.87 | 3.22 | 49.62 | 7.95 |

*** NA: Not Available**

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

| State | Off- Peak Hours (03:00 Hrs) | | | Peak Hours (19:00 Hrs) | | | Day Energy (MU) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Bilateral (MW) | IEX (MW) | PXIL (MW) | Bilateral (MW) | IEX (MW) | PXIL (MW) | Bilateral (MU) | IEX / PXIL (MU) | Total (MU) |
| Punjab | -96 | 337 | 0 | -322 | 297 | 0 | -2.77 | 8.05 | 5.28 |
| Delhi | -1038 | -557 | 0 | -704 | -24 | 0 | -18.03 | -4.26 | -22.30 |
| Haryana | -314 | -19 | 0 | -340 | 181 | 0 | -8.84 | 3.56 | -5.29 |
| HP | 201 | 114 | 0 | 471 | -264 | 0 | 10.20 | -1.97 | 8.23 |
| J&K | 724 | 0 | 0 | 742 | 25 | 0 | 15.72 | -0.19 | 15.53 |
| CHD | -30 | 0 | 0 | 0 | -15 | 0 | -0.24 | -0.13 | -0.37 |
| Rajasthan | -7 | 634 | 3 | -7 | 593 | 3 | 8.49 | 13.27 | 21.76 |
| UP | 130 | 0 | 0 | -539 | 0 | 0 | -8.56 | 0.00 | -8.56 |
| Uttarakhand | 193 | 112 | 0 | 193 | 314 | 0 | 4.75 | 3.80 | 8.55 |
| **Total** | **-239** | **621** | **3** | **-506** | **1107** | **3** | **0.70** | **22.13** | **22.83** |

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

| State | Bilateral (MW) | | IEX (MW) | | PXIL (MW) | |
|---|---|---|---|---|---|---|
| | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum |
| Punjab | -68 | -322 | 366 | 256 | 0 | 0 |
| Delhi | -502 | -1068 | 108 | -557 | 0 | 0 |
| Haryana | -314 | -543 | 240 | -272 | 0 | 0 |
| HP | 575 | 151 | 114 | -775 | 0 | 0 |
| J&K | 742 | 589 | 74 | -152 | 0 | 0 |
| CHD | 0 | -30 | 0 | -56 | 0 | 0 |
| Rajasthan | 843 | -7 | 649 | 344 | 3 | 3 |
| UP | 140 | -650 | 0 | 0 | 0 | 0 |
| Uttarakhand | 221 | 193 | 343 | 54 | 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** | **0.00%** |

(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 21.02.2016 :**
Normal

**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 :**

**Report for : 21.02.2016**

**पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER**