

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 25.12.2016

Date of Reporting : 26.12.2016



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 |
| 40344 | 859 | 41204 | 50.05 | 29379 | 344 | 29723 | 50.06 | 827.54 | 11.42 |

* 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 | 54.05 | 9.01 | 1.37 | 64.43 | 29.64 | 27.77 | -1.87 | 92.19 | 0.00 |
| Haryana | 33.26 | 0.22 | 0.00 | 33.49 | 75.88 | 75.89 | 0.01 | 109.38 | 0.24 |
| Rajasthan | 119.91 | 4.23 | 16.52 | 140.66 | 65.14 | 65.36 | 0.22 | 206.02 | 0.00 |
| Delhi | 11.57 | | 0.00 | 11.57 | 43.71 | 43.53 | -0.18 | 55.10 | 0.00 |
| UP | 177.54 | 7.97 | 0.00 | 185.51 | 86.61 | 87.33 | 0.72 | 272.84 | 2.05 |
| Uttarakhand | | 9.18 | 0.00 | 15.90 | 15.25 | 12.88 | -2.37 | 28.78 | 0.00 |
| HP | | 4.68 | 1.17 | 4.68 | 20.09 | 19.07 | -1.02 | 23.75 | 0.01 |
| J & K | | 4.00 | 0.00 | 4.00 | 39.65 | 32.46 | -7.19 | 36.46 | 9.12 |
| Chandigarh | | | | 0.00 | 3.28 | 3.02 | -0.26 | 3.02 | 0.00 |
| Total | 396.34 | 39.29 | 19.06 | 460.25 | 379.24 | 367.30 | -11.95 | 827.54 | 11.42 |

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

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

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

| State | Evening Peak (19:00 Hrs) MW | | | | Off Peak (03:00 Hrs) MW | | | | Maximum Demand Met (MW) and Time(Hrs) | Shortage (MW) | |
|--------------|-----------------------------|------------|-------------|---------------------|-------------------------|------------|-------------|---------------------|---------------------------------------|---------------|------------|
| | Demand Met | Shortage | UI | STOA/PX transaction | Demand Met | Shortage | UI | STOA/PX transaction | | | |
| Punjab | 4684 | 0 | -10 | -778 | 3037 | 0 | -89 | -623 | 4684 | 19:00 | 0 |
| Haryana | 5832 | 0 | 214 | -452 | 3214 | 0 | 106 | -682 | 5832 | 19:00 | 0 |
| Rajasthan | 9239 | 433 | 190 | 252 | 8263 | 0 | -69 | 352 | 9239 | 19:00 | 433 |
| Delhi | 2708 | 0 | -80 | -367 | 1345 | 0 | -44 | -482 | 3361 | 12:00 | 0 |
| UP | 13482 | 0 | 47 | -237 | 10190 | 0 | -57 | 120 | 13482 | 19:00 | 0 |
| Uttarakhand | 1392 | 0 | -233 | 275 | 1114 | 0 | -7 | 220 | 1577 | 9:00 | 0 |
| HP | 1145 | 0 | -177 | 320 | 752 | 0 | 9 | 560 | 1163 | 10:00 | 0 |
| J&K | 1705 | 426 | -314 | 897 | 1377 | 344 | -317 | 859 | 1724 | 18:00 | 431 |
| Chandigarh | 159 | 0 | -36 | 0 | 88 | 0 | 6 | 0 | 168 | 9:00 | 0 |
| Total | 40344 | 859 | -399 | -90 | 29379 | 344 | -463 | 325 | 40344 | 19:00 | 859 |

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

Diversity is 1.02

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

III. Regional Entities :

| 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 | Net MU |
| A. NTPC | | | | | | | | | |
| Singrauli STPS (5*200+2*500) | 2000 | 1671 | 1718 | 1446 | 38.28 | 1595 | 37.76 | 0.52 | |
| Rihand I STPS (2*500) | 1000 | 840 | 876 | 654 | 17.52 | 730 | 17.46 | 0.06 | |
| Rihand II STPS (2*500) | 1000 | 903 | 926 | 720 | 19.05 | 794 | 18.91 | 0.14 | |
| Rihand III STPS (2*500) | 1000 | 950 | 932 | 703 | 20.01 | 834 | 20.17 | -0.16 | |
| Dadri I STPS (4*210) | 840 | 815 | 210 | 158 | 4.12 | 172 | 4.32 | -0.20 | |
| Dadri II STPS (2*490) | 980 | 980 | 907 | 687 | 17.26 | 719 | 17.85 | -0.59 | |
| Unchahar I TPS (2*210) | 420 | 366 | 275 | 279 | 6.45 | 269 | 6.73 | -0.28 | |
| Unchahar II TPS (2*210) | 420 | 405 | 288 | 269 | 6.43 | 268 | 7.22 | -0.79 | |
| Unchahar III TPS (1*210) | 210 | 203 | 132 | 237 | 3.21 | 134 | 3.67 | -0.47 | |
| ISTPP (Jhajjar) (3*500) | 1500 | 1440 | 768 | 601 | 14.63 | 610 | 14.86 | -0.23 | |
| Dadri GPS (4*130.19+2*154.51) | 830 | 798 | 281 | 257 | 6.07 | 253 | 6.54 | -0.47 | |
| Anta GPS (3*88.71+1*153.2) | 419 | 417 | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | |
| Auraiya GPS (4*111.19+2*109.30) | 663 | 635 | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | |
| Dadri Solar(5) | 5 | 1 | 0 | 0 | 0.01 | 0 | 0.01 | -0.01 | |
| Unchahar Solar(10) | 10 | 0 | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | |
| Singrauli Solar(15) | 15 | 1 | 0 | 1 | 0.05 | 2 | 0.03 | 0.02 | |
| KHEP(4*200) | 800 | 870 | 392 | 0 | 2.47 | 103 | 2.61 | -0.14 | |
| Sub Total (A) | 12112 | 11295 | 7705 | 6012 | 156 | 6481 | 158 | -2.59 | |
| B. NPC | | | | | | | | | |
| NAPS (2*220) | 440 | 418 | 454 | 458 | 10.02 | 417 | 10.03 | -0.02 | |
| RAPS- B (2*220) | 440 | 385 | 429 | 432 | 9.29 | 387 | 9.24 | 0.05 | |
| RAPS- C (2*220) | 440 | 220 | 241 | 238 | 5.08 | 212 | 5.28 | -0.20 | |
| Sub Total (B) | 1320 | 1023 | 1124 | 1128 | 24.38 | 1016 | 24.55 | -0.17 | |
| C. NHPC | | | | | | | | | |
| Chamera I HPS (3*180) | 540 | 540 | 183 | 0 | 1.78 | 74 | 1.62 | 0.16 | |
| Chamera II HPS (3*100) | 300 | 201 | 209 | 0 | 1.03 | 43 | 1.00 | 0.03 | |
| Chamera III HPS (3*77) | 231 | 167 | 77 | 0 | 0.49 | 20 | 0.50 | -0.01 | |
| Bairasuli HPS(3*60) | 180 | 120 | 61 | 0 | 0.53 | 22 | 0.50 | 0.03 | |
| Salal-HPS (6*115) | 690 | 88 | 230 | 120 | 2.56 | 107 | 2.10 | 0.46 | |
| Tanakpur-HPS (3*31.4) | 94 | 26 | 31 | 26 | 0.69 | 29 | 0.62 | 0.07 | |
| Uri-I HPS (4*120) | 480 | 79 | 230 | 40 | 2.06 | 86 | 1.91 | 0.15 | |
| Uri-II HPS (4*60) | 240 | 50 | 121 | 40 | 1.28 | 53 | 1.20 | 0.07 | |
| Dhauliganga-HPS (4*70) | 280 | 210 | 210 | 0 | 0.98 | 41 | 0.89 | 0.08 | |
| Dulhasti-HPS (3*130) | 390 | 257 | 271 | 0 | 2.91 | 121 | 2.80 | 0.11 | |
| Sewa-II HPS (3*40) | 120 | 79 | 18 | 0 | 0.12 | 5 | 0.21 | -0.09 | |
| Parbati 3 (4*130) | 520 | 130 | 130 | 0 | 0.40 | 17 | 0.39 | 0.01 | |
| Sub Total (C) | 4065 | 1947 | 1771 | 227 | 15 | 618 | 14 | 1.08 | |
| D.SJVNL | | | | | | | | | |
| NJPC (6*250) | 1500 | 1615 | 706 | 0 | 6.53 | 272 | 6.50 | 0.03 | |
| Rampur HEP (6*68.67) | 412 | 442 | 268 | 0 | 1.86 | 77 | 1.82 | 0.04 | |
| Sub Total (D) | 1912 | 2057 | 974 | 0 | 8.39 | 349 | 8.31 | 0.07 | |
| E. THDC | | | | | | | | | |
| Tehri HPS (4*250) | 1000 | 1032 | 1025 | 0 | 8.41 | 350 | 8.30 | 0.11 | |
| Koteshwar HPS (4*100) | 400 | 132 | 369 | 89 | 3.14 | 131 | 3.10 | 0.04 | |
| Sub Total (E) | 1400 | 1164 | 1394 | 89 | 11.55 | 481 | 11.40 | 0.15 | |
| F. BBMB | | | | | | | | | |
| Bhakra HPS (2*108+3*126+5*157) | 1379 | 540 | 1007 | 374 | 13.21 | 550 | 12.95 | 0.25 | |
| Dehar HPS (6*165) | 990 | 115 | 330 | 0 | 2.89 | 120 | 2.76 | 0.13 | |
| Pong HPS (6*66) | 396 | 184 | 396 | 66 | 4.41 | 184 | 4.41 | 0.01 | |
| Sub Total (F) | 2765 | 838 | 1733 | 440 | 20.51 | 854 | 20.12 | 0.39 | |
| G. IPP(s)/JV(s) | | | | | | | | | |
| ALLAIN DUHANGAN HPS(IPP) (2*96) | 192 | 0 | 52 | 0 | 0.44 | 18 | 0.41 | 0.03 | |
| KARCHAM WANGTOO HPS(IPP) (4*250) | 1000 | 0 | 630 | 0 | 3.55 | 148 | 3.53 | 0.02 | |
| Malana Stg-II HPS (2*50) | 100 | 0 | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | |
| Shree Cement TPS (2*150) | 300 | 0 | -1 | 0 | -0.03 | -1 | 0.00 | -0.03 | |
| Budhil HPS(IPP) (2*35) | 70 | 0 | 0 | 0 | 0.17 | 7 | 0.16 | 0.02 | |
| Sub Total (G) | 1662 | 0 | 681 | 0 | 4.13 | 172 | 4.10 | 0.03 | |
| H. Total Regional Entities (A-G) | 25237 | 18324 | 15382 | 7895 | 239.33 | 9972 | 240.36 | -1.03 | |

| 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 | 210 | 160 | 3.33 | 139 |
| | 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 | 205 | 202 | 4.46 | 186 |
| | Goinawal(GVK) (2*270) | 540 | 0 | 0 | -0.02 | -1 |

| | | | | | | |
|---|--|----------------------------------|-------------|---------------|---------------|-------------|
| | Rajpura (2*700) | 1400 | 860 | 660 | 22.03 | 918 |
| | Talwandi Saboo (3*660) | 1980 | 924 | 924 | 24.28 | 1012 |
| | Thermal (Total) | 6560 | 2199 | 1946 | 54.05 | 2252 |
| | Total Hydro | 1000 | 421 | 377 | 9.01 | 375 |
| | Wind Power | 0 | 0 | 0 | 0.00 | 0 |
| | Biomass | 288 | 0 | 0 | 1.24 | 52 |
| | Solar | 560 | 0 | 0 | 0.13 | 5 |
| | Renewable(Total) | 848 | 0 | 0 | 1.37 | 57 |
| | Total Punjab | 8408 | 2620 | 2323 | 64.43 | 2685 |
| Haryana | Panipat TPS (2*210+2*250) | 920 | 408 | 402 | 9.84 | 410 |
| | DCRTPP (Yamuna nagar) (2*300) | 600 | 228 | 231 | 5.46 | 227 |
| | Faridabad GPS (NTPC)(2*137.75+1*156) | 432 | 0 | 0 | 0.00 | 0 |
| | 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 | 740 | 736 | 17.98 | 749 |
| | Thermal (Total) | 4497 | 1376 | 1369 | 33.28 | 1387 |
| | Total Hydro | 62 | 4 | 4 | 0.22 | 9 |
| | Wind Power | 0 | 0 | 0 | 0.00 | 0 |
| | Biomass | 40 | 0 | 0 | 0.00 | 0 |
| | Solar | 0 | 0 | 0 | 0.00 | 0 |
| | Renewable(Total) | 40 | 0 | 0 | 0.00 | 0 |
| | Total Haryana | 4599 | 1380 | 1373 | 33.49 | 1396 |
| | Rajasthan | kota TPS (2*110+2*195+3*210) | 1240 | 1017 | 971 | 23.79 |
| suratgarh TPS (6*250) | | 1500 | 539 | 597 | 13.29 | 554 |
| Chabra TPS (4*250) | | 1000 | 802 | 859 | 19.45 | 810 |
| 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 | 200 | 132 | 3.29 | 137 |
| RAPS A (NPC) (1*100+1*200) | | 300 | 169 | 171 | 4.30 | 179 |
| Barsingar (NLC) (2*125) | | 250 | 226 | 227 | 5.36 | 223 |
| Giral LTPS (2*125) | | 250 | 0 | 0 | 0.00 | 0 |
| Rajwest LTPS (IPP) (8*135) | | 1080 | 838 | 815 | 18.42 | 767 |
| VS LIGNITE LTPS (IPP) (1*135) | | 135 | 0 | 0 | 0.00 | 0 |
| Kalisindh Thermal(2*600) | | 1200 | 827 | 936 | 22.70 | 946 |
| Kawai(Adani) (2*660) | | 1320 | 615 | 0 | 9.30 | 387 |
| Thermal (Total) | | 8876 | 5233 | 4708 | 119.91 | 4996 |
| Total Hydro | | 550 | 217 | 130 | 4.23 | 176 |
| Wind power | | 4017 | 372 | 917 | 13.82 | 576 |
| Biomass | | 99 | 6 | 6 | 0.15 | 6 |
| Solar | | 1295 | 0 | 0 | 2.55 | 106 |
| Renewable/Others (Total) | | 5411 | 378 | 923 | 16.52 | 688 |
| Total Rajasthan | | 14837 | 5828 | 5761 | 140.66 | 5861 |
| UP | | Anpara TPS (3*210+2*500) | 1630 | 782 | 672 | 18.25 |
| | Obra TPS (2*50+2*94+5*200) | 1194 | 480 | 428 | 11.06 | 461 |
| | Paricha TPS (2*110+2*220+2*250) | 1160 | 876 | 663 | 18.68 | 778 |
| | Panki TPS (2*105) | 210 | 72 | 135 | 1.76 | 73 |
| | Harduaganj TPS (1*60+1*105+2*250) | 665 | 527 | 405 | 11.37 | 474 |
| | Tanda TPS (NTPC) (4*110) | 440 | 373 | 276 | 7.97 | 332 |
| | Roza TPS (IPP) (4*300) | 1200 | 1098 | 756 | 22.72 | 947 |
| | Anpara-C (IPP) (2*600) | 1200 | 1071 | 642 | 23.12 | 963 |
| | Bajaj Energy Pvt.Ltd(IPP) TPS (10*45) | 450 | 364 | 253 | 7.12 | 297 |
| | Anpara-D(2*500) | 1000 | 432 | 294 | 9.17 | 382 |
| | Lalitpur TPS(3*660) | 1980 | 594 | 595 | 14.18 | 591 |
| | Bara(2*660) | 1320 | 588 | 381 | 12.93 | 539 |
| | Thermal (Total) | 12449 | 7257 | 5500 | 158.34 | 6597 |
| | Vishnuparyag HPS (IPP)(4*110) | 440 | 83 | 88 | 2.05 | 85 |
| | Alakanada(4*82.5) | 330 | 77 | 0 | 1.22 | 51 |
| | Other Hydro | 527 | 167 | 204 | 4.70 | 196 |
| | Cogeneration | 981 | 800 | 800 | 19.20 | 800 |
| | Wind Power | 0 | 0 | 0 | 0.00 | 0 |
| | Biomass | 26 | 0 | 0 | 0.00 | 0 |
| | Solar | 102 | 0 | 0 | 0.00 | 0 |
| Renewable(Total) | 128 | 0 | 0 | 0.00 | 0 | |
| Total UP | 14855 | 8384 | 6592 | 185.51 | 7730 | |
| Uttarakhand | Other Hydro | 1250 | 570 | 331 | 9.18 | 383 |
| | Total Gas | 225 | 286 | 270 | 6.70 | 279 |
| | Wind Power | 0 | 0 | 0 | 0.00 | 0 |
| | Biomass | 127 | 0 | 0 | 0.00 | 0 |
| | Solar | 20 | 0 | 0 | 0.02 | 1 |
| | Small Hydro (< 25 MW) | 180 | 0 | 0 | 0.00 | 0 |
| | Renewable(Total) | 327 | 0 | 0 | 0.02 | 1 |
| | Total Uttarakhand | 1802 | 856 | 601 | 15.90 | 663 |
| Delhi | Rajghat TPS (2*67.5) | 135 | 0 | 0 | 0.00 | 0 |
| | Delhi Gas Turbine (6x30 + 3x34) | 282 | 72 | 73 | 1.96 | 82 |
| | Pragati Gas Turbine (2x104+ 1x122) | 330 | 149 | 160 | 3.78 | 158 |
| | Rithala GPS (3*36) | 95 | 0 | 0 | 0.00 | 0 |
| | Bawana GPS (4*216+2*253) | 1370 | 249 | 280 | 6.00 | 250 |
| | Badarpur TPS (NTPC) (3*95+2*210) | 705 | -4 | -4 | -0.17 | -7 |
| | Thermal (Total) | 2917 | 466 | 509 | 11.57 | 482 |
| | Wind Power | 0 | 0 | 0 | 0.00 | 0 |
| | Biomass | 16 | 0 | 0 | 0.00 | 0 |
| | Solar | 2 | 0 | 0 | 0.00 | 0 |
| | Renewable(Total) | 18 | 0 | 0 | 0.00 | 0 |
| | Total Delhi | 2935 | 466 | 509 | 11.57 | 482 |
| | HP | Baspa HPS (IPP) (3*100) | 300 | 0 | 0 | 1.05 |
| Malana HPS (IPP) (2*43) | | 86 | 0 | 0 | 0.23 | 10 |
| Other Hydro | | 372 | 132 | 50 | 2.23 | 93 |
| Wind Power | | 0 | 0 | 0 | 0.00 | 0 |
| Biomass | | 0 | 0 | 0 | 0.00 | 0 |
| Solar | | 0 | 0 | 0 | 0.00 | 0 |
| Small Hydro (< 25 MW) | | 486 | 57 | 42 | 1.17 | 49 |
| Renewable(Total) | | 486 | 57 | 42 | 1.17 | 49 |
| Total HP | | 1244 | 190 | 92 | 4.68 | 195 |
| J & K | | Baqilhar HPS (IPP) (3*150+3*150) | 900 | 143 | 122 | 3.01 |
| | Other Hydro/IPP(including 98 MW Small Hydro) | 308 | 81 | 21 | 0.99 | 41 |
| | Gas/Diesel/Others | 190 | 0 | 0 | 0.00 | 0 |
| | Wind Power | 0 | 0 | 0 | 0.00 | 0 |
| | Biomass | 0 | 0 | 0 | 0.00 | 0 |
| | Solar | 0 | 0 | 0 | 0.00 | 0 |
| | Small Hydro (< 25 MW)Included in Other Hydro Above | 98 | 0 | 0 | 0.00 | 0 |
| | Renewable(Total) | 98 | 0 | 0 | 0.00 | 0 |
| Total J & K | 1398 | 224 | 143 | 4 | 167 | |

| | | | | | |
|--|-------|-------|-------|--------|-------|
| Total State Control Area Generation | 50078 | 19948 | 17395 | 460.25 | 19177 |
| J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)] | | 6952 | 6137 | 172.12 | 7172 |
| Total Regional Availability(Gross) | 75315 | 42283 | 31427 | 871.69 | 36321 |

IV. Total Hydro Generation:

| | | | | | |
|--------------------------|-------|------|------|--------|------|
| Regional Entities Hydro | 12234 | 6946 | 756 | 61.72 | 2572 |
| State Control Area Hydro | 7163 | 2239 | 1639 | 39.29 | 1917 |
| Total Regional Hydro | 19397 | 9184 | 2395 | 101.01 | 4489 |

V. Total Renewable Generation:

| | | | | | |
|------------------------------|------|-----|-----|-------|-----|
| Regional Entities Renewable | 30 | 0 | 1 | 0.06 | 3 |
| State Control Area Renewable | 7356 | 435 | 965 | 19.08 | 795 |
| Total Regional Renewable | 7386 | 435 | 966 | 19.15 | 798 |

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

| Element | Peak(19:00 Hrs) MW | Off Peak(03:00 Hrs) MW | Maximum Interchange (MW) | | Energy (MU) | | Net Energy MU |
|------------------------------------|-----------------------|---------------------------|--------------------------|--------|---------------|--------------|------------------|
| | | | Import | Export | Import | Export | |
| Vindhychal(HVDC B/B) | 400 | -400 | 400 | -400 | 2.97 | 4.06 | -1.09 |
| 765 KV Gwalior-Agra (D/C) | 1303 | 1771 | 2875 | 0 | 43.03 | 0.00 | 43.03 |
| 400 KV Zerda-Kankroli | -30 | -179 | 19 | 223 | 0.00 | 2.61 | -2.61 |
| 400 KV Zerda-Bhimnal | -41 | 121 | 115 | -159 | 0.00 | 0.43 | -0.43 |
| 220 KV Auraiya-Malanpur | -105 | -76 | 0 | 109 | 0.00 | 1.82 | -1.82 |
| 220 KV Badod-Kota/Morak | -63 | -99 | 15 | 90 | 0.00 | 1.69 | -1.69 |
| Mundra-Mohinderghar(HVDC Bipole) | 2499 | 1899 | 2507 | 0.00 | 53.95 | 0.00 | 53.95 |
| 400 KV RAPPCC-Sujalpur | 290 | 140 | 346 | 0 | 5.08 | 0.00 | 5.08 |
| 400 KV Vindhychal-Rihand | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| 765 kV Phagi-Gwalior (D/C) | 1257 | 1137 | 806 | 0 | 30.18 | 0.00 | 30.18 |
| Sub Total WR | 5510 | 4314 | | | 135.20 | 10.60 | 124.60 |
| 400 kV Sasaram - Varanasi | 49 | 9 | 0 | 56 | 0.00 | 1.18 | -1.18 |
| 400 kV Sasaram - Allahabad | -134 | -38 | 0 | 142 | 0.00 | 2.23 | -2.23 |
| 400 KV MZP- GKP (D/C) | 87 | 343 | 465 | 0 | 6.32 | 0.00 | 6.32 |
| 400 KV Patna-Balia(D/C) X 2 | 616 | 772 | 797 | 0 | 16.74 | 0.00 | 16.74 |
| 400 KV B'Sharif-Balia (D/C) | 56 | 239 | 240 | 0 | 4.17 | 0.00 | 4.17 |
| 765 KV Gaya-Balia | 113 | 184 | 257 | 0 | 4.65 | 0.00 | 4.65 |
| 765 KV Gaya-Varanasi (D/C) | -368 | -607 | 691 | 0 | 13.44 | 0.00 | 13.44 |
| 220 KV Pusaali-Sahupuri | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| 132 KV K'nasa-Sahupuri | 0 | 0 | 0 | 0 | 0.00 | 0.51 | -0.51 |
| 132 KV Son Ngr-Rihand | -38 | -35 | 0 | 43 | 0.00 | 0.88 | -0.88 |
| 132 KV Garhwa-Rihand | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| 765 KV Sasaram - Fatehpur | 151 | 145 | 262 | 0 | 3.90 | 0.00 | 3.90 |
| 400 KV Barh -GKP (D/C) | 466 | 516 | 560 | 0 | 11.45 | 0.00 | 11.45 |
| 400 kV B'Sharif - Varanasi (D/C) | -60 | -205 | 205 | 0 | 3.75 | 0.00 | 3.75 |
| Sub Total ER | 938 | 1323 | | | 64.41 | 4.80 | 59.61 |
| +/- 800 KV BiswanathCharialli-Agra | 504 | 500 | 0 | 504.00 | 0.00 | 12.09 | -12.09 |
| Sub Total NER | 504 | 500 | | | 0.00 | 12.09 | -12.09 |
| Total IR Exch | 6952 | 6137 | | | 199.61 | 27.49 | 172.12 |

VI(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 |
| 46.23 | 0.94 | 47.16 | 0.92 | -9.36 | 9.15 | 0.17 | 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 |
| 57.24 | 123.50 | 180.74 | 47.52 | 124.60 | 172.12 | -9.72 | 1.10 | -8.62 |

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

| Element | Peak(19:00 Hrs) MW | Off Peak(03:00 Hrs) MW | Maximum Interchange (MW) | | Energy (MU) | | Net Energy MU |
|---------------------------------|-----------------------|---------------------------|--------------------------|--------|-------------|--------|------------------|
| | | | Import | Export | Import | Export | |
| 132 KV Tanakpur - Mahendarnagar | 12 | 13 | 0 | -14 | 0 | -1 | 0.69 |

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

| <49.2 | <49.7 | <49.8 | <49.9 | <50.0 | 49.9-50.05 | 50.05-50.10 | 50.10-50.20 | >50.20 | >50.50 |
|-------|-------|-------|-------|-------|------------|-------------|-------------|--------|--------|
| 0.00 | 0.00 | 0.00 | 5.67 | 41.09 | 65.35 | 20.79 | 8.10 | 0.20 | 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) | | |
| 50.22 | 6.04 | 49.83 | 11.13 | 50.01 | 0.046 | 0.067 | 50.12 | 49.91 | 34.65 |

VIII(A). Voltage profile 400 kV

| Station | Voltage Level (kV) | Maximum | | Minimum | | Voltage (in % of Time) | | | | Volta ge Deviat |
|-------------------|--------------------|-------------|-------|--------------|-------|------------------------|---------|---------|---------|-----------------------|
| | | Voltage(KV) | Time | Voltage (KV) | Time | <380 kV | <390 kV | >420 kV | >430 kV | |
| Rihand | 400 | 405 | 0:00 | 400 | 18:54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gorakhpur | 400 | 420 | 22:27 | 406 | 18:00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bareilly(PG)400kV | 400 | 423 | 1:56 | 406 | 8:38 | 0.0 | 0.0 | 4.8 | 0.0 | 4.8 |
| Kanpur | 400 | 420 | 2:02 | 404 | 11:39 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dadri | 400 | 426 | 2:30 | 409 | 11:10 | 0.0 | 0.0 | 31.7 | 0.0 | 31.7 |
| Ballabgarh | 400 | 431 | 2:02 | 412 | 11:13 | 0.0 | 0.0 | 69.3 | 0.6 | 69.3 |
| Bawana | 400 | 409 | 0:00 | 409 | 0:00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bassi | 400 | 425 | 21:59 | 399 | 11:08 | 0.0 | 0.0 | 9.5 | 0.0 | 9.5 |
| Hissar | 400 | 420 | 2:02 | 401 | 11:11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Moga | 400 | 422 | 1:16 | 406 | 10:12 | 0.0 | 0.0 | 1.6 | 0.0 | 1.6 |
| Abdullapur | 400 | 424 | 1:15 | 409 | 11:12 | 0.0 | 0.0 | 16.2 | 0.0 | 16.2 |
| Nalagarh | 400 | 427 | 2:09 | 417 | 6:43 | 0.0 | 0.0 | 78.6 | 0.0 | 78.6 |
| Kishenpur | 400 | 421 | 1:04 | 400 | 18:10 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 |
| Wagoora | 400 | 403 | 13:01 | 369 | 18:12 | 19.8 | 68.0 | 0.0 | 0.0 | 19.8 |
| Amritsar | 400 | 425 | 2:02 | 407 | 9:37 | 0.0 | 0.0 | 32.5 | 0.0 | 32.5 |
| Kashipur | 400 | 0 | 0:00 | 0 | 0:00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Hamirpur | 400 | 419 | 0:30 | 406 | 10:09 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rishikesh | 400 | 422 | 1:54 | 402 | 8:43 | 0.0 | 0.0 | 4.5 | 0.0 | 4.5 |

VIII(B). Voltage profile 765 kV

| Station | Voltage Level (kV) | Maximum | | Minimum | | Voltage (in % of Time) | | | | Volta ge Deviat |
|----------|--------------------|-------------|------|--------------|-------|------------------------|---------|---------|---------|-----------------------|
| | | Voltage(KV) | Time | Voltage (KV) | Time | <728 kV | <742 kV | >800 kV | >820 kV | |
| Fatehpur | 765 | 775 | 2:02 | 750 | 8:22 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Balia | 765 | 794 | 1:56 | 765 | 8:42 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Moga | 765 | 803 | 1:15 | 773 | 10:09 | 0.0 | 0.0 | 1.6 | 0.0 | 1.6 |

| | | | | | | | | | | |
|-----------------|-----|-----|-------|-----|-------|-----|-----|------|-----|------|
| Agra | 765 | 792 | 22:00 | 758 | 11:11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bhiwani | 765 | 806 | 1:00 | 775 | 11:10 | 0.0 | 0.0 | 27.9 | 0.0 | 27.9 |
| Unnao | 765 | 784 | 1:03 | 750 | 8:41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lucknow | 765 | 800 | 23:57 | 792 | 22:47 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Meerut | 765 | 806 | 17:04 | 769 | 10:10 | 0.0 | 0.0 | 2.3 | 0.0 | 2.3 |
| Jhatikara | 765 | 806 | 2:01 | 773 | 11:11 | 0.0 | 0.0 | 21.8 | 0.0 | 21.8 |
| Bareilly 765 kV | 765 | 799 | 2:03 | 765 | 8:41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Anta | 765 | 796 | 4:01 | 766 | 11:10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Phagi | 765 | 803 | 4:02 | 768 | 10:29 | 0.0 | 0.0 | 4.6 | 0.0 | 4.6 |

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

IX. Reservoir Parameters:

| Name of Reservoir | Parameters | | Present Parameters | | Last Year | | Last day | |
|-------------------|------------|----------|--------------------|-------------|-----------|-------------|----------------------------|---------------------------|
| | FRL (m) | MDDL (m) | Level (m) | Energy (MU) | Level (m) | Energy (MU) | Inflow (m ³ /s) | Usage (m ³ /s) |
| Bhakra | 513.59 | 445.62 | 489.62 | 719.44 | 502.08 | 1179.55 | 157.72 | 415.83 |
| Pong | 426.72 | 384.05 | 408.86 | 454.47 | 412.05 | 566.84 | 43.30 | 295.97 |
| Tehri | 829.79 | 740.04 | 810.70 | 816.26 | 804.85 | 701.66 | 39.63 | 195.00 |
| Koteshwar | 612.50 | 598.50 | 610.82 | 4.95 | 610.70 | 4.95 | 195.00 | 206.47 |
| Chamera-I | 760.00 | 748.75 | 0.00 | 0.00 | 0.00 | 0.00 | 40.86 | 47.89 |
| 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 | 505.75 | 2.24 | 499.77 | 4.14 | 39.88 | 132.54 |

* 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 | -625 | 3 | 0 | -708 | -69 | 0 | -20.99 | -1.02 | -22.01 |
| Delhi | -200 | -282 | 0 | -290 | -76 | 0 | -6.14 | -2.60 | -8.73 |
| Haryana | -974 | 292 | 0 | -661 | 209 | 0 | -18.29 | 2.94 | -15.35 |
| HP | 492 | 68 | 0 | 401 | -81 | 0 | 12.55 | -1.62 | 10.93 |
| J&K | 608 | 252 | 0 | 603 | 295 | 0 | 14.39 | 5.55 | 19.94 |
| CHD | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | -0.02 | -0.02 |
| Rajasthan | -7 | 360 | 0 | -7 | 259 | 0 | 6.71 | 8.08 | 14.79 |
| UP | 120 | 0 | 0 | -137 | -100 | 0 | -7.37 | -1.54 | -8.91 |
| Uttarakhand | 239 | -19 | 0 | 239 | 36 | 0 | 5.86 | 0.13 | 5.99 |
| Total | -348 | 672 | 0 | -562 | 472 | 0 | -13.29 | 9.92 | -3.37 |

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

| State | Bilateral (MW) | | IEX (MW) | | PXIL (MW) | |
|-------------|----------------|---------|----------|---------|-----------|---------|
| | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum |
| Punjab | -620 | -1261 | 193 | -414 | 0 | 0 |
| Delhi | -156 | -381 | 263 | -548 | 0 | 0 |
| Haryana | -621 | -1000 | 298 | -430 | 0 | 0 |
| HP | 659 | 377 | 68 | -591 | 0 | 0 |
| J&K | 608 | 590 | 372 | -98 | 0 | 0 |
| CHD | 0 | 0 | 0 | -62 | 0 | 0 |
| Rajasthan | 681 | -7 | 690 | 191 | 0 | 0 |
| UP | 144 | -855 | 0 | -100 | 0 | 0 |
| Uttarakhand | 270 | 239 | 182 | -207 | 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 | 1.74% |
| ER | 0.00% |
| Simultaneous | 0.00% |

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

| | |
|--------------|-------|
| WR | 7.99% |
| ER | 0.00% |
| Simultaneous | 5.21% |

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

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

XII. Zero Crossing Violations

| State | No. of violations(Maximum 8 in a day) | Maximum number of continuous blocks without sign change |
|-------------|---------------------------------------|---|
| Punjab | 1 | 24 |
| Haryana | 0 | 10 |
| Rajasthan | 1 | 13 |
| Delhi | 3 | 25 |
| UP | 1 | 21 |
| Uttarakhand | 1 | 17 |
| HP | 3 | 22 |
| J & K | 3 | 32 |
| Chandigarh | 4 | 29 |

XIII. System Constraints:

XIV. Grid Disturbance / Any Other Significant Event:

XV. Weather Conditions For 25.12.2016 :

XVI. Synchronisation of new generating units :

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

0
0.00
0

0

XVIII. Tripping of lines in pooling stations :

XIX. Complete generation loss in a generating station :

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

Report for : 25.12.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER