

# 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 16.12.2016

Date of Reporting : 17.12.2016



### 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
42417	989	43406	50.05	29247	348	29595	50.06	865.83	10.29

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

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

State	State's Control Area Generation (Net MU)				Drawal Schedule (Net MU)	Actual Drawal (Net MU)	UI (Net MU)	Consumption (Net MU)	Shortages * (MU)
	Thermal	Hydro	Renewable/others \$	Total					
Punjab	58.86	7.64	1.48	67.98	39.34	40.14	0.81	108.13	0.00
Haryana	45.64	0.34	0.00	45.98	77.16	77.08	-0.08	123.07	0.00
Rajasthan	121.70	4.40	9.12	135.22	70.56	72.06	1.50	207.27	0.81
Delhi	14.16	0.00	0.00	14.16	43.81	45.12	1.31	59.28	0.00
UP	185.19	8.58	0.00	193.77	80.14	79.36	-0.78	273.13	0.53
Uttarakhand		7.53	0.00	12.93	19.40	18.16	-1.24	31.09	0.00
HP		2.80	1.35	4.16	20.72	20.44	-0.27	24.60	0.02
J & K		4.03	0.00	4.03	37.66	31.70	-5.96	35.73	8.93
Chandigarh				0.00	3.48	3.53	0.05	3.53	0.00
<b>Total</b>	<b>425.55</b>	<b>35.32</b>	<b>11.96</b>	<b>478.23</b>	<b>392.27</b>	<b>387.59</b>	<b>-4.67</b>	<b>865.83</b>	<b>10.29</b>

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

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

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	5657	0	-12	-698	3142	0	58	-615	5657	19:00	0
Haryana	6492	0	35	-320	3495	0	74	-589	6492	19:00	0
Rajasthan	9171	382	-77	404	7974	0	38	279	9456	8:00	260
Delhi	3101	0	143	-257	1344	0	-22	-526	3381	11:00	0
UP	13157	175	-283	-183	10061	0	28	139	13157	19:00	175
Uttarakhand	1685	0	-2	366	1048	0	-26	314	1753	8:00	0
HP	1244	0	-32	361	705	0	-68	574	1365	9:00	0
J&K	1727	432	-223	832	1392	348	-176	754	1727	19:00	432
Chandigarh	183	0	12	0	86	0	-6	0	201	9:00	0
<b>Total</b>	<b>42417</b>	<b>989</b>	<b>-439</b>	<b>505</b>	<b>29247</b>	<b>348</b>	<b>-100</b>	<b>330</b>	<b>42417</b>	<b>19:00</b>	<b>989</b>

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

### III. Regional Entities :

Station/ Constituent	Inst. Capacity (Effective) MW	Declared Capacity(MW)	Peak MW	Off Peak MW	Energy	Average	Schedule	UI
			(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	
<b>A. NTPC</b>								
Singrauli STPS (5*200+2*500)	2000	1862	2008	1765	43.88	1828	43.54	0.34
Rihand I STPS (2*500)	1000	553	475	545	12.09	504	11.94	0.15
Rihand II STPS (2*500)	1000	952	991	723	21.38	891	20.98	0.41
Rihand III STPS (2*500)	1000	952	988	719	21.02	876	20.72	0.30
Dadri I STPS (4*210)	840	815	209	209	4.04	168	4.25	-0.21
Dadri II STPS (2*490)	980	980	971	693	17.70	737	18.12	-0.42
Unchahar I TPS (2*210)	420	361	334	268	6.89	287	7.08	-0.19
Unchahar II TPS (2*210)	420	405	349	280	7.46	311	7.90	-0.44
Unchahar III TPS (1*210)	210	203	182	136	3.73	156	3.98	-0.25
ISTPP (Jhajjar) (3*500)	1500	1440	998	602	15.96	665	15.99	-0.03
Dadri GPS (4*130.19+2*154.51)	830	754	248	273	6.21	259	6.64	-0.43
Anta GPS (3*88.71+1*153.2)	419	412	0	0	0.00	0	0.15	-0.15
Auraiya GPS (4*111.19+2*109.30)	663	625	0	0	0.00	0	0.20	-0.20
Dadri Solar(5)	5	1	0	0	0.02	1	0.02	0.00
Unchahar Solar(10)	10	0	0	0	0.00	0	0.00	0.00
Singrauli Solar(15)	15	2	0	0	0.06	3	0.06	0.00
KHEP(4*200)	800	680	533	0	2.11	88	1.97	0.15
<b>Sub Total (A)</b>	<b>12112</b>	<b>10995</b>	<b>8286</b>	<b>6213</b>	<b>163</b>	<b>6773</b>	<b>164</b>	<b>-0.95</b>
<b>B. NPC</b>								
NAPS (2*220)	440	413	450	456	10.00	417	9.91	0.09
RAPS- B (2*220)	440	385	429	428	9.23	384	9.24	-0.02
RAPS- C (2*220)	440	218	239	239	5.04	210	5.23	-0.19
<b>Sub Total (B)</b>	<b>1320</b>	<b>1016</b>	<b>1118</b>	<b>1123</b>	<b>24.27</b>	<b>1011</b>	<b>24.38</b>	<b>-0.12</b>
<b>C. NHPC</b>								
Chamera I HPS (3*180)	540	360	0	0	0.00	0	1.20	-1.20
Chamera II HPS (3*100)	300	201	210	0	1.15	48	1.03	0.13
Chamera III HPS (3*77)	231	185	209	0	0.57	24	0.56	0.02
Bairasuli HPS(3*60)	180	179	70	0	0.45	19	0.43	0.02
Salal-HPS (6*115)	690	80	305	35	2.29	95	1.92	0.37
Tanakpur-HPS (3*31.4)	94	23	31	32	0.73	31	0.55	0.18
Uri-I HPS (4*120)	480	74	223	23	2.10	87	1.77	0.33
Uri-II HPS (4*60)	240	54	121	41	1.35	56	1.29	0.06
Dhauliganga-HPS (4*70)	280	210	206	0	1.06	44	0.98	0.08
Dulhasti-HPS (3*130)	390	257	262	0	3.12	130	3.00	0.12
Sewa-II HPS (3*40)	120	80	63	0	0.24	10	0.25	-0.01
Parbati 3 (4*130)	520	130	131	0	0.43	18	0.39	0.04
<b>Sub Total (C)</b>	<b>4065</b>	<b>1832</b>	<b>1831</b>	<b>131</b>	<b>13</b>	<b>562</b>	<b>13</b>	<b>0.14</b>
<b>D.SJVNL</b>								
NJPC (6*250)	1500	1615	1616	0	6.64	277	6.70	-0.06
Rampur HEP (6*68.67)	412	442	438	0	1.84	77	1.86	-0.02
<b>Sub Total (D)</b>	<b>1912</b>	<b>2057</b>	<b>2054</b>	<b>0</b>	<b>8.48</b>	<b>353</b>	<b>8.56</b>	<b>-0.08</b>
<b>E. THDC</b>								
Tehri HPS (4*250)	1000	1060	1032	0	7.13	297	7.00	0.13
Koteshwar HPS (4*100)	400	100	200	91	2.46	102	2.41	0.05
<b>Sub Total (E)</b>	<b>1400</b>	<b>1160</b>	<b>1232</b>	<b>91</b>	<b>9.59</b>	<b>400</b>	<b>9.41</b>	<b>0.18</b>
<b>F. BBMB</b>								
Bhakra HPS (2*108+3*126+5*157)	1379	620	1014	387	15.03	626	14.89	0.14
Dehar HPS (6*165)	990	126	495	0	3.13	130	3.02	0.11
Pong HPS (6*66)	396	209	396	66	4.94	206	5.02	-0.08
<b>Sub Total (F)</b>	<b>2765</b>	<b>955</b>	<b>1905</b>	<b>453</b>	<b>23.09</b>	<b>962</b>	<b>22.92</b>	<b>0.17</b>
<b>G. IPP(s)/JV(s)</b>								
ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	67	0	0.45	19	0.43	0.02
KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	630	0	3.46	144	3.56	-0.09
Malana Stg-II HPS (2*50)	100	0	0	0	0.00	0	0.00	0.00
Shree Cement TPS (2*150)	300	0	0	0	0.00	0	0.00	0.00
Budhil HPS(IPP) (2*35)	70	0	0	0	0.19	8	0.19	0.00
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>697</b>	<b>0</b>	<b>4.10</b>	<b>171</b>	<b>4.18</b>	<b>-0.08</b>
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18015</b>	<b>17122</b>	<b>8010</b>	<b>245.58</b>	<b>10233</b>	<b>246.31</b>	<b>-0.73</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	530	510	12.18	508
	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	563	569	13.46	561
	Goidwal(GVK) (2*270)	540	0	0	-0.02	-1

	Rajpura (2*700)	1400	610	330	12.76	532
	Talwandi Saboo (3*660)	1980	864	616	20.50	854
	<b>Thermal (Total)</b>	<b>6560</b>	<b>2567</b>	<b>2025</b>	<b>58.86</b>	<b>2453</b>
	Total Hydro	1000	375	233	7.64	318
	Wind Power	0	0	0	0.00	0
	Biomass	288	0	0	1.22	51
	Solar	560	0	0	0.26	11
	<b>Renewable(Total)</b>	<b>848</b>	<b>0</b>	<b>0</b>	<b>1.48</b>	<b>62</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>2942</b>	<b>2258</b>	<b>67.98</b>	<b>2833</b>
Haryana	Panipat TPS (2*210+2*250)	920	433	216	8.78	366
	DCRTPP (Yamuna nagar) (2*300)	600	554	464	12.06	502
	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	1185	732	24.81	1034
	<b>Thermal (Total)</b>	<b>4497</b>	<b>2172</b>	<b>1412</b>	<b>45.64</b>	<b>1902</b>
	Total Hydro	62	7	8	0.34	14
	Wind Power	0	0	0	0.00	0
	Biomass	40	0	0	0.00	0
	Solar	0	0	0	0.00	0
	<b>Renewable(Total)</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
	<b>Total Haryana</b>	<b>4599</b>	<b>2179</b>	<b>1420</b>	<b>45.98</b>	<b>1916</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	1153	1051	26.20	1092
	suratgarh TPS (6*250)	1500	871	791	19.80	825
	Chabra TPS (4*250)	1000	920	919	21.60	900
	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	167	170	4.30	179
	RAPS A (NPC) (1*100+1*200)	300	170	171	4.20	175
	Barsingar (NLC) (2*125)	250	0	0	0.00	0
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwest LTPS (IPP) (8*135)	1080	825	821	19.40	808
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	1120	1119	26.20	1092
	Kawai(Adani) (2*660)	1320	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5226</b>	<b>5042</b>	<b>121.70</b>	<b>5071</b>
	Total Hydro	550	216	199	4.40	183
	Wind power	4017	328	281	6.49	271
	Biomass	99	11	11	0.27	11
	Solar	1295	7	0	2.36	98
	Renewable/Others (Total)	5411	346	292	9.12	380
	<b>Total Rajasthan</b>	<b>14837</b>	<b>5788</b>	<b>5533</b>	<b>135.22</b>	<b>5634</b>
UP	Anpara TPS (3*210+2*500)	1630	1233	995	28.44	1185
	Obra TPS (2*50+2*94+5*200)	1194	475	401	10.77	449
	Paricha TPS (2*110+2*220+2*250)	1160	837	580	17.02	709
	Panki TPS (2*105)	210	0	0	0.00	0
	Harduaganj TPS (1*60+1*105+2*250)	665	527	407	11.36	474
	Tanda TPS (NTPC) (4*110)	440	282	201	6.21	259
	Roza TPS (IPP) (4*300)	1200	1080	765	23.22	968
	Anpara-C (IPP) (2*600)	1200	527	302	11.56	482
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	81	58	1.61	67
	Anpara-D(2*500)	1000	872	874	21.02	876
	Lalitpur TPS(3*660)	1980	597	601	14.29	596
	Bara(2*660)	1320	877	723	20.48	853
	<b>Thermal (Total)</b>	<b>12449</b>	<b>7388</b>	<b>5907</b>	<b>165.99</b>	<b>6916</b>
	Vishnuparyag HPS (IPP)(4*110)	440	93	88	2.21	92
	Alaknada(4*82.5)	330	75	0	2.00	83
	Other Hydro	527	245	132	4.38	182
	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
<b>Renewable(Total)</b>	<b>128</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	
<b>Total UP</b>	<b>14855</b>	<b>8601</b>	<b>6927</b>	<b>193.77</b>	<b>8074</b>	
Uttarakhand	Other Hydro	1250	590	215	7.53	314
	Total Gas	225	287	177	5.36	223
	Wind Power	0	0	0	0.00	0
	Biomass	127	0	0	0.00	0
	Solar	20	0	0	0.04	2
	Small Hydro (< 25 MW)	180	0	0	0.00	0
	<b>Renewable(Total)</b>	<b>327</b>	<b>0</b>	<b>0</b>	<b>0.04</b>	<b>2</b>
<b>Total Uttarakhand</b>	<b>1802</b>	<b>877</b>	<b>392</b>	<b>12.93</b>	<b>539</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	68	69	1.92	80
	Pragati Gas Turbine (2x104+ 1x122)	330	261	264	6.16	257
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	248	280	6.08	253
	Badarpur TPS (NTPC) (3*95+2*210)	705	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>2917</b>	<b>577</b>	<b>613</b>	<b>14.16</b>	<b>590</b>
	Wind Power	0	0	0	0.00	0
	Biomass	16	0	0	0.00	0
	Solar	2	0	0	0.00	0
	<b>Renewable(Total)</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
<b>Total Delhi</b>	<b>2935</b>	<b>577</b>	<b>613</b>	<b>14.16</b>	<b>590</b>	
HP	Baspa HPS (IPP) (3*100)	300	27	0	1.05	44
	Malana HPS (IPP) (2*43)	86	44	0	0.28	12
	Other Hydro	372	67	38	1.47	61
	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	65	50	1.35	56
	<b>Renewable(Total)</b>	<b>486</b>	<b>65</b>	<b>50</b>	<b>1.35</b>	<b>56</b>
	<b>Total HP</b>	<b>1244</b>	<b>203</b>	<b>88</b>	<b>4.16</b>	<b>173</b>
	J & K	Baqilhar HPS (IPP) (3*150+3*150)	900	143	123	3.03
Other Hydro/IPP(including 98 MW Small Hydro)		308	86	20	1.00	42
Gas/Diesel/Others		190	0	0	0.00	0
Wind Power		0	0	0	0.00	0
Biomass		0	0	0	0.00	0
Solar		0	0	0	0.00	0
Small Hydro (< 25 MW)Included in Other Hydro Above		98	0	0	0.00	0
<b>Renewable(Total)</b>		<b>98</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
<b>Total J &amp; K</b>	<b>1398</b>	<b>229</b>	<b>143</b>	<b>4</b>	<b>168</b>	

Total State Control Area Generation	50078	21396	17374	478.23	19926
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		5898	5803	180.03	7501
Total Regional Availability(Gross)	75315	44416	31188	903.85	37660

**IV. Total Hydro Generation:**

Regional Entities Hydro	12234	8251	674	60.68	2528
State Control Area Hydro	7163	2320	1283	36.67	1753
Total Regional Hydro	19397	10571	1957	97.35	4281

**V. Total Renewable Generation:**

Regional Entities Renewable	30	0	0	0.08	3
State Control Area Renewable	7356	411	342	12.00	500
Total Regional Renewable	7386	411	342	12.08	503

**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)	-500	-500	0	500	0.00	12.24	-12.24
765 KV Gwalior-Agra (D/C)	1950	1807	2604	0	52.84	0.00	52.84
400 KV Zerda-Kankroli	-51	-120	25	126	0.00	1.08	-1.08
400 KV Zerda-Bhimnal	115	-22	155	60	1.38	0.00	1.38
220 KV Auraiya-Malanpur	-97	-61	0	100	0.00	1.54	-1.54
220 KV Badod-Kota/Morak	56	-54	7	68	0.00	0.93	-0.93
Mundra-Mohinderghar(HVDC Bipole)	1798	1803	2004	0.00	43.75	0.00	43.75
400 KV RAPPCC-Sujalpur	-315	-248	429	0	8.12	0.00	8.12
400 KV Vindhychal-Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1095	1006	1601	0	32.55	0.00	32.55
<b>Sub Total WR</b>	<b>4051</b>	<b>3611</b>			<b>138.64</b>	<b>15.79</b>	<b>122.85</b>
400 kV Sasaram - Varanasi	272	256	276	0	6.33	0.00	6.33
400 kV Sasaram - Allahabad	67	85	101	0	1.94	0.00	1.94
400 KV MZP- GKP (D/C)	26	341	462	0	7.17	0.00	7.17
400 KV Patna-Balia(D/C) X 2	622	642	861	0	17.15	0.00	17.15
400 KV B'Sharif-Balia (D/C)	-92	125	224	92	2.54	0.00	2.54
765 KV Gaya-Balia	171	182	301	0	5.48	0.00	5.48
765 KV Gaya-Varanasi (D/C)	-302	-378	837	0	13.24	0.00	13.24
220 KV Pusaali-Sahupuri	160	116	164	0	3.01	0.00	3.01
132 KV K'nasa-Sahupuri	-26	-28	0	34	0.00	0.51	-0.51
132 KV Son Ngr-Rihand	-26	-26	0	30	0.00	0.60	-0.60
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-156	-97	126	156	0.00	0.42	-0.42
400 KV Barh -GKP (D/C)	520	506	662	0	12.88	0.00	12.88
400 kV B'Sharif - Varanasi (D/C)	111	-32	207	111	1.00	0.00	1.00
<b>Sub Total ER</b>	<b>1347</b>	<b>1692</b>			<b>70.74</b>	<b>1.53</b>	<b>69.21</b>
+/- 800 KV BiswanathChariali-Agra	500	500	0	600.00	0.00	12.03	-12.03
<b>Sub Total NER</b>	<b>500</b>	<b>500</b>			<b>0.00</b>	<b>12.03</b>	<b>-12.03</b>
<b>Total IR Exch</b>	<b>5898</b>	<b>5803</b>			<b>209.38</b>	<b>29.34</b>	<b>180.03</b>

**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
42.61	0.76	43.37	3.28	-8.47	8.66	15.51	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
55.32	123.36	178.67	57.18	122.85	180.03	1.87	-0.51	1.36

**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	-29	-30	0	31	0	1	-0.55

**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	0.71	10.28	55.92	68.81	15.66	5.27	0.22	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)		
50.21	13.01	49.76	17.14	49.99	0.053	50.09	49.87	31.19	

**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	399	9:20	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	419	2:23	398	10:11	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	422	2:22	381	11:46	0.0	0.0	3.0	0.0	3.0
Kanpur	400	416	1:04	395	9:49	0.0	0.0	0.0	0.0	0.0
Dadri	400	428	2:23	400	11:38	0.0	0.0	23.7	0.0	23.7
Ballabgarh	400	432	2:23	402	10:05	0.0	0.0	36.7	7.4	36.7
Bawana	400	430	2:22	402	11:36	0.0	0.0	34.5	0.0	34.5
Bassi	400	424	21:37	394	10:07	0.0	0.0	4.0	0.0	4.0
Hissar	400	422	2:23	391	11:38	0.0	0.0	0.3	0.0	0.3
Moga	400	424	2:23	398	10:05	0.0	0.0	7.1	0.0	7.1
Abdullapur	400	428	12:10	120	12:59	3.7	3.7	25.6	0.0	29.3
Nalagarh	400	428	2:24	410	9:28	0.0	0.0	37.7	0.0	37.7
Kishenpur	400	428	2:26	396	11:39	0.0	0.0	9.7	0.0	9.7
Wagoora	400	408	2:23	364	12:13	43.6	86.9	0.0	0.0	43.6
Amritsar	400	429	2:23	401	9:25	0.0	0.0	23.1	0.0	23.1
Kashipur	400	0	0:00	0	0:00	100.0	100.0	0.0	0.0	100.0
Hamirpur	400	420	0:00	401	15:17	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	422	2:23	390	10:12	0.0	0.0	3.2	0.0	3.2

**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	776	0:12	735	10:12	0.0	9.5	0.0	0.0	0.0
Balia	765	787	2:22	749	10:11	0.0	0.0	0.0	0.0	0.0
Moga	765	801	0:15	753	11:38	0.0	0.0	0.4	0.0	0.4

Agra	765	791	1:02	747	10:10	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	810	1:03	758	10:05	0.0	0.0	22.0	0.0	22.0
Unnao	765	780	2:22	727	10:10	0.3	15.2	0.0	0.0	0.3
Lucknow	765	802	2:23	757	10:10	0.0	0.0	0.1	0.0	0.1
Meerut	765	809	2:23	758	10:11	0.0	0.0	13.1	0.0	13.1
Jhatikara	765	810	2:23	755	10:10	0.0	0.0	19.1	0.0	19.1
Bareilly 765 kV	765	797	2:23	750	10:05	0.0	0.0	0.0	0.0	0.0
Anta	765	798	3:58	760	11:48	0.0	0.0	0.0	0.0	0.0
Phagi	765	803	21:34	750	11:46	0.0	0.0	6.7	0.0	6.7

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

**IX. Reservoir Parameters:**

Name of Reservoir	Parameters		Present Parameters		Last Year		Last day	
	FRL (m)	MDDL (m)	Level (m)	Energy (MU)	Level (m)	Energy (MU)	Inflow (m <sup>3</sup> /s)	Usage (m <sup>3</sup> /s)
Bhakra	513.59	445.62	491.64	788.17	503.90	1258.87	166.19	460.63
Pong	426.72	384.05	410.00	494.27	413.41	611.20	57.40	329.01
Tehri	829.79	740.04	813.35	870.00	808.15	766.00	39.61	163.00
Koteshwar	612.50	598.50	610.01	4.57	611.13	5.20	163.00	162.03
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	0.00	0.00
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	507.08	2.28	502.53	4.19	35.76	109.21

\* 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	-617	2	0	-698	0	0	-18.10	4.14	-13.96
Delhi	-182	-344	0	-271	15	0	-5.50	-3.42	-8.92
Haryana	-940	351	0	-650	329	0	-17.91	8.28	-9.63
HP	504	71	0	411	-50	0	12.82	-1.46	11.36
J&K	617	137	0	611	221	0	14.99	4.37	19.36
CHD	0	0	0	0	0	0	0.00	-0.02	-0.02
Rajasthan	-7	286	0	-7	411	0	4.37	12.62	16.99
UP	139	0	0	-83	-100	0	-6.87	-1.44	-8.32
Uttarakhand	325	-11	0	325	42	0	7.95	2.23	10.17
<b>Total</b>	<b>-163</b>	<b>492</b>	<b>0</b>	<b>-362</b>	<b>867</b>	<b>0</b>	<b>-8.24</b>	<b>25.28</b>	<b>17.04</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-596	-983	638	0	0	0
Delhi	-93	-361	54	-424	0	0
Haryana	-621	-973	362	319	0	0
HP	673	387	71	-649	0	0
J&K	704	598	353	-117	0	0
CHD	0	0	20	-51	0	0
Rajasthan	448	-7	956	239	0	0
UP	176	-819	0	-100	0	0
Uttarakhand	356	325	246	-98	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%
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**XII. Zero Crossing Violations**

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
Punjab	1	13
Haryana	0	12
Rajasthan	1	16
Delhi	3	24
UP	0	9
Uttarakhand	3	25
HP	3	28
J & K	4	22
Chandigarh	5	43

**XIII. System Constraints:**

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

**XV. Weather Conditions For 16.12.2016 :**  
Dense Fog in some parts of NR.

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

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

1. 220 kV hisar-fatehabad ckt 2 charged from hisar end ony at 1945 hrs after 5 years.
2. Bay no 419,420 at kurukshetra HVDC first time charged at 1921 and 1922 hrs respectively.

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 : 16.12.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER