

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पारदर्शिता की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 19.12.2016

Date of Reporting : 20.12.2016



### 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
41389	760	42149	50.05	27986	355	28341	50.06	848.69	12.25

\* 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	52.25	8.02	0.36	60.63	41.10	41.40	0.30	102.02	0.00
Haryana	45.29	0.38	0.00	45.67	72.36	71.80	-0.56	117.47	0.00
Rajasthan	118.08	3.65	4.84	126.58	71.04	73.36	2.32	199.93	1.74
Delhi	13.73	0.00	0.00	13.73	44.10	44.47	0.37	58.20	0.03
UP	178.74	6.56	0.00	185.31	88.20	88.15	-0.05	273.45	1.21
Uttarakhand		7.95	0.00	14.27	17.81	18.27	0.47	32.55	0.00
HP		2.34	1.38	3.72	20.47	20.90	0.43	24.61	0.02
J & K		3.18	0.00	3.18	38.77	33.82	-4.96	37.00	9.25
Chandigarh				0.00	3.39	3.46	0.07	3.46	0.00
<b>Total</b>	<b>408.10</b>	<b>32.09</b>	<b>6.58</b>	<b>453.08</b>	<b>397.23</b>	<b>395.61</b>	<b>-1.62</b>	<b>848.69</b>	<b>12.25</b>

\* Shortage furnished by the respective constituent States 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	5352	0	56	-708	2936	0	58	-623	5404	9:00	0
Haryana	6459	0	109	-364	3068	0	108	-704	6459	19:00	0
Rajasthan	9236	176	221	280	7589	0	18	250	9236	19:00	176
Delhi	3026	0	13	-263	1332	0	-45	-374	3343	11:00	0
UP	12344	130	-97	-217	9837	0	-260	100	12613	8:00	0
Uttarakhand	1702	0	16	342	1039	0	-2	384	1811	8:00	0
HP	1273	0	63	370	680	0	-53	536	1399	8:00	0
J&K	1814	454	-126	878	1419	355	-169	840	1814	19:00	454
Chandigarh	184	0	12	0	86	0	-1	0	195	8:00	0
<b>Total</b>	<b>41389</b>	<b>760</b>	<b>267</b>	<b>317</b>	<b>27986</b>	<b>355</b>	<b>-345</b>	<b>409</b>	<b>41389</b>	<b>19:00</b>	<b>760</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 (Gross)	Off Peak MW (Gross)	Energy (Net MU)	Average Sentout(MW)	Schedule Net MU	UI	
								Net MU	Net MU
<b>A. NTPC</b>									
Singrauli STPS (5*200+2*500)	2000	1857	2009	1569	43.10	1796	42.55	0.54	
Rihand I STPS (2*500)	1000	745	705	616	16.08	670	16.44	-0.36	
Rihand II STPS (2*500)	1000	950	1009	702	21.26	886	21.07	0.19	
Rihand III STPS (2*500)	1000	950	994	715	21.24	885	21.27	-0.02	
Dadri I STPS (4*210)	840	815	170	154	4.06	169	4.28	-0.22	
Dadri II STPS (2*490)	980	980	866	707	16.69	695	16.88	-0.20	
Unchahar I TPS (2*210)	420	363	278	273	6.94	289	7.27	-0.33	
Unchahar II TPS (2*210)	420	405	310	269	7.12	297	7.66	-0.54	
Unchahar III TPS (1*210)	210	203	146	137	3.67	153	3.96	-0.29	
ISTPP (Jhajjar) (3*500)	1500	1440	673	602	14.92	621	15.22	-0.30	
Dadri GPS (4*130.19+2*154.51)	830	762	270	255	6.35	265	6.74	-0.39	
Anta GPS (3*88.71+1*153.2)	419	412	0	0	0.00	0	0.00	0.00	
Auraiya GPS (4*111.19+2*109.30)	663	625	0	0	0.00	0	0.00	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	1	0.04	0.00	
Singrauli Solar(15)	15	2	0	0	0.05	2	0.05	0.00	
KHEP(4*200)	800	870	859	555	2.80	117	2.61	0.19	
<b>Sub Total (A)</b>	<b>12112</b>	<b>11379</b>	<b>8289</b>	<b>6554</b>	<b>164</b>	<b>6847</b>	<b>166</b>	<b>-1.74</b>	
<b>B. NPC</b>									
NAPS (2*220)	440	418	453	454	9.99	416	10.03	-0.04	
RAPS- B (2*220)	440	385	429	429	9.24	385	9.24	0.00	
RAPS- C (2*220)	440	230	239	240	5.06	211	5.52	-0.46	
<b>Sub Total (B)</b>	<b>1320</b>	<b>1033</b>	<b>1121</b>	<b>1123</b>	<b>24.29</b>	<b>1012</b>	<b>24.79</b>	<b>-0.51</b>	
<b>C. NHPC</b>									
Chamera I HPS (3*180)	540	360	270	0	1.37	57	1.20	0.17	
Chamera II HPS (3*100)	300	201	209	0	1.21	51	1.10	0.11	
Chamera III HPS (3*77)	231	185	146	0	0.59	25	0.56	0.03	
Bairasuli HPS(3*60)	180	151	121	0	0.48	20	0.45	0.03	
Salal-HPS (6*115)	690	86	306	35	2.35	98	2.05	0.31	
Tanakpur-HPS (3*31.4)	94	23	31	30	0.71	30	0.55	0.16	
Uri-I HPS (4*120)	480	73	232	21	1.91	79	1.75	0.16	
Uri-II HPS (4*60)	240	48	121	39	1.20	50	1.16	0.04	
Dhauliganga-HPS (4*70)	280	210	210	0	1.01	42	0.91	0.10	
Dulhasti-HPS (3*130)	390	257	268	0	3.20	133	3.00	0.20	
Sewa-II HPS (3*40)	120	80	69	0	0.21	9	0.25	-0.04	
Parbati 3 (4*130)	520	130	131	0	0.44	18	0.39	0.05	
<b>Sub Total (C)</b>	<b>4065</b>	<b>1804</b>	<b>2115</b>	<b>125</b>	<b>15</b>	<b>612</b>	<b>13</b>	<b>1.32</b>	
<b>D.SJVNL</b>									
NJPC (6*250)	1500	1615	1548	0	6.70	279	6.60	0.10	
Rampur HEP (6*68.67)	412	442	447	0	1.83	76	1.84	-0.01	
<b>Sub Total (D)</b>	<b>1912</b>	<b>2057</b>	<b>1995</b>	<b>0</b>	<b>8.53</b>	<b>356</b>	<b>8.44</b>	<b>0.10</b>	
<b>E. THDC</b>									
Tehri HPS (4*250)	1000	1060	707	0	7.27	303	7.00	0.27	
Koteshwar HPS (4*100)	400	100	101	0	2.42	101	2.41	0.01	
<b>Sub Total (E)</b>	<b>1400</b>	<b>1160</b>	<b>808</b>	<b>0</b>	<b>9.69</b>	<b>404</b>	<b>9.41</b>	<b>0.28</b>	
<b>F. BBMB</b>									
Bhakra HPS (2*108+3*126+5*157)	1379	608	985	386	14.67	611	14.60	0.07	
Dehar HPS (6*165)	990	121	495	0	2.98	124	2.92	0.07	
Pong HPS (6*66)	396	204	396	66	4.80	200	4.90	-0.11	
<b>Sub Total (F)</b>	<b>2765</b>	<b>934</b>	<b>1876</b>	<b>452</b>	<b>22.45</b>	<b>935</b>	<b>22.42</b>	<b>0.03</b>	
<b>G. IPP(s)/JV(s)</b>									
ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	64	0	0.45	19	0.43	0.02	
KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	630	0	3.48	145	3.56	-0.07	
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	-0.01	
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>694</b>	<b>0</b>	<b>4.12</b>	<b>172</b>	<b>4.18</b>	<b>-0.06</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18368</b>	<b>16898</b>	<b>8254</b>	<b>248.10</b>	<b>10337</b>	<b>248.67</b>	<b>-0.58</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	210	210	4.00	167
	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	219	205	4.65	194
	Goidwal(GVK) (2*270)	540	0	0	-0.02	-1

	Rajpura (2*700)	1400	560	330	13.17	549
	Talwandi Saboo (3*660)	1980	1008	924	30.47	1270
	<b>Thermal (Total)</b>	<b>6560</b>	<b>1997</b>	<b>1669</b>	<b>52.25</b>	<b>2177</b>
	Total Hydro	1000	410	181	8.02	334
	Wind Power	0	0	0	0.00	0
	Biomass	288	13	13	0.30	13
	Solar	560	0	0	0.05	2
	<b>Renewable(Total)</b>	<b>848</b>	<b>13</b>	<b>13</b>	<b>0.36</b>	<b>15</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>2420</b>	<b>1863</b>	<b>60.63</b>	<b>2526</b>
Haryana	Panipat TPS (2*210+2*250)	920	424	404	9.98	416
	DCRTPP (Yamuna nagar) (2*300)	600	563	488	11.76	490
	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	1183	737	23.55	981
	<b>Thermal (Total)</b>	<b>4497</b>	<b>2170</b>	<b>1629</b>	<b>45.29</b>	<b>1887</b>
	Total Hydro	62	10	8	0.38	16
	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>2180</b>	<b>1637</b>	<b>45.67</b>	<b>1903</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	1154	967	26.17	1090
	suratgarh TPS (6*250)	1500	907	782	20.24	843
	Chabra TPS (4*250)	1000	685	615	16.64	693
	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	168	168	4.15	173
	RAPS A (NPC) (1*100+1*200)	300	172	170	4.27	178
	Barsingar (NLC) (2*125)	250	113	113	2.60	108
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwest LTPS (IPP) (8*135)	1080	844	818	19.02	792
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	1127	998	24.99	1041
	Kawai(Adani) (2*660)	1320	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5170</b>	<b>4631</b>	<b>118.08</b>	<b>4920</b>
	Total Hydro	550	258	132	3.65	152
	Wind power	4017	174	176	4.82	201
	Biomass	99	0	0	0.00	0
	Solar	1295	0	0	0.02	1
	Renewable/Others (Total)	5411	174	176	4.84	202
	<b>Total Rajasthan</b>	<b>14837</b>	<b>5602</b>	<b>4939</b>	<b>126.58</b>	<b>5274</b>
UP	Anpara TPS (3*210+2*500)	1630	1201	929	27.82	1159
	Obra TPS (2*50+2*94+5*200)	1194	477	383	10.30	429
	Paricha TPS (2*110+2*220+2*250)	1160	582	581	15.60	650
	Panki TPS (2*105)	210	0	0	0.00	0
	Harduaganj TPS (1*60+1*105+2*250)	665	415	408	11.00	458
	Tanda TPS (NTPC) (4*110)	440	203	270	6.97	290
	Roza TPS (IPP) (4*300)	1200	774	756	22.22	926
	Anpara-C (IPP) (2*600)	1200	1062	639	21.93	914
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	58	58	1.54	64
	Anpara-D(2*500)	1000	871	683	16.15	673
	Lalitpur TPS(3*660)	1980	137	291	5.76	240
	Bara(2*660)	1320	876	723	20.26	844
	<b>Thermal (Total)</b>	<b>12449</b>	<b>6656</b>	<b>5721</b>	<b>159.54</b>	<b>6648</b>
	Vishnuparyag HPS (IPP)(4*110)	440	88	88	2.14	89
	Alakanada(4*82.5)	330	75	0	1.05	44
	Other Hydro	527	66	119	3.38	141
	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>7685</b>	<b>6728</b>	<b>185.31</b>	<b>7721</b>	
Uttarakhand	Other Hydro	1250	440	277	7.95	331
	Total Gas	225	256	275	6.28	262
	Wind Power	0	0	0	0.00	0
	Biomass	127	0	0	0.00	0
	Solar	20	0	0	0.05	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>0.05</b>	<b>2</b>
<b>Total Uttarakhand</b>	<b>1802</b>	<b>696</b>	<b>552</b>	<b>14.27</b>	<b>595</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	80	79	1.97	82
	Pragati Gas Turbine (2x104+ 1x122)	330	262	150	5.75	239
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	249	280	6.02	251
	Badarpur TPS (NTPC) (3*95+2*210)	705	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>2917</b>	<b>591</b>	<b>509</b>	<b>13.73</b>	<b>572</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>591</b>	<b>509</b>	<b>13.73</b>	<b>572</b>	
HP	Baspa HPS (IPP) (3*100)	300	0	0	1.18	49
	Malana HPS (IPP) (2*43)	86	45	0	0.25	11
	Other Hydro	372	0	8	0.91	38
	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	51	1.38	57
	<b>Renewable(Total)</b>	<b>486</b>	<b>65</b>	<b>51</b>	<b>1.38</b>	<b>57</b>
	<b>Total HP</b>	<b>1244</b>	<b>110</b>	<b>59</b>	<b>3.72</b>	<b>155</b>
	J & K	Baqilhar HPS (IPP) (3*150+3*150)	900	101	88	2.18
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>187</b>	<b>108</b>	<b>3</b>	<b>133</b>	

Total State Control Area Generation	50078	19470	16394	453.08	18878
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		6910.84	5924.26	186.89	7787
Total Regional Availability(Gross)	75315	43279	30573	888.06	37003

**IV. Total Hydro Generation:**

Regional Entities Hydro	12234	8347	1132	62.09	2587
State Control Area Hydro	7163	1900	1247	33.46	1658
Total Regional Hydro	19397	10246	2379	95.55	4245

**V. Total Renewable Generation:**

Regional Entities Renewable	30	0	0	0.11	4
State Control Area Renewable	7356	251	239	6.62	276
Total Regional Renewable	7386	251	239	6.73	280

**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	12.00	-12.00
765 KV Gwalior-Agra (D/C)	2100	1689	2586	0	51.73	0.00	51.73
400 KV Zerda-Kankroli	-115	-166	62	168	0.00	2.33	-2.33
400 KV Zerda-Bhimnal	42	-68	126	90	0.77	0.00	0.77
220 KV Auraiya-Malanpur	-86	-94	0	109	0.00	2.05	-2.05
220 KV Badod-Kota/Morak	-25	-71	47	53	0.00	0.65	-0.65
Mundra-Mohindergarh(HVDC Bipole)	2199	1399	2206	0.00	46.21	0.00	46.21
400 KV RAPPCC-Sujalpur	350	278	387	0	7.42	0.00	7.42
400 KV Vindhychal-Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1128	1249	1635	0	35.17	0.00	35.17
<b>Sub Total WR</b>	<b>5093</b>	<b>3716</b>			<b>141.30</b>	<b>17.04</b>	<b>124.26</b>
400 kV Sasaram - Varanasi	203	252	272	0	5.07	0.00	5.07
400 kV Sasaram - Allahabad	39	88	101	82	1.61	0.00	1.61
400 KV MZP- GKP (D/C)	198	343	546	0	8.47	0.00	8.47
400 KV Patna-Balia(D/C) X 2	641	712	917	0	17.89	0.00	17.89
400 KV B'Sharif-Balia (D/C)	43	140	347	0	4.34	0.00	4.34
765 KV Gaya-Balia	171	210	317	0	5.80	0.00	5.80
765 KV Gaya-Varanasi (D/C)	407	437	878	0	14.61	0.00	14.61
220 KV Pusaali-Sahupuri	157	110	157	0	2.87	0.00	2.87
132 KV K'nasa-Sahupuri	-34	-24	0	34	0.00	0.51	-0.51
132 KV Son Ngr-Rihand	-30	-36	0	43	0.00	0.84	-0.84
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	25	28	163	65	0.69	0.00	0.69
400 KV Barh -GKP (D/C)	486	512	596	0	12.32	0.00	12.32
400 kV B'Sharif - Varanasi (D/C)	17	-64	187	17	2.36	0.00	2.36
<b>Sub Total ER</b>	<b>2323</b>	<b>2708</b>			<b>76.01</b>	<b>1.35</b>	<b>74.66</b>
+/- 800 KV BiswanathChariali-Agra	-505	-500	0	505.00	0.00	12.04	-12.04
<b>Sub Total NER</b>	<b>-505</b>	<b>-500</b>			<b>0.00</b>	<b>12.04</b>	<b>-12.04</b>
<b>Total IR Exch</b>	<b>6911</b>	<b>5924</b>			<b>217.31</b>	<b>30.42</b>	<b>186.89</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
44.01	0.75	44.75	2.25	-8.42	11.14	13.77	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
58.14	132.24	190.37	62.62	124.26	186.89	4.48	-7.97	-3.49

**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	-30	-28	0	31	0	1	-0.72

**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	6.24	51.58	73.76	16.55	4.14	0.08	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	5.01	49.82	6.41	50.00	0.037	50.09	49.90	26.24	

**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	397	8:14	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	417	2:32	398	17:52	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	420	3:59	396	10:10	0.0	0.0	0.0	0.0	0.0
Kanpur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Dadri	400	426	1:38	402	11:15	0.0	0.0	21.5	0.0	21.5
Ballabgarh	400	433	4:01	404	11:10	0.0	0.0	30.8	8.3	30.8
Bawana	400	429	2:25	404	10:10	0.0	0.0	26.5	0.0	26.5
Bassi	400	426	4:02	399	6:27	0.0	0.0	12.3	0.0	12.3
Hissar	400	421	4:02	397	11:16	0.0	0.0	0.3	0.0	0.3
Moga	400	422	4:03	402	10:10	0.0	0.0	3.3	0.0	3.3
Abdullapur	400	426	2:02	406	10:08	0.0	0.0	29.3	0.0	29.3
Nalagarh	400	428	1:52	411	9:43	0.0	0.0	35.3	0.0	35.3
Kishenpur	400	421	0:00	402	9:42	0.0	0.0	4.6	0.0	4.6
Wagoora	400	396	13:02	371	18:07	40.4	89.4	0.0	0.0	40.4
Amritsar	400	426	0:50	405	10:07	0.0	0.0	28.2	0.0	28.2
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	421	20:27	406	14:51	0.0	0.0	7.9	0.0	7.9
Rishikesh	400	421	3:59	394	10:10	0.0	0.0	0.5	0.0	0.5

**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	774	4:00	739	6:23	0.0	5.1	0.0	0.0	0.0
Balia	765	775	23:57	752	17:50	0.0	0.0	0.0	0.0	0.0
Moga	765	800	20:28	765	10:09	0.0	0.0	0.0	0.0	0.0

Agra	765	788	4:01	752	6:22	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	811	4:02	769	10:09	0.0	0.0	19.2	0.0	19.2
Unnao	765	773	4:01	730	10:10	0.0	48.5	0.0	0.0	0.0
Lucknow	765	792	4:00	752	17:56	0.0	0.0	0.0	0.0	0.0
Meerut	765	804	20:25	758	6:22	0.0	0.0	1.5	0.0	1.5
Jhatikara	765	810	4:02	648	18:19	35.1	35.1	16.4	0.0	51.5
Bareilly 765 kV	765	791	4:00	746	12:44	0.0	0.0	0.0	0.0	0.0
Anta	765	798	3:31	769	6:12	0.0	0.0	0.0	0.0	0.0
Phagi	765	806	3:58	769	6:12	0.0	0.0	11.9	0.0	11.9

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	490.94	768.41	503.29	1232.31	166.53	464.99
Pong	426.72	384.05	409.58	484.26	412.78	588.94	44.88	322.81
Tehri	829.79	740.04	812.60	854.27	807.10	745.70	39.47	167.00
Koteshwar	612.50	598.50	611.22	5.20	610.69	4.92	167.00	159.63
Chamera-I	760.00	748.75	759.88	0.00	0.00	0.00	43.76	36.72
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	506.69	2.40	501.60	3.81	35.76	96.95

\* 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	-625	3	0	-708	0	0	-18.36	3.95	-14.40
Delhi	-184	-191	0	-274	11	0	-5.75	-0.04	-5.79
Haryana	-957	253	0	-662	299	0	-18.16	6.80	-11.36
HP	468	67	0	401	-32	0	12.46	-1.83	10.63
J&K	608	232	0	603	275	0	14.73	4.83	19.56
CHD	0	0	0	0	0	0	0.00	-0.07	-0.07
Rajasthan	-7	257	0	-7	287	0	4.30	12.88	17.18
UP	100	0	0	-117	-100	0	-7.89	-1.55	-9.44
Uttarakhand	320	64	0	320	22	0	7.79	0.30	8.09
<b>Total</b>	<b>-278</b>	<b>687</b>	<b>0</b>	<b>-446</b>	<b>762</b>	<b>0</b>	<b>-10.87</b>	<b>25.28</b>	<b>14.42</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-605	-997	816	0	0	0
Delhi	-140	-365	359	-338	0	0
Haryana	-621	-995	332	67	0	0
HP	659	377	67	-749	0	0
J&K	646	590	339	-98	0	0
CHD	0	0	10	-57	0	0
Rajasthan	441	-7	1035	180	0	0
UP	146	-892	0	-100	0	0
Uttarakhand	351	207	162	-163	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	0	12
Haryana	1	18
Rajasthan	1	18
Delhi	4	27
UP	0	12
Uttarakhand	2	33
HP	5	50
J & K	3	18
Chandigarh	5	29

**XIII. System Constraints:**

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

**XV. Weather Conditions For 19.12.2016 :**

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 : 19.12.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER