

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(प्राधिकृत की पूर्ण स्वामित्व प्राप्त सार्वजनिक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GO1188682

Power Supply Position in Northern Region for 23.12.2016

Date of Reporting : 24.12.2016



### 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
41481	852	42333	50.05	29242	289	29531	50.06	859.00	20.31

\* 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 *
	Thermal	Hydro	Renewable/others \$	Total					
Punjab	60.54	8.53	1.35	70.42	34.19	33.85	-0.35	104.26	0.00
Haryana	47.06	0.25	0.00	47.31	72.17	70.86	-1.32	118.17	0.00
Rajasthan	126.40	4.90	3.79	135.09	70.33	72.05	1.72	207.14	4.28
Delhi	12.04		0.00	12.04	48.09	49.54	1.45	61.58	0.03
UP	172.16	7.21	0.00	179.37	88.66	89.66	1.01	269.03	6.77
Uttarakhand		9.66	0.00	15.84	17.96	17.69	-0.27	33.53	0.47
HP		4.95	1.25	4.95	21.00	21.69	0.69	26.63	0.00
J & K		3.97	0.00	3.97	38.68	31.16	-7.52	35.12	8.75
Chandigarh				0.00	3.45	3.54	0.09	3.54	0.00
<b>Total</b>	<b>418.19</b>	<b>39.46</b>	<b>6.40</b>	<b>468.97</b>	<b>394.53</b>	<b>390.03</b>	<b>-4.50</b>	<b>859.00</b>	<b>20.31</b>

\* Shortage furnished by the respective constituent. \$ 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	5451	0	-243	-708	3087	0	-25	-621	5451	19:00	0
Haryana	6395	0	-8	-785	3409	0	42	-606	6395	19:00	0
Rajasthan	9278	368	198	302	8079	0	57	615	9499	8:00	95
Delhi	3159	0	3	-379	1441	0	55	-444	3531	11:00	0
UP	12356	30	-263	-230	10131	0	-24	104	12578	20:00	510
Uttarakhand	1709	40	25	68	1129	0	-49	269	1846	8:00	0
HP	1291	0	30	299	724	0	-25	581	1378	9:00	0
J&K	1655	414	-369	858	1155	289	-498	840	1687	7:00	422
Chandigarh	187	0	-1	0	87	0	-3	0	208	9:00	0
<b>Total</b>	<b>41481</b>	<b>852</b>	<b>-628</b>	<b>-575</b>	<b>29242</b>	<b>289</b>	<b>-471</b>	<b>738</b>	<b>41481</b>	<b>19:00</b>	<b>852</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	1674	1782	1343	39.28	1637	38.65		0.63
Rihand I STPS (2*500)	1000	838	892	652	18.34	764	18.48		-0.14
Rihand II STPS (2*500)	1000	949	1002	720	21.29	887	21.05		0.24
Rihand III STPS (2*500)	1000	950	937	682	21.03	876	21.05		-0.02
Dadri I STPS (4*210)	840	815	187	139	4.26	178	4.57		-0.31
Dadri II STPS (2*490)	980	980	916	650	19.52	813	19.99		-0.47
Unchahar I TPS (2*210)	420	366	350	264	7.26	303	7.88		-0.62
Unchahar II TPS (2*210)	420	406	370	256	7.71	321	8.66		-0.95
Unchahar III TPS (1*210)	210	203	187	148	3.98	166	4.33		-0.36
ISTPP (Jhajjar) (3*500)	1500	1440	506	332	10.09	421	10.27		-0.17
Dadri GPS (4*130.19+2*154.51)	830	745	240	235	6.15	256	6.75		-0.60
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	625	0	0	0.00	0	0.00		0.00
Dadri Solar(5)	5	1	0	0	0.01	1	0.02		-0.01
Unchahar Solar(10)	10	1	0	0	0.02	1	0.02		0.00
Singrauli Solar(15)	15	2	0	0	0.04	2	0.05		-0.01
KHEP(4*200)	800	870	723	0	2.60	108	2.61		-0.01
<b>Sub Total (A)</b>	<b>12112</b>	<b>11281</b>	<b>8092</b>	<b>5421</b>	<b>162</b>	<b>6733</b>	<b>164</b>		<b>-2.80</b>
<b>B. NPC</b>									
NAPS (2*220)	440	419	457	460	10.01	417	10.06		-0.05
RAPS- B (2*220)	440	386	428	430	9.25	385	9.26		-0.02
RAPS- C (2*220)	440	220	238	239	5.06	211	5.28		-0.22
<b>Sub Total (B)</b>	<b>1320</b>	<b>1025</b>	<b>1123</b>	<b>1129</b>	<b>24.32</b>	<b>1013</b>	<b>24.60</b>		<b>-0.28</b>
<b>C. NHPC</b>									
Chamera I HPS (3*180)	540	360	367	0	1.57	65	1.40		0.17
Chamera II HPS (3*100)	300	201	209	0	1.18	49	1.05		0.13
Chamera III HPS (3*77)	231	167	154	0	0.52	22	0.50		0.02
Bairasul HPS(3*60)	180	120	122	0	0.43	18	0.40		0.03
Salal-HPS (6*115)	690	73	220	50	2.10	88	1.76		0.35
Tanakpur-HPS (3*31.4)	94	24	32	24	0.70	29	0.58		0.13
Uri-I HPS (4*120)	480	70	229	0	1.89	79	1.69		0.20
Uri-II HPS (4*60)	240	51	121	0	1.20	50	1.22		-0.02
Dhauliganga-HPS (4*70)	280	210	213	0	0.96	40	0.88		0.09
Dulhasti-HPS (3*130)	390	257	263	263	3.13	130	2.90		0.23
Sewa-II HPS (3*40)	120	80	34	0	0.21	9	0.25		-0.04
Parbati 3 (4*130)	520	130	193	0	0.42	17	0.39		0.03
<b>Sub Total (C)</b>	<b>4065</b>	<b>1743</b>	<b>2093</b>	<b>337</b>	<b>14</b>	<b>596</b>	<b>13</b>		<b>1.31</b>
<b>D.SJVNL</b>									
NJPC (6*250)	1500	1615	1615	0	6.52	271	6.50		0.02
Rampur HEP (6*68.67)	412	442	445	0	1.77	74	1.81		-0.04
<b>Sub Total (D)</b>	<b>1912</b>	<b>2057</b>	<b>2060</b>	<b>0</b>	<b>8.28</b>	<b>345</b>	<b>8.30</b>		<b>-0.02</b>
<b>E. THDC</b>									
Tehri HPS (4*250)	1000	1052	1033	0	8.10	338	8.00		0.10
Koteshwar HPS (4*100)	400	121	92	92	2.85	119	2.81		0.04
<b>Sub Total (E)</b>	<b>1400</b>	<b>1173</b>	<b>1125</b>	<b>92</b>	<b>10.95</b>	<b>456</b>	<b>10.81</b>		<b>0.14</b>
<b>F. BBMB</b>									
Bhakra HPS (2*108+3*126+5*157)	1379	555	986	358	13.37	557	13.32		0.05
Dehar HPS (6*165)	990	119	330	0	2.96	123	2.85		0.12
Pong HPS (6*66)	396	185	396	66	4.37	182	4.45		-0.08
<b>Sub Total (F)</b>	<b>2765</b>	<b>859</b>	<b>1712</b>	<b>424</b>	<b>20.70</b>	<b>863</b>	<b>20.61</b>		<b>0.09</b>
<b>G. IPP(s)/JV(s)</b>									
ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	56	0	0.46	19	0.45		0.02
KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	630	0	3.59	150	3.54		0.05
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	0.16	7	0.16		0.00
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>686</b>	<b>0</b>	<b>4.21</b>	<b>176</b>	<b>4.14</b>		<b>0.07</b>
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18138</b>	<b>16891</b>	<b>7403</b>	<b>244.37</b>	<b>10182</b>	<b>245.86</b>		<b>-1.50</b>

### I. State Entities

Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sentout MW)
<b>Punjab</b>					
Guru Gobind Singh TPS (Ropar) (6*210)	1260	160	160	3.69	154
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	203	203	5.04	210
Goindwal(GVK) (2*270)	540	0	0	-0.02	-1

	Rajpura (2*700)	1400	1220	660	20.96	874
	Talwandi Saboo (3*660)	1980	1136	924	30.89	1287
	<b>Thermal (Total)</b>	<b>6560</b>	<b>2719</b>	<b>1947</b>	<b>60.54</b>	<b>2522</b>
	Total Hydro	1000	363	314	8.53	355
	Wind Power	0	0	0	0.00	0
	Biomass	288	0	0	1.08	45
	Solar	560	0	0	0.27	11
	<b>Renewable(Total)</b>	<b>848</b>	<b>0</b>	<b>0</b>	<b>1.35</b>	<b>56</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>3082</b>	<b>2261</b>	<b>70.42</b>	<b>2934</b>
Haryana	Panipat TPS (2*210+2*250)	920	435	412	10.41	434
	DCRTPP (Yamuna nagar) (2*300)	600	536	480	10.50	437
	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	1179	738	26.15	1090
	<b>Thermal (Total)</b>	<b>4497</b>	<b>2150</b>	<b>1630</b>	<b>47.06</b>	<b>1961</b>
	Total Hydro	62	4	7	0.25	10
	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>2154</b>	<b>1637</b>	<b>47.31</b>	<b>1971</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	950	1084	26.40	1100
	suratgarh TPS (6*250)	1500	903	789	21.30	888
	Chabra TPS (4*250)	1000	877	910	22.00	917
	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	127	129	3.20	133
	RAPS A (NPC) (1*100+1*200)	300	169	172	4.00	167
	Barsingar (NLC) (2*125)	250	191	112	3.10	129
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwst LTPS (IPP) (8*135)	1080	837	842	20.10	838
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	1121	1109	26.30	1096
	Kawai(Adani) (2*660)	1320	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5175</b>	<b>5147</b>	<b>126.40</b>	<b>5267</b>
	Total Hydro	550	217	197	4.90	204
	Wind power	4017	18	92	1.11	46
	Biomass	99	7	7	0.16	7
	Solar	1295	7	0	2.53	105
	Renewable/Others (Total)	5411	32	99	3.79	158
	<b>Total Rajasthan</b>	<b>14837</b>	<b>5424</b>	<b>5443</b>	<b>135.09</b>	<b>5629</b>
UP	Anpara TPS (3*210+2*500)	1630	743	956	20.20	842
	Obra TPS (2*50+2*94+5*200)	1194	458	275	9.70	404
	Paricha TPS (2*110+2*220+2*250)	1160	824	574	17.60	733
	Panki TPS (2*105)	210	68	68	1.80	75
	Harduaqanj TPS (1*60+1*105+2*250)	665	542	411	11.90	496
	Tanda TPS (NTPC) (4*110)	440	381	276	8.36	348
	Roza TPS (IPP) (4*300)	1200	1103	738	23.70	988
	Anpara-C (IPP) (2*600)	1200	1062	621	22.20	925
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	81	58	1.10	46
	Anpara-D(2*500)	1000	435	873	18.00	750
	Lalitpur TPS(3*660)	1980	0	0	0.00	0
	Bara(2*660)	1320	574	721	18.40	767
	<b>Thermal (Total)</b>	<b>12449</b>	<b>6271</b>	<b>5571</b>	<b>152.96</b>	<b>6373</b>
	Vishnuparyag HPS (IPP)(4*110)	440	88	88	2.10	88
	Alakanada(4*82.5)	330	76	0	1.20	50
	Other Hydro	527	214	45	3.91	163
	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>7449</b>	<b>6504</b>	<b>179.37</b>	<b>7474</b>
	Uttarakhand	Other Hydro	1250	615	285	9.66
Total Gas		225	256	255	6.13	255
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>871</b>	<b>540</b>	<b>15.84</b>	<b>660</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.01	-1
	Delhi Gas Turbine (6x30 + 3x34)	282	72	73	1.97	82
	Pragati Gas Turbine (2x104+ 1x122)	330	158	156	3.79	158
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	329	280	6.46	269
	Badarpur TPS (NTPC) (3*95+2*210)	705	-4	-4	-0.17	-7
	<b>Thermal (Total)</b>	<b>2917</b>	<b>555</b>	<b>506</b>	<b>12.04</b>	<b>501</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>555</b>	<b>506</b>	<b>12.04</b>	<b>501</b>
	HP	Baspa HPS (IPP) (3*100)	300	0	0	1.22
Malana HPS (IPP) (2*43)		86	35	0	0.25	10
Other Hydro		372	102	63	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	61	47	1.25	52
<b>Renewable(Total)</b>		<b>486</b>	<b>61</b>	<b>47</b>	<b>1.25</b>	<b>52</b>
<b>Total HP</b>		<b>1244</b>	<b>198</b>	<b>109</b>	<b>4.95</b>	<b>206</b>
J & K		Baqilhar HPS (IPP) (3*150+3*150)	900	148	89	2.96
	Other Hydro/IPP(including 98 MW Small Hydro)	308	80	22	1.01	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>228</b>	<b>111</b>	<b>4</b>	<b>165</b>

Total State Control Area Generation	50078	19961	17111	468.97	19541
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		7143	6526	190.59	7941
Total Regional Availability(Gross)	75315	43995	31040	903.93	37664

**IV. Total Hydro Generation:**

Regional Entities Hydro	12234	8399	853	60.90	2538
State Control Area Hydro	7163	2259	1411	39.46	1902
Total Regional Hydro	19397	10658	2265	100.36	4439

**V. Total Renewable Generation:**

Regional Entities Renewable	30	0	0	0.08	3
State Control Area Renewable	7356	93	146	6.44	268
Total Regional Renewable	7386	93	146	6.52	272

**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)	200	-500	500	500	3.35	5.20	-1.85
765 KV Gwalior-Agra (D/C)	1387	1933	2875	0	44.48	0.00	44.48
400 KV Zerda-Kankroli	-67	-174	0	194	0.00	2.95	-2.95
400 KV Zerda-Bhimnal	27	-64	97	121	0.00	0.29	-0.29
220 KV Auraiya-Malanpur	-115	-73	0	130	0.00	2.15	-2.15
220 KV Badod-Kota/Morak	-75	-132	0	146	0.00	2.52	-2.52
Mundra-Mohinderghar(HVDC Bipole)	2503	2202	2507	0.00	55.04	0.00	55.04
400 KV RAPP-Subalpur	379	240	450	0	7.37	0.00	7.37
400 KV Vindhychal-Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1198	1012	1635	0	33.63	0.00	33.63
<b>Sub Total WR</b>	<b>5437</b>	<b>4444</b>			<b>143.86</b>	<b>13.10</b>	<b>130.76</b>
400 kV Sasaram - Varanasi	52	-2	16	52	0.00	0.64	-0.64
400 kV Sasaram - Allahabad	124	57	0	142	0.00	2.45	-2.45
400 KV MZP- GKP (D/C)	104	420	438	0	7.73	0.00	7.73
400 KV Patna-Balia(D/C) X 2	788	728	992	0	20.49	0.00	20.49
400 KV B'Sharif-Balia (D/C)	209	242	383	0	6.24	0.00	6.24
765 KV Gaya-Balia	0	283	343	0	3.76	0.00	3.76
765 KV Gaya-Varanasi (D/C)	-444	-519	747	0	14.17	0.00	14.17
220 KV Pusauli-Sahupuri	-131	-77	152	0	2.51	0.00	2.51
132 KV K'nasa-Sahupuri	0	0	0	0	0.00	0.51	-0.51
132 KV Son Ngr-Rihand	-30	-40	0	42	0.00	0.80	-0.80
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	169	164	362	0	5.70	0.00	5.70
400 KV Barh -GKP (D/C)	472	500	550	0	11.47	0.00	11.47
400 kV B'Sharif - Varanasi (D/C)	-107	-174	269	0	4.28	0.00	4.28
<b>Sub Total ER</b>	<b>1206</b>	<b>1582</b>			<b>76.35</b>	<b>4.39</b>	<b>71.96</b>
+/- 800 KV BiswanathChariali-Agra	500	500	0	500.00	0.00	12.13	-12.13
<b>Sub Total NER</b>	<b>500</b>	<b>500</b>			<b>0.00</b>	<b>12.13</b>	<b>-12.13</b>
<b>Total IR Exch</b>	<b>7143</b>	<b>6526</b>			<b>220.21</b>	<b>29.63</b>	<b>190.59</b>

**VI(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]**

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)		Power Exchange Shdl (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
48.17	0.95	49.13	1.94	-5.84	11.74	2.25	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
62.80	126.29	189.09	59.83	130.76	190.59	-2.98	4.47	1.49

**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	-0.71

**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	6.35	50.25	69.97	17.35	6.31	0.07	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)		
50.26	17.03	49.77	6.48	50.00	0.047	50.10	49.87	30.03	

**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	18:25	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	420	2:01	402	17:52	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	423	1:30	402	10:50	0.0	0.0	15.8	0.0	15.8
Kanpur	400	418	1:29	400	10:45	0.0	0.0	0.0	0.0	0.0
Dadri	400	428	4:03	406	10:36	0.0	0.0	29.8	0.0	29.8
Ballabgarh	400	433	4:02	409	10:15	0.0	0.0	37.4	3.8	37.4
Bawana	400	409	0:00	409	0:00	0.0	0.0	0.0	0.0	0.0
Bassi	400	426	20:01	396	7:46	0.0	0.0	4.9	0.0	4.9
Hissar	400	423	19:57	400	6:39	0.0	0.0	1.1	0.0	1.1
Moga	400	424	1:29	402	8:36	0.0	0.0	9.4	0.0	9.4
Abdullapur	400	429	1:30	410	6:41	0.0	0.0	37.3	0.0	37.3
Nalagarh	400	434	1:35	412	6:41	0.0	0.0	57.0	21.5	57.0
Kishenpur	400	437	1:30	393	6:46	0.0	0.0	5.4	1.5	5.4
Wagoora	400	428	2:17	358	2:16	66.7	92.8	0.2	0.0	66.9
Amritsar	400	431	1:26	405	6:54	0.0	0.0	38.0	0.0	38.0
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	426	20:00	402	7:52	0.0	0.0	1.2	0.0	1.2
Rishikesh	400	423	1:29	399	12:13	0.0	0.0	14.4	0.0	14.4

**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	779	1:14	744	6:40	0.0	0.0	0.0	0.0	0.0
Balia	765	797	1:59	762	17:53	0.0	0.0	0.0	0.0	0.0
Moga	765	808	20:00	761	8:36	0.0	0.0	2.1	0.0	2.1

Agra	765	792	20:00	754	7:48	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	812	20:01	772	10:15	0.0	0.0	23.1	0.0	23.1
Unnao	765	774	2:29	736	10:45	0.0	12.7	0.0	0.0	0.0
Lucknow	765	806	3:01	770	17:50	0.0	0.0	17.3	0.0	17.3
Meerut	765	812	19:57	761	6:54	0.0	0.0	2.4	0.0	2.4
Jhatikara	765	807	1:29	769	6:52	0.0	0.0	18.3	0.0	18.3
Bareilly 765 kV	765	799	2:01	759	12:14	0.0	0.0	0.0	0.0	0.0
Anta	765	802	19:59	762	7:42	0.0	0.0	0.2	0.0	0.2
Phagi	765	804	19:54	762	7:46	0.0	0.0	1.5	0.0	1.5

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	490.03	738.95	502.45	1192.70	158.77	441.12
Pong	426.72	384.05	409.10	464.36	412.35	577.87	43.66	296.34
Tehri	829.79	740.04	811.35	833.28	805.60	716.35	39.61	187.00
Koteshwar	612.50	598.50	611.09	5.20	610.76	4.96	187.00	187.80
Chamera-I	760.00	748.75	759.85	0.00	0.00	0.00	42.88	42.00
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	506.02	2.88	500.48	3.57	35.76	126.94

\* 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	4	0	-708	0	0	-18.36	0.03	-18.33
Delhi	-200	-244	0	-290	-89	0	-6.14	-1.21	-7.35
Haryana	-957	351	0	-662	-122	0	-18.29	3.24	-15.05
HP	492	88	0	401	-102	0	12.62	-1.46	11.16
J&K	608	232	0	603	256	0	14.81	4.84	19.65
CHD	0	0	0	0	0	0	0.00	-0.02	-0.02
Rajasthan	182	433	0	49	252	0	7.41	11.51	18.92
UP	104	0	0	-130	-100	0	-7.83	-1.67	-9.50
Uttarakhand	320	-51	0	218	-150	0	6.97	-0.74	6.23
<b>Total</b>	<b>-76</b>	<b>814</b>	<b>0</b>	<b>-520</b>	<b>-56</b>	<b>0</b>	<b>-8.81</b>	<b>14.50</b>	<b>5.70</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-605	-997	4	0	0	0
Delhi	-156	-381	414	-356	0	0
Haryana	-642	-985	357	-472	0	0
HP	659	377	88	-665	0	0
J&K	670	590	411	-15	0	0
CHD	0	0	10	-21	0	0
Rajasthan	629	49	1028	231	0	0
UP	137	-878	0	-100	0	0
Uttarakhand	351	109	168	-349	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	2.43%
ER	0.69%
Simultaneous	19.44%

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

WR	15.63%
ER	33.33%
Simultaneous	45.14%

(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	2	18
Haryana	1	15
Rajasthan	2	22
Delhi	5	34
UP	0	10
Uttarakhand	2	22
HP	4	48
J & K	5	30
Chandigarh	3	33

**XIII. System Constraints:**

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

**XV. Weather Conditions For 23.12.2016 :**

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

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

1. SVC at Kankroli first time charged at 1700 hrs on 23.12.2016.
2. 400kV Aligarh-Mainpuri charged only from Aligarh end at 1900 hrs on 23.12.2016.

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 : 23.12.2016

परी प्रभारी अभियंता / SHIFT CHARGE ENGINEER