

# 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 01.12.2016

Date of Reporting : 02.12.2016



### 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
38900	465	39365	50.05	27996	373	28369	50.06	782.39	13.96

\* 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	24.32	10.71	0.30	35.34	53.53	53.92	0.39	89.25	0.00
Haryana	32.45	0.43	0.00	32.88	74.51	75.67	1.16	108.55	0.13
Rajasthan	113.40	4.20	12.94	130.54	65.63	65.56	-0.07	196.10	1.72
Delhi	13.58		0.00	13.58	42.01	43.35	1.34	56.92	0.01
UP	147.95	7.12	0.00	155.07	83.80	83.04	-0.75	238.11	2.41
Uttarakhand		7.57	0.00	12.42	18.12	18.77	0.65	31.19	0.00
HP		3.29	1.68	4.97	18.46	18.57	0.11	23.53	0.02
J & K		2.77	0.00	2.77	35.37	32.69	-2.67	35.46	9.69
Chandigarh				0.00	3.35	3.26	-0.09	3.26	0.00
<b>Total</b>	<b>331.70</b>	<b>36.08</b>	<b>14.93</b>	<b>387.56</b>	<b>394.77</b>	<b>394.83</b>	<b>0.06</b>	<b>782.39</b>	<b>13.96</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	4349	0	-27	-723	3719	0	-72	-460	4349 19:00	0
Haryana	6074	23	37	-275	3307	0	650	-864	6074 19:00	23
Rajasthan	8728	0	-609	100	7514	0	22	436	9261 9:00	67
Delhi	3036	0	79	-265	1413	0	49	-680	3036 19:00	0
UP	11954	0	-207	-201	8677	0	-886	114	11954 19:00	0
Uttarakhand	1633	0	-7	211	1071	0	37	124	1697 18:00	0
HP	1184	0	-16	248	719	0	-20	412	1332 8:00	0
J&K	1769	442	-41	800	1493	373	-184	719	1793 7:00	448
Chandigarh	173	0	-47	0	83	0	-1	0	176 8:00	0
<b>Total</b>	<b>38900</b>	<b>465</b>	<b>-839</b>	<b>-103</b>	<b>27996</b>	<b>373</b>	<b>-406</b>	<b>-199</b>	<b>38900 19:00</b>	<b>465</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
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1794	1820	212	43.00	1792	42.63
	Rihand I STPS (2*500)	1000	867	926	861	18.92	788	19.28
	Rihand II STPS (2*500)	1000	948	986	864	22.11	921	21.67
	Rihand III STPS (2*500)	1000	948	1005	847	21.58	899	21.29
	Dadri I STPS (4*210)	840	815	345	316	7.57	316	7.92
	Dadri II STPS (2*490)	980	980	469	392	9.91	413	10.62
	Unchahar I TPS (2*210)	420	360	351	270	7.20	300	7.65
	Unchahar II TPS (2*210)	420	404	368	303	7.97	332	8.46
	Unchahar III TPS (1*210)	210	202	204	147	3.94	164	4.21
	ISTPP (Jhajjar) (3*500)	1500	1440	1028	919	22.74	948	22.34
	Dadri GPS (4*130.19+2*154.51)	830	702	242	275	6.01	250	6.36
	Anta GPS (3*88.71+1*153.2)	419	409	-1	-1	0.00	0	0.00
	Auraiya GPS (4*111.19+2*109.30)	663	625	0	0	0.00	0	0.09
	Dadri Solar(5)	5	1	0	0	0.01	1	0.01
	Unchahar Solar(10)	10	1	0	0	0.01	0	0.01
	Singrauli Solar(15)	15	2	0	0	0.00	0	0.04
	KHEP(4*200)	800	865	859	0	2.80	117	2.60
	<b>Sub Total (A)</b>	<b>12112</b>	<b>11362</b>	<b>8602</b>	<b>5405</b>	<b>174</b>	<b>7241</b>	<b>175</b>
B. NPC	NAPS (2*220)	440	402	436	441	9.62	401	9.65
	RAPS- B (2*220)	440	382	423	424	9.15	381	9.17
	RAPS- C (2*220)	440	220	236	236	5.00	208	5.28
	<b>Sub Total (B)</b>	<b>1320</b>	<b>1004</b>	<b>1095</b>	<b>1101</b>	<b>23.77</b>	<b>990</b>	<b>24.10</b>
								<b>-0.33</b>
C. NHPC	Chamera I HPS (3*180)	540	540	367	0	1.83	76	1.62
	Chamera II HPS (3*100)	300	201	208	0	1.20	50	1.05
	Chamera III HPS (3*77)	231	231	147	0	0.57	24	0.55
	Bairasuil HPS(3*60)	180	120	123	0	0.55	23	0.50
	Salal-HPS (6*115)	690	106	304	35	2.94	122	2.54
	Tanakpur-HPS (3*31.4)	94	25	29	31	0.75	31	0.59
	Uri-I HPS (4*120)	480	72	126	26	1.95	81	1.74
	Uri-II HPS (4*60)	240	53	44	39	1.34	56	1.28
	Dhauliganga-HPS (4*70)	280	209	203	0	1.00	42	0.98
	Dulhasti-HPS (3*130)	390	383	397	0	3.32	138	3.10
	Sewa-II HPS (3*40)	120	80	66	0	0.22	9	0.25
	Parbati 3 (4*130)	520	130	106	0	0.45	19	0.39
	<b>Sub Total (C)</b>	<b>4065</b>	<b>2149</b>	<b>2120</b>	<b>132</b>	<b>16</b>	<b>672</b>	<b>15</b>
								<b>1.54</b>
D. SJVNL	NJPC (6*250)	1500	1610	1547	0	7.34	306	7.31
	Rampur HEP (6*68.67)	412	442	436	0	2.07	86	2.03
	<b>Sub Total (D)</b>	<b>1912</b>	<b>2052</b>	<b>1983</b>	<b>0</b>	<b>9.42</b>	<b>392</b>	<b>9.34</b>
E. THDC	Tehri HPS (4*250)	1000	1075	1028	0	7.29	304	7.00
	Koteshwar HPS (4*100)	400	100	204	90	2.44	102	2.41
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1175</b>	<b>1232</b>	<b>90</b>	<b>9.73</b>	<b>405</b>	<b>9.41</b>
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	564	989	371	13.81	575	13.54
	Dehar HPS (6*165)	990	138	495	0	3.36	140	3.32
	Pong HPS (6*66)	396	171	396	66	4.26	178	4.11
G. IPP(s)/JV(s)	<b>Sub Total (F)</b>	<b>2765</b>	<b>874</b>	<b>1880</b>	<b>437</b>	<b>21.43</b>	<b>893</b>	<b>20.97</b>
								<b>0.46</b>
	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	0	0	0.56	23	0.54
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	630	0	4.22	176	4.03
	Malana Stg-II HPS (2*50)	100	0	0	0	0.25	11	0.24
	Shree Cement TPS (2*150)	300	0	0	0	0.00	0	0.00
	Budhil HPS(IPP) (2*35)	70	0	0	0	0.23	9	0.23
H. Total Regional Entities (A-G)	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>630</b>	<b>0</b>	<b>5.26</b>	<b>219</b>	<b>5.03</b>
								<b>0.22</b>
								<b>0.89</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	320	210	5.05	210
	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	-0.10	-4
	Goidwal(GVK) (2*270)	540	0	0	-0.02	-1

	Rajpura (2*700)	1400	660	660	15.79	658
	Talwandi Saboo (3*660)	1980	0	645	3.63	151
	<b>Thermal (Total)</b>	<b>6560</b>	<b>980</b>	<b>1515</b>	<b>24.32</b>	<b>1013</b>
	Total Hydro	1000	422	397	10.71	446
	Wind Power	0	0	0	0.00	0
	Biomass	288	0	0	0.25	11
	Solar	560	0	0	0.05	2
	<b>Renewable(Total)</b>	<b>848</b>	<b>0</b>	<b>0</b>	<b>0.30</b>	<b>13</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>1402</b>	<b>1912</b>	<b>35.34</b>	<b>1472</b>
Haryana	Panipat TPS (2*210+2*250)	920	0	0	0.00	0
	DCRTPP (Yamuna nagar) (2*300)	600	559	465	12.17	507
	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	1139	384	20.28	845
	<b>Thermal (Total)</b>	<b>4497</b>	<b>1698</b>	<b>849</b>	<b>32.45</b>	<b>1352</b>
	Total Hydro	62	11	8	0.43	18
	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>1709</b>	<b>857</b>	<b>32.88</b>	<b>1370</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	1165	954	25.80	1075
	suratgarh TPS (6*250)	1500	441	414	10.30	429
	Chabra TPS (4*250)	1000	920	824	20.80	867
	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	164	153	4.00	167
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0
	Barsingsar (NLC) (2*125)	250	226	222	5.20	217
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwest LTPS (IPP) (8*135)	1080	828	825	18.50	771
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	1136	551	18.00	750
	Kawai(Adani) (2*660)	1320	450	452	10.80	450
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5330</b>	<b>4395</b>	<b>113.40</b>	<b>4725</b>
	Total Hydro	550	190	186	4.20	175
	Wind power	4017	362	393	10.10	421
	Biomass	99	12	12	0.29	12
	Solar	1295	0	0	2.55	106
	Renewable/Others (Total)	5411	374	405	12.94	539
	<b>Total Rajasthan</b>	<b>14837</b>	<b>5894</b>	<b>4986</b>	<b>130.54</b>	<b>5439</b>
UP	Anpara TPS (3*210+2*500)	1630	1172	781	22.24	927
	Obra TPS (2*50+2*94+5*200)	1194	295	312	8.18	341
	Paricha TPS (2*110+2*220+2*250)	1160	834	585	16.62	692
	Panki TPS (2*105)	210	135	135	3.25	135
	Harduaganj TPS (1*60+1*105+2*250)	665	438	307	8.48	353
	Tanda TPS (NTPC) (4*110)	440	280	227	6.30	262
	Roza TPS (IPP) (4*300)	1200	810	635	17.52	730
	Anpara-C (IPP) (2*600)	1200	617	887	17.86	744
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	405	283	7.95	331
	Anpara-D(2*500)	1000	0	201	4.93	206
	Lalitpur TPS(3*660)	1980	0	0	0.00	0
	Bara(2*660)	1320	853	582	15.44	643
	<b>Thermal (Total)</b>	<b>12449</b>	<b>5839</b>	<b>4935</b>	<b>128.75</b>	<b>5365</b>
	Vishnuparyag HPS (IPP)(4*110)	440	103	98	2.41	100
	Alaknanada(4*82.5)	330	75	0	1.47	61
	Other Hydro	527	250	29	3.24	135
	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>7067</b>	<b>5862</b>	<b>155.07</b>	<b>6461</b>
Uttarakhand	Other Hydro	1250	540	203	7.57	315
	Total Gas	225	143	272	4.81	201
	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>
Delhi	<b>Total Uttarakhand</b>	<b>1802</b>	<b>683</b>	<b>475</b>	<b>12.42</b>	<b>518</b>
	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	77	73	1.87	78
	Pragati Gas Turbine (2x104+ 1x122)	330	265	153	5.71	238
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	251	280	6.13	255
	Badarpur TPS (NTPC) (3*95+2*210)	705	-4	-4	-0.12	-5
	<b>Thermal (Total)</b>	<b>2917</b>	<b>589</b>	<b>503</b>	<b>13.58</b>	<b>566</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>589</b>	<b>503</b>	<b>13.58</b>	<b>566</b>
HP	Baspa HPS (IPP) (3*100)	300	0	0	1.12	47
	Malana HPS (IPP) (2*43)	86	0	0	0.26	11
	Other Hydro	372	92	45	1.91	80
	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	71	65	1.68	70
	<b>Renewable(Total)</b>	<b>486</b>	<b>71</b>	<b>65</b>	<b>1.68</b>	<b>70</b>
	<b>Total HP</b>	<b>1244</b>	<b>163</b>	<b>110</b>	<b>4.97</b>	<b>207</b>
J & K	Baqilhar HPS (IPP) (3*150+3*150)	900	144	143	0.00	0
	Other Hydro/IPP(including 98 MW Small Hydro)	308	138	93	2.77	115
	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>282</b>	<b>236</b>	<b>3</b>	<b>115</b>

Total State Control Area Generation	50078	17789	14941	387.56	16148
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		5512	5437	170.02	7084
Total Regional Availability(Gross)	75315	40843	27543	817.09	34045

IV. Total Hydro Generation:					
Regional Entities Hydro	12234	8703	658	64.53	2689
State Control Area Hydro	7163	2179	1539	37.77	1776
Total Regional Hydro	19397	10883	2197	102.29	4465

V. Total Renewable Generation:					
Regional Entities Renewable	30	0	0	0.02	1
State Control Area Renewable	7356	445	470	14.97	624
Total Regional Renewable	7386	445	470	14.99	625

VI(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 MU
	MW	MW	Import	Export	Import	Export	
Vindhychal(HVDC B/B)	350	-500	500	500	2.95	5.00	-2.06
765 KV Gwalior-Agra (D/C)	2138	1952	2588	0	52.91	0.00	52.91
400 KV Zerda-Kankrol	-117	-43	30	216	0.00	2.23	-2.23
400 KV Zerda-Bhimnal	-78	17	204	212	0.00	0.44	-0.44
220 KV Auraiya-Malanpur	-81	-54	0	87	0.00	1.29	-1.29
220 KV Badod-Kota/Morak	-63	-34	0	116	0.00	1.38	-1.38
Mundra-Mohindergarh(HVDC Bipole)	1251	999	1404	0.00	27.15	0.00	27.15
400 KV RAPPC-Sujalpur	270	343	498	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)	1265	1376	1784	0	34.23	0.00	34.23
<b>Sub Total WR</b>	<b>4935</b>	<b>4056</b>			<b>125.36</b>	<b>10.34</b>	<b>115.02</b>
400 kV Sasaram - Varanasi	-46	-14	36	47	0.00	0.09	-0.09
400 kV Sasaram - Allahabad	-193	-138	0	205	0.00	3.88	-3.88
400 KV MZP- GKP (D/C)	-110	172	193	110	2.28	0.00	2.28
400 KV Patna-Balia(D/C) X 2	305	380	448	0	8.80	0.00	8.80
400 KV B'Sharif-Balia (D/C)	4	97	179	0	2.56	0.00	2.56
765 KV Gaya-Balia	170	190	297	0	4.79	0.00	4.79
765 KV Gaya-Varanasi (D/C)	-336	-479	786	0	13.29	0.00	13.29
220 KV Pusauli-Sahupuri	132	105	199	0	3.05	0.00	3.05
132 KV K'nasa-Sahupuri	-24	-22	0	36	0.00	0.57	-0.57
132 KV Son Ngr-Rihand	-34	-37	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	56	29	264	0	2.33	0.00	2.33
400 KV Barh -GKP (D/C)	354	450	496	0	9.94	0.00	9.94
400 kV B'Sharif - Varanasi (D/C)	-1	-52	55	0	0.41	0.00	0.41
<b>Sub Total ER</b>	<b>277</b>	<b>681</b>			<b>47.44</b>	<b>5.43</b>	<b>42.02</b>
+/- 800 KV BiswanathCharialli-Agra	300	700	700	0.00	12.99	0.00	12.99
<b>Sub Total NER</b>	<b>300</b>	<b>700</b>			<b>12.99</b>	<b>0.00</b>	<b>12.99</b>
<b>Total IR Exch</b>	<b>5512</b>	<b>5437</b>			<b>185.79</b>	<b>15.77</b>	<b>170.02</b>

ISGS/LT Schedule (MU)			Bilateral Schedule (MU)		Power Exchange Shdli (MU)		Wheeling (MU)	
ER	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
50.43	1.24	51.67	2.87	-5.26	-0.50	0.00	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
54.04	108.37	162.41	55.01	115.02	170.02	0.97	6.65	7.61

VI(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 MU
	MW	MW	Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	-27	-26	0	31	0	1	-0.67

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	1.10	13.40	54.01	67.25	15.51	3.89	0.00	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)	
50.17	21.31	49.73	17.24	49.98	0.055	0.072	0.00	0.00	32.75

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	411	0:00	402	8:17	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	420	4:01	403	17:39	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	424	2:01	400	12:18	0.0	0.0	15.7	0.0	15.7
Kanpur	400	420	2:01	400	12:18	0.0	0.0	0.0	0.0	0.0
Dadri	400	430	2:01	401	12:10	0.0	0.0	26.5	0.0	26.5
Ballabgarh	400	434	2:02	403	12:18	0.0	0.0	41.0	16.5	41.0
Bawana	400	431	1:00	403	12:12	0.0	0.0	38.6	1.8	38.6
Bassi	400	424	19:43	396	6:15	0.0	0.0	7.1	0.0	7.1
Hissar	400	424	2:02	394	12:19	0.0	0.0	18.5	0.0	18.5
Moga	400	424	0:59	399	12:13	0.0	0.0	22.3	0.0	22.3
Abdullapur	400	428	0:49	398	11:45	0.0	0.0	23.1	0.0	23.1
Nalagarh	400	434	0:52	401	12:19	0.0	0.0	38.5	18.8	38.5
Kishenpur	400	420	1:35	396	11:10	0.0	0.0	0.0	0.0	0.0
Wagoora	400	399	13:01	364	18:15	57.5	84.5	0.0	0.0	57.5
Amritsar	400	433	4:00	406	8:46	0.0	0.0	42.2	13.0	42.2
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	428	0:55	397	11:14	0.0	0.0	46.7	0.0	46.7
Rishikesh	400	422	2:01	393	12:18	0.0	0.0	2.5	0.0	2.5

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	776	2:01	745	12:18	0.0	0.0	0.0	0.0	0.0
Balia	765	793	2:00	765	17:40	0.0	0.0	0.0	0.0	0.0
Moga	765	806	21:28	758	12:11	0.0	0.0	5.7	0.0	5.7

Agra	765	792	19:43	753	22:08	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	811	1:59	763	12:12	0.0	0.0	25.9	0.0	25.9
Unnao	765	776	2:01	743	12:18	0.0	0.0	0.0	0.0	0.0
Lucknow	765	805	2:01	771	12:18	0.0	0.0	14.1	0.0	14.1
Meerut	765	810	20:57	761	12:18	0.0	0.0	6.7	0.0	6.7
Jhatikara	765	811	4:00	758	12:18	0.0	0.0	21.5	0.0	21.5
Bareilly 765 kV	765	799	2:00	757	12:18	0.0	0.0	0.0	0.0	0.0
Anta	765	800	21:01	718	14:47	2.5	2.5	0.0	0.0	2.5
Phagi	765	802	3:59	764	11:56	0.0	0.0	5.8	0.0	5.8

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 (m³/s)	Usage (m³/s)
Bhakra	513.59	445.62	494.83	891.94	506.32	1367.40	157.47	431.32
Pong	426.72	384.05	411.56	544.90	415.35	693.24	31.60	276.66
Tehri	829.79	740.04	817.05	942.25	811.65	835.28	41.54	163.00
Koteshwar	612.50	598.50	611.28	5.20	611.09	4.95	163.00	160.68
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	45.69	49.21
Rihand	268.22	252.98	876.60	776.70	849.80	252.30	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	509.21	4.04	506.47	3.43	47.75	157.15

\* 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	-460	0	0	-540	-182	0	-10.11	-2.16	-12.27
Delhi	-181	-500	0	-269	4	0	-6.39	-4.90	-11.30
Haryana	-834	-30	0	-541	266	0	-15.32	1.51	-13.81
HP	363	49	0	269	-21	0	9.71	-2.24	7.47
J&K	521	198	0	518	282	0	12.32	2.00	14.32
CHD	0	0	0	0	0	0	0.00	0.00	0.00
Rajasthan	-7	444	0	-7	107	0	4.42	10.93	15.35
UP	114	0	0	-101	-100	0	-6.49	-2.12	-8.60
Uttarakhand	303	-179	0	303	-92	0	7.47	-1.11	6.35
Total	-180	-18	0	-368	264	0	-4.39	1.92	-2.48

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-279	-579	3	-556	0	0
Delhi	-181	-357	126	-603	0	0
Haryana	-467	-869	276	-522	0	0
HP	563	245	49	-624	0	0
J&K	521	503	282	-217	0	0
CHD	0	0	0	0	0	0
Rajasthan	452	-7	1432	107	0	0
UP	159	-755	0	-100	0	0
Uttarakhand	335	303	98	-184	0	0

XL 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	0.35%
ER	0.00%
Simultaneous	6.25%

(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	2	16
Rajasthan	3	17
Delhi	4	27
UP	2	17
Uttarakhand	2	21
HP	3	39
J & K	3	30
Chandigarh	2	19

XIII.System Constraints:

XIV. Grid Disturbance / Any Other Significant Event:

XV. Weather Conditions For 01.12.2016 :  
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 :**

Filter bank ACF 2 type D first time charged at 1533hrs on 29.11.2016.

400kV Bays No.407 and 410 of 400 kV Jalandhar-samba-I and II first time charged at 1533 & 1535 hrs of 01.12.16.

**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 : 01.12.2016**

**पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER**