

# 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 09.11.2016

Date of Reporting : 10.11.2016



### 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
40421	440	40862	50.10	30411	559	30970	50.06	838.6	13.55

\* 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	48.01	9.28	0.21	57.50	41.43	41.37	-0.07	98.87	0.00
Haryana	36.65	0.56	0.00	37.21	73.54	72.50	-1.04	109.71	0.00
Rajasthan	115.68	3.33	13.56	132.57	72.31	74.17	1.86	206.74	0.26
Delhi	8.16	0.00	0.00	8.16	51.10	51.59	0.49	59.76	0.01
UP	168.13	14.67	0.00	182.81	86.43	82.19	-4.24	264.99	4.01
Uttarakhand	8.15	0.00	0.00	12.51	20.43	21.51	1.08	34.02	0.00
HP	4.26	2.22	0.00	6.48	17.56	18.07	0.51	24.55	0.09
J & K	7.40	0.00	0.00	7.40	33.34	29.29	-4.05	36.69	9.17
Chandigarh	0.00	0.00	0.00	0.00	3.34	3.26	-0.09	3.26	0.00
<b>Total</b>	<b>376.63</b>	<b>47.67</b>	<b>15.99</b>	<b>444.64</b>	<b>399.49</b>	<b>393.94</b>	<b>-5.55</b>	<b>838.59</b>	<b>13.55</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	4749	0	74	-346	3042	0	-54	-346	4749	19:00	0
Haryana	6318	0	-79	60	3185	0	26	-634	6318	19:00	0
Rajasthan	8724	0	-22	588	8345	0	42	737	10009	8:00	0
Delhi	3255	0	137	-229	1673	0	94	-681	3255	19:00	0
UP	12684	0	-33	-198	10747	210	495	129	12923	20:00	100
Uttarakhand	1718	0	-98	224	1139	0	127	287	1764	18:00	0
HP	1127	23	-65	-38	798	0	-8	335	1410	8:00	0
J&K	1670	417	-446	431	1395	349	-107	352	1769	20:00	442
Chandigarh	176	0	-35	-30	88	0	-2	-30	176	19:00	0
<b>Total</b>	<b>40421</b>	<b>440</b>	<b>-567</b>	<b>461</b>	<b>30411</b>	<b>559</b>	<b>613</b>	<b>148</b>	<b>40421</b>	<b>19:00</b>	<b>440</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	Net MU
<b>A. NTPC</b>								
Singrauli STPS (5*200+2*500)	2000	1679	1874	1538	39.44	1643	39.20	0.24
Rihand I STPS (2*500)	1000	943	914	879	20.28	845	20.13	0.15
Rihand II STPS (2*500)	1000	963	838	842	20.17	841	20.01	0.16
Rihand III STPS (2*500)	1000	963	861	883	20.23	843	20.39	-0.16
Dadri I STPS (4*210)	840	815	219	156	4.14	172	4.37	-0.23
Dadri II STPS (2*490)	980	980	882	689	18.03	751	19.10	-1.07
Unchahar I TPS (2*210)	420	223	152	259	4.47	186	4.59	-0.13
Unchahar II TPS (2*210)	420	402	340	309	8.28	345	8.45	-0.17
Unchahar III TPS (1*210)	210	201	198	147	3.91	163	4.11	-0.20
ISTPP (Jhajjar) (3*500)	1500	1425	492	304	7.66	319	7.84	-0.18
Dadri GPS (4*130.19+2*154.51)	830	797	358	452	10.59	441	11.06	-0.47
Anta GPS (3*88.71+1*153.2)	419	393	0	0	0.00	0	0.00	0.00
Auraiya GPS (4*111.19+2*109.30)	663	624	0	0	0.00	0	0.00	0.00
Dadri Solar(5)	5	1	0	0	0.01	1	0.01	0.00
Unchahar Solar(10)	10	2	0	0	0.04	1	0.04	-0.01
Singrauli Solar(15)	15	2	0	0	0.04	2	0.05	-0.01
KHEP(4*200)	800	860	852	0	3.89	162	3.60	0.29
<b>Sub Total (A)</b>	<b>12112</b>	<b>11272</b>	<b>7980</b>	<b>6458</b>	<b>161</b>	<b>6715</b>	<b>163</b>	<b>-1.80</b>
<b>B. NPC</b>								
NAPS (2*220)	440	419	431	445	9.70	404	10.06	-0.36
RAPS- B (2*220)	440	383	424	428	9.20	383	9.19	0.00
RAPS- C (2*220)	440	214	233	235	4.92	205	5.14	-0.21
<b>Sub Total (B)</b>	<b>1320</b>	<b>1016</b>	<b>1088</b>	<b>1108</b>	<b>23.82</b>	<b>992</b>	<b>24.39</b>	<b>-0.57</b>
<b>C. NHPC</b>								
Chamera I HPS (3*180)	540	540	180	0	2.23	93	2.00	0.23
Chamera II HPS (3*100)	300	301	310	0	1.64	68	1.50	0.14
Chamera III HPS (3*77)	231	231	225	0	0.86	36	0.75	0.11
Bairasuil HPS(3*60)	180	179	178	0	0.64	27	0.60	0.04
Salal-HPS (6*115)	690	118	273	139	4.07	170	2.82	1.25
Tanakpur-HPS (3*31.4)	94	35	29	60	1.01	42	0.84	0.18
Uri-I HPS (4*120)	480	79	232	24	2.14	89	1.81	0.33
Uri-II HPS (4*60)	240	56	122	38	1.42	59	1.35	0.08
Dhauliganga-HPS (4*70)	280	280	284	0	1.32	55	1.26	0.06
Dulhasti-HPS (3*130)	390	383	393	0	4.21	175	4.00	0.21
Sewa-II HPS (3*40)	120	119	101	0	0.29	12	0.36	-0.07
Parbati 3 (4*130)	520	260	264	0	0.67	28	0.65	0.02
<b>Sub Total (C)</b>	<b>4065</b>	<b>2580</b>	<b>2590</b>	<b>261</b>	<b>21</b>	<b>855</b>	<b>18</b>	<b>2.58</b>
<b>D.SJVNL</b>								
NJPC (6*250)	1500	1605	1509	0	9.65	402	9.50	0.15
Rampur HEP (6*88.67)	412	442	444	0	2.77	115	2.65	0.12
<b>Sub Total (D)</b>	<b>1912</b>	<b>2047</b>	<b>1953</b>	<b>0</b>	<b>12.42</b>	<b>518</b>	<b>12.15</b>	<b>0.27</b>
<b>E. THDC</b>								
Tehri HPS (4*250)	1000	1075	1062	0	6.52	272	6.28	0.24
Koteshwar HPS (4*100)	400	96	103	91	2.33	97	2.30	0.03
<b>Sub Total (E)</b>	<b>1400</b>	<b>1171</b>	<b>1165</b>	<b>91</b>	<b>8.85</b>	<b>369</b>	<b>8.58</b>	<b>0.27</b>
<b>F. BBMB</b>								
Bhakra HPS (2*108+3*126+5*157)	1379	543	904	399	13.33	556	13.03	0.30
Dehar HPS (6*165)	990	178	495	145	4.35	181	4.28	0.07
Pong HPS (6*66)	396	189	330	66	4.55	189	4.53	0.01
<b>Sub Total (F)</b>	<b>2765</b>	<b>910</b>						

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sent out MW)	
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	0	0	-0.18	-8	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	0	0	-0.03	-1	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	0	0	-0.07	-3	
	Goindwal(GVK) (2*270)	540	0	0	-0.02	-1	
	Rajpura (2*700)	1400	920	760	26.07	1086	
	Talwandi Saboo (3*660)	1980	728	616	22.24	927	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>1648</b>	<b>1376</b>	<b>48.01</b>	<b>2000</b>	
	Total Hydro	1000	427	340	9.28	387	
	Wind Power	0	0	0	0.00	0	
	Biomass	288	7	7	0.16	7	
	Solar	560	2	2	0.04	2	
	<b>Renewable(Total)</b>	<b>848</b>	<b>9</b>	<b>9</b>	<b>0.21</b>	<b>9</b>	
	<b>Total Punjab</b>	<b>8408</b>	<b>2083</b>	<b>1725</b>	<b>57.50</b>	<b>2396</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	209	206	5.04	210
		DCRTPP (Yamuna nagar) (2*300)	600	557	454	11.65	485
Faridabad GPS (NTPC)(2*137.75+1*156)		432	0	0	0.00	0	
RGTPP (khedar) (IPP) (2*600)		1200	1134	746	19.96	832	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	0	0	0.00	0	
<b>Thermal (Total)</b>		<b>4497</b>	<b>1900</b>	<b>1406</b>	<b>36.65</b>	<b>1527</b>	
Total Hydro		62	10	29	0.56	23	
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>1910</b>	<b>1435</b>	<b>37.21</b>	<b>1550</b>	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	998	924	21.72	905
		suratgarh TPS (6*250)	1500	786	770	18.58	774
	Chabra TPS (4*250)	1000	905	610	18.97	790	
	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	154	113	3.59	150	
	RAPS A (NPC) (1*100+1*200)	300	166	166	4.13	172	
	Barsingar (NLC) (2*125)	250	226	224	5.32	222	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	816	802	17.76	740	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	484	552	12.03	501	
	Kawai(Adani) (2*660)	1320	607	600	13.58	566	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5142</b>	<b>4761</b>	<b>115.68</b>	<b>4820</b>	
	Total Hydro	550	134	181	3.33	139	
	Wind power	4017	142	699	10.44	435	
	Biomass	99	18	18	0.42	18	
	Solar	1295	3	0	2.70	113	
	Renewable/Others (Total)	5411	163	717	13.56	565	
	<b>Total Rajasthan</b>	<b>14837</b>	<b>5439</b>	<b>5659</b>	<b>132.57</b>	<b>5524</b>	
UP	Anpara TPS (3*210+2*500)	1630	1205	1232	28.28	1178	
	Obra TPS (2*50+2*94+5*200)	1194	300	309	7.03	293	
	Paricha TPS (2*110+2*220+2*250)	1160	845	581	17.18	716	
	Panki TPS (2*105)	210	122	135	3.09	129	
	Harduaganj TPS (1*60+1*105+2*250)	665	425	308	9.25	386	
	Tanda TPS (NTPC) (4*110)	440	279	206	6.40	266	
	Roza TPS (IPP) (4*300)	1200	1098	756	24.06	1002	
	Anpara-C (IPP) (2*600)	1200	1017	1008	23.67	986	
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	323	282	7.87	328	
	Anpara-D(2*500)	1000	427	441	10.10	421	
	Lalitpur TPS(3*660)	1980	541	540	12.82	534	
	Bara(2*660)	1320	580	577	13.60	567	
	<b>Thermal (Total)</b>	<b>12449</b>	<b>7162</b>	<b>6375</b>	<b>163.33</b>	<b>6806</b>	
	Vishnuparyag HPS (IPP)(4*110)	440	122	127	7.87	328	
	Alaknada(4*82.5)	330	81	82	3.09	129	
	Other Hydro	527	96	34	3.71	155	
	Cogeneration	981	200	200	4.80	200	
	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>7661</b>	<b>6818</b>	<b>182.81</b>	<b>7617</b>	
Uttarakhand	Other Hydro	1250	584	214	8.15	340	
	Total Gas	225	175	185	4.31	179	
	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>759</b>	<b>399</b>	<b>12.51</b>	<b>521</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.01	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	77	78	1.91	80	
	Pragati Gas Turbine (2x104+ 1x122)	330	264	260	6.38	266	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	-3	-3	0.00	0	
	Badarpur TPS (NTPC) (3*95+2*210)	705	-4	-4	-0.13	-5	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>334</b>	<b>331</b>	<b>8.16</b>	<b>340</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>334</b>	<b>331</b>	<b>8.16</b>	<b>340</b>		

HP	Baspa HPS (IPP) (3*100)	300	0	30	1.53	64
	Malana HPS (IPP) (2*43)	86	47	0	0.35	15
	Other Hydro	372	128	76	2.39	99
	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	99	91	2.22	92
	<b>Renewable(Total)</b>	<b>486</b>	<b>99</b>	<b>91</b>	<b>2.22</b>	<b>92</b>
	<b>Total HP</b>	<b>1244</b>	<b>274</b>	<b>197</b>	<b>6.48</b>	<b>270</b>
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	293	143	4.63
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>431</b>	<b>236</b>	<b>7</b>	<b>308</b>
<b>Total State Control Area Generation</b>		<b>50078</b>	<b>18891</b>	<b>16800</b>	<b>444.64</b>	<b>18527</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>5572.04</b>	<b>6660.84</b>	<b>165.89</b>	<b>6912</b>
<b>Total Regional Availability(Gross)</b>		<b>75315</b>	<b>41830</b>	<b>31988</b>	<b>865.94</b>	<b>36081</b>

**IV. Total Hydro Generation:**

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>9113</b>	<b>962</b>	<b>74.05</b>	<b>3085</b>
<b>State Control Area Hydro</b>	<b>7163</b>	<b>2334</b>	<b>1625</b>	<b>49.88</b>	<b>2260</b>
<b>Total Regional Hydro</b>	<b>19397</b>	<b>11447</b>	<b>2587</b>	<b>123.94</b>	<b>5346</b>

**V. Total Renewable Generation:**

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.09</b>	<b>4</b>
<b>State Control Area Renewable</b>	<b>7356</b>	<b>270</b>	<b>816</b>	<b>16.04</b>	<b>668</b>
<b>Total Regional Renewable</b>	<b>7386</b>	<b>270</b>	<b>816</b>	<b>16.13</b>	<b>672</b>

**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	
Vindhychall(HVDC B/B)	-500	-500	0	500	0.00	12.10	-12.10
765 KV Gwalior-Agra (D/C)	1594	1872	2254	0	48.02	0.00	48.02
400 KV Zerda-Kankroli	-152	-123	0	206	0.00	2.15	-2.15
400 KV Zerda-Bhinmal	-35	-112	64	246	0.00	1.13	-1.13
220 KV Auraiya-Malanpur	-90	-103	0	127	0.00	2.18	-2.18
220 KV Badod-Kota/Morak	-24	-25	16	76	0.00	0.61	-0.61
Mundra-Mohindergarh(HVDC Bipole)	1498	1499	1505	0.00	36.31	0.00	36.31
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1058	1307	1563	0	34.15	0.00	34.15
<b>Sub Total WR</b>	<b>3349</b>	<b>3815</b>			<b>118.48</b>	<b>18.16</b>	<b>100.32</b>
400 kV Sasaram - Varanasi	-250	-197	0	254	0.00	4.91	-4.91
400 kV Sasaram - Allahabad	150	150	150	0	3.59	0.00	3.59
400 KV MZP- GKP (D/C)	32	194	308	67	3.61	0.00	3.61
400 KV Patna-Balia(D/C) X 2	584	586	777	0	15.01	0.00	15.01
400 KV B'Sharif-Balia (D/C)	-36	86	153	36	1.88	0.00	1.88
765 KV Gaya-Balia	147	252	285	0	5.66	0.00	5.66
765 KV Gaya-Varanasi (D/C)	331	369	653	0	10.76	0.00	10.76
220 KV Pusauli-Sahupuri	189	158	225	0	4.00	0.00	4.00
132 KV K'nasa-Sahupuri	-30	-24	0	36	0.00	0.56	-0.56
132 KV Son Ngr-Rihand	-33	-35	0	43	0.00	0.97	-0.97
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-110	-71	134	112	0.00	0.25	-0.25
400 KV Barh -GKP (D/C)	500	460	564	0	11.03	0.00	11.03
400 kV B'Sharif - Varanasi (D/C)	49	218	225	56	0.73	0.00	0.73
<b>Sub Total ER</b>	<b>1523</b>	<b>2146</b>			<b>56.25</b>	<b>6.69</b>	<b>49.57</b>
+/- 800 KV BiswanathChariali-Agra	700	700	700	0.00	16.00	0.00	16.00
<b>Sub Total NER</b>	<b>700</b>	<b>700</b>			<b>16.00</b>	<b>0.00</b>	<b>16.00</b>
<b>Total IR Exch</b>	<b>5572</b>	<b>6661</b>			<b>190.74</b>	<b>24.85</b>	<b>165.89</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
45.32	1.39	46.71	0.86	-12.08	5.73	17.51	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
53.30	109.32	162.62	65.57	100.32	165.89	12.26	-9.00	3.26

**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	-22	0	0	22	0	0	-0.07

**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	7.48	52.38	74.47	14.62	3.96	0.00	0.00

Frequency (Hz)				Average Frequency Hz	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum		Minimum					MAX (Hz)	MIN (Hz)	
Freq	Time	Freq	Time						
50.20	21.58	49.80	15.57	49.99	0.041	0.063	50.19	49.98	25.53

## VIII(A). Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	409	0:00	401	11:15	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	421	0:12	403	17:21	0.0	0.0	0.2	0.0	0.2
Bareilly(PG)400kV	400	422	2:02	403	12:11	0.0	0.0	0.7	0.0	0.7
Kanpur	400	417	0:00	403	6:23	0.0	0.0	0.0	0.0	0.0
Dadri	400	423	1:58	404	9:29	0.5	0.5	9.2	0.0	9.8
Ballabgarh	400	430	2:01	407	9:42	0.0	0.0	41.0	0.0	41.0
Bawana	400	427	2:02	406	9:35	0.0	0.0	31.0	0.0	31.0
Bassi	400	423	20:11	394	6:24	0.0	0.0	3.6	0.0	3.6
Hissar	400	421	20:29	400	6:26	0.0	0.0	0.7	0.0	0.7
Moga	400	424	20:41	401	9:44	0.0	0.0	9.6	0.0	9.6
Abdullapur	400	423	20:46	402	10:10	0.0	0.0	5.5	0.0	5.5
Nalagarh	400	432	20:49	408	9:37	0.0	0.0	45.5	0.8	45.5
Kishenpur	400	417	2:02	390	11:20	0.0	0.0	0.0	0.0	0.0
Wagoora	400	398	4:01	363	18:39	48.6	78.3	0.0	0.0	48.6
Amritsar	400	432	20:43	404	9:44	0.0	0.0	45.1	1.3	45.1
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	422	0:24	403	6:48	0.0	0.0	25.3	0.0	25.3
Rishikesh	400	419	2:01	394	6:25	0.0	0.0	0.0	0.0	0.0

## VIII(B). Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	775	20:31	741	6:25	0.0	0.4	0.0	0.0	0.0
Balia	765	790	0:00	765	17:23	0.0	0.0	0.0	0.0	0.0
Moga	765	805	20:41	771	12:11	0.0	0.0	9.0	0.0	9.0
Agra	765	790	20:31	748	9:35	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	806	21:30	772	6:25	0.0	0.0	11.9	0.0	11.9
Unnao	765	774	0:00	743	9:42	0.0	0.0	0.0	0.0	0.0
Lucknow	765	801	0:00	771	6:46	0.0	0.0	0.1	0.0	0.1
Meerut	765	807	20:28	753	6:27	0.0	0.0	3.9	0.0	3.9
Jhatikara	765	802	20:41	765	9:35	0.0	0.0	1.8	0.0	1.8
Bareilly 765 kV	765	795	2:01	760	6:29	0.0	0.0	0.0	0.0	0.0
Anta	765	803	20:12	792	22:11	0.0	0.0	33.0	0.0	33.0
Phagi	765	804	20:12	762	6:26	0.0	0.0	4.4	0.0	4.4

Note : \*0" in Max / Min Col -&gt; 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	497.79	1006.54	508.65	1485.27	207.90	367.64
Pong	426.72	384.05	413.56	622.40	417.86	794.52	73.45	284.47
Tehri	829.79	740.04	821.30	1029.72	816.05	923.25	47.22	143.00
Koteswar	612.50	598.50	611.64	5.20	610.85	5.00	143.00	153.27
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	61.64	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	512.17	3.02	509.21	4.53	74.15	134.50

\* 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	-346	0	0	-346	0	0	-11.24	-0.54	-11.78
Delhi	-133	-548	0	-231	2	0	-6.48	-2.47	-8.95
Haryana	-625	-8	0	-314	373	0	-10.16	4.70	-5.46
HP	244	90	0	72	-110	0	4.80	-0.79	4.01
J&K	352	0	0	446	-15	0	9.53	-0.28	9.25
CHD	-30	0	0	-30	0	0	-0.36	0.01	-0.35
Rajasthan	-7	744	0	-7	595	0	4.42	21.58	26.00
UP	129	0	0	-98	-100	0	-6.09	-1.54	-7.63
Uttarakhand	147	140	0	179	46	0	3.78	5.00	8.78
Total	-270	418	0	-329	790	0	-11.80	25.66	13.86

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-346	-659	0	-505	0	0
Delhi	-114	-421	343	-562	0	0
Haryana	-314	-628	411	-444	0	0
HP	293	72	198	-663	0	0
J&K	446	349	0	-15	0	0
CHD	0	-30	0	0	10	-19
Rajasthan	452	-7	1760	583	0	0
UP	182	-697	0	-100	0	0
Uttarakhand	179	147	450	-27	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

<b>WR</b>	<b>0.00%</b>
<b>ER</b>	<b>0.00%</b>
<b>Simultaneous</b>	<b>0.00%</b>

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

<b>WR</b>	<b>0.00%</b>
<b>ER</b>	<b>0.00%</b>
<b>Simultaneous</b>	<b>0.00%</b>

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

<b>Rihand - Dadri</b>	<b>0.00%</b>
-----------------------	--------------

**XII. Zero Crossing Violations**

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
Punjab	1	19
Haryana	0	11
Rajasthan	2	17
Delhi	4	45
UP	1	16
Uttarakhand	5	28
HP	1	20
J & K	5	40
Chandigarh	5	44

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:****XV. Weather Conditions For 09.11.2016 :**  
Normal**XVI. Synchronisation of new generating units :****XVII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / /substation :**

400/132 kV 200 MVA ICT-2 at Meja first time charged at 1430 hrs

**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.