

# 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 19.10.2016

Date of Reporting : 20.10.2016



### 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
43731	457	44189	50.10	35281	295	35575	50.08	913.3	10.50

\* 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:

UI [OD:(+ve), UD: (-ve)]

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	50.82	10.98		62.00	62.15	60.64	-1.52	122.64	0.00
Haryana	35.92	0.68		36.59	98.07	96.81	-1.25	133.41	0.00
Rajasthan	111.54	3.34	17.32	132.20	60.35	61.52	1.16	193.72	0.42
Delhi	15.24			15.24	61.80	62.01	0.21	77.25	0.06
UP	168.36	17.75		186.12	101.12	101.38	0.26	287.49	1.38
Uttarakhand		10.86		15.55	19.15	19.91	0.76	35.46	0.00
HP		9.33		9.33	14.71	15.68	0.97	25.01	0.02
J & K		9.78	0.00	9.78	29.40	24.73	-4.67	34.51	8.63
Chandigarh				0.00	4.04	3.80	-0.24	3.80	0.00
<b>Total</b>	<b>381.89</b>	<b>62.71</b>	<b>17.32</b>	<b>466.80</b>	<b>450.79</b>	<b>446.48</b>	<b>-4.32</b>	<b>913.28</b>	<b>10.50</b>

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

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

UI/OA/PX [OD/Import: (+ve), UD/Export: (-ve)]

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	5955	0	-128	0	4192	0	-28	0	5955	19:00	0
Haryana	7122	0	-185	843	4295	0	9	302	7122	19:00	0
Rajasthan	8541	0	45	582	8264	0	60	592	8808	24:00	0
Delhi	3755	0	-41	45	2708	0	112	-187	3755	19:00	0
UP	13380	0	259	4	12374	0	59	195	13380	19:00	0
Uttarakhand	1763	0	-1	149	1350	0	80	324	1772	18:00	0
HP	1192	0	-28	-327	804	0	48	81	1274	10:00	0
J&K	1830	457	-79	246	1178	295	-211	62	1830	19:00	457
Chandigarh	194	0	-38	-15	116	0	-2	0	194	19:00	0
<b>Total</b>	<b>43731</b>	<b>457</b>	<b>-195</b>	<b>1528</b>	<b>35281</b>	<b>295</b>	<b>127</b>	<b>1369</b>	<b>43731</b>	<b>19:00</b>	<b>457</b>

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

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### III. Regional Entities :

UI [OD:(+ve), UG: (-ve)]

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	1833	1954	1974	43.86	1828	43.40	0.46
Rihand I STPS (2*500)	1000	943	1033	1018	21.99	916	21.81	0.17
Rihand II STPS (2*500)	1000	915	966	865	21.32	888	21.03	0.30
Rihand III STPS (2*500)	1000	472	509	481	10.94	456	10.96	-0.02
Dadri I STPS (4*210)	840	815	294	286	7.32	305	7.60	-0.29
Dadri II STPS (2*490)	980	980	718	710	16.74	698	17.84	-1.10
Unchahar I TPS (2*210)	420	346	350	271	6.63	276	6.96	-0.33
Unchahar II TPS (2*210)	420	400	389	297	7.22	301	7.59	-0.37
Unchahar III TPS (1*210)	210	200	198	152	3.63	151	3.88	-0.26
ISTPP (Jhajjar) (3*500)	1500	1425	334	328	7.92	330	8.17	-0.25
Dadri GPS (4*130.19+2*154.51)	830	784	351	383	8.03	334	8.64	-0.62
Anta GPS (3*88.71+1*153.2)	419	384	248	191	5.59	233	5.58	0.01
Auraiya GPS (4*111.19+2*109.30)	663	623	0	0	0.00	0	0.10	-0.10
Dadri Solar(5)	5	1	0	0	0.02	1	0.02	0.00
Unchahar Solar(10)	10	2	0	0	0.04	1	0.05	-0.01
Singrauli Solar(15)	15	2	0	0	0.05	2	0.05	0.00
KHEP(4*200)	800	858	859	0	4.19	175	3.75	0.44
<b>Sub Total (A)</b>	<b>12112</b>	<b>10982</b>	<b>8203</b>	<b>6956</b>	<b>165</b>	<b>6895</b>	<b>167</b>	<b>-1.96</b>
<b>B. NPC</b>								
NAPS (2*220)	440	192	212	216	4.63	193	4.61	0.02
RAPS- B (2*220)	440	383	422	426	9.16	382	9.19	-0.03
RAPS- C (2*220)	440	0	0	0	-0.50	-21	0.00	-0.50
<b>Sub Total (B)</b>	<b>1320</b>	<b>575</b>	<b>634</b>	<b>642</b>	<b>13.29</b>	<b>554</b>	<b>13.80</b>	<b>-0.51</b>
<b>C. NHPC</b>								
Chamera I HPS (3*180)	540	540	549	0	2.21	92	2.00	0.21
Chamera II HPS (3*100)	300	301	310	0	2.49	104	2.36	0.14
Chamera III HPS (3*77)	231	231	230	0	1.57	65	1.40	0.17
Bairasuil HPS(3*60)	180	179	178	0	0.90	38	0.82	0.09
Salal-HPS (6*115)	690	210	331	217	5.65	235	5.03	0.62
Tanakpur-HPS (3*31.4)	94	54	53	64	1.51	63	1.29	0.22
Uri-I HPS (4*120)	480	95	140	20	2.51	105	2.27	0.24
Uri-II HPS (4*60)	240	64	123	37	1.64	68	1.54	0.10
Dhauliganga-HPS (4*70)	280	280	284	61	2.29	96	2.19	0.11
Dulhasti-HPS (3*130)	390	383	389	269	7.77	324	7.50	0.27
Sewa-II HPS (3*40)	120	119	118	0	0.35	15	0.36	-0.01
Parbati 3 (4*130)	520	303	306	0	0.72	30	0.68	0.04
<b>Sub Total (C)</b>	<b>4065</b>	<b>2757</b>	<b>3009</b>	<b>668</b>	<b>30</b>	<b>1234</b>	<b>27</b>	<b>2.18</b>
<b>D.SJVNL</b>								
NJPC (6*250)	1500	1605	1542	0	12.61	525	12.50	0.11
Rampur HEP (6*68.67)	412	442	420	0	3.64	152	3.48	0.15
<b>Sub Total (D)</b>	<b>1912</b>	<b>2047</b>	<b>1962</b>	<b>0</b>	<b>16.25</b>	<b>677</b>	<b>15.98</b>	<b>0.26</b>
<b>E. THDC</b>								
Tehri HPS (4*250)	1000	1071	1075	0	5.62	234	5.40	0.22
Koteshwar HPS (4*100)	400	75	102	65	1.84	77	1.80	0.04
<b>Sub Total (E)</b>	<b>1400</b>	<b>1146</b>	<b>1177</b>	<b>65</b>	<b>7.45</b>	<b>310</b>	<b>7.20</b>	<b>0.25</b>
<b>F. BBMB</b>								
Bhakra HPS (2*108+3*126+5*157)	1379	738	1055	650	18.18	758	17.70	0.48
Dehar HPS (6*165)	990	257	660	165	6.42	268	6.17	0.26
Pong HPS (6*66)	396	166	330	0	4.09	170	3.98	0.10
<b>Sub Total (F)</b>	<b>2765</b>	<b>1161</b>	<b>2045</b>	<b>815</b>	<b>28.69</b>	<b>1195</b>	<b>27.85</b>	<b>0.84</b>
<b>G. IPP(s)/JV(s)</b>								
ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	97	0	0.88	36	0.77	0.11
KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	815	180	6.83	285	6.66	0.17
Malana Stg-II HPS (2*50)	100	0	96	0	0.71	30	0.67	0.03
Shree Cement TPS (2*150)	300	0	-2	-2	-0.06	-2	0.00	-0.06
Budhil HPS(IPP) (2*35)	70	0	25	28	0.52	22	0.41	0.10
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1031</b>	<b>206</b>	<b>8.87</b>	<b>370</b>	<b>8.52</b>	<b>0.36</b>
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18668</b>	<b>18061</b>	<b>9352</b>	<b>269.65</b>	<b>11235</b>	<b>268.23</b>	<b>1.42</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	160	160	3.60	150	
	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	-0.11	-5	
	Goindwal(GVK) (2*270)	540	0	0	-0.02	-1	
	Rajpura (2*700)	1400	1320	920	28.49	1187	
	Talwandi Saboo (3*660)	1980	916	616	18.88	787	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>2396</b>	<b>1696</b>	<b>50.82</b>	<b>2118</b>	
	Total Hydro	1000	443	440	10.98	457	
	Wind Power	0	0	0	0.00	0	
	Biomass	288	6	6	0.13	6	
	Solar	560	3	3	0.07	3	
	<b>Renewable(Total)</b>	<b>848</b>	<b>9</b>	<b>9</b>	<b>0.20</b>	<b>9</b>	
	<b>Total Punjab</b>	<b>8408</b>	<b>2848</b>	<b>2145</b>	<b>62.00</b>	<b>2583</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	210	199	4.91	205
		DCRTPP (Yamuna nagar) (2*300)	600	557	472	11.54	481
Faridabad GPS (NTPC)(2*137.75+1*156)		432	0	0	0.00	0	
RGTPP (khedar) (IPP) (2*600)		1200	1086	757	19.46	811	
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>1853</b>	<b>1428</b>	<b>35.92</b>	<b>1497</b>	
Total Hydro		62	21	33	0.68	28	
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>1874</b>	<b>1461</b>	<b>36.59</b>	<b>1525</b>	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	1043	935	24.14	1006
		suratgarh TPS (6*250)	1500	845	749	18.93	789
	Chabra TPS (4*250)	1000	891	818	20.14	839	
	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	116	113	2.79	116	
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0	
	Barsingsar (NLC) (2*125)	250	226	226	5.31	221	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	817	815	18.59	775	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	0	396	5.64	235	
	Kawai(Adani) (2*660)	1320	705	703	16.01	667	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>4643</b>	<b>4755</b>	<b>111.54</b>	<b>4648</b>	
	Total Hydro	550	187	127	3.34	139	
	Wind power	4017	306	816	16.46	686	
	Biomass	99	23	23	0.55	23	
	Solar	1295	6	0	0.31	13	
	Renewable/Others (Total)	5411	335	839	17.32	722	
<b>Total Rajasthan</b>	<b>14837</b>	<b>5165</b>	<b>5721</b>	<b>132.20</b>	<b>5508</b>		
UP	Anpara TPS (3*210+2*500)	1630	998	1027	24.32	1013	
	Obra TPS (2*50+2*94+5*200)	1194	301	239	7.00	292	
	Paricha TPS (2*110+2*220+2*250)	1160	926	908	19.90	829	
	Panki TPS (2*105)	210	135	149	3.30	138	
	Harduaganj TPS (1*60+1*105+2*250)	665	511	510	11.50	479	
	Tanda TPS (NTPC) (4*110)	440	376	370	8.43	351	
	Roza TPS (IPP) (4*300)	1200	1035	1058	23.97	999	
	Anpara-C (IPP) (2*600)	1200	1062	990	23.77	990	
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	404	404	8.81	367	
	Anpara-D(2*500)	1000	433	397	9.94	414	
	Lalitpur TPS(3*660)	1980	0	787	13.07	545	
	Bara(2*660)	1320	545	550	13.16	548	
	<b>Thermal (Total)</b>	<b>12449</b>	<b>6726</b>	<b>7389</b>	<b>167.16</b>	<b>6965</b>	
	Vishnuparyag HPS (IPP)(4*110)	440	221	236	8.81	367	
	Alaknada(4*82.5)	330	164	163	3.30	138	
	Other Hydro	527	292	135	5.65	235	
	Cogeneration	981	50	50	1.20	50	
	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>7453</b>	<b>7973</b>	<b>186.12</b>	<b>7755</b>	
Uttarakhand	Other Hydro	1250	595	313	10.86	453	
	Total Gas	225	173	260	4.63	193	
	Wind Power	0	0	0	0.00	0	
	Biomass	127	0	0	0.00	0	
	Solar	20	0	0	0.06	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>0.06</b>	<b>2</b>	
	<b>Total Uttarakhand</b>	<b>1802</b>	<b>768</b>	<b>573</b>	<b>15.55</b>	<b>648</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	77	76	1.84	77	
	Pragati Gas Turbine (2x104+ 1x122)	330	150	155	3.69	154	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	250	250	6.02	251	
	Badarpur TPS (NTPC) (3*95+2*210)	705	169	180	3.69	154	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>646</b>	<b>661</b>	<b>15.24</b>	<b>635</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>646</b>	<b>661</b>	<b>15.24</b>	<b>635</b>		

HP	Baspa HPS (IPP) (3*100)	300	61	61	2.19	91
	Malana HPS (IPP) (2*43)	86	80	0	0.69	29
	Other Hydro	372	145	145	3.38	141
	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	133	125	3.06	128
	<b>Renewable(Total)</b>	<b>486</b>	<b>133</b>	<b>125</b>	<b>3.06</b>	<b>128</b>
	<b>Total HP</b>	<b>1244</b>	<b>420</b>	<b>331</b>	<b>9.33</b>	<b>389</b>
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	292	292	7.01
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>430</b>	<b>385</b>	<b>10</b>	<b>407</b>	
<b>Total State Control Area Generation</b>		<b>50078</b>	<b>19603</b>	<b>19250</b>	<b>466.80</b>	<b>19450</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>8292</b>	<b>8132</b>	<b>208.33</b>	<b>8680</b>
<b>Total Regional Availability(Gross)</b>		<b>75315</b>	<b>45956</b>	<b>36734</b>	<b>944.78</b>	<b>39366</b>

**IV. Total Hydro Generation:**

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>10060</b>	<b>1728</b>	<b>94.60</b>	<b>3942</b>
<b>State Control Area Hydro</b>	<b>7163</b>	<b>2946</b>	<b>2423</b>	<b>62.71</b>	<b>2808</b>
<b>Total Regional Hydro</b>	<b>19397</b>	<b>13006</b>	<b>4151</b>	<b>157.31</b>	<b>6750</b>

**V. Total Renewable Generation:**

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.11</b>	<b>4</b>
<b>State Control Area Renewable</b>	<b>7356</b>	<b>477</b>	<b>972</b>	<b>20.65</b>	<b>860</b>
<b>Total Regional Renewable</b>	<b>7386</b>	<b>477</b>	<b>972</b>	<b>20.75</b>	<b>865</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	
Vindhychal(HVDC B/B)	50	50	250	0	3.64	0.00	3.64
765 KV Gwalior-Agra (D/C)	1977	1844	2641	0	50.87	0.00	50.87
400 KV Zerda-Kankroli	-5	-48	47	184	0.00	0.86	-0.86
400 KV Zerda-Bhinmal	22	-43	112	196	0.00	0.48	-0.48
220 KV Auraiya-Malanpur	-26	-58	0	84	0.00	0.98	-0.98
220 KV Badod-Kota/Morak	-10	-22	29	47	0.00	0.40	-0.40
Mundra-Mohindergerh(HVDC Bipole)	2002	2198	2205	0.00	48.50	0.00	48.50
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1327	1148	1703	0	32.46	0.00	32.46
<b>Sub Total WR</b>	<b>5337</b>	<b>5069</b>			<b>135.47</b>	<b>2.73</b>	<b>132.74</b>
Pusauli Bypass/HVDC	200	150	200	0	2.57	1.30	1.27
400 KV MZP- GKP (D/C)	170	379	584	0	9.58	0.00	9.58
400 KV Patna-Balia(D/C) X 2	660	612	754	0	15.53	0.00	15.53
400 KV B Sharif-Balia (D/C)	38	80	181	38	2.30	0.00	2.30
765 KV Gaya-Balia	163	204	5	0	5.16	0.00	5.16
765 KV Gaya-Varanasi (D/C)	557	472	754	0	13.72	0.00	13.72
220 KV Pusauli-Sahupuri	174	161	177	0	3.58	0.00	3.58
132 KV K'nasa-Sahupuri	-36	-42	0	42	0.00	0.77	-0.77
132 KV Son Ngr-Rihand	-43	-32	0	43	0.00	0.73	-0.73
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	24	55	191	92	0.24	0.00	0.24
400 KV Barh -GKP (D/C)	498	434	512	0	10.63	0.00	10.63
400 kV B Sharif - Varanasi (D/C)	50	90	238	0	3.33	0.00	3.33
<b>Sub Total ER</b>	<b>2455</b>	<b>2563</b>			<b>66.64</b>	<b>2.80</b>	<b>63.84</b>
+/- 800 KV BiswanathChariali-Agra	500	500	500	0.00	11.75	0.00	11.75
<b>Sub Total NER</b>	<b>500</b>	<b>500</b>			<b>11.75</b>	<b>0.00</b>	<b>11.75</b>
<b>Total IR Exch</b>	<b>8292</b>	<b>8132</b>			<b>213.85</b>	<b>5.52</b>	<b>208.33</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
47.49	3.62	51.11	9.13	0.50	7.30	13.11	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
67.55	129.04	196.59	75.58	132.74	208.33	8.03	3.70	11.74

**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	-21	0	0	21	0	0	-0.05

**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	0.02	7.11	59.02	80.53	10.43	1.97	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)	
50.19	Time 6.02	49.79	Time 14.11	49.99	0.036	0.058	50.16	49.97	19.47

## 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	410	0:00	402	15:46	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	417	6:04	399	14:37	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	404	0:00	404	0:00	0.0	0.0	0.0	0.0	0.0
Kanpur	400	418	3:00	401	12:16	0.0	0.0	0.0	0.0	0.0
Dadri	400	421	2:54	398	14:41	0.0	0.0	1.2	0.0	1.2
Ballabgarh	400	429	2:56	402	11:38	0.0	0.0	42.6	0.0	42.6
Bawana	400	423	1:08	400	11:37	0.0	0.0	19.7	0.0	19.7
Bassi	400	423	4:03	400	11:23	0.0	0.0	0.9	0.0	0.9
Hissar	400	420	2:58	397	14:41	0.0	0.0	0.0	0.0	0.0
Moga	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Abdullapur	400	428	1:28	404	18:28	0.0	0.0	33.9	0.0	33.9
Nalagarh	400	429	3:05	408	11:43	0.0	0.0	37.0	0.0	37.0
Kishenpur	400	424	2:59	392	18:17	0.0	0.0	8.7	0.0	8.7
Wagoora	400	413	3:00	365	18:17	5.4	39.4	0.0	0.0	5.4
Amritsar	400	428	2:56	405	11:26	0.0	0.0	34.4	0.0	34.4
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	413	4:03	386	14:41	0.0	3.4	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	779	2:59	746	18:25	0.0	0.0	0.0	0.0	0.0
Balia	765	784	6:02	758	18:11	0.0	0.0	0.0	0.0	0.0
Moga	765	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Agra	765	792	2:59	753	14:41	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	806	3:00	767	14:36	0.0	0.0	12.4	0.0	12.4
Unnao	765	765	6:04	736	15:43	0.0	12.8	0.0	0.0	0.0
Lucknow	765	786	6:03	754	14:37	0.0	0.0	0.0	0.0	0.0
Meerut	765	806	2:58	754	11:39	0.0	0.0	8.3	0.0	8.3
Jhatikara	765	803	2:58	764	14:41	0.0	0.0	3.9	0.0	3.9
Bareilly 765 kV	765	784	6:04	749	11:37	0.0	0.0	0.0	0.0	0.0
Anta	765	795	21:44	766	14:33	0.0	0.0	0.0	0.0	0.0
Phagi	765	796	2:49	766	11:52	0.0	0.0	0.0	0.0	0.0

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	500.42	1114.30	510.09	1545.02	308.63	531.25
Pong	426.72	384.05	415.49	693.24	419.60	875.55	75.63	246.75
Tehri	829.79	740.04	824.15	1089.96	819.30	988.26	113.61	122.00
Koteswar	612.50	598.50	609.41	4.30	611.18	5.00	122.00	121.03
Chamera-I	760.00	748.75	758.91	0.00	0.00	0.00	77.17	59.57
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	515.38	3.25	512.53	3.60	52.70	134.75

\* 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	0	0	0	0	0	0	0.00	0.00	0.00
Delhi	5	-193	0	12	33	0	1.51	0.30	1.81
Haryana	-24	326	0	476	367	0	4.14	7.93	12.08
HP	81	0	0	-8	-319	0	3.03	-4.26	-1.23
J&K	62	0	0	62	184	0	2.94	1.45	4.38
CHD	0	0	0	0	0	-15	0.00	0.22	0.22
Rajasthan	-5	596	0	-7	589	0	-0.13	14.07	13.94
UP	245	-50	0	104	-100	0	-1.88	-1.98	-3.86
Uttarakhand	25	299	0	25	124	0	0.45	6.28	6.73
Total	390	978	0	664	879	-15	10.07	24.00	34.07

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	0	0	0	0	0	0
Delhi	157	5	263	-276	0	0
Haryana	487	-27	412	-94	0	0
HP	228	-8	0	-686	0	0
J&K	211	62	283	-15	0	0
CHD	0	0	0	0	49	-26
Rajasthan	-5	-7	600	571	0	0
UP	256	-414	0	-100	0	0
Uttarakhand	25	13	520	111	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>0.69%</b>

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

<b>Rihand - Dadri</b>	<b>0.00%</b>
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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	4	26
Haryana	1	21
Rajasthan	0	9
Delhi	1	16
UP	0	10
Uttarakhand	4	21
HP	2	23
J & K	3	22
Chandigarh	3	30

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:****XV. Weather Conditions For 19.10.2016 :**  
Normal**XVI. Synchronisation of new generating units :****XVII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / /substation :**

- 400kV Varanasi(PG)-Samath(UP) - I first time charged at 19:35/19.10.2016.
- 400kV Agra(UP)-Fatehabad first time at 12:31/19.10.2016 after LILO of 400kV Agra(PG)-Agra(UP) at Fatehabad.
- 400kV Agra(PG)-Fatehabad first time at 13:28/19.10.2016 after LILO of 400kV Agra(PG)-Agra(UP) at Fatehabad.

**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 : 19.10.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER