

# 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 22.10.2016

Date of Reporting : 23.10.2016



### 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
43008	729	43737	50.10	35295	313	35608	0.00	933.3	8.84

\* 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	43.12	10.42	0.21	53.75	61.46	60.90	-0.56	114.64	0.00
Haryana	34.07	0.68	0.00	34.75	96.76	95.31	-1.45	130.06	0.00
Rajasthan	109.00	4.53	17.93	131.45	62.75	64.52	1.76	195.97	0.00
Delhi	15.41		0.00	15.41	59.13	60.41	1.28	75.82	0.00
UP	175.64	14.61	0.00	190.25	85.59	85.49	-0.09	275.74	0.00
Uttarakhand		10.32	0.00	12.18	21.66	21.93	0.26	34.11	0.00
HP		50.53	3.05	53.58	14.64	15.40	0.76	68.98	0.07
J & K		9.73	0.00	9.73	29.15	24.64	-4.51	34.37	8.77
Chandigarh				0.00	3.68	3.60	-0.08	3.60	0.00
<b>Total</b>	<b>377.24</b>	<b>100.81</b>	<b>21.19</b>	<b>501.11</b>	<b>434.83</b>	<b>432.20</b>	<b>-2.63</b>	<b>933.30</b>	<b>8.84</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	5519	0	-129	-696	4242	0	53	9	5519	19:00	0
Haryana	6915	0	-275	263	4172	0	123	73	6918	20:00	0
Rajasthan	8657	157	78	592	8511	0	29	601	8807	1:00	0
Delhi	3704	0	55	-77	2711	0	96	-156	3776	20:00	0
UP	13340	130	-296	-13	12281	0	-137	50	13340	19:00	130
Uttarakhand	1723	0	29	229	1249	0	75	341	1723	19:00	0
HP	1190	0	35	-271	766	0	23	135	1297	8:00	0
J&K	1767	442	-77	295	1253	313	-94	161	1767	19:00	442
Chandigarh	193	0	-20	0	111	0	-4	0	193	19:00	0
<b>Total</b>	<b>43008</b>	<b>729</b>	<b>-600</b>	<b>324</b>	<b>35295</b>	<b>313</b>	<b>164</b>	<b>1215</b>	<b>43008</b>	<b>19:00</b>	<b>729</b>

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

Diversity is 1.01

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

### III. Regional Entities :

Entity	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
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1783	1997	1986	43.34	1806	42.48	0.86
	Rihand I STPS (2*500)	1000	943	975	1012	20.91	871	21.49	-0.58
	Rihand II STPS (2*500)	1000	943	972	964	20.76	865	21.78	-1.01
	Rihand III STPS (2*500)	1000	366	407	405	9.01	375	8.51	0.50
	Dadri I STPS (4*210)	840	815	313	289	6.94	289	7.51	-0.57
	Dadri II STPS (2*490)	980	980	720	697	16.07	670	18.06	-1.99
	Unchahar I TPS (2*210)	420	353	285	292	6.48	270	6.62	-0.14
	Unchahar II TPS (2*210)	420	400	245	279	6.17	257	7.18	-1.01
	Unchahar III TPS (1*210)	210	200	145	145	3.20	133	3.68	-0.49
	ISTPP (Jhajjar) (3*500)	1500	950	345	317	6.74	281	7.46	-0.73
	Dadri GPS (4*130.19+2*154.51)	830	785	311	362	7.65	319	8.28	-0.64
	Anta GPS (3*88.71+1*153.2)	419	388	0	0	0.00	0	0.00	0.00
	Auraiya GPS (4*111.19+2*109.30)	663	629	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	2	0.04	0.00
	Singrauli Solar(15)	15	2	0	0	0.01	0	0.05	-0.05
	KHEP(4*200)	800	858	860	220	2.99	125	3.00	-0.01
<b>Sub Total (A)</b>	<b>12112</b>	<b>10398</b>	<b>7575</b>	<b>6968</b>	<b>150</b>	<b>6263</b>	<b>156</b>	<b>-5.85</b>	
B. NPC	NAPS (2*220)	440	195	222	221	4.72	197	4.68	0.04
	RAPS- B (2*220)	440	382	425	430	9.22	384	9.17	0.05
	RAPS- C (2*220)	440	200	0	212	1.83	76	4.80	-2.97
	<b>Sub Total (B)</b>	<b>1320</b>	<b>777</b>	<b>647</b>	<b>863</b>	<b>15.77</b>	<b>657</b>	<b>18.65</b>	<b>-2.88</b>
C. NHPC	Chamera I HPS (3*180)	540	540	366	0	2.11	88	2.00	0.11
	Chamera II HPS (3*100)	300	301	309	0	2.42	101	2.10	0.32
	Chamera III HPS (3*77)	231	231	228	0	1.38	57	1.30	0.08
	Bairasuli HPS(3*60)	180	179	119	0	0.87	36	0.66	0.22
	Salal-HPS (6*115)	690	220	224	242	5.44	227	5.29	0.15
	Tanakpur-HPS (3*31.4)	94	49	54	53	1.36	57	1.18	0.18
	Uri-I HPS (4*120)	480	90	231	42	2.41	101	2.16	0.25
	Uri-II HPS (4*60)	240	58	98	37	1.52	63	1.39	0.13
	Dhauliganga-HPS (4*70)	280	280	282	0	2.01	84	1.96	0.05
	Dulhasti-HPS (3*130)	390	383	395	262	7.22	301	6.80	0.42
	Sewa-II HPS (3*40)	120	119	110	0	0.32	13	0.36	-0.04
	Parbati 3 (4*130)	520	303	310	0	0.96	40	0.91	0.05
	<b>Sub Total (C)</b>	<b>4065</b>	<b>2753</b>	<b>2723</b>	<b>636</b>	<b>28</b>	<b>1168</b>	<b>26</b>	<b>1.91</b>
	D.SJVNL	NJPC (6*250)	1500	1605	1598	0	12.02	501	12.00
Rampur HEP (6*68.67)		412	442	447	0	3.45	144	3.36	0.09
<b>Sub Total (D)</b>		<b>1912</b>	<b>2047</b>	<b>2045</b>	<b>0</b>	<b>15.47</b>	<b>645</b>	<b>15.36</b>	<b>0.11</b>
E. THDC	Tehri HPS (4*250)	1000	1071	1048	0	5.99	250	6.40	-0.41
	Koteshwar HPS (4*100)	400	88	99	72	1.80	75	1.70	0.10
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1159</b>	<b>1147</b>	<b>72</b>	<b>7.79</b>	<b>324</b>	<b>8.10</b>	<b>-0.31</b>
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	740	1070	504	17.83	743	17.75	0.08
	Dehar HPS (6*165)	990	253	495	165	5.92	247	6.08	-0.16
	Pong HPS (6*66)	396	128	330	66	3.79	158	3.07	0.72
	<b>Sub Total (F)</b>	<b>2765</b>	<b>1121</b>	<b>1895</b>	<b>735</b>	<b>27.53</b>	<b>1147</b>	<b>26.90</b>	<b>0.63</b>
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	109	0	0.96	40	0.91	0.05
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	825	0	6.53	272	6.16	0.36
	Malana Stg-II HPS (2*50)	100	0	56	0	0.47	20	0.59	-0.12
	Shree Cement TPS (2*150)	300	0	-1	-1	-0.03	-1	0.00	-0.03
	Budhil HPS(IPP) (2*35)	70	0	25	10	0.35	15	0.36	-0.01
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1013</b>	<b>9</b>	<b>8.28</b>	<b>345</b>	<b>8.02</b>	<b>0.26</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18255</b>	<b>17045</b>	<b>9283</b>	<b>253.17</b>	<b>10549</b>	<b>259.30</b>	<b>-6.13</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	-0.14	-6	
	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	
	Goindwal(GVK) (2*270)	540	0	0	-0.02	-1	
	Rajpura (2*700)	1400	660	920	21.19	883	
	Talwandi Saboo (3*660)	1980	924	924	22.21	925	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>1584</b>	<b>1844</b>	<b>43.12</b>	<b>1797</b>	
	Total Hydro	1000	437	397	10.42	434	
	Wind Power	0	0	0	0.00	0	
	Biomass	288	5	5	0.11	5	
	Solar	560	0	0	0.09	4	
	<b>Renewable(Total)</b>	<b>848</b>	<b>5</b>	<b>5</b>	<b>0.21</b>	<b>9</b>	
	<b>Total Punjab</b>	<b>8408</b>	<b>2026</b>	<b>2246</b>	<b>53.75</b>	<b>2239</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	198	201	4.85	202
		DCRTPP (Yamuna nagar) (2*300)	600	456	482	11.06	461
Faridabad GPS (NTPC)(2*137.75+1*156)		432	0	0	0.00	0	
RGTPP (khedar) (IPP) (2*600)		1200	769	763	18.16	757	
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>1423</b>	<b>1446</b>	<b>34.07</b>	<b>1420</b>	
Total Hydro		62	25	24	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>1448</b>	<b>1470</b>	<b>34.75</b>	<b>1448</b>	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	1051	1094	24.39	1016
		suratgarh TPS (6*250)	1500	606	651	14.06	586
	Chabra TPS (4*250)	1000	921	912	20.91	871	
	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	111	113	2.75	115	
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0	
	Barsingsar (NLC) (2*125)	250	226	228	5.34	223	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	636	692	15.52	647	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	468	520	11.71	488	
	Kawai(Adani) (2*660)	1320	607	611	14.31	596	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>4626</b>	<b>4821</b>	<b>109.00</b>	<b>4542</b>	
	Total Hydro	550	184	151	4.53	189	
	Wind power	4017	193	934	14.49	604	
	Biomass	99	21	21	0.51	21	
	Solar	1295	0	0	2.94	122	
	Renewable/Others (Total)	5411	214	955	17.93	747	
	<b>Total Rajasthan</b>	<b>14837</b>	<b>5024</b>	<b>5927</b>	<b>131.45</b>	<b>5477</b>	
	UP	Anpara TPS (3*210+2*500)	1630	1200	1194	29.10	1213
Obra TPS (2*50+2*94+5*200)		1194	334	323	7.80	325	
Paricha TPS (2*110+2*220+2*250)		1160	514	630	12.30	513	
Panki TPS (2*105)		210	135	153	3.30	138	
Harduaganj TPS (1*60+1*105+2*250)		665	381	518	9.90	413	
Tanda TPS (NTPC) (4*110)		440	367	382	8.54	356	
Roza TPS (IPP) (4*300)		1200	1076	1063	22.50	938	
Anpara-C (IPP) (2*600)		1200	995	995	24.70	1029	
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	257	403	6.70	279	
Anpara-D(2*500)		1000	465	454	11.00	458	
Lalitpur TPS(3*660)		1980	1130	1135	24.40	1017	
Bara(2*660)		1320	541	542	13.00	542	
<b>Thermal (Total)</b>		<b>12449</b>	<b>7395</b>	<b>7792</b>	<b>173.24</b>	<b>7218</b>	
Vishnuparyag HPS (IPP)(4*110)		440	246	216	6.70	279	
Alaknada(4*82.5)		330	82	164	3.30	138	
Other Hydro		527	167	202	4.61	192	
Cogeneration		981	100	100	2.40	100	
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>7990</b>	<b>8474</b>	<b>190.25</b>	<b>7927</b>	
Uttarakhand		Other Hydro	1250	534	393	10.32	430
	Total Gas	225	91	95	1.81	75	
	Wind Power	0	0	0	0.00	0	
	Biomass	127	0	0	0.00	0	
	Solar	20	0	0	0.06	3	
	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>3</b>	
	<b>Total Uttarakhand</b>	<b>1802</b>	<b>625</b>	<b>488</b>	<b>12.18</b>	<b>508</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	74	74	1.83	76	
	Pragati Gas Turbine (2x104+ 1x122)	330	147	147	3.69	154	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	251	251	6.03	251	
	Badarpur TPS (NTPC) (3*95+2*210)	705	162	165	3.86	161	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>634</b>	<b>637</b>	<b>15.41</b>	<b>642</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>634</b>	<b>637</b>	<b>15.41</b>	<b>642</b>		

HP	Baspa HPS (IPP) (3*100)	300	63	73	1.83	76
	Malana HPS (IPP) (2*43)	86	75	0	45.50	1896
	Other Hydro	372	146	125	3.21	134
	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	124	3.05	127
	<b>Renewable(Total)</b>	<b>486</b>	<b>133</b>	<b>124</b>	<b>3.05</b>	<b>127</b>
	<b>Total HP</b>	<b>1244</b>	<b>417</b>	<b>322</b>	<b>53.58</b>	<b>2233</b>
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	290	290	6.96
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>428</b>	<b>383</b>	<b>10</b>	<b>405</b>
<b>Total State Control Area Generation</b>		<b>50078</b>	<b>18591</b>	<b>19946</b>	<b>501.11</b>	<b>20879</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>		<b>5715</b>	<b>6321</b>	<b>-747.88</b>	<b>-31162</b>	
<b>Total Regional Availability(Gross)</b>	<b>75315</b>	<b>41352</b>	<b>35550</b>	<b>6.39</b>	<b>266</b>	

**IV. Total Hydro Generation:**

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>9660</b>	<b>1663</b>	<b>89.76</b>	<b>3740</b>
<b>State Control Area Hydro</b>	<b>7163</b>	<b>2611</b>	<b>2347</b>	<b>103.86</b>	<b>4405</b>
<b>Total Regional Hydro</b>	<b>19397</b>	<b>12270</b>	<b>4010</b>	<b>193.62</b>	<b>8145</b>

**V. Total Renewable Generation:**

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.06</b>	<b>3</b>
<b>State Control Area Renewable</b>	<b>7356</b>	<b>352</b>	<b>1084</b>	<b>21.25</b>	<b>885</b>
<b>Total Regional Renewable</b>	<b>7386</b>	<b>352</b>	<b>1084</b>	<b>21.31</b>	<b>888</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	
Vindhyhall(HVDC B/B)	-250	-250	0	250	0.00	6.00	-6.00
765 KV Gwalior-Agra (D/C)	2010	2072	2360	0	57.11	0.00	57.11
400 KV Zerda-Kankroli	69	-111	70	145	0.00	1.26	-1.26
400 KV Zerda-Bhinmal	98	-110	136	126	0.00	0.48	-0.48
220 KV Auraiya-Malanpur	-53	-50	0	90	0.00	1.09	-1.09
220 KV Badod-Kota/Morak	52	-3	86	54	0.37	0.00	0.37
Mundra-Mohindergerh(HVDC Bipole)	1999	2004	2006	0.00	48.38	0.00	48.38
400 KV Vindhyachal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	697	1237	965	0	26.28	0.00	26.28
<b>Sub Total WR</b>	<b>4622</b>	<b>4789</b>			<b>132.14</b>	<b>8.82</b>	<b>123.32</b>
Pusauli Bypass/HVDC	169	258	0	312	0.00	3.80	-3.80
400 KV MZP- GKP (D/C)	197	456	626	0	9.82	0.00	9.82
400 KV Patna-Balia(D/C) X 2	400	348	563	0	10.35	0.00	10.35
400 KV B Sharif-Balia (D/C)	14	169	223	0	3.26	0.00	3.26
765 KV Gaya-Balia	135	252	278	0	4.57	0.00	4.57
765 KV Gaya-Varanasi (D/C)	-286	-446	505	0	8.73	0.00	8.73
220 KV Pusauli-Sahupuri	-126	-186	190	0	4.04	0.00	4.04
132 KV K'nasa-Sahupuri	-38	-48	0	52	0.00	925.92	-925.92
132 KV Son Ngr-Rihand	-41	-36	0	41	0.00	0.83	-0.83
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	11	26	178	9	1.70	0.00	1.70
400 KV Barh -GKP (D/C)	352	304	376	0	7.56	0.00	7.56
400 kV B Sharif - Varanasi (D/C)	19	-46	155	31	1.16	0.00	1.16
<b>Sub Total ER</b>	<b>806</b>	<b>1051</b>			<b>51.19</b>	<b>930.55</b>	<b>-879.36</b>
+/- 800 KV BiswanathChariali-Agra	287	481	481	0.00	8.15	0.00	8.15
<b>Sub Total NER</b>	<b>287</b>	<b>481</b>			<b>8.15</b>	<b>0.00</b>	<b>8.15</b>
<b>Total IR Exch</b>	<b>5715</b>	<b>6321</b>			<b>191.49</b>	<b>939.37</b>	<b>-747.88</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
43.78	3.78	47.56	9.67	-0.32	1.87	15.83	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
59.10	131.73	190.84	-871.20	123.32	-747.88	-930.31	-8.41	-938.72

**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	-12	0	0	12	0	0	-0.01

**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	10.88	60.80	73.65	12.71	2.79	0.07	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)	
50.21	Time 18.01	49.80	Time 5.55	49.98	0.045	0.065	0.00	0.00	26.35

## 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	499.70	1076.64	509.78	1530.03	195.27	526.27
Pong	426.72	384.05	415.28	680.86	419.23	848.35	59.83	230.92
Tehri	829.79	740.04	823.95	1085.80	818.90	980.00	98.80	130.00
Koteswar	612.50	598.50	609.54	4.35	610.58	4.95	130.00	118.35
Chamera-I	760.00	748.75	759.61	0.00	0.00	0.00	67.74	57.19
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	514.94	3.18	511.99	3.87	73.37	128.73

\* 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	9	0	0	9	-705	0	0.21	-2.67	-2.45
Delhi	6	-162	0	-94	17	0	-0.35	-0.90	-1.25
Haryana	-1	74	0	476	-212	0	4.25	3.90	8.15
HP	135	0	0	-8	-263	0	3.19	-3.36	-0.17
J&K	61	99	0	61	234	0	3.26	2.78	6.04
CHD	0	0	0	0	0	0	0.00	0.02	0.02
Rajasthan	-5	606	0	-7	599	0	-0.13	14.34	14.21
UP	150	-100	0	87	-100	0	-1.32	-2.21	-3.53
Uttarakhand	12	329	0	25	205	0	0.40	9.25	9.65
Total	369	846	0	549	-226	0	9.52	21.15	30.67

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	9	9	0	-705	0	0
Delhi	6	-94	112	-258	0	0
Haryana	487	-15	401	-244	0	0
HP	224	-8	188	-789	0	0
J&K	210	61	383	-15	0	0
CHD	0	0	0	0	15	-28
Rajasthan	-5	-7	608	579	0	0
UP	202	-290	0	-100	0	0
Uttarakhand	25	12	714	97	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	2	22
Haryana	2	16
Rajasthan	1	13
Delhi	4	43
UP	3	27
Uttarakhand	1	14
HP	1	13
J & K	4	26
Chandigarh	4	41

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:****XV. Weather Conditions For 22.10.2016 :**  
Normal**XVI. Synchronisation of new generating units :****XVII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / /substation :**

1. 220 kV Jaipur south (PG) - Chakshu (RRVPNL)- 1 (including LILO portion of line upto Goner) first time charge bypassing Goner (RRVPNL) at 22:40 hrs dt. 22.10.2016

**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 : 22.10.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER