



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	530	680	14.90	621	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	90	90	1.98	83	
	Guru Har Gobind Singh TPS(L.mbt) (2*210+2*250)	920	224	220	4.81	200	
	Goindwal(GVK) (2*270)	540	0	0	-0.03	-1	
	Rajpura (2*700)	1400	1320	1220	31.02	1293	
	Talwandi Saboo (3*660)	1980	1030	616	22.66	944	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>3194</b>	<b>2826</b>	<b>75.34</b>	<b>3139</b>	
	Total Hydro	1000	497	466	11.68	487	
	Wind Power	0	0	0	0.00	0	
	Biomass	288	6	6	0.15	6	
	Solar	560	2	2	0.06	2	
	<b>Renewable(Total)</b>	<b>848</b>	<b>8</b>	<b>8</b>	<b>0.20</b>	<b>8</b>	
	<b>Total Punjab</b>	<b>8408</b>	<b>3699</b>	<b>3300</b>	<b>87.23</b>	<b>3634</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	772	566	15.51	646
		DCRTPP (Yamuna nagar) (2*300)	600	469	471	11.10	462
Faridabad GPS (NTPC)(2*137.75+1*156)		432	0	0	0.00	0	
RGTPP (khedar) (IPP) (2*600)		1200	1079	763	19.12	797	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	375	375	7.44	310	
<b>Thermal (Total)</b>		<b>4497</b>	<b>2695</b>	<b>2175</b>	<b>53.17</b>	<b>2216</b>	
Total Hydro		62	29	34	0.82	34	
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>2724</b>	<b>2209</b>	<b>53.99</b>	<b>2250</b>	
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	839	1029	22.48	937	
	suratgarh TPS (6*250)	1500	0	193	2.21	92	
	Chabra TPS (4*250)	1000	720	746	17.71	738	
	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	123	125	3.06	127	
	RAPS A (NPC) (1*100+1*200)	300	169	168	4.21	175	
	Barsingsar (NLC) (2*125)	250	114	112	2.64	110	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	908	562	14.51	605	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	498	409	10.04	418	
	Kawai(Adani) (2*660)	1320	1029	1142	24.50	1021	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>4400</b>	<b>4486</b>	<b>101.36</b>	<b>4223</b>	
	Total Hydro	550	119	92	2.21	92	
	Wind power	4017	186	823	12.56	523	
	Biomass	99	22	22	0.52	22	
	Solar	1295	7	0	0.39	16	
	Renewable/Others (Total)	5411	215	845	13.47	561	
<b>Total Rajasthan</b>	<b>14837</b>	<b>4734</b>	<b>5423</b>	<b>117.04</b>	<b>4877</b>		
UP	Anpara TPS (3*210+2*500)	1630	1022	1088	25.42	1059	
	Obra TPS (2*50+2*94+5*200)	1194	249	241	6.27	261	
	Paricha TPS (2*110+2*220+2*250)	1160	653	904	19.05	794	
	Panki TPS (2*105)	210	131	122	2.72	113	
	Harduaganj TPS (1*60+1*105+2*250)	665	270	535	10.42	434	
	Tanda TPS (NTPC) (4*110)	440	371	372	8.83	368	
	Roza TPS (IPP) (4*300)	1200	761	1105	24.00	1000	
	Anpara-C (IPP) (2*600)	1200	1022	1022	24.94	1039	
	Bajaj Energy Pvt.Ltd.(IPP) TPS (10*45)	450	224	404	7.59	316	
	Anpara-D(2*500)	1000	658	539	13.52	563	
	Lalitpur TPS(3*660)	1980	872	872	20.66	861	
	Bara(2*660)	1320	0	0	0.00	0	
	<b>Thermal (Total)</b>	<b>12449</b>	<b>6233</b>	<b>7204</b>	<b>163.41</b>	<b>6809</b>	
	Vishnuparyag HPS (IPP)(4*110)	440	326	316	7.59	316	
	Alakanada(4*82.5)	330	163	165	2.72	113	
	Other Hydro	527	282	245	6.03	251	
	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>7054</b>	<b>7980</b>	<b>180.94</b>	<b>7539</b>		
Uttarakhand	Other Hydro	1250	27	27	0.63	26	
	Total Gas	225	4	79	0.40	17	
	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>31</b>	<b>106</b>	<b>1.10</b>	<b>46</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	73	71	1.84	77	
	Pragati Gas Turbine (2x104+ 1x122)	330	146	148	3.42	142	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	252	251	6.05	252	
	Badarpur TPS (NTPC) (3*95+2*210)	705	330	328	7.06	294	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>801</b>	<b>798</b>	<b>18.37</b>	<b>765</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>801</b>	<b>798</b>	<b>18.37</b>	<b>765</b>		

HP	Baspa HPS (IPP) (3*100)	300	181	120	3.12	130
	Malana HPS (IPP) (2*43)	86	45	18	0.80	33
	Other Hydro	372	176	174	4.21	175
	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	158	150	3.67	153
	<b>Renewable(Total)</b>	<b>486</b>	<b>158</b>	<b>150</b>	<b>3.67</b>	<b>153</b>
	<b>Total HP</b>	<b>1244</b>	<b>561</b>	<b>462</b>	<b>11.79</b>	<b>491</b>
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	586	585	14.50
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>724</b>	<b>678</b>	<b>17</b>	<b>719</b>
<b>Total State Control Area Generation</b>		<b>50078</b>	<b>20328</b>	<b>20957</b>	<b>487.72</b>	<b>20322</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>		<b>9126</b>	<b>9318</b>	<b>212.14</b>	<b>8839</b>	
<b>Total Regional Availability(Gross)</b>		<b>75315</b>	<b>47557</b>	<b>42399</b>	<b>1003.98</b>	<b>41833</b>

**IV. Total Hydro Generation:**

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>10188</b>	<b>3553</b>	<b>123.79</b>	<b>5158</b>
<b>State Control Area Hydro</b>	<b>7163</b>	<b>2732</b>	<b>2564</b>	<b>60.74</b>	<b>2550</b>
<b>Total Regional Hydro</b>	<b>19397</b>	<b>12919</b>	<b>6117</b>	<b>184.53</b>	<b>7708</b>

**V. Total Renewable Generation:**

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.11</b>	<b>5</b>
<b>State Control Area Renewable</b>	<b>7356</b>	<b>382</b>	<b>1003</b>	<b>17.40</b>	<b>725</b>
<b>Total Regional Renewable</b>	<b>7386</b>	<b>382</b>	<b>1003</b>	<b>17.51</b>	<b>730</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)	-100	-100	50	250	0.13	2.23	-2.10
765 KV Gwalior-Agra (D/C)	2723	2546	2765	0	54.74	0.00	54.74
400 KV Zerda-Kankrol	111	95	139	12	1.75	0.00	1.75
400 KV Zerda-Bhinmal	131	74	149	21	1.74	0.00	1.74
220 KV Auraiya-Malanpur	-60	-42	0	81	0.00	1.14	-1.14
220 KV Badod-Kota/Morak	55	45	120	27	1.14	0.00	1.14
Mundra-Mohindergarh(HVDC Bipole)	1998	2001	2404	0.00	48.49	0.00	48.49
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1096	1148	1332	0	27.90	0.00	27.90
<b>Sub Total WR</b>	<b>5954</b>	<b>5767</b>			<b>135.88</b>	<b>3.37</b>	<b>132.51</b>
Pusaui Bypass/HVDC	8	42	150	146	1.21	0.00	1.21
400 KV MZP- GKP (D/C)	319	526	585	0	11.53	0.00	11.53
400 KV Patna-Balia(D/C) X 2	594	690	737	0	16.05	0.00	16.05
400 KV B'Sharif-Balia (D/C)	154	214	289	0	5.14	0.00	5.14
765 KV Gaya-Balia	355	369	438	0	4.41	0.00	4.41
765 KV Gaya-Varanasi (D/C)	700	661	826	0	16.11	0.00	16.11
220 KV Pusaui-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV K'nasa-Sahupuri	-26	-26	0	32	0.00	0.60	-0.60
132 KV Son Ngr-Rihand	-16	-24	0	56	0.00	0.33	-0.33
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	61	-9	133	61	1.02	0.00	1.02
400 KV Barh -GKP (D/C)	416	464	488	0	10.05	0.00	10.05
400 KV B'Sharif - Varanasi (D/C)	107	144	255	0	3.83	0.00	3.83
<b>Sub Total ER</b>	<b>2672</b>	<b>3051</b>			<b>69.34</b>	<b>0.92</b>	<b>68.41</b>
+/- 800 KV BiswanathCharialli-Agra	500	500	500	0.00	11.22	0.00	11.22
<b>Sub Total NER</b>	<b>500</b>	<b>500</b>			<b>11.22</b>	<b>0.00</b>	<b>11.22</b>
<b>Total IR Exch</b>	<b>9126</b>	<b>9318</b>			<b>216.43</b>	<b>4.29</b>	<b>212.14</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
48.28	3.42	51.70	15.95	14.80	6.29	14.06	0.00	0.00

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR Incls Mndra	Total	Through ER(including NER)	Through WR	Total	Through ER (including NER)	Through WR	Total
73.94	138.71	212.65	79.63	132.51	212.14	5.68	-6.20	-0.51

**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	-25	0	0	25	0	0	-0.25

**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	1.18	34.34	76.39	18.66	4.28	0.34	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)	
50.25	Time 13.02	49.84	Time 14.17	50.02	0.028	0.050	50.23	0.00	23.61

## VIII(A). Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	409	08:03	403	12:42	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	416	07:06	400	00:46	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	0	00:00	0	00:00	100.0	100.0	0.0	0.0	100.0
Kanpur	400	412	21:45	409	22:13	0.0	0.0	0.0	0.0	0.0
Dadri	400	416	07:06	398	18:36	0.0	0.0	0.0	0.0	0.0
Ballabhgarh	400	423	04:01	400	18:38	0.0	0.0	6.2	0.0	6.2
Bawana	400	416	04:00	398	18:39	0.0	0.0	0.0	0.0	0.0
Bassi	400	420	04:00	394	18:52	0.0	0.0	0.0	0.0	0.0
Hissar	400	416	04:01	394	18:39	0.0	0.0	0.0	0.0	0.0
Moga	400	417	03:21	398	18:50	14.4	14.4	0.0	0.0	14.4
Abdullapur	400	426	02:53	403	18:38	0.0	0.0	29.1	0.0	29.1
Nalagarh	400	430	04:02	406	18:48	0.0	0.0	38.7	0.0	38.7
Kishenpur	400	423	02:46	397	18:49	0.0	0.0	14.3	0.0	14.3
Wagoora	400	416	03:01	372	18:51	4.7	14.3	0.0	0.0	4.7
Amritsar	400	427	04:01	402	18:39	0.0	0.0	23.9	0.0	23.9
Kashipur	400	0	00:00	0	00:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	417	07:08	404	00:00	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	413	05:03	387	12:15	0.0	3.2	0.0	0.0	0.0

## VIII(B). Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	778	06:49	743	18:39	0.0	0.0	0.0	0.0	0.0
Balia	765	783	07:10	755	18:53	0.0	0.0	0.0	0.0	0.0
Moga	765	796	04:04	761	18:39	0.0	0.0	0.0	0.0	0.0
Agra	765	789	07:28	754	18:50	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	797	03:52	767	18:36	0.0	0.0	0.0	0.0	0.0
Unnao	765	760	16:04	735	00:51	0.0	10.6	0.0	0.0	0.0
Lucknow	765	787	07:10	758	00:47	0.0	0.0	0.0	0.0	0.0
Meerut	765	773	00:00	773	00:00	0.0	0.0	0.0	0.0	0.0
Jhatikara	765	797	04:01	763	18:39	0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	790	07:06	762	00:50	0.0	0.0	0.0	0.0	0.0
Anta	765	789	04:00	763	18:51	0.0	0.0	0.0	0.0	0.0
Phagi	765	797	04:01	760	18:40	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	502.21	1192.70	510.86	1590.18	403.77	611.30
Pong	426.72	384.05	416.13	718.14	420.46	902.94	99.25	255.50
Tehri	829.79	740.04	824.55	1098.43	821.25	1028.66	153.39	157.00
Koteshwar	612.50	598.50	609.75	4.44	610.74	4.95	157.00	159.00
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	102.53	99.89
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	516.83	3.36	513.66	3.62	108.35	182.41

\* 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	320	0	0	470	0	0	10.49	0.08	10.57
Delhi	50	71	0	91	91	0	3.15	3.46	6.61
Haryana	436	151	0	542	343	0	12.70	5.26	17.96
HP	-54	-67	0	-133	-607	0	-2.37	-6.01	-8.38
J&K	-38	-151	0	-38	-15	0	0.49	-1.17	-0.68
CHD	0	0	0	0	0	0	0.00	0.44	0.44
Rajasthan	-5	636	0	-7	640	0	-0.13	15.15	15.02
UP	826	585	0	803	-100	0	17.51	3.33	20.84
Uttarakhand	1570	223	0	36	103	0	0.87	6.05	6.92
<b>Total</b>	<b>1570</b>	<b>1448</b>	<b>0</b>	<b>1763</b>	<b>455</b>	<b>0</b>	<b>42.72</b>	<b>26.59</b>	<b>69.31</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	470	216	86	0	0	0
Delhi	251	20	374	-66	0	0
Haryana	705	361	383	-152	0	0
HP	-54	-133	-6	-822	0	0
J&K	79	-38	50	-202	0	0
CHD	0	0	0	0	59	0
Rajasthan	-5	-7	643	610	0	0
UP	838	625	879	-100	0	0
Uttarakhand	36	36	503	79	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>
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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	1	14
Haryana	3	17
Rajasthan	2	22
Delhi	1	17
UP	1	15
Uttarakhand	4	47
HP	4	47
J & K	1	19
Chandigarh	2	21

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:**

**XV. Weather Conditions For 08.10.2016 :**  
Normal

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

**XVII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus //substation :**  
400kV Orai-Pariccha first time charged at 18:00 hrs on 08.10.2016.

**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 : 08.10.2016

परी प्रभादी अक्षयंता / SHIFT CHARGE ENGINEER