



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	3.57	149
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	100	100	2.22	92
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	0	0	0.00	0
	Goindwal(GVK)		0	0	0.00	0
	Rajpura (2*700)	1400	717	702	22.39	933
	Talwandi Saboo (2*660)	1320	689	676	18.91	788
	<b>Thermal (Total)</b>	<b>5360</b>	<b>1666</b>	<b>1638</b>	<b>47.08</b>	<b>1962</b>
	Total Hydro	1000	245	183	7.86	327
	<b>Total Punjab</b>	<b>6360</b>	<b>1911</b>	<b>1821</b>	<b>54.94</b>	<b>2289</b>
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	235	224	5.36
DCRTPP (Yamuna nagar) (2*300)		600	565	456	11.58	483
Faridabad GPS (NTPC)		432	0	0	0.00	0
RGTPP (khedan) (IPP) (2*600)		1200	882	822	19.89	829
Magnum Diesel (IPP)		25	0	0	0.00	0
Jhajjar (CLP) (2*660)		1320	546	377	11.39	474
<b>Thermal (Total)</b>		<b>4944</b>	<b>2228</b>	<b>1879</b>	<b>48.21</b>	<b>2009</b>
Total Hydro		62	11	9	0.36	15
<b>Total Haryana</b>		<b>5006</b>	<b>2239</b>	<b>1888</b>	<b>48.58</b>	<b>2024</b>
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	1147	1129	27.41
	suratgarh TPS (6*250)	1500	1147	1127	26.58	1107
	Chabra TPS (4*250)	1000	661	394	13.40	558
	Dholpur GPS (3*110)	330	96	97	2.30	96
	Ramgarh GPS (1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50)	271	121	181	3.95	165
	RAPS A (NPC) (1*100+1*200)	300	163	165	4.06	169
	Barsingsar (NLC) (2*125)	250	93	178	3.30	137
	Giral LTPS (2*125)	250	0	0	0.00	0
	Raiwate LTPS (IPP) (8*135)	1080	722	674	17.15	715
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalsindh Thermal(2*600)	1200	1009	827	21.06	878
	Kawal(Adani) (2*660)	1320	613	617	14.53	605
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5772</b>	<b>5389</b>	<b>134</b>	<b>5572</b>
	Total Hydro	550	213	159	3.95	165
	Wind power	3214	57	75	3.15	131
	Biomass	99	21	21	0.49	21
	Solar	730	6	0	0.31	13
	Renewable/Others (Total)	4043	84	96	3.95	165
	<b>Total Rajasthan</b>	<b>13469</b>	<b>6069</b>	<b>5644</b>	<b>141.63</b>	<b>5901</b>
	UP	Anpara TPS (3*210+2*500)	1630	1361	1211	29.90
Obra TPS (2*50+2*94+5*200)		1194	473	452	11.09	462
Paricha TPS (2*110+2*220+2*250)		1140	666	665	16.56	690
Panki TPS (2*105)		210	0	0	0.00	0
Harduaqani TPS (1*60+1*105+2*250)		665	534	529	12.81	534
Tanda TPS (NTPC) (4*110)		440	385	390	9.27	386
Rozza TPS (IPP) (4*300)		1200	385	554	12.67	528
Anpara-C (IPP) (2*600)		1200	1080	1076	25.90	1079
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	0	0	0.00	0
Anpara-D(1*500)		500	0	0	0.00	0
Lalitpur TPS(2*660)		1320	0	0	0.00	0
Bara(2*660)		1320	337	212	6.70	279
<b>Thermal (Total)</b>		<b>11269</b>	<b>5221</b>	<b>5089</b>	<b>125</b>	<b>5204</b>
Vishnupanyag HPS (IPP)(4*110)		440	70	70	1.68	70
Alaknanda(4*82.5)		330	0	0	1.07	45
Other Hydro		527	63	20	1.22	51
Cogeneration		981	800	800	19.20	800
<b>Total UP</b>		<b>13547</b>	<b>6154</b>	<b>5979</b>	<b>148</b>	<b>6169</b>
Uttarakhand		Total Hydro	1398	644	376	9.91
	<b>Total Uttarakhand</b>	<b>1398</b>	<b>644</b>	<b>376</b>	<b>9.91</b>	<b>413</b>
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.01	0
	Delhi Gas Turbine (6x30 + 3x34)	282	35	35	0.92	38
	Pragati Gas Turbine (2x104+ 1x122)	330	139	139	3.37	140
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	254	253	6.03	251
	Badarpur TPS (NTPC) (3*95+2*210)	705	163	164	3.55	148
	<b>Thermal (Total)</b>	<b>2917</b>	<b>590</b>	<b>590</b>	<b>13.85</b>	<b>577</b>
	<b>Total Delhi</b>	<b>2917</b>	<b>590</b>	<b>590</b>	<b>13.85</b>	<b>577</b>
HP	Baspa HPS (IPP) (3*100)	300	0	0	0.90	37
	Malana HPS (IPP) (2*43)	86	0	0	0.19	8
	Other Hydro	878	124	61	2.31	96
	<b>Total HP</b>	<b>1264</b>	<b>124</b>	<b>61</b>	<b>3.40</b>	<b>142</b>
J & K	Baqilhar HPS (IPP) (3*150)	450	142	142	3.41	142
	Other Hydro/IPP	560	110	72	2.04	85
	Gas/Diesel/Others	190	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>1200</b>	<b>252</b>	<b>214</b>	<b>5.45</b>	<b>227</b>
<b>Total State Control Area Generation</b>		<b>45161</b>	<b>17983</b>	<b>16573</b>	<b>425.83</b>	<b>17743</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>4456.67</b>	<b>5567.21</b>	<b>119.02</b>	<b>4959</b>
<b>Total Regional Availability(Gross)</b>		<b>70398</b>	<b>40421</b>	<b>32540</b>	<b>840.86</b>	<b>35036</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	12234	7208	787	66.12	2755
State Control Area Hydro	6581	1622	1092	35	1454
<b>Total Regional Hydro</b>	<b>18815</b>	<b>8830</b>	<b>1879</b>	<b>101.02</b>	<b>4209</b>

**V(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	Import	Export	
	Vindhychal(HVDC B/B)	300	-500	300	500	1.13	6.04	-4.91	
765 KV Gwalior-Agra (D/C)	1200	-2180	2329	0	44.44	0.00	44.44		
400 KV Zerda-Kankrolli	-236	-112	0	299	0.00	3.55	-3.55		
400 KV Zerda-Bhimnal	38	-41	97	157	0.00	0.30	-0.30		
220 KV Auraiya-Malapur	119	92	0	129	0.00	2.03	-2.03		
220 KV Badod-Kota/Morak	-107	-124	0	178	0.00	2.81	-2.81		
Mundra-Mohindergarh(HVDC Bipole)	2503	1802	2506	0	53.62	0.00	53.62		
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Phagi-Gwalior (D/C)	606	1003	1137	0	19.81	0.00	19.81		
<b>Sub Total WR</b>	<b>4423</b>	<b>4382</b>			<b>119.00</b>	<b>14.72</b>	<b>104.28</b>		
Pusauli Bypass/HVDC	400	400	400	0	8.35	0.00	8.35		
400 KV MZP- GKP (D/C)	-880	-476	0	990	0.00	15.56	-15.56		
400 KV Patna-Balia(D/C) X 2	183	353	393	0	7.27	0.00	7.27		
400 KV B Sharif-Balia (D/C)	-405	-198	0	430	0.00	6.25	-6.25		
765 KV Gaya-Balia	204	107	232	4	1.54	0.00	1.54		
765 KV Gaya-Fatehpur	0	-19	37	47	0.00	0.22	-0.22		
220 KV Pusauli-Sahupuri	139	145	184	0	3.67	0.00	3.67		
132 KV Knasa-Sahupuri	0	0	0	0	0.48	0.00	0.48		
132 KV Son Ngr-Rihand	-28	-27	0	30	0.00	0.58	-0.58		
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Sasaram - Fatehpur	-415	-290	0	415	0.00	6.81	-6.81		
400 KV Barh -GKP (D/C)	336	440	488	0	8.91	0.00	8.91		
<b>Sub Total ER</b>	<b>-466</b>	<b>435</b>			<b>30.21</b>	<b>29.42</b>	<b>0.79</b>		
+/- 800 KV BiswanathChariali-Agra	500	750	750	0	13.96	0.00	13.96		
<b>Sub Total NER</b>	<b>500</b>	<b>750</b>			<b>13.96</b>	<b>0.00</b>	<b>13.96</b>		
<b>Total IR Exch</b>	<b>4457</b>	<b>5567</b>			<b>163.17</b>	<b>44.14</b>	<b>119.02</b>		

**V(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	
32.64	0.22	32.86	-3.88	-13.17	-0.81	0.00	4.93	-4.93	
<b>Total IR Schedule (MU)</b>			<b>Total IR Actual (MU)</b>			<b>Net IR UI (MU)</b>			
Through ER	Through WR Inclds Mndra	Total	Through ER(including NER)	Through WR	Total	Through ER(including NER)	Through WR	Total	
33.09	87.74	120.83	14.75	104.28	119.02	-18.34	16.54	-1.80	

**V(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	Import	Export	
	132 KV Tanakpur - Mahendarnagar	-30	-31	0	33	0	1	-0.72	

**VI. 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	0.10	8.90	54.22	72.47	14.14	4.42	0.12	NA

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum	Time	Minimum	Time				MAX (Hz)	MIN (Hz)	
50.21	17.02	49.78	19.51	49.99	0.045	0.067	50.10	49.87	27.53

**VII. Voltage profile 400 kV**

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation Index (% of Time)
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
		Rihand	400	405	01:04	396	06:04	0.0	0.0	
Gorakhpur	400	419	21:55	398	07:15	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	420	02:03	380	07:23	0.0	0.0	0.0	0.0	0.0
Kanpur	400	411	23:47	398	07:31	0.0	0.0	0.0	0.0	0.0
Dadri	400	425	02:01	401	11:15	0.0	0.0	21.5	0.0	21.5
Ballabgarh	400	411	00:00	411	00:00	0.0	0.0	0.0	0.0	0.0
Bawana	400	428	02:40	407	11:06	0.0	0.0	33.5	0.0	33.5
Bassi	400	422	20:41	380	07:48	0.0	1.7	0.7	0.0	0.7
Hissar	400	422	21:41	400	07:48	0.0	0.0	2.0	0.0	2.0
Moga	400	423	21:21	403	07:48	0.0	0.0	6.0	0.0	6.0
Abdullapur	400	427	02:03	408	06:48	0.0	0.0	21.0	0.0	21.0
Nalagarh	400	437	02:41	413	09:22	0.0	0.0	75.5	24.3	75.5
Kishenpur	400	422	03:03	398	07:48	0.0	0.0	3.5	0.0	3.5
Wagooora	400	398	13:02	371	18:22	23.6	80.6	0.0	0.0	23.6
Amritsar	400	431	20:42	410	07:48	0.0	0.0	61.7	0.0	61.7
Kashipur	400	420	19:37	412	17:52	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	427	03:03	404	07:47	0.0	0.0	27.9	0.0	27.9
Rishikesh	400	416	20:02	397	17:54	0.0	0.0	0.0	0.0	0.0

**VIII. Voltage profile 765 kV**

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation Index (% of Time)
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
		Fatehpur	765	778	21:45	733	07:31	0.0	8.7	
Balia	765	770	21:55	735	07:31	0.0	10.6	0.0	0.0	0.0
Moga	765	805	20:43	758	07:48	0.0	0.0	2.7	0.0	2.7
Agra	765	794	23:33	742	07:31	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	805	21:46	757	07:44	0.0	0.0	12.1	0.0	12.1
Unnao	765	772	02:03	733	11:18	0.0	5.8	0.0	0.0	0.0
Lucknow	765	787	21:55	745	11:17	0.0	0.0	0.0	0.0	0.0
Meerut	765	811	21:22	765	07:48	0.0	0.0	22.6	0.0	22.6
Jhatkara	765	806	02:40	762	07:47	0.0	0.0	15.4	0.0	15.4
Bareilly 765 kV	765	790	21:55	741	11:18	0.0	0.1	0.0	0.0	0.0
Anta	765	783	12:27	750	07:40	0.0	0.0	0.0	0.0	0.0
Phagi	765	792	12:31	718	07:49	1.1	1.8	0.0	0.0	1.1

**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	498.06	1018.16	494.65	891.94	163.22	400.54
Pong	426.72	384.05	408.19	435.19	403.15	296.79	52.47	426.54
Tehri	829.79	740.04	794.70	524.45	803.75	680.19	57.89	221.00
Koteshwar	612.50	598.50	611.40	5.20	609.03	4.10	221.00	198.68
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	0.00	0.00
Rihand	268.22	252.98	0.00	0.00	0.00	0.00	0.00	0.00
RPS	352.80	343.81	1138.63	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	496.18	1.94	503.77	2.72	69.95	156.59

\* 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	-452	5	0	-909	31	0	-16.08	0.33	-15.76
Delhi	-840	-689	-2	-524	-197	-2	-13.77	-7.90	-21.67
Haryana	-541	-334	0	-746	98	0	-17.15	-1.30	-18.45
HP	102	291	0	164	-137	0	7.90	-0.90	7.00
J&K	723	-14	0	740	97	0	16.60	-0.11	16.49
CHD	-31	0	0	0	0	0	-0.24	-0.04	-0.28
Rajasthan	-7	665	2	-7	431	2	0.78	8.99	9.77
UP	114	0	0	-8	0	0	-3.65	0.00	-3.65
Uttarakhand	385	157	0	385	183	0	9.36	5.61	14.97
<b>Total</b>	<b>-547</b>	<b>81</b>	<b>0</b>	<b>-905</b>	<b>505</b>	<b>0</b>	<b>-16.27</b>	<b>4.68</b>	<b>-11.59</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-452	-909	65	0	0	0
Delhi	-281	-870	110	-713	-2	-2
Haryana	-541	-949	142	-537	0	0
HP	489	102	291	-742	0	0
J&K	740	570	97	-26	0	0
CHD	0	-31	0	-41	0	0
Rajasthan	185	-7	673	-68	2	2
UP	150	-458	0	0	0	0
Uttarakhand	414	385	385	138	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	61
ER	0
Simultaneous	0

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

WR	92%
ER	0%
Simultaneous	44%

**XII. System Constraints:**

**XIII. Grid Disturbance / Any Other Significant Event:**

**XIV. Weather Conditions For 17.01.2016 :**

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

**XVI. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / substation :**

**XVII. Tripping of lines in pooling stations :**

**XVIII. Complete generation loss in a generating station :**