



I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sentout MW)
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	160	160	3.46	144
	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	215	0	2.51	105
	Goindwal(GVK) (2*270)	540	0	0	-0.16	-7
	Rajpura (2*700)	1400	1260	1320	23.34	973
	Talwandi Saboo (3*660)	1980	616	727	18.14	756
	<b>Thermal (Total)</b>	<b>6560</b>	<b>2251</b>	<b>2207</b>	<b>47.27</b>	<b>1970</b>
	Total Hydro	1000	317	325	7.50	312
	<b>Total Punjab</b>	<b>7560</b>	<b>2568</b>	<b>2532</b>	<b>54.77</b>	<b>2282</b>
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	231	216	5.16
DCRTPP (Yamuna nagar) (2*300)		600	524	536	11.47	478
Faridabad GPS (NTPC)(2*137.75+1*156)		432	178	194	4.27	178
RGTPP (khedar) (IPP) (2*600)		1200	684	373	12.09	504
Magnum Diesel (IPP)		25	0	0	0.00	0
Jhajjar(CLP) (2*660)		1320	0	0	0.00	0
<b>Thermal (Total)</b>		<b>4944</b>	<b>1617</b>	<b>1319</b>	<b>33.00</b>	<b>1375</b>
Total Hydro		62	4	12	0.29	12
<b>Total Haryana</b>		<b>5006</b>	<b>1621</b>	<b>1331</b>	<b>33.28</b>	<b>1387</b>
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	844	867	21.26
	suratgarh TPS (6*250)	1500	220	194	5.19	216
	Chabra TPS (4*250)	1000	646	883	20.22	843
	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	203	204	5.09	212
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0
	Barsingsar (NLC) (2*125)	250	66	63	1.37	57
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwast LTPS (IPP) (8*135)	1080	799	654	18.31	763
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	564	812	17.24	718
	Kawai(Adani) (2*660)	1320	932	1173	26.87	1120
	<b>Thermal (Total)</b>	<b>8876</b>	<b>4274</b>	<b>4850</b>	<b>116</b>	<b>4814</b>
	Total Hydro	550	0	22	0.23	9
	Wind power	3214	253	1371	13.03	543
	Biomass	99	27	27	0.64	27
	Solar	730	0	0	2.99	125
	Renewable/Others (Total)	4043	280	1398	16.65	694
	<b>Total Rajasthan</b>	<b>13469</b>	<b>4554</b>	<b>6270</b>	<b>132.42</b>	<b>5517</b>
	UP	Anpara TPS (3*210+2*500)	1630	1188	1517	29.20
Obra TPS (2*50+2*94+5*200)		1194	312	278	7.30	304
Paricha TPS (2*110+2*220+2*250)		1160	896	926	21.60	900
Panki TPS (2*105)		210	63	0	1.20	50
Harduaganj TPS (1*60+1*105+2*250)		665	500	324	8.60	358
Tanda TPS (NTPC) (4*110)		440	390	390	9.33	389
Roza TPS (IPP) (4*300)		1200	1085	1107	25.20	1050
Anpara-C (IPP) (2*600)		1200	1080	1035	25.70	1071
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	405	405	8.70	363
Anpara-D(2*500)		1000	221	0	6.40	267
Lalitpur TPS(3*660)		1980	497	498	10.20	425
Bara(2*660)		1320	484	479	12.10	504
<b>Thermal (Total)</b>		<b>12449</b>	<b>7121</b>	<b>6959</b>	<b>166</b>	<b>6897</b>
Vishnuparyag HPS (IPP)(4*110)		440	108	100	2.30	96
Alakanada(4*82.5)		330	82	74	1.20	50
Other Hydro		527	40	28	0.70	29
Cogeneration		981	300	300	7.20	300
<b>Total UP</b>		<b>14727</b>	<b>7651</b>	<b>7461</b>	<b>177</b>	<b>7372</b>
Uttarakhand	Total Hydro	1398	536	370	11.20	467
	<b>Total Uttarakhand</b>	<b>1398</b>	<b>536</b>	<b>370</b>	<b>11.20</b>	<b>467</b>
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	29	31	0.79	33
	Pragati Gas Turbine (2x104+ 1x122)	330	260	260	5.63	235
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	0	0	0.00	0
	Badarpur TPS (NTPC) (3*95+2*210)	705	329	324	6.97	290
	<b>Thermal (Total)</b>	<b>2917</b>	<b>618</b>	<b>615</b>	<b>13.40</b>	<b>558</b>
	<b>Total Delhi</b>	<b>2917</b>	<b>618</b>	<b>615</b>	<b>13.40</b>	<b>558</b>
HP	Baspa HPS (IPP) (3*100)	300	0	54	1.21	50
	Malana HPS (IPP) (2*43)	86	0	0	0.45	19
	Other Hydro	878	313	255	6.83	284
	<b>Total HP</b>	<b>1264</b>	<b>313</b>	<b>309</b>	<b>8.48</b>	<b>353</b>
J & K	Baglihar HPS (IPP) (3*150+2*150)	750	390	379	9.22	384
	Other Hydro/IPP	560	118	81	2.25	94
	Gas/Diesel/Others	190	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>1500</b>	<b>508</b>	<b>460</b>	<b>11.47</b>	<b>478</b>
<b>Total State Control Area Generation</b>		<b>47841</b>	<b>18369</b>	<b>19348</b>	<b>441.94</b>	<b>18414</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>7176</b>	<b>9283</b>	<b>181.35</b>	<b>7556</b>
<b>Total Regional Availability(Gross)</b>		<b>73078</b>	<b>43144</b>	<b>38975</b>	<b>902.32</b>	<b>37596</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	12234	9000	2218	91.96	3832
State Control Area Hydro	6881	1908	1700	43	1807
<b>Total Regional Hydro</b>	<b>19115</b>	<b>10908</b>	<b>3918</b>	<b>135.32</b>	<b>5638</b>

#### V(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(20:00 Hrs)		Off Peak(03:00 Hrs)		Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	MW	MW	Import	Export	Import	Export	
Vindhychal(HVDC B/B)	250	250	250	0	6.03	0.00	6.03		
765 KV Gwalior-Agra (D/C)	2184	3238	3466	0	62.38	0.00	62.38		
400 KV Zerda-Kankroli	-154	-203	0	336	0.00	5.83	-5.83		
400 KV Zerda-Bhinmal	-117	-177	0	290	0.00	4.43	-4.43		
220 KV Auraiya-Malanpur	26	7	0	69	0.00	0.56	-0.56		
220 KV Badod-Kota/Morak	-21	-9	4	112	0.00	0.81	-0.81		
Mundra-Mohinderghar(HVDC Bipole)	2502	2502	2513	0	60.45	0.00	60.45		
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00		
765 kV Phagi-Gwalior (D/C)	857	923	1006	0	19.44	0.00	19.44		
<b>Sub Total WR</b>	<b>5527</b>	<b>6531</b>			<b>148.29</b>	<b>11.62</b>	<b>136.67</b>		

Pusauli Bypass/HVDC	0	0	300	0	0.50	0.00	0.50
400 KV MZP- GKP (D/C)	-26	216	280	-102	2.26	0.00	2.26
400 KV Patna-Balia(D/C) X 2	228	502	521	0	8.77	0.00	8.77
400 KV B'Sharif-Balia (D/C)	105	300	329	0	4.85	0.00	4.85
765 KV Gaya-Balia	236	379	415	0	3.94	0.00	3.94
765 KV Gaya-Varanasi -1	111	132	297	0	4.58	0.00	4.58
220 KV Pusauli-Sahupuri	171	212	221	0	4.42	0.00	4.42
132 KV K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV Son Ngr-Rihand	-23	-10	0	27	0.00	0.39	-0.39
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-151	-89	16	218	0.00	1.78	-1.78
400 KV Barh -GKP (D/C)	358	448	448	0	8.31	0.00	8.31
400 kvB'Sharif - Varanasi (D/C)	140	162	199	152	0.00	2.56	-2.56
<b>Sub Total ER</b>	<b>1149</b>	<b>2252</b>			<b>37.63</b>	<b>4.73</b>	<b>32.90</b>
+/- 800 KV BiswanathCharialli-Agra	500	500	491	0	11.79	0.00	11.79
<b>Sub Total NER</b>	<b>500</b>	<b>500</b>			<b>11.79</b>	<b>0.00</b>	<b>11.79</b>
<b>Total IR Exch</b>	<b>7176</b>	<b>9283</b>			<b>197.71</b>	<b>16.36</b>	<b>181.35</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
36.47	0.30	36.77	5.89	-0.70	0.00	25.05	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
42.66	135.53	178.19	44.68	136.67	181.35	2.02	1.14	3.16

**V(C). Inter National Exchange with Nepal [Import (+ve)/Export (-ve)] [Linkwise]**

Element	Peak(20:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	-32	-32	0	-33	0	-1	0.67

**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	1.06	17.78	60.19	66.59	11.30	4.36	0.01	0.00

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum		Minimum					MAX	MIN	
Freq	Time	Freq	Time	Hz	Index	(Hz)	(Hz)		
50.20	18.02	49.77	0.38	49.98	0.063	0.075	0.00	0.00	33.41

**VII. Voltage profile 400 kV**

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation Index (% of)
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	404	07:18	398	00:30	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	423	17:03	403	02:08	0.0	0.0	5.4	0.0	5.4
Bareilly(PG)400kV	400	417	17:32	402	10:54	0.0	0.0	0.0	0.0	0.0
Kanpur	400	419	08:04	404	19:11	0.0	0.0	0.0	0.0	0.0
Dadri	400	421	08:03	405	19:13	0.0	0.0	0.1	0.0	0.1
Ballabgarh	400	427	08:01	409	14:36	0.0	0.0	35.5	0.0	35.5
Bawana	400	425	08:04	408	19:10	0.0	0.0	30.3	0.0	30.3
Bassi	400	420	04:01	402	19:36	0.0	0.0	0.0	0.0	0.0
Hissar	400	420	01:59	404	19:12	0.0	0.0	0.0	0.0	0.0
Moga	400	420	01:59	407	19:12	0.0	0.0	0.0	0.0	0.0
Abdullapur	400	428	02:00	406	19:12	0.0	0.0	32.1	0.0	32.1
Nalagarh	400	434	02:00	413	19:10	0.0	0.0	68.9	4.5	68.9
Kishenpur	400	422	03:59	400	19:22	0.0	0.0	3.1	0.0	3.1
Wagoor	400	410	13:01	376	19:24	10.5	29.6	0.0	0.0	10.5
Amritsar	400	430	02:00	411	14:42	0.0	0.0	38.4	0.0	38.4
Kashipur	400	420	21:45	413	00:40	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	424	21:55	408	12:11	0.0	0.0	2.3	0.0	2.3
Rishikesh	400	415	21:56	387	09:50	0.0	5.6	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)
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	781	08:05	744	19:13	0.0	0.0	0.0	0.0	0.0
Balia	765	780	17:03	753	02:07	0.0	0.0	0.0	0.0	0.0
Moga	765	801	18:00	778	19:12	0.0	0.0	0.0	0.0	0.0
Agra	765	790	07:01	760	14:47	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	798	21:50	778	11:40	0.0	0.0	0.0	0.0	0.0
Unnao	765	763	17:38	744	19:12	0.0	0.0	0.0	0.0	0.0
Lucknow	765	784	13:01	762	01:11	0.0	0.0	0.0	0.0	0.0
Meerut	765	806	17:48	776	12:12	0.0	0.0	11.9	0.0	11.9
Jhatikara	765	800	07:44	769	14:37	0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	0	00:00	0	00:00	0.0	0.0	0.0	0.0	0.0
Anta	765	772	02:00	760	00:00	0.0	0.0	0.0	0.0	0.0
Phagi	765	781	03:59	760	14:31	0.0	0.0	0.0	0.0	0.0

Note : '0' in Max / Min Col -> 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	478.83	434.29	481.88	503.43	197.34	320.72
Pong	426.72	384.05	395.76	136.17	403.97	312.39	45.90	74.81
Tehri	829.79	740.04	746.55	31.85	767.55	185.00	69.72	155.00
Koteshwar	612.50	598.50	611.22	4.95	610.89	4.95	155.00	148.03
Chamera-I	760.00	748.75	755.88	0.00	0.00	0.00	140.46	118.47
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	496.02	2.88	516.31	2.38	98.88	116.97

\* NA: Not Available

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

State	Off- Peak Hours (03:00 Hrs)			Peak Hours (20:00 Hrs)			Day Energy (MU)		
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MU)	IEX / PXIL (MU)	Total (MU)
Punjab	19	-260	0	-389	97	0	-1.17	3.30	2.12
Delhi	-277	-133	0	-177	-65	0	-4.94	-2.08	-7.02
Haryana	513	296	0	411	289	0	9.15	5.14	14.29
HP	-176	73	0	-75	-491	0	-2.61	0.14	-2.47
J&K	-15	23	0	-65	172	0	-0.69	1.88	1.19
CHD	0	0	0	0	0	0	0.00	0.24	0.24
Rajasthan	-8	-337	0	-4	419	0	-0.17	4.49	4.32
UP	285	1266	0	225	0	0	5.30	8.64	13.95
Uttarakhand	157	377	0	157	439	0	5.13	7.47	12.59
<b>Total</b>	<b>497</b>	<b>1305</b>	<b>0</b>	<b>84</b>	<b>860</b>	<b>0</b>	<b>10.00</b>	<b>29.22</b>	<b>39.21</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	19	-389	356	-531	0	0
Delhi	-177	-303	60	-406	0	0
Haryana	513	260	308	-89	0	0
HP	-75	-176	245	-684	0	0
J&K	59	-65	172	-26	0	0
CHD	0	0	35	-30	0	0
Rajasthan	-4	-8	424	-681	0	0
UP	294	153	1266	0	0	0
Uttarakhand	283	157	439	153	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	13.54%

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

Rihand - Dadri	0.00%
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**XII. System Constraints:**

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

**XIV. Weather Conditions For 15.04.2016 :**  
Normal

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

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

125 MVAR damaged Bus Reactor has been replaced with new 80 MVAR Bus Reactor as a temporary arrangement at 2011 hrs on 15.04.16 at 765kV Lucknow

0.00

0.00

0.00

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

**XVIII. 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.