



	Rajpura (2*700)	1400	1120	660	25.09	1046
	Talwandi Saboo (3*660)	1980	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>6560</b>	<b>1120</b>	<b>660</b>	<b>25.09</b>	<b>1046</b>
	Total Hydro	1000	409	201	9.13	380
	Wind Power	0	0	0	0.00	0
	Biomass	288	9	9	0.22	9
	Solar	560	0	0	0.07	3
	<b>Renewable(Total)</b>	<b>848</b>	<b>9</b>	<b>9</b>	<b>0.30</b>	<b>12</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>1538</b>	<b>870</b>	<b>34.52</b>	<b>1438</b>
Haryana	Panipat TPS (2*210+2*250)	920	0	0	0.00	0
	DCRTPP (Yamuna nagar) (2*300)	600	219	228	5.61	234
	Faridabad GPS (NTPC)(2*137.75+1*156)	432	197	168	4.29	179
	RGTPP (khedar) (IPP) (2*600)	1200	0	0	0.00	0
	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>416</b>	<b>396</b>	<b>9.89</b>	<b>412</b>
	Total Hydro	62	10	22	0.35	15
	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>426</b>	<b>418</b>	<b>10.24</b>	<b>427</b>
	Rajasthan	kota TPS (2*110+2*195+3*210)	1240	301	306	7.82
suratgarh TPS (6*250)		1500	179	183	4.62	193
Chabra TPS (4*250)		1000	766	737	19.56	815
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	170	173	4.41	184
RAPS A (NPC) (1*100+1*200)		300	194	194	4.30	179
Barsingar (NLC) (2*125)		250	166	214	4.81	200
Giral LTPS (2*125)		250	0	0	0.00	0
Rajwest LTPS (IPP) (8*135)		1080	453	483	14.14	589
VS LIGNITE LTPS (IPP) (1*135)		135	0	0	0.00	0
Kalisindh Thermal(2*600)		1200	842	828	22.27	928
Kawai(Adani) (2*660)		1320	904	865	26.11	1088
<b>Thermal (Total)</b>		<b>8876</b>	<b>3975</b>	<b>3983</b>	<b>108.05</b>	<b>4502</b>
Total Hydro		550	226	103	3.69	154
Wind power		4017	210	541	8.00	333
Biomass		99	17	17	0.41	17
Solar		1295	0	0	0.00	0
Renewable/Others (Total)		5411	227	558	8.41	350
<b>Total Rajasthan</b>		<b>14837</b>	<b>4428</b>	<b>4644</b>	<b>120.15</b>	<b>5006</b>
UP	Anpara TPS (3*210+2*500)	1630	1421	1411	32.80	1367
	Obra TPS (2*50+2*94+5*200)	1194	518	476	11.00	458
	Paricha TPS (2*110+2*220+2*250)	1160	0	0	0.00	0
	Panki TPS (2*105)	210	0	0	0.00	0
	Harduaganj TPS (1*60+1*105+2*250)	665	162	174	3.90	163
	Tanda TPS (NTPC) (4*110)	440	273	272	7.57	315
	Roza TPS (IPP) (4*300)	1200	0	0	0.00	0
	Anpara-C (IPP) (2*600)	1200	959	984	24.10	1004
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	0	0	0.00	0
	Anpara-D(2*500)	1000	810	731	19.00	792
	Lalitpur TPS(3*660)	1980	710	715	20.90	871
	Bara(2*660)	1320	396	385	11.20	467
	<b>Thermal (Total)</b>	<b>12449</b>	<b>5249</b>	<b>5148</b>	<b>130.47</b>	<b>5436</b>
	Vishnuparyag HPS (IPP)(4*110)	440	58	0	1.50	63
	Alakanada(4*82.5)	330	84	0	0.90	38
	Other Hydro	527	129	10	0.90	38
	Cogeneration	981	850	850	20.40	850
	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>6370</b>	<b>6008</b>	<b>154.17</b>	<b>6424</b>
	Uttarakhand	Other Hydro	1250	430	219	6.31
Total Gas		225	286	303	6.96	290
Wind Power		0	0	0	0.00	0
Biomass		127	0	0	0.00	0
Solar		20	0	0	0.01	0
Small Hydro (< 25 MW)		180	0	0	0.00	0
<b>Renewable(Total)</b>		<b>327</b>	<b>0</b>	<b>0</b>	<b>0.01</b>	<b>0</b>
<b>Total Uttarakhand</b>		<b>1802</b>	<b>716</b>	<b>522</b>	<b>13.28</b>	<b>553</b>
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	37	38	0.86	36
	Pragati Gas Turbine (2x104+ 1x122)	330	0	0	0.00	0
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	272	250	6.42	268
	Badarpur TPS (NTPC) (3*95+2*210)	705	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>2917</b>	<b>309</b>	<b>288</b>	<b>7.28</b>	<b>303</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>309</b>	<b>288</b>	<b>7.28</b>	<b>303</b>
	HP	Baspa HPS (IPP) (3*100)	300	0	0	0.79
Malana HPS (IPP) (2*43)		86	0	0	0.19	8
Other Hydro		372	209	70	4.10	171
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	110	54	2.10	87
<b>Renewable(Total)</b>		<b>486</b>	<b>110</b>	<b>54</b>	<b>2.10</b>	<b>87</b>
<b>Total HP</b>		<b>1244</b>	<b>319</b>	<b>124</b>	<b>7.17</b>	<b>299</b>
J & K		Baqilhar HPS (IPP) (3*150+3*150)	900	146	147	3.52
	Other Hydro/IPP(including 98 MW Small Hydro)	308	136	120	2.86	119
	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>282</b>	<b>267</b>	<b>6</b>	<b>266</b>	

Total State Control Area Generation	50078	14388	13141	353.19	14716
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		7938	6605	199.83	8326
Total Regional Availability(Gross)	75315	39691	27936	828.69	34529

**IV. Total Hydro Generation:**

Regional Entities Hydro	12234	8316	1385	75.83	3159
State Control Area Hydro	7163	2233	1249	36.34	1804
Total Regional Hydro	19397	10548	2634	112.17	4964

**V. Total Renewable Generation:**

Regional Entities Renewable	30	0	0	0.07	3
State Control Area Renewable	7356	346	621	10.81	451
Total Regional Renewable	7386	346	621	10.88	453

**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	-500	0	500	0.00	7.39	-7.39
765 KV Gwalior-Agra (D/C)	2610	2232	2949	0	63.14	0.00	63.14
400 KV Zerda-Kankroli	-112	-148	0	228	0.00	3.08	-3.08
400 KV Zerda-Bhimnal	-39	-77	49	175	0.00	1.20	-1.20
220 KV Auraiya-Malanpur	-65	-81	0	95	0.00	1.48	-1.48
220 KV Badod-Kota/Morak	34	73	101	0	1.43	0.00	1.43
Mundra-Mohinderghar(HVDC Bipole)	1999	1603	2504	0.00	48.26	0.00	48.26
400 KV RAPPCC-Sujalpur	346	260	406	0	7.70	0.00	7.70
400 KV Vindhychal-Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1027	1215	1491	0	30.95	0.00	30.95
+/- 800 kV HVDC Champa-Kurushetra	0	150	200	0	2.67	0.00	2.67
<b>Sub Total WR</b>	<b>5700</b>	<b>4727</b>			<b>154.14</b>	<b>13.15</b>	<b>141.00</b>
400 kV Sasaram - Varanasi	277	290	294	0	7.07	0.00	7.07
400 kV Sasaram - Allahabad	112	100	125	0	2.60	0.00	2.60
400 KV MZP- GKP (D/C)	29	76	326	33	3.08	0.00	3.08
400 KV Patna-Balia(D/C) X 2	676	593	850	0	14.85	0.00	14.85
400 KV B'Sharif-Balia (D/C)	16	28	220	0	2.43	0.00	2.43
765 KV Gaya-Balia	241	203	379	0	6.65	0.00	6.65
765 KV Gaya-Varanasi (D/C)	602	286	702	0	11.35	0.00	11.35
220 KV Pusauli-Sahupuri	103	154	207	0	3.90	0.00	3.90
132 KV K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV Son Ngr-Rihand	-26	-25	0	30	0.00	0.59	-0.59
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-232	-186	21	232	0.00	2.76	-2.76
400 KV Barh -GKP (D/C)	524	468	578	0	11.22	0.00	11.22
400 kV B'Sharif - Varanasi (D/C)	-84	-109	84	138	0.00	0.96	-0.96
<b>Sub Total ER</b>	<b>2238</b>	<b>1878</b>			<b>63.14</b>	<b>4.31</b>	<b>58.83</b>
+/- 800 KV HVDC BiswanathChariali-Agra	0	0	0	0.00	0.00	0.00	0.00
<b>Sub Total NER</b>	<b>0</b>	<b>0</b>			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total IR Exch</b>	<b>7938</b>	<b>6605</b>			<b>217.28</b>	<b>17.45</b>	<b>199.83</b>

**VI(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]**

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)		Power Exchange Shdl (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
44.84	0.36	45.20	-2.50	-0.23	15.09	2.66	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
57.79	136.95	194.74	58.83	141.00	199.83	1.04	4.04	5.08

**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	-34	-34	0	39	0	1	-0.85

**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	0.69	14.70	65.85	72.58	11.42	1.33	0.00	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)		
50.14	18.01	49.74	22.37	49.97	0.053	0.066	50.08	49.84	27.42

**VIII(A). Voltage profile 400 kV**

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Volta ge Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	407	16:53	393	17:52	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	416	1:51	402	10:07	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	418	2:00	395	12:16	0.0	0.0	0.0	0.0	0.0
Kanpur	400	417	2:00	400	12:18	0.0	0.0	0.0	0.0	0.0
Dadri	400	427	4:00	401	12:17	0.0	0.0	19.5	0.0	19.5
Ballabgarh	400	425	2:03	400	12:16	0.0	0.0	15.4	0.0	15.4
Bawana	400	427	2:02	403	12:16	0.0	0.0	20.9	0.0	20.9
Bassi	400	426	4:00	402	6:40	0.0	0.0	9.1	0.0	9.1
Hissar	400	424	2:03	400	12:16	0.0	0.0	7.5	0.0	7.5
Moga	400	424	1:29	404	7:10	0.0	0.0	16.0	0.0	16.0
Abdullapur	400	428	1:33	406	12:19	0.0	0.0	26.3	0.0	26.3
Nalagarh	400	431	1:59	412	12:17	0.0	0.0	38.2	0.3	38.2
Kishenpur	400	420	1:58	400	6:58	0.0	0.0	0.0	0.0	0.0
Wagoora	400	392	4:00	371	6:51	33.4	97.3	0.0	0.0	33.4
Amritsar	400	432	2:03	409	12:20	0.0	0.0	32.7	1.1	32.7
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	416	17:31	414	17:08	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	423	1:54	397	12:22	0.0	0.0	11.5	0.0	11.5

**VIII(B). Voltage profile 765 kV**

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Volta ge Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	779	2:01	747	10:10	0.0	0.0	0.0	0.0	0.0
Balia	765	785	4:01	757	12:16	0.0	0.0	0.0	0.0	0.0

Moga	765	800	16:59	768	12:17	0.0	0.0	0.0	0.0	0.0
Agra	765	792	4:01	755	12:17	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	812	2:03	768	12:17	0.0	0.0	16.7	0.0	16.7
Unnao	765	773	17:00	730	12:19	0.0	17.8	0.0	0.0	0.0
Lucknow	765	789	3:59	753	12:19	0.0	0.0	0.0	0.0	0.0
Meerut	765	807	20:44	767	7:16	0.0	0.0	8.9	0.0	8.9
Jhatikara	765	810	3:59	764	12:20	0.0	0.0	16.3	0.0	16.3
Bareilly 765 kV	765	796	4:00	753	12:17	0.0	0.0	0.0	0.0	0.0
Anta	765	797	1:58	771	8:09	0.0	0.0	0.0	0.0	0.0
Phagi	765	0	0:00	0	0:00	100.0	100.0	0.0	0.0	100.0

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	468.59	243.71	482.52	519.70	154.64	411.10
Pong	426.72	384.05	397.55	168.56	397.24	162.91	55.67	247.04
Tehri	829.79	740.04	771.10	218.97	762.60	142.38	39.38	213.00
Koteshwar	612.50	598.50	609.50	4.21	611.44	5.35	213.00	213.14
Chamera-I	760.00	748.75	757.44	0.00	0.00	0.00	84.78	87.42
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	504.95	2.54	497.95	0.00	114.53	115.32

\* 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	-202	-101	0	-202	0	0	-2.30	-0.76	-3.05
Delhi	-384	-256	0	-280	180	0	-6.69	1.72	-4.98
Haryana	-206	-296	0	-136	369	0	-3.78	4.54	0.76
HP	211	156	0	205	-172	0	4.18	2.64	6.82
J&K	174	99	0	174	74	0	4.18	2.75	6.93
CHD	0	-20	0	0	-30	0	0.00	-0.37	-0.37
Rajasthan	27	446	0	28	-23	0	0.63	5.76	6.39
UP	94	0	0	112	-100	0	1.23	-1.78	-0.55
Uttarakhand	73	65	0	73	205	0	1.91	5.01	6.91
<b>Total</b>	<b>-213</b>	<b>94</b>	<b>0</b>	<b>-26</b>	<b>503</b>	<b>0</b>	<b>-0.64</b>	<b>19.49</b>	<b>18.85</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	0	-202	0	-202	0	0
Delhi	-171	-386	473	-256	0	0
Haryana	-129	-206	390	-435	0	0
HP	254	10	370	-398	0	0
J&K	174	174	297	-202	0	0
CHD	0	0	0	-56	0	0
Rajasthan	34	16	446	-576	0	0
UP	157	-41	0	-100	0	0
Uttarakhand	104	73	374	65	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	1.04%

(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	0	9
Haryana	2	16
Rajasthan	3	30
Delhi	2	16
UP	1	17
Uttarakhand	2	23
HP	4	37
J & K	4	32
Chandigarh	5	34

**XIII. System Constraints:**

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

**XV. Weather Conditions For 16.03.2017 :**

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

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

315 MVA ICT-2 (New) first time charged at 18.22 hrs of 16.03.2017 from 400kV side at Kurukshetra PG

**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 : 16.03.2017

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER