

# पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड

(भारत सरकार का उद्यम)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GO188862

Power Supply Position in Northern Region for 23.05.2017

Date of Reporting : 24.05.2017



**I. Regional Availability/Demand:**

Evening Peak (20:00 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
46539	1298	47837	0.00	44544	270	44814	0.00	1052.82	9.62

\*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:**

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	35.18	15.43	0.35	50.96	104.17	104.92	0.76	155.88	0.00
Haryana	36.30	0.54	0.00	36.83	103.89	102.97	-0.92	139.80	0.00
Rajasthan	105.92	0.00	17.35	123.27	73.17	75.73	2.56	198.99	0.74
Delhi	11.83		0.00	11.83	86.38	86.12	-0.26	97.95	0.00
UP	183.28	15.32	0.00	198.60	149.70	151.95	2.24	350.55	0.00
Uttarakhand		14.33	7.01	21.34	18.25	18.23	-0.01	39.58	0.00
HP		12.59	5.82	18.40	5.02	8.18	3.16	26.59	0.00
J & K		22.77	0.00	22.77	16.37	15.01	-1.36	37.77	8.88
Chandigarh			0.00	0.00	5.93	5.71	-0.22	5.71	0.00
<b>Total</b>	<b>372.50</b>	<b>80.98</b>	<b>30.53</b>	<b>484.00</b>	<b>562.86</b>	<b>568.81</b>	<b>5.95</b>	<b>1052.82</b>	<b>9.62</b>

\* Shortage furnished by the respective constituent. \$ Others include UP Co-generation and JK Diesel

**II. B. State's Demand Met in MWs:**

State	Evening Peak (20:00 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	6407	0	-102	736	6262	0	16	1154	6837	15	0
Haryana	6412	0	-96	522	5836	0	-88	551	6608	21	0
Rajasthan	8021	0	-161	402	8347	0	236	17	9361	24	0
Delhi	4289	0	-66	248	3717	0	41	291	5026	24	0
UP	16590	845	259	1578	16098	0	146	1162	16997	22	1500
Uttarakhand	1797	0	16	30	1644	0	49	31	1819	13	0
HP	1020	13	-9	-1406	906	0	92	-1121	1290	13	0
J&K	1759	440	106	-632	1530	270	73	-979	1873	21	468
Chandigarh	243	0	-25	0	205	0	-13	39	294	16	0
<b>Total</b>	<b>46539</b>	<b>1298</b>	<b>-79</b>	<b>1478</b>	<b>44544</b>	<b>270</b>	<b>551</b>	<b>1144</b>	<b>48089</b>	<b>24</b>	<b>735</b>

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

Diversity is: 1.04

**III. Regional Entities :**

Entity	Station/ Constituent	Inst. Capacity (Effective) MW	Declared Capacity(MW)	Peak MW (Gross)	Off Peak MW (Gross)	Energy (Net MU)	Average Sentout(MW)	Schedule Net MU	UI		
									Net MU	Net MU	
A. NTPC	Singrauli STPS (6*200+2*500)	2000	1775	1929	1940	42.96	1790	42.53		0.43	
	Rihand I STPS (2*500)	1000	923	986	969	22.06	919	22.08		-0.02	
	Rihand II STPS (2*500)	1000	943	1003	1027	22.79	949	22.48		0.30	
	Rihand III STPS (2*500)	1000	943	1018	1003	22.75	948	22.44		0.31	
	Dadri I STPS (4*210)	840	769	592	406	9.27	386	9.51		-0.24	
	Dadri II STPS (2*490)	980	929	932	558	16.63	693	17.50		-0.87	
	Unchahar I TPS (2*210)	420	350	358	360	7.53	314	7.95		-0.42	
	Unchahar II TPS (2*210)	420	383	405	386	8.37	349	8.67		-0.30	
	Unchahar III TPS (1*210)	210	192	189	132	3.76	157	3.94		-0.18	
	Unchahar IV TPS(1*500)	500		0	0	0.00	0	0.00		0.00	
	ISTPP (Jhajjar) (3*500)	1500	1421	1454	1460	31.26	1302	31.56		-0.30	
	Dadri GPS (4*130.19+2*154.51)	830	756	344	233	6.95	290	7.29		-0.34	
	Anta GPS (3*88.71+1*153.2)	419	384	0	0	0.00	0	0.00		0.00	
	Auraiya GPS (4*111.19+2*109.30)	663	618	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	3	0	0	0.05	2	0.07		-0.01	
	Singrauli Solar(15)	15	3	0	0	0.07	3	0.07		0.00	
	KHEP(4*200)	800	792	868	645	15.48	645	14.00		1.48	
	<b>Sub Total (A)</b>	<b>12612</b>	<b>11182</b>	<b>10078</b>	<b>9119</b>	<b>27.32</b>	<b>1138</b>	<b>27.37</b>		<b>-0.05</b>	
	B. NPC	NAPS (2*220)	440	385	414	419	9.12	380	9.24		-0.12
		RAPS- B (2*220)	440	357	393	404	8.59	358	8.53		0.05
RAPS- C (2*220)		440	400	446	454	9.61	401	9.60		0.01	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1142</b>	<b>1253</b>	<b>1277</b>	<b>27.32</b>	<b>1138</b>	<b>27.37</b>		<b>-0.05</b>	
C. NHPC	Chamera I HPS (3*180)	540	535	548	0	11.43	476	11.00		0.43	
	Chamera II HPS (3*100)	300	304	309	306	7.31	305	7.29		0.03	
	Chamera III HPS (3*77)	231	232	229	234	5.23	218	5.18		0.05	
	Bairasuli HPS(3*60)	180	179	183	110	2.96	123	2.76		0.20	
	Salal-HPS (6*115)	690	660	678	673	16.18	674	15.84		0.34	
	Tanakpur-HPS (3*31.4)	94	41	46	49	1.12	47	1.00		0.13	
	Uri-I HPS (4*120)	480	474	481	481	11.67	486	11.38		0.29	
	Uri-II HPS (4*60)	240	237	241	241	5.72	238	5.69		0.02	
	Dhualganga-HPS (4*70)	280	280	284	0	2.93	122	2.78		0.15	
	Dulhasti-HPS (3*130)	390	387	404	395	9.36	390	9.30		0.06	
	Sewa-II HPS (3*40)	120	119	115	128	1.61	67	1.50		0.11	
	Parbati 3 (4*130)	520	520	516	0	1.28	53	1.24		0.05	
	<b>Sub Total (C)</b>	<b>4065</b>	<b>3968</b>	<b>4033</b>	<b>2616</b>	<b>77</b>	<b>3200</b>	<b>75</b>		<b>1.86</b>	
	D. SJVNL	NJPC (6*250)	1500	1482	1550	1544	37.05	1544	35.57		1.48
Rampur HEP (6*68.67)		412	408	441	442	10.35	431	9.79		0.56	
<b>Sub Total (D)</b>		<b>1912</b>	<b>1890</b>	<b>1991</b>	<b>1986</b>	<b>47.40</b>	<b>1975</b>	<b>45.36</b>		<b>2.04</b>	
E. THDC	Tehri HPS (4*250)	1000	356	409	140	7.23	301	7.20		0.03	
	Koteshwar HPS (4*100)	400	156	303	103	3.80	158	3.75		0.05	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>512</b>	<b>712</b>	<b>243</b>	<b>11.03</b>	<b>460</b>	<b>10.95</b>		<b>0.08</b>	
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	626	1076	473	15.45	644	15.03		0.42	
	Dehar HPS (6*165)	990	480	495	495	11.64	485	11.52		0.12	
	Pong HPS (6*66)	396	69	260	0	1.65	69	1.65		0.00	
	<b>Sub Total (F)</b>	<b>2765</b>	<b>1175</b>	<b>1831</b>	<b>968</b>	<b>28.75</b>	<b>1198</b>	<b>28.20</b>		<b>0.54</b>	
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	125	102	2.33	97	2.69		-0.36	
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	1100	825	22.89	954	22.72		0.17	
	Malana Stg-II HPS (2*50)	100	0	111	35	0.84	35	0.80		0.04	
	Shree Cement TPS (2*150)	300	0	145	141	3.36	140	3.35		0.01	
	Budhil HPS(IPP) (2*35)	70	0	69	45	1.25	52	1.60		-0.35	
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1550</b>	<b>1147</b>	<b>30.68</b>	<b>1278</b>	<b>31.17</b>		<b>-0.50</b>		
<b>H. Total Regional Entities (A-G)</b>	<b>25737</b>	<b>19869</b>	<b>21448</b>	<b>17356</b>	<b>431.92</b>	<b>17997</b>	<b>428.11</b>		<b>3.81</b>		

**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	3.97	166
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	0	0	-0.06	-3
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	201	212	4.94	206
	Goindwal(GVK) (2*270)	540	0	0	-0.03	-1
	Raipura (2*700)	1400	1090	1090	26.43	1101
	Talwandi Saboo (3*660)	1980	0	0	-0.07	-3

	<b>Thermal (Total)</b>	<b>6560</b>	<b>1451</b>	<b>1462</b>	<b>35.18</b>	<b>1466</b>
	Total Hydro	1000	636	627	15.43	643
	Wind Power	0	0	0	0.00	0
	Biomass	288	0	0	0.25	10
	Solar	560	0	0	0.10	4
	<b>Renewable(Total)</b>	<b>848</b>	<b>0</b>	<b>0</b>	<b>0.35</b>	<b>14</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>2087</b>	<b>2089</b>	<b>50.96</b>	<b>2123</b>
Haryana	Panipat TPS (2*210+2*250)	920	212	204	4.98	207
	DCRTPP (Yamuna nagar) (2*300)	600	509	554	12.12	505
	Faridabad GPS (NTPC)(2*137.75+1*156)	432	177	159	4.28	179
	RGTPP (khedar) (IPP) (2*600)	1200	383	487	9.91	413
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar (CLP) (2*660)	1320	432	0	5.01	209
	<b>Thermal (Total)</b>	<b>4497</b>	<b>1713</b>	<b>1404</b>	<b>36.30</b>	<b>1512</b>
	Total Hydro	62	26	30	0.54	22
	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>1739</b>	<b>1434</b>	<b>36.83</b>	<b>1535</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	747	552	16.52	688
	suratgarh TPS (6*250)	1500	220	163	4.65	194
	Chabra TPS (4*250)	1000	458	688	15.26	636
	Chabra TPS (1*660)	660	0	0	0.00	0
	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	27	67	0.89	37
	RAPS A (NPC) (1*100+1*200)	300	166	167	4.14	172
	Barsingar (NLC) (2*125)	250	113	114	2.57	107
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwst LTPS (IPP) (8*135)	1080	719	716	16.77	699
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	843	1112	16.50	688
	Kawai(Adani) (2*660)	1320	1190	1197	28.63	1193
	<b>Thermal (Total)</b>	<b>9536</b>	<b>4483</b>	<b>4776</b>	<b>105.92</b>	<b>4413</b>
	Total Hydro	550	0	0	0.00	0
	Wind power	4017	297	644	14.05	585
	Biomass	99	20	20	0.47	20
	Solar	1295	0	0	2.84	118
	Renewable/Others (Total)	5411	317	664	17.35	723
	<b>Total Rajasthan</b>	<b>15497</b>	<b>4800</b>	<b>5440</b>	<b>123.27</b>	<b>5136</b>
UP	Anpara TPS (3*210+2*500)	1630	1606	1351	31.63	1318
	Obra TPS (2*50+2*94+5*200)	1194	668	673	15.56	648
	Paricha TPS (2*110+2*220+2*250)	1160	646	653	15.55	648
	Panki TPS (2*105)	210	81	77	1.84	76
	Harduaganj TPS (1*60+1*105+2*250)	665	544	539	12.22	509
	Tanda TPS (NTPC) (4*110)	440	379	380	8.61	359
	Roza TPS (IPP) (4*300)	1200	1049	1058	13.93	581
	Anpara-C (IPP) (2*600)	1200	527	513	11.83	493
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	405	363	8.08	337
	Anpara-D(2*500)	1000	834	859	20.00	833
	Lalitpur TPS(3*660)	1980	718	715	17.17	716
	Bara(2*660)	1320	920	920	22.08	920
	<b>Thermal (Total)</b>	<b>12449</b>	<b>8377</b>	<b>8101</b>	<b>178.48</b>	<b>7437</b>
	Vishnuparyag HPS (IPP)(4*110)	440	420	400	9.35	390
	Alaknanda(4*82.5)	330	84	85	3.02	126
	Other Hydro	527	176	99	2.95	123
	Cogeneration	981	200	200	4.80	200
	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>9257</b>	<b>8885</b>	<b>198.60</b>	<b>8275</b>
	Uttarakhand	Other Hydro	1250	674	625	14.33
Total Gas		225	268	245	6.41	267
Wind Power		0	0	0	0.00	0
Biomass		127	0	0	0.00	0
Solar		20	0	0	0.60	25
Small Hydro (< 25 MW)		180	0	0	0.00	0
<b>Renewable(Total)</b>		<b>327</b>	<b>0</b>	<b>0</b>	<b>0.60</b>	<b>25</b>
<b>Total Uttarakhand</b>		<b>1802</b>	<b>942</b>	<b>870</b>	<b>21.34</b>	<b>889</b>
Delhi	Raighat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	41	41	0.88	37
	Pragati Gas Turbine (2x104+ 1x122)	330	151	158	3.74	156
	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	328	331	7.21	300
	<b>Thermal (Total)</b>	<b>2917</b>	<b>520</b>	<b>530</b>	<b>11.83</b>	<b>493</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>520</b>	<b>530</b>	<b>11.83</b>	<b>493</b>	
HP	Baspa HPS (IPP) (3*100)	300	261	211	4.72	197
	Malana HPS (IPP) (2*43)	86	69	45	0.94	39
	Other Hydro (>25MW)	372	322	286	6.93	289
	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	250	231	5.82	242
	<b>Renewable(Total)</b>	<b>486</b>	<b>250</b>	<b>231</b>	<b>5.82</b>	<b>242</b>
<b>Total HP</b>	<b>1244</b>	<b>902</b>	<b>773</b>	<b>18.40</b>	<b>767</b>	
J & K	Baqilhar HPS (IPP) (3*150+3*150)	900	885	881	20.90	871
	Other Hydro/IPP(including 98 MW Small Hydro)	308	85	56	1.87	78
	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>970</b>	<b>937</b>	<b>23</b>	<b>949</b>	
<b>Total State Control Area Generation</b>		<b>50738</b>	<b>21217</b>	<b>20958</b>	<b>484.00</b>	<b>20167</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>6872</b>	<b>5861</b>	<b>160.62</b>	<b>6693</b>
<b>Total Regional Availability(Gross)</b>		<b>76475</b>	<b>49538</b>	<b>44175</b>	<b>1076.55</b>	<b>44856</b>

**IV. Total Hydro Generation:**

Regional Entities Hydro	12234	10771	7420	205.52	8564
State Control Area Hydro	7163	4156	3821	86.79	3908
<b>Total Regional Hydro</b>	<b>19397</b>	<b>14928</b>	<b>11240</b>	<b>292.32</b>	<b>12472</b>

**V. Total Renewable Generation:**

Regional Entities Renewable	30	0	0	0.15	6
State Control Area Renewable	7356	567	895	24.12	1005
<b>Total Regional Renewable</b>	<b>7386</b>	<b>567</b>	<b>895</b>	<b>24.27</b>	<b>1011</b>

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

Element	Peak(20:00 Hrs) MW	Off Peak(03:00 Hrs) MW	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
			Import	Export	Import	Export	
Vindhychal(HVDC B/B)	-500	-150	0	500	0.00	7.19	-7.19
765 KV Gwalior-Agra (D/C)	1942	1607	2370	0	37.22	0.00	37.22
400 KV Zerda-Kankroli	-186	-242	0	404	0.00	6.68	-6.68
400 KV Zerda-Bhinmal	-100	-195	0	337	0.00	4.83	-4.83
220 KV Auraiya-Malanpur	-35	-57	0	97	0.00	1.12	-1.12
220 KV Badod-Kota/Morak	47	-48	117	66	0.00	0.45	-0.45
Mundra-Mohinderghar(HVDC Bipole)	1998	1997	2007	0	47.23	0.00	47.23
400 KV RAPPCC-Sujalpur	170	170	329	0	4.96	0.00	4.96
400 KV Vindhychal-Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	647	543	522	0	18.80	0.00	18.80
+/- 800 kV HVDC Champa-Kurushetra	1000	1000	1500	0	27.80	0	27.80
<b>Sub Total WR</b>	<b>4983</b>	<b>4625</b>			<b>136.01</b>	<b>20.25</b>	<b>115.75</b>
400 kV Sasaram - Varanasi	255	289	293	0	6.64	0.00	6.64
400 kV Sasaram - Allahabad	102	67	110	0	2.04	0.00	2.04
400 KV MZP- GKP (D/C)	248	81	387	-35	3.34	0.00	3.34
400 KV Patna-Balia(D/C) X 2	495	564	719	0	14.24	0.00	14.24
400 KV B'Sharif-Balia (D/C)	225	45	288	0	2.94	0.00	2.94
765 KV Gaya-Balia	338	216	405	0	4.70	0.00	4.70
765 KV Gaya-Varanasi (D/C)	253	94	356	0	4.15	0.00	4.15
220 KV Pusaali-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV Son Ngr-Rihand	-29	-26	0	-30	0.00	0.61	-0.61
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-92	-239	16	264	0.00	3.21	-3.21
400 KV Barh -GKP (D/C)	434	502	548	0	11.00	0.00	11.00
400 kV B'Sharif - Varanasi (D/C)	-40	143	170	81	1.24	0.00	1.24
+/- 800 KV HVDC Alipurduar-Agra	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>2189</b>	<b>1736</b>			<b>50.29</b>	<b>3.82</b>	<b>46.47</b>
+/- 800 KV HVDC BiswanathCharialli-Agra	-300	-500	500	500.00	0.00	1.60	-1.60
<b>Sub Total NER</b>	<b>-300</b>	<b>-500</b>			<b>0.00</b>	<b>1.60</b>	<b>-1.60</b>
<b>Total IR Exch</b>	<b>6872</b>	<b>5861</b>			<b>186.29</b>	<b>25.67</b>	<b>160.62</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
49.81	1.34	51.15	2.09	2.85	-6.18	4.16	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
47.06	117.65	164.71	44.87	115.75	160.62	-2.19	-1.90	-4.08

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

Element	Peak(20:00 Hrs) MW	Off Peak(03:00 Hrs) MW	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
			Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	-30	-25	0	30	0	1	-0.62

**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	0.67	16.04	66.56	74.90	8.30	0.81	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)		
50.13	16.42	49.67	9.15	49.97	0.053	0.065	0.00	0.00	25.10

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

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviate
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	405	18:16	401	9:36	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	410	14:01	388	20:41	0.0	3.6	0.0	0.0	0.0
Bareilly(PG)400kV	400	413	5:34	372	11:58	0.0	1.6	0.0	0.0	0.0
Kanpur	400	411	6:37	396	21:09	0.0	0.0	0.0	0.0	0.0
Dadri	400	417	5:32	399	14:45	0.0	0.0	0.0	0.0	0.0
Ballabgarh	400	414	5:33	394	14:47	0.0	0.0	0.0	0.0	0.0
Bawana	400	414	5:33	397	14:45	0.0	0.0	0.0	0.0	0.0
Bassi	400	421	18:30	397	22:31	0.0	0.0	0.5	0.0	0.5
Hissar	400	410	18:00	395	19:34	0.0	0.0	0.0	0.0	0.0
Moga	400	414	18:02	400	10:30	0.0	0.0	0.0	0.0	0.0
Abdullapur	400	413	5:34	397	19:42	0.0	0.0	0.0	0.0	0.0
Nalagarh	400	418	5:38	403	10:46	0.0	0.0	0.0	0.0	0.0
Kishenpur	400	411	2:48	399	21:08	0.0	0.0	0.0	0.0	0.0
Wagoora	400	398	18:01	376	20:07	15.4	80.0	0.0	0.0	15.4
Amritsar	400	422	2:46	403	10:26	0.0	0.0	5.1	0.0	5.1
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	415	2:44	398	10:14	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	416	5:33	388	19:50	0.0	1.9	0.0	0.0	0.0

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

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviate
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	771	18:35	739	10:46	0.0	1.8	0.0	0.0	0.0
Balia	765	773	23:29	741	20:44	0.0	0.3	0.0	0.0	0.0
Moga	765	792	18:32	764	10:35	0.0	0.0	0.0	0.0	0.0
Agra	765	788	18:32	755	10:36	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	798	18:32	768	22:29	0.0	0.0	0.0	0.0	0.0
Unnao	765	768	18:31	735	21:20	0.0	8.3	0.0	0.0	0.0

Lucknow	765	778	5:35	741	20:06	0.0	0.2	0.0	0.0
Meerut	765	799	18:32	761	19:53	0.0	0.0	0.0	0.0
Jhatikara	765	790	5:35	756	10:33	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	785	5:34	742	19:52	0.0	0.0	0.0	0.0
Anta	765	797	18:46	757	18:55	0.0	0.0	0.0	0.0
Phagi	765	800	18:38	763	22:31	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	470.20	272.43	477.05	394.40	819.94	570.78
Pong	426.72	384.05	394.68	121.45	391.95	80.40	87.67	131.05
Tehri	829.79	740.04	746.55	31.81	742.70	12.73	132.62	254.00
Koteshwar	612.50	598.50	610.25	4.69	603.86	1.90	254.00	250.65
Chamera-I	760.00	748.75	751.89	0.00	0.00	0.00	246.11	310.32
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	513.95	7.12	503.27	2.26	220.83	288.10

\* 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	465	689	0	490	246	0	11.74	16.95	28.69
Delhi	509	-218	0	471	-224	0	12.46	-3.87	8.58
Haryana	342	209	0	342	180	0	3.23	4.45	7.68
HP	-838	-284	0	-869	-537	0	-18.19	-10.11	-28.29
J&K	-575	-404	0	-575	-57	0	-13.80	-5.06	-18.86
CHD	0	39	0	0	0	0	0.00	0.21	0.21
Rajasthan	32	-15	0	38	364	0	0.78	6.35	7.13
UP	1014	148	0	1334	245	0	12.62	2.60	15.22
Uttarakhand	27	4	0	-46	76	0	0.10	0.44	0.54
<b>Total</b>	<b>977</b>	<b>167</b>	<b>0</b>	<b>1186</b>	<b>292</b>	<b>0</b>	<b>8.94</b>	<b>11.97</b>	<b>20.91</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	785	293	1181	246	0	0
Delhi	619	471	116	-643	0	0
Haryana	342	-107	238	78	0	0
HP	-581	-924	-260	-569	0	0
J&K	-575	-575	-57	-404	0	0
CHD	0	0	39	0	0	0
Rajasthan	44	20	449	-616	0	0
UP	1334	109	923	-46	0	0
Uttarakhand	128	-200	147	-43	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%
----------------	-------

**XII. Zero Crossing Violations**

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
Punjab	5	68
Haryana	5	68
Rajasthan	6	76
Delhi	6	62
UP	0	9
Uttarakhand	6	64
HP	5	62
J & K	7	63
Chandigarh	6	75

**XIII. System Constraints:**

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

**XV. Weather Conditions For 23.05.2017 :**

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

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

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 : 23.05.2017

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER