

# पावर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 29.10.2016

Date of Reporting : 30.10.2016



### I. Regional Availability/Demand:

Evening Peak (19:00 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
42782	426	43208	50.10	32959	318	33277	0.00	884.3	8.83

\* 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:

UI [OD:(+ve), UD: (-ve)]

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	44.68	10.52	0.81	56.01	54.90	54.49	-0.42	110.49	0.00
Haryana	34.34	0.58	0.00	34.92	81.37	79.88	-1.49	114.79	0.00
Rajasthan	113.04	4.37	13.51	130.91	63.85	63.97	0.12	194.88	0.00
Delhi	9.15		0.00	9.15	57.43	57.87	0.44	67.02	0.08
UP	173.78	12.18	0.00	185.96	116.80	116.80	0.00	302.76	0.00
Uttarakhand		9.79	0.00	13.90	20.33	19.06	-1.27	32.96	0.00
HP		5.31	2.47	7.78	15.76	15.42	-0.34	23.20	0.00
J & K		7.25	0.00	7.25	32.15	27.75	-4.39	35.00	8.75
Chandigarh				0.00	3.69	3.18	-0.51	3.18	0.00
<b>Total</b>	<b>374.98</b>	<b>50.00</b>	<b>16.79</b>	<b>445.87</b>	<b>446.28</b>	<b>438.41</b>	<b>-7.87</b>	<b>884.27</b>	<b>8.83</b>

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

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

UI/OA/PX [OD/Import: (+ve), UD/Export: (-ve)]

State	Evening Peak (19:00 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	4806	0	-33	-1055	3866	0	33	-93	5165	10:00	0
Haryana	6408	0	-357	244	3674	0	-16	-66	6408	19:00	0
Rajasthan	8330	0	-388	393	8321	0	5	418	9202	8:00	0
Delhi	3231	0	9	-311	2362	0	6	-352	3298	12:00	0
UP	15398	0	-119	1864	11444	0	-52	835	15398	19:00	0
Uttarakhand	1667	0	-143	361	1152	0	-110	392	1667	19:00	0
HP	1074	0	-113	-250	768	0	-13	293	1263	8:00	0
J&K	1703	426	-159	300	1273	318	-121	317	1714	20:00	428
Chandigarh	167	0	-69	0	97	0	2	0	167	19:00	0
<b>Total</b>	<b>42782</b>	<b>426</b>	<b>-1373</b>	<b>1545</b>	<b>32959</b>	<b>318</b>	<b>-266</b>	<b>1744</b>	<b>42782</b>	<b>19:00</b>	<b>426</b>

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

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### III. Regional Entities :

UI [OG:(+ve), UG: (-ve)]

Entity	Station/ Constituent	Inst. Capacity (Effective) MW	Declared Capacity(MW)	Peak MW	Off Peak MW	Energy	Average	Schedule	UI
				(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1302	1410	1325	30.88	1287	29.80	1.07
	Rihand I STPS (2*500)	1000	943	901	809	20.96	873	20.55	0.41
	Rihand II STPS (2*500)	1000	943	1030	709	21.14	881	20.69	0.44
	Rihand III STPS (2*500)	1000	895	942	781	19.94	831	19.83	0.12
	Dadri I STPS (4*210)	840	815	333	318	6.96	290	7.09	-0.13
	Dadri II STPS (2*490)	980	980	709	707	16.18	674	16.92	-0.74
	Unchahar I TPS (2*210)	420	312	166	275	5.69	237	5.71	-0.02
	Unchahar II TPS (2*210)	420	402	267	309	6.51	271	6.78	-0.27
	Unchahar III TPS (1*210)	210	201	147	138	3.30	138	3.44	-0.14
	ISTPP (Jhajjar) (3*500)	1500	1425	347	423	8.14	339	8.38	-0.24
	Dadri GPS (4*130.19+2*154.51)	830	790	322	358	7.51	313	7.88	-0.37
	Anta GPS (3*88.71+1*153.2)	419	388	0	0	0.00	0	0.00	0.00
	Auraiya GPS (4*111.19+2*109.30)	663	624	0	0	0.00	0	0.00	0.00
	Dadri Solar(5)	5	1	0	0	0.01	1	0.02	0.00
	Unchahar Solar(10)	10	2	0	0	0.04	2	0.04	-0.01
	Singrauli Solar(15)	15	2	0	0	0.11	5	0.05	0.06
KHEP(4*200)	800	858	859	0	3.02	126	2.75	0.27	
<b>Sub Total (A)</b>	<b>12112</b>	<b>10882</b>	<b>7433</b>	<b>6152</b>	<b>150</b>	<b>6266</b>	<b>150</b>	<b>0.46</b>	
B. NPC	NAPS (2*220)	440	397	437	444	9.58	399	9.53	0.06
	RAPS- B (2*220)	440	385	426	431	9.28	387	9.24	0.04
	RAPS- C (2*220)	440	188	216	211	4.50	188	4.50	0.00
	<b>Sub Total (B)</b>	<b>1320</b>	<b>970</b>	<b>1079</b>	<b>1086</b>	<b>23.37</b>	<b>974</b>	<b>23.27</b>	<b>0.10</b>
C. NHPC	Chamera I HPS (3*180)	540	540	463	0	2.75	114	2.50	0.25
	Chamera II HPS (3*100)	300	301	310	0	1.98	83	1.80	0.18
	Chamera III HPS (3*77)	231	231	225	0	1.12	47	1.00	0.12
	Bairasuil HPS(3*60)	180	179	183	0	0.77	32	0.72	0.05
	Salal-HPS (6*115)	690	127	77	180	3.70	154	3.06	0.65
	Tanakpur-HPS (3*31.4)	94	40	45	45	1.18	49	0.97	0.21
	Uri-I HPS (4*120)	480	83	204	30	2.34	98	2.00	0.35
	Uri-II HPS (4*60)	240	58	121	37	1.48	62	1.38	0.10
	Dhauliganga-HPS (4*70)	280	280	275	0	1.72	72	1.61	0.11
	Dulhasti-HPS (3*130)	390	383	393	0	5.47	228	5.20	0.27
	Sewa-II HPS (3*40)	120	119	62	0	0.31	13	0.36	-0.05
	Parbati 3 (4*130)	520	260	263	0	0.82	34	0.78	0.04
	<b>Sub Total (C)</b>	<b>4065</b>	<b>2601</b>	<b>2619</b>	<b>292</b>	<b>24</b>	<b>986</b>	<b>21</b>	<b>2.27</b>
D.SJVNL	NJPC (6*250)	1500	1605	1604	0	10.57	440	10.41	0.16
	Rampur HEP (6*68.67)	412	442	438	0	3.01	126	2.90	0.11
	<b>Sub Total (D)</b>	<b>1912</b>	<b>2047</b>	<b>2042</b>	<b>0</b>	<b>13.58</b>	<b>566</b>	<b>13.31</b>	<b>0.27</b>
E. THDC	Tehri HPS (4*250)	1000	1071	1058	0	6.95	289	6.80	0.15
	Koteshwar HPS (4*100)	400	91	101	89	2.21	92	2.19	0.02
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1163</b>	<b>1159</b>	<b>89</b>	<b>9.16</b>	<b>382</b>	<b>8.99</b>	<b>0.17</b>
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	510	1057	373	12.71	530	12.24	0.47
	Dehar HPS (6*165)	990	216	495	155	5.38	224	5.20	0.18
	Pong HPS (6*66)	396	246	264	132	5.92	247	5.91	0.01
	<b>Sub Total (F)</b>	<b>2765</b>	<b>973</b>	<b>1816</b>	<b>660</b>	<b>24.01</b>	<b>1000</b>	<b>23.35</b>	<b>0.66</b>
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	108	0	0.87	36	0.84	0.03
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	825	0	5.84	243	5.81	0.04
	Malana Stg-II HPS (2*50)	100	0	0	0	0.50	21	0.46	0.04
	Shree Cement TPS (2*150)	300	0	-1	-1	-0.03	-1	0.00	-0.03
	Budhil HPS(IPP) (2*35)	70	0	10	10	0.25	10	0.35	-0.11
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>941</b>	<b>9</b>	<b>7.43</b>	<b>310</b>	<b>7.47</b>	<b>-0.03</b>
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18635</b>	<b>17090</b>	<b>8289</b>	<b>251.60</b>	<b>10483</b>	<b>247.70</b>	<b>3.90</b>	

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	3.54	148
	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	202	200	4.55	190
	Goindwal(GVK) (2*270)	540	0	0	-0.03	-1
	Rajpura (2*700)	1400	1320	720	27.41	1142
	Talwandi Saboo (3*660)	1980	308	308	9.23	385
	<b>Thermal (Total)</b>	<b>6560</b>	<b>1990</b>	<b>1388</b>	<b>44.68</b>	<b>1862</b>
	Total Hydro	1000	493	392	10.52	438
	Wind Power	0	0	0	0.00	0
	Biomass	288	21	21	0.50	21
	Solar	560	0	0	0.31	13
	<b>Renewable(Total)</b>	<b>848</b>	<b>21</b>	<b>21</b>	<b>0.81</b>	<b>34</b>
	<b>Total Punjab</b>	<b>8408</b>	<b>2504</b>	<b>1801</b>	<b>56.01</b>	<b>2334</b>
Haryana	Panipat TPS (2*210+2*250)	920	202	203	4.88	203
	DCRTPP (Yamuna nagar) (2*300)	600	462	459	11.10	463
	Faridabad GPS (NTPC)(2*137.75+1*156)	432	0	0	0.00	0
	RGTPP (khedar) (IPP) (2*600)	1200	1106	766	18.35	765
	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>1770</b>	<b>1428</b>	<b>34.34</b>	<b>1431</b>
	Total Hydro	62	8	29	0.58	24
	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>1778</b>	<b>1457</b>	<b>34.92</b>	<b>1455</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	976	981	23.65	985
	suratgarh TPS (6*250)	1500	1135	957	26.96	1123
	Chabra TPS (4*250)	1000	838	747	18.34	764
	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	100	76	2.18	91
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0
	Barsingsar (NLC) (2*125)	250	227	226	5.31	221
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwest LTPS (IPP) (8*135)	1080	632	447	12.79	533
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	426	415	11.14	464
	Kawai(Adani) (2*660)	1320	606	563	12.67	528
	<b>Thermal (Total)</b>	<b>8876</b>	<b>4940</b>	<b>4412</b>	<b>113.04</b>	<b>4710</b>
	Total Hydro	550	146	234	4.37	182
	Wind power	4017	112	1359	12.62	526
	Biomass	99	22	22	0.53	22
	Solar	1295	7	0	0.36	15
	Renewable/Others (Total)	5411	141	1381	13.51	563
<b>Total Rajasthan</b>	<b>14837</b>	<b>5227</b>	<b>6027</b>	<b>130.91</b>	<b>5455</b>	
UP	Anpara TPS (3*210+2*500)	1630	1232	1230	29.37	1224
	Obra TPS (2*50+2*94+5*200)	1194	267	310	7.05	294
	Paricha TPS (2*110+2*220+2*250)	1160	703	656	15.86	661
	Panki TPS (2*105)	210	144	135	3.28	137
	Harduaganj TPS (1*60+1*105+2*250)	665	520	391	9.89	412
	Tanda TPS (NTPC) (4*110)	440	357	280	7.32	305
	Roza TPS (IPP) (4*300)	1200	1080	752	19.96	831
	Anpara-C (IPP) (2*600)	1200	1001	630	21.52	897
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	403	282	7.02	292
	Anpara-D(2*500)	1000	804	425	14.76	615
	Lalitpur TPS(3*660)	1980	914	963	22.36	932
	Bara(2*660)	1320	542	545	13.02	543
	<b>Thermal (Total)</b>	<b>12449</b>	<b>7967</b>	<b>6599</b>	<b>171.38</b>	<b>7141</b>
	Vishnuparyag HPS (IPP)(4*110)	440	172	177	7.02	292
	Alaknanda(4*82.5)	330	163	83	3.28	137
	Other Hydro	527	54	36	1.89	79
	Cogeneration	981	100	100	2.40	100
	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>8456</b>	<b>6995</b>	<b>185.96</b>	<b>7748</b>	
Uttarakhand	Other Hydro	1250	636	266	9.79	408
	Total Gas	225	180	181	4.05	169
	Wind Power	0	0	0	0.00	0
	Biomass	127	0	0	0.00	0
	Solar	20	0	0	0.06	2
	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>2</b>
	<b>Total Uttarakhand</b>	<b>1802</b>	<b>816</b>	<b>447</b>	<b>13.90</b>	<b>579</b>
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	76	78	1.85	77
	Pragati Gas Turbine (2x104+ 1x122)	330	154	157	3.76	157
	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	164	163	3.54	147
	<b>Thermal (Total)</b>	<b>2917</b>	<b>394</b>	<b>399</b>	<b>9.15</b>	<b>381</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>394</b>	<b>399</b>	<b>9.15</b>	<b>381</b>	

HP	Baspa HPS (IPP) (3*100)	300	29	29	1.85	77
	Malana HPS (IPP) (2*43)	86	48	0	0.47	19
	Other Hydro	372	122	132	3.00	125
	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	109	99	2.47	103
	<b>Renewable(Total)</b>	<b>486</b>	<b>109</b>	<b>99</b>	<b>2.47</b>	<b>103</b>
	<b>Total HP</b>	<b>1244</b>	<b>308</b>	<b>260</b>	<b>7.78</b>	<b>324</b>
J & K	Baglihar HPS (IPP) (3*150+3*150)	900	292	143	4.48	186
	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>430</b>	<b>236</b>	<b>7</b>	<b>302</b>	
<b>Total State Control Area Generation</b>		<b>50078</b>	<b>19913</b>	<b>17621</b>	<b>445.87</b>	<b>18578</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>8098</b>	<b>8390</b>	<b>208.63</b>	<b>8693</b>
<b>Total Regional Availability(Gross)</b>		<b>75315</b>	<b>45101</b>	<b>34300</b>	<b>906.10</b>	<b>37754</b>

#### IV. Total Hydro Generation:

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>9428</b>	<b>1042</b>	<b>80.64</b>	<b>3360</b>
<b>State Control Area Hydro</b>	<b>7163</b>	<b>2590</b>	<b>1894</b>	<b>52.47</b>	<b>2357</b>
<b>Total Regional Hydro</b>	<b>19397</b>	<b>12018</b>	<b>2936</b>	<b>133.11</b>	<b>5717</b>

#### V. Total Renewable Generation:

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.16</b>	<b>7</b>
<b>State Control Area Renewable</b>	<b>7356</b>	<b>271</b>	<b>1501</b>	<b>16.84</b>	<b>702</b>
<b>Total Regional Renewable</b>	<b>7386</b>	<b>271</b>	<b>1501</b>	<b>17.00</b>	<b>708</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)	50	50	300	0	1.24	0.00	1.24
765 KV Gwalior-Agra (D/C)	2414	2340	2571	0	55.85	0.00	55.85
400 KV Zerda-Kankroli	101	-85	101	91	0.00	0.18	-0.18
400 KV Zerda-Bhinmal	141	-68	168	95	1.09	0.00	1.09
220 KV Auraiya-Malanpur	-38	-43	0	58	0.00	0.82	-0.82
220 KV Badod-Kota/Morak	17	-70	27	83	0.00	0.78	-0.78
Mundra-Mohindergarh(HVDC Bipole)	2301	2300	2307	0.00	55.62	0.00	55.62
400 KV Vindhyachal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1155	1316	1531	0	32.43	0.00	32.43
<b>Sub Total WR</b>	<b>6141</b>	<b>5740</b>			<b>146.22</b>	<b>1.79</b>	<b>144.43</b>
Pusauli Bypass/HVDC	10	88	107	0	1.64	0.00	1.64
400 KV MZP- GKP (D/C)	92	614	724	0	11.98	0.00	11.98
400 KV Patna-Balia(D/C) X 2	348	728	750	0	12.47	0.00	12.47
400 KV B'Sharif-Balia (D/C)	87	180	281	0	4.39	0.00	4.39
765 KV Gaya-Balia	356	318	363	0	7.77	0.00	7.77
765 KV Gaya-Varanasi (D/C)	465	613	731	0	14.15	0.00	14.15
220 KV Pusauli-Sahupuri	231	193	234	0	4.81	0.00	4.81
132 KV K'nasa-Sahupuri	-26	-36	0	40	0.00	0.62	-0.62
132 KV Son Ngr-Rihand	-40	-38	0	46	0.00	0.90	-0.90
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-220	-60	77	232	0.00	1.40	-1.40
400 KV Barh -GKP (D/C)	348	478	478	0	9.26	0.00	9.26
400 kV B'Sharif - Varanasi (D/C)	-194	-128	180	0	2.31	0.00	2.31
<b>Sub Total ER</b>	<b>1457</b>	<b>2950</b>			<b>68.77</b>	<b>2.92</b>	<b>65.86</b>
+/- 800 KV BiswanathCharialli-Agra	500	-300	500	300.00	1.34	2.99	-1.65
<b>Sub Total NER</b>	<b>500</b>	<b>-300</b>			<b>1.34</b>	<b>2.99</b>	<b>-1.65</b>
<b>Total IR Exch</b>	<b>8098</b>	<b>8390</b>			<b>216.33</b>	<b>7.69</b>	<b>208.63</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
79.51	0.00	79.51	0.00	0.00	0.00	0.00	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
79.51	132.42	211.93	64.20	144.43	208.63	-15.31	12.01	-3.30

#### 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	-16	0	0	20	0	0	-0.05

#### 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	3.40	53.69	78.29	15.23	3.16	0.00	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)	
Freq	Time	Freq	Time						
50.17	17.02	49.83	5.22	50.00	0.032	0.056	0.00	0.00	21.71



## VIII(A). Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	409	2:33	402	9:22	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	414	2:45	396	18:24	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	418	2:02	397	18:24	0.0	0.0	0.0	0.0	0.0
Kanpur	400	419	3:00	401	18:27	0.0	0.0	0.0	0.0	0.0
Dadri	400	422	2:01	402	18:27	0.0	0.0	6.4	0.0	6.4
Ballabgarh	400	429	2:45	363	12:35	1.9	1.9	48.8	0.0	50.7
Bawana	400	427	2:45	404	18:24	0.0	0.0	22.3	0.0	22.3
Bassi	400	420	16:01	403	5:54	0.0	0.0	0.0	0.0	0.0
Hissar	400	421	1:59	402	18:23	0.0	0.0	1.0	0.0	1.0
Moga	400	424	1:58	404	18:25	0.0	0.0	14.2	0.0	14.2
Abdullapur	400	428	1:45	407	18:23	0.0	0.0	39.5	0.0	39.5
Nalagarh	400	433	1:06	414	12:23	0.0	0.0	56.9	8.6	56.9
Kishenpur	400	423	2:17	392	18:26	0.0	0.0	8.0	0.0	8.0
Wagoora	400	408	2:45	363	18:32	11.4	55.9	0.0	0.0	11.4
Amritsar	400	429	1:06	409	8:40	0.0	0.0	44.0	0.0	44.0
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	416	1:58	392	18:26	0.0	0.0	0.0	0.0	0.0

## VIII(B). Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	780	2:45	741	18:27	0.0	0.1	0.0	0.0	0.0
Balia	765	784	2:41	753	18:27	0.0	0.0	0.0	0.0	0.0
Moga	765	806	2:00	769	18:27	0.0	0.0	16.6	0.0	16.6
Agra	765	789	2:04	755	18:27	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	804	1:56	773	18:23	0.0	0.0	9.4	0.0	9.4
Unnao	765	770	3:59	738	18:26	0.0	3.4	0.0	0.0	0.0
Lucknow	765	794	2:45	760	18:28	0.0	0.0	0.0	0.0	0.0
Meerut	765	809	2:03	765	18:27	0.0	0.0	13.2	0.0	13.2
Jhatikara	765	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	789	2:44	752	18:23	0.0	0.0	0.0	0.0	0.0
Anta	765	795	1:56	773	10:11	0.0	0.0	0.0	0.0	0.0
Phagi	765	796	2:00	768	10:28	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	498.92	1053.16	509.49	1530.03	232.42	373.92
Pong	426.72	384.05	414.92	668.52	418.72	834.82	35.79	362.43
Tehri	829.79	740.04	823.20	1067.50	817.95	962.00	57.85	151.00
Koteshwar	612.50	598.50	610.82	4.95	609.06	4.21	151.00	145.80
Chamera-I	760.00	748.75	759.99	0.00	0.00	0.00	73.17	74.05
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	513.65	4.61	511.64	4.20	92.30	192.66

\* 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	-93	0	0	-502	-553	0	-5.08	-2.51	-7.59
Delhi	6	-358	0	-94	-217	0	-0.65	-6.00	-6.65
Haryana	-51	-15	0	165	79	0	1.97	-0.76	1.22
HP	190	103	0	19	-269	0	3.08	-0.51	2.57
J&K	178	139	0	161	139	0	4.16	4.32	8.49
CHD	0	0	0	0	0	0	0.00	0.11	0.11
Rajasthan	-5	423	0	-7	400	0	-0.13	16.29	16.16
UP	151	684	0	791	1073	0	9.28	9.02	18.30
Uttarakhand	12	380	0	25	336	0	0.39	8.74	9.13
<b>Total</b>	<b>388</b>	<b>1356</b>	<b>0</b>	<b>558</b>	<b>988</b>	<b>0</b>	<b>13.01</b>	<b>28.72</b>	<b>41.73</b>

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-93	-503	0	-603	0	0
Delhi	6	-94	-22	-602	0	0
Haryana	264	-56	329	-778	0	0
HP	223	19	214	-588	0	0
J&K	178	161	279	50	0	0
CHD	0	0	0	0	20	-6
Rajasthan	-5	-7	1304	396	0	0
UP	1304	-175	1366	-100	0	0
Uttarakhand	25	12	562	141	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>23.96%</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	2	19
Haryana	1	13
Rajasthan	1	14
Delhi	3	18
UP	3	24
Uttarakhand	4	30
HP	0	12
J & K	2	18
Chandigarh	1	14

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:****XV. Weather Conditions For 29.10.2016 :**  
Normal**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 : 29.10.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER