

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(भारत सरकार का उद्यम)

## उत्तर क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 02.01.2018  
Date of Reporting : 03.01.2018



### 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
44324	1119	45443	49.98	29175	324	29499	50.04	888.23	11.80

\* 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	Gas/Naptha/ Diesal	Solar	Wind	Other (Biomass/ Small hydro/ Co-Generation etc.)	Total					
Punjab	65.66	10.81	0.00	0.06	0.00	0.15	76.68	27.01	21.73	-5.27	98.41	0.00
Haryana	47.40	0.08	0.00	0.00	0.00	0.00	47.48	68.35	69.45	1.10	116.94	0.11
Rajasthan	115.53	4.73	1.10	2.64	2.17	4.89	131.06	71.68	75.04	3.37	206.10	0.28
Delhi	0.00	0.00	13.41	0.00	0.00	0.00	13.41	52.32	52.25	-0.07	65.66	0.04
UP	159.39	8.20	0.00	0.00	0.00	21.60	189.19	98.32	99.83	1.52	289.02	0.32
Uttarakhand	0.00	10.07	0.00	0.20	0.00	0.00	10.27	25.81	25.59	-0.22	35.86	0.00
HP	0.00	3.17	0.00	0.00	0.00	1.58	4.74	21.89	21.86	-0.03	26.61	0.20
J & K	0.00	4.72	0.00	0.00	0.00	0.00	4.72	43.20	41.32	-1.88	46.04	10.85
Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.73	3.61	-0.12	3.61	0.00
Total	387.98	41.76	14.51	2.90	2.17	28.22	477.54	412.30	410.69	-1.61	888.23	11.80

\* 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 (19:00 Hrs) MW				Off Peak (03:00 Hrs) MW						Shortage (MW)
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	Maximum Demand Met (MW) and Time(Hrs)		
Punjab	5262	0	173	-1929	2729	0	-104	-1317	5262	19	0
Haryana	6058	64	-137	-756	3656	0	177	-318	6058	19	64
Rajasthan	9433	195	251	-506	7564	0	111	78	10161	8	49
Delhi	3381	0	-31	-774	1487	10	-30	-1102	3959	11	0
UP	14713	350	83	1	10041	0	181	8	14713	19	350
Uttarakhand	1923	0	54	681	1092	0	-131	469	1946	9	0
HP	1369	10	16	481	741	0	-54	515	1460	9	7
J&K	2001	500	-189	1021	1777	314	-29	952	2251	20	563
Chandigarh	185	0	-13	-31	89	0	4	-31	219	9	0
Total	44324	1119	206	-1812	29175	324	124	-746	44324	19	1119

\* 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 :

Station/ Constituent	Inst. Capacity	Declared	Peak MW	Off Peak MW	Energy	Average	Schedule	UI		
	(Effective) MW	Capacity(MW)	(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU		
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1671	1705	1252	37.12	1547	35.64	1.48	
	Rihand I STPS (2*500)	1000	900	950	651	20.55	856	20.64	-0.09	
	Rihand II STPS (2*500)	1000	943	1016	665	21.93	914	21.63	0.30	
	Rihand III STPS (2*500)	1000	943	1005	817	21.81	909	20.90	0.90	
	Dadri I STPS (4*210)	840	769	728	420	12.60	525	12.99	-0.39	
	Dadri II STPS (2*490)	980	929	875	500	16.95	706	17.69	-0.74	
	Unchahar I TPS (2*210)	420	350	338	227	6.86	286	6.99	-0.13	
	Unchahar II TPS (2*210)	420	383	372	241	7.46	311	7.49	-0.03	
	Unchahar III TPS (1*210)	210	192	183	119	3.66	153	3.75	-0.09	
	Unchahar IV TPS (1*500)	500	0	0	0	0.00	0	0.00	0.00	
	ISTPP (Jhajjar) (3*500)	1500	1019	1132	845	21.36	890	21.49	-0.13	
	Dadri GPS (4*130.19+2*154.51)	830	838	342	225	6.95	290	7.12	-0.17	
	Anta GPS (3*88.71+1*153.2)	419	418	0	0	0.00	0	0.00	0.00	
	Auraiya GPS (4*111.19+2*109.30)	663	634	0	0	0.00	0	0.00	0.00	
	Dadri Solar(5)	5	0	0	0	0.00	0	0.01	0.00	
	Unchahar Solar(10)	10	1	0	0	0.03	1	0.02	0.01	
	Singrauli Solar(15)	15	2	0	0	0.05	2	0.05	0.00	
	KHEP(4*200)	800	792	617	0	2.68	112	2.38	0.30	
	Sub Total (A)	12612	10781	9263	5962	180	7501	179	1.23	
	B. NPC	NAPS (2*220)	440	412	445	459	9.88	412	9.85	0.03
		RAPS- B (2*220)	440	194	217	218	4.62	193	4.66	-0.03
		RAPS- C (2*220)	440	417	459	461	10.14	422	10.01	0.13
		Sub Total (B)	1320	1023	1121	1138	24.64	1027	24.52	0.12
C. NHPC	Chamera I HPS (3*180)	540	534	228	0	1.80	75	1.60	0.20	
	Chamera II HPS (3*100)	300	296	203	0	1.20	50	1.10	0.10	
	Chamera III HPS (3*77)	231	216	147	0	0.83	35	0.69	0.14	
	Bairasuli HPS(3*60)	180	59	122	0	0.45	19	0.36	0.10	
	Salal-HPS (6*115)	690	103	345	30	2.63	110	2.47	0.16	
	Tanakpur-HPS (3*31.4)	94	23	32	25	0.60	25	0.55	0.05	
	Uri-I HPS (4*120)	480	85	251	41	2.23	93	2.04	0.19	
	Uri-II HPS (4*60)	240	47	60	36	1.18	49	1.14	0.05	
	Dhauliganga-HPS (4*70)	280	43	281	0	0.96	40	0.91	0.05	
	Dulhasi-HPS (3*130)	390	193	266	0	2.46	103	2.30	0.16	
	Sewa-II HPS (3*40)	120	119	124	0	0.43	18	0.40	0.03	
	Parbati 3 (4*130)	520	16	134	0	0.42	17	0.39	0.03	
	Sub Total (C)	4065	1733	2193	133	15	633	14	1.25	
	D. SJVNL	NJPC (6*250)	1500	1500	1042	0	7.49	312	7.29	0.20
		Rampur HEP (6*68.67)	412	412	300	0	2.10	87	2.04	0.06
Sub Total (D)		1912	1912	1342	0	9.58	399	9.32	0.26	
E. THDC	Tehri HPS (4*250)	1000	988	981	0	9.50	396	9.35	0.15	
	Koteshwar HPS (4*100)	400	138	388	90	3.39	141	3.30	0.09	
	Sub Total (E)	1400	1126	1369	90	12.89	537	12.65	0.24	
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	770	1201	431	18.54	772	18.48	0.05	
	Dehar HPS (6*165)	990	110	495	0	2.77	115	2.64	0.13	
	Pong HPS (6*66)	396	251	330	0	6.06	253	6.01	0.05	
	Sub Total (F)	2765	1131	2026	431	27.36	1140	27.13	0.23	
G. IPP(s)/JV(s)	Allain DuhanganHPS(IPP) (2*96)	192	0	107	0	0.43	18	0.40	0.02	
	Karcham Wangtoo HPS(IPP) (4*250)	1000	0	775	0	3.94	164	3.79	0.14	
	Malana Stg-II HPS (2*50)	100	0	0	0	0.22	9	0.20	0.01	
	Shree Cement TPS (2*150)	300	0	150	99	3.08	128	3.69	-0.62	
	Budhil HPS(IPP) (2*35)	70	0	0	0	0.18	8	0.18	0.00	
	Sainji HPS (IPP) (2*50)	100	0	0	0	0.37	0	0.37	0.00	
	Sub Total (G)	1762	0	1032	99	7.84	327	8.27	-0.43	
H. Total Regional Entities (A-G)		25837	17706	18346	7853	277.53	11564	274.63	2.90	

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(S entout MW)
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	160	180	3.84	160
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	0	0	0.00	0
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	566	390	10.67	444
	Goindwal(GVK) (2*270)	540	145	145	3.97	165
	Rajpura (2*700)	1400	1320	660	25.81	1075
	Talwandi Saboo (3*660)	1980	1016	616	21.39	891
	<b>Thermal (Total)</b>	<b>6560</b>	<b>3207</b>	<b>1991</b>	<b>65.66</b>	<b>2736</b>
	Total Hydro	1000	410	300	10.81	450
	Wind Power	0	0	0	0.00	0
	Biomass	303	0	0	0.15	6
	Solar	859	0	0	0.06	3
	<b>Renewable(Total)</b>	<b>1162</b>	<b>0</b>	<b>0</b>	<b>0.21</b>	<b>9</b>
	<b>Total Punjab</b>	<b>8722</b>	<b>3617</b>	<b>2291</b>	<b>76.68</b>	<b>3195</b>
Haryana	Panipat TPS (2*210+2*250)	920	0	0	0.00	0
	DCRTPP (Yamuna nagar) (2*300)	600	566	470	12.00	500
	Faridabad GPS (NTPC)(2*137.75+1*156)	432	0	0	0.00	0
	RGTPP (khedar) (IPP) (2*600)	1200	574	381	11.13	464
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP) (2*660)	1320	1224	741	24.27	1011
	<b>Thermal (Total)</b>	<b>4497</b>	<b>2364</b>	<b>1592</b>	<b>47.40</b>	<b>1975</b>
	Total Hydro	62	3	3	0.08	3
	Wind Power	0	0	0	0.00	0
	Biomass	106	0	0	0.00	0
	Solar	50	0	0	0.00	0
	<b>Renewable(Total)</b>	<b>156</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
	<b>Total Haryana</b>	<b>4715</b>	<b>2367</b>	<b>1595</b>	<b>47.48</b>	<b>1979</b>
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	855	842	20.19	841
	suratgarh TPS (6*250)	1500	677	182	10.79	449
	Chabra TPS (4*250)	1000	699	657	16.09	670
	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	45	46	1.10	46
	RAPS A (NPC) (1*100+1*200)	300	208	261	4.41	184
	Barsingar (NLC) (2*125)	250	224	225	5.80	242
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwest LTPS (IPP) (8*135)	1080	940	937	22.33	930
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	1134	849	25.92	1080
	Kawal(Adani) (2*660)	1320	614	608	14.42	601
	<b>Thermal (Total)</b>	<b>9536</b>	<b>5396</b>	<b>4607</b>	<b>121.04</b>	<b>5043</b>
	Total Hydro	550	221	127	4.73	197
	Wind power	4292	7	139	2.17	90
	Biomass	102	20	20	0.49	20
	Solar	1995	6	0	2.64	110
	Renewable/Others (Total)	6389	33	159	5.29	221
	<b>Total Rajasthan</b>	<b>16475</b>	<b>5650</b>	<b>4893</b>	<b>131.06</b>	<b>5461</b>
UP	Anpara TPS (3*210+2*500)	1630	1497	1021	31.27	1303
	Obra TPS (2*50+2*94+5*200)	1194	424	385	9.83	409
	Paricha TPS (2*110+2*220+2*250)	1160	808	589	14.72	613
	Panki TPS (2*105)	210	0	0	0.00	0
	Harduaganj TPS (1*60+1*105+2*250)	665	446	322	9.16	382
	Tanda TPS (NTPC) (4*110)	440	390	274	7.79	325
	Roza TPS (IPP) (4*300)	1200	546	364	9.89	412
	Anpara-C (IPP) (2*600)	1200	1098	703	22.77	949
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	0	0	0.00	0
	Anpara-D(2*500)	1000	450	331	9.71	404
	Lalitpur TPS(3*660)	1980	1248	1134	26.47	1103
	Bara(2*660)	1320	754	727	17.79	741
	<b>Thermal (Total)</b>	<b>12449</b>	<b>7661</b>	<b>5850</b>	<b>159.39</b>	<b>6641</b>
	Vishnuparyag_HPS (IPP)(4*110)	440	87	77	1.99	83
	Alaknanda(4*82.5)	330	83	0	1.38	58
	Other Hydro	527	317	192	4.82	201
	Cogeneration	981	900	950	21.60	900
	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>9048</b>	<b>7069</b>	<b>189.19</b>	<b>7883</b>
Uttarakhand	Other Hydro	1250	657	336	10.07	419
	Total Gas	450	0	0	0.00	0
	Wind Power	0	0	0	0.00	0
	Biomass	127	0	0	0.00	0
	Solar	100	0	0	0.20	8
	Small Hydro (< 25 MW)	180	0	0	0.00	0
	<b>Renewable(Total)</b>	<b>407</b>	<b>0</b>	<b>0</b>	<b>0.20</b>	<b>8</b>
Delhi	<b>Total Uttarakhand</b>	<b>2107</b>	<b>657</b>	<b>336</b>	<b>10.27</b>	<b>428</b>
	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	37	37	0.95	40
	Pragati Gas Turbine (2x104+ 1x122)	330	264	264	6.41	267
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	250	259	6.04	252
	Badarpur TPS (NTPC) (3*95+2*210)	705	0	0	0.00	0
	<b>Thermal (Total)</b>	<b>2917</b>	<b>551</b>	<b>560</b>	<b>13.41</b>	<b>559</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>551</b>	<b>560</b>	<b>13.41</b>	<b>559</b>

HP	Baspa HPS (IPP) (3*100)	300	30	0	1.18	49
	Malana HPS (IPP) (2*43)	86	75	0	0.19	8
	Other Hydro (>25MW)	372	126	40	1.80	75
	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	92	43	1.58	66
	<b>Renewable(Total)</b>	<b>486</b>	<b>92</b>	<b>43</b>	<b>1.58</b>	<b>66</b>
	<b>Total HP</b>	<b>1244</b>	<b>324</b>	<b>84</b>	<b>4.74</b>	<b>198</b>
J & K	Baglihar HPS (IPP) (3*150+3*150)	900	148	148	3.54	148
	Other Hydro/IPP(including 98 MW Small Hydro)	308	86	31	1.18	49
	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>234</b>	<b>179</b>	<b>5</b>	<b>197</b>
<b>Total State Control Area Generation</b>		<b>52451</b>	<b>22448</b>	<b>17007</b>	<b>477.54</b>	<b>19897</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>7724</b>	<b>7673</b>	<b>161.58</b>	<b>6732</b>
<b>Total Regional Availability(Gross)</b>		<b>78288</b>	<b>48518</b>	<b>32532</b>	<b>916.65</b>	<b>38194</b>

**IV. Total Hydro Generation:**

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>8429</b>	<b>654</b>	<b>72.48</b>	<b>3012</b>
<b>State Control Area Hydro</b>	<b>7468</b>	<b>2336</b>	<b>1298</b>	<b>41.76</b>	<b>1814</b>
<b>Total Regional Hydro</b>	<b>19702</b>	<b>10764</b>	<b>1951</b>	<b>114.24</b>	<b>4826</b>

**V. Total Renewable Generation:**

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.08</b>	<b>3</b>
<b>State Control Area Renewable</b>	<b>8844</b>	<b>125</b>	<b>202</b>	<b>7.28</b>	<b>304</b>
<b>Total Regional Renewable</b>	<b>8874</b>	<b>125</b>	<b>202</b>	<b>7.36</b>	<b>307</b>

**VI(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	
Vindhychal(HVDC B/B)	-50	-250	50	250	0.44	2.69	-2.25
765 KV Gwalior-Agra (D/C)	1723	1776	2723	0	46.31	0.00	46.31
400 KV Zerdha-Kankroli	-40	-118	99	140	0.00	0.76	-0.76
400 KV Zerdha-Bhinmal	27	-42	211	143	0.00	1.41	-1.41
220 KV Auraiya-Malanpur	-59	-69	0	128	0.00	1.95	-1.95
220 KV Badod-Kota/Morak	-47	-2	47	87	0.00	0.22	-0.22
Mundra-Mohindergarh(HVDC Bipole)	998	1001	1405	0	25.51	0.00	25.51
400 KV RAPPC-Sujalpur	246	170	390	0	5.74	0.00	5.74
400 KV Vindhychal-Rihand	947	765	0	998	0.00	21.89	-21.89
765 kV Phagi-Gwalior (D/C)	664	984	1256	0	24.67	0.00	24.67
+/- 800 kV HVDC Champa-Kurushetra	1500	1500	2000	0	35.17	0	35.17
<b>Sub Total WR</b>	<b>5909</b>	<b>5715</b>			<b>137.85</b>	<b>28.93</b>	<b>108.92</b>
400 kV Sasaram - Varanasi	30	30	51	0	0.68	0.00	0.68
400 kV Sasaram - Allahabad	-31	-22	0	49	0.00	0.70	-0.70
400 KV MZP- GKP (D/C)	316	260	548	0	8.27	0.00	8.27
400 KV Patna-Balia(D/C) X 2	877	720	985	0	19.81	0.00	19.81
400 KV B'Sharif-Balia (D/C)	110	127	254	0	3.50	0.00	3.50
765 KV Gaya-Balia	161	209	306	0	5.41	0.00	5.41
765 KV Gaya-Varanasi (D/C)	177	203	550	0	7.29	0.00	7.29
220 KV Pusauli-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	0	0	0	0	0.00	0.00	0.00
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-33	-29	95	153	0.00	0.29	-0.29
400 KV Motihari -GKP (D/C)	-276	-214	0	290	0.00	5.05	-5.05
400 kV B'Sharif - Varanasi (D/C)	-16	-26	62	151	0.00	1.11	-1.11
+/- 800 KV HVDC Alipurduar-Agra	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1315</b>	<b>1258</b>			<b>44.95</b>	<b>7.16</b>	<b>37.79</b>
+/- 800 KV HVDC BiswanathChariali-Agra	500	700	700	0.00	14.86	0.00	14.86
<b>Sub Total NER</b>	<b>500</b>	<b>700</b>			<b>14.86</b>	<b>0.00</b>	<b>14.86</b>
<b>Total IR Exch</b>	<b>7724</b>	<b>7673</b>			<b>197.66</b>	<b>36.09</b>	<b>161.58</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
39.13	0.34	39.47	-1.02	-30.02	-0.68	4.33	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
37.78	134.34	172.11	52.65	108.92	161.58	14.87	-25.41	-10.54

**VI(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	
132 KV Tanakpur - Mahendarnagar	-41	-23	0	42	0	1	-0.83

**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	1.41	14.47	65.63	76.35	7.07	2.12	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)	
50.19	6.03	49.75	5.44	49.97	0.053	0.066	50.06	49.82	23.65

VIII(A). Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation Index
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	405	2:00	398	11:40	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	419	3:02	397	17:42	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	421	3:02	399	11:15	0.0	0.0	0.0	0.0	0.0
Kanpur	400	420	2:59	407	9:35	0.0	0.0	0.0	0.0	0.0
Dadri	400	426	2:57	409	10:06	0.0	0.0	28.2	0.0	28.2
Ballabgarh	400	424	4:03	403	10:10	0.0	0.0	14.1	0.0	14.1
Bawana	400	428	2:57	409	10:12	0.0	0.0	31.0	0.0	31.0
Bassi	400	426	4:02	401	6:54	0.0	0.0	10.1	0.0	10.1
Hissar	400	420	4:02	401	10:09	0.0	0.0	0.0	0.0	0.0
Moga	400	421	20:57	409	15:48	0.0	0.0	0.2	0.0	0.2
Abdullapur	400	428	2:54	233	18:18	0.0	0.0	32.2	0.0	32.3
Nalagarh	400	432	2:58	414	18:21	0.0	0.0	46.9	1.5	46.9
Kishenpur	400	422	2:59	408	6:41	0.0	0.0	4.7	0.0	4.7
Wagoora	400	409	21:40	393	18:10	0.0	0.0	0.0	0.0	0.0
Amritsar	400	425	20:58	414	17:42	0.0	0.0	17.6	0.0	17.6
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	418	13:19	410	21:40	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	418	2:57	393	11:22	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 Deviation Index
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	783	3:01	754	10:09	0.0	0.0	0.0	0.0	0.0
Balia	765	789	3:01	761	10:14	0.0	0.0	0.0	0.0	0.0
Moga	765	801	20:17	773	22:08	0.0	0.0	0.5	0.0	0.5
Agra	765	798	4:01	762	1:09	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	804	4:02	771	10:13	0.0	0.0	1.9	0.0	1.9
Unnao	765	782	3:01	748	11:15	0.0	0.0	0.0	0.0	0.0
Lucknow	765	797	3:01	762	11:15	0.0	0.0	0.0	0.0	0.0
Meerut	765	809	20:19	769	10:12	0.0	0.0	8.7	0.0	8.7
Jhatikara	765	802	20:19	770	6:54	0.0	0.0	0.9	0.0	0.9
Bareilly 765 kV	765	801	3:01	762	11:17	0.0	0.0	0.2	0.0	0.2
Anta	765	792	4:02	768	6:48	0.0	0.0	0.0	0.0	0.0
Phagi	765	801	4:05	760	6:13	0.0	0.0	0.6	0.0	0.6

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	498.36	1029.80	487.92	671.08	170.61	531.14
Pong	426.72	384.05	409.75	484.26	407.79	425.81	74.87	397.03
Tehri	829.79	740.04	808.35	770.10	807.75	758.40	46.16	224.00
Koteshwar	612.50	598.50	610.21	4.60	610.13	4.50	224.00	223.91
Chamera-I	760.00	748.75	758.32	0.00	0.00	0.00	47.76	48.22
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	503.85	3.14	504.63	2.24	62.11	210.03

\* 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	-1317	0	0	-1317	-612	0	-32.59	-0.30	-32.88
Delhi	-891	-211	0	-728	-47	0	-18.89	-0.30	-19.19
Haryana	-469	151	0	-632	-124	0	-19.59	0.45	-19.14
HP	427	87	0	417	64	0	12.66	-1.33	11.33
J&K	795	157	0	795	225	0	18.74	2.40	21.13
CHD	-31	0	0	-31	0	0	-0.37	0.12	-0.25
Rajasthan	-8	86	0	-8	-497	0	1.38	0.34	1.71
UP	43	-35	0	67	-66	0	0.70	-1.47	-0.78
Uttarakhand	314	155	0	314	367	0	7.69	5.41	13.11
Total	-1136	390	0	-1122	-690	0	-30.28	5.32	-24.96

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-1307	-1419	147	-715	0	0
Delhi	-564	-893	500	-330	0	0
Haryana	-469	-1271	152	-645	0	0
HP	713	287	87	-702	0	0
J&K	795	766	353	-485	0	0
CHD	0	-31	39	-46	0	0
Rajasthan	149	-8	361	-621	0	0
UP	67	-66	-35	-71	0	0
Uttarakhand	344	314	444	8	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	6	63
Haryana	0	10
Rajasthan	3	22
Delhi	2	18
UP	0	12
Uttarakhand	3	33
HP	3	25
J & K	3	18
Chandigarh	5	21

#### XIII. System Constraints:

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

#### XV. Weather Conditions For 02.01.2018 :

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

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

1. 400/220 kV 315 MVA ICT-3 at Ajmer taken on load at 11:07 Hrs on 02-01-2018.

#### 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 : 02.01.2018

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER