



**POWER SYSTEM OPERATION CORPORATION LIMITED.**  
**NORTHERN REGIONAL LOAD DESPATCH CENTRE**  
**DAILY OPERATION REPORT OF NORTHERN REGION**

Power Supply Position in Northern Region For 23-Aug-2018

Date of Reporting:24-Aug-2018

**1. Regional Availability/Demand:**

Evening Peak (20:00) MW				Off-Peak (03:00) MW				Day Energy(Net MU)	
Demand Met	Shortage(-)/Surplus(+)	Requirement	Freq (Hz)	Demand Met	Shortage(-)/Surplus(+)	Requirement	Freq (Hz)	Demand Met	Shortage
53,032	624	53,656	49.85	50,627	188	50,815	50.08	1,187	10.67

**2(A)State's Load Deals (At State Periphery) in MU:**

State	State's Control Area Generation (Net MU)							Drawal Sch (Net MU)	Act Drawal (Net MU)	UI (Net MU)	Requirement (Net MU)	Shortage (Net MU)	Consumption (Net MU)
	Thermal	Hydro	Gas/Naptha/ Diesel	Solar	Wind	OthersBiomass/Small Hyd/Co-gen etc.)	Total						
PUNJAB	67.12	12.44	0	5.8	0	0	85.36	138.52	137.6	-0.92	222.96	0	222.96
HARYANA	37.66	0.64	0	0.1	0	0	38.4	131.51	131.31	-0.2	169.71	0	169.71
RAJASTHAN	96.2	0.2	2.85	10.56	41.25	0.44	151.52	60.3	59.7	-0.6	211.22	0	211.22
DELHI	6.57	0	15.66	0	0	0	22.22	92.53	91.15	-1.38	113.37	0	113.37
UTTAR PRADESH	157.73	17.5	0	0	0	1.2	176.44	182.59	183.08	0.49	359.52	0	359.52
UTTARAKHAND	0	17.9	0	0.35	0	0	18.25	21.34	22.19	0.85	40.44	0	40.44
HIMACHAL PRADESH	0	17.21	0	0	0	0	17.21	-2.17	2.26	4.43	19.47	0	19.47
JAMMU & KASHMIR	0	24.64	0	0	0	0	24.64	19.97	19.98	0.01	55.29	10.67	44.62
CHANDIGARH	0	0	0	0	0	0	0	6.14	5.33	-0.81	5.33	0	5.33
<b>Region</b>	<b>365.28</b>	<b>90.53</b>	<b>18.51</b>	<b>16.81</b>	<b>41.25</b>	<b>1.64</b>	<b>534.04</b>	<b>650.73</b>	<b>652.6</b>	<b>1.87</b>	<b>1,197.31</b>	<b>10.67</b>	<b>1,186.64</b>

**2(B)State Demand Met (Peak and off-peak Hrs)**

State	Evening Peak (20:00) MW				Off-Peak (03:00) MW			
	Demand Met	Shortage(-)/Surpl ..	UI	STOA/PX Transaction	Demand Met	Shortage(-)/Surpl ..	UI	STOA/PX Transaction
PUNJAB	9,750	0	-102	1,698	8,405	0	29	2,101
HARYANA	7,965	0	7	1,936	7,710	0	-187	2,424
RAJASTHAN	8,760	0	-470	-363	8,765	0	-370	443
DELHI	4,938	0	-52	90	4,775	0	52	546
UTTAR PRADESH	16,053	100	-319	1,705	17,164	0	116	2,359
UTTARAKHAND	1,941	0	144	262	1,499	0	-50	15
HIMACHAL PRADESH	1,281	0	969	-1,874	1,056	0	72	-1,769
JAMMU & KASHMIR	2,095	524	298	-564	1,063	188	-67	-1,240
CHANDIGARH	248	0	-27	-30	189	0	-44	-45
<b>Region</b>	<b>53,031</b>	<b>624</b>	<b>448</b>	<b>2,860</b>	<b>50,626</b>	<b>188</b>	<b>-449</b>	<b>4,834</b>

**2(C)State's Demand Met in MWs (Maximum Demand Met and Maximum requirement of the day details)**

State	Maximum Demand, corresponding shortage and requirement details for the day				Maximum requirement, corresponding shortage and demand details for the day			
	Maximum Demand Met of the day	Time	Shortage(-)/Surplus(+) during at maximum demand	Requirement at the max demand met of the day	Demand Met at maximum requiremnet	Time	Shortage(-)/Surplus(+) during at maximum Requirement	Maximum Requirement of the day
PUNJAB	9,958	17:00	0	9,958	9,958	17:00	0	9,958
HARYANA	8,062	1:00	0	8,062	8,062	1:00	0	8,062
RAJASTHAN	9,404	1:00	0	9,404	9,404	1:00	0	9,404
DELHI	5,403	24:00	0	5,403	5,403	24:00	0	5,403
UP	18,080	1:00	0	18,080	18,080	1:00	0	18,080
UTTARAKHAND	1,941	20:00	0	1,941	1,941	20:00	0	1,941
HP	1,340	8:00	0	1,340	1,340	8:00	0	1,340
J&K	2,095	20:00	524	2,619	2,095	20:00	524	2,619
CHANDIGARH	254	15:00	0	254	254	15:00	0	254
NR	53,815	1:00	199	54,014	53,815	1:00	199	54,014

**3(A) State Entities Generation:**

CHANDIGARH							
Station/Constituents	Inst. Capacity	N/A	N/A	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
<b>NIL</b>							
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>

DELHI							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
BADARPUR TPS	705	290	300	0		6.57	274
RAJGHAT TPS	135	0	0	0		0	0
<b>Total THERMAL</b>	<b>840</b>	<b>290</b>	<b>300</b>			<b>6.57</b>	<b>274</b>
BAWANA GPS	1,370	427	430	0		10.39	433
DELHI GAS TURBINES	282	73	108	0		2.23	93
PRAGATI GAS TURBINES	331	143	96	0		3.03	126
RITHALA GPS	108	0	0	0		0	0
<b>Total GAS/NAPTHA/DIESEL</b>	<b>2,091</b>	<b>643</b>	<b>634</b>			<b>15.65</b>	<b>652</b>
WIND	0	0	0	0		0	0
SOLAR	2	0	0	0		0	0
BIOMASS	16	0	0	0			
<b>Total OTHERs</b>	<b>16</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
<b>Total DELHI</b>	<b>2,949</b>	<b>933</b>	<b>934</b>			<b>22.22</b>	<b>926</b>

HARYANA							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
DCRTPP (YAMUNA NAGAR)	600	481	475	484	22:00	11.18	466
JHAJJAR(CLP)	1,320	1,068	737	1,148	22:00	19.73	822
MAGNUM DIESEL (IPP)	25	0	0	0		0	0
PANIPAT TPS	920	200	403	404	07:00	6.76	282
RGTPP( KHEDAR)	1,200	0	0	0	00:00	0	0
<b>Total THERMAL</b>	<b>4,065</b>	<b>1,749</b>	<b>1,615</b>			<b>37.67</b>	<b>1,570</b>
FARIDABAD GPS	432	0	0	0	00:00	0	0
<b>Total GAS/NAPTHA/DIESEL</b>	<b>432</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
TOTAL HYDRO HARYANA	62	22	19	23	12:00	0.64	27
<b>Total HYDEL</b>	<b>62</b>	<b>22</b>	<b>19</b>			<b>0.64</b>	<b>27</b>
WIND	0	0	0	0		0	0
SOLAR	50	0	0	0		0.1	4
BIOMASS	106	0	0	0			
<b>Total OTHERs</b>	<b>106</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
<b>Total HARYANA</b>	<b>4,715</b>	<b>1,771</b>	<b>1,634</b>			<b>38.41</b>	<b>1,601</b>

HIMACHAL PRADESH							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
BASPA (IPP) HPS	300	330	330	330		6.6	275
MALANA (IPP) HPS	86	86	86	86		2.04	85
OTHER HYDRO HP	372	378	318	318.43		8.57	357
<b>Total HYDEL</b>	<b>758</b>	<b>794</b>	<b>734</b>			<b>17.21</b>	<b>717</b>
SOLAR	0	0	0	0		0	0
BIOMASS	0	0	0	0			
SMALL HYDRO	486	0	0	0			
<b>Total OTHERs</b>	<b>486</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
<b>Total HP</b>	<b>1,244</b>	<b>794</b>	<b>734</b>			<b>17.21</b>	<b>717</b>

JAMMU & KASHMIR							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
GAS/DIESEL/OTHERS J&K	190	0	0	0		0	0
<b>Total GAS/NAPTHA/DIESEL</b>	<b>190</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
BAGLIHAR (IPP) HPS	900	882	882	882	20:00	21.17	882
OTHER HYDRO/IPP J&K	308	155	174	178	23:00	3.47	145
<b>Total HYDEL</b>	<b>1,208</b>	<b>1,037</b>	<b>1,056</b>			<b>24.64</b>	<b>1,027</b>
WIND	0	0	0	0		0	0
SOLAR	0	0	0	0		0	0
BIOMASS	0	0	0	0			
SMALL HYDRO	98	0	0	0			
<b>Total OTHERs</b>	<b>98</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
<b>Total J&amp;K</b>	<b>1,496</b>	<b>1,037</b>	<b>1,056</b>			<b>24.64</b>	<b>1,027</b>

PUNJAB							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
GOINDWAL(GVK)	540	173	145	246		3.78	158
GURU GOBIND SINGH TPS (ROPAR)	1,260	384	293	384		7.17	299
GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)	920	613	530	658		13.05	544
GURU NANAK DEV TPS (BHATINDA)	460	0	0	0		0	0
RAJPURA(NPL) TPS	1,400	1,320	660	1,320		24.13	1,005
TALWANDI SABO TPS	1,980	1,150	616	1,200		18.98	791
<b>Total THERMAL</b>	<b>6,560</b>	<b>3,640</b>	<b>2,244</b>			<b>67.11</b>	<b>2,797</b>
TOTAL HYDRO PUNJAB	1,000	534	453	570		12.44	518
<b>Total HYDEL</b>	<b>1,000</b>	<b>534</b>	<b>453</b>			<b>12.44</b>	<b>518</b>
WIND	0	0	0	0		0	0
SOLAR	859	0	0	420		5.8	242
BIOMASS	303	0	0	0			
<b>Total OTHERs</b>	<b>303</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
<b>Total PUNJAB</b>	<b>8,722</b>	<b>4,174</b>	<b>2,697</b>			<b>85.35</b>	<b>3,557</b>

RAJASTHAN							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
BARSINGSAR (IPP) LTPS	250	114	113	0		2.85	119
CHHABRA TPS	1,660	991	981	0		18.76	782
GIRAL (IPP) LTPS	250	0	0	0		0	0
KALISINDH TPS	1,200	511	405	0		10.21	425
KAWAI TPS	1,320	580	445	0		11.16	465
KOTA TPS	1,240	721	656	0		16.05	669
RAJWEST (IPP) LTPS	1,080	906	839	0		16.2	675
SURATGARH TPS	1,500	792	912	0		18.95	790
VSLPP (IPP)	135	104	75	0		2.03	85
<b>Total THERMAL</b>	<b>8,635</b>	<b>4,719</b>	<b>4,426</b>			<b>96.21</b>	<b>4,010</b>
RAMGARH GPS	271	119	96	0		2.85	119
<b>Total GAS/NAPTHA/DIESEL</b>	<b>271</b>	<b>119</b>	<b>96</b>			<b>2.85</b>	<b>119</b>
RAPS-A	300	0	0	0		0	0
<b>Total NUCLEAR</b>	<b>300</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>
DHOLPUR GPS	330	0	0	0		0	0
TOTAL HYDRO RAJASTHAN	550	0	33	0		0.2	8
<b>Total HYDEL</b>	<b>880</b>	<b>0</b>	<b>33</b>			<b>0.2</b>	<b>8</b>
WIND	4,292	2,022	1,129	0		41.25	1,719
BIOMASS	102	18	18	0		0.44	18
SOLAR	1,995	35	0	0		10.56	440
<b>Total RAJASTHAN</b>	<b>16,475</b>	<b>6,913</b>	<b>5,702</b>			<b>151.51</b>	<b>6,314</b>

UTTAR PRADESH							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
ANPARA TPS	1,630	1,303	1,332	0		29.5	1,229
ANPARA-C TPS	1,200	1,101	1,082	0		20.78	866
ANPARA-D TPS	1,000	890	945	0		21.14	881
BAJAJ ENERGY PVT LTD (IPP) TPS	450	223	223	0		5.46	228
BARA PPGCL TPS	1,980	884	833	0		18.47	770
HARDUAGANJ TPS	665	448	456	0		8.69	362
LALITPUR TPS	1,980	356	354	0		8.86	369
OBRA TPS	1,188	506	500	0		9.89	412
PANKI TPS	210	0	0	0		0	0
PARICHA TPS	1,160	604	517	0		12.15	506
ROSA TPS	1,200	1,056	596	0		16.14	673
TANDA TPS	440	356	363	0		6.67	278
<b>Total THERMAL</b>	<b>13,103</b>	<b>7,727</b>	<b>7,201</b>			<b>157.75</b>	<b>6,574</b>
ALAKHANDA HEP	330	347	347	0		8.32	347
VISHNUPARYAG HPS	440	0	395	0		7.46	311
OTHER HYDRO UP	527	48	56	0		1.73	72
<b>Total HYDEL</b>	<b>1,297</b>	<b>395</b>	<b>798</b>			<b>17.51</b>	<b>730</b>
WIND	0	0	0	0		0	0
SOLAR	472	0	0	0		0	0
BIOMASS	26	0	0	0			
CO-GENERATION	1,360	50	50	0		1.2	50
<b>Total OTHERs</b>	<b>1,386</b>	<b>50</b>	<b>50</b>			<b>1.2</b>	<b>50</b>
<b>Total UP</b>	<b>16,258</b>	<b>8,172</b>	<b>8,049</b>			<b>176.46</b>	<b>7,354</b>

UTTARAKHAND							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
TOTAL GAS UK	450	0	0	0		0	0
Total GAS/NAPHTHA/DIESEL	450	0	0			0	0
OTHER HYDRO UK	1,250	743	742	848	09:00	17.9	746
Total HYDEL	1,250	743	742			17.9	746
WIND	0	0	0	0		0	0
SOLAR	100	0	0	51	14:00	0.35	15
BIOMASS	127	0	0	0			
SMALL HYDRO	180	0	0	0			
Total OTHERs	307	0	0			0	0
Total UTTARAKHAND	2,107	743	742			18.25	761

### 3(B) Regional Entities Generation

Station/Constituents	Inst. Capacity	Declared Capacity	20:00	03:00	Day Peak		Day Energy		AVG. MW	UI
	(MW)	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	SCHD (MU)	ACT (MU)		
<b>BBMB</b>										
Bhakra HPS	1,379	672.5	1,087	539	1,087	19:00	16.14	16.17	674	0.03
Dehar HPS	990	599.96	975	570	975	20:00	14.4	14.43	601	0.03
Pong HPS	396	64.32	198	0	198	20:00	1.54	1.55	65	0.01
Sub-Total	2,765	1,336.78	2,260	1,109	-	-	32.08	32.15	1,340	0.07
<b>NHPC</b>										
Bairasiul HPS	180	115.78	180	124	180	11:00	2.78	2.86	119	0.08
Chamera HPS	540	534.33	538	538	538	20:00	12.8	12.93	539	0.13
Chamera II HPS	300	296.85	304	303	305	15:00	7.12	7.23	301	0.11
Chamera III HPS	231	229.08	231	237	238	02:00	5.48	5.57	232	0.09
Dhauliganga HPS	280	266.91	286	287	292	19:00	6.36	6.45	269	0.09
Dulhasti HPS	390	347.94	389	391	395	04:00	8.35	8.47	353	0.12
Kishanganga	220	0	0	0	0	-	0	0	0	0
Parbati III HEP	520	199.35	504	160	508	19:00	4.78	4.76	198	-0.02
Salal HPS	690	688.25	708	708	708	06:00	16.52	17.02	709	0.5
Sewa-II HPS	120	119.54	122	114	122	20:00	2	2.05	85	0.05
Tanakpur HPS	94	60.5	34	65	66	11:00	1.45	1.51	63	0.06
URI HPS	480	422.03	461	441	478	10:00	10.13	10.63	443	0.5
Uri-II HPS	480	226.67	241	240	245	15:00	5.44	5.51	230	0.07
Sub-Total	4,525	3,507.23	3,998	3,608	-	-	83.21	84.99	3,541	1.78
<b>NPCL</b>										
NAPS	440	304.5	213	426	427	04:00	7.31	6.62	276	-0.69
RAPS-B	440	354	397	398	397	20:00	8.5	8.55	356	0.05
RAPS-C	440	405	451	451	453	14:00	9.72	9.71	405	-0.01
Sub-Total	1,320	1,063.5	1,061	1,275	-	-	25.53	24.88	1,037	-0.65
<b>NTPC</b>										
Anta GPS	419	400.85	0	0	0	-	0	0	0	0
Auraiya GPS	663	448.4	299	95	301	21:00	3.47	3.55	148	0.08
Dadri GPS	830	795.05	0	0	0	-	0.1	0	0	-0.1
Dadri Solar	5	0.76	0	0	0	-	0.02	0.02	1	0
Dadri-I TPS	840	768.6	738	493	738	20:00	12.07	12.32	513	0.25
Dadri-II TPS	980	928.5	921	522	921	20:00	14.88	14.71	613	-0.17
ISTPP (Jhajjar)	1,500	1,421.25	1,428	858	1,491	22:35	21.21	22.02	918	0.81
Koldam HPS	800	872	872	853	872	20:00	20.93	20.96	873	0.03
Rihand-I STPS	1,000	890.49	1,004	874	1,004	-	19.55	19.39	808	-0.16
Rihand-II STPS	1,000	942.5	993	986	993	-	21.26	21.48	895	0.22
Rihand-III STPS	1,000	942.5	997	949	997	-	19.17	19.81	825	0.64
Singrauli STPS	2,000	1,752.86	1,895	1,919	1,919	03:00	33.71	34.41	1,434	0.7
Singrauli Solar	15	2.2	0	0	12	12:00	0.05	0.06	3	0.01
Unchahar II TPS	420	382.2	405	281	420	22:00	6.14	6.6	275	0.46
Unchahar III TPS	210	191.1	210	117	211	22:00	3.07	3.43	143	0.36
Unchahar IV TPS	500	0	0	0	0	-	0	0	0	0
Unchahar Solar	10	1.74	0	0	0	-	0.04	0	0	-0.04
Unchahar TPS	420	191.1	208	133	211	21:00	3.25	3.63	151	0.38
Sub-Total	12,612	10,932.1	9,970	8,080	-	-	178.92	182.39	7,600	3.47
<b>SJVNL</b>										
Nathpa-Jhakri HPS	1,500	1,209.38	0	1,609	1,645	14:00	29.02	29.29	1,220	0.27
Rampur HEP	412	333.85	0	448	448	03:00	8.01	8.22	343	0.21
Sub-Total	1,912	1,543.23	0	2,057	-	-	37.03	37.51	1,563	0.48
<b>THDC</b>										
Koteshwar HPS	400	312.08	402	368	404	22:00	7.49	7.55	315	0.06
TEHRI HPS	1,000	1,060	1,015	722	1,065	16:00	21.82	22.6	942	0.78
Sub-Total	1,400	1,372.08	1,417	1,090	-	-	29.31	30.15	1,257	0.84
Total	24,534	19,754.92	18,706	17,219			386.08	392.07	16,338	5.99

## IPP/JV

Station/Constituents	Inst. Capacity	Declared Capacity	20:00	03:00	Day Peak		Day Energy		AVG. MW	UI
	(MW)	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	SCHD (MU)	ACT (MU)		
IPP										
ADHPL(IPP) HPS	192	0	0	0	0	-	0	0	0	0
Budhil HPS (IPP)	70	0	76	75	76	20:00	1.77	1.69	70	-0.08
Karcham Wangtoo HPS	1,000	0	0	1,100	1,100	19:00	18.13	17.82	743	-0.31
Malana2	100	0	111	111	111	01:00	2.49	2.63	110	0.14
Sainj HEP	50	0	110	110	110	00:00	2.59	2.6	108	0.01
Shree Cement (IPP) TPS	300	0	279	141	293	21:00	4.37	4.28	178	-0.09
<b>Sub-Total</b>	<b>1,712</b>	<b>0</b>	<b>576</b>	<b>1,537</b>	<b>-</b>	<b>-</b>	<b>29.35</b>	<b>29.02</b>	<b>1,209</b>	<b>-0.33</b>
<b>Total</b>	<b>1,712</b>	<b>0</b>	<b>576</b>	<b>1,537</b>			<b>29.35</b>	<b>29.02</b>	<b>1,209</b>	<b>-0.33</b>

Summary Section					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Total State Control Area Generation	53,966	24,537	21,548	534.05	22,252
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		11,384	10,688	244.09	12,860
Total Regional Availability(Gross)	80,212	55,203	50,992	1,199.23	52,657

Total Hydro Generation					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Regional Entities Hydro	12,814	8,844	10,113	230.5	9,604
State Control Area Hydro	6,455	3,525	3,835	90.54	3,772
Total Regional Hydro	19,269	12,369	13,948	321.04	13,376

Total Renewable Generation					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Regional Entities Renewable	30	0	0	0.08	3
State Control Area Renewable	7,872	2,075	1,147	58.5	2,438
Total Regional Renewable	7,902	2,075	1,147	58.58	2,441

## 4(A) INTER-REGIONAL EXCHANGES (Import=(+ve) /Export =(-ve))

SL.No.	Element	20:00	03:00	Maximum Interchange (MW)		Import in MU	Export in MU	NET
		(MW)	MW	Import (MW)	Export (MW)			
Import/Export between EAST REGION and NORTH REGION								
1	132KV-Garhwa-Rihand	-	-	-	-	0	0	0
2	132KV-Karmnasa(PG)-Sahupuri(UP)	-	-	1	-	0	0	0
3	132KV-Rihand-Sonnagar(PG)	-20	-28	-	32	0	0.57	-0.57
4	220KV-Pusauli(PG)-Sahupuri(UP)	162	138	206	0	3.53	0	3.53
5	400KV-Biharsharif(PG)-Baliala(PG)	58	100	139	0	2.18	0	2.18
6	400KV-Biharsharif(PG)-Varanasi(PG)	-134	-155	39	168	0	1.43	-1.43
7	400KV-Fatehpur(UP)-Sasaram	-	-	-	-	-	-	-
8	400KV-Motihari(DMT)-Gorakhpur(UP)	-344	-214	0	344	0	6.04	-6.04
9	400KV-Muzaffarpur(PG)-Gorakhpur(UP)	300	280	505	0	8.56	0	8.56
10	400KV-Patna(PG)-Baliala(PG)	744	720	954	0	20.22	0	20.22
11	400KV-Sasaram-Allahabad(PG)	112	112	156	0	3.01	0	3.01
12	400KV-Sasaram-Varanasi(PG)	275	276	279	0	9.6	0	9.6
13	765KV-Fatehpur(PG)-Sasaram.	-314	-342	0	345	0	6.28	-6.28
14	765KV-Gaya(PG)-Baliala(PG)	131	257	297	0	3.67	0	3.67
15	765KV-Gaya(PG)-Varanasi(PG)	72	36	153	111	1.31	0	1.31
16	HVDC800KV-Alipurduar-Agra(PG)	600	800	800	-	16.01	0	16.01
Sub-Total EAST REGION		1,642	1,980	3,529	1,000	68.09	14.32	53.77
Import/Export between NORTH_EAST REGION and NORTH REGION								
1	HVDC800KV-BiswanathCharialli-Agra(PG)	600	700	700	-	14.7	0	14.7
Sub-Total NORTH_EAST REGION		600	700	700	0	14.7	0	14.7
Import/Export between WEST REGION and NORTH REGION								
1	220KV-Auraiya(NT)-Malanpur(PG)	4	19	-	74	0.35	0	0.35
2	220KV-Badod(MP)-Kota(PG)	-2	97	136	2	1.46	0	1.46
3	220KV-Badod(MP)-Modak(RJ)	-	-	-	-	-	-	-
4	400KV-RAPS C(NP)-Sujalpur	-212	-190	-	327	0	4.16	-4.16
5	400KV-Vindhyachal(PG)-Rihand(NT)	-946	-905	-	958	0	19.81	-19.81
6	400KV-Zerda(PG)-Bhinmal(PG)	56	31	177	171	0.99	0	0.99
7	400KV-Zerda(PG)-Kankroli(RJ)	26	-12	106	256	0	0.07	-0.07
8	765KV-Orai-Gwalior(PG)	-321	-308	0	358	0	7.36	-7.36
9	765KV-Orai-Jabalpur	1,210	860	1,528	0	22.97	0	22.97
10	765KV-Orai-Satna	1,842	1,672	1,848	0	40.67	0	40.67
11	765KV-Gwalior(PG)-Agra(PG)	2,531	2,092	2,737	0	49.5	0	49.5
12	765KV-Phagi(RJ)-Gwalior(PG)	1,203	1,101	1,491	-	27.08	0	27.08
13	HVDC500KV-Mundra(JH)-Mohindergarh(JH)	2,001	1,801	2,004	0	33.51	0	33.51
14	HVDC500KV-Vindhyachal(PG)-Vindhaychal B/B	-250	-250	0	250	0	6.03	-6.03
15	HVDC800KV-Champa(PG)-Kurukshetra(PG)(PG)	2,000	2,000	2,000	0	36.52	0	36.52
Sub-Total WEST REGION		9,142	8,008	12,027	2,396	213.05	37.43	175.62
<b>TOTAL IR EXCHANGE</b>		<b>11,384</b>	<b>10,688</b>	<b>16,256</b>	<b>3,396</b>	<b>295.84</b>	<b>51.75</b>	<b>244.09</b>

## 4(B) Inter Regional Schedule &amp; Actual Exchange (Import=(+ve) /Export =(-ve)) in MU

	ISGS/(LT+MT) Schedule	BILT Schedule	PX Schedule	Total IR Schedule	Total IR Actual	NET IR UI
NR-ER	47.83	36.06	-10.53	73.36	68.47	-4.89
NR-WR	133.99	70.28	-8.96	195.31	175.62	-19.69
<b>Total</b>	<b>181.82</b>	<b>106.34</b>	<b>-19.49</b>	<b>268.67</b>	<b>244.09</b>	<b>-24.58</b>

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

Element	Peak	Off-Peak	Maximum Interchange(MW)		Energy (MU)		Net Energy
	MW	MW	Import	Export	Import	Export	(MU)
132KV-Tanakpur(NH)-Mahendranagar(PG)	-22.2	-17.76		23		0.3042	0

5. Frequency Profile

RANGE(Hz)	< 49.2	< 49.7	< 49.8	< 49.9	< 50.0	>= 49.9 - <= 50.05	>= 50.05 - <= 50.1	>= 50.1 - <= 50.2	> 50.2	> 50.05
%	0	0	.3	10.3	65.9	83.3	6.1	.5	0	6.3

<-----Frequency (Hz)----->

Maximum		Minimum		Average Frequency	Freq Variation Index	Standard Deviation	Freq. in 15 mnt blk		Freq Dev Index (% of Time)
Frequency	Time	Frequency	Time				Max.	Min.	
50.13	08:01:10	49.75	18:15:10	49.97	0.04	0.056	50.09	49.85	16.7

6. Voltage Profile: 400kV

STATION	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
	VOLTAGE	TIME	VOLTAGE	TIME	< 380	< 390	> 420	> 430	
Abdullapur(PG) - 400KV	416	08:00	401	19:35	0	0	0	0	0
Abdullapur(PG) - 400KV	416	08:00	401	19:35	0	0	0	0	0
Amritsar(PG) - 400KV	414	06:00	395	15:40	0	0	0	0	0
Ballabgarh(PG) - 400KV	415	07:35	394	19:30	0	0	0	0	0
Bareilly II(PG) - 400KV	413	07:15	393	19:35	0	0	0	0	0
Bareilly(UP) - 400KV	415	07:20	394	19:35	0	0	0	0	0
Baspa(HP) - 400KV	412	08:05	399	14:40	0	0	0	0	0
Bassi(PG) - 400KV	421	04:00	397	22:20	0	0	1.04	0	1.04
Bawana(DTL) - 400KV	415	08:00	389	15:05	0	.35	0	0	0
Dadri HVDC(PG). - 400KV	414	08:00	397	19:35	0	0	0	0	0
Gorakhpur(PG) - 400KV	417	07:10	393	19:35	0	0	0	0	0
Hisar(PG) - 400KV	413	07:35	391	19:20	0	0	0	0	0
Kanpur(PG) - 400KV	420	07:10	403	19:30	0	0	.69	0	.69
Kashipur(UT) - 400KV	402	00:00	402	00:00	0	0	0	0	0
Kishenpur(PG) - 400KV	415	05:00	401	14:50	0	0	0	0	0
Moga(PG) - 400KV	413	06:00	395	19:35	0	0	0	0	0
Nallagarh(PG) - 400KV	412	08:05	399	14:40	0	0	0	0	0
Rihand HVDC(PG) - 400KV	410	16:30	402	00:05	0	0	0	0	0
Rihand(NT) - 400KV	408	16:30	401	00:05	0	0	0	0	0

6.1 Voltage Profile: 765kV

STATION	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
	VOLTAGE	TIME	VOLTAGE	TIME	< 728	< 742	> 800	> 820	
Anta RS(RJ) - 765KV	800	04:00	773	19:25	0	0	0	0	0
Balia(PG) - 765KV	793	07:10	750	19:35	0	0	0	0	0
Bareilly II(PG) - 765KV	790	07:20	752	19:35	0	0	0	0	0
Bhiwani(PG) - 765KV	800	07:40	761	19:25	0	0	0	0	0
Fatehpur(PG) - 765KV	784	07:10	738	19:35	0	2.08	0	0	0
Jhatikara(PG) - 765KV	793	06:00	754	19:30	0	0	0	0	0
Lucknow II(PG) - 765KV	791	07:10	750	19:35	0	0	0	0	0
Meerut(PG) - 765KV	804	06:00	763	19:30	0	0	7.64	0	7.64
Moga(PG) - 765KV	803	06:00	756	19:35	0	0	3.82	0	3.82
Phagi(RJ) - 765KV	0	00:00	0	00:00	100	100	0	0	100
Unnao(UP) - 765KV	779	07:10	745	19:30	0	0	0	0	0

7(A). Short-Term Open Access Details:

State	Off- Peak Hours (03:00)			Peak Hours (20:00)			Day Energy (MU)			
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	ISGS/(LT+MT) Schedule	BILT Schedule	PX Schedule	Total (MU)
CHANDIGARH	0	-45.28	0	0	-30.18	0	6.8	0	-0.66	6.14
HIMACHAL PRADESH	-1,568.64	-200.08	0	-1,619.39	-254.13	0	38	-35.41	-4.77	-2.17
UTTAR PRADESH	2,340.24	18.6	0	1,705.17	0	0	138.83	47.79	-4.04	182.59
PUNJAB	2,100.86	0	0	2,100.86	-402.45	0	89.41	50.41	-1.31	138.52
UTTARAKHAND	39.15	-24.55	0	136.94	125.42	0	18.84	2.47	0.03	21.34
HARYANA	2,248.97	174.59	0	1,935.16	0.59	0	88.49	44.94	-1.93	131.51
JAMMU & KASHMIR	-1,047.39	-192.13	0	-1,047.39	483.34	0	38.39	-25.14	6.72	19.97
DELHI	927.62	-381.33	0	721.12	-630.85	0	81.65	20.79	-9.91	92.53
RAJASTHAN	350.83	91.94	0	-365.81	2.98	0	55.66	5.29	-0.65	60.3
TOTAL	5,391.64	-558.24	0	3,566.66	-705.28	0	556.07	111.14	-16.52	650.73

7(B). Short-Term Open Access Details

State	ISGS/(LT+MT) Schedule		Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
CHANDIGARH	313.51	258.63	0	0	0	-80.49	0	0
HIMACHAL PRADESH	1,864.29	997.09	-1,374.04	-1,797.25	36.69	-277.9	0	0
UTTAR PRADESH	7,187.05	4,888.56	2,367.52	1,666.01	18.6	-1,111.37	0	0
PUNJAB	4,003.37	3,352.01	2,100.86	2,100.42	0	-402.45	0	0
UTTARAKHAND	916.09	509.36	136.95	17.87	164.97	-103.87	0	0
HARYANA	4,408.64	2,802.29	2,248.99	1,407.17	174.69	-957.03	0	0
JAMMU & KASHMIR	1,743.14	1,428.01	-1,047.39	-1,047.39	532.66	-202.24	0	0
DELHI	4,113.57	2,920.65	1,008.02	721.12	-36.56	-882.38	0	0
RAJASTHAN	3,400.57	1,020.54	350.83	-427.11	104.5	-1,184.19	0	0

**8. Major Reservoir Particulars**

RESERVOIR	Parameters			Present Parameters		LAST YEAR		LAST DAY	
	MDDL (Mts)	FRL (Mts)	Energy (MU)	Level (Mts)	Energy (MU)	Level (Mts)	Energy (MU)	Inflow (m3/s)	Usage (m3/s)
Bhakra	445.62	513.59	653	496.73	972	507.51	1,426	1,367.76	464.08
Chamera-I	748.75	760	0	-	-	-	-	-	0
Gandhisagar	295.78	295.78	0	-	-	-	-	-	0
Jawahar Sagar	295.78	298.7	0	-	-	-	-	-	0
Koteshwar	598.5	612.5	5	-	-	-	-	-	0
Pong	384.05	426.72	138	415.37	693	420.31	903	2,199.17	92.6
RPS	343.81	352.8	0	-	-	-	-	-	0
RSD	487.91	527.91	1	519.14	4	521.47	10	404.7	206.75
Rihand	252.98	268.22	0	260.3	322	263.77	530	68.76	5,211.49
Tehri	740.04	829.79	787	-	-	-	-	-	0
TOTAL	-	-	1,584	-	1,991	-	2,869	4,040.39	5,974.92

**9. System Reliability Indices (Violation of TTC and ATC):****(i) %age of times N-1 Criteria was violated in the inter - regional corridors**

WR	0
ER	0
Simultaneous	0

**ii) %age of times ATC violated on the inter-regional corridors**

WR	3.13
ER	0
Simultaneous	0

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

Rihand-Dadri	0
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**10. Zero Crossing Violations**

State	No. of violations (Maximum 8 in a day)	Maximum number of continuous blocks without sign change
CHANDIGARH	3	41
DELHI	3	47
HARYANA	0	0
HIMACHAL PRADESH	2	26
JAMMU & KASHMIR	4	36
PUNJAB	1	21
RAJASTHAN	1	19
UTTAR PRADESH	0	0
UTTARAKHAND	3	26

**11. Significant events (If any):****12. Grid Disturbance / Any Other Significant Event:****13. Weather Conditions :****14. Synchronisation of new generating units :****15. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / /substation :****16. Tripping of lines in pooling stations :****17. 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.

**Shift In Charge**