



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

Power Supply Position in Northern Region For 01-Mar-2020

Date of Reporting:02-Mar-2020

1. Regional Availability/Demand:

Evening Peak (19:00) 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
38,424	502	38,926	50.03	24,522	289	24,811	49.98	802	10.87

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

State	State's Control Area Generation (Net MU)							Drawal Sch	Act Drawal	UI	Requirement	Shortage	Consumption
	Thermal	Hydro	Gas/Naptha/Diesel	Solar	Wind	OthersBiomass/Small Hyd/Co-gen etc.)	Total	(Net MU)	(Net MU)	(Net MU)	(Net MU)	(Net MU)	(Net MU)
PUNJAB	18.48	13.89	0	3.76	0	1.05	37.18	60.92	60.66	-0.26	97.84	0	97.84
HARYANA	14.77	0.69	0	0.16	0	1.25	16.86	76.97	77.68	0.71	94.54	0	94.54
RAJASTHAN	123.83	2.44	1.53	15.66	33.33	3.88	180.67	50.35	49.43	-0.92	230.1	0	230.1
DELHI	0	0	16.26	0	0	0.21	16.47	41.91	41.39	-0.52	57.86	0	57.86
UTTAR PRADESH	89.9	6.6	0	4.3	0	19.2	120	97.97	95.8	-2.17	215.8	0	215.8
UTTARAKHAND	0	11.25	6.52	0.78	0	0.79	19.34	12.16	11.97	-0.19	31.31	0	31.31
HIMACHAL PRADESH	0	4.08	0	0	0	3.2	7.28	18.82	17.67	-1.15	24.95	0	24.95
J&K(UT) & Ladakh(UT)	0	6.13	0	0	0	0	6.13	41.77	40.18	-1.59	57.18	10.87	46.31
CHANDIGARH	0	0	0	0	0	0	0	3.08	3.41	0.33	3.41	0	3.41
Region	246.98	45.08	24.31	24.66	33.33	29.58	403.93	403.95	398.19	-5.76	812.99	10.87	802.12

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

State	Evening Peak (19:00) MW				Off-Peak (03:00) MW			
	Demand Met	Shortage(-)/Surplus(+)	UI	STOA/PX Transaction	Demand Met	Shortage(-)/Surplus(+)	UI	STOA/PX Transaction
PUNJAB	4,512	0	17	-316	3,026	0	11	-316
HARYANA	5,020	0	-157	-205	2,894	0	-39	-153
RAJASTHAN	9,486	0	-227	-52	6,813	0	136	-1,214
DELHI	2,608	0	-144	-471	1,573	0	73	-1,141
UTTAR PRADESH	12,020	0	547	100	6,560	0	-983	133
UTTARAKHAND	1,533	0	109	38	1,117	0	-54	140
HIMACHAL PRADESH	1,064	0	-104	-96	823	0	-69	441
J&K(UT) & Ladakh(UT)	2,007	502	4	114	1,636	289	-70	64
CHANDIGARH	175	0	25	-71	81	0	-14	-30
Region	38,425	502	70	-959	24,523	289	-1,009	-2,076

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	Maximum Requirement of the day	Time	Shortage(-) /Surplus(+) during at maximum Requirement	Demand Met at maximum requiremnet	Min Demand Met	Time
PUNJAB	4,915	9:00	0	4,915	4,915	9:00	0	4,915	3,026	3:00
HARYANA	5,020	19:00	0	5,020	5,020	19:00	0	5,020	2,894	3:00
RAJASTHAN	12,528	10:00	0	12,528	12,528	10:00	0	12,528	6,612	4:00
DELHI	3,326	12:00	0	3,326	3,326	12:00	0	3,326	1,552	4:00
UP	13,061	20:00	0	13,061	13,061	20:00	0	13,061	6,560	3:00
UTTARAKHAND	1,722	8:00	0	1,722	1,722	8:00	0	1,722	1,053	16:00
HP	1,502	10:00	0	1,502	1,502	10:00	0	1,502	814	4:00
J&K(UT)&Ladak ..	2,342	8:00	586	2,928	2,928	8:00	586	2,342	1,544	12:00
CHANDIGARH	204	9:00	0	204	204	9:00	0	204	80	2:00
NR	40,271	20:00	531	40,802	40,802	20:00	531	40,271	24,522	3:00

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)	
NIL							
Total	0	0	0			0	0
Total	0	0	0			0	0

DELHI							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
RAJGHAT TPS(2 * 67.5)	135	0	0	0			
Total THERMAL	135	0	0			0	0
BAWANA GPS(2 * 253 + 4 * 216)	1,370	480	479	0		11.49	479
DELHI GAS TURBINES(3 * 34 + 6 * 30)	282	38	39	0		0.94	39
PRAGATI GAS TURBINES(1 * 121.2 + 2 * 104.6)	452	155	155	0		3.82	159
RITHALA GPS(3 * 36)	108	0	0	0			
Total GAS/NAPTHA/DIESEL	2,212	673	673			16.25	677
WIND	0	0	0	0			
BIOMASS(16)	16	11	11	0		0.21	9
SOLAR(2)	2	0	0	0			
Total DELHI	2,365	684	684			16.46	686

HARIYANA							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
DCRTPP (YAMUNA NAGAR)(2 * 300)	600	0	0	0			
JHAJJAR(CLP)(2 * 660)	1,320	428	734	819	09:00	14.77	615
MAGNUM DIESEL (IPP)(4 * 6.3)	25	0	0	0			
PANIPAT TPS(2 * 210 + 2 * 250)	920	0	0	0			
RGTPP(KHEDAR)(2 * 600)	1,200	0	0	0			
Total THERMAL	4,065	428	734			14.77	615
FARIDABAD GPS(1 * 156.07 + 2 * 137.75)	432	0	0	0			
Total GAS/NAPTHA/DIESEL	432	0	0			0	0
TOTAL HYDRO HARYANA(64.8)	65	24	22	32	13:00	0.69	29
Total HYDEL	65	24	22			0.69	29
WIND	0	0	0	0			
BIOMASS(106)	106	0	0	0		1.25	52
SOLAR(55.8)	56	0	0	0		0.16	7
Total HARYANA	4,724	452	756			16.87	703

HIMACHAL PRADESH							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
BASPA (IPP) HPS(3 * 100)	300	31	52	0		1.01	42
MALANA (IPP) HPS(2 * 43)	86	0	0	0		0.22	9
OTHER HYDRO HP(372)	372	127	115	0		2.85	119
Total HYDEL	758	158	167			4.08	170
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0			
SMALL HYDRO(486)	486	127	73	0		3.2	133
Total SMALL HYDRO	486	127	73			3.2	133
Total HP	1,244	285	240			7.28	303

J&K(UT) & LADAKH(UT)							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
GAS/DIESEL/OTHERS J&K(1 * 190)	190	0	0	0			
Total GAS/NAPTHA/DIESEL	190	0	0			0	0
BAGLIHAR (IPP) HPS(6 * 150)	900	148	148	0		4.28	178
OTHER HYDRO/IPP J&K(308)	308	111	53	0		1.85	77
Total HYDEL	1,208	259	201			6.13	255
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0			
SMALL HYDRO(98)	98	0	0	0			
Total SMALL HYDRO	98	0	0			0	0
Total J&K(UT)&Ladakh(UT)	1,496	259	201			6.13	255

PUNJAB							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
GOINDWAL(GVK)(2 * 270)	540	0	0	0			
GURU GOBIND SINGH TPS (ROPAR)(4 * 210)	840	0	0	0		0.08	3
GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)(2 * 210 + 2 * 250)	920	0	0	0		0.06	3
RAJPURA(NPL) TPS(2 * 700)	1,400	660	350	660		11.49	479
TALWANDI SABO TPS(3 * 660)	1,980	426	308	426		6.86	286
Total THERMAL	5,680	1,086	658			18.49	771
ANANADPUR SAHIB HYDRO PLANT(2 * 33.5 + 2 * 33.5)	134	0	0	0			
MUKERIAN HYDRO PLANT(6 * 15 + 6 * 19.5 + 2 * 9)	225	188	143	203		4.47	186
RANJIT SAGAR POWER PLANT (4 * 150)	600	240	150	240		4.87	203
SHANAN(4 * 15 + 1 * 50)	110	45	24	45		0.69	29
UBDC(3 * 15 + 3 * 15.5)	92	69	54	69		1.52	63
OTHER HYDRO PUNJAB	0	0	0	0		2.34	98
Total HYDEL	1,161	542	371			13.89	579
WIND	0	0	0	0			
BIOMASS(303)	303	0	0	0		1.05	44
SOLAR(859)	859	0	0	527		3.76	157
Total PUNJAB	8,003	1,628	1,029			37.19	1,551

RAJASTHAN							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
BARSINGSAR (IPP) LTPS(2 * 125)	250	106	113	0		2.53	105
CHHABRA TPS(2 * 660 + 4 * 250)	2,320	1,179	1,195	0		29.06	1,211
GIRAL (IPP) LTPS(2 * 125)	250	0	0	0			
KALISINDH TPS(2 * 600)	1,200	894	783	0		21.36	890
KAWAI TPS(2 * 660)	1,320	855	858	0		22.07	920
KOTA TPS(2 * 110 + 2 * 195 + 3 * 210)	1,240	721	723	0		17.53	730
RAJWEST (IPP) LTPS(8 * 135)	1,080	502	424	0		14.22	593
SURATGARH TPS (6 * 250)	1,500	512	696	0		14.34	598
VSLPP (IPP)(1 * 135)	135	114	115	0		2.73	114
Total THERMAL	9,295	4,883	4,907			123.84	5,161
DHOLPUR GPS(3 * 110)	330	0	0	0			
RAMGARH GPS(1 * 110 + 1 * 35.5 + 1 * 50 + 2 * 37.5)	271	60	63	0		1.53	64
Total GAS/NAPTHA/DIESEL	601	60	63			1.53	64
RAPS-A(1 * 100 + 1 * 200)	300	158	160	0		3.24	135
Total NUCLEAR	300	158	160			3.24	135
TOTAL HYDRO RAJASTHAN(550)	550	90	96	0		2.44	102
Total HYDEL	550	90	96			2.44	102
WIND	4,292	1,234	1,389	0		33.33	1,389
BIOMASS(102)	102	27	27	0		0.64	27
SOLAR(3045)	3,045	0	0	0		15.66	653
Total RAJASTHAN	18,185	6,452	6,642			180.68	7,531

UTTAR PRADESH							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
ANPARA TPS(2 * 500 + 3 * 210)	1,630	1,482	954	0		29.4	1,225
ANPARA-C TPS(2 * 600)	1,200	550	311	0		8.6	358
ANPARA-D TPS(2 * 500)	1,000	0	0	0			
BAJAJ ENERGY PVT LTD (IPP) TPS(10 * 45)	450	0	0	0			
BARA PPGCL TPS(3 * 660)	1,980	1,616	996	0		26.2	1,092
HARDUAGANJ TPS(1 * 105 + 1 * 60 + 2 * 250)	665	441	254	0		6.4	267
LALITPUR TPS(3 * 660)	1,980	0	0	0			
MEJA TPS(1 * 660)	660	0	0	0			
OBRA TPS (2 * 94 + 5 * 200)	1,188	626	420	0		11.2	467
PARICHA TPS(2 * 110 + 2 * 210 + 2 * 250)	1,380	0	0	0			
ROSA TPS(4 * 300)	1,200	510	294	0		8.1	338
TANDA TPS(4 * 110)	440	0	0	0			
Total THERMAL	13,773	5,225	3,229			89.9	3,747
ALAKHANANDA HEP(4 * 82.5)	330	82	76	0		1.8	75
VISHNUPARYAG HPS(4 * 110)	440	53	58	0		1.3	54
OTHER HYDRO UP(527)	527	229	29	0		3.5	146
Total HYDEL	1,297	364	163			6.6	275
WIND	0	0	0	0			
BIOMASS(26)	26	0	0	0			
SOLAR(798)	798	0	0	0		4.3	179
CO-GENERATION(1360)	1,360	800	800	0		19.2	800
Total OTHERs	1,360	800	800			19.2	800
Total UP	17,254	6,389	4,192			120	5,001

UTTARAKHAND							
Station/Constituents	Inst. Capacity	19:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
TOTAL GAS UK(675)	675	269	270	278	12:00	6.52	272
Total GAS/NAPTHA/DIESEL	675	269	270			6.52	272
OTHER HYDRO UK(1250)	1,250	543	323	633	09:00	11.25	469
Total HYDEL	1,250	543	323			11.25	469
WIND	0	0	0	0			
BIOMASS(127)	127	34	33	35	18:00	0.79	33
SOLAR(100)	100	0	0	97	12:00	0.78	33
SMALL HYDRO(180)	180	0	0	0			
Total SMALL HYDRO	180	0	0			0	0
Total UTTARAKHAND	2,332	846	626			19.34	807

(B) Regional Entities Generation										
Station/Constituents	Inst. Capacity	Declared Capacity	19:00	03:00	Day Peak		Day Energy		AVG. MW	UI
	(MW)	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	SCHD (MU)	ACT (MU)		
Aravali Power Company Private Ltd										
ISTPP (JHAJJAR)(3 * 500)	1,500	1,413.75	560	551	560	19:00	12.49	12.52	522	0.03
Sub-Total	1,500	1,413.75	560	551	-	-	12.49	12.52	522	0.03
BBMB										
BHAKRA HPS(2 * 108 + 3 * 126 + 5 * 157)	1,379	930	948	416	948	19:00	13.98	14	583	0.02
DEHAR HPS(6 * 165)	990	480	495	0	495	19:00	3.76	3.74	156	-0.02
PONG HPS(6 * 66)	396	240	246	126	246	19:00	4.88	4.94	206	0.06
Sub-Total	2,765	1,650	1,689	542	-	-	22.62	22.68	945	0.06
NHPC										
BAIRASIUL HPS(3 * 60)	180	120	123	61	123	19:00	1.62	1.66	69	0.04
CHAMERA HPS(3 * 180)	540	555	176	0	541	19:00	3	3.11	130	0.11
CHAMERA II HPS(3 * 100)	300	100	98	0	100	05:00	1.52	1.57	65	0.05
CHAMERA III HPS(3 * 77)	231	160	111	0	159	19:00	1	1.02	43	0.02
DHAULIGANGA HPS(4 * 70)	280	216	133	0	283	07:00	1.12	1.15	48	0.03
DULHASTI HPS(3 * 130)	390	405	262	0	403	07:00	2.89	2.89	120	0
KISHANGANGA(3 * 110)	330	111	110	112	110	19:00	2.61	2.63	110	0.02
PARBATI III HEP(4 * 130)	520	130	132	0	132	19:00	0.41	0.43	18	0.02
SALAL HPS(6 * 115)	690	200	113	225	686	08:00	4.07	4.62	193	0.55
SEWA-II HPS(3 * 40)	120	130.56	121	123	124	07:00	2.85	2.83	118	-0.02
TANAKPUR HPS(1 * 31.42 + 2 * 31.4)	94	20	29	23	64	07:00	0.54	0.76	32	0.22
URI HPS(4 * 120)	480	475	475	482	482	01:00	11.43	11.57	482	0.14
URI-II HPS(4 * 60)	240	224	245	244	245	20:00	5.39	5.82	243	0.43
Sub-Total	4,395	2,846.56	2,128	1,270	-	-	38.45	40.06	1,671	1.61
NPCL										
NAPS(2 * 220)	440	405	435	441	446	06:00	9.72	9.64	402	-0.08
RAPS-B(2 * 220)	440	175	201	204	205	05:00	4.2	4.23	176	0.03
RAPS-C(2 * 220)	440	200	228	229	228	19:00	4.8	4.57	190	-0.23
Sub-Total	1,320	780	864	874	-	-	18.72	18.44	768	-0.28
NTPC										
ANTA GPS(1 * 153.2 + 3 * 88.71)	419	268	0	0	0	-	0	0.04	2	0.04
AURAIYA GPS(2 * 109.3 + 4 * 111.19)	663	664	0	0	0	-	0	0.03	1	0.03
DADRI GPS(2 * 154.51 + 4 * 130.19)	830	143	223	222	275	-	5.59	5.28	220	-0.31
DADRI SOLAR(5)	5	0	0	0	4	-	0.02	0.02	1	0
DADRI-I TPS(4 * 210)	840	768.6	0	0	0	-	0	-	-	0
DADRI-II TPS(2 * 490)	980	923.65	549	563	549	19:00	12.21	12.5	521	0.29
KOLDAM HPS(4 * 200)	800	872	0	0	652	07:00	2.8	2.84	118	0.04
RIHAND-I STPS(2 * 500)	1,000	800	786	997	786	19:00	20.14	20.11	838	-0.03
RIHAND-II STPS(2 * 500)	1,000	800	969	891	969	19:00	20.92	20.95	873	0.03
RIHAND-III STPS(2 * 500)	1,000	800	947	1,001	947	19:00	21.07	21.41	892	0.34
SINGRAULI STPS(2 * 500 + 5 * 200)	2,000	1,780	1,736	1,922	1,736	19:00	42.24	42.63	1,776	0.39
SINGRAULI SOLAR(15)	15	0	0	0	0	-	0.07	0.06	3	-0.01
TANDA TPS STAGE-II(1 * 660)	660	622.05	657	381	657	19:00	10.91	11.17	465	0.26
UNCHAHAH I(2 * 210)	420	191.1	122	122	122	19:00	2.53	2.92	122	0.39
UNCHAHAH II TPS(2 * 210)	420	382.2	229	238	229	19:00	5.08	5.74	239	0.66
UNCHAHAH III TPS(1 * 210)	210	191.1	115	119	115	19:00	2.54	2.79	116	0.25
UNCHAHAH IV TPS(1 * 500)	500	471.25	280	285	280	19:00	6.26	6.87	286	0.61
UNCHAHAH SOLAR(10)	10	0	0	0	0	-	0.04	0.04	2	0
Sub-Total	11,772	9,676.95	6,613	6,741	-	-	152.42	155.4	6,475	2.98
SJVNL										
NATHPA-JHAKRI HPS(6 * 250)	1,500	1,080	638	0	1,065	19:00	7.26	6.64	277	-0.62
RAMPUR HEP(6 * 68.67)	412	296	192	0	298	18:00	2.03	1.91	80	-0.12
Sub-Total	1,912	1,376	830	0	-	-	9.29	8.55	357	-0.74
THDC										
KOTESHWAR HPS(4 * 100)	400	400	402	192	403	06:00	3.81	3.81	159	0
TEHRI HPS(4 * 250)	1,000	868	597	611	611	03:00	8.4	8.41	350	0.01
Sub-Total	1,400	1,268	999	803	-	-	12.21	12.22	509	0.01
Total	25,064	19,011.26	13,683	10,781			266.2	269.87	11,247	3.67

IPP/JV										
Station/Constituents	Inst. Capacity	Declared Capacity	19:00	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(2 * 96)	192	0	0	0	98	09:00	0.37	0.38	16	0.01
BUDHIL HPS (IPP)(2 * 35)	70	0	0	0	61	08:00	0.18	0.18	8	0
KARCHAM WANGTOO HPS(4 * 250)	1,000	0	825	0	825	18:15	3.56	3.42	143	-0.14
MALANA2(2 * 50)	100	0	0	0	70	09:00	0	0.22	9	0.22
SAINJ HEP(2 * 50)	100	0	50	0	50	20:30	0.33	0.34	14	0.01
SHREE CEMENT (IPP) TPS(2 * 150)	300	0	209	209	294	09:00	5.27	5.12	213	-0.15
Sub-Total	1,762	0	1,084	209	-	-	9.71	9.66	403	-0.05
SOLAR IPP										
ACME CHITTORGARH SOLAR ENERGY PVT LTD(1 * 250)	250	0	0	0	203	12:32	1.34	1.32	55	-0.02
AZURE POWER INDIA PVT LTD.(4 * 50)	200	0	0	0	188	13:00	1.25	1.23	51	-0.02
AZURE POWER THIRTY FOUR PRIVATE LTD(1 * 130)	130	0	0	0	128	12:07	0.85	0.88	37	0.03
CLEAN SOLAR POWER (BHADLA) PVT LTD(1 * 300)	300	0	0	0	270	13:05	1.84	1.76	73	-0.08
MAHOBASOLAR (UP) PRIVATE LTD(1 * 250)	250	0	0	0	205	13:15	1.29	1.33	55	0.04
RENEW SOLAR POWER PVT LTD(50)	50	0	0	0	50	13:03	0.33	0.34	14	0.01
RENEW SOLAR POWER PVT LTD. BIKANER(1 * 250)	250	0	0	0	246	12:49	1.52	1.63	68	0.11
SB ENERGY FOUR PVT LTD(2 * 100)	200	0	0	0	200	13:15	1.44	1.37	57	-0.07
TATA POWER RENEWABLE ENERGY LTD(1 * 150)	150	0	0	0	154	12:00	1	1.01	42	0.01
Sub-Total	1,780	0	0	0	-	-	10.86	10.87	452	0.01
Total	3,542	0	1,084	209			20.57	20.53	855	-0.04
Summary Section										
	Inst. Capacity		PEAK	OFF-PEAK		Day Energy		Day AVG.		
Total State Control Area Generation	55,603		16,995	14,370		403.95		16,831		
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			6,397	2,243		125.76		8,003		
Total Regional Availability(Gross)	84,209		38,159	27,603		820.11		36,934		
Total Hydro Generation										
	Inst. Capacity		PEAK	OFF-PEAK		Day Energy		Day AVG.		
Regional Entities Hydro	12,734		6,521	2,615		90.89		3,787		
State Control Area Hydro	6,289		1,980	1,343		45.08		1,878		
Total Regional Hydro	19,023		8,501	3,958		135.97		5,665		
Total Renewable Generation										
	Inst. Capacity		PEAK	OFF-PEAK		Day Energy		Day AVG.		
Regional Entities Renewable	1,810		0	0		10.99		458		
State Control Area Renewable	10,596		1,433	1,533		65.13		2,714		
Total Regional Renewable	12,406		1,433	1,533		76.12		3,172		
4(A) INTER-REGIONAL EXCHANGES (Import=(+ve) /Export =(-ve))										
SL.No.	Element	19:00	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	-18	-20	-	23	0	0.41	-0.41		
2	132KV-Karmnasa (PG)-Sahupuri(UP)	-	-	-	-	-	-	-		
3	132KV-Rihand-Sonnagar (PG)	-	-	-	-	-	-	-		
4	220KV-Pusauli (PG)-Sahupuri(UP)	135	102	137	0	2.46	0	2.46		
5	400KV-Biharsharif (PG)-Baliala(PG)	145	90	210	0	1.28	0	1.28		
6	400KV-Biharsharif (PG)-Varanasi(PG)	106	190	117	268	0	2.87	-2.87		
7	400KV-Motihari (DMT)-Gorakhpur(UP)	402	236	456	-	7.41	0	7.41		
8	400KV-Muzaffarpur (PG)-Gorakhpur(UP)	25	152	210	-	1.07	0	1.07		
9	400KV-Patna (PG)-Baliala(PG)	266	158	310	0	3.82	0	3.82		
10	400KV-Sasaram-Allahabad (PG)	31	28	93	0	1.14	0	1.14		
11	400KV-Sasaram-Varanasi (PG)	-204	-206	218	0	4.77	0	4.77		
12	765KV-Fatehpur (PG)-Sasaram.	5	-171	180	174	0	0.44	-0.44		
13	765KV-Gaya (PG)-Baliala(PG)	214	82	234	0	3.7	0	3.7		
14	765KV-Gaya (PG)-Varanasi(PG)	-153	200	438	264	1.35	0	1.35		
15	HVDC800KV-Alipurduar-Agra (PG)	-	-	-	-	-	-	-		
Sub-Total EAST REGION		954	841	2,603	729	27	3.72	23.28		
Import/Export between NORTH_EAST REGION and NORTH REGION										
1	HVDC800KV-BiswanathCharialli-Agra (PG)	500	500	500	0	11.82	0	11.82		
Sub-Total NORTH_EAST REGION		500	500	500	0	11.82	0	11.82		
Import/Export between WEST REGION and NORTH REGION										
1	220KV-Auraiya (NT)-Malanpur(PG)	3	-23	-	83	0	0.55	-0.55		

Import/Export between WEST REGION and NORTH REGION								
2	220KV-Bhanpur-Modak	81	-36	114	41	1.09	0	1.09
3	220KV-Ranpur-Bhanpur	54	-90	74	95	0.08	0	0.08
4	400KV-RAPS C (NP)-Sujalpur	220	-259	282	259	0.26	0	0.26
5	400KV-Vindhyachal (PG)-Rihand(NT)	-887	-966	-	969	0	21.41	-21.41
6	400KV-Zerda (PG)-Bhinmal(PG)	49	-216	201	289	0	2.16	-2.16
7	400KV-Zerda (PG)-Kankroli(RJ)	27	-174	71	187	0	1.35	-1.35
8	765KV-0rai-Gwalior (PG)	-433	-335	0	728	0	11.25	-11.25
9	765KV-0rai-Jabalpur	1,208	105	1,469	0	17.38	0	17.38
10	765KV-0rai-Satna	1,178	748	1,322	0	25.18	0	25.18
11	765KV-Chittorgarh-Banaskata D/C	-516	262	711	281	3.3	0	3.3
12	765KV-Gwalior (PG)-Agra(PG)	2,103	820	2,182	0	36.57	0	36.57
13	765KV-Phagi (RJ)-Gwalior(PG)	1,083	290	1,357	-	18.48	0	18.48
14	HVDC500KV-Mundra (JH)-Mohindergarh(JH)	1,173	1,176	1,178	0	28.46	0	28.46
15	HVDC500KV-Vindhyachal (PG)-Vindhaychal B/B	-400	-400	0	400	0	9.72	-9.72
16	HVDC800KV-Champa (PG)-Kurukshetra(PG)(PG)	-	-	-	-	6.3	0	6.3
Sub-Total WEST REGION		4,943	902	8,961	3,332	137.1	46.44	90.66
TOTAL IR EXCHANGE		6,397	2,243	12,064	4,061	175.92	50.16	125.76

4(B) Inter Regional Schedule & 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	49.84	-14.54	1.77	37.07	23.28	-13.79
NR-WR	132.04	-9.11	0.72	123.65	90.66	-32.99
Total	181.88	-23.65	2.49	160.72	125.76	-34.96

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)	49	38		54		1.2326	-1.2326

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	0	3.1	36.5	72.3	18.8	5.2	.5	24.6

<-----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.	
50.26	18:02:20	49.81	09:07:00	50.02	0.035	0.058	50.13	49.89	0.00

6.Voltage Profile: 400kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
					< 380	< 390	> 420	> 430	
Abdullapur(PG) - 400KV	427	14:00	410	19:10	0	0	68.75	0	68.75
Amritsar(PG) - 400KV	428	04:00	413	19:10	0	0	78.13	0	78.13
Ballabgarh(PG) - 400KV	426	02:00	411	19:10	0	0	53.82	0	53.82
Bareilly II(PG) - 400KV	424	02:05	407	19:10	0	0	28.47	0	28.47
Bareilly(UP) - 400KV	425	02:15	408	19:10	0	0	45.83	0	45.83
Baspa(HP) - 400KV	424	01:15	412	18:35	0	0	88.89	0	88.89
Bassi(PG) - 400KV	422	04:00	400	08:45	0	0	2.78	0	2.78
Bawana(DTL) - 400KV	429	01:50	415	19:10	0	0	69.1	0	69.1
Dadri HVDC(PG). - 400KV	425	00:40	413	19:10	0	0	53.13	0	53.13
Gorakhpur(PG) - 400KV	426	01:30	410	19:10	0	0	52.78	0	52.78
Hisar(PG) - 400KV	424	01:50	409	19:10	0	0	34.38	0	34.38
Kanpur(PG) - 400KV	420	01:30	406	19:10	0	0	1.74	0	1.74
Kashipur(UT) - 400KV	402	00:00	402	00:00	0	0	0	0	0
Kishenpur(PG) - 400KV	424	04:00	410	19:20	0	0	22.92	0	22.92
Moga(PG) - 400KV	410	02:40	396	19:05	0	0	0	0	0
Nallagarh(PG) - 400KV	424	01:15	412	18:35	0	0	88.89	0	88.89
Rihand HVDC(PG) - 400KV	412	00:00	408	19:10	0	0	0	0	0

Rihand(NT) - 400KV	411	18:00	407	19:10	0	0	0	0	0
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6.1 Voltage Profile: 765kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index
					< 728	< 742	> 800	> 820	
Anta RS(RJ) - 765KV	789	14:10	771	07:00	0	0	0	0	0
Balia(PG) - 765KV	791	17:15	767	19:10	0	0	0	0	0
Bareilly II(PG) - 765KV	808	02:15	776	19:10	0	0	39.24	0	39.24
Bhiwani(PG) - 765KV	799	23:55	771	07:00	0	0	0	0	0
Fatehpur(PG) - 765KV	778	15:05	749	06:10	0	0	0	0	0
Jhatikara(PG) - 765KV	770	00:00	770	00:00	0	0	0	0	0
Lucknow II(PG) - 765KV	804	01:50	774	19:10	0	0	12.85	0	12.85
Meerut(PG) - 765KV	798	00:00	762	19:10	0	0	0	0	0
Moga(PG) - 765KV	784	02:00	757	19:10	0	0	0	0	0
Phagi(RJ) - 765KV	797	23:55	766	07:40	0	0	0	0	0
Unnao(UP) - 765KV	792	04:40	762	19:10	0	0	0	0	0

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

State	Off- Peak Hours (03:00)			Peak Hours (19:00)			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)
PUNJAB	-315.76	0	0	-315.76	0	0	67.08	-7.58	1.41	60.92
HARYANA	-399.27	246.5	0	-392.75	188.16	0	83.2	-9.19	2.96	76.97
RAJASTHAN	-51.52	-1,162.78	0	-43.69	-8.04	0	52.81	-1.14	-1.32	50.35
DELHI	-673.97	-466.64	0	-521.82	50.6	0	58.12	-14.82	-1.39	41.91
UTTAR PRADESH	23.36	109.45	0	18.44	81.62	0	100.12	0.43	-2.58	97.97
UTTARAKHAND	140.22	0	0	90.89	-52.51	0	10.67	2.58	-1.08	12.16
HIMACHAL PRADESH	447.01	-5.57	0	332.64	-428.58	0	10	10.36	-1.53	18.82
J&K(UT) & Ladakh(UT)	-34.38	98.72	0	-34.38	148.08	0	34.53	-0.83	8.07	41.77
CHANDIGARH	0	-30.24	0	0	-70.55	0	3.8	0	-0.72	3.08
TOTAL	-864.31	-1,210.56	0	-866.43	-91.22	0	420.33	-20.19	3.82	403.95

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
PUNJAB	3,754.71	2,293.07	-315.76	-315.76	197.94	0	0	0
HARYANA	4,852.34	2,449.79	-284.12	-399.27	246.5	-378.3	0	0
RAJASTHAN	3,329.64	1,018.22	-31.04	-57.54	2,084.33	-1,565.76	0	0
DELHI	2,982.52	1,912.73	-521.82	-684.05	626.08	-494.86	0	0
UTTAR PRADESH	6,765.83	2,914.96	23.36	11.85	124.37	-1,129.38	0	0
UTTARAKHAND	686.93	265.72	140.22	90.89	115.6	-121.56	0	0
HIMACHAL PRADESH	1,074.02	145.57	466.04	332.64	384.43	-668.96	0	0
J&K(UT) & Ladakh(UT)	1,944.93	1,201.17	-34.38	-34.38	740.4	0	0	0
CHANDIGARH	235.72	119.92	0	0	0	-80.63	0	0

8.Major Reservoir Particulars

RESERVOIR	Parameters			Present Parameters		LAST YEAR		LAST DAY	
	MDDL (Mts)	FRL (Mts)	Energy Content at FRL	Level (Mts)	Energy (MU)	Level (Mts)	Energy (MU)	Inflow (m3/s)	Usage (m3/s)
Bhakra	445.62	513.59	1,728.8	490.16	739	496.92	972	186.58	391.71
Chamera-I	748.75	760	753.95	-	-	-	-	-	0
Gandhisagar	381	399.9	725	-	-	-	-	-	0
Jawahar Sagar	295.78	298.7	2.01	-	-	-	-	-	0
Koteshwar	598.5	612.5	610.73	610.64	5	611.29	5	223	250.72
Pong	384.05	426.72	1,084	414.72	669	409.7	484	114.71	305.54
RPS	343.81	352.8	175.66	-	-	-	-	-	0
RSD	487.91	527.91	390.3	505.27	161	521.74	332	90.37	242.9
Rihand	252.98	268.22	860.5	-	-	-	-	-	0
Tehri	740.04	829.79	1,291.49	786.64	407	789.19	442	93.04	223
TOTAL	-	-	-	-	1,981	-	2,235	707.7	1,413.87

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	0
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	5	30
DELHI	5	29
HARYANA	1	13
HIMACHAL PRADESH	2	19
J&K(UT) & Ladakh(UT)	0	10
PUNJAB	1	14
RAJASTHAN	3	18
UTTAR PRADESH	1	21
UTTARAKHAND	1	19

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