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

Power Supply Position in Northern Region For 02-Jan-2020

Date of Reporting:03-Jan-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
47,966	706	48,672	50.06	29,557	304	29,861	50.07	991	12.14

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	44.32	9.76	0	2.72	0	1.05	57.85	66.28	63.14	-3.14	120.99	0	120.99
HARYANA	42.16	0.52	8.4	0.11	0	0.79	51.98	75.21	75.5	0.29	127.48	0	127.48
RAJASTHAN	130.91	2.47	2.07	10.31	23.05	4.8	173.61	70.5	65.51	-4.99	239.12	0	239.12
DELHI	0	0	9.62	0	0	0.91	10.53	69.03	68.63	-0.4	79.16	0	79.16
UTTAR PRADESH	134.92	5.97	0	2.69	0	21.6	165.17	135.68	133.82	-1.86	298.99	0	298.99
UTTARAKHAND	0	8.67	7.48	0.37	0	0.88	17.39	22.33	21.81	-0.52	39.2	0	39.2
HIMACHAL PRADESH	0	3.65	0	0	0	3.26	6.91	23.28	23.29	0.01	30.2	0	30.2
J&K(UT) & Ladakh(UT)	0	5.39	0	0	0	0	5.39	46.62	46.1	-0.52	63.63	12.14	51.49
CHANDIGARH	0	0	0	0	0	0	0	4.38	4.28	-0.1	4.28	0	4.28
Region	352.31	36.43	27.57	16.2	23.05	33.29	488.83	513.31	502.08	-11.23	1,003.05	12.14	990.91

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	5,952	0	-56	-4	3,489	0	-101	-498
HARYANA	6,648	0	138	-176	3,819	0	35	-275
RAJASTHAN	10,824	0	0	125	6,462	0	-661	-67
DELHI	3,972	0	34	603	1,808	0	51	-608
UTTAR PRADESH	14,043	0	-113	828	10,167	0	242	66
UTTARAKHAND	1,921	0	-103	540	1,193	0	-95	409
HIMACHAL PRADESH	1,555	0	24	5	791	0	-83	544
J&K(UT) & Ladakh(UT)	2,824	706	522	559	1,725	304	-294	124
CHANDIGARH	226	0	-10	0	103	0	-9	0
Region	47,965	706	436	2,480	29,557	304	-915	-305

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	6,176	10:00	0	6,176	6,176	10:00	0	6,176	3,484	2:00
HARYANA	6,648	19:00	0	6,648	6,648	19:00	0	6,648	3,819	3:00
RAJASTHAN	13,670	10:00	0	13,670	13,670	10:00	0	13,670	6,211	4:00
DELHI	4,690	12:00	0	4,690	4,690	12:00	0	4,690	1,718	4:00
UP	15,989	20:00	0	15,989	15,989	20:00	0	15,989	10,167	3:00
UTTARAKHAND	2,110	9:00	0	2,110	2,110	9:00	0	2,110	1,193	3:00
HP	1,668	11:00	0	1,668	1,668	11:00	0	1,668	791	3:00
J&K(UT)&Ladak ..	2,824	19:00	706	3,531	3,531	19:00	706	2,824	1,725	3:00
CHANDIGARH	260	9:00	0	260	260	9:00	0	260	100	4:00
NR	49,944	10:00	579	50,524	50,524	10:00	579	49,944	29,557	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 (MW)	19:00 Peak MW	03:00 Off Peak MW	Day Peak (MW)	Day Peak Hrs	Day Energy (MU)	AVG. MW
RAJGHAT TPS(2 * 67.5)	135	0	0	0			
Total THERMAL	135	0	0			0	0
BAWANA GPS(2 * 253 + 4 * 216)	1,370	237	229	0		4.86	203
DELHI GAS TURBINES(3 * 34 + 6 * 30)	282	42	42	0		0.94	39
PRAGATI GAS TURBINES(1 * 121.2 + 2 * 104.6)	452	154	156	0		3.82	159
RITHALA GPS(3 * 36)	108	0	0	0			
Total GAS/NAPTHA/DIESEL	2,212	433	427			9.62	401
WIND	0	0	0	0			
BIOMASS(16)	16	18	20	0		0.91	38
SOLAR(2)	2	0	0	0			
Total DELHI	2,365	451	447			10.53	439

HARIYANA

Station/Constituents	Inst. Capacity (MW)	19:00 Peak MW	03:00 Off Peak MW	Day Peak (MW)	Day Peak Hrs	Day Energy (MU)	AVG. MW
DCRTPP (YAMUNA NAGAR)(2 * 300)	600	235	239	0		5.67	236
JHAJJAR(CLP)(2 * 660)	1,320	780	741	0		19.16	798
MAGNUM DIESEL (IPP)(4 * 6.3)	25	0	0	0			
PANIPAT TPS(2 * 210 + 2 * 250)	920	202	390	0		7.36	307
RGTPP(KHEDAR)(2 * 600)	1,200	500	378	0		9.97	415
Total THERMAL	4,065	1,717	1,748			42.16	1,756
FARIDABAD GPS(1 * 156.07 + 2 * 137.75)	432	407	306	0		8.4	350
Total GAS/NAPTHA/DIESEL	432	407	306			8.4	350
TOTAL HYDRO HARYANA(64.8)	65	16	16	0		0.52	22
Total HYDEL	65	16	16			0.52	22
WIND	0	0	0	0			
BIOMASS(106)	106	0	0	0		0.79	33
SOLAR(55.8)	56	0	0	0		0.11	5
Total HARYANA	4,724	2,140	2,070			51.98	2,166

HIMACHAL PRADESH

Station/Constituents	Inst. Capacity (MW)	19:00 Peak MW	03:00 Off Peak MW	Day Peak (MW)	Day Peak Hrs	Day Energy (MU)	AVG. MW
BASPA (IPP) HPS(3 * 100)	300	70	30	0		1.15	48
MALANA (IPP) HPS(2 * 43)	86	40	0	0		0.26	11
OTHER HYDRO HP(372)	372	113	47	0		2.25	94
Total HYDEL	758	223	77			3.66	153
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0			
SMALL HYDRO(486)	486	129	52	0		3.26	136
Total SMALL HYDRO	486	129	52			3.26	136
Total HP	1,244	352	129			6.92	289

J&K(UT) & LADAKH(UT)

Station/Constituents	Inst. Capacity (MW)	19:00 Peak MW	03:00 Off Peak MW	Day Peak (MW)	Day Peak Hrs	Day Energy (MU)	AVG. MW
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	0	0	0		3.56	148
OTHER HYDRO/IPP J&K(308)	308	0	0	0		1.83	76
Total HYDEL	1,208	0	0			5.39	224
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	0	0			5.39	224

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	306	290	418		7.41	309
GURU GOBIND SINGH TPS (ROPAR)(4 * 210)	840	293	339	384		7.51	313
GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)(2 * 210 + 2 * 250)	920	319	342	424		8.12	338
RAJPURA(NPL) TPS(2 * 700)	1,400	0	0	0		-0.15	-6
TALWANDI SABO TPS(3 * 660)	1,980	1,165	616	1,204		21.43	893
Total THERMAL	5,680	2,083	1,587			44.32	1,847
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	148	74	148		2.7	113
RANJIT SAGAR POWER PLANT (4 * 150)	600	120	120	240		3.2	133
SHANAN(4 * 15 + 1 * 50)	110	45	16	45		0.51	21
UBDC(3 * 15 + 3 * 15.5)	92	45	39	48		1.02	43
OTHER HYDRO PUNJAB	0	0	0	0		2.34	98
Total HYDEL	1,161	358	249			9.77	408
WIND	0	0	0	0			
BIOMASS(303)	303	0	0	0		1.05	44
SOLAR(859)	859	0	0	463		2.72	113
Total PUNJAB	8,003	2,441	1,836			57.86	2,412

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	226	181	0		5.04	210
CHHABRA TPS(2 * 660 + 4 * 250)	2,320	1,448	1,276	0		33.32	1,388
GIRAL (IPP) LTPS(2 * 125)	250	0	0	0			
KALISINDH TPS(2 * 600)	1,200	703	684	0		18.52	772
KAWAI TPS(2 * 660)	1,320	1,032	859	0		24.42	1,018
KOTA TPS(2 * 110 + 2 * 195 + 3 * 210)	1,240	711	679	0		19.23	801
RAJWEST (IPP) LTPS(8 * 135)	1,080	795	360	0		15.2	633
SURATGARH TPS (6 * 250)	1,500	719	713	0		13.2	550
VSLPP (IPP)(1 * 135)	135	82	82	0		1.97	82
Total THERMAL	9,295	5,716	4,834			130.9	5,454
DHOLPUR GPS(3 * 110)	330	0	0	0			
RAMGARH GPS(1 * 110 + 1 * 35.5 + 1 * 50 + 2 * 37.5)	271	84	86	0		2.07	86
Total GAS/NAPTHA/DIESEL	601	84	86			2.07	86
RAPS-A(1 * 100 + 1 * 200)	300	179	177	0		4.13	172
Total NUCLEAR	300	179	177			4.13	172
TOTAL HYDRO RAJASTHAN(550)	550	90	86	0		2.47	103
Total HYDEL	550	90	86			2.47	103
WIND	4,292	970	820	0		23.05	960
BIOMASS(102)	102	28	28	0		0.67	28
SOLAR(3045)	3,045	0	0	0		10.31	430
Total RAJASTHAN	18,185	7,067	6,031			173.6	7,233

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	1,441	1,263	0		34.57	1,440
ANPARA-C TPS(2 * 600)	1,200	1,027	606	0		23.01	959
ANPARA-D TPS(2 * 500)	1,000	0	0	0			
BAJAJ ENERGY PVT LTD (IPP) TPS(10 * 45)	450	89	132	0		3.17	132
BARA PPGCL TPS(3 * 660)	1,980	1,152	336	0		18.43	768
HARDUAGANJ TPS(1 * 105 + 1 * 60 + 2 * 250)	665	500	305	0		11.02	459
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	318	209	0		7.71	321
PARICHA TPS(2 * 110 + 2 * 210 + 2 * 250)	1,380	592	346	0		12.22	509
ROSA TPS(4 * 300)	1,200	915	601	0		18.12	755
TANDA TPS(4 * 110)	440	368	214	0		6.68	278
Total THERMAL	13,773	6,402	4,012			134.93	5,621
ALAKHANANDA HEP(4 * 82.5)	330	140	76	0		1.54	64
VISHNUPARYAG HPS(4 * 110)	440	68	63	0		1.6	67
OTHER HYDRO UP(527)	527	162	83	0		2.82	118
Total HYDEL	1,297	370	222			5.96	249
WIND	0	0	0	0			
BIOMASS(26)	26	0	0	0			
SOLAR(798)	798	0	0	0		2.69	112
CO-GENERATION(1360)	1,360	900	900	0		21.6	900
Total OTHERs	1,360	900	900			21.6	900
Total UP	17,254	7,672	5,134			165.18	6,882

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	308	316	317	04:00	7.48	312
Total GAS/NAPTHA/DIESEL	675	308	316			7.48	312
OTHER HYDRO UK(1250)	1,250	358	248	575	10:00	8.67	361
Total HYDEL	1,250	358	248			8.67	361
WIND	0	0	0	0			
BIOMASS(127)	127	36	35	37	11:00	0.88	37
SOLAR(100)	100	0	0	65	12:00	0.37	15
SMALL HYDRO(180)	180	0	0	0			
Total SMALL HYDRO	180	0	0			0	0
Total UTTARAKHAND	2,332	702	599			17.4	725

3(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	942.5	302	285	532	10:18	7.39	7.3	304	-0.09
Sub-Total	1,500	942.5	302	285	-	-	7.39	7.3	304	-0.09
BBMB										
BHAKRA HPS(2 * 108 + 3 * 126 + 5 * 157)	1,379	1,119	1,136	413	1,136	19:00	14.49	14.57	607	0.08
DEHAR HPS(6 * 165)	990	465	480	0	480	19:00	3.15	3.22	134	0.07
PONG HPS(6 * 66)	396	188	192	0	192	19:00	2.78	2.85	119	0.07
Sub-Total	2,765	1,772	1,808	413	-	-	20.42	20.64	860	0.22
NHPC										
BAIRASIUL HPS(3 * 60)	180	120	61	0	122	19:00	0.8	0.45	19	-0.35
CHAMERA HPS(3 * 180)	540	555	352	0	534	07:00	2.2	2.31	96	0.11
CHAMERA II HPS(3 * 100)	300	100	99	0	101	07:00	1.16	1.22	51	0.06
CHAMERA III HPS(3 * 77)	231	235	0	0	232	18:00	0.72	0.76	32	0.04
DHAULIGANGA HPS(4 * 70)	280	216	139	0	208	07:00	1.02	1.1	46	0.08
DULHASTI HPS(3 * 130)	390	190	0	0	0	-	3.3	3.3	138	0
KISHANGANGA(3 * 110)	330	222	0	0	222	07:00	0.72	0.77	32	0.05
PARBATI III HEP(4 * 130)	520	260	0	0	262	18:00	0.41	0.43	18	0.02
SALAL HPS(6 * 115)	690	200	113	565	565	03:00	3.28	3.33	139	0.05
SEWA-II HPS(3 * 40)	120	87.04	85	0	85	20:00	0.8	0.84	35	0.04
TANAKPUR HPS(1 * 31.42 + 2 * 31.4)	94	25	31	23	67	07:15	0.67	0.72	30	0.05
URI HPS(4 * 120)	480	220	359	238	360	16:00	6.02	6.25	260	0.23
URI-II HPS(4 * 60)	240	120	141	122	182	09:00	3.16	3.45	144	0.29
Sub-Total	4,395	2,550.04	1,380	948	-	-	24.26	24.93	1,040	0.67
NPCL										
NAPS(2 * 220)	440	417	440	451	455	05:00	10.01	9.88	412	-0.13
RAPS-B(2 * 220)	440	376	0	0	0	-	9.02	9.02	376	0
RAPS-C(2 * 220)	440	430	0	0	0	-	10.32	10.32	430	0
Sub-Total	1,320	1,223	440	451	-	-	29.35	29.22	1,218	-0.13
NTPC										
ANTA GPS(1 * 153.2 + 3 * 88.71)	419	415	0	0	0	-	0	0.02	1	0.02
AURAIYA GPS(2 * 109.3 + 4 * 111.19)	663	665	0	0	0	-	0	0.04	2	0.04
DADRI GPS(2 * 154.51 + 4 * 130.19)	830	650	0	0	0	-	0	-	-	0
DADRI SOLAR(5)	5	0	0	0	0	-	0.02	0	0	-0.02
DADRI-I TPS(4 * 210)	840	768.6	0	0	0	-	5.14	5.04	210	-0.1
DADRI-II TPS(2 * 490)	980	923.65	0	0	0	-	12.55	13.1	546	0.55
KOLDAM HPS(4 * 200)	800	872	0	0	871	07:00	2.62	2.8	117	0.18
RIHAND-I STPS(2 * 500)	1,000	920	1,009	619	1,009	19:00	19.41	19.71	821	0.3
RIHAND-II STPS(2 * 500)	1,000	937.5	999	605	999	19:00	20.6	20.97	874	0.37
RIHAND-III STPS(2 * 500)	1,000	937.5	1,009	771	1,009	19:00	21.15	21.67	903	0.52
SINGRAULI STPS(2 * 500 + 5 * 200)	2,000	1,780	1,935	1,698	1,935	19:00	42.22	42.43	1,768	0.21
SINGRAULI SOLAR(15)	15	0	0	0	0	-	0.02	0.02	1	0
TANDA TPS STAGE-II(1 * 660)	660	622.05	651	403	651	19:00	12.63	12.94	539	0.31
UNCHAHAR I(2 * 210)	420	382.2	245	259	245	19:00	6.1	6.78	283	0.68
UNCHAHAR II TPS(2 * 210)	420	382.2	252	253	252	19:00	6.04	6.89	287	0.85
UNCHAHAR III TPS(1 * 210)	210	191.1	135	131	135	19:00	3.06	3.39	141	0.33
UNCHAHAR IV TPS(1 * 500)	500	471.25	312	319	312	19:00	8.44	8.88	370	0.44
UNCHAHAR SOLAR(10)	10	0	0	0	0	-	0.03	0.04	2	0.01
Sub-Total	11,772	10,918.05	6,547	5,058	-	-	160.03	164.72	6,865	4.69
SJVNL										
NATHPA-JHAKRI HPS(6 * 250)	1,500	1,605	272	0	1,329	18:00	6.2	6.27	261	0.07
RAMPUR HEP(6 * 68.67)	412	442	148	0	375	18:00	1.73	1.81	75	0.08
Sub-Total	1,912	2,047	420	0	-	-	7.93	8.08	336	0.15
THDC										
KOTESHWAR HPS(4 * 100)	400	300	103	68	305	07:00	2.96	2.95	123	-0.01
TEHRI HPS(4 * 250)	1,000	1,060	987	0	998	07:00	8.25	8.33	347	0.08
Sub-Total	1,400	1,360	1,090	68	-	-	11.21	11.28	470	0.07
Total	25,064	20,812.59	11,987	7,223			260.59	266.17	11,093	5.58

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	94	0	94	09:00	0.49	0.51	21	0.02
BUDHIL HPS (IPP)(2 * 35)	70	0	0	0	60	08:00	0.18	0.18	8	0
KARCHAM WANGTOO HPS(4 * 250)	1,000	0	0	0	750	07:00	3.56	3.61	150	0.05
MALANA2(2 * 50)	100	0	0	0	78	10:00	0	0.24	10	0.24
SAINJ HEP(2 * 50)	100	0	100	0	100	03:30	0.4	0.41	17	0.01
SHREE CEMENT (IPP) TPS(2 * 150)	300	0	296	210	297	08:00	6.39	6.26	261	-0.13
Sub-Total	1,762	0	490	210	-	-	11.02	11.21	467	0.19
SOLAR IPP										
ACME CHITTORGARH SOLAR ENERGY PVT LTD(1 * 250)	250	0	0	0	153	13:12	0.83	0.76	32	-0.07
AZURE POWER INDIA PVT LTD.(4 * 50)	200	0	0	0	178	12:45	1.08	0.85	35	-0.23
AZURE POWER THIRTY FOUR PRIVATE LTD(1 * 130)	130	0	0	0	128	12:23	0.75	0.66	28	-0.09
CLEAN SOLAR POWER (BHADLA) PVT LTD(1 * 300)	300	0	0	0	93	12:34	0.6	0.46	19	-0.14
MAHOBA SOLAR (UP) PRIVATE LTD(1 * 250)	250	0	0	0	191	13:30	1.11	0.97	40	-0.14
RENEW SOLAR POWER PVT LTD(50)	50	0	0	0	49	12:55	0.27	0.23	10	-0.04
RENEW SOLAR POWER PVT LTD. BIKANER(1 * 250)	250	0	0	0	215	12:50	1.18	1.17	49	-0.01
SB ENERGY FOUR PVT LTD(2 * 100)	200	0	0	0	200	12:40	1.04	0.96	40	-0.08
TATA POWER RENEWABLE ENERGY LTD(1 * 150)	150	0	0	0	124	14:14	0.72	0.73	30	0.01
Sub-Total	1,780	0	0	0	-	-	7.58	6.79	283	-0.79
Total	3,542	0	490	210			18.6	18	750	-0.6

Summary Section					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Total State Control Area Generation	55,603	20,825	16,246	488.86	20,369
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		11,288	5,688	233.21	16,507
Total Regional Availability(Gross)	84,209	44,590	29,367	1,006.24	48,717

Total Hydro Generation					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Regional Entities Hydro	12,734	4,892	1,429	72.68	3,028
State Control Area Hydro	6,289	1,415	898	36.44	1,518
Total Regional Hydro	19,023	6,307	2,327	109.12	4,546

Total Renewable Generation					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Regional Entities Renewable	1,810	0	0	6.85	285
State Control Area Renewable	10,596	1,181	955	46.81	1,950
Total Regional Renewable	12,406	1,181	955	53.66	2,235

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	-	-	-	-	-	-	-
2	132KV-Karmnasa (PG)-Sahupuri(UP)	-	-	-	-	0.96	0	0.96
3	132KV-Rihand-Sonnagar (PG)	-	-	-	-	0	0.59	-0.59
4	220KV-Pusauli (PG)-Sahupuri(UP)	-39	-48	109	0	1.77	0	1.77
5	400KV-Biharsharif (PG)-Balia(PG)	208	93	453	0	5.39	0	5.39
6	400KV-Biharsharif (PG)-Varanasi(PG)	8	14	362	54	2.2	0	2.2
7	400KV-Motihari (DMT)-Gorakhpur(UP)	-	-	-	-	-	-	-
8	400KV-Muzaffarpur (PG)-Gorakhpur(UP)	152	60	796	0	6.21	0	6.21
9	400KV-Patna (PG)-Balia(PG)	722	362	936	0	15.59	0	15.59
10	400KV-Sasaram-Allahabad (PG)	-87	-96	171	0	2.54	0	2.54
11	400KV-Sasaram-Varanasi (PG)	-206	-197	223	0	4.57	0	4.57
12	765KV-Fatehpur (PG)-Sasaram.	-	-24	405	98	3.53	0	3.53
13	765KV-Gaya (PG)-Balia(PG)	413	210	463	0	8.12	0	8.12
14	765KV-Gaya (PG)-Varanasi(PG)	-433	-178	1,007	0	11.35	0	11.35
15	HVDC800KV-Alipurduar-Agra (PG)	500	150	0	500	0	4.77	-4.77
Sub-Total EAST REGION		1,238	346	4,925	652	62.23	5.36	56.87
Import/Export between NORTH_EAST REGION and NORTH REGION								
1	HVDC800KV-BiswanathCharialli-Agra (PG)	0	0	0	300	0	0.17	-0.17
Sub-Total NORTH_EAST REGION		0	0	0	300	0	0.17	-0.17
Import/Export between WEST REGION and NORTH REGION								
1	220KV-Auraiya (NT)-Malanpur(PG)	-20	-60	-	140	0	1.34	-1.34

Import/Export between WEST REGION and NORTH REGION								
2	220KV-Bhanpur-Modak	68	-3	68	14	0.5	0	0.5
3	220KV-Ranpur-Bhanpur	31	-41	31	72	0	0.74	-0.74
4	400KV-RAPS C (NP)-Sujalpur	-	-	-	-	-	-	-
5	400KV-Vindhyachal (PG)-Rihand(NT)	963	576	-	969	0	21.67	-21.67
6	400KV-Zerda (PG)-Bhinmal(PG)	34	-25	312	172	0.66	0	0.66
7	400KV-Zerda (PG)-Kankroli(RJ)	-4	-77	102	96	0	0.48	-0.48
8	765KV-0rai-Gwalior (PG)	-516	-229	-	-683	0	10.88	-10.88
9	765KV-0rai-Jabalpur	1,292	899	1,902	-	33.94	0	33.94
10	765KV-0rai-Satna	1,243	987	1,483	-	31.07	0	31.07
11	765KV-Chittorgarh-Banaskata D/C	-415	-44	771	54	5.52	0	5.52
12	765KV-Gwalior (PG)-Agra(PG)	2,418	1,566	2,457	0	49.83	0	49.83
13	765KV-Phagi (RJ)-Gwalior(PG)	960	292	1,688	-	22.18	0	22.18
14	HVDC500KV-Mundra (JH)-Mohindergarh(JH)	1,996	1,001	2,304	0	39.51	0	39.51
15	HVDC500KV-Vindhyachal (PG)-Vindhaychal B/B	-500	-500	250	500	0.72	9.35	-8.64
16	HVDC800KV-Champa (PG)-Kurukshetra(PG)(PG)	2,500	1,000	2,500	-	37.05	0	37.05
Sub-Total WEST REGION		10,050	5,342	13,868	1,334	220.98	44.46	176.51
TOTAL IR EXCHANGE		11,288	5,688	18,793	2,286	283.21	49.99	233.21

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	43.33	5.82	10.75	59.9	56.87	-3.03
NR-WR	157.18	-15.68	57.53	199.03	176.51	-22.52
Total	200.51	-9.86	68.28	258.93	233.21	-25.72

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)	52.1	47.4		57		1.2147	-1.2147

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	.4	11	49.2	67.7	17	4.1	.1	21.3

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

Maximum		Minimum		Average	Freq Variation	Standard	Freq. in 15 mnt blk		Freq Dev Index
Frequency	Time	Frequency	Time	Frequency	Index	Deviation	Max.	Min.	(% of Time)
50.22	00:00:20	49.76	16:18:30	49.99	0.049	0.07	50.13	49.81	32.3

6.Voltage Profile: 400kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index
					< 380	< 390	> 420	> 430	(% of time)
Abdullapur(PG) - 400KV	431	02:55	409	10:35	0	0	63.54	4.51	63.54
Amritsar(PG) - 400KV	428	02:25	413	09:40	0	0	69.44	0	69.44
Ballabgarh(PG) - 400KV	424	02:55	400	09:40	0	0	21.18	0	21.18
Bareilly II(PG) - 400KV	424	03:15	406	09:40	0	0	25	0	25
Bareilly(UP) - 400KV	425	02:55	407	09:40	0	0	27.43	0	27.43
Baspa(HP) - 400KV	426	21:15	412	09:40	0	0	68.06	0	68.06
Bassi(PG) - 400KV	421	04:00	393	09:45	0	0	3.13	0	3.13
Bawana(DTL) - 400KV	433	02:55	413	10:40	0	0	79.17	17.36	79.17
Dadri HVDC(PG). - 400KV	427	02:55	406	09:40	.69	.69	25.35	0	26.04
Gorakhpur(PG) - 400KV	425	02:55	407	10:15	0	0	26.39	0	26.39
Hisar(PG) - 400KV	426	02:55	404	09:45	0	0	38.54	0	38.54
Kanpur(PG) - 400KV	421	02:55	406	09:45	0	0	6.94	0	6.94
Kashipur(UT) - 400KV	402	00:00	402	00:00	0	0	0	0	0
Kishenpur(PG) - 400KV	421	03:00	408	09:50	0	0	15.63	0	15.63
Moga(PG) - 400KV	419	02:25	404	09:45	0	0	0	0	0
Nallagarh(PG) - 400KV	426	21:15	412	09:40	0	0	68.06	0	68.06
Rihand HVDC(PG) - 400KV	413	01:25	406	10:10	1.39	1.39	0	0	1.39

Rihand(NT) - 400KV	411	01:25	404	10:10	.69	.69	0	0	.69

6.1 Voltage Profile: 765kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index
					< 728	< 742	> 800	> 820	
Anta RS(RJ) - 765KV	795	00:00	766	09:55	0	0	0	0	0
Balia(PG) - 765KV	795	02:30	766	10:10	0	0	0	0	0
Bareilly II(PG) - 765KV	808	02:55	773	09:40	0	0	26.04	0	26.04
Bhiwani(PG) - 765KV	800	18:30	767	09:45	0	0	0	0	0
Fatehpur(PG) - 765KV	790	18:30	758	08:15	0	0	0	0	0
Jhatikara(PG) - 765KV	798	02:55	762	09:40	0	0	0	0	0
Lucknow II(PG) - 765KV	804	02:55	771	09:40	0	0	14.58	0	14.58
Meerut(PG) - 765KV	803	18:30	767	19:20	0	0	7.64	0	7.64
Moga(PG) - 765KV	774	00:00	774	00:00	0	0	0	0	0
Phagi(RJ) - 765KV	796	21:00	759	09:45	0	0	0	0	0
Unnao(UP) - 765KV	784	02:55	754	09:40	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	-596.84	98.78	0	-596.84	592.68	0	62.3	-16.15	20.14	66.28
HARYANA	-333.77	58.59	0	-329.73	153.41	0	81.04	-7.67	1.84	75.21
RAJASTHAN	-10.3	-57.12	0	-10.3	134.9	0	54.42	6.59	9.5	70.5
DELHI	-312.49	-295.29	0	-311.55	914.84	0	60.73	-8.02	16.32	69.03
UTTAR PRADESH	-29.81	96.22	0	259.13	568.4	0	136.38	-6.29	5.59	135.68
UTTARAKHAND	409.03	0	0	340.58	199.28	0	10.16	8.72	3.46	22.33
HIMACHAL PRADESH	519.32	24.32	0	514.57	-509.59	0	9.64	15.34	-1.71	23.28
CHANDIGARH	0	0	0	0	0	0	3.89	0	0.5	4.38
J&K(UT) & Ladakh(UT)	-23.7	148.17	0	-23.7	582.8	0	33.67	-0.57	13.51	46.62
TOTAL	-378.56	73.67	0	-157.84	2,636.72	0	452.23	-8.05	69.15	513.31

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	3,654.15	2,006.04	-596.84	-901.83	1,693.35	0	0	0
HARYANA	4,604.62	2,072.69	-219.52	-333.77	173.71	-558.08	0	0
RAJASTHAN	3,703.46	908.11	911.47	-10.3	1,840.21	-589.67	0	0
DELHI	3,204.72	1,847.82	-281.55	-403.32	1,889.49	-378.17	0	0
UTTAR PRADESH	6,874.74	4,440.89	259.13	-781.39	2,313.97	-114.89	0	0
UTTARAKHAND	800.22	199.93	409.03	340.58	314.07	0	0	0
HIMACHAL PRADESH	1,368.57	101.78	768.8	496.52	289.49	-826.04	0	0
CHANDIGARH	283.67	110.02	0	0	98.28	-60.59	0	0
J&K(UT) & Ladakh(UT)	1,879.74	840.35	-23.7	-23.7	839.63	148.17	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	500.85	1,127	504.29	1,272	184.99	402.1
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	611.19	5	611.23	5	193	195.42
Pong	384.05	426.72	1,084	417.21	768	415.1	681	67.59	170.35
RPS	343.81	352.8	175.66	-	-	-	-	-	0
RSD	487.91	527.91	390.3	516.54	286	516.25	277	78.77	318.79
Rihand	252.98	268.22	860.5	-	-	-	-	-	0
Tehri	740.04	829.79	1,291.49	811.86	839	812.16	845	79.73	193
TOTAL	-	-	-	-	3,025	-	3,080	604.08	1,279.66

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	0.35
Simultaneous	0

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

Rihand-Dadri	0

10. Zero Crossing Violations

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
CHANDIGARH	2	26
DELHI	1	20
HARYANA	1	13
HIMACHAL PRADESH	2	21
J&K(UT) & Ladakh(UT)	2	16
PUNJAB	2	20
RAJASTHAN	3	27
UTTAR PRADESH	0	10
UTTARAKHAND	4	25

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