



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

Power Supply Position in Northern Region For 01-Dec-2019

Date of Reporting:02-Dec-2019

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
38,535	475	39,009	50.08	27,213	286	27,499	50.01	794	12.36

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	34.43	11.51	0	2.49	0	1.05	49.48	44.97	43.4	-1.57	92.88	0	92.88
HARYANA	8.95	0.8	0	0.13	0	0.8	10.68	86.92	87.06	0.14	97.74	0	97.74
RAJASTHAN	112.24	2.07	2	15.74	17.28	4.69	154.03	56.73	56.23	-0.5	210.26	0	210.26
DELHI	0	0	10.74	0	0	0.84	11.58	47.4	45.63	-1.77	57.21	0	57.21
UTTAR PRADESH	113.4	6.5	0	0.4	0	19.2	139.5	93.27	93.07	-0.2	233.65	1.08	232.57
UTTARAKHAND	0	8.43	2.39	0.44	0	0.29	11.54	19.07	19.33	0.26	30.87	0	30.87
HIMACHAL PRADESH	0	4.4	0	0	0	3.37	7.77	18.66	18.03	-0.63	26.78	0.98	25.8
JAMMU & KASHMIR	0	7.52	0	0	0	0	7.52	36.25	36.25	0	54.07	10.3	43.77
CHANDIGARH	0	0	0	0	0	0	0	2.86	3.11	0.25	3.11	0	3.11
Region	269.02	41.23	15.13	19.2	17.28	30.24	392.1	406.13	402.11	-4.02	806.57	12.36	794.21

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	4,410	0	-149	-663	3,043	0	-17	-663
HARYANA	4,894	0	107	21	3,381	0	97	-44
RAJASTHAN	9,027	0	1	-79	6,564	0	85	-814
DELHI	2,824	0	-79	-251	1,531	0	-10	-778
UTTAR PRADESH	12,689	0	142	29	8,977	0	106	106
UTTARAKHAND	1,436	0	-72	110	1,138	0	16	326
HIMACHAL PRADESH	1,192	0	-139	-377	875	0	-10	434
JAMMU & KASHMIR	1,898	475	-124	-42	1,621	286	71	401
CHANDIGARH	165	0	13	-81	84	0	13	-25
Region	38,535	475	-300	-1,333	27,214	286	351	-1,057

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	4,712	9:00	0	4,712	4,712	9:00	0	4,712	3,043	3:00
HARYANA	4,894	19:00	0	4,894	4,894	19:00	0	4,894	3,328	24:00
RAJASTHAN	11,369	10:00	0	11,369	11,369	10:00	0	11,369	6,355	4:00
DELHI	3,249	12:00	0	3,249	3,249	12:00	0	3,249	1,484	5:00
UP	12,689	19:00	0	12,689	12,689	19:00	0	12,689	7,484	17:00
UTTARAKHAND	1,727	9:00	0	1,727	1,727	9:00	0	1,727	1,037	24:00
HP	1,462	9:00	0	1,462	1,462	9:00	0	1,462	814	24:00
J&K	1,979	8:00	495	2,474	2,474	8:00	495	1,979	1,554	16:00
CHANDIGARH	187	9:00	0	187	187	9:00	0	187	84	3:00
NR	38,535	19:00	475	39,009	39,009	19:00	475	38,535	27,179	4:00

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	244	244	0		6.02	251
DELHI GAS TURBINES(3 * 34 + 6 * 30)	282	39	38	0		0.94	39
PRAGATI GAS TURBINES(1 * 121.2 + 2 * 104.6)	452	156	156	0		3.78	158
RITHALA GPS(3 * 36)	108	0	0	0			
Total GAS/NAPTHA/DIESEL	2,212	439	438			10.74	448
WIND	0	0	0	0			
BIOMASS(16)	16	39	30	0		0.84	35
SOLAR(2)	2	0	0	0			
Total DELHI	2,365	478	468			11.58	483

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	379	376	0		8.95	373
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	379	376			8.95	373
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	31	14	0		0.8	33
Total HYDEL	65	31	14			0.8	33
WIND	0	0	0	0			
BIOMASS(106)	106	0	0	0		0.8	33
SOLAR(55.8)	56	0	0	0		0.13	5
Total HARYANA	4,724	410	390			10.68	444

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	60	30	110	17:00	1.28	53
MALANA (IPP) HPS(2 * 43)	86	80	0	80	19:00	0.35	15
OTHER HYDRO HP(372)	372	162	103	165	19:00	2.77	115
Total HYDEL	758	302	133			4.4	183
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0		0	0
SMALL HYDRO(486)	486	192	96	192	19:00	3.37	140
Total SMALL HYDRO	486	192	96			3.37	140
Total HP	1,244	494	229			7.77	323

JAMMU & KASHMIR							
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	237	237	0		5.69	237
OTHER HYDRO/IPP J&K(308)	308	92	53	0		1.83	76
Total HYDEL	1,208	329	290			7.52	313
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	1,496	329	290			7.52	313

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	1,228	780	1,320		26.52	1,105
TALWANDI SABO TPS(3 * 660)	1,980	368	308	438		8.05	335
Total THERMAL	5,680	1,596	1,088			34.43	1,434
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	205	171	214		4.48	187
RANJIT SAGAR POWER PLANT (4 * 150)	600	150	120	150		3.2	133
SHANAN(4 * 15 + 1 * 50)	110	30	18	33		0.53	22
UBDC(3 * 15 + 3 * 15.5)	92	39	39	45		0.96	40
OTHER HYDRO PUNJAB	0	0	0	0		2.34	98
Total HYDEL	1,161	424	348			11.51	480
WIND	0	0	0	0			
BIOMASS(303)	303	0	0	0		1.05	44
SOLAR(859)	859	0	0	450		2.49	104
Total PUNJAB	8,003	2,020	1,436			49.48	2,062

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	225	0		5.33	222
CHHABRA TPS(2 * 660 + 4 * 250)	2,320	1,855	1,557	0		42.01	1,750
GIRAL (IPP) LTPS(2 * 125)	250	0	0	0			
KALISINDH TPS(2 * 600)	1,200	0	0	0			
KAWAI TPS(2 * 660)	1,320	866	854	0		22.24	927
KOTA TPS(2 * 110 + 2 * 195 + 3 * 210)	1,240	720	724	0		17.65	735
RAJWEST (IPP) LTPS(8 * 135)	1,080	783	473	0		14.09	587
SURATGARH TPS (6 * 250)	1,500	334	350	0		8.5	354
VSLPP (IPP)(1 * 135)	135	100	113	0		2.43	101
Total THERMAL	9,295	4,884	4,296			112.25	4,676
DHOLPUR GPS(3 * 110)	330	0	0	0			
RAMGARH GPS(1 * 110 + 1 * 35.5 + 1 * 50 + 2 * 37.5)	271	80	82	0		2	83
Total GAS/NAPTHA/DIESEL	601	80	82			2	83
RAPS-A(1 * 100 + 1 * 200)	300	175	174	0		4.05	169
Total NUCLEAR	300	175	174			4.05	169
TOTAL HYDRO RAJASTHAN(550)	550	81	76	0		2.07	86
Total HYDEL	550	81	76			2.07	86
WIND	4,292	406	920	0		17.28	720
BIOMASS(102)	102	27	27	0		0.64	27
SOLAR(3045)	3,045	25	0	0		15.74	656
Total RAJASTHAN	18,185	5,678	5,575			154.03	6,417

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	621	1,024	0		20.8	867
ANPARA-C TPS(2 * 600)	1,200	592	995	0		17.9	746
ANPARA-D TPS(2 * 500)	1,000	472	469	0		10.7	446
BAJAJ ENERGY PVT LTD (IPP) TPS(10 * 45)	450	0	0	0			
BARA PPGCL TPS(3 * 660)	1,980	676	1,087	0		18.2	758
HARDUAGANJ TPS(1 * 105 + 1 * 60 + 2 * 250)	665	264	432	0		6.6	275
LALITPUR TPS(3 * 660)	1,980	1,016	1,247	0		27	1,125
MEJA TPS(1 * 660)	660	0	0	0			
OBRA TPS (2 * 94 + 5 * 200)	1,188	214	313	0		6.4	267
PARICHA TPS(2 * 110 + 2 * 210 + 2 * 250)	1,380	129	127	0		3.2	133
ROSA TPS(4 * 300)	1,200	0	0	0			
TANDA TPS(4 * 110)	440	107	94	0		2.6	108
Total THERMAL	13,773	4,091	5,788			113.4	4,725
ALAKHANANDA HEP(4 * 82.5)	330	83	85	0		2	83
VISHNUPARYAG HPS(4 * 110)	440	99	104	0		2.4	100
OTHER HYDRO UP(527)	527	26	62	0		2.1	88
Total HYDEL	1,297	208	251			6.5	271
WIND	0	0	0	0			
BIOMASS(26)	26	0	0	0			
SOLAR(798)	798	0	0	0		0.4	17
CO-GENERATION(1360)	1,360	800	800	0		19.2	800
Total OTHERs	1,360	800	800			19.2	800
Total UP	17,254	5,099	6,839			139.5	5,813

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	99	101	102	06:00	2.39	100
Total GAS/NAPTHA/DIESEL	675	99	101			2.39	100
OTHER HYDRO UK(1250)	1,250	428	257	556	07:00	8.43	351
Total HYDEL	1,250	428	257			8.43	351
WIND	0	0	0	0			
BIOMASS(127)	127	14	13	14	18:00	0.29	12
SOLAR(100)	100	0	0	90	12:00	0.44	18
SMALL HYDRO(180)	180	0	0	0			
Total SMALL HYDRO	180	0	0			0	0
Total UTTARAKHAND	2,332	541	371			11.55	481

(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	557	554	654	07:54	12.47	12.52	522	0.05
Sub-Total	1,500	1,413.75	557	554	-	-	12.47	12.52	522	0.05
BBMB										
BHAKRA HPS(2 * 108 + 3 * 126 + 5 * 157)	1,379	727	751	369	751	19:00	11.25	11.4	475	0.15
DEHAR HPS(6 * 165)	990	465	480	0	480	19:00	3.96	4.1	171	0.14
PONG HPS(6 * 66)	396	312	318	132	318	19:00	5.14	5.23	218	0.09
Sub-Total	2,765	1,504	1,549	501	-	-	20.35	20.73	864	0.38
NHPC										
BAIRASIUL HPS(3 * 60)	180	120	122	0	123	07:00	0.93	0.94	39	0.01
CHAMERA HPS(3 * 180)	540	540	21	0	540	06:30	2.4	2.5	104	0.1
CHAMERA II HPS(3 * 100)	300	100	100	0	100	19:00	1.5	1.51	63	0.01
CHAMERA III HPS(3 * 77)	231	235	233	0	234	18:00	0.91	0.99	41	0.08
DHAULIGANGA HPS(4 * 70)	280	290	269	0	281	07:00	1.33	1.43	60	0.1
DULHASTI HPS(3 * 130)	390	328	319	0	329	21:00	4.25	4.25	177	0
KISHANGANGA(3 * 110)	330	222	222	0	222	07:00	1.4	1.35	56	-0.05
PARBATI III HEP(4 * 130)	520	257	258	0	259	18:30	0.61	0.64	27	0.03
SALAL HPS(6 * 115)	690	575	576	138	576	19:00	5.21	5.75	240	0.54
SEWA-II HPS(3 * 40)	120	130.56	122	0	124	17:00	1.2	1.2	50	0
TANAKPUR HPS(1 * 31.42 + 2 * 31.4)	94	35	38	63	65	09:00	0.94	0.98	41	0.04
URI HPS(4 * 120)	480	475	468	477	480	01:00	11.42	11.5	479	0.08
URI-II HPS(4 * 60)	240	225	240	235	241	17:00	5.4	5.69	237	0.29
Sub-Total	4,395	3,532.56	2,988	913	-	-	37.5	38.73	1,614	1.23
NPCL										
NAPS(2 * 220)	440	402	446	449	452	07:00	9.65	9.82	409	0.17
RAPS-B(2 * 220)	440	402	0	0	0	-	9.65	9.65	402	0
RAPS-C(2 * 220)	440	420	0	0	0	-	9.56	9.56	398	0
Sub-Total	1,320	1,224	446	449	-	-	28.86	29.03	1,209	0.17
NTPC										
ANTA GPS(1 * 153.2 + 3 * 88.71)	419	256	0	0	0	-	0	0.03	1	0.03
AURAIYA GPS(2 * 109.3 + 4 * 111.19)	663	505	0	0	0	-	0	-	-	0
DADRI GPS(2 * 154.51 + 4 * 130.19)	830	835	0	0	0	-	0	0.07	3	0.07
DADRI SOLAR(5)	5	0	0	0	3	11:45	0.02	0.02	1	0
DADRI-I TPS(4 * 210)	840	768.6	101	107	101	19:00	2.54	2.42	101	-0.12
DADRI-II TPS(2 * 490)	980	928.54	253	280	253	19:00	6.13	6.29	262	0.16
KOLDAM HPS(4 * 200)	800	872	424	0	868	07:00	3.3	3.44	143	0.14
RIHAND-I STPS(2 * 500)	1,000	460	500	500	500	19:00	11.01	10.92	455	-0.09
RIHAND-II STPS(2 * 500)	1,000	937.5	999	996	999	19:00	22.5	22.7	946	0.2
RIHAND-III STPS(2 * 500)	1,000	937.5	993	994	993	19:00	22.5	22.91	955	0.41
SINGRAULI STPS(2 * 500 + 5 * 200)	2,000	1,190	1,326	1,306	1,326	19:00	28.53	28.7	1,196	0.17
SINGRAULI SOLAR(15)	15	0	0	0	0	-	0.05	0.04	2	-0.01
TANDA TPS STAGE-II(1 * 660)	660	622.05	634	384	634	19:00	11.62	11.7	488	0.08
UNCHAHAH I(2 * 210)	420	382.2	239	243	239	19:00	5.1	5.88	245	0.78
UNCHAHAH II TPS(2 * 210)	420	382.2	262	236	262	19:00	5.07	5.94	248	0.87
UNCHAHAH III TPS(1 * 210)	210	191.1	123	121	123	19:00	2.55	2.93	122	0.38
UNCHAHAH IV TPS(1 * 500)	500	0	0	0	0	-	0	-	-	0
UNCHAHAH SOLAR(10)	10	0	0	0	0	-	0.04	0	0	-0.04
Sub-Total	11,772	9,267.69	5,854	5,167	-	-	120.96	123.99	5,168	3.03
SJVNL										
NATHPA-JHAKRI HPS(6 * 250)	1,500	1,605	1,222	0	1,563	07:00	8.5	8.52	355	0.02
RAMPUR HEP(6 * 68.67)	412	442	179	0	433	07:00	2.36	2.45	102	0.09
Sub-Total	1,912	2,047	1,401	0	-	-	10.86	10.97	457	0.11
THDC										
KOTESHWAR HPS(4 * 100)	400	304	305	95	305	19:00	2.7	2.68	112	-0.02
TEHRI HPS(4 * 250)	1,000	1,060	996	0	1,027	07:00	7.75	7.82	326	0.07
Sub-Total	1,400	1,364	1,301	95	-	-	10.45	10.5	438	0.05
Total	25,064	20,353	14,096	7,679			241.45	246.47	10,272	5.02

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	194	0	196	18:00	0.6	0.62	26	0.02
BUDHIL HPS (IPP)(2 * 35)	70	0	35	0	70	15:00	0.24	0.26	11	0.02
KARCHAM WANGTOO HPS(4 * 250)	1,000	0	1,000	0	1,000	19:00	4.74	4.7	196	-0.04
MALANA2(2 * 50)	100	0	0	0	105	08:00	0.3	0.32	13	0.02
SAINJ HEP(2 * 50)	100	0	100	0	100	18:30	0.49	0.51	21	0.02
SHREE CEMENT (IPP) TPS(2 * 150)	300	0	0	0	0	-	0	-	-	0
Sub-Total	1,762	0	1,329	0	-	-	6.37	6.41	267	0.04
SOLAR IPP										
ACME CHITTORGARH SOLAR ENERGY PVT LTD(1 * 250)	250	0	0	0	135	12:11	0.74	0.86	36	0.12
AZURE POWER INDIA PVT LTD.(4 * 50)	200	0	0	0	194	13:00	1.11	1.29	54	0.18
AZURE POWER THIRTY FOUR PRIVATE LTD(1 * 130)	130	0	0	0	128	11:01	0.81	0.92	38	0.11
MAHOBASOLAR (UP) PRIVATE LTD(1 * 250)	250	0	0	0	206	13:00	1.33	1.42	59	0.09
RENEW SOLAR POWER PVT LTD(50)	50	0	0	0	50	11:17	0.31	0.34	14	0.03
RENEW SOLAR POWER PVT LTD. BIKANER(1 * 250)	250	0	0	0	210	12:03	1.22	1.35	56	0.13
SB ENERGY FOUR PVT LTD(2 * 100)	200	0	0	0	200	12:40	1.24	1.38	58	0.14
TATA POWER RENEWABLE ENERGY LTD(1 * 150)	150	0	0	0	154	11:08	0.85	1.07	45	0.22
Sub-Total	1,480	0	0	0	-	-	7.61	8.63	360	1.02
Total	3,242	0	1,329	0			13.98	15.04	627	1.06
Summary Section										
	Inst. Capacity		PEAK	OFF-PEAK		Day Energy		Day AVG.		
Total State Control Area Generation	55,603		15,049	15,598		392.11		16,338		
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			7,178	8,053		166.33		8,789		
Total Regional Availability(Gross)	83,909		37,652	31,330		819.95		36,023		
Total Hydro Generation										
	Inst. Capacity		PEAK	OFF-PEAK		Day Energy		Day AVG.		
Regional Entities Hydro	12,734		8,992	1,509		90.78		3,782		
State Control Area Hydro	6,289		1,803	1,369		41.23		1,718		
Total Regional Hydro	19,023		10,795	2,878		132.01		5,500		
Total Renewable Generation										
	Inst. Capacity		PEAK	OFF-PEAK		Day Energy		Day AVG.		
Regional Entities Renewable	1,510		0	0		8.69		362		
State Control Area Renewable	10,596		703	1,086		43.47		1,811		
Total Regional Renewable	12,106		703	1,086		52.16		2,173		
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)	-	-	-	-	-	-	-		
3	132KV-Rihand-Sonnagar (PG)	-	-	-	-	0	0.43	-0.43		
4	220KV-Pusauli (PG)-Sahupuri(UP)	-46	-19	-75	0	0.79	0	0.79		
5	400KV-Biharsharif (PG)-Baliala(PG)	196	282	282	0	5.43	0	5.43		
6	400KV-Biharsharif (PG)-Varanasi(PG)	-84	-94	309	0	3.84	0	3.84		
7	400KV-Motihari (DMT)-Gorakhpur(UP)	-	-	-	-	-	-	-		
8	400KV-Muzaffarpur (PG)-Gorakhpur(UP)	458	468	964	0	13.61	0	13.61		
9	400KV-Patna (PG)-Baliala(PG)	645	737	737	0	14.83	0	14.83		
10	400KV-Sasaram-Allahabad (PG)	-67	-72	-123	0	1.98	0	1.98		
11	400KV-Sasaram-Varanasi (PG)	-125	-122	138	0	3.98	0	3.98		
12	765KV-Fatehpur (PG)-Sasaram.	170	102	0	473	5.71	0	5.71		
13	765KV-Gaya (PG)-Baliala(PG)	247	311	311	0	5.93	0	5.93		
14	765KV-Gaya (PG)-Varanasi(PG)	-388	-309	791	0	10.89	0	10.89		
15	HVDC800KV-Alipurduar-Agra (PG)	-	-	-	-	-	-	-		
Sub-Total EAST REGION		1,006	1,284	3,334	473	66.99	0.43	66.56		
Import/Export between NORTH_EAST REGION and NORTH REGION										
1	HVDC800KV-BiswanathCharialli-Agra (PG)	300	500	0	500	0	8.95	-8.95		
Sub-Total NORTH_EAST REGION		300	500	0	500	0	8.95	-8.95		
Import/Export between WEST REGION and NORTH REGION										
1	220KV-Auraiya (NT)-Malanpur(PG)	-10	-5	-	151	0	1.34	-1.34		
2	220KV-Bhanpur-Modak	68	-1	92	5	0.97	0	0.97		

Import/Export between WEST REGION and NORTH REGION								
3	220KV-Ranpur-Bhanpur	1	-65	5	79	0	1.06	-1.06
4	400KV-RAPS C (NP)-Sujalpur	-	-	-	-	-	-	-
5	400KV-Vindhyachal (PG)-Rihand(NT)	932	931	-	975	0	22.9	-22.9
6	400KV-Zerda (PG)-Bhinmal(PG)	142	-59	180	102	0.74	0	0.74
7	400KV-Zerda (PG)-Kankroli(RJ)	-	-	-	-	-	-	-
8	765KV-0rai-Gwalior (PG)	-319	-312	0	511	0	9.08	-9.08
9	765KV-0rai-Jabalpur	797	1,021	1,372	0	23.67	0	23.67
10	765KV-0rai-Satna	966	1,144	1,213	0	26.1	0	26.1
11	765KV-Chittorgarh-Banaskata D/C	-464	-81	617	127	5.38	0	5.38
12	765KV-Gwalior (PG)-Agra(PG)	1,618	1,732	1,888	-	32.75	0	32.75
13	765KV-Phagi (RJ)-Gwalior(PG)	674	613	1,338	-	19.88	0	19.88
14	HVDC500KV-Mundra (JH)-Mohindergarh(JH)	1,097	1,301	1,303	0	29.16	0	29.16
15	HVDC500KV-Vindhyachal (PG)-Vindhaychal B/B	-250	-250	0	250	0	6.05	-6.05
16	HVDC800KV-Champa (PG)-Kurukshetra(PG)(PG)	620	300	620	0	10.5	0	10.5
Sub-Total WEST REGION		5,872	6,269	8,628	2,200	149.15	40.43	108.72
TOTAL IR EXCHANGE		7,178	8,053	11,962	3,173	216.14	49.81	166.33

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	55.95	3.84	9.24	69.03	66.56	-2.47
NR-WR	130.31	-20.7	-1.75	107.86	108.72	0.86
Total	186.26	-16.86	7.49	176.89	166.33	-10.56

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)	0	0		0		0	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	0	4.7	44.1	76.9	15.6	2.5	.2	18.4

<-----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.	
50.22	06:02:30	49.79	16:42:50	50	0.031	0.056	50.1	49.88	23.1

6.Voltage Profile: 400kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
					< 380	< 390	> 420	> 430	
Abdullapur(PG) - 400KV	431	14:05	417	09:45	0	0	91.67	.69	91.67
Amritsar(PG) - 400KV	428	02:55	416	09:45	0	0	66.67	0	66.67
Ballabgarh(PG) - 400KV	425	04:00	409	09:45	0	0	58.68	0	58.68
Bareilly II(PG) - 400KV	423	15:15	404	09:45	0	0	27.08	0	27.08
Bareilly(UP) - 400KV	424	15:05	405	09:45	0	0	44.79	0	44.79
Baspa(HP) - 400KV	426	13:35	418	17:40	0	0	81.25	0	81.25
Bassi(PG) - 400KV	404	00:00	404	00:00	0	0	0	0	0
Bawana(DTL) - 400KV	431	23:55	416	09:45	0	0	88.54	8.33	88.54
Dadri HVDC(PG). - 400KV	428	04:00	412	09:45	.35	.35	76.39	0	76.74
Gorakhpur(PG) - 400KV	423	15:05	408	09:20	0	0	25.35	0	25.35
Hisar(PG) - 400KV	426	20:40	410	09:45	0	0	60.76	0	60.76
Kanpur(PG) - 400KV	415	00:00	415	00:00	0	0	0	0	0
Kashipur(UT) - 400KV	402	00:00	402	00:00	0	0	0	0	0
Kishenpur(PG) - 400KV	416	00:00	416	00:00	0	0	0	0	0
Moga(PG) - 400KV	401	00:00	401	00:00	0	0	0	0	0
Nallagarh(PG) - 400KV	426	13:35	418	17:40	0	0	81.25	0	81.25
Rihand HVDC(PG) - 400KV	412	15:20	409	19:30	90.97	90.97	0	0	90.97
Rihand(NT) - 400KV	411	02:55	404	13:35	0	0	0	0	0

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index
					< 728	< 742	> 800	> 820	
Anta RS(RJ) - 765KV	791	03:00	772	10:20	0	0	0	0	0
Balia(PG) - 765KV	791	14:05	768	09:20	0	0	0	0	0
Bareilly II(PG) - 765KV	806	15:15	770	09:45	0	0	31.6	0	31.6
Bhiwani(PG) - 765KV	800	15:05	773	09:25	0	0	1.74	0	1.74
Fatehpur(PG) - 765KV	788	14:05	755	19:15	0	0	0	0	0
Jhatikara(PG) - 765KV	799	15:05	769	09:45	0	0	0	0	0
Lucknow II(PG) - 765KV	802	15:15	772	09:20	0	0	4.17	0	4.17
Meerut(PG) - 765KV	794	04:00	762	10:10	0	0	0	0	0
Moga(PG) - 765KV	782	04:00	758	09:45	0	0	0	0	0
Phagi(RJ) - 765KV	800	15:20	768	09:25	0	0	1.04	0	1.04
Unnao(UP) - 765KV	785	15:05	757	09:45	0	0	0	0	0

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	-663.48	0	0	-663.48	0	0	61.96	-17.77	0.78	44.97
HARYANA	-197.2	153.42	0	-105.2	126.35	0	88.22	-4.33	3.03	86.92
RAJASTHAN	-50.85	-763.29	0	-50.85	-28.3	0	57.9	1.99	-3.16	56.73
DELHI	-388.08	-389.7	0	-270.24	19.04	0	54.6	-9.07	1.88	47.4
UTTAR PRADESH	-40.51	146.7	0	-4.43	33.36	0	99.92	-7.04	0.39	93.27
UTTARAKHAND	326.27	0	0	262.91	-152.68	0	12.05	6.82	0.22	19.07
HIMACHAL PRADESH	467.68	-33.77	0	144.8	-521.78	0	10.98	10.84	-3.16	18.66
JAMMU & KASHMIR	-40.89	441.99	0	-41.62	0	0	28.11	-0.99	9.13	36.25
CHANDIGARH	0	-25.32	0	0	-81.04	0	3.64	0	-0.78	2.86
TOTAL	-587.06	-469.97	0	-728.11	-605.05	0	417.38	-19.55	8.33	406.13

State	ISGS/(LT+MT) Schedule		Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
PUNJAB	3,584.52	2,049.95	-663.48	-971.77	293.16	0	0	0
HARYANA	4,618.96	2,906.12	-105.2	-197.2	159.38	-116.98	0	0
RAJASTHAN	3,508.5	1,428.43	483.84	-50.85	383.86	-1,098.98	0	0
DELHI	2,717.28	1,776.92	-270.24	-408.29	786.05	-389.7	0	0
UTTAR PRADESH	5,835.12	2,711.05	-4.43	-597.38	161.29	-745.08	0	0
UTTARAKHAND	813.71	299.15	326.27	262.91	341.14	-188.44	0	0
HIMACHAL PRADESH	1,342.2	136.47	584.94	133.83	43.71	-823.78	0	0
JAMMU & KASHMIR	1,977.82	821.59	-40.89	-41.62	540.21	-25.45	0	0
CHANDIGARH	254.41	100.49	0	0	0	-99.98	0	0

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	504.68	1,299	507.91	1,441	214.78	310.72
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	611.04	5	610.5	5	173	177.23
Pong	384.05	426.72	1,084	418.97	848	419.22	848	88.83	305.91
RPS	343.81	352.8	175.66	-	-	-	-	-	0
RSD	487.91	527.91	390.3	519.98	312	520.93	322	61.5	125.04
Rihand	252.98	268.22	860.5	-	-	-	-	-	0
Tehri	740.04	829.79	1,291.49	820.52	1,013	821.85	1,041	56.26	173
TOTAL	-	-	-	-	3,477	-	3,657	594.37	1,091.9

(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	4	25
DELHI	5	70
HARYANA	0	11
HIMACHAL PRADESH	1	22
JAMMU & KASHMIR	1	13
PUNJAB	1	17
RAJASTHAN	1	14
UTTAR PRADESH	0	12
UTTARAKHAND	2	17

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