



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

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

Date of Reporting:02-Jun-2020

1. Regional Availability/Demand:

Evening Peak (20:00) MW				Off-Peak (03:00) MW				Day Energy(Net MU)	
Demand Met	Shortage	Requirement	Freq (Hz)	Demand Met	Shortage	Requirement	Freq (Hz)	Demand Met	Shortage
43,257	489	43,746	50.1	35,580	229	35,809	50.01	945	10.03

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	9.72	16.75	0	3.6	0	3.32	33.38	102.41	101.56	-0.85	134.94	0	134.94
HARYANA	4.44	0.9	4	0.18	0	0.63	10.14	98.24	99.23	0.99	109.37	0	109.37
RAJASTHAN	95.7	0	1.65	18.18	18.94	4.26	138.72	61.52	58.66	-2.86	197.38	0	197.38
DELHI	0	0	11.13	0	0	0.79	11.91	64.74	62.66	-2.08	74.57	0	74.57
UTTAR PRADESH	128.94	13.77	0	0	0	4.8	147.51	183.43	183.51	0.08	331.24	0.22	331.02
UTTARAKHAND	0	17.88	0	0.81	0	0.11	18.79	11.58	10.65	-0.93	29.44	0	29.44
HIMACHAL PRADESH	0	12.62	0	0	0	11.65	24.26	-2.45	-1.52	0.93	22.74	0	22.74
J&K(UT) & Ladakh(UT)	0	23.04	0	0	0	0	23.04	18.62	18.23	-0.39	51.08	9.81	41.27
CHANDIGARH	0	0	0	0	0	0	0	4.14	3.91	-0.23	3.91	0	3.91
Region	238.8	84.96	16.78	22.77	18.94	25.56	407.75	542.23	536.89	-5.34	954.67	10.03	944.64

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

State	Evening Peak (20:00) MW				Off-Peak (03:00) MW			
	Demand Met	Shortage	UI	STOA/PX/RTM Transaction	Demand Met	Shortage	UI	STOA/PX/RTM Transaction
PUNJAB	6,106	0	-86	940	4,894	0	-32	742
HARYANA	5,074	0	164	187	3,777	0	175	193
RAJASTHAN	7,419	0	47	-219	6,899	0	156	-1,372
DELHI	3,042	0	76	545	2,832	0	23	620
UTTAR PRADESH	17,055	0	754	2,183	14,129	0	-124	2,512
UTTARAKHAND	1,480	0	30	-69	980	0	-165	-139
HIMACHAL PRADESH	948	0	178	-1,567	644	0	5	-1,387
J&K(UT) & Ladakh(UT)	1,957	489	141	-870	1,298	229	-24	-1,073
CHANDIGARH	175	0	-15	-100	127	0	-3	-80
Region	43,256	489	1,289	1,030	35,580	229	11	16

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 during at maximum demand	Requirement at the max demand met of the day	Maximum Requirement of the day	Time	Shortage during at maximum Requirement	Demand Met at maximum requiremnet	Min Demand Met	Time
PUNJAB	6,279	21:00	0	6,279	6,279	21:00	0	6,279	4,894	3:00
HARYANA	5,782	23:00	0	5,782	5,782	23:00	0	5,782	3,676	4:00
RAJASTHAN	9,815	11:00	0	9,815	9,815	11:00	0	9,815	6,401	5:00
DELHI	3,765	24:00	0	3,765	3,765	24:00	0	3,765	2,558	7:00
UP	17,818	22:00	0	17,818	17,818	22:00	0	17,818	10,803	7:00
UTTARAKHAND	1,480	20:00	0	1,480	1,480	20:00	0	1,480	945	4:00
HP	1,197	10:00	0	1,197	1,197	10:00	0	1,197	644	3:00
J&K(UT)&Ladak ..	2,032	21:00	508	2,540	2,540	21:00	508	2,032	1,298	3:00
CHANDIGARH	190	16:00	0	190	190	16:00	0	190	127	3:00
NR	45,737	23:00	428	46,164	46,164	23:00	428	45,737	34,143	6:00

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	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
BAWANA GPS( 2 * 253 + 4 * 216 )	1,370	277	267	294		6.66	278
DELHI GAS TURBINES( 3 * 34 + 6 * 30 )	282	38	38	38.46		0.91	38
PRAGATI GAS TURBINES( 1 * 121.2 + 2 * 104.6 )	452	144	151	151.9		3.57	149
RITHALA GPS( 3 * 36 )	108	0	0	0			
Total GAS/NAPTHA/DIESEL	2,212	459	456			11.14	465
WIND	0	0	0	0			
BIOMASS( 52 )	52	21	33	33.3		0.79	33
SOLAR( 2 )	2	0	0	0			
Total DELHI	2,266	480	489			11.93	498

HARIYANA							
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)( 2 * 300 )	600	172	175	278	22:00	4.44	185
JHAJJAR(CLP)( 2 * 660 )	1,320	0	0	0			
MAGNUM DIESEL (IPP)( 4 * 6.3 )	25	0	0	0			
PANIPAT TPS( 1 * 210 + 2 * 250 )	710	0	0	0			
RGTPP( KHEDAR)( 2 * 600 )	1,200	0	0	0			
Total THERMAL	3,855	172	175			4.44	185
FARIDABAD GPS( 1 * 156.07 + 2 * 137.75 )	432	165	163	196	00:00	4	167
Total GAS/NAPTHA/DIESEL	432	165	163			4	167
TOTAL HYDRO HARYANA(64.8)	65	26	23	32	06:00	0.9	38
Total HYDEL	65	26	23			0.9	38
WIND	0	0	0	0			
BIOMASS( 106 )	106	0	0	0		0.63	26
SOLAR(55.8)	56	0	0	0		0.18	8
Total HARYANA	4,514	363	361			10.15	424

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( 3 * 100 )	300	205	212	246	05:00	4.72	197
MALANA (IPP) HPS( 2 * 43 )	86	38	46	85	23:45	1.13	47
OTHER HYDRO HP( 372 )	372	284	293	0		6.76	282
Total HYDEL	758	527	551			12.61	526
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR( 1 * 18.9 )	19	0	0	8.421	13:00	0	0
SMALL HYDRO( 486 )	486	466	462	0		11.65	485
Total SMALL HYDRO	486	466	462			11.65	485
Total HP	1,263	993	1,013			24.26	1,011

J&K(UT) & LADAKH(UT)							
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( 1 * 190 )	190	0	0	0			
Total GAS/NAPTHA/DIESEL	190	0	0			0	0
BAGLIHAR (IPP) HPS( 6 * 150 )	900	883	883	883		21.19	883
OTHER HYDRO/IPP J&K( 308 )	308	111	53	138	18:00	1.85	77
Total HYDEL	1,208	994	936			23.04	960
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	994	936			23.04	960

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)( 2 * 270 )	540	0	0	0			
GURU GOBIND SINGH TPS (ROPAR)( 4 * 210 )	840	0	0	0		0	0
GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)( 2 * 210 + 2 * 250 )	920	0	0	0		0	0
RAJPURA(NPL) TPS( 2 * 700 )	1,400	330	338	648		9.72	405
TALWANDI SABO TPS( 3 * 660 )	1,980	0	0	0			
Total THERMAL	5,680	330	338			9.72	405
ANANADPUR SAHIB HYDRO PLANT( 2 * 33.5 + 2 * 33.5 )	134	117	116	117		2.84	118
MUKERIAN HYDRO PLANT( 6 * 15 + 6 * 19.5 + 2 * 9 )	225	214	213	214		5.02	209
RANJIT SAGAR POWER PLANT ( 4 * 150 )	600	120	120	120		2.95	123
SHANAN( 4 * 15 + 1 * 50 )	110	110	110	110		2.64	110
UBDC( 3 * 15 + 3 * 15.5 )	92	39	39	39		0.92	38
OTHER HYDRO PUNJAB	0	0	0	0		2.38	99
Total HYDEL	1,161	600	598			16.75	697
WIND	0	0	0	0			
BIOMASS( 303 )	303	0	0	0		3.32	138
SOLAR( 859 )	859	0	0	467		3.6	150
Total PUNJAB	8,003	930	936			33.39	1,390

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( 2 * 125 )	250	108	99	0		2.3	96
CHHABRA TPS( 2 * 660 + 4 * 250 )	2,320	1,757	1,533	0		39.82	1,659
GIRAL (IPP) LTPS( 2 * 125 )	250	0	0	0			
KALISINDH TPS( 2 * 600 )	1,200	392	384	0		9.26	386
KAWAI TPS( 2 * 660 )	1,320	952	854	0		21.97	915
KOTA TPS( 2 * 110 + 2 * 195 + 3 * 210 )	1,240	149	293	0		6.02	251
RAJWEST (IPP) LTPS( 8 * 135 )	1,080	678	557	0		15.07	628
SURATGARH TPS ( 6 * 250 )	1,500	0	0	0			
VSLPP (IPP)( 1 * 135 )	135	-2	118	0		1.26	53
Total THERMAL	9,295	4,034	3,838			95.7	3,988
DHOLPUR GPS( 3 * 110 )	330	0	0	0			
RAMGARH GPS( 1 * 110 + 1 * 35.5 + 1 * 50 + 2 * 37.5 )	271	66	83	0		1.65	69
Total GAS/NAPTHA/DIESEL	601	66	83			1.65	69
RAPS-A( 1 * 100 + 1 * 200 )	300	162	164	0		3.8	158
Total NUCLEAR	300	162	164			3.8	158
TOTAL HYDRO RAJASTHAN( 550 )	550	0	0	0			
Total HYDEL	550	0	0			0	0
WIND	4,292	317	1,171	0		18.94	789
BIOMASS( 102 )	102	19	19	0		0.46	19
SOLAR( 3045 )	3,045	0	0	0		18.18	758
Total RAJASTHAN	18,185	4,598	5,275			138.73	5,781

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( 2 * 500 + 3 * 210 )	1,630	1,370	1,366	0		32.57	1,357
ANPARA-C TPS( 2 * 600 )	1,200	1,087	1,008	0		20.21	842
ANPARA-D TPS( 2 * 500 )	1,000	468	468	0		9.4	392
BAJAJ ENERGY PVT LTD (IPP) TPS( 10 * 45 )	450	0	0	0			
BARA PPGCL TPS( 3 * 660 )	1,980	1,190	1,189	0		16.01	667
HARDUAGANJ TPS( 1 * 105 + 1 * 60 + 2 * 250 )	665	444	251	0		7.61	317
LALITPUR TPS( 3 * 660 )	1,980	0	0	0			
MEJA TPS( 1 * 660 )	660	340	0	0		9.32	388
OBRA TPS ( 2 * 94 + 5 * 200 )	1,188	494	475	0		8.34	348
PARICHA TPS( 2 * 110 + 2 * 210 + 2 * 250 )	1,380	385	184	0		7.29	304
ROSA TPS( 4 * 300 )	1,200	1,060	901	0		18.19	758
TANDA TPS( 4 * 110 )	440	0	0	0			
Total THERMAL	13,773	6,838	5,842			128.94	5,373
ALAKHANANDA HEP( 4 * 82.5 )	330	164	162	0		4.23	176
VISHNUPARYAG HPS( 4 * 110 )	440	247	218	0		5.32	222
OTHER HYDRO UP( 527 )	527	165	285	0		4.22	176
Total HYDEL	1,297	576	665			13.77	574
WIND	0	0	0	0			
BIOMASS( 26 )	26	0	0	0			
SOLAR( 798 )	798	0	0	0			
CO-GENERATION( 1360 )	1,360	200	200	0		4.8	200
Total OTHERs	1,360	200	200			4.8	200
Total UP	17,254	7,614	6,707			147.51	6,147

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( 675 )	675	0	0	0			
Total GAS/NAPTHA/DIESEL	675	0	0			0	0
OTHER HYDRO UK( 1250 )	1,250	721	778	787	08:00	17.88	745
Total HYDEL	1,250	721	778			17.88	745
WIND	0	0	0	0			
BIOMASS( 127 )	127	2	8	10	12:00	0.11	5
SOLAR( 100 )	100	0	0	100	13:00	0.81	34
SMALL HYDRO( 180 )	180	0	0	0			
Total SMALL HYDRO	180	0	0			0	0
Total UTTARAKHAND	2,332	723	786			18.8	784

(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)		
Aravali Power Company Private Ltd										
ISTPP (JHAJJAR)( 3 * 500 )	1,500	1,414	0	0	0	-	0	-	-	0
Sub-Total	1,500	1,414	0	0	-	-	0	0	0	0
BBMB										
BHAKRA HPS( 2 * 108 + 3 * 126 + 5 * 157 )	1,379	1,127	1,142	666	1,142	20:00	18.26	18.5	771	0.24
DEHAR HPS( 6 * 165 )	990	790	810	580	810	20:00	14.28	14.57	607	0.29
PONG HPS( 6 * 66 )	396	304	310	184	310	20:00	6.63	6.67	278	0.04
Sub-Total	2,765	2,221	2,262	1,430	-	-	39.17	39.74	1,656	0.57
NHPC										
BAIRASIUL HPS( 3 * 60 )	180	122	122	121	123	07:00	2.76	2.81	117	0.05
CHAMERA HPS( 3 * 180 )	540	555	534	359	540	14:30	10.28	10.33	430	0.05
CHAMERA II HPS( 3 * 100 )	300	100	101	99	101	20:00	2.36	2.38	99	0.02
CHAMERA III HPS( 3 * 77 )	231	240	231	231	237	08:00	5.48	5.5	229	0.02
DHAULIGANGA HPS( 4 * 70 )	280	292	274	141	282	23:00	4.18	4.23	176	0.05
DULHASTI HPS( 3 * 130 )	390	405	400	400	401	02:00	9.25	9.44	393	0.19
KISHANGANGA( 3 * 110 )	330	111	111	111	112	12:00	2.64	2.67	111	0.03
PARBATI III HEP( 4 * 130 )	520	520	513	0	524	06:45	2.06	2.07	86	0.01
PARBATI-II( 4 * 200 )(Infirm)	800	-	58	59	63	19:00	-	1.3	54	1.3
SALAL HPS( 6 * 115 )	690	683	706	706	707	01:00	16.47	16.85	702	0.38
SEWA-II HPS( 3 * 40 )	120	131	122	121	126	23:59	2.85	2.9	121	0.05
TANAKPUR HPS( 1 * 31.42 + 2 * 31.4 )	94	50	52	47	98	11:00	1.36	1.64	68	0.28
URI HPS( 4 * 120 )	480	480	482	482	490	09:00	11.54	11.66	486	0.12
URI-II HPS( 4 * 60 )	240	237	246	246	247	12:00	5.73	5.86	244	0.13
Sub-Total	5,195	3,926	3,952	3,123	-	-	76.96	79.64	3,316	2.68
NPCL										
NAPS( 2 * 220 )	440	362	411	418	425	01:00	8.69	9.09	379	0.4
RAPS-B( 2 * 220 )	440	353	403	403	406	06:00	8.47	8.56	357	0.09
RAPS-C( 2 * 220 )	440	418	439	445	446	15:00	10.03	9.68	403	-0.35
Sub-Total	1,320	1,133	1,253	1,266	-	-	27.19	27.33	1,139	0.14
NTPC										
ANTA GPS( 1 * 153.2 + 3 * 88.71 )	419	395	0	0	0	-	0	0	0	0
AURAIYA GPS( 2 * 109.3 + 4 * 111.19 )	663	330	209	189	239	00:00	4.57	4.53	189	-0.04
DADRI GPS( 2 * 154.51 + 4 * 130.19 )	830	375	221	226	244	-	5.52	5.4	225	-0.12
DADRI SOLAR( 5 )	5	5	0	0	3	-	0.02	0.02	1	0
DADRI-I TPS( 4 * 210 )	840	769	0	0	0	-	2.62	2.44	102	-0.18
DADRI-II TPS( 2 * 490 )	980	924	0	0	0	-	6.1	5.82	243	-0.28
KOLDAM HPS( 4 * 200 )	800	872	772	788	873	23:00	11	10.98	458	-0.02
RIHAND-I STPS( 2 * 500 )	1,000	920	973	888	973	20:00	20.23	20.02	834	-0.21
RIHAND-II STPS( 2 * 500 )	1,000	938	1,008	1,006	1,008	20:00	21.07	21.23	885	0.16
RIHAND-III STPS( 2 * 500 )	1,000	938	1,006	717	1,006	20:00	20.43	20.56	857	0.13
SINGRAULI STPS( 2 * 500 + 5 * 200 )	2,000	1,650	1,812	1,436	1,812	20:00	37.45	37.59	1,566	0.14
SINGRAULI SOLAR( 15 )	15	15	0	0	0	-	0.07	0.08	3	0.01
TANDA TPS STAGE-II( 1 * 660 )	660	622	501	371	501	20:00	9.13	9	375	-0.13
UNCHAHAH I( 2 * 210 )	420	382	117	124	117	20:00	2.52	2.51	105	-0.01
UNCHAHAH II TPS( 2 * 210 )	420	382	248	233	248	20:00	5.05	5.02	209	-0.03
UNCHAHAH III TPS( 1 * 210 )	210	191	121	119	121	20:00	2.52	2.85	119	0.33
UNCHAHAH IV TPS( 1 * 500 )	500	471	278	276	278	20:00	6.24	6.2	258	-0.04
UNCHAHAH SOLAR( 10 )	10	10	0	0	0	-	0.05	0.05	2	0
Sub-Total	11,772	10,189	7,266	6,373	-	-	154.59	154.3	6,431	-0.29
SJVNL										
NATHPA-JHAKRI HPS( 6 * 250 )	1,500	1,605	1,424	747	1,500	21:00	28.59	28.56	1,190	-0.03
RAMPUR HEP( 6 * 68.67 )	412	442	434	221	434	20:00	7.96	8.19	341	0.23
Sub-Total	1,912	2,047	1,858	968	-	-	36.55	36.75	1,531	0.2
THDC										
KOTESHWAR HPS( 4 * 100 )	400	412	408	272	408	20:00	4.98	4.94	206	-0.04
TEHRI HPS( 4 * 250 )	1,000	640	635	475	644	23:00	10.92	10.83	451	-0.09
Sub-Total	1,400	1,052	1,043	747	-	-	15.9	15.77	657	-0.13
Total	25,864	21,982	17,634	13,907			350.36	353.53	14,730	3.17

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( 2 * 96 )	192	0	61	95	187	22:00	2.13	2.19	91	0.06
BUDHIL HPS (IPP)( 2 * 35 )	70	0	71	35	71	20:00	1.06	1.08	45	0.02
KARCHAM WANGTOO HPS( 4 * 250 )	1,000	0	1,000	550	1,000	21:00	15.67	15.67	653	0
MALANA2( 2 * 50 )	100	0	40	40	101	01:00	0	1.15	48	1.15
SAINJ HEP( 2 * 50 )	100	0	65	70	100	06:00	1.47	1.64	68	0.17
SHREE CEMENT (IPP) TPS( 2 * 150 )	300	0	0	0	0	-	0	-	-	0
Sub-Total	1,762	0	1,237	790	-	-	20.33	21.73	905	1.4
SOLAR IPP										
ACME CHITTORGARH SOLAR ENERGY PVT LTD( 1 * 250 )	250	250	0	0	211	12:00	1.45	1.64	68	0.19
ADANI RENEWABLE ENERGY RJ LIMITED (ARERJL)( 1 * 200 )	200	200	0	0	215	12:45	1.47	1.66	69	0.19
AZURE POWER INDIA PVT LTD.( 4 * 50 )	200	200	0	0	189	12:15	1.28	1.46	61	0.18
AZURE POWER THIRTY FOUR PRIVATE LTD( 1 * 130 )	130	130	0	0	128	12:00	0.92	1.07	45	0.15
CLEAN SOLAR POWER (BHADLA) PVT LTD( 1 * 300 )	300	300	0	0	300	13:03	2.1	2.48	103	0.38
M/S KILAJ SOLAR (MAHARASHTRA) PRIVATE LIMITED( 1 * 50 )	50	50	0	0	50	12:45	0.32	0.39	16	0.07
RENEW SOLAR POWER PVT LTD( 50 )	50	50	0	0	50	12:01	0.38	0.43	18	0.05
RENEW SOLAR POWER PVT LTD. BIKANER( 1 * 250 )	250	250	0	0	247	12:02	1.7	1.79	75	0.09
SB ENERGY FOUR PVT LTD( 2 * 100 )	200	200	0	0	200	12:45	1.53	1.59	66	0.06
TATA POWER RENEWABLE ENERGY LTD( 1 * 150 )	150	150	0	0	155	13:41	1.08	1.24	52	0.16
Sub-Total	1,780	1,780	0	0	-	-	12.23	13.75	573	1.52
Total	3,542	1,780	1,237	790			32.56	35.48	1,478	2.92
Summary Section										
	Inst. Capacity		PEAK	OFF-PEAK			Day Energy		Day AVG.	
Total State Control Area Generation		55,313	16,695	16,503			407.81		16,995	
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			9,636	6,925			161.95		10,151	
Total Regional Availability(Gross)		84,719	45,202	38,125			958.77		43,354	
Total Hydro Generation										
	Inst. Capacity		PEAK	OFF-PEAK			Day Energy		Day AVG.	
Regional Entities Hydro		13,534	11,124	7,846			204.61		8,523	
State Control Area Hydro		6,289	3,444	3,551			84.95		3,540	
Total Regional Hydro		19,823	14,568	11,397			289.56		12,063	
Total Renewable Generation										
	Inst. Capacity		PEAK	OFF-PEAK			Day Energy		Day AVG.	
Regional Entities Renewable		1,810	0	0			13.9		579	
State Control Area Renewable		10,651	825	1,693			58.67		2,445	
Total Regional Renewable		12,461	825	1,693			72.57		3,024	
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	16	7	-	-25	0	0.3	-0.3		
2	132KV-Karmnasa (PG)-Sahupuri(UP)	-	-	-	-	0	0	0		
3	132KV-Rihand-Sonnagar (PG)	-	-	-	-	-	-	-		
4	220KV-Pusauli (PG)-Sahupuri(UP)	152	143	166	0	2.81	0	2.81		
5	400KV-Biharsharif (PG)-Balia(PG)	217	156	284	0	4.31	0	4.31		
6	400KV-Biharsharif (PG)-Varanasi(PG)	38	-19	90	140	0.58	0	0.58		
7	400KV-Motihari (DMT)-Gorakhpur(UP)	220	239	265	0	4.72	0	4.72		
8	400KV-Muzaffarpur (PG)-Gorakhpur(UP)	500	446	688	0	10.94	0	10.94		
9	400KV-Patna (PG)-Balia(PG)	569	591	827	0	13.55	0	13.55		
10	400KV-Sasaram-Allahabad (PG)	37	60	110	0	1.47	0	1.47		
11	400KV-Sasaram-Varanasi (PG)	-210	-181	216	0	4.4	0	4.4		
12	765KV-Fatehpur (PG)-Sasaram.	158	37	162	158	0.34	0	0.34		
13	765KV-Gaya (PG)-Balia(PG)	373	212	381	0	5.83	0	5.83		
14	765KV-Gaya (PG)-Varanasi(PG)	-140	-190	421	0	4.5	0	4.5		
15	HVDC800KV-Alipurduar-Agra (PG)	300	225	300	0	6.66	0	6.66		
Sub-Total EAST REGION		2,230	1,726	3,910	273	60.11	0.3	59.81		
Import/Export between NORTH_EAST REGION and NORTH REGION										
1	HVDC800KV-BiswanathCharialli-Agra (PG)	700	500	700	0	14.54	0	14.54		
Sub-Total NORTH_EAST REGION		700	500	700	0	14.54	0	14.54		

Import/Export between WEST REGION and NORTH REGION								
1	220KV-Auraiya (NT)-Malanpur(PG)	-84	-98	-	136	0	2.31	-2.31
2	220KV-Bhanpur-Modak	53	4	83	-12	0.93	0	0.93
3	220KV-Ranpur-Bhanpur	31	22	47	-	0.73	0	0.73
4	400KV-RAPS C (NP)-Sujalpur	150	-170	218	235	0	0.49	-0.49
5	400KV-Vindhyachal (PG)-Rihand(NT)	943	672	-	952	0	20.56	-20.56
6	400KV-Zerda (PG)-Bhinmal(PG)	106	-240	0	287	0	1.19	-1.19
7	400KV-Zerda (PG)-Kankroli(RJ)	45	-224	48	250	0	3.18	-3.18
8	765KV-0rai-Gwalior (PG)	-280	-211	0	-383	0	7.32	-7.32
9	765KV-0rai-Jabalpur	1,069	712	1,475	0	23.05	0	23.05
10	765KV-0rai-Satna	856	716	979	0	18.92	0	18.92
11	765KV-Chittorgarh-Banaskata D/C	-436	447	648	774	0	4.67	-4.67
12	765KV-Gwalior (PG)-Agra(PG)	1,678	836	1,780	0	25.41	0	25.41
13	765KV-Phagi (RJ)-Gwalior(PG)	627	282	873	-	12.68	0	12.68
14	HVDC500KV-Mundra (JH)-Mohindergarh(JH)	998	1,001	1,002	0	24.25	0	24.25
15	HVDC500KV-Vindhyachal (PG)-Vindhaychal B/B	200	200	200	50	4.54	0.78	3.76
16	HVDC800KV-Champa (PG)-Kurukshetra(PG)(PG)	750	750	750	0	17.59	0	17.59
Sub-Total WEST REGION		6,706	4,699	8,103	2,289	128.1	40.5	87.6
TOTAL IR EXCHANGE		9,636	6,925	12,713	2,562	202.75	40.8	161.95

4(B) Inter Regional Schedule & Actual Exchange (Import=(+ve) /Export =(-ve)) in MU							
	ISGS/(LT+MT) Schedule	BILT Schedule	PX Schedule	RTM Schedule	Total IR Schedule	Total IR Actual	NET IR UI
NR-ER	46.21	6.18	-0.16	0.03	52.26	74.35	22.09
NR-WR	132.5	32.05	-31.84	-1.02	131.69	87.6	-44.09
Total	178.71	38.23	-32	-0.99	183.95	161.95	-22

5.Inter National Exchange with Nepal [Import (+ve)/Export(-ve)] [Linkwise]								
Element		Peak MW	Off-Peak MW	Maximum Interchange(MW)		Energy (MU)		Net Energy (MU)
				Import	Export	Import	Export	
132KV-Tanakpur(NH)-Mahendranagar(PG)		14	0		14		0.05	-0.05

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	27.8	68.8	22.7	5	.4	28.1

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	06:04:30	49.81	22:15:10	50.02	0.035	0.055	50.14	49.9	31.2

6.Voltage Profile: 400kV									
	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
					< 380	< 390	> 420	> 430	
Abdullapur(PG) - 400KV	427	03:55	407	22:15	0	0	33.33	0	33.33
Amritsar(PG) - 400KV	423	03:55	406	22:15	0	0	15.28	0	15.28
Ballabgarh(PG) - 400KV	422	03:55	401	22:50	0	0	9.03	0	9.03
Bareilly II(PG) - 400KV	421	06:05	400	22:50	0	0	.69	0	.69
Bareilly(UP) - 400KV	422	06:00	401	22:50	0	0	1.04	0	1.04
Baspa(HP) - 400KV	418	03:30	405	19:45	0	0	0	0	0
Bassi(PG) - 400KV	423	18:00	402	09:20	0	0	12.5	0	12.5
Bawana(DTL) - 400KV	425	05:00	400	22:15	0	0	23.61	0	23.61
Dadri HVDC(PG). - 400KV	423	05:00	404	22:15	0	0	17.71	0	17.71
Gorakhpur(PG) - 400KV	418	06:00	396	22:50	0	0	0	0	0
Hisar(PG) - 400KV	424	03:55	404	22:15	0	0	21.53	0	21.53
Kanpur(PG) - 400KV	416	06:00	400	22:50	0	0	0	0	0
Kashipur(UT) - 400KV	421	06:05	411	22:15	0	0	11.11	0	11.11
Kishenpur(PG) - 400KV	417	03:55	409	22:10	0	0	0	0	0
Moga(PG) - 400KV	415	03:55	382	22:10	0	13.54	0	0	0
Nallagarh(PG) - 400KV	418	03:30	405	19:45	0	0	0	0	0
Rihand HVDC(PG) - 400KV	408	06:00	401	22:50	0	0	0	0	0

Rihand(NT) - 400KV	406	06:00	400	22:50	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	785	17:35	767	09:15	0	0	0	0	0
Balia(PG) - 765KV	785	06:00	754	22:50	0	0	0	0	0
Bareilly II(PG) - 765KV	801	06:00	762	22:50	0	0	.69	0	.69
Bhiwani(PG) - 765KV	798	18:05	767	22:20	0	0	0	0	0
Fatehpur(PG) - 765KV	771	18:00	744	22:50	0	0	0	0	0
Jhatikara(PG) - 765KV	799	05:00	762	22:15	0	0	0	0	0
Lucknow II(PG) - 765KV	795	06:00	757	22:55	0	0	0	0	0
Meerut(PG) - 765KV	797	05:00	761	22:15	0	0	0	0	0
Moga(PG) - 765KV	783	05:00	753	22:15	0	0	0	0	0
Phagi(RJ) - 765KV	797	18:00	767	09:15	0	0	0	0	0
Unnao(UP) - 765KV	778	06:00	739	22:50	0	5.21	0	0	0

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

State	Off- Peak Hours (03:00)					Peak Hours (20:00)				
	Bilateral (MW)	IEX (MW)	IEX RTM (MW)	PXIL (MW)	PXI RTM (MW)	Bilateral (MW)	IEX (MW)	IEX RTM (MW)	PXIL (MW)	PXI RTM (MW)
PUNJAB	247.18	495.15	0	0	0	247.18	693.21	0	0	0
HARYANA	128.72	64.24	0	0	0	127.24	59.71	0	0	0
RAJASTHAN	-341.5	-928.56	0	-101.75	0	-242.8	23.7	0	0	0
DELHI	880.03	-260.31	0	0	0	669.4	-203.13	79.22	0	0
UTTAR PRADESH	2,568.22	-56.41	0	0	0	2,233.03	-49.75	0	0	0
UTTARAKHAND	2.45	-141.07	0	0	0	2.45	-74.6	2.94	0	0
HIMACHAL PRADESH	-1,077.61	-309.07	0	0	0	-941.21	-605.8	0	-20.25	0
J&K(UT) & LADAKH(UT)	-72.96	-997.18	-2.72	0	0	-74.14	-755.44	-40.29	0	0
CHANDIGARH	0	-80.38	0	0	0	0	-99.97	0	0	0
TOTAL	2,334.53	-2,213.59	-2.72	-101.75	0	2,021.15	-1,012.07	41.87	-20.25	0

State	Day Energy (MU)				
	ISGS/(LT+MT) Schedule	BILT Schedule	PX Schedule	RTM Schedule	Total (MU)
PUNJAB	79.65	5.93	16.84	0	102.41
HARYANA	93	3.5	1.74	0	98.24
RAJASTHAN	73.47	-7.51	-4.4	-0.02	61.52
DELHI	50.18	21.6	-6.94	-0.12	64.74
UTTAR PRADESH	151.15	37.54	-5.27	0	183.43
UTTARAKHAND	12.79	0.06	-1.3	0.03	11.58
HIMACHAL PRADESH	26.96	-21.35	-8.07	0	-2.45
J&K(UT) & LADAKH(UT)	39.72	-1.79	-19.28	-0.04	18.62
CHANDIGARH	5.6	0	-1.43	-0.03	4.14
TOTAL	532.52	37.98	-28.11	-0.18	542.23

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	3,338.21	2,304.61	247.18	247.18	891.27	495.15	0	0
HARYANA	2,385.89	1,333.24	174.01	73.05	100.8	46.9	0	0
RAJASTHAN	3,185.28	1,649.19	-242.8	-342.53	25.75	-1,089.14	0	-101.75
DELHI	2,077.64	1,281.21	1,143.53	468.77	-71.45	-692.36	0	0
UTTAR PRADESH	5,464.78	3,463.05	2,620.18	757.11	53.92	-1,708.86	0	0
UTTARAKHAND	820.4	335.35	2.45	2.45	27.74	-166.55	0	0
HIMACHAL PRADESH	1,446.89	864.89	-701.71	-1,193.12	-123.52	-728.8	0	-50.62
J&K(UT) & Ladakh(UT)	2,064	1,429.93	-72.96	-76.98	-579.17	-1,001.41	0	0
CHANDIGARH	299.43	183.93	0	0	0	-99.97	0	0

State	IEX RTM (MW)		PXI RTM (MW)	
	Maximum	Minimum	Maximum	Minimum
PUNJAB	0	0	0	0
HARYANA	0	0	0	0
RAJASTHAN	0	-48.84	0	0
DELHI	79.22	-105.5	0	0
UTTAR PRADESH	0	0	0	0
UTTARAKHAND	2.94	0	0	0
HIMACHAL PRADESH	0	0	0	0
J&K(UT) & LADAKH(UT)	0	-50.36	0	0
CHANDIGARH	0	-19.09	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	475.8	368	491.59	788	632.03	633.39
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	610.9	5	610.22	5	344	326.06
Pong	384.05	426.72	1,084	409.49	474	406.97	398	204.65	434.8
RPS	343.81	352.8	175.66	-	-	-	-	-	0
RSD	487.91	527.91	390.3	513.7	259	516.4	277	328.98	107.59
Rihand	252.98	268.22	860.5	256.98	157	255.64	102	-	4,956.36
Tehri	740.04	829.79	1,291.49	758.64	110	744.22	20	170.4	344
TOTAL	-	-	-	-	1,373	-	1,590	1,680.06	6,802.2

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	3	22
DELHI	4	26
HARYANA	1	16
HIMACHAL PRADESH	2	22
J&K(UT) & Ladakh(UT)	1	19
PUNJAB	1	14
RAJASTHAN	2	15
UTTAR PRADESH	0	12
UTTARAKHAND	3	30

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 :

18.Remarks :

Shortage in J&K(UT) and Ladakh(UT) is due to congestion in distribution side network.



**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