



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

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

Date of Reporting:02-Sep-2019

1. Regional Availability/Demand:

Evening Peak (20:00) MW				Off-Peak (03:00) MW				Day Energy(Net MU)	
Demand Met	Shortage(-)/Surplus(+)	Requirement	Freq (Hz)	Demand Met	Shortage(-)/Surplus(+)	Requirement	Freq (Hz)	Demand Met	Shortage
53,195	1,843	55,037	50.08	57,461	213	57,674	50.03	1,261	9.12

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	78.69	17.11	0	2.88	0	2.06	100.73	134.96	132.69	-2.27	233.42	0	233.42
HARYANA	47.69	0.9	0	0.11	0	0.6	49.31	145.31	145.33	0.02	194.64	0	194.64
RAJASTHAN	119.79	5.62	1.86	14.89	3.48	4.61	150.24	56.96	53.67	-3.29	203.91	0	203.91
DELHI	0	0	24.46	0	0	0.99	25.45	89.13	88.42	-0.71	113.87	0	113.87
UTTAR PRADESH	189.6	21	0	3.6	0	0.7	214.9	192.49	194.3	1.81	409.2	0	409.2
UTTARAKHAND	0	19.33	6.83	0.43	0	0	26.59	9.99	8.34	-1.65	34.93	0	34.93
HIMACHAL PRADESH	0	20.73	0	0	0	12.48	33.21	-3.53	-5.47	-1.94	27.85	0.11	27.74
JAMMU & KASHMIR	0	23	0	0	0	0	23	17.19	14.94	-2.25	46.95	9.01	37.94
CHANDIGARH	0	0	0	0	0	0	0	5.95	5.34	-0.61	5.34	0	5.34
Region	435.77	107.69	33.15	21.91	3.48	21.44	623.43	648.45	637.56	-10.89	1,270.11	9.12	1,260.99

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

State	Evening Peak (20:00) MW				Off-Peak (03:00) MW			
	Demand Met	Shortage(-)/Surplus(+)	UI	STOA/PX Transaction	Demand Met	Shortage(-)/Surplus(+)	UI	STOA/PX Transaction
PUNJAB	8,748	0	29	1,793	10,640	0	-117	1,793
HARYANA	8,065	0	62	2,171	9,426	0	80	2,150
RAJASTHAN	7,987	0	-486	-1,118	8,411	0	-301	-885
DELHI	4,617	0	-46	538	5,473	0	106	927
UTTAR PRADESH	18,771	1,370	588	2,002	19,545	0	-311	2,402
UTTARAKHAND	1,646	0	-84	-164	1,397	0	-327	-182
HIMACHAL PRADESH	1,224	0	-8	-1,643	1,123	0	-29	-1,750
JAMMU & KASHMIR	1,890	473	213	-531	1,209	213	-90	-824
CHANDIGARH	247	0	-10	-100	237	0	-30	-10
Region	53,195	1,843	258	2,948	57,461	213	-1,019	3,621

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	11,044	1:00	0	11,044	11,044	1:00	0	11,044	8,123	16:00
HARYANA	9,761	1:00	0	9,761	9,761	1:00	0	9,761	6,379	18:00
RAJASTHAN	9,127	11:00	0	9,127	9,127	11:00	0	9,127	7,326	19:00
DELHI	6,097	1:00	0	6,097	6,097	1:00	0	6,097	3,790	10:00
UP	21,061	1:00	680	21,741	21,741	1:00	680	21,061	14,333	10:00
UTTARAKHAND	1,646	20:00	0	1,646	1,646	20:00	0	1,646	1,341	6:00
HP	1,289	8:00	33	1,322	1,322	8:00	33	1,289	1,037	24:00
J&K	1,890	20:00	472	2,362	2,362	20:00	472	1,890	1,209	3:00
CHANDIGARH	271	1:00	0	271	271	1:00	0	271	186	10:00
NR	61,201	1:00	928	62,129	62,129	1:00	928	61,201	47,419	18:00

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)	
RAJGHAT TPS( 2 * 67.5 )	135	0	0	0			
Total THERMAL	135	0	0			0	0
BAWANA GPS( 2 * 253 + 4 * 216 )	1,370	700	897	0		19.12	797
DELHI GAS TURBINES( 3 * 34 + 6 * 30 )	282	76	76	0		1.78	74
PRAGATI GAS TURBINES( 1 * 121.2 + 2 * 104.6 )	452	144	141	0		3.56	148
RITHALA GPS( 3 * 36 )	108	0	0	0			
Total GAS/NAPTHA/DIESEL	2,212	920	1,114			24.46	1,019
WIND	0	0	0	0			
BIOMASS( 16 )	16	46	33	0		0.99	41
SOLAR( 2 )	2	0	0	0			
Total DELHI	2,365	966	1,147			25.45	1,060

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	475	560	560	03:00	11.49	479
JHAJJAR(CLP)( 2 * 660 )	1,320	744	1,114	1,144	01:00	20.28	845
MAGNUM DIESEL (IPP)( 4 * 6.3 )	25	0	0	0			
PANIPAT TPS( 2 * 210 + 2 * 250 )	920	405	406	406	03:00	9.55	398
RGTPP( KHEDAR)( 2 * 600 )	1,200	0	381	467	01:00	6.37	265
Total THERMAL	4,065	1,624	2,461			47.69	1,987
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	48	48	48	03:00	0.9	38
Total HYDEL	65	48	48			0.9	38
WIND	0	0	0	0			
BIOMASS( 106 )	106	0	0	0		0.6	25
SOLAR(55.8)	56	0	0	0		0.11	5
Total HARYANA	4,724	1,672	2,509			49.3	2,055

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	330	330	0		7.92	330
MALANA (IPP) HPS( 2 * 43 )	86	105	106	0		2.47	103
OTHER HYDRO HP( 372 )	372	452	434	0		10.34	431
Total HYDEL	758	887	870			20.73	864
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0			
SMALL HYDRO( 486 )	486	560	528	0		12.48	520
Total SMALL HYDRO	486	560	528			12.48	520
Total HP	1,244	1,447	1,398			33.21	1,384

JAMMU & KASHMIR							
Station/Constituents	Inst. Capacity	20:00	03:00	Day Peak		Day Energy	AVG. MW
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)	
GAS/DIESEL/OTHERS J&K( 1 * 190 )	190	0	0	0			
Total GAS/NAPTHA/DIESEL	190	0	0			0	0
BAGLIHAR (IPP) HPS( 6 * 150 )	900	882	882	0		21.17	882
OTHER HYDRO/IPP J&K( 308 )	308	111	53	0		1.83	76
Total HYDEL	1,208	993	935			23	958
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	993	935			23	958

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	290	476	491		7.65	319
GURU GOBIND SINGH TPS (ROPAR)( 4 * 210 )	840	320	293	320		7.2	300
GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)( 2 * 210 + 2 * 250 )	920	156	322	327		5.67	236
RAJPURA(NPL) TPS( 2 * 700 )	1,400	1,025	1,320	1,320		26.59	1,108
TALWANDI SABO TPS( 3 * 660 )	1,980	1,036	1,841	1,841		31.58	1,316
Total THERMAL	5,680	2,827	4,252			78.69	3,279
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	0	0	0			
RANJIT SAGAR POWER PLANT ( 4 * 150 )	600	0	0	0			
SHANAN( 4 * 15 + 1 * 50 )	110	0	0	0			
UBDC( 3 * 15 + 3 * 15.5 )	92	0	0	0			
OTHER HYDRO PUNJAB	0	601	795	951		17.11	713
Total HYDEL	1,161	601	795			17.11	713
WIND	0	0	0	0			
BIOMASS( 303 )	303	0	0	0		2.06	86
SOLAR( 859 )	859	0	0	440		2.88	120
Total PUNJAB	8,003	3,428	5,047			100.74	4,198

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	226	226	0		5.29	220
CHHABRA TPS( 1 * 660 + 4 * 250 )	1,660	1,620	1,667	0		37.01	1,542
GIRAL (IPP) LTPS( 2 * 125 )	250	0	0	0			
KALISINDH TPS( 2 * 600 )	1,200	535	483	0		10.59	441
KAWAI TPS( 2 * 660 )	1,320	1,138	855	0		21.66	903
KOTA TPS( 2 * 110 + 2 * 195 + 3 * 210 )	1,240	805	794	0		17.87	745
RAJWEST (IPP) LTPS( 8 * 135 )	1,080	507	717	0		11.26	469
SURATGARH TPS ( 6 * 250 )	1,500	566	820	0		16.12	672
VSLPP (IPP)( 1 * 135 )	135	0	0	0			
Total THERMAL	8,635	5,397	5,562			119.8	4,992
DHOLPUR GPS( 3 * 110 )	330	0	0	0			
RAMGARH GPS( 1 * 110 + 1 * 35.5 + 1 * 50 + 2 * 37.5 )	271	83	63	0		1.86	78
Total GAS/NAPTHA/DIESEL	601	83	63			1.86	78
RAPS-A( 1 * 100 + 1 * 200 )	300	170	167	0		3.97	165
Total NUCLEAR	300	170	167			3.97	165
TOTAL HYDRO RAJASTHAN( 550 )	550	277	202	0		5.62	234
Total HYDEL	550	277	202			5.62	234
WIND	4,292	515	103	0		3.48	145
BIOMASS( 102 )	102	27	27	0		0.64	27
SOLAR( 3045 )	3,045	1	0	0		14.89	620
Total RAJASTHAN	17,525	6,470	6,124			150.26	6,261

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	1,396	1,392	0		33	1,375
ANPARA-C TPS( 2 * 600 )	1,200	680	675	0		16.2	675
ANPARA-D TPS( 2 * 500 )	1,000	925	925	0		21.1	879
BAJAJ ENERGY PVT LTD (IPP) TPS( 10 * 45 )	450	97	97	0		2	83
BARA PPGCL TPS( 3 * 660 )	1,980	994	1,023	0		23.6	983
HARDUAGANJ TPS( 1 * 105 + 1 * 60 + 2 * 250 )	665	533	526	0		11.1	463
LALITPUR TPS( 3 * 660 )	1,980	658	1,000	0		18.6	775
MEJA TPS( 1 * 660 )	660	556	571	0		11.2	467
OBRA TPS ( 2 * 94 + 5 * 200 )	1,188	480	438	0		11.1	463
PARICHA TPS( 2 * 110 + 2 * 210 + 2 * 250 )	1,380	661	654	0		13.1	546
ROSA TPS( 4 * 300 )	1,200	1,045	1,056	0		20.6	858
TANDA TPS( 4 * 110 )	440	382	370	0		8	333
TANDA TPS STAGE-II( 1 * 660 )	660	0	0	0			
Total THERMAL	14,433	8,407	8,727			189.6	7,900
ALAKHANANDA HEP( 4 * 82.5 )	330	344	345	0		8.3	346
VISHNUPARYAG HPS( 4 * 110 )	440	436	436	0		10.5	438
OTHER HYDRO UP( 527 )	527	80	222	0		2.2	92
Total HYDEL	1,297	860	1,003			21	876
WIND	0	0	0	0			
BIOMASS( 26 )	26	0	0	0			
SOLAR( 798 )	798	0	0	0		3.6	150
CO-GENERATION( 1360 )	1,360	30	30	0		0.7	29
Total OTHERs	1,360	30	30			0.7	29
Total UP	17,914	9,297	9,760			214.9	8,955

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	282	286	289	07:00	6.83	285
Total GAS/NAPTHA/DIESEL	675	282	286			6.83	285
OTHER HYDRO UK( 1250 )	1,250	889	828	889	21:00	19.33	805
Total HYDEL	1,250	889	828			19.33	805
WIND	0	0	0	0			
BIOMASS( 127 )	127	0	0	0			
SOLAR( 100 )	100	0	0	72	12:00	0.43	18
SMALL HYDRO( 180 )	180	0	0	0			
Total SMALL HYDRO	180	0	0			0	0
Total UTTARAKHAND	2,332	1,171	1,114			26.59	1,108

(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	1,413.75	889	857	925	20:54	18.29	18.86	786	0.57
Sub-Total	1,500	1,413.75	889	857	-	-	18.29	18.86	786	0.57
BBMB										
BHAKRA HPS( 2 * 108 + 3 * 126 + 5 * 157 )	1,379	1,380	1,406	1,416	1,416	03:00	33.36	33.56	1,398	0.2
DEHAR HPS( 6 * 165 )	990	775	800	480	800	20:00	13.81	14.06	586	0.25
PONG HPS( 6 * 66 )	396	250	258	132	258	20:00	4.88	5.03	210	0.15
Sub-Total	2,765	2,405	2,464	2,028	-	-	52.05	52.65	2,194	0.6
NHPC										
BAIRASIUL HPS( 3 * 60 )	180	60	61	61	62	21:00	1.11	1.25	52	0.14
CHAMERA HPS( 3 * 180 )	540	370	356	359	359	02:00	8.54	8.58	358	0.04
CHAMERA II HPS( 3 * 100 )	300	100	101	99	101	20:00	2.36	2.36	98	0
CHAMERA III HPS( 3 * 77 )	231	235	231	233	234	09:00	5.4	5.46	228	0.06
DHAULIGANGA HPS( 4 * 70 )	280	292	279	290	290	03:00	6.64	6.76	282	0.12
DULHASTI HPS( 3 * 130 )	390	328	317	327	328	02:00	7.7	7.66	319	-0.04
KISHANGANGA( 3 * 110 )	330	100	100	106	106	03:00	2.34	2.37	99	0.03
PARBATI III HEP( 4 * 130 )	520	514	519	519	519	20:00	5.43	5.46	228	0.03
SALAL HPS( 6 * 115 )	690	690	724	711	726	15:00	16.32	16.72	697	0.4
SEWA-II HPS( 3 * 40 )	120	130	130	0	130	20:00	1	1.04	43	0.04
TANAKPUR HPS( 1 * 31.42 + 2 * 31.4 )	94	90	97	94	101	09:00	2.08	2.25	94	0.17
URI HPS( 4 * 120 )	480	484	476	422	480	22:00	11.13	11.18	466	0.05
URI-II HPS( 4 * 60 )	240	240	243	237	244	10:00	5.72	5.75	240	0.03
Sub-Total	4,395	3,633	3,634	3,458	-	-	75.77	76.84	3,204	1.07
NPCL										
NAPS( 2 * 220 )	440	377	418	413	425	08:00	9.05	9.08	378	0.03
RAPS-B( 2 * 220 )	440	345	386	391	392	04:00	8.28	8.24	343	-0.04
RAPS-C( 2 * 220 )	440	415	457	455	457	20:00	9.96	9.81	409	-0.15
Sub-Total	1,320	1,137	1,261	1,259	-	-	27.29	27.13	1,130	-0.16
NTPC										
ANTA GPS( 1 * 153.2 + 3 * 88.71 )	419	394	0	0	0	-	0	0	0	0
AURAIYA GPS( 2 * 109.3 + 4 * 111.19 )	663	620	0	0	0	-	0	0	0	0
DADRI GPS( 2 * 154.51 + 4 * 130.19 )	830	400	242	222	250	-	5.53	5.27	220	-0.26
DADRI SOLAR( 5 )	5	0	0	0	3	14:55	0.01	0.01	0	0
DADRI-I TPS( 4 * 210 )	840	768.6	450	451	450	20:00	10.98	10.79	450	-0.19
DADRI-II TPS( 2 * 490 )	980	464.27	263	258	263	20:00	6.17	5.86	244	-0.31
KOLDAM HPS( 4 * 200 )	800	872	867	879	879	03:00	20.93	20.88	870	-0.05
RIHAND-I STPS( 2 * 500 )	1,000	922.5	975	982	975	20:00	21.94	21.27	886	-0.67
RIHAND-II STPS( 2 * 500 )	1,000	471.25	508	509	508	20:00	11.09	11.21	467	0.12
RIHAND-III STPS( 2 * 500 )	1,000	942.5	1,001	1,003	1,001	20:00	22.32	22.16	923	-0.16
SINGRAULI STPS( 2 * 500 + 5 * 200 )	2,000	1,550	1,685	1,701	1,685	20:00	36.07	36.57	1,524	0.5
SINGRAULI SOLAR( 15 )	15	0	0	0	0	-	0.05	0.06	3	0.01
UNCHAHAH I( 2 * 210 )	420	327	253	254	253	20:00	5.08	6.05	252	0.97
UNCHAHAH II TPS( 2 * 210 )	420	382.2	245	237	245	20:00	5.05	5.8	242	0.75
UNCHAHAH III TPS( 1 * 210 )	210	191.1	120	119	120	20:00	2.53	2.92	122	0.39
UNCHAHAH IV TPS( 1 * 500 )	500	471.25	282	301	282	20:00	6.48	6.95	290	0.47
UNCHAHAH SOLAR( 10 )	10	0	0	0	0	-	0.05	0.04	2	-0.01
Sub-Total	11,112	8,776.67	6,891	6,916	-	-	154.28	155.84	6,495	1.56
SJVNL										
NATHPA-JHAKRI HPS( 6 * 250 )	1,500	1,605	1,585	1,610	1,619	15:00	38.52	38.3	1,596	-0.22
RAMPUR HEP( 6 * 68.67 )	412	442	436	447	447	03:00	10.61	10.64	443	0.03
Sub-Total	1,912	2,047	2,021	2,057	-	-	49.13	48.94	2,039	-0.19
THDC										
KOTESHWAR HPS( 4 * 100 )	400	400	397	91	405	19:00	3.2	3.22	134	0.02
TEHRI HPS( 4 * 250 )	1,000	1,060	1,043	0	1,065	22:00	10.44	10.39	433	-0.05
Sub-Total	1,400	1,460	1,440	91	-	-	13.64	13.61	567	-0.03
Total	24,404	20,872.42	18,600	16,666			390.45	393.87	16,415	3.42

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	215	182	220	21:00	4.34	4.46	186	0.12
BUDHIL HPS (IPP)( 2 * 35 )	70	0	71	71	72	05:00	1.68	1.7	71	0.02
KARCHAM WANGTOO HPS( 4 * 250 )	1,000	0	1,100	1,100	1,100	-	26.08	26.38	1,099	0.3
MALANA2( 2 * 50 )	100	0	115	115	115	07:00	2.57	2.74	114	0.17
SAINJ HEP( 2 * 50 )	100	0	110	110	110	23:59	2.59	2.62	109	0.03
SHREE CEMENT (IPP) TPS( 2 * 150 )	300	0	292	294	296	22:00	7.1	6.96	290	-0.14
Sub-Total	1,762	0	1,903	1,872	-	-	44.36	44.86	1,869	0.5
SOLAR IPP										
AZURE POWER INDIA PVT LTD.( 4 * 50 )	200	0	0	0	143	12:00	0.89	0.83	35	-0.06
RENEW SOLAR POWER PVT LTD( 50 )	50	0	0	0	50	11:18	0.3	0.3	13	0
SB ENERGY FOUR PVT LTD( 2 * 100 )	200	0	0	0	0	-	1.22	1.05	44	-0.17
Sub-Total	450	0	0	0	-	-	2.41	2.18	92	-0.23
Total	2,212	0	1,903	1,872			46.77	47.04	1,961	0.27
Summary Section										
	Inst. Capacity		PEAK	OFF-PEAK			Day Energy		Day AVG.	
Total State Control Area Generation	55,603		25,444	28,034			623.45		25,977	
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			8,929	12,449			220.61		14,022	
Total Regional Availability(Gross)	82,219		54,876	59,021			1,284.97		58,370	
Total Hydro Generation										
	Inst. Capacity		PEAK	OFF-PEAK			Day Energy		Day AVG.	
Regional Entities Hydro	12,734		12,037	10,091			250.82		10,451	
State Control Area Hydro	6,289		4,555	4,681			107.69		4,487	
Total Regional Hydro	19,023		16,592	14,772			358.51		14,938	
Total Renewable Generation										
	Inst. Capacity		PEAK	OFF-PEAK			Day Energy		Day AVG.	
Regional Entities Renewable	480		0	0			2.29		95	
State Control Area Renewable	10,596		1,149	691			42.16		1,757	
Total Regional Renewable	11,076		1,149	691			44.45		1,852	
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	-15	-22	-	27	0	0.41	-0.41		
2	132KV-Karmnasa (PG)-Sahupuri(UP)	-	-	-	-	-	-	-		
3	132KV-Rihand-Sonnagar (PG)	-	-	-	-	-	-	-		
4	220KV-Pusauli (PG)-Sahupuri(UP)	194	202	207	0	4.27	0	4.27		
5	400KV-Biharsharif (PG)-Baliala(PG)	144	343	363	0	4.87	0	4.87		
6	400KV-Biharsharif (PG)-Varanasi(PG)	-93	-135	0	234	0	3.26	-3.26		
7	400KV-Motihari (DMT)-Gorakhpur(UP)	-	-	-	-	-	-	-		
8	400KV-Muzaffarpur (PG)-Gorakhpur(UP)	22	550	744	0	8.76	0	8.76		
9	400KV-Patna (PG)-Baliala(PG)	475	728	772	0	10.87	0	10.87		
10	400KV-Sasaram-Allahabad (PG)	12	29	43	8	0.47	0	0.47		
11	400KV-Sasaram-Varanasi (PG)	189	167	202	0	6.25	0	6.25		
12	765KV-Fatehpur (PG)-Sasaram.	-235	-176	0	267	0	4.34	-4.34		
13	765KV-Gaya (PG)-Baliala(PG)	273	368	432	0	6.5	0	6.5		
14	765KV-Gaya (PG)-Varanasi(PG)	-125	-13	194	111	0	0.33	-0.33		
15	HVDC800KV-Alipurduar-Agra (PG)	900	900	900	0	21.41	0	21.41		
Sub-Total EAST REGION		1,741	2,941	3,857	647	63.4	8.34	55.06		
Import/Export between NORTH_EAST REGION and NORTH REGION										
1	HVDC800KV-BiswanathCharialli-Agra (PG)	400	400	500	0	10.51	0	10.51		
Sub-Total NORTH_EAST REGION		400	400	500	0	10.51	0	10.51		
Import/Export between WEST REGION and NORTH REGION										
1	220KV-Auraiya (NT)-Malanpur(PG)	57	13	-	71	0.26	0	0.26		
2	220KV-Bhanpur-Modak	27	42	68	-	0.97	0	0.97		
3	220KV-Ranpur-Bhanpur	6	18	50	24	0.4	0	0.4		
4	400KV-RAPS C (NP)-Sujalpur	208	180	302	0	3.87	0	3.87		
5	400KV-Vindhyachal (PG)-Rihand(NT)	-936	-945	-	954	0	22.16	-22.16		
6	400KV-Zerda (PG)-Bhinmal(PG)	144	83	239	67	2.24	0	2.24		
7	400KV-Zerda (PG)-Kankroli(RJ)	76	44	149	79	0.82	0	0.82		

Import/Export between WEST REGION and NORTH REGION								
8	765KV-0rai-Gwalior (PG)	-249	-225	0	313	0	6.22	-6.22
9	765KV-0rai-Jabalpur	1,749	1,538	1,865	0	32.62	0	32.62
10	765KV-0rai-Satna	1,286	1,275	1,336	0	28.31	0	28.31
11	765KV-Chittorgarh-Banaskata D/C	618	507	988	80	10.11	0	10.11
12	765KV-Gwalior (PG)-Agra(PG)	2,520	2,275	2,605	0	46.31	0	46.31
13	765KV-Phagi (RJ)-Gwalior(PG)	684	502	796	-	15.06	0	15.06
14	HVDC500KV-Mundra (JH)-Mohindergarh(JH)	398	1,401	1,402	0	20.57	0	20.57
15	HVDC500KV-Vindhyachal (PG)-Vindhaychal B/B	-400	-100	0	400	0	7.21	-7.21
16	HVDC800KV-Champa (PG)-Kurukshetra(PG)(PG)	600	2,500	2,500	0	29.09	0	29.09
Sub-Total WEST REGION		6,788	9,108	12,300	1,988	190.63	35.59	155.04
TOTAL IR EXCHANGE		8,929	12,449	16,657	2,635	264.54	43.93	220.61

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	53.43	-4.19	0	49.24	55.06	5.82
NR-WR	136.55	80.84	-21.06	196.33	155.04	-41.29
Total	189.98	76.65	-21.06	245.57	220.61	-24.96

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)	-18.8	-13.22		19		0.2441	-0.2441

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
%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

<-----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.	
50.19	06:02:30	49.83	01:18:20	50.03	0.027	0.045	50.13	49.93	28.1

6.Voltage Profile: 400kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
					< 380	< 390	> 420	> 430	
Abdullapur(PG) - 400KV	410	17:20	395	00:45	0	0	0	0	0
Amritsar(PG) - 400KV	410	14:05	395	00:45	0	0	0	0	0
Ballabgarh(PG) - 400KV	417	08:00	397	00:35	0	0	0	0	0
Bareilly II(PG) - 400KV	420	08:00	397	00:40	0	0	0	0	0
Bareilly(UP) - 400KV	421	08:00	399	00:40	0	0	.35	0	.35
Baspa(HP) - 400KV	408	13:30	400	00:00	0	0	0	0	0
Bassi(PG) - 400KV	418	17:00	403	00:35	0	0	0	0	0
Bawana(DTL) - 400KV	417	08:00	401	00:40	0	0	0	0	0
Dadri HVDC(PG). - 400KV	418	08:00	418	08:00	4.86	4.86	0	0	4.86
Gorakhpur(PG) - 400KV	419	08:55	395	00:40	0	0	0	0	0
Hisar(PG) - 400KV	412	17:25	397	00:35	0	0	0	0	0
Kanpur(PG) - 400KV	418	08:00	400	00:40	0	0	0	0	0
Kashipur(UT) - 400KV					0	0	0	0	0
Kishenpur(PG) - 400KV	411	14:05	396	00:45	0	0	0	0	0
Moga(PG) - 400KV	412	16:00	398	00:40	0	0	0	0	0
Nallagarh(PG) - 400KV	408	13:30	400	00:00	0	0	0	0	0
Rihand HVDC(PG) - 400KV	409	17:10	402	21:55	0	0	0	0	0
Rihand(NT) - 400KV	408	17:15	400	21:55	0	0	0	0	0

6.1 Voltage Profile: 765kV

	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index
					< 728	< 742	> 800	> 820	
Anta RS(RJ) - 765KV	787	03:45	773	00:00	0	0	0	0	0
Balia(PG) - 765KV	794	17:00	759	00:40	0	0	0	0	0

Bareilly II(PG) - 765KV	801	08:00	759	00:40	0	0	.35	0	.35
Bhiwani(PG) - 765KV	796	08:05	766	00:10	0	0	0	0	0
Fatehpur(PG) - 765KV	790	05:30	748	00:40	0	0	0	0	0
Jhatikara(PG) - 765KV	793	08:00	759	00:35	0	0	0	0	0
Lucknow II(PG) - 765KV	797	08:00	756	00:40	0	0	0	0	0
Meerut(PG) - 765KV	801	08:00	765	00:10	0	0	.35	0	.35
Moga(PG) - 765KV	786	17:05	759	00:35	0	0	0	0	0
Phagi(RJ) - 765KV	793	03:55	768	00:35	0	0	0	0	0
Unnao(UP) - 765KV	784	08:00	746	00:40	0	0	0	0	0

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

State	Off- Peak Hours (03:00)			Peak Hours (20:00)			Day Energy (MU)			
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	ISGS / (LT+MT) Schedule	BILT Schedule	PX Schedule	Total (MU)
PUNJAB	1,792.96	0	0	1,792.96	0	0	91.13	43.84	0	134.96
HARYANA	2,004.47	145.11	0	2,061.28	109.4	0	95.13	48.73	1.45	145.31
RAJASTHAN	-431.78	-453.54	0	-59.95	-1,058.52	0	68.7	-2.91	-8.83	56.96
DELHI	970	-42.87	0	897.52	-359.28	0	69.4	20.73	-1	89.13
UTTAR PRADESH	1,615.1	786.66	0	1,052.44	949.45	0	163.94	19.58	8.97	192.49
UTTARAKHAND	-164.95	-16.65	0	-164.95	0.79	0	15.03	-3.96	-1.09	9.99
HIMACHAL PRADESH	-1,407.55	-342.85	0	-1,239.27	-403.75	0	35.33	-30.59	-8.27	-3.53
JAMMU & KASHMIR	-525.9	-298.34	0	-527.01	-4.25	0	31.64	-12.6	-1.86	17.19
CHANDIGARH	0	-10.06	0	0	-99.62	0	7.41	0	-1.47	5.95
TOTAL	3,852.35	-232.54	0	3,813.02	-865.78	0	577.71	82.82	-12.1	648.45

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	4,055.11	3,013.83	1,893.59	1,792.88	0	0	0	0
HARYANA	4,946.47	2,921.28	2,063.03	2,004.46	146.39	-632.33	0	0
RAJASTHAN	3,680.65	1,567.04	-59.95	-431.78	129.1	-1,255.18	0	0
DELHI	3,560.85	2,187.3	1,064.93	619.47	18.79	-359.28	0	0
UTTAR PRADESH	7,930.42	5,646.6	1,615.1	195.23	1,439.68	-57.1	0	0
UTTARAKHAND	1,017.86	445.91	-164.86	-164.95	10.93	-158.59	0	0
HIMACHAL PRADESH	1,566.74	1,390.89	-1,132.57	-1,488.3	-239.7	-516.12	0	0
JAMMU & KASHMIR	1,542.82	1,162.72	-521.44	-527.01	0	-302.59	0	0
CHANDIGARH	384.15	252.86	0	0	-10.06	-99.62	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	510.83	1,590	500.4	1,114	1,295.27	1,016.52
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	610.86	5	611.09	5	228	213.14
Pong	384.05	426.72	1,084	422.26	991	418.18	808	575.4	282.66
RPS	343.81	352.8	175.66	-	-	-	-	-	0
RSD	487.91	527.91	390.3	524	6	520.78	7	378.1	416.16
Rihand	252.98	268.22	860.5	259.51	278	262.19	430	52.67	7,548.36
Tehri	740.04	829.79	1,291.49	-	-	-	-	-	0
TOTAL	-	-	-	-	2,870	-	2,364	2,529.44	9,476.84

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

10. Zero Crossing Violations

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
CHANDIGARH	2	16



DELHI	2	14
HARYANA	1	15
HIMACHAL PRADESH	3	47
JAMMU & KASHMIR	2	17
PUNJAB	3	23
RAJASTHAN	2	32
UTTAR PRADESH	1	14
UTTARAKHAND	3	24

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