



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

Power Supply Position in Northern Region For 23-Nov-2018

Date of Reporting:24-Nov-2018

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
42,312	610	42,921	49.96	31,080	294	31,374	49.98	902	12.76

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

State	State's Control Area Generation (Net MU)							Drawal Sch (Net MU)	Act Drawal (Net MU)	UI (Net MU)	Requirement (Net MU)	Shortage (Net MU)	Consumption (Net MU)
	Thermal	Hydro	Gas/Naptha/Diesel	Solar	Wind	OthersBiomass/Small Hyd/Co-gen etc.)	Total						
PUNJAB	55.89	13.21	0	4.21	0	7.99	81.29	32.21	32.49	0.28	113.78	0	113.78
HARYANA	47.54	0.65	0	0.13	0	0.79	49.11	66.26	67.49	1.23	117.74	1.14	116.6
RAJASTHAN	133.72	4.24	1.8	13.63	9.53	4.44	167.37	63.39	65.64	2.25	233.01	0	233.01
DELHI	-0.02	0	15.42	0	0	0.9	16.31	44.86	45.26	0.4	61.57	0	61.57
UTTAR PRADESH	120.2	8.4	0	2.6	0	16.8	148	116.62	116.63	0.01	266.05	1.42	264.63
UTTARAKHAND	0	8.43	2.37	0.64	0	0.4	11.84	22.81	23.65	0.84	35.49	0	35.49
HIMACHAL PRADESH	0	5.09	0	0	0	3.59	8.67	18.94	19.5	0.56	28.17	0	28.17
JAMMU & KASHMIR	0	5.81	0	0	0	0	5.81	37.31	39.96	2.65	55.97	10.2	45.77
CHANDIGARH	0	0	0	0	0	0	0	2.74	3.03	0.29	3.03	0	3.03
Region	357.33	45.83	19.59	21.21	9.53	34.91	488.4	405.14	413.65	8.51	914.81	12.76	902.05

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(-)/Sur ..	UI	STOA/PX Transaction
PUNJAB	5,087	0	23	-1,382	3,283	0	-37	-892
HARYANA	6,052	63	41	-694	3,959	0	165	-693
RAJASTHAN	9,780	0	-123	-1,161	8,522	0	202	135
DELHI	3,139	0	45	-1,365	1,610	0	18	-1,547
UTTAR PRADESH	12,814	0	21	90	9,879	0	-46	94
UTTARAKHAND	1,710	0	-61	455	1,197	0	128	345
HIMACHAL PRADESH	1,376	0	106	-103	883	0	-4	323
JAMMU & KASHMIR	2,188	547	371	505	1,669	294	-8	505
CHANDIGARH	165	0	12	-56	80	0	12	-30
Region	42,311	610	435	-3,711	31,082	294	430	-1,760

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	5,273	9:00	0	5,273	5,273	9:00	0	5,273	3,246	1:00
HARYANA	6,052	19:00	63	6,114	6,114	19:00	63	6,052	3,911	2:00
RAJASTHAN	11,572	9:00	0	11,572	11,572	9:00	0	11,572	7,830	5:00
DELHI	3,460	12:00	0	3,460	3,460	12:00	0	3,460	1,558	4:00
UP	12,894	20:00	0	12,894	12,894	20:00	0	12,894	9,879	3:00
UTTARAKHAND	1,820	8:00	0	1,820	1,820	8:00	0	1,820	1,197	3:00
HP	1,531	9:00	0	1,531	1,531	9:00	0	1,531	883	3:00
J&K	2,198	9:00	550	2,748	2,748	9:00	550	2,198	1,647	2:00
CHANDIGARH	176	9:00	0	176	176	9:00	0	176	80	3:00
NR	42,312	19:00	610	42,921	42,921	19:00	610	42,312	31,080	3:00

3(A) State Entities Generation:

CHANDIGARH						
Station/Constituents	Inst. Capacity	N/A	N/A	Day Peak		Day Energy
	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	(MU)
NIL						
Total	0	0	0			0
Total	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)	
BADARPUR TPS(2 * 210 + 3 * 100)	705	-3	-3	0		-0.02	-1
RAJGHAT TPS(2 * 67.5)	135	0	0	0			
Total THERMAL	840	-3	-3			-0.02	-1
BAWANA GPS(2 * 253 + 4 * 216)	1,370	425	431	0		10.65	444
DELHI GAS TURBINES(3 * 34 + 6 * 30)	282	40	39	0		0.91	38
PRAGATI GAS TURBINES(1 * 121.2 + 2 * 104.6)	331	158	158	0		3.87	161
RITHALA GPS(3 * 36)	108	0	0	0			
Total GAS/NAPHTHA/DIESEL	2,091	623	628			15.43	643
WIND	0	0	0	0			
BIOMASS(1 * 16)	16	29	34	0		0.9	38
SOLAR(1 * 2)	2	0	0	0			
Total DELHI	2,949	649	659			16.31	680

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	289	251	0		6.24	260
JHAJJAR(CLP)(2 * 660)	1,320	617	372	0		13.18	549
MAGNUM DIESEL (IPP)(4 * 6.3)	25	0	0	0			
PANIPAT TPS(2 * 210 + 2 * 250)	920	230	203	0		5.28	220
RGTPP(KHEDAR)(2 * 600)	1,200	1,144	768	0		22.85	952
Total THERMAL	4,065	2,280	1,594			47.55	1,981
FARIDABAD GPS(1 * 156.07 + 2 * 137.75)	432	0	0	0			
Total GAS/NAPHTHA/DIESEL	432	0	0			0	0
TOTAL HYDRO HARYANA(1 * 62)	62	11	19	0		0.65	27
Total HYDEL	62	11	19			0.65	27
WIND	0	0	0	0			
BIOMASS(1 * 106)	106	0	0	0		0.79	33
SOLAR(1 * 50)	50	0	0	0		0.13	5
Total HARYANA	4,715	2,291	1,613			49.12	2,046

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	30	50	198	09:00	1.58	66
MALANA (IPP) HPS(2 * 43)	86	48	0	48	19:00	0.41	17
OTHER HYDRO HP(1 * 372)	372	164	102	170	19:00	3.1	129
Total HYDEL	758	242	152			5.09	212
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0			
SMALL HYDRO(1 * 486)	486	177	140	180	19:00	3.59	150
Total SMALL HYDRO	486	177	140			3.59	150
Total HP	1,244	419	292			8.68	362

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/NAPHTHA/DIESEL	190	0	0			0	0
BAGLIHAR (IPP) HPS(6 * 150)	900	148	148	0		3.55	148
OTHER HYDRO/IPP J&K(1 * 308)	308	132	84	0		2.26	94
Total HYDEL	1,208	280	232			5.81	242
WIND	0	0	0	0			
BIOMASS	0	0	0	0			
SOLAR	0	0	0	0			
SMALL HYDRO(1 * 98)	98	0	0	0			
Total SMALL HYDRO	98	0	0			0	0
Total J&K	1,496	280	232			5.81	242

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	491	290	491		11.33	472
GURU GOBIND SINGH TPS (ROPAR)(6 * 210)	1,260	0	0	0		-0.14	-6
GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)(2 * 210 + 2 * 250)	920	231	172	311		4.95	206
GURU NANAK DEV TPS (BHATINDA)(4 * 110)	460	0	0	0		-0.09	-4
RAJPURA(NPL) TPS(2 * 700)	1,400	660	570	660		14.54	606
TALWANDI SABO TPS(3 * 660)	1,980	1,228	616	1,228		25.29	1,054
Total THERMAL	6,560	2,610	1,648			55.88	2,328
TOTAL HYDRO PUNJAB(1 * 1000)	1,000	544	271	603		13.21	550
Total HYDEL	1,000	544	271			13.21	550
WIND	0	0	0	0			
BIOMASS(1 * 303)	303	0	0	0		7.99	333
SOLAR(1 * 859)	859	0	0	368		4.21	175
Total PUNJAB	8,722	3,154	1,919			81.29	3,386

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	224	223	0		5.1	213
CHHABRA TPS(1 * 660 + 4 * 250)	1,660	1,484	1,406	0		34.5	1,438
GIRAL (IPP) LTPS(2 * 125)	250	0	0	0			
KALISINDH TPS(2 * 600)	1,200	562	403	0		12.18	508
KAWAI TPS(2 * 660)	1,320	1,236	841	0		26.46	1,103
KOTA TPS(2 * 110 + 2 * 195 + 3 * 210)	1,240	1,031	832	0		22.41	934
RAJWEST (IPP) LTPS(8 * 135)	1,080	720	387	0		14.67	611
SURATGARH TPS(6 * 250)	1,500	724	717	0		18.4	767
VSLPP (IPP)(1 * 135)	135	0	0	0			
Total THERMAL	8,635	5,981	4,809			133.72	5,574
DHOLPUR GPS(3 * 110)	330	0	0	0			
RAMGARH GPS(1 * 110 + 1 * 35.5 + 1 * 50 + 2 * 37.5)	271	81	46	0		1.8	75
Total GAS/NAPHTHA/DIESEL	601	81	46			1.8	75
RAPS-A(1 * 100 + 1 * 200)	300	161	159	0		3.72	155
Total NUCLEAR	300	161	159			3.72	155
TOTAL HYDRO RAJASTHAN(1 * 550)	550	154	175	0		4.24	177
Total HYDEL	550	154	175			4.24	177
WIND	4,292	256	504	0		9.53	397
BIOMASS(1 * 102)	102	30	30	0		0.73	30
SOLAR(1 * 1995)	1,995	10	0	0		13.63	568
Total RAJASTHAN	16,475	6,673	5,723			167.37	6,976

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	1,359	1,163	0		33.9	1,413
ANPARA-C TPS(2 * 600)	1,200	537	1,092	0		18	750
ANPARA-D TPS(2 * 500)	1,000	953	934	0		21.8	908
BAJAJ ENERGY PVT LTD (IPP) TPS(10 * 45)	450	0	0	0			
BARA PPGCL TPS(3 * 660)	1,980	937	361	0		15.4	642
HARDUAGANJ TPS(1 * 105 + 1 * 60 + 2 * 250)	665	441	248	0		9.5	396
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	172	113	0		4.1	171
PANKI TPS(2 * 105)	210	0	0	0			
PARICHA TPS(2 * 110 + 2 * 210 + 2 * 250)	1,160	438	250	0		9.4	392
ROSA TPS(4 * 300)	1,200	0	0	0			
TANDA TPS(4 * 110)	440	387	240	0		8.1	338
Total THERMAL	13,763	5,224	4,401			120.2	5,010
ALAKHANDA HEP(4 * 82.5)	330	83	82	0		2	83
VISHNUPARYAG HPS(4 * 110)	440	108	108	0		2.5	104
OTHER HYDRO UP(1 * 527)	527	174	121	0		3.9	163
Total HYDEL	1,297	365	311			8.4	350
WIND	0	0	0	0			
BIOMASS(1 * 26)	26	0	0	0			
SOLAR(1 * 472)	472	0	0	0		2.6	108
CO-GENERATION(1 * 1360)	1,360	700	700	0		16.8	700
Total OTHERs	1,360	700	700			16.8	700
Total UP	16,918	6,289	5,412			148	6,168

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(1 * 450)	450	95	96	96	03:00	2.37	99			
Total GAS/NAPHTHA/DIESEL	450	95	96			2.37	99			
OTHER HYDRO UK(1 * 1250)	1,250	456	177	677	09:00	8.43	351			
Total HYDEL	1,250	456	177			8.43	351			
WIND	0	0	0	0						
BIOMASS(1 * 127)	127	22	9	22	19:00	0.4	17			
SOLAR(1 * 100)	100	0	0	99	12:00	0.64	27			
SMALL HYDRO(1 * 180)	180	0	0	0						
Total SMALL HYDRO	180	0	0			0	0			
Total UTTARAKHAND	2,107	573	282			11.84	494			

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)		
BBMB										
BHAKRA HPS(2 * 108 + 3 * 126 + 5 * 157)	1,379	383.54	649	367	649	19:00	9.2	9.3	388	0.1
DEHAR HPS(6 * 165)	990	219.43	660	0	660	19:00	5.27	5.49	229	0.22
PONG HPS(6 * 66)	396	282.34	330	198	330	19:00	6.78	6.82	284	0.04
Sub-Total	2,765	885.31	1,639	565	-	-	21.25	21.61	901	0.36
NHPC										
BAIRASIUL HPS(3 * 60)	180	0	0	0	0	-	0	-	-	0
CHAMERA HPS(3 * 180)	540	535.58	546	0	546	18:30	2.8	2.98	124	0.18
CHAMERA II HPS(3 * 100)	300	158.18	200	30	200	17:00	2.12	2.35	98	0.23
CHAMERA III HPS(3 * 77)	231	153	161	0	162	07:00	1.4	1.53	64	0.13
DHAULIGANGA HPS(4 * 70)	280	64.99	142	71	144	18:00	1.56	1.56	65	0
DULHASTI HPS(3 * 130)	390	386.9	394	0	395	07:00	4.4	4.51	188	0.11
KISHANGANGA(2 * 110)	220	0	0	0	0	-	0	0	0	0
PARBATI III HEP(4 * 130)	520	33.79	260	0	265	06:15	0.81	0.83	35	0.02
SALAL HPS(6 * 115)	690	120.52	35	200	460	08:00	2.89	3.56	148	0.67
SEWA-II HPS(3 * 40)	120	80.09	81	0	84	18:00	0.5	0.51	21	0.01
TANAKPUR HPS(1 * 31.42 + 2 * 31.4)	94	38.21	49	39	66	02:00	0.92	0.98	41	0.06
URI HPS(4 * 120)	480	211.77	360	186	360	19:00	5.08	5.81	242	0.73
URI-II HPS(4 * 60)	480	130.07	120	121	183	09:00	3.12	3.23	135	0.11
Sub-Total	4,525	1,913.1	2,348	647	-	-	25.6	27.85	1,161	2.25
NPCL										
NAPS(2 * 220)	440	400	439	432	448	02:00	9.6	9.69	404	0.09
RAPS-B(2 * 220)	440	197	218	218	218	19:00	4.73	4.64	193	-0.09
RAPS-C(2 * 220)	440	420	473	473	474	09:00	10.08	10.18	424	0.1
Sub-Total	1,320	1,017	1,130	1,123	-	-	24.41	24.51	1,021	0.1
NTPC										
ANTA GPS(1 * 153.2 + 3 * 88.71)	419	5.83	309	226	404	09:37	7.09	0.7	29	-6.39
AURAIYA GPS(2 * 109.3 + 4 * 111.19)	663	642.6	0	0	0	-	0	-	-	0
DADRI GPS(2 * 154.51 + 4 * 130.19)	830	566.88	382	115	382	19:00	4.47	4.39	183	-0.08
DADRI SOLAR(1 * 5)	5	0.86	0	0	3	12:07	0.02	0.02	1	0
DADRI-I TPS(4 * 210)	840	576.45	343	570	343	19:00	10.65	10.53	439	-0.12
DADRI-II TPS(2 * 490)	980	928.55	573	895	573	19:00	17.7	18.57	774	0.87
ISTPP (JHAJJAR)(3 * 500)	1,500	947.5	986	559	986	19:00	19.23	18.95	790	-0.28
KOLDAM HPS(4 * 200)	800	654	514	0	642	18:00	4	4.12	172	0.12
RIHAND-I STPS(2 * 500)	1,000	466.22	505	502	505	19:00	11.16	11	458	-0.16
RIHAND-II STPS(2 * 500)	1,000	942.5	967	987	967	19:00	22.61	22.44	935	-0.17
RIHAND-III STPS(2 * 500)	1,000	942.5	996	1,008	996	19:00	22.44	23.18	966	0.74
SINGRAULI STPS(2 * 500 + 5 * 200)	2,000	1,862.5	2,032	2,042	2,058	13:00	44.69	45.34	1,889	0.65
SINGRAULI SOLAR(1 * 15)	15	2.48	0	0	0	-	0.06	0.06	3	0
UNCHAHAH II TPS(2 * 210)	420	382.2	419	224	419	19:00	7.68	8.04	335	0.36
UNCHAHAH III TPS(1 * 210)	210	191.1	203	208	203	19:00	4.08	4.21	175	0.13
UNCHAHAH IV TPS(1 * 500)	500	0	0	0	0	-	0	-	-	0
UNCHAHAH SOLAR(1 * 10)	10	1.68	0	0	0	-	0.04	0.04	2	0
UNCHAHAH TPS(2 * 210)	420	303.47	213	238	213	19:00	5.77	5.9	246	0.13
Sub-Total	12,612	9,417.32	8,442	7,574	-	-	181.69	177.49	7,397	-4.2
SJVNL										
NATHPA-JHAKRI HPS(6 * 250)	1,500	1,249.38	1,274	0	1,274	19:00	8.8	9.02	376	0.22
RAMPUR HEP(6 * 68.67)	412	348.12	369	0	370	20:00	2.46	2.62	109	0.16
Sub-Total	1,912	1,597.5	1,643	0	-	-	11.26	11.64	485	0.38
THDC										
KOTESHWAR HPS(4 * 100)	400	99.58	202	93	202	19:00	2.39	2.43	101	0.04
TEHRI HPS(4 * 250)	1,000	1,064	999	0	1,004	18:00	7	7.13	297	0.13
Sub-Total	1,400	1,163.58	1,201	93	-	-	9.39	9.56	398	0.17
Total	24,534	15,993.81	16,403	10,002			273.6	272.66	11,363	-0.94

IPP/JV

Station/Constituents	Inst. Capacity	Declared Capacity	19:00	03:00	Day Peak		Day Energy		AVG. MW	UI
	(MW)	(MW)	Peak MW	Off Peak MW	(MW)	Hrs	SCHD (MU)	ACT (MU)		
IPP										
ADHPL(IPP) HPS(2 * 96)	192	0	0	0	0	-	0	0	0	0
BUDHIL HPS (IPP)(2 * 35)	70	0	69	0	70	18:00	0.31	0.33	14	0.02
KARCHAM WANGTOO HPS(4 * 250)	1,000	0	1,000	0	1,000	18:00	4.62	4.64	193	0.02
MALANA2(2 * 50)	100	0	0	0	0	-	0	-	-	0
SAINJ HEP(2 * 50)	50	0	55	15	55	05:15	0.64	0.62	26	-0.02
SHREE CEMENT (IPP) TPS(2 * 150)	300	0	146	77	150	10:00	2.65	2.56	107	-0.09
Sub-Total	1,712	0	1,270	92	-	-	8.22	8.15	340	-0.07
Total	1,712	0	1,270	92	-	-	8.22	8.15	340	-0.07

Summary Section					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Total State Control Area Generation	54,626	20,328	16,132	488.42	20,351
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]		5,364	6,463	150.12	7,324
Total Regional Availability(Gross)	80,872	43,365	32,689	919.35	39,375

Total Hydro Generation					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Regional Entities Hydro	12,814	8,469	1,320	80.37	3,349
State Control Area Hydro	6,125	2,052	1,337	45.83	1,910
Total Regional Hydro	18,939	10,521	2,657	126.2	5,259

Total Renewable Generation					
	Inst. Capacity	PEAK	OFF-PEAK	Day Energy	Day AVG.
Regional Entities Renewable	30	0	0	0.12	5
State Control Area Renewable	9,214	524	717	45.14	1,881
Total Regional Renewable	9,244	524	717	45.26	1,886

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(U ..	-	-	-	-	-	-	-
3	132KV-Rihand-Sonnagar(PG)	-	-	-	-	-	-	-
4	220KV-Pusauli(PG)-Sahupuri(UP)	99	79	105	0	2.25	0	2.25
5	400KV-Biharsharif(PG)-Balua(PG)	-13	-54	168	68	1.85	0	1.85
6	400KV-Biharsharif(PG)-Varanasi(P..	53	53	72	113	0	0.47	-0.47
7	400KV-Fatehpur(UP)-Sasaram	-	-	-	-	-	-	-
8	400KV-Motihari(DMT)-Gorakhpur ..	196	310	334	0	6.26	0	6.26
9	400KV-Muzaffarpur(PG)-Gorakhp ..	-10	46	314	104	2.14	0	2.14
10	400KV-Patna(PG)-Balua(PG)	410	539	695	0	13.7	0	13.7
11	400KV-Sasaram-Allahabad(PG)	39	204	224	0	2.53	0	2.53
12	400KV-Sasaram-Varanasi(PG)	39	204	224	0	4.13	0	4.13
13	765KV-Fatehpur(PG)-Sasaram.	11	-52	91	111	0.16	0	0.16
14	765KV-Gaya(PG)-Balua(PG)	72	135	230	0	3.78	0	3.78
15	765KV-Gaya(PG)-Varanasi(PG)	-73	-191	411	0	5.65	0	5.65
16	HVDC800KV-Alipurduar-Agra(PG)	300	150	300	0	4.5	0	4.5
Sub-Total EAST REGION		1,123	1,423	3,168	396	46.95	0.47	46.48
Import/Export between NORTH_EAST REGION and NORTH REGION								
1	HVDC800KV-BiswanathCharialli- ..	400	500	500	0	11.71	0	11.71
Sub-Total NORTH_EAST REGION		400	500	500	0	11.71	0	11.71
Import/Export between WEST REGION and NORTH REGION								
1	220KV-Auraiya(NT)-Malanpur(PG)	-56	-64	-	127	0	1.93	-1.93
2	220KV-Badod(MP)-Kota(PG)	-120	-96	-	197	0	2.73	-2.73
3	220KV-Badod(MP)-Modak(RJ)	-	-	-	-	-	-	-
4	400KV-RAPS C(NP)-Sujalpur	264	117	0	382	0	3.09	-3.09
5	400KV-Vindhyachal(PG)-Rihand(N ..	-977	-960	-	977	0	23.18	-23.18
6	400KV-Zerda(PG)-Bhinmal(PG)	-320	-37	161	390	0	3.27	-3.27
7	400KV-Zerda(PG)-Kankroli(RJ)	0	-175	0	261	0	2	-2
8	765KV-0rai-Gwalior(PG)	-278	-362	0	541	0	9.5	-9.5
9	765KV-0rai-Jabalpur	177	591	691	0	9.13	0	9.13
10	765KV-0rai-Satna	1,508	1,567	1,640	0	37.46	0	37.46
11	765KV-Gwalior(PG)-Agra(PG)	1,344	1,514	1,616	0	32.85	0	32.85
12	765KV-Phagi(RJ)-Gwalior(PG)	648	994	1,166	-	20.61	0	20.61
13	HVDC500KV-Mundra(JH)-Mohind..	1,001	801	1,003	0	22.51	0	22.51
14	HVDC500KV-Vindhyachal(PG)-Vindhaychal B/B	-250	-250	0	250	0	6.03	-6.03
15	HVDC800KV-Champa(PG)-Kuruku..	900	900	900	0	21.1	0	21.1
Sub-Total WEST REGION		3,841	4,540	7,177	3,125	143.66	51.73	91.93
TOTAL IR EXCHANGE		5,364	6,463	10,845	3,521	202.32	52.2	150.12

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	52.55	-21.86	7.47	38.16	46.48	8.32

NR-WR	147.25	-34.46	-6.2	106.59	91.93	-14.66
Total	199.8	-56.32	1.27	144.75	150.12	5.37

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)	22.7	0		23		0.1481	-0.1481

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	.7	15.1	70.7	77.5	6.8	.6	0	7.4

<-----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.	
50.17	06:02:10	49.76	09:13:30	49.97	0.05	0.062	50.08	49.85	22.5

6. Voltage Profile: 400kV

STATION	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
	VOLTAGE	TIME	VOLTAGE	TIME	< 380	< 390	> 420	> 430	
Abdullapur(PG) - 400KV	427	04:00	412	17:50	0	0	50.69	0	50.69
Amritsar(PG) - 400KV	428	04:00	413	07:35	0	0	52.43	0	52.43
Ballabgarh(PG) - 400KV	426	04:00	409	10:10	0	0	29.17	0	29.17
Bareilly II(PG) - 400KV	420	04:00	407	17:50	0	0	0	0	0
Bareilly(UP) - 400KV	421	13:00	408	17:50	0	0	1.74	0	1.74
Baspa(HP) - 400KV	431	04:00	411	17:55	0	0	61.81	.35	61.81
Bassi(PG) - 400KV	419	20:05	395	06:25	0	0	0	0	0
Bawana(DTL) - 400KV	426	04:05	412	17:50	0	0	44.79	0	44.79
Dadri HVDC(PG) - 400KV	426	04:00	414	10:10	0	0	52.78	0	52.78
Gorakhpur(PG) - 400KV	419	04:00	408	17:50	0	0	0	0	0
Hisar(PG) - 400KV	423	04:00	423	04:00	39.58	39.58	5.9	0	45.48
Kanpur(PG) - 400KV	423	04:00	412	10:10	0	0	17.01	0	17.01
Kashipur(UT) - 400KV	402	00:00	402	00:00	0	0	0	0	0
Kishenpur(PG) - 400KV	421	04:00	407	07:35	0	0	.69	0	.69
Moga(PG) - 400KV	419	04:00	405	07:35	0	0	0	0	0
Nallagarh(PG) - 400KV	431	04:00	411	17:55	0	0	61.81	.35	61.81
Rihand HVDC(PG) - 400KV	406	21:25	403	14:35	0	0	0	0	0
Rihand(NT) - 400KV	405	04:00	402	14:35	0	0	0	0	0

6.1 Voltage Profile: 765kV

STATION	Maximum		Minimum		Voltage (in %)				Voltage Deviation Index (% of time)
	VOLTAGE	TIME	VOLTAGE	TIME	< 728	< 742	> 800	> 820	
Anta RS(RJ) - 765KV	789	19:10	768	07:35	0	0	0	0	0
Balia(PG) - 765KV	784	04:00	768	17:50	0	0	0	0	0
Bareilly II(PG) - 765KV	799	04:00	777	17:50	0	0	0	0	0
Bhiwani(PG) - 765KV	807	20:05	776	06:30	0	0	2.78	0	2.78
Fatehpur(PG) - 765KV	774	04:00	754	10:10	0	0	0	0	0
Jhatikara(PG) - 765KV	801	04:00	775	10:10	0	0	1.39	0	1.39
Lucknow II(PG) - 765KV	793	04:00	774	10:10	0	0	0	0	0
Meerut(PG) - 765KV	806	20:00	776	07:45	0	0	5.21	0	5.21
Moga(PG) - 765KV	798	20:00	758	07:35	0	0	0	0	0
Phagi(RJ) - 765KV	798	19:55	768	06:30	0	0	0	0	0
Unnao(UP) - 765KV	772	04:00	756	10:10	0	0	0	0	0

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

State	Off- Peak Hours (03:00)			Peak Hours (19:00)			Day Energy (MU)			
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	ISGS/(LT+MT) Schedule	BILT Schedule	PX Schedule	Total (MU)
PUNJAB	-1,680.35	788.08	0	-1,579.09	197.02	0	59.83	-38.71	11.08	32.21
HARYANA	-852.79	159.74	0	-811.97	117.61	0	84.93	-20.85	2.18	66.26
RAJASTHAN	-8.2	143.48	0	-8.2	-1,152.85	0	63.31	0.34	-0.26	63.39
DELHI	-1,004.82	-542.27	0	-1,016.85	-348.35	0	76.59	-25.63	-6.1	44.86
UTTAR PRADESH	93.7	0	0	89.79	0	0	120.98	-4.21	-0.14	116.62
UTTARAKHAND	512.53	-167.57	0	504.95	-50.39	0	12.11	12.13	-1.45	22.81
HIMACHAL PRADESH	324.49	-1.13	0	144.3	-247.5	0	13.83	7.34	-2.23	18.94
JAMMU & KASHMIR	504.51	0	0	504.51	0	0	24.93	12.11	0.26	37.31
CHANDIGARH	0	-30.3	0	0	-55.55	0	3.65	0	-0.91	2.74
TOTAL	-2,110.93	350.03	0	-2,172.56	-1,540.01	0	460.16	-57.48	2.43	405.14

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	3,325.35	2,106.27	-1,579.09	-1,680.35	788.08	197.02	0	0
HARYANA	4,469.87	2,844.16	-729.1	-1,011.98	159.74	8.31	0	0
RAJASTHAN	3,549.86	1,916.29	88.81	-8.2	1,145.94	-1,243.5	0	0
DELHI	3,788.77	2,442.44	-872.89	-1,187.16	228.44	-755.38	0	0
UTTAR PRADESH	6,480.92	4,013.7	102.59	-471.54	19.55	-300.17	0	0
UTTARAKHAND	772.23	372.43	541.74	487.15	94.87	-190.17	0	0
HIMACHAL PRADESH	1,283.43	251.59	419.96	144.22	212.79	-572.63	0	0
JAMMU & KASHMIR	1,589.79	746.52	504.51	504.51	344.78	-356.2	0	0
CHANDIGARH	258.52	102.44	0	0	0	-99.99	0	0

8. Major Reservoir Particulars

RESERVOIR	Parameters		Present Parameters		LAST YEAR		LAST DAY	
	MDDL (Mts)	FRL (Mts)	Level (Mts)	Energy (MU)	Level (Mts)	Energy (MU)	Inflow (m3/s)	Usage (m3/s)
Bhakra	445.62	513.59	508.04	1,456	505.11	1,312	234.18	245.2
Chamera-I	748.75	760	756.28	-	-	-	83.93	80.41
Gandhisagar	295.78	295.78	-	-	-	-	-	0
Jawahar Sagar	295.78	298.7	-	-	-	-	-	0
Koteshwar	598.5	612.5	-	-	-	-	-	0
Pong	384.05	426.72	420.07	889	415.02	681	86.85	392.39
RPS	343.81	352.8	-	-	-	-	-	0
RSD	487.91	527.91	521.98	4	510.16	4	90.67	127.22
Rihand	252.98	268.22	-	-	-	-	-	0
Tehri	740.04	829.79	823.05	1,067	819.75	997	89.68	156
TOTAL	-	-	-	3,416	-	2,994	585.31	1,001.22

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	1	15
DELHI	2	15
HARYANA	0	12
HIMACHAL PRADESH	3	17
JAMMU & KASHMIR	6	78
PUNJAB	0	11
RAJASTHAN	0	11
UTTAR PRADESH	2	13
UTTARAKHAND	4	31

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 :

220 kV Nehrian Hamirpur ckt-II First time charged at 11.18 hrs on 23.11.18.

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