

	Renewable(Total)	848	10591	10591	0.30	13	
	Total Punjab	8408	13591	12877	70.07	2920	
Haryana	Panipat TPS (2*210+2*250)	920	199	202	4.93	205	
	DCRTPP (Yamuna nagar) (2*300)	600	468	464	11.14	464	
	Faridabad GPS (NTPC)(2*137.75+1*156)	432	188	165	4.22	176	
	RGTPP (khedar) (IPP) (2*600)	1200	0	0	0.00	0	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP) (2*660)	1320	807	737	19.36	807	
	Thermal (Total)	4497	1662	1568	39.64	1652	
	Total Hydro	62	10	8	0.36	15	
	Wind Power	0	0	0	0.00	0	
	Biomass	40	0	0	0.00	0	
	Solar	0	0	0	0.00	0	
	Renewable(Total)	40	0	0	0.00	0	
	Total Haryana	4599	1672	1576	40.00	1667	
	Rajasthan	kota TPS (2*110+2*195+3*210)	1240	949	1157	24.31	1013
		suratgarh TPS (6*250)	1500	455	430	10.72	447
Chabra TPS (4*250)		1000	681	906	19.02	793	
Dholpur GPS (3*110)		330	0	0	0.00	0	
Ramgarh GPS(1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50)		271	182	183	4.31	180	
RAPS A (NPC) (1*100+1*200)		300	168	168	4.31	180	
Barsingsar (NLC) (2*125)		250	98	100	2.34	98	
Giral LTPS (2*125)		250	0	0	0.00	0	
Rajwest LTPS (IPP) (8*135)		1080	820	824	19.15	798	
VS LIGNITE LTPS (IPP) (1*135)		135	0	0	0.00	0	
Kalisindh Thermal(2*600)		1200	916	991	22.97	957	
Kawai(Adani) (2*660)		1320	458	456	10.79	450	
Thermal (Total)		8876	4727	5215	117.93	4914	
Total Hydro		550	171	193	4.12	171	
Wind power		4017	470	120	6.36	265	
Biomass		99	15	15	0.37	15	
Solar		1295	0	0	2.54	106	
Renewable/Others (Total)		5411	485	135	9.27	386	
Total Rajasthan		14837	5383	5543	131.31	5471	
UP		Anpara TPS (3*210+2*500)	1630	798	780	20.00	833
	Obra TPS (2*50+2*94+5*200)	1194	293	253	6.90	288	
	Paricha TPS (2*110+2*220+2*250)	1160	837	580	17.00	708	
	Panki TPS (2*105)	210	0	0	0.00	0	
	Harduaganj TPS (1*60+1*105+2*250)	665	544	406	11.70	488	
	Tanda TPS (NTPC) (4*110)	440	292	207	6.16	257	
	Roza TPS (IPP) (4*300)	1200	1084	734	23.10	963	
	Anpara-C (IPP) (2*600)	1200	630	630	15.80	658	
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	81	58	1.70	71	
	Anpara-D(2*500)	1000	580	591	14.80	617	
	Lalitpur TPS(3*660)	1980	0	0	0.00	0	
	Bara(2*660)	1320	874	716	19.90	829	
	Thermal (Total)	12449	6013	4955	137.06	5711	
	Vishnuparyag HPS (IPP)(4*110)	440	103	98	2.30	96	
	Alakananda(4*82.5)	330	82	0	1.40	58	
	Other Hydro	527	191	205	4.31	180	
	Cogeneration	981	800	800	19.20	800	
	Wind Power	0	0	0	0.00	0	
	Biomass	26	0	0	0.00	0	
	Solar	102	0	0	0.00	0	
Renewable(Total)	128	0	0	0.00	0		
Total UP	14855	7189	6058	164.27	6845		
Uttarakhand	Other Hydro	1250	532	174	7.10	296	
	Total Gas	225	279	273	6.59	275	
	Wind Power	0	0	0	0.00	0	
	Biomass	127	0	0	0.00	0	
	Solar	20	0	0	0.04	2	
	Small Hydro (< 25 MW)	180	0	0	0.00	0	
	Renewable(Total)	327	0	0	0.04	2	
	Total Uttarakhand	1802	811	447	13.73	572	
	Rajghat TPS (2*67.5)	135	0	0	-0.01	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	66	79	1.89	79	
Pragati Gas Turbine (2x104+ 1x122)	330	265	263	6.39	266		
Rithala GPS (3*36)	95	0	0	0.00	0		
Bawana GPS (4*216+2*253)	1370	250	280	6.02	251		
Badarpur TPS (NTPC) (3*95+2*210)	705	-4	-4	-0.21	-9		
Thermal (Total)	2917	577	619	14.07	586		
Wind Power	0	0	0	0.00	0		
Biomass	16	0	0	0.00	0		
Solar	2	0	0	0.00	0		
Renewable(Total)	18	0	0	0.00	0		
Total Delhi	2935	577	619	14.07	586		
HP	Baspa HPS (IPP) (3*100)	300	27	0	1.00	42	
	Malana HPS (IPP) (2*43)	86	0	0	0.26	11	
	Other Hydro	372	85	28	1.99	83	
	Wind Power	0	0	0	0.00	0	
	Biomass	0	0	0	0.00	0	
	Solar	0	0	0	0.00	0	
	Small Hydro (< 25 MW)	486	59	54	1.35	56	
	Renewable(Total)	486	59	54	1.35	56	
	Total HP	1244	171	82	4.59	191	
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	101	110	2.43	101
Other Hydro/IPP(including 98 MW Small Hydro)		308	85	133	1.14	47	
Gas/Diesel/Others		190	0	0	0.00	0	
Wind Power		0	0	0	0.00	0	
Biomass		0	0	0	0.00	0	
Solar		0	0	0	0.00	0	
Small Hydro (< 25 MW)Included in Other Hydro Above		98	0	0	0.00	0	
Renewable(Total)		98	0	0	0.00	0	
Total J & K	1398	186	243	4	149		
Total State Control Area Generation		50078	29581	27444	441.62	18401	
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			5645.62	6341	175.18	7299	
Total Regional Availability(Gross)		75315	52134	41585	864.76	36032	

IV. Total Hydro Generation:

Regional Entities Hydro	12234	8586	694	64.43	2684
State Control Area Hydro	7163	2086	1453	35.51	1756
Total Regional Hydro	19397	10672	2147	99.93	4440

V. Total Renewable Generation:

Regional Entities Renewable	30	0	0	0.10	4
State Control Area Renewable	7356	11135	10780	10.95	456
Total Regional Renewable	7386	11135	10780	11.05	461

VI(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(19:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
Vindhychal(HVDC B/B)	-500	-500	0	500	0.00	12.05	-12.05
765 KV Gwalior-Agra (D/C)	1883	1915	2378	0	49.80	0.00	49.80
400 KV Zerda-Kankroli	-124	-166	0	212	0.00	3.49	-3.49
400 KV Zerda-Bhinmal	0	-53	37	157	0.00	1.00	-1.00
220 KV Auraiya-Malanpur	-89	-65	0	102	0.00	1.72	-1.72
220 KV Badod-Kota/Morak	-38	-99	0	122	0.00	1.76	-1.76
Mundra-Mohindergarh(HVDC Bipole)	1999	1798	2013	0.00	45.33	0.00	45.33
400 KV RAPPCC-Sujalpur	400	270	450	0	8.96	0.00	8.96
400 KV Vindhychal-Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1150	1054	1477	0	30.92	0.00	30.92
Sub Total WR	4681	4154			135.01	20.02	114.99
400 kV Sasaram - Varanasi	285	241	289	241	9.63	0.00	9.63
400 kV Sasaram - Allahabad	53	90	109	0	1.65	0.00	1.65
400 kV MZP- GKP (D/C)	-5	400	467	5	7.75	0.00	7.75
400 KV Patna-Balia(D/C) X 2	659	723	808	0	17.39	0.00	17.39
400 KV B'Sharif-Balia (D/C)	-1	237	275	-1	4.36	0.00	4.36
765 KV Gaya-Balia	139	288	416	0	6.89	0.00	6.89
765 KV Gaya-Varanasi (D/C)	165	486	842	0	11.46	0.00	11.46
220 KV Pusauli-Sahupuri	-90	0	140	0	0.89	0.00	0.89
132 KV K'nasa-Sahupuri	-30	-24	0	30	0.00	0.51	-0.51
132 KV Son Ngr-Rihand	-30	-22	0	30	0.00	0.55	-0.55
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-173	-50	103	199	0.00	0.69	-0.69
400 KV Barh -GKP (D/C)	462	424	544	0	11.00	0.00	11.00
400 kV B'Sharif - Varanasi (D/C)	38	-105	201	54	3.13	0.00	3.13
Sub Total ER	1472	2688			74.14	1.75	72.38
+/- 800 KV BiswanathChariali-Agra	-507	-501	0	507.00	0.00	12.19	-12.19
Sub Total NER	-507	-501			0.00	12.19	-12.19
Total IR Exch	5646	6341			209.14	33.96	175.18

VI(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]

ISGS/LT Schedule (MU)			Bilateral Schedule (MU)		Power Exchange Shdl (MU)		Wheeling (MU)	
ER	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
44.75	0.93	45.68	1.70	-8.63	8.00	2.10	0.00	0.00

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR Incls Mndra	Total	Through ER(including NER)	Through WR	Total	Through ER (including NER)	Through WR	Total
55.37	103.41	158.78	60.19	114.99	175.18	4.82	11.58	16.40

VI(C). Inter National Exchange with Nepal [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(19:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	13	13	0	14	0	1	-0.72

VII. Frequency Profile <----- % of Time Frequency ----->

<49.2	<49.7	<49.8	<49.9	<50.0	49.9-50.05	50.05-50.10	50.10-50.20	>50.20	>50.50
0.00	0.00	0.17	8.69	56.87	73.44	13.13	4.63	0.14	0.00

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum		Minimum					MAX	MIN	
Freq	Time	Freq	Time	Hz	Index	(Hz)	(Hz)		
50.21	6.04	49.76	17.14	49.99	0.045	0.067	0.00	0.00	26.56

VIII(A). Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	405	00:00	400	12:24	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	421	04:00	399	17:41	0.0	0.0	0.1	0.0	0.1
Bareilly(PG)400kV	400	425	04:00	395	16:18	0.0	0.0	15.1	0.0	15.1
Kanpur	400	421	03:01	402	11:07	0.0	0.0	0.5	0.0	0.5
Dadri	400	429	03:56	411	11:09	0.0	0.0	40.9	0.0	40.9
Ballabgarh	400	434	03:58	413	11:07	0.0	0.0	75.5	11.3	75.5
Bawana	400	432	04:01	411	11:08	0.0	0.0	51.0	0.6	51.0
Bassi	400	426	04:00	397	11:08	0.0	0.0	7.1	0.0	7.1
Hissar	400	421	03:57	400	11:11	0.0	0.0	0.5	0.0	0.5
Moga	400	424	03:59	404	10:10	0.0	0.0	13.5	0.0	13.5
Abdullapur	400	425	03:02	404	11:37	0.0	0.0	13.5	0.0	13.5
Nalagarh	400	427	03:06	412	06:47	0.0	0.0	38.4	0.0	38.4
Kishenpur	400	431	01:39	402	15:51	0.0	0.0	24.6	0.9	24.6
Wagoora	400	0	00:00	0	00:00	0.0	0.0	0.0	0.0	0.0
Amritsar	400	424	01:39	401	12:19	0.0	0.0	18.6	0.0	18.6
Kashipur	400	0	00:00	0	00:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	412	19:17	402	12:22	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	425	03:59	400	10:30	0.0	0.0	14.7	0.0	14.7

VIII(B). Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	779	04:00	743	22:17	0.0	0.0	0.0	0.0	0.0
Balia	765	797	03:59	760	12:19	0.0	0.0	0.0	0.0	0.0
Moga	765	800	03:03	764	10:51	0.0	0.0	0.0	0.0	0.0
Agra	765	793	03:59	756	11:07	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	811	03:04	771	11:08	0.0	0.0	23.4	0.0	23.4
Unnao	765	780	00:59	743	11:07	0.0	0.0	0.0	0.0	0.0
Lucknow	765	808	04:00	770	12:19	0.0	0.0	15.4	0.0	15.4
Meerut	765	806	20:44	755	08:37	0.0	0.0	5.3	0.0	5.3
Jhatikara	765	812	04:00	770	11:07	0.0	0.0	17.1	0.0	17.1
Bareilly 765 kV	765	802	03:59	765	10:31	0.0	0.0	0.4	0.0	0.4
Anta	765	799	04:00	755	08:41	0.0	0.0	0.0	0.0	0.0
Phagi	765	807	04:00	752	08:43	0.0	0.0	7.9	0.0	7.9

Note : '0' in Max / Min Col -> Telemetry Outage

IX. Reservoir Parameters:

Name of Reservoir	Parameters		Present Parameters		Last Year		Last day	
	FRL (m)	MDDL (m)	Level (m)	Energy (MU)	Level (m)	Energy (MU)	Inflow (m ³ /s)	Usage (m ³ /s)
Bhakra	513.59	445.62	429.73	827.99	504.79	1298.95	181.54	467.88
Pong	426.72	384.05	410.49	514.41	414.11	644.91	60.00	350.56
Tehri	829.79	740.04	814.65	895.26	809.40	790.57	39.87	157.00
Koteshwar	612.50	598.50	610.01	4.56	610.94	5.04	157.00	160.97
Chamera-I	760.00	748.75	759.49	0.00	0.00	0.00	40.67	38.03

Rihand	268.22	252.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RPS	352.80	343.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jawahar Sagar	298.70	295.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RSD	527.91	487.91	507.72	2.18	503.66	4.59	37.80	91.51	

* NA: Not Available

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

State	Off- Peak Hours (03:00 Hrs)			Peak Hours (19:00 Hrs)			Day Energy (MU)		
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MU)	IEX / PXIL (MU)	Total (MU)
Punjab	-461	2	0	-542	0	0	-13.96	0.36	-13.60
Delhi	-281	-356	0	-370	58	0	-8.82	-0.42	-9.24
Haryana	-852	288	0	-528	208	0	-14.77	5.65	-9.12
HP	335	71	0	267	-18	0	9.41	-1.30	8.10
J&K	621	118	0	615	197	0	14.69	2.85	17.54
CHD	0	0	0	0	0	0	0.00	-0.10	-0.10
Rajasthan	-7	278	0	-7	230	0	4.40	7.32	11.73
UP	126	0	0	-142	0	0	-7.35	-0.36	-7.71
Uttarakhand	327	-82	0	327	-17	0	7.15	-1.57	5.58
Total	-193	318	0	-380	659	0	-9.25	12.43	3.18

X(B). Short-Term Open Access Details:

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-441	-752	115	0	0	0
Delhi	-281	-459	412	-361	0	0
Haryana	-439	-866	289	-125	0	0
HP	549	242	71	-580	0	0
J&K	621	602	296	-203	0	0
CHD	0	0	0	-71	0	0
Rajasthan	450	-7	899	181	0	0
UP	140	-837	0	-100	0	0
Uttarakhand	358	24	101	-336	0	0

XI. System Reliability Indices(Violation of TTC and ATC):

(i)%age of times N-1 Criteria was violated in the inter - regional corridors

WR	0.00%
ER	0.00%
Simultaneous	0.00%

(ii)%age of times ATC violated on the inter-regional corridors

WR	0.00%
ER	0.00%
Simultaneous	11.81%

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

Rihand - Dadri	0.00%
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XII. Zero Crossing Violations

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
Punjab	5	39
Haryana	2	23
Rajasthan	3	16
Delhi	3	17
UP	0	11
Uttarakhand	5	51
HP	3	31
J & K	2	32
Chandigarh	5	40

XIII. System Constraints:

XIV. Grid Disturbance / Any Other Significant Event:

XV. Weather Conditions For 11.12.2016 :
Fog in some parts of NR.

XVI. Synchronisation of new generating units :

XVII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / substation :
400kV Jallandhar – Samba Ckt1 charged at 16:45 hrs and ckt 2 at 17:38 hrs for the first time.
400kV Unchahar 401 bay and Station Transformer charged on no load from 400kV Side only for the first time at 18:45 hrs.

XVIII. Tripping of lines in pooling stations :

XIX. 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.