

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sent out MW)	
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	160	160	3.42	143	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	0	0	-0.02	-1	
	Guru Har Gobind Singh TPS(L.mbt) (2*210+2*250)	920	0	0	-0.07	-3	
	Goindwal(GVK)		0	0	0.00	0	
	Rajpura (2*700)	1400	1212	710	24.30	1013	
	Talwandi Saboo (2*660)	1320	455	349	10.29	429	
	Thermal (Total)	5360	1827	1219	37.92	1580	
	Total Hydro	1000	427	243	7.48	312	
	Total Punjab	6360	2254	1462	45.41	1892	
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	218	221	5.16	215
DCRTPP (Yamuna nagar) (2*300)		600	456	454	11.51	479	
Faridabad GPS (NTPC)		432	157	166	4.29	179	
RGTPP (Khedar) (IPP) (2*600)		1200	766	788	19.22	801	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	372	372	8.96	373	
Thermal (Total)		4944	1969	2001	49.12	2047	
Total Hydro		62	9	10	0.26	11	
Total Haryana		5006	1978	2011	49.38	2058	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	1074	1034	25.90	1079
	suratgarh TPS (6*250)	1500	826	756	19.00	792	
	Chabra TPS (4*250)	1000	553	615	14.20	592	
	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	82	82	2.04	85	
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0	
	Barsingsar (NLC) (2*125)	250	189	185	4.29	179	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	811	845	19.56	815	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	0	1068	16.51	688	
	Kawai(Adani) (2*660)	1320	1066	1164	25.87	1078	
	Thermal (Total)	8876	4601	5749	127	5307	
	Total Hydro	550	183	150	4.90	204	
	Wind power	3214	44	286	4.13	172	
	Biomass	99	23	23	0.55	23	
	Solar	730	1	0	0.06	3	
	Renewable/Others (Total)	4043	68	309	4.75	198	
	Total Rajasthan	13469	4852	6208	137.00	5709	
	UP	Anpara TPS (3*210+2*500)	1630	1378	1384	30.10	1254
		Obra TPS (2*50+2*94+5*200)	1194	410	282	8.00	333
		Paricha TPS (2*110+2*220+2*250)	1140	778	799	18.60	775
		Panki TPS (2*105)	210	0	0	0.00	0
Harduaaganj TPS (1*60+1*105+2*250)		665	310	311	7.40	308	
Tanda TPS (NTPC) (4*110)		440	281	290	6.69	279	
Roza TPS (IPP) (4*300)		1200	720	824	17.10	713	
Anpara-C (IPP) (2*600)		1200	536	540	12.90	533	
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	81	81	1.70	71	
Anpara-D(1*500)		500	137	138	0.40	17	
Lalitpur TPS(2*660)		1320	0	0	0.00	0	
Bara(2*660)		1320	391	542	12.90	538	
Thermal (Total)		11269	5022	5191	116	4820	
Vishnuparyag HPS (IPP)(4*110)		440	0	0	0.00	0	
Alakanada(4*82.5)		330	83	0	0.90	38	
Other Hydro		527	15	2	1.00	42	
Cogeneration		981	800	800	19.20	800	
Total UP		13547	5920	5993	137	5700	
Uttarakhand		Total Hydro	1398	406	243	8.07	336
	Total Uttarakhand	1398	406	243	8.07	336	
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.01	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	36	35	0.90	38	
	Praagati Gas Turbine (2x104+ 1x122)	330	140	142	3.42	142	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	250	252	6.00	250	
	Badarpur TPS (NTPC) (3*95+2*210)	705	162	165	3.81	159	
	Thermal (Total)	2917	588	594	14.12	588	
	Total Delhi	2917	588	594	14.12	588	
HP	Baspa HPS (IPP) (3*100)	300	26	34	0.85	35	
	Malana HPS (IPP) (2*43)	86	0	0	0.19	8	
	Other Hydro	878	155	84	2.84	118	
	Total HP	1264	181	118	3.88	162	
J & K	Baglihar HPS (IPP) (3*150)	450	123	143	2.74	114	
	Other Hydro/IPP	560	138	123	2.76	115	
	Gas/Diesel/Others	190	0	0	0.00	0	
	Total J & K	1200	261	266	5.50	229	
Total State Control Area Generation		45161	16440	16895	400.15	16673	
J. Net Inter Regional Exchange (Import (+ve)/Export (-ve))			5477	5727	148.32	6180	
Total Regional Availability(Gross)		70398	40385	33353	839.65	34985	

IV. Total Hydro Generation:

Regional Entities Hydro	12234	8560	1090	72.02	3001
State Control Area Hydro	6581	1565	1032	32	1333
Total Regional Hydro	18815	10125	2122	104.01	4334

V(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	MW	MW	Import	Export	Import	Export	
	Vindhychal(HVDC B/B)	-250	-250	0	250	0.00	6.08	-6.08	
765 KV Gwalior-Agra (D/C)	2172	2446	2861	0	59.47	0.00	59.47		
400 KV Zerde-Kankroli	-42	-170	0	233	0.00	2.75	-2.75		
400 KV Zerde-Bhinmal	51	-76	133	156	0.00	0.14	-0.14		
220 KV Auraiya-Malanpur	-107	-112	0	129	0.00	2.52	-2.52		
220 KV Badod-Kota/Morak	-3	-22	18	-22	0.00	-0.42	0.42		
Mundra-Mohindergarh(HVDC Bipole)	2197	2197	2206	0	53.20	0.00	53.20		
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Phagi-Gwalior (D/C)	870	591	1115	0	20.74	0.00	20.74		
Sub Total WR	4888	4604			133.41	11.07	122.34		
Pusauli Bypass/HVDC	400	400	400	0	9.10	0.00	9.10		
400 KV MZP- GKP (D/C)	-478	-416	0	668	0.00	9.87	-9.87		
400 KV Patna-Balia(D/C) X 2	515	660	705	0	14.85	0.00	14.85		
400 KV B' Sharif-Balia (D/C)	-199	-119	0	247	0.00	2.80	-2.80		
765 KV Gaya-Balia	45	134	175	0	1.37	0.00	1.37		
765 KV Gaya-Fatehpur	44	79	303	0	3.87	0.00	3.87		
220 KV Pusauli-Sahupuri	0	0	0	0	0.00	0.00	0.00		
132 KV K'nasa-Sahupuri	0	0	1	0	0.00	0.00	0.00		
132 KV Son Ngr-Rihand	-33	-26	0	-32	0.00	0.68	-0.68		
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Sasaram - Fatehpur	-189	-139	98	233	0.00	1.70	-1.70		
400 KV Barh -GKP (D/C)	484	550	564	0	11.84	0.00	11.84		
Sub Total ER	589	1123			41.03	15.05	25.98		
+/- 800 KV BiswanathCharialli-Agra	0	0	0	0	0.00	0.00	0.00		
Sub Total NER	0	0			0.00	0.00	0.00		
Total IR Exch	5477	5727			174.44	26.12	148.32		

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

ISGS/LT Schedule (MU)			Bilateral Schedule (MU)		Power Exchange Shdli (MU)		Wheeling (MU)	
ER	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
28.48	0.02	28.50	3.93	-3.37	0.01	17.91	0.00	0.00
Total IR Schedule (MU)			Total IR Actual (MU)		Net IR UI (MU)			
Through ER	Through WR Inclds Mndra	Total	Through ER(including NER)	Through WR	Total	Through ER(including NER)	Through WR	Total
32.43	124.40	156.83	25.98	122.34	148.32	-6.45	-2.06	-8.51

V(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	MW	MW	Import	Export	Import	Export	
	132 KV Tanakpur - Mahendarnagar	-31	-29	0	31	0	1	-0.70	

VI. 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	0.13	9.10	49.73	67.44	16.27	6.74	0.54	0.00

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum	Minimum		MAX (Hz)				MIN (Hz)		
Freq	Time	Freq	Time	Hz	Index	Std. Dev.	MAX (Hz)	MIN (Hz)	Freq Dev Index (% of Time)
50.26	17.03	49.78	22.08	50.00	0.053	0.073	0.00	0.00	32.56

VII. Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation Index (% of Time)
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	404	18:07	400	04:50	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	414	01:13	400	22:13	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	419	01:05	399	17:54	0.0	0.0	0.0	0.0	0.0
Kanpur	400	415	01:40	400	16:39	0.0	0.0	0.0	0.0	0.0
Dadrn	400	419	20:54	404	11:18	0.0	0.0	0.0	0.0	0.0
Ballabgarh	400	426	02:00	407	11:23	0.0	0.0	29.2	0.0	29.2
Bawana	400	426	01:39	403	11:22	0.0	0.0	27.2	0.0	27.2
Bassi	400	423	21:12	398	08:47	0.0	0.0	3.7	0.0	3.7
Hissar	400	419	20:40	394	11:24	0.0	0.0	0.0	0.0	0.0
Moga	400	422	20:41	398	11:23	0.0	0.0	0.8	0.0	0.8
Abdullapur	400	423	20:57	398	11:18	0.0	0.0	4.5	0.0	4.5
Nalagarh	400	434	20:45	404	11:21	0.0	0.0	37.4	2.8	37.4
Kishenpur	400	418	04:00	397	07:46	0.0	0.0	0.0	0.0	0.0
Wagoora	400	398	13:01	372	19:04	29.4	72.2	0.0	0.0	29.4
Amritsar	400	428	20:37	401	11:22	0.0	0.0	24.9	0.0	24.9
Kashipur	400	421	00:57	411	17:56	0.0	0.0	2.3	0.0	2.3
Hamirpur	400	425	20:39	399	10:08	0.0	0.0	4.9	0.0	4.9
Rishkesh	400	416	01:00	392	18:50	0.0	0.0	0.0	0.0	0.0

VIII. Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviation Index (% of Time)
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	768	02:00	743	09:16	0.0	0.0	0.0	0.0	0.0
Balia	765	763	01:40	741	22:13	0.0	0.5	0.0	0.0	0.0
Moga	765	803	20:40	760	11:23	0.0	0.0	1.9	0.0	1.9
Agra	765	788	18:16	755	08:48	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	799	20:38	764	11:20	0.0	0.0	0.0	0.0	0.0
Unnao	765	765	02:01	740	19:16	0.0	2.6	0.0	0.0	0.0
Lucknow	765	781	01:04	755	19:16	0.0	0.0	0.0	0.0	0.0
Meerut	765	810	20:59	768	11:24	0.0	0.0	5.5	0.0	5.5
Jhatikara	765					0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	786	01:00	760	09:12	0.0	0.0	0.0	0.0	0.0
Anta	765	778	18:04	759	07:10	0.0	0.0	0.0	0.0	0.0
Phagi	765	786	18:04	754	11:24	0.0	0.0	0.0	0.0	0.0

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	488.01	671.08	482.16	511.55	137.48	528.70
Pong	426.72	384.05	398.89	197.21	399.52	209.93	34.21	298.86
Tehri	829.79	740.04	772.75	237.99	784.40	377.27	49.14	224.00
Koteshwar	612.50	598.50	611.28	5.20	610.60	4.95	224.00	204.61
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	57.02	75.49
Rihand	268.22	252.98	0.00	0.00	0.00	0.00	0.00	0.00
RPS	352.80	343.81	1138.40	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
RSD	527.91	487.91	496.09	0.64	502.43	3.05	84.77	67.49

* 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	-96	329	0	-637	304	0	-3.77	7.46	3.70
Delhi	-937	-419	0	-628	-54	0	-17.15	-2.55	-19.70
Haryana	-338	-41	0	-363	-1	0	-9.41	3.68	-5.72
HP	175	78	0	301	-117	0	9.72	-2.40	7.32
J&K	724	-102	0	619	74	0	15.45	-1.82	13.62
CHD	-30	0	0	0	-30	0	-0.24	-0.18	-0.43
Rajasthan	-7	636	3	-7	433	3	8.48	13.24	21.73
UP	130	0	0	28	678	0	-7.55	2.52	-5.03
Uttarakhand	193	101	0	193	231	0	4.74	3.32	8.06
Total	-187	583	3	-495	1517	3	0.28	23.27	23.55

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-68	-637	354	203	0	0
Delhi	-553	-967	289	-446	0	0
Haryana	-338	-567	269	-153	0	0
HP	646	175	78	-824	0	0
J&K	724	589	74	-203	0	0
CHD	0	-30	0	-51	0	0
Rajasthan	843	-7	644	96	3	2
UP	161	-784	678	0	0	0
Uttarakhand	221	193	382	36	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	0.00%

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

Rihand - Dadri	0.00%
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XII. System Constraints:

XIII. Grid Disturbance / Any Other Significant Event:

XIV. Weather Conditions For 28.02.2016 :

Normal

XV. Synchronisation of new generating units :

XVI. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / substation :

- I 400 kV Meerut-Bagpat-II synchronised first time at 2037 hrs. dated 27/02/16
- II 400 kV Kaithal-Bagpat-II synchronised first time at 2026 hrs. dated 27/02/16
- III 765 kV Ballia-Varanasi charged first time at 1937 hrs. dated 27/02/16
- IV 765 kV bus-II at varanasi charged first time at 2111 hrs. dated 27/02/16

XVII. Tripping of lines in pooling stations :

XVIII. Complete generation loss in a generating station :