

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	210	115	2.73	114
	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	1372	711	25.50	1062
	Talwandi Saboo (2*660)	1320	346	347	10.34	431
	Thermal (Total)	5360	1928	1173	38.48	1603
	Total Hydro	1000	335	248	8.27	345
	Total Punjab	6360	2263	1421	46.75	1948
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	222	219	5.23
DCRTPP (Yamuna nagar) (2*300)		600	459	460	11.46	477
Faridabad GPS (NTPC)		432	158	156	4.17	174
RGTPP (Khedar) (IPP) (2*600)		1200	785	773	20.84	868
Magnum Diesel (IPP)		25	0	0	0.00	0
Jhajjar(CLP) (2*660)		1320	361	387	8.97	374
Thermal (Total)		4944	1985	1995	50.66	2111
Total Hydro		62	9	10	0.23	10
Total Haryana		5006	1994	2005	50.89	2121
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	1037	1132	26.55
	suratgarh TPS (6*250)	1500	778	904	20.16	840
	Chabra TPS (4*250)	1000	578	653	14.90	621
	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	81	83	2.02	84
	RAPS A (NPC) (1*100+1*200)	300	0	0	0.00	0
	Barsingsar (NLC) (2*125)	250	184	185	4.33	180
	Giral LTPS (2*125)	250	0	0	0.00	0
	Rajwest LTPS (IPP) (8*135)	1080	716	850	19.56	815
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(2*600)	1200	487	0	8.08	337
	Kawai(Adani) (2*660)	1320	954	1165	27.52	1147
	Thermal (Total)	8876	4815	4972	123	5130
	Total Hydro	550	128	233	4.49	187
	Wind power	3214	72	65	4.24	177
	Biomass	99	0	0	0.57	24
	Solar	730	0	0	3.11	130
	Renewable/Others (Total)	4043	72	65	7.92	330
	Total Rajasthan	13469	5015	5270	135.53	5647
	UP	Anpara TPS (3*210+2*500)	1630	1072	1076	29.80
Obra TPS (2*50+2*94+5*200)		1194	422	440	10.00	417
Paricha TPS (2*110+2*220+2*250)		1140	797	788	18.80	783
Panki TPS (2*105)		210	0	0	0.00	0
Harduaaganj TPS (1*60+1*105+2*250)		665	79	313	3.40	142
Tanda TPS (NTPC) (4*110)		440	181	190	4.66	194
Roza TPS (IPP) (4*300)		1200	806	828	19.00	792
Anpara-C (IPP) (2*600)		1200	536	531	12.70	529
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	81	58	1.70	71
Anpara-D(1*500)		500	0	140	0.40	17
Lalitpur TPS(2*660)		1320	410	0	0.00	0
Bara(2*660)		1320	410	355	10.00	417
Thermal (Total)		11269	4384	4719	110	4603
Vishnuparyag HPS (IPP)(4*110)		440	0	0	0.00	0
Alakanada(4*82.5)		330	82	0	0.90	38
Other Hydro		527	219	81	1.90	79
Cogeneration		981	800	800	19.20	800
Total UP		13547	5485	5600	132	5519
Uttarakhand	Total Hydro	1398	418	233	8.18	341
	Total Uttarakhand	1398	418	233	8.18	341
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0
	Delhi Gas Turbine (6x30 + 3x34)	282	39	39	0.91	38
	Praagati Gas Turbine (2x104+ 1x122)	330	143	142	3.42	143
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	249	251	5.99	250
	Badarpur TPS (NTPC) (3*95+2*210)	705	165	165	3.52	147
	Thermal (Total)	2917	596	597	13.84	577
	Total Delhi	2917	596	597	13.84	577
HP	Baspa HPS (IPP) (3*100)	300	0	30	0.94	39
	Malana HPS (IPP) (2*43)	86	0	0	0.23	10
	Other Hydro	878	147	84	2.93	122
	Total HP	1264	147	114	4.10	171
J & K	Baglihar HPS (IPP) (3*150)	450	143	143	3.43	143
	Other Hydro/IPP	560	139	123	2.76	115
	Gas/Diesel/Others	190	0	0	0.00	0
	Total J & K	1200	282	266	6.19	258
Total State Control Area Generation		45161	16200	15506	397.95	16581
J. Net Inter Regional Exchange (Import (+ve)/Export (-ve))			6931	6474	160.63	6693
Total Regional Availability(Gross)		70398	42305	32225	857.88	35745

IV. Total Hydro Generation:

Regional Entities Hydro	12234	9087	1089	75.97	3165
State Control Area Hydro	6581	1620	1185	34	1428
Total Regional Hydro	18815	10707	2274	110.24	4593

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	
Vindhyachal(HVDC B/B)	100	250	100	250	100	250	0.10	5.76	-5.67
765 KV Gwalior-Agra (D/C)	2718	2276	3366	0	55.08	0.00	55.08		
400 KV Zarda-Kankroli	-112	-221	34	224	0.00	2.58	-2.58		
400 KV Zarda-Bhimnal	-16	-116	184	143	0.00	0.15	-0.15		
220 KV Auraiya-Malanpur	-99	-118	0	137	0.00	2.17	-2.17		
220 KV Badod-Kota/Morak	8	-17	32	17	0.00	0.26	-0.26		
Mundra-Mohindergarh (HVDC Bipole)	2497	2197	2510	0	56.14	0.00	56.14		
400 KV Vindhyachal - Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Phagi-Gwalior (D/C)	1110	965	1351	0	28.21	0.00	28.21		
Sub Total WR	6206	5216			139.53	10.91	128.62		
Pusauli Bypass/HVDC	400	400	400	0	9.00	0.00	9.00		
400 KV MZP- GKP (D/C)	-518	-320	0	642	0.00	7.79	-7.79		
400 KV Patna-Balia(D/C) X 2	523	642	761	0	15.26	0.00	15.26		
400 KV B' Sharif-Balia (D/C)	-193	-94	0	193	0.00	1.85	-1.85		
765 KV Gaya-Balia	72	131	250	0	1.84	0.00	1.84		
765 KV Gaya-Fatehpur	94	102	336	0	4.69	0.00	4.69		
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	-20	-10	0	30	0.00	0.60	-0.60		
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Sasaram - Fatehpur	-157	-121	127	202	0.00	0.97	-0.97		
400 KV Barh -GKP (D/C)	524	528	592	0	12.44	0.00	12.44		
Sub Total ER	725	1258			43.22	11.21	32.01		
+/- 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	6931	6474			182.75	22.13	160.63		

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
34.24	0.08	34.32	3.56	-4.38	0.01	19.49	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
37.89	130.18	168.06	32.01	128.62	160.63	-5.88	-1.56	-7.44

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	0.02	4.49	46.64	74.61	15.30	5.45	0.24	0.00

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum		Minimum					MAX	MIN	
Freq	Time	Freq	Time	Hz	(Hz)	(Hz)			
50.24	18.02	49.79	6.14	50.00	0.038	0.062	0.00	0.00	25.39

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
Dadrh	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	487.69	661.49	482.16	511.55	161.86	585.37
Pong	426.72	384.05	398.66	191.43	399.52	209.93	36.36	341.73
Tehri	829.79	740.04	772.15	229.79	784.40	377.27	36.62	221.00
Koteshwar	612.50	598.50	610.36	4.75	610.33	4.69	221.00	204.53
Chamera-I	760.00	748.75	0.00	0.00	0.00	0.00	69.79	75.95
Rihand	268.22	252.98	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
Jawahar Sagar	298.70	295.78	0.00	0.00	0.00	0.00	0.00	0.00
RSD	527.91	487.91	496.07	1.05	502.43	3.05	68.27	31.87

* 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	299	0	-636	58	0	-3.76	6.20	2.44
Delhi	-1035	-344	0	-627	22	0	-17.86	-1.81	-19.68
Haryana	-338	-218	0	-363	260	0	-8.89	3.86	-5.03
HP	173	60	0	352	-160	0	9.62	-1.90	7.72
J&K	725	-102	0	620	63	0	15.46	-1.19	14.28
CHD	-30	0	0	0	-20	0	-0.24	-0.14	-0.38
Rajasthan	-7	584	3	-7	129	3	7.52	12.30	19.81
UP	104	0	0	69	523	0	-6.83	2.30	-4.53
Uttarakhand	193	130	0	193	324	0	4.75	4.62	9.37
Total	-311	410	3	-400	1199	3	-0.24	24.23	23.99

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-68	-636	313	-62	0	0
Delhi	-553	-1064	269	-344	0	0
Haryana	-267	-566	286	-342	0	0
HP	642	173	60	-682	0	0
J&K	725	589	74	-228	0	0
CHD	0	-30	0	-41	0	0
Rajasthan	844	-7	617	-151	3	2
UP	165	-727	679	0	0	0
Uttarakhand	222	193	354	105	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	8.33%

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

WR	7.64%
ER	0.00%
Simultaneous	22.92%

(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 29.02.2016 :

Normal

XV. Synchronisation of new generating units :

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

- 1.765 kV Bus-II at Varanasi first time charged at 14.19 Hrs.
- 2.765/400 kV ICT-1 at Varanasi first time charged on No load at 1726 Hrs .
- 3.400 kV Bus-I & Bus-II at Varanasi first time charged at 19.43 Hrs & 19.25 Hrs respectively.
4. 400/220 kV 500 MVA ICT-1 at Ballabgarh first time charged at No load at 18.36 Hrs

XVII. Tripping of lines in pooling stations :

XVIII. Complete generation loss in a generating station :