पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड (पावरग्रिड की पूर्ण स्वायित प्राप्त सहायक कंपनी) उत्तरी क्षेत्रीय भार प्रेषण केंद्र CIN: U40105DL2009G01188882 Power Supply Position in Northern Region for 01.09.2016 Date of Reporting : 02.09.2016

I. Regional Availability/Demand:

	Evening Peak (20:00	Hrs) MW			Off Peak (03	:00 Hrs) MW		Day Energy (Net MU)		
Demand Met	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage	
42210	941	43150	50.02	38387	254	38642	50.14	938.7	9.37	
* Half hourly (two 15 minutes block-one block	each hefore and after the decinnated time) average frequency							•		

					Drawal				
State	State	e's Control Area Gene	eration (Net MU)		Schedule	Actual Drawal	UI	Consumption	Shortages *
	Thermal	Hydro	Renewable/others \$	Total	(Net MU)	(Net MU)	(Net MU)	(Net MU)	(MŪ)
Punjab	47.52	11.86		59.38	108.15	107.51	-0.64	166.89	0.00
Haryana	6.95	0.86		7.81	124.14	122.17	-1.97	129.99	0.00
Rajasthan	64.51	7.33	6.65	78.49	69.57	72.10	2.53	150.59	0.26
Delhi	13.43			13.43	78.45	78.27	-0.19	91.69	0.01
JP	137.34	23.27		160.60	134.77	134.52	-0.24	295.13	0.00
Jttarakhand		20.37		23.73	13.36	14.75	1.39	38.48	0.00
HP		25.33		25.33	-2.94	-1.28	1.66	24.05	0.00
J&K		21.91	0.00	21.91	16.45	14.51	-1.94	36.42	9.11
Chandigarh				0.00	5.97	5.50	-0.47	5.50	0.00
otal	269.75	110.92	6.65	390.68	547.93	548.06	0.13	938.74	9.37

II. B. State's Demand Met in MWS:											
State		Evening Peak (20:00 Hr	s) MW	1		Off Peak (0	3:00 Hrs) MW				l
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	Maximum Dem (MW) and Tin		Shortage (MW)
Punjab	6527	0	75	735	6388	0	-21	705	7782	17:00	0
Haryana	6482	0	-203	2019	5468	0	235	2279	7074	21:00	0
Rajasthan	7128	141	227	388	6278	0	31	423	7206	21:00	93
Delhi	4321	6	36	631	3446	12	-68	358	4323	17:00	0

Total	42210	941	555	1827	38387	254	22	1716	42723	21:00	668
Chandigarh	250	0	-44	-20	194	0	2	0	270	16:00	0
J&K	1895	474	-37	-563	969	242	-154	-1047	1899	21:00	475
HP	1154	0	158	-1754	817	0	67	-1721	1154	20:00	0
Uttarakhand	1786	0	81	-129	1403	0	2	-147	1786	20:00	0
UP	12668	320	262	519	13423	0	-67	866	14636	24:00	0
Delhi	4321	6	36	631	3446	12	-68	358	4323	17:00	0
Rajasthan	7128	141	227	388	6278	0	31	423	7206	21:00	93
Haryana	6482	0	-203	2019	5468	0	235	2279	7074	21:00	0
i unjab	0021	0	13	700	0300	0	-21	100	1102	17.00	U

II. Regional Entities				1	1			UI [OG:(+	-ve), UG: (-ve)]
	Station/	Inst. Capacity	Declared	Peak MW	Off Peak MW	Energy	Average	Schedule	UI
	Constituent	(Effective) MW	Capacity(MW)	(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU
NTPC	Singrauli STPS (5*200+2*500)	2000	1680	1725	1610	37.50	1562	38.07	-0.57
	Rihand I STPS (2*500)	1000	943	935	683	19.22	801	19.68	-0.46
	Rihand II STPS (2*500)	1000	963	916	678	18.54	773	18.77	-0.23
	Rihand III STPS (2*500)	1000	963	958	705	19.32	805	20.01	-0.69
	Dadri I STPS (4*210)	840	815	279	266	6.79	283	6.94	-0.15
	Dadri II STPS (2*490)	980	960	774	641	16.41	684	17.10	-0.69
	Unchahar I TPS (2*210)	420	350	311	256	5.92	247	6.19	-0.27
	Unchahar II TPS (2*210)	420	400	340	267	6.04	252	6.92	-0.87
	Unchahar III TPS (1*210)	210	200	181	127	3.10	129	3.52	-0.42
	ISTPP (Jhajjhar) (3*500)	1500	1425	411	333	7.09	295	7.30	-0.21
	Dadri GPS (4*130.19+2*154.51)	830	796	397	341	6.53	272	6.80	-0.27
	Anta GPS (3*88.71+1*153.2)	419	416	249	195	4.87	203	4.91	-0.05
	Auraiya GPS (4*111.19+2*109.30)	663	623	204	206	4.68	195	4.83	-0.15
	Dadri Solar(5)	5	1	0	0	0.01	0	0.02	0.00
	Unchahar Solar(10)	10	1	0	0	0.00	0	0.03	-0.02
	Singrauli Solar(15)	15	1	0	0	0.00	0	0.03	-0.03
	KHEP(4*200)	800	855	855	855	20.66	861	20.52	0.14
	Sub Total (A)	12112	11392	8535	7163	177	7362	182	-4.95
NPC	NAPS (2*220)	440	190	214	214	4.46	186	4.56	-0.10
	RAPS- B (2*220)	440	367	420	423	9.03	376	8.81	0.22
	RAPS- C (2*220)	440	390	439	439	9.37	390	9.36	0.01
	Sub Total (B)	1320	947	1073	1076	22.86	952	22.73	0.13
NHPC	Chamera I HPS (3*180)	540	540	545	545	13.15	548	12.96	0.19
K- Su 3. NPC NP RP RP RP Su C. NHPC Ch Ch Ba Sa Ta Uri Uri Ori Ori Ori Ori Ori Ori Ori Ori Ori O	Chamera II HPS (3*100)	300	301	310	305	7.25	302	7.22	0.03
	Chamera III HPS (3*77)	231	223	224	228	4.98	207	5.01	-0.03
	Bairasuil HPS(3*60)	180	179	185	60	3.67	153	3.62	0.05
	Salai-HPS (6*115)	690	665	678	678	16.33	681	15.96	0.37
	Tanakpur-HPS (3*31.4)	94	93	94	96	2.28	95	2.23	0.05
	Uri-I HPS (4*120)	480	445	466	459	10.89	454	10.68	0.21
	Uri-II HPS (4*60)	240	236	241	241	5.68	236	5.66	0.01
	Dhauliganga-HPS (4*70)	280	210	208	213	5.04	210	5.04	0.00
	Dulhasti-HPS (3*130)	390	383	394	391	9.23	385	9.18	0.05
	Sewa-II HPS (3*40)	120	119	128	121	2.98	124	2.87	0.12
	Parbati 3 (4*130)	520	390	388	0	4.04	168	4.00	0.04
	Sub Total (C)	4065	3784	3861	3338	86	3563	84	1.09
SJVNL	NJPC (6*250)	1500	1605	1597	1610	38.38	1599	38.52	-0.14
	Rampur HEP (6*68.67)	412	442	446	448	10.68	445	10.61	0.08
	Sub Total (D)	1912	2047	2043	2058	49.06	2044	49.13	-0.06
THDC	Tehri HPS (4*250)	1000	1071	1051	0	9.64	402	9.53	0.11
	Koteshwar HPS (4*100)	400	135	390	91	3.14	131	3.14	0.01
	Sub Total (E)	1400	1206	1441	91	12.78	533	12.67	0.12
BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	617	1014	474	14.71	613	14.81	-0.11
	Dehar HPS (6*165)	990	599	825	560	14.41	601	14.38	0.03
	Pong HPS (6*66)	396	18	66	0	0.38	16	0.43	-0.05
	Sub Total (F)	2765	1234	1905	1034	29.50	1229	29.62	-0.12
IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	202	184	4.37	182	4.28	0.09
(-)(5)	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	1100	850	22.68	945	22.93	-0.25
	Malana Stg-II HPS (2*50)	100	0	101	110	2.48	103	2.35	0.14
	Shree Cement TPS (2*150)	300	0	186	149	4.22	176	4.20	0.02
	Budhil HPS(IPP) (2*35)	70	0	70	75	1.46	61	1.75	-0.29
	Sub Total (G)	1662	Ŏ	1658	1367	35.22	1467	35.51	-0.30
Total Pagiona	I Entities (A-G)	25237	20610	20517	16126	411.62	17151	415.72	-4.10

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sent ut MW)
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	0	0	-0.12	-5
						-2
						-4
		Capterly Color C	-1			
						1230
Punjab Guru Gobind Singh TPS (Ropar) (6*210)						763
						1980
						494
	-					2474
Haryana						0
						129
						160
						0
						0
						0
						290
	Total Hydro					36
	Total Haryana	4559	480	195	7.81	326
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	308	302	7.46	311
	suratgarh TPS (6*250)	1500	0	0	0.00	0
	Chabra TPS (4*250)	1000	418	368	10.66	444
		330	0			0
	Ramgarh GPS(1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50)		147	143		138
						172
						222
						0
						438
						0
						0
						963
						2688
						305
						254
	•					234
						0
						277
ID.						3271
JP						1023
						329
						671
						129
						400
						320
						862
		1200	630	999	16.56	690
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	283	283	6.58	274
	Anpara-D(2*500)	1000	230	239	4.31	180
	Lalitpur TPS(3*660)	1980	351	360	8.60	359
	Bara(2*660)	1320	453	360	10.46	436
	Thermal (Total)	12449	5508	6415	136	5672
	Vishnuparyag HPS (IPP)(4*110)	440	435	435	10.47	436
	Alaknanada(4*82.5)	330	337	338	8.05	335
					4.75	198
		981			1.20	50
	9					6692
Jttarakhand						849
						140
						989
Delhi						-11
						36
						154
						0
						88
						293
						559
					0.00 0.00 0.00 0.00 0.00 0.00 6.95 0.86 7.81 7.46 0.00 10.66 0.00 10.66 0.00 0.00 0.00 0	559 559
ш						
ır						317
						97
						641
1016						1055
J & K						731
						182
						0
						913
		47619				16278
						6448
Total Regional Av	vailability(Gross)	72856	44325	39141	957.06	39878
V. Total Hydro G	eneration:					
v. Total Hydro G Regional Entities	Hvdro	12224	11500	9510	227 05	9461
State Control Are	a Hydro	7106	4920	4761	110 02	4762

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

Element	Peak(20:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Inte	rchange (MW)	Energ	y (MU)	Net Energy
Liement	MW	MW	Import	Export	Import	Export	MU
Vindhychal(HVDC B/B)	-400	-100	0	500	0.00	6.80	-6.80
765 KV Gwalior-Agra (D/C)	2637	1800	2851	0	50.22	0.00	50.22
400 KV Zerda-Kankroli	156	-28	161	94	0.22	0.00	0.22
400 KV Zerda-Bhinmal	194	-26	215	143	0.72	0.00	0.72
220 KV Auraiya-Malanpur	-35	-30	0	36	0.00	0.47	-0.47
220 KV Badod-Kota/Morak	120	75	132	-14	1.78	0.00	1.78
Mundra-Mohindergarh(HVDC Bipole)	2203	1999	2204	0.00	45.51	0.00	45.51
400 KV Vindhyachal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	1106	765	1160	0	21.95	0.00	21.95
Sub Total WR	5981	4455			120.39	7.27	113.11
Pusauli Bypass/HVDC	250	250	250	0	6.09	0.00	6.09
400 KV MZP- GKP (D/C)	324	514	734	0	13.11	0.00	13.11
400 KV Patna-Balia(D/C) X 2	237	220	371	0	6.86	0.00	6.86
400 KV B'Sharif-Balia (D/C)	36	60	180	0	2.32	0.00	2.32
765 KV Gaya-Balia	0	208	299	0	1.10	0.00	1.10
765 KV Gaya-Varanasi (D/C)	432	266	564	0	8.90	0.00	8.90
220 KV Pusauli-Sahupuri	183	211	222	0	4.51	0.00	4.51
132 KV K'nasa-Sahupuri	-32	-28	0	38	0.00	0.52	-0.52
132 KV Son Ngr-Rihand	-18	-36	0	36	0.00	0.60	-0.60
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-278	-302	0	323	0.00	5.65	-5.65
400 KV Barh -GKP (D/C)	324	252	324	0	5.70	0.00	5.70
400 kV B'Sharif - Varanasi (D/C)	93	43	68	136	0.00	0.55	-0.55
Sub Total ER	1551	1658			48.59	7.32	41.27
+/- 800 KV BiswanathCharialli-Agra	0	0	700	0.00	0.38	0.00	0.38
Sub Total NER	0	0			0.38	0.00	0.38
Total IR Exch	7532	6113	-		169.35	14.59	154.76

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

	ISGS/LT Schedule (MU)	Bilateral Sched	Power Excha	nge Shdl (MU)	Wheeling (MU)			
ER	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
31.43	3.73	35.16	26.68	16.94	-16.28	-1.10	0.00	0.00

	Total IR Schedule (MU)			Total IR Actual (MU)				Net IR UI (MU)			
						Through ER					
			Through ER(including			(including					
Through ER	Through WR Inclds Mndra	Total	NER)	Through WR	Total	NER)	WR	Total			
45.56	105.48	151.04	41.64	113.11	154.76	-3.92	7.64	3.71			

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

Element	Peak(20:00 Hrs) Off Peak(03:00 Hrs)		Maximum Inter	change (MW)	Energ	Net Energy	
Liement	MW	MW	Import	Export	Import	Export	MU
132 KV Tanakpur - Mahendarnagar	27	12	0	32	0	1	-0.57

<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	0.23	3.38	29.03	61.68	26.27	8.73	0.00	0.00

	< Frequency (Hz	Average	Frequency		Frequency in	15 Min Block	Freq Dev		
Maximum		M	Minimum		Variation	Std. Dev.	MAX	MIN	Index (%
Freq	Time	Freq	Time	Hz	Index		(Hz)	(Hz)	of Time)
50.16	4.02	49.76	18.12	50.03	0.040	0.058	50.20	0.00	38.32

VII. Voltage profile 400 kV

Station	Voltage Level (kV)	Ma	aximum	Minim	um	Voltage (in % of Time)				Volta
Station	Voltage Level (KV)	Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	ge Deviat
Rihand	400	414	7:35	406	0:40	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	420	7:53	399	0:23	0.0	0.0	0.0	0.0	0.0
Bareilly(PG)400kV	400	418	7:54	390	0:07	0.0	0.0	0.0	0.0	0.0
Kanpur	400	421	7:49	403	0:07	0.0	0.0	0.8	0.0	0.8
Dadri	400	419	6:03	401	19:34	0.0	0.0	0.0	0.0	0.0
Ballabhgarh	400	426	6:01	406	19:34	0.0	0.0	36.6	0.0	36.6
Bawana	400	424	6:02	403	19:34	0.0	0.0	10.6	0.0	10.6
Bassi	400	424	3:59	399	19:34	0.0	0.0	19.3	0.0	19.3
Hissar	400	423	6:04	398	19:35	0.0	0.0	0.9	0.0	0.9
Moga	400	423	6:09	400	14:30	0.0	0.0	0.7	0.0	0.7
Abdullapur	400	423	6:05	399	19:41	0.0	0.0	0.8	0.0	0.8
Nalagarh	400	418	6:08	402	14:38	0.0	0.0	0.0	0.0	0.0
Kishenpur	400	416	6:04	396	19:27	0.0	0.0	0.0	0.0	0.0
Wagoora	400	410	2:57	382	19:33	0.0	10.1	0.0	0.0	0.0
Amritsar	400	422	6:02	402	14:25	0.0	0.0	1.8	0.0	1.8
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	413	2:27	398	14:48	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	413	8:03	394	0:07	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)				Volta
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	ge Deviat
Fatehpur	765	793	7:57	755	14:46	0.0	0.0	0.0	0.0	0.0
Balia	765	793	7:54	759	0:07	0.0	0.0	0.0	0.0	0.0
Moga	765	815	6:04	767	12:40	0.0	0.0	32.0	0.0	32.0
Agra	765	800	7:53	757	21:03	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	804	3:03	770	19:34	0.0	0.0	15.0	0.0	15.0
Unnao	765	780	7:55	746	0:21	0.0	0.0	0.0	0.0	0.0
Lucknow	765	795	7:55	760	0:20	0.0	0.0	0.0	0.0	0.0
Meerut	765	816	6:02	773	14:47	0.0	0.0	35.8	0.0	35.8
Jhatikara	765	807	6:03	767	19:34	0.0	0.0	6.4	0.0	6.4
Bareilly 765 kV	765	789	7:54	751	0:07	0.0	0.0	0.0	0.0	0.0
Anta	765	768	0:00	768	0:00	0.0	0.0	0.0	0.0	0.0
Phagi	765	802	6:00	764	19:53	0.0	0.0	4.1	0.0	4.1

IX. Reservior Parameters:

Name of	Parameters		Present Pa	rameters	Last	Year	Last day	
Reservior	FRL (m)	MDDL (m)	Level (m)	Energy (MU)	Level (m)	Energy (MU)	Inflow (m ³ /s)	Usage (m³/s)
Bhakra	513.59	445.62	501.69	1166.44	511.27	1605.30	1133.35	445.08
Pong	426.72	384.05	417.41	768.49	422.72	1020.81	591.14	33.16
Tehri	829.79	740.04	819.45	0.00	817.90	962.25	458.32	214.00
Koteshwar	612.50	598.50	610.93	5.08	609.98	4.55	214.00	207.13
Chamera-I	760.00	748.75	753.72	0.00	0.00	0.00	329.92	356.31
Rihand	268.22	252.98	0.00	0.00	0.00	0.00	0.00	0.00
RPS	352.80	343.81	1157.00	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	521.49	6.42	519.43	13.29	333.24	244.72

^{*} NA: Not Available

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

State	Off- Peak Hours (03:00 Hrs)			Peak Hours (20:00 Hrs)			Day Energy (MU)		
State	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MU)	IEX / PXIL (MU)	Total (MU)
Punjab	660	45	0	660	75	0	17.25	2.25	19.51
Delhi	634	-275	0	756	-125	0	17.26	-3.14	14.12
Haryana	1944	321	13	1684	321	14	42.28	7.05	49.33
HP	-941	-780	0	-849	-906	0	-20.40	-18.77	-39.17
J&K	-548	-499	0	-548	-15	0	-13.74	-4.29	-18.03
CHD	0	0	0	0	-20	0	0.36	-0.11	0.25
Rajasthan	-129	552	0	-129	517	0	-3.08	13.03	9.95
UP	866	0	0	519	0	0	12.83	1.57	14.40
Uttarakhand	-150	3	0	-150	21	0	-3.59	0.93	-2.66
Total	2336	-634	13	1944	-130	14	49.16	-1.46	47.70

X(B) Short-Term Open Access Details:

State	Bilateral (MV	IEX (M	PXIL (MW)			
Otate	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	778	660	397	16	0	0
Delhi	805	634	88	-474	0	0
Haryana	2040	1602	359	-117	14	13
HP	-623	-1144	-628	-1000	0	0
J&K	-548	-618	0	-499	0	0
CHD	44	0	0	-20	0	0
Rajasthan	-129	-129	568	510	0	0
UP	891	339	393	0	0	0
Uttarakhand	-150	-150	101	-44	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%
Rinana - Daari	0.00%

XII.System Constraints:

XIII. Grid Disturbance / Any Other Significant Event:

XIV. Weather Conditions For 01.09.2016 :

XV. Synchronisation of new generating units : 660 MW Bara unit 2 first time synchronised to grid at 17:00 hrs/01.09.2016

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

 $\ensuremath{\mathsf{XVII}}\xspace.$ Tripping of lines in pooling stations :

 $\ensuremath{\mathsf{XVIII}}.$ 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.