

**GOVERNMENT OF INDIA  
MINISTRY OF POWER**

**LOK SABHA  
UNSTARRED QUESTION NO.1669  
TO BE ANSWERED ON 20.12.2018**

**HYDRO POWER PROJECTS**

**1669. SHRI DEVUSINH CHAUHAN:**

**Will the Minister of POWER  
be pleased to state:**

- (a) the details of the hydro electric projects in operation and the quantum of hydro power generated by each of the projects in the last three years, State-wise;**
- (b) whether the Government has assessed the potential of North Eastern States for generation of hydro power;**
- (c) if so, the details thereof along with the steps being taken by the Government to harness the potential;**
- (d) whether the Central Electricity Authority has assessed the potential of the Arunachal Pradesh for generation of hydro energy; and**
- (e) if so, the details thereof including projects proposed to tap the hydro-electric potential of the North Eastern States along with the time by which these projects are likely to be operationalised?**

**A N S W E R**

**THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER  
AND NEW & RENEWABLE ENERGY**

**( SHRI R. K. SINGH )**

**(a) : Hydro Electric Stations numbering 204 with total installed capacity of 45,399.22 MW are in operation in the country at present. The State-wise details of Hydro Electric Stations in operation along with the quantum of electricity generated during the last three years is given at Annex-I.**

**(b) to (e) : Central Electricity Authority has made an assessment of hydro electric potential in the country including North Eastern (NE) States. The hydroelectric potential in NE states is 58,971 MW which includes 50,328 MW of Arunachal Pradesh. Ranganadi (405 MW) and Pare (110 MW) aggregating to 515 MW are in operation in the State of Arunachal Pradesh. The State-wise details of the identified potential in NE states are given at Annex-II.**

**3 Hydro Electric Projects (HEPs) namely Kameng (660 MW), Lower Subansiri (2000 MW) and Gongri (144 MW) with an aggregate capacity of 2,744 MW are presently under construction in Arunachal Pradesh. In addition, 21HEPs with an aggregate capacity of 16,899 MW have been identified for benefits for the period 2022-2029 including 16 HEPs with an aggregate capacity of 16,172 MW in Arunachal Pradesh. The details are given at Annex-III.**

**Steps taken by the Government to harness the potential of the Hydro Power is detailed at Annex-IV**

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**ANNEX REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1669  
TO BE ANSWERED IN THE LOK SABHA ON 20.12.2018.**

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**STATE-WISE HYDRO GENERATION (I.C. ABOVE 25 MW) IN THE COUNTRY FROM 2015-16 TO 2018-19(UP TO 30.11.2018)**

Sl. No.	Region / State / Utility / Station	Installed Capacity (As on 30.11.2018) (MW)	Design Energy (MU)	Actual Generation (MU)		
				2015-16	2016-17	2017-18
<b>NORTHERN REGION</b>						
<b>HIMACHAL PRADESH</b>						
<b>CENTRAL SECTOR</b>						
<b>BBMB</b>						
1	Bhakra L	594	3924	5893	5168	5134
2	Bhakra R	785				
3	Dehar	990	3110	3339	3185	3086
4	Pong	396	1123	1735	1370	1642
<b>Total BBMB-HP</b>		<b>2765</b>	<b>8157</b>	<b>10967</b>	<b>9723</b>	<b>9862</b>
<b>NHPC</b>						
5	BairaSiul	180	779	746	669	642
6	Chamera-I	540	1665	2624	2224	2344
7	Chamera-II	300	1500	1524	1444	1487
8	Chamera-III	231	1108	1044	917	1068
9	Parbati III	520	1977	643	682	711
<b>Total NHPC -HP</b>		<b>1771</b>	<b>7029</b>	<b>6580</b>	<b>5937</b>	<b>6252</b>
<b>SJVN</b>						
10	NapthaJhakri	1500	6612	7314	7051	7208
11	Rampur	412	1878	1983	1960	2015
<b>Total SJVN</b>		<b>1912</b>	<b>8490</b>	<b>9297</b>	<b>9011</b>	<b>9223</b>
<b>NTPC</b>						
12	Kol Dam	800	3055	2309	3225	3314
<b>Total NTPC</b>		<b>800</b>	<b>3055</b>	<b>2309</b>	<b>3225</b>	<b>3314</b>
<b>Total Central-HP</b>		<b>7248</b>	<b>26731</b>	<b>29152</b>	<b>27896</b>	<b>28650</b>
<b>STATE SECTOR</b>						
<b>HPPCL</b>						
13	Integrated Kashang I	195	246		56	197
14	Sainj	100	323			135
<b>Total HPPCL</b>		<b>295</b>	<b>569</b>		<b>56</b>	<b>332</b>
<b>HPSEB LTD</b>						
15	Bassi	66	347	316	298	315
16	Giri Bata	60	240	189	141	170
17	Larji	126	587	657	612	612
18	Sanjay	120	518	0	187	493
<b>Total HPSEB LTD</b>		<b>372</b>	<b>1692</b>	<b>1162</b>	<b>1237</b>	<b>1591</b>
<b>PSPCL</b>						
19	Shanan	110	585	533	473	509
<b>Total PSPCL-HP</b>		<b>110</b>	<b>585</b>	<b>533</b>	<b>473</b>	<b>509</b>
<b>Total State Sector-HP</b>		<b>777</b>	<b>2846</b>	<b>1694</b>	<b>1766</b>	<b>2432</b>
<b>PRIVATE</b>						
<b>AllainDuhangan Power Power Ltd.</b>						
20	AllainDuhangan	192	678	725	679	683
<b>Everest Power Private Ltd.</b>						
21	Malana-II	100	403	354	367	369
<b>JSW ENERGY</b>						
22	Baspa-II	300	1213	1305	1343	1337
23	KarchamWangtoo	1000	4131	4726	4372	4570
<b>Total HBPCCL</b>		<b>1300</b>	<b>5344</b>	<b>6031</b>	<b>5715</b>	<b>5907</b>
<b>GBHPPL</b>						

24	Budhil	70	292	288	261	318
<b>IA Energy Pvt. Ltd.(IAEPL)</b>						
25	Chanju I	36	158		11	79
<b>Malana Power Company Ltd.(MPCL)</b>						
26	Malana	86	371	342	354	346
<b>Total Private-HP</b>		<b>1784</b>	<b>7246</b>	<b>7740</b>	<b>7387</b>	<b>7702</b>
<b>Total H.P.</b>		<b>9809</b>	<b>36822</b>	<b>38587</b>	<b>37050</b>	<b>38783</b>
<b>JAMMU &amp; KASHMIR</b>						
<b>CENTRAL SECTOR</b>						
<b>NHPC</b>						
27	Chutak	44	213	37	44	46
28	Dulhasti	390	1907	2361	2280	2344
29	NimooBazgo	45	239	91	95	99
30	Salal-I & II	690	3082	3591	3423	3247
31	Sewa-II	120	534	597	471	506
32	Uri -I	480	2587	3283	2803	2350
33	Uri -II	240	1124	1196	1472	1207
34	Kishenganga	330	1706			2
<b>Total NHPC -J&amp;K</b>		<b>2339</b>	<b>11392</b>	<b>11156</b>	<b>10588</b>	<b>9801</b>
<b>Total Central Sector - J&amp;K</b>		<b>2339</b>	<b>11392</b>	<b>11156</b>	<b>10588</b>	<b>9801</b>
<b>STATE SECTOR</b>						
<b>JKSPDC</b>						
35	Baglihar	450	2643	3000	2185	2507
36	Baglihar II	450	1302	56	1759	1822
37	Lower Jhelum	105	533	666	483	481
38	Upper Sindh II	105	355	258	363	327
<b>Total JKSPDC</b>		<b>1110</b>	<b>4833</b>	<b>3980</b>	<b>4790</b>	<b>5137</b>
<b>Total State Sector-J&amp;K</b>		<b>1110</b>	<b>4833</b>	<b>3980</b>	<b>4790</b>	<b>5137</b>
<b>Total Jammu &amp; Kashmir</b>		<b>3449</b>	<b>16225</b>	<b>15136</b>	<b>15378</b>	<b>14938</b>
<b>PUNJAB</b>						
<b>CENTRAL SECTOR</b>						
<b>BBMB</b>						
39	Ganguwal	78	1358	852	847	494
40	Kotla	78				508
<b>Total BBMB-Punjab</b>		<b>155</b>	<b>1358</b>	<b>852</b>	<b>847</b>	<b>1002</b>
<b>STATE SECTOR</b>						
<b>PSPCL</b>						
41	A.P.Sahib I	67	1206	1169	1084	1271
42	A.P.Sahib II	67				
43	Mukerian I	45				
44	Mukerian II	45				
45	Mukerian III	58.50				
46	Mukerian IV	58.50				
47	RanjitSagar	600	1507	1957	1306	1803
<b>Total PSPCL</b>		<b>941</b>	<b>3622</b>	<b>3795</b>	<b>3063</b>	<b>3722</b>
<b>Total State Sector-Punjab</b>		<b>941</b>	<b>3622</b>	<b>3795</b>	<b>3063</b>	<b>3722</b>
<b>Total Punjab</b>		<b>1096</b>	<b>4980</b>	<b>4648</b>	<b>3911</b>	<b>4724</b>
<b>RAJASTHAN</b>						
<b>STATE SECTOR</b>						
<b>RRVUNL</b>						
48	JawaharSagar	99	298	349	308	261
49	Mahi Bajaj I	50	289	166	210	180
50	Mahi Bajaj II	90				
51	R.P. Sagar	172	459	518	449	378
<b>Total RRVUNL</b>		<b>411</b>	<b>1046</b>	<b>1034</b>	<b>966</b>	<b>820</b>
<b>Total State sector-Rajasthan</b>		<b>411</b>	<b>1046</b>	<b>1034</b>	<b>966</b>	<b>820</b>
<b>Total Rajasthan</b>		<b>411</b>	<b>1046</b>	<b>1034</b>	<b>966</b>	<b>820</b>
<b>UTTAR PRADESH</b>						
<b>STATE SECTOR</b>						
<b>UPJVNL</b>						
52	Khara	72	385	321	269	259

53	Matatilla	31	123	79	123	94
54	Obra	99	279	160	217	300
55	Rihand	300	920	375	567	834
	<b>Total UPJVNL</b>	<b>502</b>	<b>1707</b>	<b>935</b>	<b>1176</b>	<b>1487</b>
	<b>Total State Sector-UP</b>	<b>502</b>	<b>1707</b>	<b>935</b>	<b>1176</b>	<b>1487</b>
	<b>Total Uttar Pradesh</b>	<b>502</b>	<b>1707</b>	<b>935</b>	<b>1176</b>	<b>1487</b>
	<b>UTTARAKHAND</b>					
	<b>CENTRAL SECTOR</b>					
	<b>NHPC</b>					
56	Dhauliganga	280	1135	1090	956	1153
57	Tanakpur	94	452	452	430	460
	<b>Total NHPC-UK</b>	<b>374</b>	<b>1587</b>	<b>1542</b>	<b>1386</b>	<b>1613</b>
	<b>THDC LTD</b>					
58	Tehri	1000	2797	3101	3146	3081
59	Koteshwar	400	1155	1248	1225	1220
	<b>Total THDC LTD</b>	<b>1400</b>	<b>3952</b>	<b>4349</b>	<b>4371</b>	<b>4301</b>
	<b>Total Central Sector - UK</b>	<b>1774</b>	<b>5539</b>	<b>5891</b>	<b>5757</b>	<b>5914</b>
	<b>STATE SECTOR</b>					
	<b>UJVNL</b>					
60	Chibro (Y.St.II)	240	750	814	714	784
61	Chilla	144	725	754	769	812
62	Dhakrani (Y.St.I)	34	169	137	120	130
63	Dhalipur (Y.St.I)	51	192	205	180	187
64	Khatima	41	208	120	180	213
65	Khodri (Y.St.II)	120	345	376	333	356
66	Kulhal (Y.St.IV)	30	164	139	122	124
67	ManeriBhali-I	90	395	487	349	395
68	ManeriBhali-II	304	1566	1229	1252	1277
69	Ram Ganga	198	334	503	181	251
	<b>Total UJVNL</b>	<b>1252</b>	<b>4848</b>	<b>4763</b>	<b>4201</b>	<b>4526</b>
	<b>Total State Sector-Uttarakhand</b>	<b>1252</b>	<b>4848</b>	<b>4763</b>	<b>4201</b>	<b>4526</b>
	<b>PRIVATE SECTOR</b>					
	<b>AHPC LTD</b>					
70	Srinagar	330	1397	901	1281	1383
	<b>Jaiprakash Power Venture Ltd.</b>					
71	Vishnu Prayag	400	1774	1211	2042	2161
	<b>Total Private Sector - UK</b>	<b>730</b>	<b>3171</b>	<b>2112</b>	<b>3323</b>	<b>3543</b>
	<b>Total Uttarakhand</b>	<b>3756</b>	<b>13558</b>	<b>12766</b>	<b>13282</b>	<b>13984</b>
	<b>Total N. REGION</b>	<b>19023</b>	<b>74338</b>	<b>73105</b>	<b>71761</b>	<b>74735</b>
	<b>WESTERN REGION</b>					
	<b>CHHATISGARH</b>					
	<b>STATE SECTOR</b>					
	<b>CSPGC</b>					
72	HasdeoBango	120	245	323	154	178
	<b>Total CSPGC</b>	<b>120</b>	<b>245</b>	<b>323</b>	<b>154</b>	<b>178</b>
	<b>Total State Sector-Chhatisgarh</b>	<b>120</b>	<b>245</b>	<b>323</b>	<b>154</b>	<b>178</b>
	<b>Total Chhatisgarh</b>	<b>120</b>	<b>245</b>	<b>323</b>	<b>154</b>	<b>178</b>
	<b>GUJARAT</b>					
	<b>STATE SECTOR</b>					
	<b>GSECL</b>					
73	Kadana PSS	240	518	290	339	309
74	Ukai	300	1080	492	396	304
	<b>Total GSECL</b>	<b>540</b>	<b>1598</b>	<b>781</b>	<b>735</b>	<b>612</b>
	<b>SSNNL</b>					
75	SardarSarovar CHPH	250	213	705	876	563
76	SardarSarovar RBPH	1200	3635	1466	2333	377
	<b>Total SSNNL</b>	<b>1450</b>	<b>3848</b>	<b>2170</b>	<b>3209</b>	<b>939</b>
	<b>Total State Sector -Gujarat</b>	<b>1990</b>	<b>5446</b>	<b>2952</b>	<b>3944</b>	<b>1552</b>
	<b>Total Gujarat</b>	<b>1990</b>	<b>5446</b>	<b>2952</b>	<b>3944</b>	<b>1552</b>
	<b>MADHYA PRADESH</b>					
	<b>CENTRAL</b>					
	<b>NHDC</b>					
77	Indira Sagar	1000	1980	1974	3321	882

78	Omkareshwar	520	1167	955	1428	444
	Total NHDC	1520	3147	2929	4748	1325
	<b>Total Central Sector-MP</b>					
	<b>STATE SECTOR</b>					
	<b>MPPGCL</b>					
79	Bansagar Tons-I	315	900	574	1239	545
80	Bansagar Tons-II	30	113	107	110	56
81	Bansagar Tons-III	60	143	40	53	69
82	Bargi	90	508	328	445	159
83	Gandhi Sagar	115	420	383	351	351
84	Madhikheda	60	74	92	147	23
85	Rajghat	45	88	37	62	58
	Total MPPGCL	715	2246	1562	2408	1261
	Total State-MP	715	2246	1562	2408	1261
	Total M.P.	2235	5393	4491	7157	2587
	<b>MAHARASHTRA</b>					
	<b>STATE SECTOR</b>					
	<b>MAHAGENCO</b>					
86	Bhira Tail Race	80	75	74	102	97
87	Ghatghar PSS	250	146	302	384	153
88	Koyna DPH	36	410	136	156	135
89	KoynaSt.I&II	600	3030	2840	3150	1051
90	KoynaSt.III	320				499
91	Koyna IV	1000				945
92	Tillari	60	133	44	106	58
93	Vaitarna	60	144	123	154	205
	Total MAHAGENCO	2406	3938	3519	4051	3143
	<b>MPPGCL</b>					
94	Pench	160	315	379	360	160
	Total MPPGCL-Maha.	160	315	379	360	160
	Total State Sector-Maha.	2566	4253	3898	4411	3303
	<b>PRIVATE SECTOR</b>					
	<b>Dodson-Lindblom Hydro Power Pvt. Ltd. (DLHPPL)</b>					
95	Bhandardhara - II	34	50	83	47	43
	Total DLHP	34	50	83	47	43
	<b>Tata Power Company Ltd.</b>					
96	Bhira	150	775	640	952	341
97	Bhira PSS	150				551
98	Bhivpuri	75	220	197	207	307
99	Khopoli	72	225	261	307	316
	Total TPCL	447	1220	1098	1465	1516
	Total Private Sector-Maha.	481	1270	1181	1513	1558
	Total Maharashtra	3047	5523	5079	5924	4861
	Total Western	7392	16607	12845	17178	9178
	<b>SOUTHERN REGION</b>					
	<b>ANDHRA PRADESH</b>					
	<b>STATE SECTOR</b>					
	<b>APGENCO</b>					
100	N.J.Sagar TPD	50	177		7	42
101	N.J.Sagar RBC	90	156	0	4	60
102	Srisaillam RB	770	2900	206	641	575
103	Upper sileru I & II	240	529	465	340	482
104	Lower Sileru	460	1070	1233	832	1110
	Total APGENCO	1610	4832	1904	1824	2269
	Total State Sector-AP	1610	4832	1904	1824	2269
	Total Andhra Pradesh	1610	4832	1904	1824	2269
	<b>KARNATAKA</b>					
	<b>STATE SECTOR</b>					
	<b>KPCL</b>					
105	Almatti Dam	290	483	145	404	442
106	Bhadra	26	123	40	27	16
107	Gerusoppa	240	622	303	277	281
108	Ghatprabha	32	131	32	49	48

109	Jog	139	118	318	288	191
110	Kadra	150	570	220	176	193
111	Kalinadi	855	3385	1948	1345	1537
112	Supa DPH	100	542	325	239	291
113	Kodasali	120	512	203	154	171
114	Lingnamakki	55	254	119	106	126
115	Munirabad	28	66	62	31	51
116	Sharavathy	1035	4932	2665	2709	2722
117	Shivasamudram	42	183	216	145	177
118	Varahi	460	1060	752	741	762
	<b>Total KPCL</b>	<b>3572</b>	<b>12981</b>	<b>7350</b>	<b>6691</b>	<b>7009</b>
	<b>APGENCO</b>					
119	T.B.Dam	36	236	129	81	134
120	Hampi	36				
	<b>Total APGENCO-Karnataka</b>	<b>72</b>	<b>236</b>	<b>129</b>	<b>81</b>	<b>134</b>
	<b>Total State Sector-Karnataka</b>	<b>3644</b>	<b>13217</b>	<b>7479</b>	<b>6772</b>	<b>7143</b>
	<b>Total Karnataka</b>	<b>3644</b>	<b>13217</b>	<b>7479</b>	<b>6772</b>	<b>7143</b>
	<b>KERALA</b>					
	<b>STATE SECTOR</b>					
	<b>KSEB Ltd.</b>					
121	Idamalayar	75	380	273	172	256
122	Idukki	780	2398	2372	1380	1611
123	Kakkad	50	262	184	132	160
124	Kuttiadi	75	323	578	479	601
125	KuttiadiExtn.	50				
126	Kuttiadi Additional Extn.	100				
127	Lower Periyar	180	493	511	307	508
128	Neriamangalam	45	237	351	197	311
129	Pallivasal	38	284	219	166	188
130	Panniar	30	158	174	62	129
131	Poringalkuthu	32	170	160	91	117
132	Sabarigiri	300	1338	1171	799	968
133	Sengulam	48	182	161	116	145
134	Sholayar	54	233	210	167	205
	<b>Total KSEB LTD.</b>	<b>1857</b>	<b>6458</b>	<b>6364</b>	<b>4067</b>	<b>5199</b>
	<b>Total State Sector-Kerala</b>	<b>1857</b>	<b>6458</b>	<b>6364</b>	<b>4067</b>	<b>5199</b>
	<b>Total Kerala</b>	<b>1857</b>	<b>6458</b>	<b>6364</b>	<b>4067</b>	<b>5199</b>
	<b>TAMIL NADU</b>					
	<b>STATE SECTOR</b>					
	<b>TANGEDCO</b>					
135	Aliyar	60	175	153	62	90
136	Bhawani K Barrage-III	30	90	157	21	0
137	Bhawani K Barrage-II	30	100	7	20	38
138	Bhawani K Barrage-I	30	80	6	17	17
139	Kadamparai PSS	400	77	413	289	384
140	Kodayar I	60	165	279	169	124
141	Kodayar II	40				
142	Kundah I	60	1387	1372	816	806
143	Kundah II	175				
144	Kundah III	180				
145	Kundah IV	100				
146	Kundah V	40				
147	Lower Mettur I	30	252	223	92	132
148	Lower Mettur II	30				
149	Lower Mettur III	30				
150	Lower Mettur IV	30				
151	Mettur Dam	50	541	341	125	52
152	Mettur Tunnel	200				163
153	Moyar	36	115	104	62	94
154	Papanasam	32	105	117	67	115
155	Parson's Valley	30	53	26	24	27
156	Periyar	161	409	505	94	287
157	Pykara	59	274	57	13	1

158	Pykara Ultimate	150	30	281	193	274
159	Sarkarpathy	30	162	79	63	85
160	Sholayar I	70	254	264	228	158
161	Suruliyar	35	79	93	43	71
	<b>Total TANGEDCO</b>	<b>2178</b>	<b>4348</b>	<b>4474</b>	<b>2397</b>	<b>2920</b>
	<b>Total State Sector-TN</b>	<b>2178</b>	<b>4348</b>	<b>4474</b>	<b>2397</b>	<b>2920</b>
	<b>Total Tamilnadu</b>	<b>2178</b>	<b>4348</b>	<b>4474</b>	<b>2397</b>	<b>2920</b>
<b>TELANGANA</b>						
<b>STATE SECTOR</b>						
<b>TSGENCO</b>						
162	Lower Jurala	240	534	9	176	206
163	N.J.Sagar PSS	816	2237	88	186	184
164	N.J.Sagar LBC	60	104	0	0	13
165	Pochampad	36	147	0	75	36
166	PriyadarshniJurala	234	404	30	212	217
167	Pulichinthala	120	219	0	13	7
168	Srisailam LB	900	1400	155	617	829
	<b>Total TSGENCO</b>	<b>2406</b>	<b>5046</b>	<b>282</b>	<b>1280</b>	<b>1492</b>
	<b>Total State Sector-Telangana</b>	<b>2406</b>	<b>5046</b>	<b>282</b>	<b>1280</b>	<b>1492</b>
	<b>Total Telangana</b>	<b>2406</b>	<b>5046</b>	<b>282</b>	<b>1280</b>	<b>1492</b>
	<b>Total Southern</b>	<b>11695</b>	<b>33901</b>	<b>20504</b>	<b>16341</b>	<b>19022</b>
<b>EASTERN REGION</b>						
<b>JHARKHAND</b>						
<b>CENTRAL SECTOR</b>						
<b>DVC</b>						
169	Panchet	80	237	69	134	142
	<b>Total DVC</b>	<b>80</b>	<b>237</b>	<b>69</b>	<b>134</b>	<b>142</b>
	<b>Total Central Sector-Jharkhand</b>	<b>80</b>	<b>237</b>	<b>69</b>	<b>134</b>	<b>142</b>
<b>STATE SECTOR</b>						
<b>JUUNL</b>						
170	Subernarekha I	65	149	51	30	190
171	Subernarekha II	65				
	<b>Total Jharkhand</b>	<b>130</b>	<b>149</b>	<b>51</b>	<b>30</b>	<b>190</b>
	<b>Total State Sector-Jharkhand</b>	<b>130</b>	<b>149</b>	<b>51</b>	<b>30</b>	<b>190</b>
	<b>Total Jharkhand</b>	<b>210</b>	<b>386</b>	<b>120</b>	<b>164</b>	<b>332</b>
<b>ODISHA</b>						
<b>STATE SECTOR</b>						
<b>OHPC</b>						
172	Balimela	510	1183	622	1001	1477
173	Hirakud I	348	1174	684	717	863
174	Hirakud II					
175	Rengali	250	525	599	554	763
176	Upper Indravati	600	1962	1760	1522	1746
177	Upper Kolab	320	832	767	619	707
	<b>Total OHPC</b>	<b>2028</b>	<b>5676</b>	<b>4433</b>	<b>4413</b>	<b>5555</b>
<b>APGENCO</b>						
178	Machkund	115	670	477	700	468
	<b>Total APGENCO-Odisha</b>	<b>115</b>	<b>670</b>	<b>477</b>	<b>700</b>	<b>468</b>
	<b>Total State Sector-Odisha</b>	<b>2142</b>	<b>6346</b>	<b>4910</b>	<b>5113</b>	<b>6023</b>
	<b>Total Odisha</b>	<b>2142</b>	<b>6346</b>	<b>4910</b>	<b>5113</b>	<b>6023</b>
<b>SIKKIM</b>						
<b>CENTRAL SECTOR</b>						
<b>NHPC</b>						
179	Rangit	60	339	345	347	346
180	Teesta-V	510	2573	2710	2773	2819
	<b>Total NHPC</b>	<b>570</b>	<b>2911</b>	<b>3055</b>	<b>3121</b>	<b>3165</b>
	<b>Total Central Sector-Sikkim</b>	<b>570</b>	<b>2911</b>	<b>3055</b>	<b>3121</b>	<b>3165</b>
<b>STATE SECTOR</b>						
<b>TeestaUrja Ltd. (TUL)</b>						
181	Teesta III	1200	5214		309	4429
	<b>Total TUL</b>	<b>1200</b>	<b>5214</b>	<b>0</b>	<b>309</b>	<b>4429</b>
	<b>Total State Sector-Sikkim</b>	<b>1200</b>	<b>5214</b>	<b>0</b>	<b>309</b>	<b>4429</b>
<b>PRIVATE SECTOR</b>						
<b>DANS Energy Pvt. Ltd. (DEPL)</b>						

182	Jorethang Loop	96	459	75	406	406
	<b>Shiga Energy Pvt. Ltd.(SEPL)</b>					
183	Tashiding	97	425			73
	<b>Gati Infrastructure Pvt. Ltd. (GIPL)</b>					
184	Chuzachen HEP	110	538	421	495	445
	<b>Sneha Kinetic</b>					
185	Dikchu	96	431			370
	<b>Total Private-Sikkim</b>	<b>399</b>	<b>1853</b>	<b>496</b>	<b>900</b>	<b>1294</b>
	<b>Total Sikkim</b>	<b>2169</b>	<b>9978</b>	<b>3552</b>	<b>4330</b>	<b>8888</b>
	<b>WEST BENGAL</b>					
	<b>CENTRAL SECTOR</b>					
	<b>NHPC</b>					
186	Teesta Low Dam-III	132	594	515	554	387
187	Teesta Low Dam-IV	160	720	19	603	495
	<b>Total NHPC</b>	<b>292</b>	<b>1314</b>	<b>534</b>	<b>1156</b>	<b>882</b>
	<b>DVC</b>					
188	Maithon	63	137	108	122	114
	<b>Total DVC-WB</b>	<b>63</b>	<b>137</b>	<b>108</b>	<b>122</b>	<b>114</b>
	<b>Total Central Sector-WB</b>	<b>355</b>	<b>1451</b>	<b>641</b>	<b>1278</b>	<b>996</b>
	<b>STATE SECTOR</b>					
	<b>WBSEDCL</b>					
189	Jaldhaka I	36	170	173	205	145
190	Purulia PSS	900	1235	1065	1107	1014
191	Rammam II	50	209	254	248	122
	<b>Total WBSEDCL</b>	<b>986</b>	<b>1614</b>	<b>1492</b>	<b>1561</b>	<b>1282</b>
	<b>Total State Sector -WB</b>	<b>986</b>	<b>1614</b>	<b>1492</b>	<b>1561</b>	<b>1282</b>
	<b>Total West Bengal</b>	<b>1341</b>	<b>3064</b>	<b>2133</b>	<b>2839</b>	<b>2278</b>
	<b>Total Eastern</b>	<b>5862</b>	<b>19774</b>	<b>10715</b>	<b>12447</b>	<b>17522</b>
	<b>NORTH EASTERN REGION</b>					
	<b>ARUNACHAL PRADESH</b>					
	<b>CENTRAL SECTOR</b>					
	<b>NEEPCO</b>					
192	Ranganadi	405	1510	1280	1249	1417
193	Pare	110	506			
	<b>Total NEEPCO-Arunachal</b>	<b>515</b>	<b>2016</b>	<b>1280</b>	<b>1249</b>	<b>1417</b>
	<b>Total Central Sector-Arunachal</b>	<b>515</b>	<b>2016</b>	<b>1280</b>	<b>1249</b>	<b>1417</b>
	<b>Total Arunachal</b>	<b>515</b>	<b>2016</b>	<b>1280</b>	<b>1249</b>	<b>1417</b>
	<b>ASSAM</b>					
	<b>CENTRAL SECTOR</b>					
	<b>NEEPCO</b>					
194	Kopili	200	1186	782	1088	1173
195	Khandong	50	364	175	197	261
	<b>Total NEEPCO-Aassm</b>	<b>250</b>	<b>1550</b>	<b>957</b>	<b>1285</b>	<b>1434</b>
	<b>Total Central Sector-Assam</b>	<b>250</b>	<b>1550</b>	<b>957</b>	<b>1285</b>	<b>1434</b>
	<b>STATE SECTOR</b>					
	<b>APGCL</b>					
196	KarbiLangpi	100	390	409	397	485
	<b>Total APGCL</b>	<b>100</b>	<b>390</b>	<b>409</b>	<b>397</b>	<b>485</b>
	<b>Total State Sector-Assam</b>	<b>100</b>	<b>390</b>	<b>409</b>	<b>397</b>	<b>485</b>
	<b>Total Assam</b>	<b>350</b>	<b>1940</b>	<b>1366</b>	<b>1682</b>	<b>1919</b>
	<b>NAGALAND</b>					
	<b>CENTRAL SECTOR</b>					
	<b>NEEPCO</b>					
197	Doyang	75	227	163	259	274
	<b>Total NEEPCO-Nagaland</b>	<b>75</b>	<b>227</b>	<b>163</b>	<b>259</b>	<b>274</b>
	<b>Total Central Sector-Nagaland</b>	<b>75</b>	<b>227</b>	<b>163</b>	<b>259</b>	<b>274</b>
	<b>Total Nagaland</b>	<b>75</b>	<b>227</b>	<b>163</b>	<b>259</b>	<b>274</b>
	<b>MANIPUR</b>					
	<b>CENTRAL SECTOR</b>					
	<b>NHPC</b>					



<b>198</b>	<b>Loktak (Manipur)</b>	<b>105</b>	<b>448</b>	<b>537</b>	<b>741</b>	<b>838</b>
	<b>Total NHPC-Manipur</b>	<b>105</b>	<b>448</b>	<b>537</b>	<b>741</b>	<b>838</b>
	<b>Total Central Sector-Manipur</b>	<b>105</b>	<b>448</b>	<b>537</b>	<b>741</b>	<b>838</b>
	<b>Total Manipur</b>	<b>105</b>	<b>448</b>	<b>537</b>	<b>741</b>	<b>838</b>
<b>MEGHALAYA</b>						
<b>STATE SECTOR</b>						
<b>MePGCL</b>						
<b>199</b>	<b>Kyrdemkulai</b>	<b>60</b>	<b>118</b>	<b>118</b>	<b>65</b>	<b>132</b>
<b>200</b>	<b>Myntdu</b>	<b>126</b>	<b>128</b>	<b>444</b>	<b>392</b>	<b>502</b>
<b>201</b>	<b>New Umtru</b>	<b>40</b>	<b>235</b>			<b>160</b>
<b>202</b>	<b>UmiumSt.I</b>	<b>36</b>	<b>324</b>	<b>114</b>	<b>97</b>	<b>129</b>
<b>203</b>	<b>UmiumSt.IV</b>	<b>60</b>	<b>373</b>	<b>185</b>	<b>166</b>	<b>217</b>
	<b>Total MePGCL</b>	<b>322</b>	<b>1178</b>	<b>861</b>	<b>720</b>	<b>1140</b>
	<b>Total State Sector-Meghalaya</b>	<b>322</b>	<b>1178</b>	<b>861</b>	<b>720</b>	<b>1140</b>
	<b>Total Meghalaya</b>	<b>322</b>	<b>1178</b>	<b>861</b>	<b>720</b>	<b>1140</b>
<b>MIZORAM</b>						
<b>CENTRAL SECTOR</b>						
<b>204</b>	<b>Tuirial</b>	<b>60</b>	<b>251</b>			<b>78</b>
	<b>Total NEEPCO-Mizoram</b>	<b>60</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>78</b>
	<b>Total Central Sector-Mizoram</b>	<b>60</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>78</b>
	<b>Total Mizoram</b>	<b>60</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>78</b>
	<b>Total N.Eastern</b>	<b>1427</b>	<b>6060</b>	<b>4207</b>	<b>4651</b>	<b>5666</b>
	<b>Total All India</b>	<b>45399</b>	<b>150681</b>	<b>121377</b>	<b>122378</b>	<b>126123</b>

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**ANNEX REFERRED TO IN REPLY TO PARTS (b) TO (e) OF UNSTARRED QUESTION NO. 1669 TO BE ANSWERED IN THE LOK SABHA ON 20.12.2018.**

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**The state-wise details of the identified potential in North Eastern States**

Region/ State	Identified Capacity (MW)		Capacity	Developed
	Total	Above 25 MW	(MW)	%
<b>North Eastern States</b>				
<b>Meghalaya</b>	<b>2394</b>	<b>2298</b>	<b>322</b>	<b>14.01</b>
<b>Tripura</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0.00</b>
<b>Manipur</b>	<b>1784</b>	<b>1761</b>	<b>105</b>	<b>5.96</b>
<b>Assam</b>	<b>680</b>	<b>650</b>	<b>350</b>	<b>53.84</b>
<b>Nagaland</b>	<b>1574</b>	<b>1452</b>	<b>75</b>	<b>5.17</b>
<b>Arunachal Pradesh</b>	<b>50328</b>	<b>50064</b>	<b>515</b>	<b>1.02</b>
<b>Mizoram</b>	<b>2196</b>	<b>2131</b>	<b>60</b>	<b>2.81</b>
<b>Sub Total (NER)</b>	<b>58971</b>	<b>58356</b>	<b>1427</b>	<b>2.44</b>

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**ANNEX-III**

**ANNEX REFERRED TO IN REPLY TO PARTS (b) TO (e) OF UNSTARRED QUESTION NO. 1669 TO BE ANSWERED IN THE LOK SABHA ON 20.12.2018.**

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**DPR concurred by CEA & yet to be taken up for construction and DPR under Examination  
(Benefits for the period 2022-2029)**

S. No.	Name of Project	State	I.C. (MW)	No. of Units x MW	Benefits during 2022-2027 (MW)	Remarks
<b>DPR concurred by CEA and yet to be taken up for construction</b>						
<b>2022-23</b>						
1	Nafra	Arunachal Pradesh	120	2x60	120	TEC held on: 11.02.11 Env.Clearance: 19.08.13 FC-I: 02.04.12 & FC-II: 19.11.12 PPA yet to be signed. Thereafter Financial agreement to be made to resume works.
<b>Sub Total (2022-23)</b>			<b>120</b>		<b>120</b>	
<b>2023-24</b>						
<b>DPR concurred by CEA and yet to be taken up for construction</b>						
2	Tagurshit	Arunachal Pradesh	74	3x24.67	74	TEC held on: 21.10.16 Env.Clearance: recommended by EAC in Oct, 2016. Letter will be issued after FC-I. FC-I & FC-II yet to be obtained.
3	Heo	Arunachal Pradesh	240	3x80	240	TEC held on: 28.07.15 Env.Clearance: 10.11.15 FC-I: 27.10.15 FC-II yet to be obtained. Infrastructure to be developed by State Govt./ BRO.
4	Tato-I	Arunachal Pradesh	186	3x62	186	TEC held on: 28.10.15 Env.Clearance: 10.11.15 FC-I: 27.10.15 FC-II yet to be obtained. Infrastructure to be developed by State Govt./ BRO.
5	Lower Kopilli	Assam	120	2x55+1x5+2x2.5	120	TEC held on: 24.05.16 EC & FC yet to be obtained by developer.
6	Dikhu	Nagaland	186	3X62	186	TEC held on: 31.03.14 EC yet to be obtained by developer. FC not applicable as forest land is not involved. Property survey is in progress.
7	Dibbin	Arunachal Pradesh	120	2x60	120	TEC held on: 04.12.09 Env.Clearance: 23.07.12 FC-I: 07.02.12 FC-II yet to be obtained. Developer to submit revised PPS based on BSR to CEA.
<b>Sub Total (2023-24)</b>			<b>926</b>		<b>926</b>	

	<b>2024-25</b>					
	<b>DPR concurred by CEA and yet to be taken up for construction</b>					
8	Loktak Down Stream	Manipur	66	2x33	66	TEC held on: 05.05.17 Env. Clearance: 16.01.13 FC-I: 03.02.11 FC-II: 22.12.14 PIB proposal returned by MoP on 11.07.17 seeking firm commitment regarding grant from State Government.
9	Talong Londa	Arunachal Pradesh	225	3x75	225	TEC held on: 16.08.13 Env. Clearance: 07.08.15 FC-I&FC-II yet to be obtained. Pending with State Govt.
	<b>Sub total (2024-25)</b>		<b>291</b>		<b>291</b>	
	<b>2025-26</b>					
	<b>DPR concurred by CEA and yet to be taken up for construction</b>					
10	Kynshi-I	Meghalaya	270	2x135	270	TEC held on: 31.03.15 EC & FC yet to obtained by developer. Issue of funding for Flood Moderation component to be resolved.
11	Demwe Lower	Arunachal Pradesh	1750	5x342+1 x40	1750	TEC held on: 20.11.09 Env. Clearance: 12.02.10 As per NGT order dated 24.10.17, NBWL issue to be reconsidered by MoEF&CC.
12	Attunli	Arunachal Pradesh	680	4x170	680	TEC held on: 15.03.18 EC & FC yet to be obtained by developer.
	<b>Sub Total (yet to be taken up for construction)</b>		<b>2700</b>		<b>2700</b>	
	<b>DPRs under examination in CEA</b>					
13	Mawphu Stage-II	Meghalaya	85	2x42.50	85	DPR accepted for examination in the meeting held on 08.08.2017.
	<b>Sub Total (DPR under examination)</b>		<b>85</b>		<b>85</b>	
	<b>Sub total (2025-26)</b>		<b>2785</b>		<b>2785</b>	
	<b>2026-27</b>					
	<b>DPR concurred by CEA and yet to be taken up for construction</b>					
14	Tawang-I	Arunachal Pradesh	600	3x200	600	TEC held on: 10.10.11 Env. Clearance: 10.06.11 FC-I&FC-II yet to be obtained. Land acquisition in process. Local resident are not cooperating.
	<b>Sub total (2026-27)</b>		<b>600</b>		<b>600</b>	
	<b>2027-28</b>					
	<b>DPR concurred by CEA and yet to be taken up for construction</b>					
15	Hirong	Arunachal Pradesh	500	4x125	500	TEC held on: 10.04.13 EC & FC yet to be obtained by developer. Impacted by Siang Basin Report. Developer to submit revised PPS based on BSR to CEA.

16	Kalai-II	Arunachal Pradesh	1200	5x190+ 1x190+1x 60	1200	TEC held on: 27.03.15 Env. Clearance: 20.05.15 FC-I&FC-II yet to be obtained. Developer to submit revised PPS based on BSR to CEA.
17	Naying	Arunachal Pradesh	1000	4x250	1000	TEC held on: 11.09.13 EC & FC yet to be obtained by developer. Developer to submit revised PPS based on BSR to CEA. DISCOMs are reluctant to sign PPA.
18	Tawang-II	Arunachal Pradesh	800	4x200	800	TEC held on: 22.09.11 Env. Clearance: 10.06.11 FC-I: 8.01.14 FC-II yet to be obtained. Local resident are not cooperating.
19	Etalin	Arunachal Pradesh	3097	10x307+ 1x19.6+1 x7.4	3097	TEC held on: 12.07.2013 Env. Clearance: 11.07.14 FC-I & FC-II yet to be obtained. WII study is to be carried out.
<b>Sub total (2027-28)</b>			<b>6597</b>		<b>6597</b>	
<b>2028-29</b>						
<b>DPR concurred by CEA and yet to be taken up for construction</b>						
20	Dibang	Arunachal Pradesh	2880	12x240	2880	TEC held on: 18.09.17 Env. Clearance: 19.05.2015 FC-I: 15.04.15 FC- II yet to be obtained. Land acquisition in process.
21	Lower Siang	Arunachal Pradesh	2700	9x300	2700	TEC held on: 16.02.10 EC & FC yet to be obtained by developer. Facing difficulties in conducting public hearing due to local protest.
<b>Sub total (2028-29)</b>			<b>5580</b>		<b>5580</b>	
<b>Total (2022-29)</b>			<b>16899</b>		<b>16899</b>	

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TO BE ANSWERED IN THE LOK SABHA ON 20.12.2018.**

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**Steps taken by the Government to harness Hydro potential**

**1. Hydro Power Policy- 2008 (as amended from time to time):**

- (i) **Transparent selection procedure/ criteria to be followed by the States for awarding sites to private developers.**
- (ii) **The dispensation regarding exemption from tariff based bidding, available to the Public Sector under the National Tariff Policy 2006, also extended to private sector hydroelectric projects up to January 2011 (since extended up to 15.08.2022 in Revised Tariff Policy, 2016).**
- (iii) **To enable the project developer (public as well as private sector hydro developers) to recover the costs incurred by him in obtaining the project site, the policy allows a special incentive to the developer by way of merchant sale of upto a maximum of 40% of the saleable energy.**
- (iv) **An additional 1% free power from the project (over and above 12% free power earmarked for the host State) would be provided and earmarked for a Local Area Development Fund, aimed at providing a regular stream of revenue for income generation and welfare schemes, creation of additional infrastructure and common facilities etc. on a sustained and continued basis over the life of the project.**
- (v) **Developer to provide 100 units of electricity per month to each Project Affected Family - in cash or kind or a combination of both for 10 years from the COD.**
- (vi) **Developer to assist in implementing rural electrification in the vicinity of the project area & contribute 10% share of the State Govt. under the RGGVY scheme.**

**2. Tariff Policy, 2016 (Portions relevant to Hydropower)**

**Intent of Government for promotion of HEP emphasized in the objective of the Policy - "To promote HEP generation including PSP to provide adequate peaking reserves, reliable grid operation and integration of variable RE sources".**

- (i) **Hydropower to be excluded for estimating Solar Purchase Obligation.**
- (ii) **Certainty of long term PPA for min. 60% of capacity, balance through merchant sale - Provision for extension of PPA beyond 35 years for a further period of 15 years.**
- (iii) **Enabling provision for suitable regulatory framework incentivizing the developers of HEPs for using long term financial instruments - in order to reduce tariff burden in the initial years.**
- (iv) **Depreciation – Developer shall have the option of charging lower rate of depreciation vis-à-vis the ceiling determined by CERC.**
- (v) **Exemption from competitive bidding extended up to 2022.**

**3. Other measures and steps taken to harness potential are detailed as follows:**

- (i) **Time bound appraisal norms have been evolved for examination of DPRs in CEA. Appraisal of DPRs by respective appraising groups including convening of Concurrence/ Appraisal meeting by Secretary, CEA shall be completed in a period of 150 working days**
- (ii) **Central Electricity Authority (CEA) is monitoring the progress of the under construction hydro projects regularly through frequent site visits, interaction with the developers and critical study of monthly progress reports.**
- (iii) **Regular review meetings are taken by Ministry of Power/ CEA with equipment manufacturers, State Utilities/ CPSUs/ Project developers, etc. to sort out the critical issues on Quarterly Basis.**

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