

# केंद्रीय विद्युत प्राधिकरण

(जल विद्युत स्कंध)



## निर्माणाधीन जल विद्युत परियोजनाओं की प्रगति

(विद्युत अधिनियम, 2003 के तहत के.वि.प्रा. के दायित्व की पूर्ति में)

त्रैमासिक समीक्षा संख्या. 102

**QUARTERLY REVIEW No. 102**

जुलाई ~ सितम्बर, 2020

जल विद्युत् परियोजना प्रबोधन प्रभाग

नई दिल्ली

अक्टूबर ~ 2020

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## PREFACE

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<b>Present Review</b>	This quarterly review which is <b>102<sup>th</sup></b> in the series covers the period from <b>July ~ Sept, 2020</b> . The objective of this review is to provide up to date information in respect of Hydro Electric (HE) Projects under construction/ implementation in the country.
	This quarterly review has been brought out by CEA on the basis of data received from various project authorities, visit made to different HE projects and discussions held with the executing agencies and suppliers of equipment from time to time.
<b>Milestone Achieved during July ~ Sept, 2020</b>	Details of HE Projects Rolled/Commissioned during the Quarter is indicated in Chapter-1.
<b>Plan / Year wise Hydro Capacity Addition / Under Execution</b>	Hydro Capacity Addition – Financial Year Wise Lists are placed in Ch. 2.2a to 2.2h. Summary of Hydro Capacity Addition is in Ch. 2.3 (2020-26), Hydro Electric Projects Under Execution – Year wise Lists are placed in Ch. 2.3a to 2.3g.
<b>Growth of Installed Capacity, Hydro Capacity Addition</b>	A Graphical representation of Trends & Growth of Installed Capacity, Hydro Capacity Addition of Hydro-Thermal-Nuclear HEPs during Plans/Years is placed in Ch. 3 & 4.
<b>Sanctioned Hydro Electric Projects</b>	A Sector wise list of Sanctioned H.E. projects Under Execution is placed in Chapter 5.
<b>Status of Sanctioned Hydro Electric Projects</b>	Broad present status of HE projects commissioned during the financial year & Under Execution is given in Chapter 6.
<b>Financial Status of Hydro Electric Projects</b>	Financial status of HE projects supplied by project authorities (unaudited) is given in Chapter 7.
<b>Status of Environment &amp; Forest Clearances of H.E. Projects.</b>	The status of Environmental & Forest clearance of HE projects is given in Chapters 8.
<b>Dates of Award of First Civil Package</b>	The date of award of First Civil Package for HE projects under execution is indicated in Chapter 9.
<b>Ordering Status of TG set.</b>	Details of Ordering status of TG Set for HE projects under construction is given in Chapters 9.1 and 9.2.

**Status of Financial closure of Private Sector Hydro Electric Projects**

Details of financial closure of Private Sector HE projects is given in Chapter-10.

**Time & Cost Over-run of Ongoing Hydro Projects**

The Status of Time & Cost Over-run of HE projects under execution is given in Chapter 11.

**Exclusions**

The review does not cover HE projects categorised as renewable, each with a total installed capacity of 25 MW and below, as these schemes come under the purview of Ministry of New & Renewable Energy (MNRE).

Any suggestions/feedback for further improvement in the quarterly review shall be appreciated.

**The report is in fulfilment of CEA's obligation under Electricity Act, 2003.**

## Executive Summary

### Trend of Hydro-Thermal-Nuclear Mix of Installed Capacity (As on 30.09.2020).

<b>Hydro:</b>	45,699.22 MW	(16.10 %)
<b>Thermal:</b>	2,31,320.72 MW	(81.51 %)
<b>Nuclear:</b>	6,780.00 MW	( 2.39 %)
<b>Total: (excluding RES)</b>	2,83,799.94 MW	

**Sector wise Hydro Capacity Under Execution:** A hydro capacity of **12,973.50 MW** is under execution. Sector wise summary is given as under:-

Sector	Under Execution (MW)
<b>Central</b>	8389.00
<b>State</b>	2712.50
<b>Private</b>	1872.00
<b>Total:</b>	<b>12973.50</b>

**Sector wise summary for the financial year 2019-20 given as under:-**

Year	Monitorable Targets (MW)	Capacity Addition (MW)	Sector					
			Central		State		Private	
			Tgt.	Act.	Tgt.	Act.	Tgt.	Act.
<b>2019-20</b>	<b>1190</b>	<b>300</b>	600	300	211	0	379	0

### Monitorable Targets for Hydro Capacity Addition for the year 2020-21:

Monitorable Targets for hydro capacity addition for the year 2020-21 is **606 MW** (300 MW in Central Sector, 111 MW in State Sector and 195 MW in Private Sector). Details are as under:-

Sl. No.	Particular	Unit Nos.	Cap. (MW)	Capacity addition as programmed	Remarks
<b>A.</b>	<b>Central Sector</b>				
1	<b>Kameng</b> NEEPCO, Arunachal Pradesh 4x150=600 MW	Unit # 3 Unit # 4	150 150	March,21 March,21	Q-4
	<b>Sub- total (A):</b>		<b>300</b>		
<b>B.</b>	<b>State Sector</b>				
3	<b>Sawra Kuddu</b> HPPCL, H.P. 3x37=111 MW	Unit #1 Unit # 2 Unit # 3	37 37 37	March,21 March,21 March,21	Q-4
	<b>Sub- total (B):</b>		<b>111</b>		
<b>C.</b>	<b>Private Sector</b>				
7	<b>Singoli Bhatwari</b> L&T, Uttarakhand	Unit #1 Unit # 2	33 33	December,20 December,20	Q-3

<b>Sl. No.</b>	<b>Particular</b>	<b>Unit Nos.</b>	<b>Cap. (MW)</b>	<b>Capacity addition as programmed</b>	<b>Remarks</b>
	2x33=99 MW	Unit # 3	33	Dec,20	
9	<b>Rongnichu</b> 2x48= 96 MW Madhya Bharat Power Corpn., Sikkim	Unit #1 Unit # 2	48 48	March,21 March,21	Q-4
	<b>Sub- total (C):</b>		<b>195</b>		
	<b>Total (A+B+C)</b>		<b>606</b>		

## **CHAPTER- 1**

**Milestones achieved during the Quarter July ~ Sept, 2020**

**- NIL-**

**CHAPTER - 2**

**Plan wise Hydro capacity Target Vs Achievement since 4th Plan**

<b>Plan / Year</b>	<b>Target (MW) (Original)</b>	<b>Capacity Addition (MW)</b>	<b>% Achieved</b>
4th Plan (1969-74)	3518.00	1058.39	<b>30.08</b>
5th Plan (1974-79)	4654.00	3867.77	<b>83.11</b>
Annual Plan (1979-80)	548.00	550.9	<b>100.53</b>
6th Plan (1980-85)	4768.00	3076.05	<b>64.51</b>
7th Plan (1985-90)	5541.25	3828.41	<b>69.09</b>
Annual Plan (1990-91)	1006.50	445.5	<b>44.26</b>
Annual Plan (1991-92)	754.30	436	<b>57.8</b>
8th Plan (1992-97)	9282.15	2427.65	<b>26.15</b>
9th Plan (1997-02)	9817.70	4538.25	<b>46.23</b>
10th Plan (2002-07)	14393.20	7886	<b>54.79</b>
11th Plan (2007-12)	15627.00	5544	<b>35.48</b>
12 <sup>th</sup> Plan (2012-17)	10897.00	5479	<b>50.28</b>
2017-18	1305.00	795	<b>60.92</b>
2018-19	840.00	140	<b>16.67</b>
2019-20	1190.00	300	<b>25.21</b>
2020-21	606.00		



## CHAPTER - 2.1

### Year/Plan wise Hydro Capacity Addition in the Country

S.No.	Year	Target (Original)	Capacity Addition (MW)	% Achieved	Remarks
<b>1st Five Year Plan (1.1.51 to 31.12.55)</b>					
1	1951		15.89		
2	1952		140.00		
3	1953		16.00		
4	1954		62.17		
5	1955		<u>146.13</u>		
		<b>Total :</b>	<b><u>380.19</u></b>		
<b>2nd Five Year Plan (1.1.56 to 31.03.61)</b>					
6	1956		121.96		
7	1957-58		152.48		
8	1958-59		147.52		
9	1959-60		168.71		
10	1960-61		<u>386.51</u>		
		<b>Total :</b>	<b><u>977.18</u></b>		
<b>3rd Five Year Plan (1.4.61 to 31.03.66)</b>					
11	1961-62		502.44		
12	1962-63		517.25		
13	1963-64		230.67		
14	1964-65		221.71		
15	1965-66		<u>735.01</u>		
		<b>Total :</b>	<b><u>2207.08</u></b>		
<b>Annual Plans (1966-67, 67-68, 68-69)</b>					
16	1966-67		633.48		
17	1967-68		729.70		
18	1968-69		419.99		
<b>4th Five Year Plan (1.4.69 to 31.03.74)</b>					
19	1969-70		227.79		
20	1970-71		248.53		
21	1971-72		228.38		
22	1972-73		173.80		
23	1973-74		<u>179.89</u>		
		<b>Total : 3518</b>	<b><u>1058.39</u></b>	<b>30.08</b>	
<b>5th Five Year Plan (1.4.74 to 31.03.79)</b>					
24	1974-75		563.94		
25	1975-76		934.36		
26	1976-77		561.30		
27	1977-78		995.32		
28	1978-79		<u>812.85</u>		
		<b>Total : 4654</b>	<b><u>3867.77</u></b>	<b>81.11</b>	
<b>Annual Plan (1979-80)</b>					
29	1979-80	<b>548</b>	<b>550.90</b>	<b>100.18</b>	
<b>6th Five Year Plan (1.4.80 to 31.03.85)</b>					
30	1980-81		407.25		
31	1981-82		381.59		
32	1982-83		883.05		
33	1983-84		799.70		
34	1984-85		<u>604.46</u>		
		<b>Total : 4768</b>	<b><u>3076.05</u></b>	<b>64.51</b>	

S.No.	Year	Target (Original)	Capacity Addition (MW)	% Achieved	Remarks
<b>7th Five Year Plan (1.4.85 to 31.03.90)</b>					
35	1985-86		1012.00		
36	1986-87		704.525		
37	1987-88		1069.285		
38	1988-89		532.70		
39	1989-90		<u>509.90</u>		
	<b>Total :</b>	<b>5541.25</b>	<b><u>3828.41</u></b>	<b>69.09</b>	
<b>Annual Plans (1990-91, 91-92)</b>					
40	1990-91	<b>1006.5</b>	<b>445.50</b>	<b>44.26</b>	
41	1991-92	<b>754.3</b>	<b>436.00</b>	<b>57.8</b>	
<b>8th Five Year Plan (1.4.92 to 31.03.97)</b>					
42	1992-93	372.95	372.95		
43	1993-94	957.65	797.15		
44	1994-95	1192.55	450.00		
45	1995-96	1846	147.05		
46	1996-97	4913	<u>660.50</u>		
	<b>Total :</b>	<b>9282.15</b>	<b><u>2427.65</u></b>	<b>26.15</b>	
<b>9th Five Year Plan (1.4.97 to 31.03.2002)</b>					
47	1997-98	233	233.00		
48	1998-99	312	542.50		
49	1999-2000	1543	1371.50		
50	2000-01	2223	1285.00		
51	<b>2001-02</b>	<b>5506.7</b>	<u>1106.25</u>		
	<b>Total :</b>	<b>9817.7</b>	<b><u>4538.25</u></b>	<b>46.22</b>	
<b>10th Five Year Plan (1.4.02 to 31.03.07)</b>					
52	2002-03	585	635.00		
<b>53</b>	<b>2003-04</b>	<b>3740</b>	<b>2590.00</b>		<b>Highest till date.</b>
54	2004-05	2401	1015.00		
55	2005-06	2010	1340.00		
56	2006-07	5657	<b>2306.00</b>		<b>3rd Highest</b>
	<b>Total :</b>	<b>14393</b>	<b>7886.00</b>	<b>54.79</b>	
<b>11th Five Year Plan (1.4.07 to 31.03.12)</b>					
57	<b>2007-08</b>	<b>2423</b>	<b>2423</b>		<b>2nd Highest.</b>
58	2008-09	1097	969		
59	2009-10	1805	39		
60	2010-11	1741	690		
61	2011-12	8561	1423		
	<b>Total :</b>	<b>15627</b>	<b>5544.00</b>	<b>35.48</b>	
<b>12th Five Year Plan (1.4.12 to 31.03.17)</b>					
62	2012-13	802 ★	510		
63	2013-14	1198 ★	1058		
64	2014-15	842 ★	736		
65	2015-16	1691 ★	1516		
66	2016-17	1714 ★	<b>1659</b>		<b>4th Highest</b>
	<b>Total :</b>	<b>10897</b>	<b>5479</b>	<b>50.23</b>	
67	2017-18	1305 ★	795	60.92	
68	2018-19	840 ★	140	16.67	
69	2019-20	1190 ★	300	25.21	
70	2020-21	606 ★			

★ Targets set at the beginning of the year.

## Chapter- 2.2a

### Hydro Capacity Addition during the Year 2012-13

Sl. No.	Particular	Unit Nos.	Target (MW)	Commissioning as programmed	Actual (MW)	Actual (A)/ Anticipated	Remarks/Critical Issue
<b>A. Central Sector</b>							
1.	<b>Chamera-III</b> NHPC, H.P. 3x77= 231 MW	1 2 3	77 77 77	Jun-12 Aug-12 Oct-12	77 77 77	<b>28.06.2012(A)</b> <b>12.06.2012(A)</b> <b>07.06.2012(A)</b>	<b>Commissioned</b>
2.	<b>Uri-II</b> NHPC, J&K 4x60= 240 MW	1 2 3 4	60 60 60 60	Aug-12 Sept-12 Nov-12 Dec-12	-	Slipped Slipped Slipped Slipped	- Local agitation from mid March, 12 to June, 12 end. - TRT was flooded on 17.09.12 due to flash flood. - Filling of U/s Water conductor system delayed due to agitation by local people demanding employment in NHPC.
3.	<b>Chutak</b> NHPC, J&K 4x11 =44 MW	1 2 3 4	11 11 11 11	Sept-12 Sept-12 Nov-12 Dec-12	<b>11</b> <b>11</b> <b>11</b> <b>11</b>	<b>22.11.2012(A)</b> <b>08.11.2012(A)</b> <b>11.11.2012(A)</b> <b>28.01.2013(A)</b>	<b>Commissioned</b>
4.	<b>Parbati-III</b> NHPC, HP 4x130= 520 MW	1	130	Mar-13	-	Slipped	- Non-availability of transmission system. - Non completion of Surge shaft gates.
<b>Sub- total (A):</b>			<b>645</b>		<b>275</b>		
<b>B. State Sector</b>							
5.	<b>Bhawani Kattalai -II</b> TANGEDCO, T.N Tamil Nadu, 2x15 = 30 MW	1 2	15 15	June-12 July-12	-	Slipped	- Unit #1&2 synchronised at part load in July,11 & Sept,11 - Reservoir filling delayed on account of less release from Mettur dam.
6.	<b>Bhawani Kattalai - III</b> TANGEDCO, T.N 2x15 = 30 MW	1	15	Oct-12	<b>15</b>	<b>08.12.12(A)</b>	<b>Commissioned</b>
7.	<b>Myntdu</b> MeECL, Meghalaya 3x42 = 126 MW	3	42	Mar-13	<b>42</b>	<b>07.03.2013(A)</b>	<b>Commissioned</b>
<b>Sub- total (B):</b>			<b>87</b>		<b>57</b>		
<b>C. Private Sector</b>							
8.	<b>Budhil</b> Lanco H P 2x35=70 MW	1 2	35 35	May-12 July-12	<b>35</b> <b>35</b>	<b>30.05.2012(A)</b> <b>26.05.2012(A)</b>	<b>Commissioned</b>
<b>Sub- total (C):</b>			<b>70</b>		<b>70</b>		
<b>Total (A+B+C)</b>			<b>802</b>		<b>402</b>		
<b>Out side the programme of 2012-13.</b>							
1.	<b>Teesta Low Dam –III</b> NHPC, WB 4x33=132 MW	1 2 3	- - -	2013-14 2013-14 2013.14	<b>33</b> <b>33</b> <b>33</b>	<b>30.01.2013(A)</b> <b>20.01.2013(A)</b> <b>24.02.2013(A)</b>	<b>Commissioned</b>
2.	<b>Jaldhaka</b> (WBSEDCL) West Bengal 4x9=36 MW	4	-	-	<b>9</b>	<b>08.10.2012(A)</b>	<b>Commissioned</b>
<b>Sub- total : Outside</b>			<b>-</b>		<b>108</b>		

## Chapter- 2.2a

Sl. No.	Particular	Unit Nos.	Target (MW)	Commissioning as programmed	Actual (MW)	Actual (A)/ Anticipated	Remarks/Critical Issue
	Grand Total: 2012-13		802		510		

## Chapter- 2.2b

### Hydro Capacity Addition during the Year 2013-14

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks/Critical Issue
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
<b>A. Central Sector</b>							
1	<b>Teesta Low Dam-III</b> NHPC, WB. 4x33= 132 MW	Unit # 4	33	<b>33</b>	April-13	<b>01.04.2013(A)</b>	<b>Commissioned</b>
2	<b>Uri-II</b> NHPC, J&K 4x60= 240 MW	Unit # 1 Unit # 2 Unit # 3 Unit # 4	60 60 60 60	<b>60</b> <b>60</b> <b>60</b> <b>60</b>	May-13 June- 13 July- 13 July- 13	<b>25.09.2013 (A)</b> <b>16.11.2013 (A)</b> <b>27.09.2013 (A)</b> <b>02.02.2014 (A)</b>	<b>Commissioned</b>
3	<b>Parbati-III</b> NHPC, HP 4x130= 520 MW	Unit # 1 Unit # 2 Unit # 3	130 130 130	<b>130</b> <b>130</b> <b>130</b>	June-13 July -13 Feb- 14	<b>18.02.2014 (A)</b> <b>27.02.2014 (A)</b> <b>15.03.2014 (A)</b>	<b>Commissioned</b>
4	<b>Nimoo Bazgo</b> NHPC, J&K 3x15 =45 MW	Unit # 1 Unit # 2 Unit # 3	15 15 15	<b>15</b> <b>15</b> <b>15</b>	Dec- 13 Nov -13 Nov-13	<b>02.11.2013 (A)</b> <b>31.10.2013 (A)</b> <b>30.10.2013 (A)</b>	<b>Commissioned</b>
5	<b>Rampur</b> SJVN Limited, HP. 6x68.67 = 412 MW	Unit # 1 Unit # 2 Unit # 5	68.67 68.67 68.67	<b>68.67</b> <b>68.67</b> <b>68.67</b>	Jan- 14 Feb- 14 Mar- 14	<b>23.03.2014 (A)</b> <b>21.03.2014 (A)</b> <b>29.03.2014 (A)</b>	<b>Commissioned</b>
	<b>Sub- total (A):</b>		<b>914</b>	<b>914</b>			
<b>B. State Sector</b>							
6.	<b>Lower Jurala</b> APGENCO, A.P. (6x40=240 MW)	Unit # 1	40	-	Dec-13	Slipped	-Unit was synchronized at part load on 29.12.13, but full load commissioning could not be achieved due to non-availability of sufficient water.
7	<b>Bhawani Kattalai -II</b> TANGEDCO, T.N Tamil Nadu, 2x15 = 30 MW	Unit # 1 Unit # 2	15 15	<b>15</b> <b>15</b>	July -13 Aug- 13	<b>27.08.2013 (A)</b> <b>06.09.2013 (A)</b>	<b>Commissioned</b>
8	<b>Bhawani Kattalai -III</b> TANGEDCO, T.N Tamil Nadu, 2x15 = 30 MW	Unit # 2	15	<b>15</b>	June -13	<b>25.09.2013 (A)</b>	<b>Commissioned</b>
	<b>Sub- total (B):</b>		<b>85</b>	<b>45</b>			
<b>C. Private Sector</b>							
9	<b>Sorang</b> Himachal Sorang Power Pvt. Ltd, H P. 2x50=100 MW	Unit # 1 Unit # 2	50 50	- -	Nov-11 Dec-11	Slipped	- Commissioning delayed, cracks developed in penstock during filling of water conductor system in 1 <sup>st</sup> week of Nov-2013.
10	<b>Chuzachen</b> Gati Infra. Limited, Sikkim 2x49.5= 99 MW	Unit # 1 Unit # 2	49.5 49.5	<b>49.5</b> <b>49.5</b>	June -13 July -13	<b>21.04.2013(A)</b> <b>20.04.2013(A)</b>	<b>Commissioned</b>
	<b>Sub- total (C):</b>		<b>199</b>	<b>99</b>			
	<b>Total (A+B+C)</b>		<b>1198</b>	<b>1058</b>			

**Out side RFD achievements:** Unit # 2 (40 MW) of Lower Jurala HEP was synchronized at part load on 10.01.2014, but full load commissioning could not be achieved due to non-availability of sufficient water.

## Chapter- 2.2c

### Hydro Capacity Addition during the Year 2014-15

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks/Critical Issue
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
<b>A. Central Sector</b>							
1	<b>Parbati-III</b> NHPC, HP 4x130= 520 MW	Unit # 4	130	130	Aug- 14	<b>22.05.2014 (A)</b>	<b>Commissioned</b>
2	<b>Rampur</b> SJVN Limited, HP. 6x68.67 = 412 MW	Unit # 3 Unit # 4 Unit # 6	68.67 68.67 68.67	68.67 68.67 68.67	Jun 14 May 14 Apr 14	<b>31.07.2014(A)</b> <b>12.06.2014(A)</b> <b>04.12.2014(A)</b>	<b>Commissioned</b>
<b>Out side the Programme</b>							
3	<b>Koldam</b> NTPC, H.P. 4x200 = 800 MW	Unit # 1 Unit # 2	200 200	200 200	Mar-15 Mar-15	<b>31.03.2015 (A)</b> <b>30.03.2015 (A)</b>	<b>Commissioned</b>
	<b>Sub- total (A):</b>		<b>736</b>	<b>736</b>			
<b>B. State Sector</b>							
4	<b>Lower Jurala</b> TSGENCO, Telangana 6x40= 240 MW	Unit # 1 Unit # 2 Unit # 3 Unit # 4	40 40 40 40	0 0 0 0	Jul.-14 Jul.-14 Oct.-14 Mar.-15	Slipped	- Slipped due to flooding of Power House on 30.07.2014 during synchronization process for Unit # 1 to Unit# 3.
5	<b>Nagarjuna Sagar</b> APGENCO, A.P. 2x25= 50 MW	Unit # 1 Unit # 2	25 25	0 0	Sep-14 Dec-14	Slipped	- Commissioning delayed due to non-availability of water.
	<b>Sub- total (B):</b>		<b>210</b>	<b>0</b>			
<b>C. Private Sector</b>							
6	<b>Jorethang Loop</b> DANS Pvt. Ltd., Sikkim 2x48= 96 MW	Unit # 1 Unit # 2	48 48	0 0	Feb-15 Mar-15	Slipped	- Slipped due to non-completion of HRT.
7	<b>Teesta-III</b> Teesta Urja, Sikkim 6x200= 1200 MW	Unit # 6	200	0	Mar-15	Slipped	- Slipped due to Financial crunch with the Developer.
	<b>Sub- total (C):</b>		<b>296</b>	<b>0</b>			
	<b>Total (A+B+C)</b>		<b>842</b>	<b>736</b>			

#### **Out side RFD achievements:**

**Unit #1 & # 2 (400 MW) of Kol Dam HEP commissioned during March, 2015.**

## Chapter- 2.2d

### Hydro Capacity Addition during the Year 2015-16

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks/Critical Issue
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
<b>A.</b>	<b>Central Sector</b>						
1	<b>Koldam</b> NTPC, HP 4x200= 800 MW	Unit # 3 Unit # 4	200 200	200 200	4/15 5/15	10.04.2015(A) 12.06.2015(A)	<b>Commissioned</b>
2	<b>Teesta Low Dam-IV</b> NHPC, W.B 4x40 = 160 MW	Unit # 1 Unit # 2	40 40	40 40	2/16 3/16	14.02.2016 16.03.2016	<b>Commissioned</b>
3	<b>Pare</b> NEEPCO, Ar. Pradesh 2x55=110 MW	Unit # 1 Unit # 2	55 55		8/12 8/12	Slipped Slipped	Slipped due to inundation of dam area with flood water after overtopping of Cofferdam in June'15 and many times thereafter. Slow progress of works in Dam concreting.
	<b>Sub- total (A):</b>		<b>590</b>	<b>480</b>			<b>Achieved:-480 MW</b>
<b>B.</b>	<b>State Sector</b>						
4	<b>Baglihar - II</b> JKPDC, J&K 3x150= 450 MW	Unit # 1 Unit # 2 Unit # 3	150 150 150	150 150 150	9/15 9/15 2016-17	05.09.2015(A) 29.09.2015(A) 26.10.2015(A)	<b>Commissioned</b>
5	<b>Kashang - I</b> HPPCL, H.P. 1x65=65 MW	Unit # 1	65		3/16	Slipped	Slow progress of E&M works.
6	<b>Lower Jurala</b> TSGENCO, Telangana 6x40= 240 MW	Unit # 1 Unit # 2 Unit # 3 Unit # 4	40 40 40 40	40 40 40 40	7/15 8/15 9/15 10/15	14.10.2015(A) 30.09.2015(A) 04.01.2016(A) 05.03.2016(A)	<b>Commissioned</b>
7	<b>Nagarjuna Sagar TR</b> APGENCO, AP 2x25=50 MW	Unit # 1 Unit # 2	25 25		7/15 7/15	Slipped Slipped	Unit 1 & 2 could not be commissioned due to non-availability of rated discharge.
	<b>Sub- total (B):</b>		<b>575</b>	<b>610</b>			<b>Achieved:-610 MW</b>
<b>C.</b>	<b>Private Sector</b>						
8	<b>Sorang</b> HSPCL, H.P. 2x50 = 100 MW	Unit # 1 Unit # 2	50 50		11/11 12/11	Slipped Slipped	<b>Unit # 1 synchronized</b> , but could not be commissioned due to non-availability of rated discharge. Penstock ruptured on 18.11.2015.
9	<b>Srinagar</b> AHPCL, Uttarakhand 4x82.5=330	Unit # 1 Unit # 2 Unit # 3 Unit # 4	82.5 82.5 82.5 82.5	82.5 82.5 82.5 82.5	4/15 4/15 5/15 6/15	10.04.2015(A) 08.06.2015(A) 20.04.2015(A) 03.06.2015(A)	<b>Commissioned</b>
10	<b>Jorethang Loop</b> DANS Pvt. Ltd., Sikkim 2x48= 96 MW	Unit # 1 Unit # 2	48 48	48 48	9/15 10/15	22.09.2015(A) 23.09.2015(A)	<b>Commissioned</b>
	<b>Sub- total (C):</b>		<b>526</b>	<b>426</b>			<b>Achieved:-426 MW</b>
	<b>Total (A+B+C)</b>		<b>1691</b>	<b>1516</b>			<b>Achieved:-1516 MW</b>
<b>Note: 1516 MW out of 1691 MW is Commissioned during 2015-16.</b>							

#### Out side RFD achievements:

**Unit #3 (150 MW) of Baglihar-II HEP commissioned ahead of Programme during Oct-2015.**

## Chapter- 2.2e

### Hydro Capacity Addition during the Year 2016-17

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks/ Critical Issue
			Target	Actual	As Programmed	Actual(A)/ Anticipated	
<b>A. Central Sector</b>							
1	<b>Teesta Low Dam IV</b> NHPC, West Bengal 4x40 = 160 MW	<b>Unit # 3</b> <b>Unit # 4</b>	<b>40</b> <b>40</b>	<b>40</b> <b>40</b>	<b>Jun.16</b> <b>Sep.16</b>	<b>03.07.2016(A)</b> <b>11.08.2016(A)</b>	<b>Commissioned</b>
2	<b>Pare</b> NEEPCO, Ar. Pradesh 2x55=110 MW	Unit # 1 Unit # 2	55 55	- -	Aug.12 Aug.12	Slipped Slipped	Slow progress in Dam concreting and erection of spillway gates.
3	<b>Kameng</b> NEEPCO, Ar. Pradesh 4x150= 600 MW	Unit # 1 Unit # 2	150 150	- -	Dec.'09 Dec.'09	Slipped Slipped	Slow progress in Dam & HM works.
	<b>Sub- total (C.S.):</b>		<b>490</b>	<b>80</b>			
<b>B. State Sector</b>							
1	<b>Sainj</b> HPPCL, H.P 2x50= 100 MW.	Unit # 1 Unit # 2	50 50	- -	Dec.16 Jan.17	Slipped Slipped	Slow progress of concreting barrage, pressure shaft & power house.
2	<b>Kashang – I</b> HPPCL, H.P. 1x65=65 MW	<b>Unit # 1</b>	<b>65</b>	<b>65</b>	<b>May 16</b>	<b>10.10.2016(A)</b>	<b>Commissioned</b>
3	<b>Lower Jurala</b> TSGENCO, Telangana 6x40= 240 MW	<b>Unit # 5</b> <b>Unit # 6</b>	<b>40</b> <b>40</b>	<b>40</b> <b>40</b>	<b>Sept.16</b> <b>Nov.16</b>	<b>20.08.2016(A)</b> <b>29.09.2016(A)</b>	<b>Commissioned</b>
4	<b>Pulichintala</b> TSGENCO, Telangana 4x30=120 MW	<b>Unit # 1</b> Unit # 2	<b>30</b> 30	<b>30</b> -	<b>Aug.16</b> Dec16	<b>25.09.2016(A)</b> Slipped	<b>Commissioned</b> Due to non-availability of water in the Dam.
5	<b>New Umtru</b> MePGCL, Meghalaya 2x20=40 MW	Unit # 1 Unit # 2	20 20	- -	Nov.16 Dec.16	Slipped Slipped	Slow progress of works.
6	<b>Teesta-III</b> Teesta Urja Ltd. Sikkim 6x200= 1200 MW	Unit #1 Unit # 2 Unit # 3	<b>200</b> <b>200</b> <b>200</b>	<b>200</b> <b>200</b> <b>200</b>	<b>Dec.16</b> <b>Jan.17</b> <b>Feb.17</b>	<b>15.01.2017(A)</b> <b>27.01.2017(A)</b> <b>14.01.2017(A)</b>	<b>Commissioned</b>
7	<b>Nagarjuna Sagar TR</b> APGENCO, Telangana 2x25= 50 MW	Unit #1 Unit #2	<b>25</b> <b>25</b>	<b>25</b> <b>25</b>	<b>Aug.16</b> <b>Aug.16</b>	<b>05.01.2017(A)</b> <b>28.01.2017(A)</b>	<b>Commissioned</b>
	<b>Sub- total (B):</b>		<b>995</b>	<b>825</b>			
<b>C. Private Sector</b>							
1	<b>Chanju-I</b> IA Energy ; H.P. 3x12= 36 MW	Unit # 1 Unit # 2 Unit # 3	<b>12</b> <b>12</b> <b>12</b>	<b>12</b> <b>12</b> -	<b>July 16</b> <b>Sept.16</b> Dec.16	<b>17.02.2017(A)</b> <b>01.02.2017(A)</b> Slipped	<b>Commissioned</b> <b>Commissioned</b> Slow progress of E&M works.
2	<b>Dikchu</b> Sneha Kinetic Power Projects (P).Ltd., Sikkim 2x48= 96 MW	Unit # 1 Unit # 2	48 48	- -	July.16 Sept.16	Slipped Slipped	Slow progress of HM & EM works.
3	<b>Tashiding</b> Shiga Energy Pvt. Ltd. Sikkim 2x48.5= 97 MW	Unit # 1 Unit # 2	48.5 48.5	- -	Jan.17 Feb.17	Slipped Slipped	Non completion of power evacuation system.



## Chapter- 2.2e

	<b>Sub- total (P.S.):</b>		<b>229</b>	<b>24</b>			
	<b>Total C.S.+S.S.+P.S.)</b>		<b>1714</b>	<b>929</b>			
	<b>Out Side Programme</b>						
1	<b>Kashang-II &amp; III</b> HPPCL , HP 1x65+1x65= 130MW	<b>Unit # 1</b> <b>Unit # 2</b>	<b>65</b> <b>65</b>	<b>65</b> <b>65</b>	<b>NA</b> <b>NA</b>	<b>02.01.2017(A)</b> <b>22.08.2016(A)</b>	<b>Commissioned</b>
2.	<b>Teesta-III</b> Teesta Urja Ltd. Sikkim 6x200=1200 MW.	<b>Unit #4</b> <b>Unit # 5</b> <b>Unit # 6</b>	<b>200</b> <b>200</b> <b>200</b>	<b>200</b> <b>200</b> <b>200</b>	<b>Outside</b> <b>Programme</b>	<b>16.02.2017(A)</b> <b>24.01.2017(A)</b> <b>28.01.2017(A)</b>	<b>Commissioned</b>
	<b>Total Outside Programme :</b>			<b>730</b>			
	<b>Grand Total (31.03.2017)</b>			<b>1659</b>			

## Chapter- 2.2f

### Hydro Capacity Addition during the Year 2017-18

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks / Critical Issues
			Actual	Target	As Programmed	Actual (A)/ Anticipated	
<b>A.</b>	<b>Central Sector</b>						
1	<b>Tuirial</b> NEEPCO, Mizoram 2x30 = 60 MW	Unit # 1 Unit # 2	<b>30</b> <b>30</b>	<b>30</b> <b>30</b>	<b>Jun '17</b> <b>Sep '17</b>	<b>25.08.2017(A)</b> <b>28.11.2017(A)</b>	<b>Commissioned</b>
2	<b>Kishanganga</b> NHPC, J&K 3x110 = 330 MW	Unit #1 Unit # 2 Unit # 3	<b>110</b> <b>110</b> <b>110</b>	<b>110</b> <b>110</b> <b>110</b>	<b>Jan '18</b> <b>Feb '18</b> <b>Mar '18</b>	<b>13.03.2018(A)</b> <b>21.03.2018(A)</b> <b>30.03.2018(A)</b>	<b>Commissioned</b>
3	<b>Pare</b> NEEPCO, Arunachal Pradesh 2x55=110 MW	Unit # 1 Unit # 2	55 55	55 55	May'18 May'18	Slipped Slipped	Seepage from diversion tunnel during impounding of reservoir.
4	<b>Kameng</b> NEEPCO, Arunachal Pradesh 4x150=600 MW	Unit # 1 Unit # 2	150 150	-	Mar. '18 Mar. '18	Slipped Slipped	Leaking observed in Penstock during water filling
	<b>Sub- total (A):</b>		<b>800</b>	<b>390</b>	<b>Total Commissioned in Central Sector : 390 MW</b>		
<b>B.</b>	<b>State Sector</b>						
1	<b>Sainj</b> HPPCL, H.P. 2x50= 100 MW	Unit # 1 Unit # 2	<b>50</b> <b>50</b>	<b>50</b> <b>50</b>	May.17 Jun.17	<b>04.09.2017(A)</b> <b>04.09.2017(A)</b>	<b>Commissioned</b>
2	<b>Uhl - III</b> BVPCL, H.P. 3x33.33=100 MW	Unit #1 Unit # 2 Unit # 3	33.33 33.33 33.33	-	Jan.'18 Feb.'18 Mar.'18	Slipped Slipped Slipped	Delay in completion of HRT lining due to heavy ingress of water in HRT.
3	<b>Pulichintala</b> TSGENCO,Telangana 4x30=120 MW	Unit # 2 Unit # 3	<b>30</b> <b>30</b>	<b>30</b> <b>30</b>	Aug.17 Oct.17	<b>26.10.2017(A)</b> <b>01.11.2017(A)</b>	<b>Commissioned</b>
4	<b>New Umtru</b> MePGCL, Meghalaya 2x20=40 MW	Unit # 1 Unit # 2	<b>20</b> <b>20</b>	<b>20</b> <b>20</b>	Apr.17 Jul.17	<b>22.04.2017 (A)</b> <b>30.06.2017 (A)</b>	<b>Commissioned</b>
	<b>Sub- total (B):</b>		<b>300</b>	<b>200</b>	<b>Total Commissioned in State Sector :200 MW</b>		
<b>C.</b>	<b>Private Sector</b>						
1	<b>Chanju-I</b> IA Energy, H.P. 3x12 = 36 MW	Unit # 3	<b>12</b>	<b>12</b>	May.17	<b>26.07.2017 (A)</b>	<b>Commissioned</b>
2	<b>Dikchu</b> Sneha Kinetic Power Projects Pvt. Ltd., Sikkim,2x48MW= 96	Unit # 1 Unit # 2	<b>48</b> <b>48</b>	<b>48</b> <b>48</b>	Apr.17 May.17	<b>11.04.2017 (A)</b> <b>12.04.2017 (A)</b>	<b>Commissioned</b>
3	<b>Tashiding</b> Shiga Energy Pvt. Ltd. Sikkim 2x48.5= 97 MW	Unit # 1 Unit # 2	<b>48.5</b> <b>48.5</b>	<b>48.5</b> <b>48.5</b>	Jul.17 Aug.17	<b>06.11.2017 (A)</b> <b>06.11.2017(A)</b>	<b>Commissioned</b>
	<b>Sub- total (C):</b>		<b>205</b>	<b>205</b>	<b>Total Commissioned in Private Sector : 205 MW</b>		
	<b>Total (A+B+C)</b>		<b>1305</b>	<b>795</b>	<b>Total Commissioned during 2017-18 : 795 MW.</b>		

## Chapter- 2.2g

### Hydro Capacity Addition during the Year 2018-19

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks / Critical Issues
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
<b>A.</b>	<b>Central Sector</b>						
1	<b>Pare</b> NEEPCO, Arunachal Pradesh 2x55=110 MW	Unit # 1 Unit # 2	55 55	55 55	May'18 May'18	28.05.2018 21.05.2018	<b>Commissioned</b>
2	<b>Kameng</b> NEEPCO, Arunachal Pradesh 4x150=600 MW	Unit # 1 Unit # 2 Unit # 3 Unit # 4	150 150 150 150		March'19 March'19 March'19 March'19	Slipped to 2019-20	Non-completion of Rectification works of leakage observed in penstock1&2 during water filling..
	<b>Sub- total (A):</b>		<b>710</b>	<b>110</b>	<b>Total Commissioned in Central Sector :110 MW</b>		
<b>B.</b>	<b>State Sector</b>						
3	<b>Uhl - III</b> BVPCL, H.P. 3x33.33=100 MW	Unit #1 Unit # 2 Unit # 3	33.33 33.33 33.33		Aug. 18 Aug.18 Sep.18	Slipped to 2019-20	During HST, some leakage in Penstock is observed which is being rectified.
4	<b>Pulichintala</b> TSGENCO, Telangana 4x30=120 MW	Unit # 4	<b>30</b>	<b>30</b>	Sep.18	<b>08.09.2018(A)</b>	<b>Commissioned</b>
	<b>Sub- total (B):</b>		<b>130</b>		<b>30</b>		
	<b>Total (A+B)</b>		<b>840</b>		<b>140</b>	<b>Total Comm. 140 MW</b>	

Chapter-2.2h

Hydro Capacity Addition during the Year 2019-20

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks / Critical Issues
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
<b>A.</b>	<b>Central Sector</b>						
1	<b>Kameng</b> NEEPCO, Arunachal Pradesh 4x150=600 MW	Unit # 1 Unit # 2 Unit # 3 Unit # 4	150 150 150 150	150 150	Aug'19 Aug'19 Aug'19 Aug'19	Feb,20 Feb,20 Slipped Slipped Slipping to (March-21)	-Seepage of water during welding affecting progress of works and causing delays. -Difficult approach and working condition. -Ventilation constrains Works effected due to heavy rains this monsoon.
	<b>Sub- total (A):</b>		<b>600</b>	<b>300</b>			
<b>B.</b>	<b>State Sector</b>						
2.	<b>Uhl - III</b> BVPCL, H.P. 3x33.33=100	Unit #1 Unit # 2 Unit # 3	33.33 33.33 33.33		Oct,19 Nov,19 Dec,19	Slipping to (Dec,22)	-Difficult approach -Delay in welding of liner in bend. - Rupture in Penstock in May,2020
3	<b>Sawra Kuddu</b> HPPCL, H.P. 3x37=111 MW	Unit #1 Unit # 2 Unit # 3	37 37 37		Sep,19 Oct,19 Nov,19	Slipping to (March,21)	- Delay in completion of HRT works & associated transmission line. - During filling of water conductor system in May,20, leakage is observed in adit to HRT.
	<b>Sub- total (B):</b>		<b>211</b>				
<b>C.</b>	<b>Private Sector</b>						
4.	<b>Bajoli Holi</b> GMR,H.P. 3x60=180 MW	Unit #1 Unit # 2 Unit # 3	60 60 60		Jan.,20 Feb.,20 Mar.,20	Slipping to (Dec,21)	-Works affected due to heavy rainfall in August,19 and inclement weather from early Dec,19. to end of Jan,20 -Poor financial health of civil contractor.
5.	<b>Singoli Bhatwari</b> L&T, Uttarakhand	Unit #1 Unit # 2	33 33		Mar.,20 Mar.,20	Slipping to (Dec,20)	-The HRT crossing two major nallahs that led to

Chapter-2.2h

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks / Critical Issues
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
	2x33=99 MW	Unit # 3	33		Mar.,20		slippage of HRT completion target.
6.	<b>Sorang</b> HSPCL Uttarakhand 2x50=100 MW	Unit #1 Unit # 2	50 50		Nov,19 Dec.,19	Slipping to Dec,21	- Poor planning of re-erection of penstock works - Weather constraints.
	<b>Sub- total (C):</b>		<b>379</b>				
	<b>Total (A+B+C)</b>		<b>1190</b>	<b>300</b>			

## Chapter- 2.3a

### SUMMARY Hydro Capacity Addition during the Period 2020-26 (As on 30.09.2020)

(Capacity in MW)

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Total
	MW / Nos of Scheme-Projects	MW / Nos of Scheme-Projects	MW / Nos of Scheme-Projects	MW / Nos of Scheme-Projects	MW / Nos of Scheme-Projects	MW / Nos of Scheme-Projects	MW / Nos of Scheme-Projects
<b>Central Sector</b>	<b>300 (1)</b>	<b>1380 (3)</b>	<b>1120 (2)</b>	<b>2944 (3)</b>	<b>624 (1)</b>	<b>2021 (3)</b>	<b>8389 (13)</b>
<b>State Sector</b>	<b>111 (1)</b>	<b>40 (1)</b>	<b>317.5 (4)</b>	<b>1186 (3) #</b>	<b>930 (2) #</b>	<b>128 (2)</b>	<b>2712.5 (12)</b>
<b>Private Sector</b>	<b>195 (2)</b>	<b>280 (2)</b>	<b>100 (1)</b>	<b>476 (2)</b>	<b>161 (3)</b>	<b>660 (3)</b>	<b>1872 (13)</b>
	<b>606 (4)</b>	<b>1700 (6)</b>	<b>1537.5 (7)</b>	<b>4606 (8)</b>	<b>1715 (6)</b>	<b>2809 (8)</b>	<b>12973.5 (38)</b>

- Note:** 1) At present, there are 38 no. of Hydro Electric Projects (above 25 MW) totaling to 12973.50 MW which are under construction in the country. Central Sector – 13 nos. (8389 MW), State Sector – 12 nos. (2712.50 MW), Private Sector – 13 nos. (1872 MW). Out of these, 26 nos. of Hydro Power Project totaling to 9807.5 MW are under construction with no major constraints and 12 nos. of Hydro Power Project totaling to 3166 MW are having major constraints/stalled. The stalled projects have been kept in a particular year based on assumption that the project can be commissioned in a particular year, if works start immediately.
- 2) Some of the schemes/Projects (Mark #) are bifurcated for benefits during more than one year.

## Chapter- 2.3b

**List of under construction Hydro projects (above 25 MW) (2020-21)  
(Excluding projects under Ministry of New & Renewable Energy)**

Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	<b>Central Sector</b>				
1	<b>Kameng</b> 4x150= 600 MW	U-3 to U-4	Arunachal Pradesh/ NEEPCO	300	
			<b>Sub- total (Central):</b>	<b>300</b>	
	<b>State Sector</b>				
2	<b>Sawra Kuddu</b> 3x37= 111 MW	U-1 to U-3	Himachal Pradesh/ HPPCL	111	
			<b>Sub- total (State):</b>	<b>111</b>	
	<b>Private Sector</b>				
3	<b>Rongnichu</b> 2x48= 96 MW	U-1 to U-2	Sikkim/ Madhya Bharat Power Corporation Ltd.	96	
4	<b>Singoli Bhatwari</b> 3x33= 99 MW	U-1 to U-3	Uttarakhand/ L&T Uttaranchal Hydro power Limited	99	
			<b>Sub- total (Private):</b>	<b>195</b>	
			<b>Total (CS+SS+PS)</b>	<b>606</b>	

## Chapter- 2.3c

**List of under construction Hydro projects (above 25 MW) (2021-22)  
(Excluding projects under Ministry of New & Renewable Energy)**

Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	<b>Central Sector</b>				
1	<b>Parbati St. II</b> 4x200= 800 MW	U-1 to U-4	Himachal Pradesh/ NHPC	800	
2	<b>Naitwar Mori</b> 2x30=60 MW	U-1 to U-2	Uttarakhand/ SJVNL	60	
3	<b>Tapovan Vishnugad</b> 4x130=520 MW	U-1 to U-4	Uttarakhand / NTPC	520	
			<b>Sub- total (Central):</b>	<b>1380</b>	
	<b>State Sector</b>				
4	<b>Thottiyar</b> 1x30 + 1x10= 40 MW	U-1 to U-2	Kerala/ KSEB	40	
			<b>Sub- total (State):</b>	<b>40</b>	
	<b>Private Sector</b>				
5	<b>Bajoli Holi</b> 3x60= 180 MW	U-1 to U-3	Himachal Pradesh/ GMR Bajoli Holi Hydro Power Pvt. Ltd.	180	
6	<b>Sorang</b> 2x50= 100 MW	U-1 & U-2	Himachal Pradesh/ Himachal Sorang Power	100	
			<b>Sub- total (Private):</b>	<b>280</b>	
			<b>Total (CS+SS+PS)</b>	<b>1700</b>	



## Chapter- 2.3d

**List of under construction Hydro projects (above 25 MW) (2022-23)  
(Excluding projects under Ministry of New & Renewable Energy)**

Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
<b>Central Sector</b>					
1	<b>Rammam - III</b> 3x40=120 MW	U-1 to U-3	West Bengal/ NTPC Ltd.	120	
2	<b>Tehri PSS</b> 4x250= 1000 MW	U-1 to U-4	Uttarakhand/ THDC	1000	
<b>Sub- total (Central):</b>				<b>1120</b>	
<b>State Sector</b>					
3	<b>Uhi III</b> 3x33.33= 100 MW	U-1 to U-3	Himachal Pradesh/ BVPCL	100	
4	<b>Parnai</b> 3x12.5= 37.5 MW	U-1 to U-3	Jammu & Kashmir/ JKSPDC	37.5	
5	<b>Pallivasal</b> 2x30= 60 MW	U-1 to U-2	Kerala/ KSEB Ltd.	60	
6	<b>Vyasi</b> 2x60=120 MW	U-1 to U-2	UJVNL/ Uttarakhand	120	
<b>Sub- total (State):</b>				<b>317.5</b>	
<b>Private Sector</b>					
7	<b>Tidong-I</b> 2x50= 100 MW	U-1 to U-2	Himachal Pradesh/ M/s Statkraft India Pvt. Ltd.	100	
<b>Sub- total (Private):</b>				<b>100</b>	
<b>Total (CS+SS+PS)</b>				<b>1537.5</b>	

## Chapter- 2.3e

### List of under construction Hydro projects (above 25 MW) (2023-24) (Excluding projects under Ministry of New & Renewable Energy)

Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	<b>Central Sector</b>				
1	<b>Vishnugad Pipalkoti</b> 4x111= 444 MW	U-1 to U-4	Uttarakhand/ THDC	444	
2	<b>Subansiri Lower</b> 8x250= 2000 MW	U-1 to U-8	Arunachal Pradesh/ NHPC	2000	
3	<b>Teesta- VI</b> 4x125= 500 MW	U-1 to U-4	Sikkim/ NHPC	500	
			<b>Sub- total (Central):</b>	<b>2944</b>	
	<b>State Sector</b>				
4	<b>Kundah Pumped Storage (Phase-I, Phase-II &amp; Phase-III)</b> 4x125=500 MW	U-1 to U-4	Tamil Nadu/  TANGEDCO	500	
5	<b>Polavaram</b> 12x80= 960 MW	U-1 to U-6	Andhra Pradesh/ Polavaram Project Authority	480	
6	<b>Shahpurkandi</b> 3x33+3x33+1x8= 206 MW	U-1 to U-7	Punjab/ Irr. Deptt. & PSPCL	206	
			<b>Sub- total (State):</b>	<b>1186</b>	
	<b>Private Sector</b>				
7	<b>Phata Byung</b> 2x38= 76 MW	U-1 to U-2	Uttarakhand/ M/s Lanco	76	Subject to re-start of works
8	<b>Maheshwar #</b> 10x40= 400 MW	U-1 to U-10	Madhya Pradesh/ SMHPCL	400	Subject to re-start of works
			<b>Sub- total (Private):</b>	<b>476</b>	
			<b>Total (CS+SS+PS)</b>	<b>4606</b>	

# PFC as lead lender have acquired majority equity i.e. 51% in the SMHPCL w.e.f. 1<sup>st</sup> June, 2016. Matter Sub-judice.

## Chapter- 2.3f

### List of under construction Hydro projects (above 25 MW) (2024-25) (Excluding projects under Ministry of New & Renewable Energy)

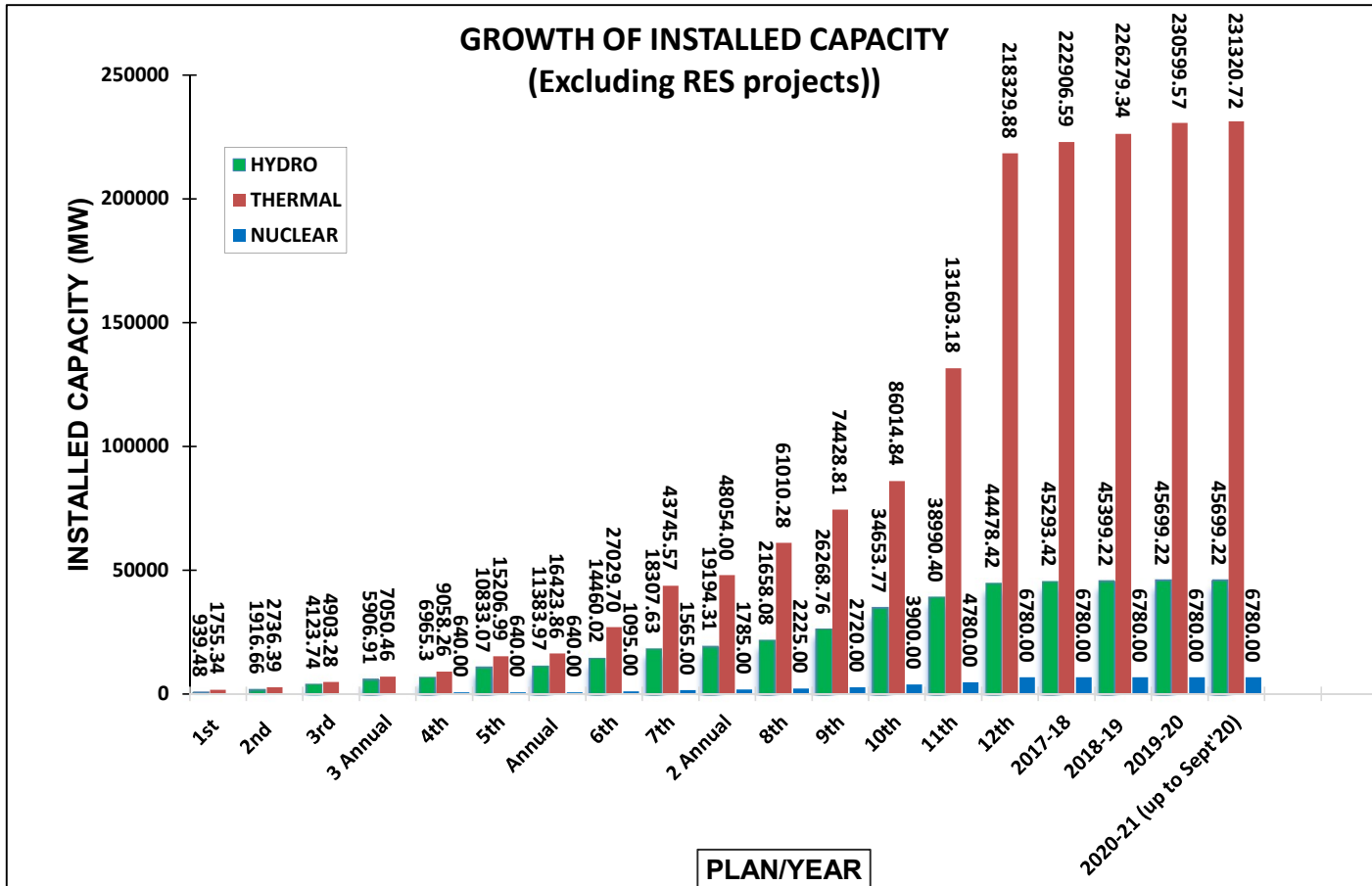
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	<b>Central Sector</b>				
1	<b>Kiru</b> 4x156=624 MW	U-1 to U-4	Jammu & Kashmir/ CVPPL	624	
			<b>Sub- total (Central):</b>	<b>624</b>	
	<b>State Sector</b>				
2	<b>Polavaram</b> 12x80= 960 MW	U-7 to U-12	Andhra Pradesh/ Polavaram Project Authority	480	
3	<b>Shongtong Karcham</b> 3x150= 450 MW	U-1 to U-3	Himachal Pradesh/ HPPCL	450	
			<b>Sub- total (State):</b>	<b>930</b>	
	<b>Private Sector</b>				
4	<b>Rangit-II</b> 2x33= 66 MW	U-1 to U-2	Sikkim/ Sikkim Hydro Power Ltd.	66	Subject to re- start of works
5	<b>Bhasmey</b> 2x25.5= 51 MW	U-1 to U-2	Sikkim/ Gati Infrastructure	51	Subject to re- start of works
6	<b>Tangnu Romai- I</b> 2x22= 44 MW	U-1 to U-2	Himachal Pradesh/ Tangu Romai Power Generation	44	Subject to re- start of works
			<b>Sub- total (Private):</b>	<b>161</b>	
			<b>Total (CS+SS+PS)</b>	<b>1715</b>	

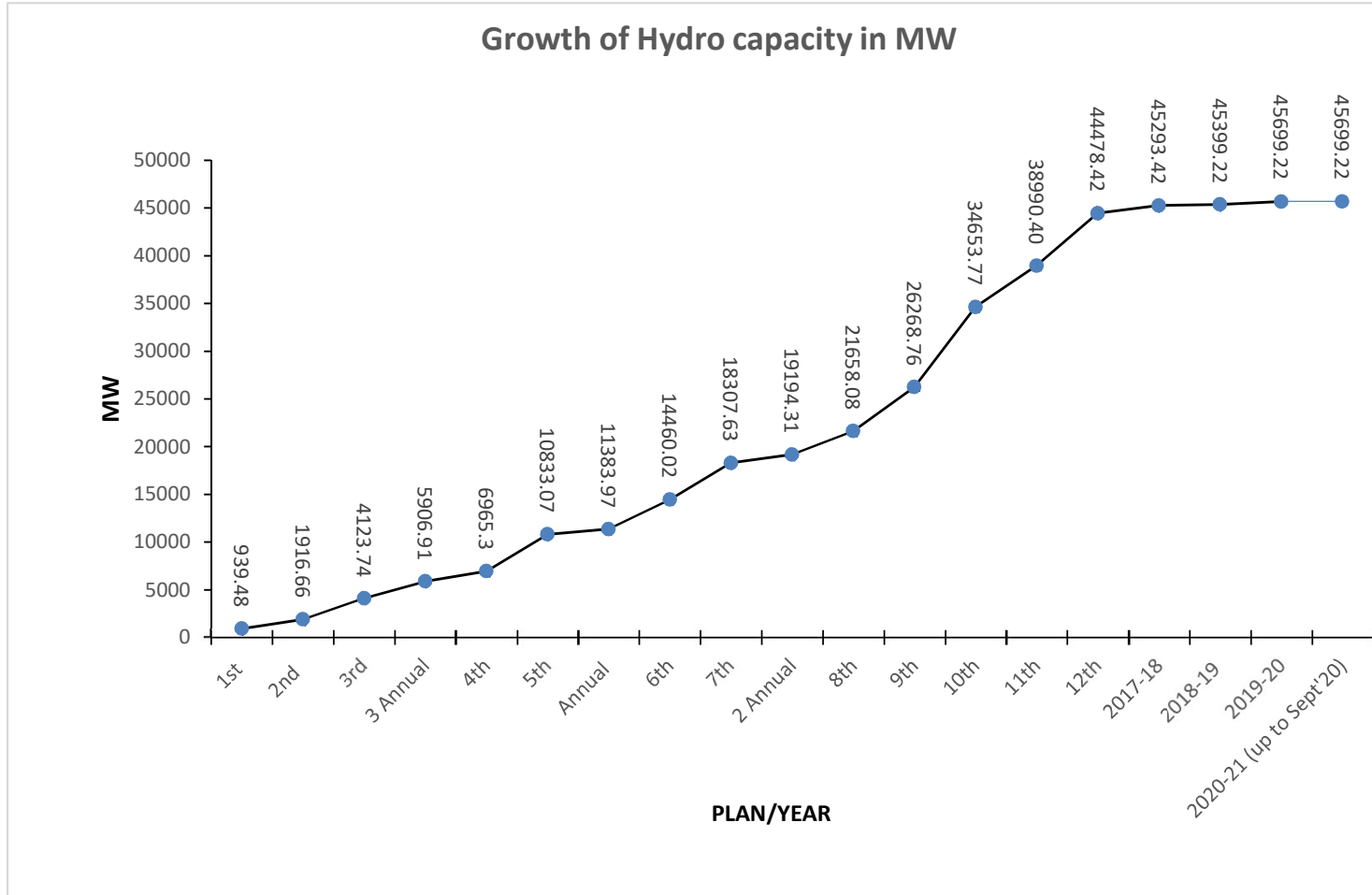
## Chapter- 2.3g

### List of under construction Hydro projects (above 25 MW) (2025-26) (Excluding projects under Ministry of New & Renewable Energy)

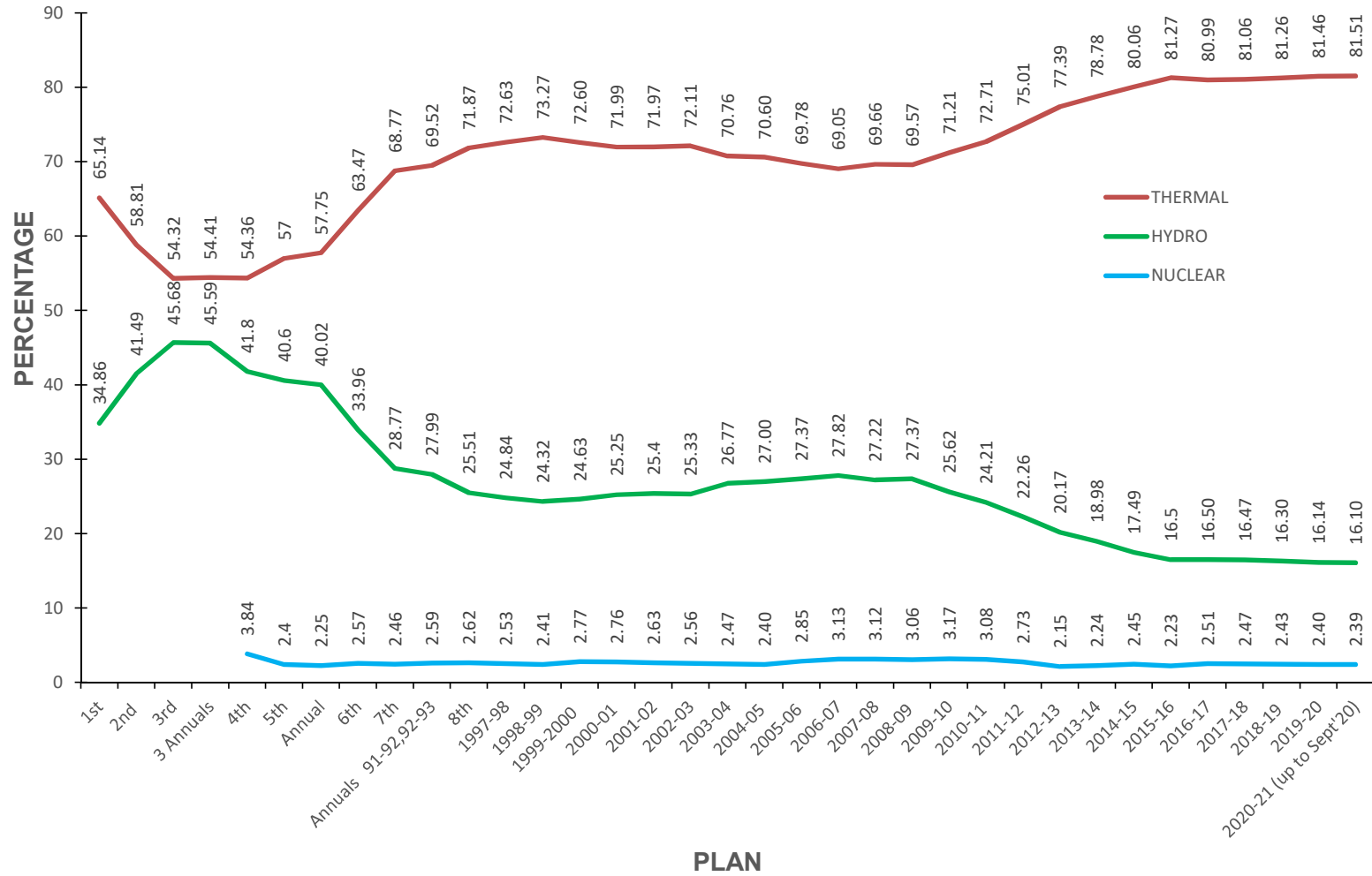
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
<b>Central Sector</b>					
1	<b>Ratle #</b> 4x205+1x30= 850 MW	U-1 to U-5	Jammu & Kashmir/ Ratle Hydro Electric Project Pvt. Ltd. / NHPC	850	Subject to re-start of works
2	<b>Lata Tapovan</b> 3x57= 171 MW	U-1 to U-3	Uttarakhand/ NTPC	171	Subject to re-start of works
3	<b>Pakal Dul</b> 4x250= 1000 MW	U-1 to U-4	Jammu & Kashmir/ CVPPL	1000	
<b>Sub- total (Central):</b>				<b>2021</b>	
<b>State Sector</b>					
4	<b>Lower Kalnai</b> 2x24= 48 MW	U-1 & U-2	Jammu & Kashmir/ JKSPDC	48	Subject to re-start of works
5	<b>Koyna Left Bank PSS</b> 2x40= 80 MW	U-1 to U-2	Maharashtra/ WRD, GO Mah.	80	Subject to re-start of works
<b>Sub- total (State):</b>				<b>128</b>	
<b>Private Sector</b>					
6	<b>Panan</b> 4x75= 300 MW	U-1 to U-4	Sikkim/ Himgiri Hydro Energy Pvt. Ltd.	300	Subject to re-start of works
7	<b>Rangit-IV</b> 3x40= 120 MW	U-1 to U-3	Sikkim/ Jal Power corp. Ltd.	120	Subject to re-start of works
8	<b>Kutehr</b> 3x80=240 MW	U-1 to U-3	Himachal Pradesh JSW Energy	240	
<b>Sub- total (Private):</b>				<b>660</b>	
<b>Total (CS+SS+PS)</b>				<b>2809</b>	

# Govt. of J&K, PDD have terminated PPA on 09.02.2017 and directed JKSPDC to take over the project and implement in JV mode with Gol. MoU for execution of project in JV mode was signed on 03.02.2019 between JKPDD, JKSPDC & NHPC.





### TREND OF CAPACITY ADDITION AS % OF TOTAL (Hydro Thermal Mix)



**Chapter 5**  
**Sanctioned Hydro Electric Projects for Construction**  
**(Excluding projects under Ministry of New & Renewable Energy)**

Sl. No.	Name of Scheme	State	I.C. (No. x MW)	Benefits (MW)	Date of Approval	Commissioned/Commissioning
<b>Central Sector</b>						
1	Pakal Dul (CVPPL)	J&K	4x250	1000.00	28.10.14	2025-26
2	Parbati St. II (NHPC)	H.P.	4x200	800.00	11.09.02	2021-22
3	Tapovan Vishnugad (NTPC)	Uttarakhand	4x130	520.00	11/2006	2021-22
4	Subansiri Lower (NHPC)	Ar. Pr./Assam	8x250	2000.00	09.09.03	2023-24
5	Kameng (NEEPCO) (2 units in operation, 2 units under construction)	Ar. Pr.	4x150	300.00	02.12.04	2020-21
6	Tehri PSS (THDC)	Uttarakhand	4x250	1000.00	18.07.06	2022-23
7	Lata Tapovan (NTPC)	Uttarakhand	3x57	171.00	17.07.12	2025-26*
8	Vishnugad Pipalkoti (THDC)	Uttarakhand	4x111	444.00	21.08.08	2023-24
9	Naitwar Mori (SJVN)	Uttarakhand	2x30	60.00	16.10.17	2021-22
10	Ramam-III (NTPC)	West Bengal	3x40	120.00	10.09.14	2022-23
11	Teesta St. VI (NHPC)	Sikkim	4x125	500.00	08.03.19	2023-24
12	Ratle (Ratle Hydro) #	J&K	4x205+1x30	850.00	19.12.12	2025-26*
13	Kiru (CVPPL)	J&K	4x156	624.00	08.03.19	2024-25
<b>Sub- total (Central Sector) :</b>				<b>8389.00</b>		
<b>State Sector</b>						
14	Parnai (JKSPDC)	J&K	3x12.5	37.50	21.10.13	2022-23
15	Lower Kalnai (JKSPDC)	J&K	2x24	48.00	16.08.13	2025-26*
16	Uhl-III (BVPCL)	H.P.	3x33.33	100.00	19.09.02	2022-23
17	Swara Kuddu (HPPCL)	H.P.	3x37	111.00	10.11.04	2020-21
18	Shongtom Karcham (HPPCL)	H.P.	3x150	450.00	16.08.12	2024-25
19	Vyasi (UJVNL)	Uttarakhand	2x60	120.00	25.10.11	2022-23
20	Shahpurkandi (PSPCL)	Punjab	3x33+3x33+1x8	206.00	04.05.11	2023-24
21	Koyna Left Bank (WRDMah)	Maharashtra	2x40	80.00	20.02.04	2025-26*
22	Indrasagar Polavaram (PPA)	Andhra Pradesh	12x80	960.00	25.02.09	2023-25*
23	Pallivasal (KSEB)	Kerala	2x30	60.00	Jan., 07	2022-23
24	Thottiyar (KSEB)	Kerala	1x30+1x10	40.00	05.06.08	2021-22
25	Kundah Pumped Storage-I (TANGENDCO)	Tamil Nadu	4x125	500.00	15.02.18	2023-24
<b>Sub- total (State Sector) :</b>				<b>2712.50</b>		
<b>Private Sector</b>						
26	Sorang (Himachal Sorang Power)	H.P.	2x50	100.00	09.06.06	2021-22
27	Tidong-I (Statkraft India Pvt. Ltd.)	H.P.	2x50	100.00	28.07.06	2022-23
28	Tangnu Romai- I (Tangu Romai Power Genreation.)	H.P.	2x22	44.00	30.11.07	2024-25*
29	Bajoli Holi (GMR)	H.P.	3x60	180.00	30.12.11	2021-22
30	Phata Byung (LANCO)	Uttarakhand	2x38	76.00	06.10.08	2023-24*
31	Singoli Bhatwari (L&T)	Uttarakhand	3x33	99.00	11.07.08	2020-21
32	Maheshwar (SMHPCL) ##	M.P.	10x40	400.00	30.12.96	2023-24*
33	Rangit-IV (JAL Power)	Sikkim	3x40	120.00	06.07.07	2025-26*
34	Bhasmey (GATI Infrstructure)	Sikkim	2x25.5	51.00	Dec-08	2024-25*
35	Rangit-II (Sikkim Hydro Power)	Sikkim	2x33	66.00	10.02.10	2024-25*
36	Rongnichu (Madhya Bharat Power)	Sikkim	2x48	96.00	01.10.08	2020-21
37	Panan (Himagiri Hydro Energy)	Sikkim	4x75	300.00	07.03.11	2025-26*
38	Kutehr (JSW Energy (Kutehr)Ltd.	H.P.	3x80	240.00	30.03.10	2025-26
<b>Sub- total (Private Sector) :</b>				<b>1872.00</b>		
<b>Total - Under execution (as on 30.09.2020)</b>				<b>12973.50</b>		

# Govt. of J&K, PDD have terminated PPA on 09.02.2017 and directed JKSPDC to take over the project. MoU between NHPC (51% share) & JKSPDC (49% share) signed for implementation of project in JV mode on 03.02.2019.

## PFC as lead lender have acquired majority equity i.e. 51% in the SMHPCL w.e.f. 1st June, 2016. Matter Sub-judice.

\*Stalled Projects Commissioning subject to Re-Start of works.



## Chapter 6

### Status of Under Execution Hydro Electric Projects (above 25 MW) in the Country

(As on 30.09.2020)

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
<b>Central Sector</b>				
1	<b>Parbati-II</b> NHPC 11.09.2002 4x200 = 800 MW <b>Broad Features :</b> Dam – 85m High, 109. m long at top, concrete gravity type HRT- 6m x 31.23km P.House- Surface 23.5mx 39.7mx 123m. Turbine- Pelton Swyd.- 13.8/400 kV <b>Cost:</b> <u>Original:3919.59</u> Latest: 9897.59 (04/20 PL) <b>Contractors</b> Civil : Gammon / Valecha HM : Om Metals E&M : BHEL	<u>H.P.</u>  <u>2009-10</u> <u>2021-22</u> (Mar'22)	All major works related to commissioning of the project completed except HRT. <b>Head Race Tunnel</b> -Excavation: 28.98 km out of 31.5km completed <b>Total Overt lining:</b> 27.34 km lining out of 31.5km completed. <b>E&amp;M Works:</b> All units have been synchronized with grid at part load using water from Jiwa Nallah.	- Poor geology in HRT especially in Face-4 (TBM-Face).
2	<b>Tapovan Vishnugad</b> NTPC 11.08.2004/Nov, 2006 4x130 = 520 MW <b>Broad Features :</b> Barrage–5 bays of 12m HRT- 5.4m x 11.97km P.House- underground Turbine- V.Pelton <b>Cost: Original:</b> <u>2978.48</u> Latest: 5867.38 <b>Contractors</b> Civil : Rithwik/L&T / Patel HM : Om Metals E&M : BHEL	<u>Uttara khand</u>  <u>2012-13</u> <u>2021-22</u> (Dec'21)	<b>Barrage:</b> Excavation Completed and Concreting 127628 cum out of 129358 cum completed. <b>HRT:</b> Excavation of 3.60km out of 4.95km by DBM & 5.50km out of 8.27km by TBM completed. 7.66km concrete lining out of 12.09km completed <b>PH Cavern:</b> Excavation and concreting completed. <b>Desilting Chamber &amp; Intake:</b> Excavation and concreting completed. <b>TRT:</b> Excavation and lining completed. <b>Surge shaft:</b> Excavation & Lining completed. <b>Penstock:</b> Excavation and Lining completed. <b>E&amp;M works:</b> Pit liner erection on all 4 units completed. Turbine housing erection of all 4 units completed. <b>Unit #1:</b> Boxed up. <b>Unit #2:</b> Boxed up. <b>Unit #3:</b> Turbine erection completed. <b>Unit #4:</b> Turbine erection in progress. Bus Duct: Erection of all units completed <b>Critical : HRT</b>	- Completion of HRT. - Associated Transmission system.
3	<b>Tehri PSS,</b> THDC, 18.7.06 Nov-11 (Revised CCEA) 4x250=1000 MW <b>Broad Features :</b> Surge Shaft: U/s – 2 nos. D/s – 2 nos Power House: U/G TRT: 2, Dia 9m and	<u>Uttara khand</u>  <u>2010-11</u> <u>2022-23</u> (Dec'22)	Upstream (Tehri Dam) and Downstream (Koteshwar Dam), intake and Head Race Tunnels (2 Nos.) already completed alongwith Tehri Stage-I works. <b>Surge Shafts Upstream (2 nos- 140m):</b> Excavation, Mucking & Rock bolt, Lattice Girder Support work in Progress. <b>Surge Shafts Downstream (2 Nos):</b> Excavation, Mucking & Rock Bolt, Lattice Girder Support work in progress. <b>Butterfly Valve Chamber (BVC 78x10x26m):</b> Excavation of all 10 bench completed. <b>Penstock Assembly Chamber (PAC):</b> Crown slashing with steel ribs completed. Excavation of all 7 bench completed.	- Poor Geology in under ground works of BVC, PAC, TRT, PH Cavern etc. - Slow progress of works - Cash flow crisis with M/s. HCC.

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
	Length 1070m & 1160m Turbine: VF reversible pump turbine <b>Cost: Original:</b> <u>1657.60</u> Latest: 4835.60 (02/2019 PL) <b>Contractors</b> Turnkey : Alstom, France/ HCC		<b>Power House:</b> Excavation completed. <b>TRT-3(1151 RM):</b> Excavation in Heading 979.5 RM, Benching 722.5 RM, Invert Lining-217.9m, Overt Lining 139.3m completed <b>TRT-4 (1255 RM):</b> Excavation in Heading-1028.4 RM, Benching- 920.5 RM, Invert Lining-354m & Overt Lining: 301m completed. <b>E&amp;M Works:</b> Manufacturing & supplies are in progress.	
4	<b>Lata Tapovan,</b> NTPC Aug-2012 3x57= 171 MW <b>Broad Features :</b> Barrage-14 bays of 11m each HRT- 7.51 Km, 4.7m dia P.House- underground Turbine- V.Francis <b>Cost: Original:</b> <u>1527.00</u> Latest: 1801.07 <b>Contractors</b> Civil & HM : L&T E&M : BHEL	<u>Uttara khand</u> <u>2017-18</u> <u>2025-26</u> (Subject to re-start of works)	Infrastructure works are almost completed. Main works to re-start after clearances from Hon'ble Supreme Court. EPC contract for Civil & HM works awarded to M/s L&T on 17-08-2012. E&M package awarded to M/s BHEL on 07.12.12.	-Works of barrage & HRT yet to start due to protest by villagers.  -Construction work stopped vide Hon'ble Supreme Court order dated 7.5.14.
5	<b>Vishnugad Pipakoti</b> THDC 21.08. 2008 4x111= 444 MW <b>Broad Features :</b> Dam – 65m High, 89.3m long, concrete gravity HRT- 13.4 Km, 8.8m dia Horse shoe shape P. House-Underground 127mx 20.3mx 50m Turbine- Francis SWYD- 13.8/420 kV <b>Cost:Original: 2491.58</b> Latest: 3860.35 (02/2019 PL) <b>Contractors</b> Civil & HM : HCC E&M : BHEL	<u>Uttara khand</u> <u>2013-14</u> <u>2023-24</u> (Dec.'23)	River diverted on 02.04.2018. Concreting of U/S coffer dam has been completed. TBM has been commissioned on 24.11.19. Main Access Tunnel (MAT) 413.50m: Excavation completed upto 397.50m. <b>HRT (13400m):</b> 644m completed by DBM. Construction of Adits and infrastructure works are under progress <b>Desilting Chambers (3 No. X 390m) :</b> Crown Slashing completed in DC #2 & DC #3 and Benching is under progress in DC #1, DC #2 and DC#3.  Upstream Surge Shaft: 129 RM out of 325.5 RM excavation from bottom adit to Upstream Surge Shaft has been completed.  Downstream Surge Shaft : 337.17 RM out of 352 RM excavation from adit to Downstream Surge Tank bottom has been completed.	-Frequent disruption of works by local people. - Slow progress of works - Cash flow crisis with M/s. HCC.
6	<b>Subansiri Lower</b> NHPC 09.09.2003 8x250= 2000 MW (1000 MW in 12 <sup>th</sup> Plan) <b>Broad Features :</b> Dam –116m High, concrete gravity HRT- 8 x 9.5m x 1145m	Arunachal Pradesh Assam  <u>2009-11</u> <u>2023-24</u> (Aug'23)	<b>Dam :-</b> Dam concreting 1190053cum (57.47%) out of 2070616cum & Intake concreting 269899cum (96.58%) out of 279454cum completed. <b>HRT:-</b> 6948m (98%) out of 7102m heading excavation, 5275m (74.27%) out of 7102m benching excavation & 4087m (57.54%) out of 7102m concrete overt lining completed. <b>Surge Tunnel :-</b> Heading excavation 3063m (85.64%) & benching excavation 416m (12%) out of 3545m completed. <b>Pressure Shaft :-</b> Vertical PS slashing 199m (51.82%) out	

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
	Power House- Surface Turbine- Francis SWYD- 16/400 kV <b>Cost:</b> <u>Original: 6285.33</u> Latest: 20368.9 (01/20 PL) <b>Contractors</b> Civil : BGS-SGS-Soma JV HM : Texmaco E&M : Alstom		of 384m. <b>Power House</b> :- Excavation almost completed & concreting 159429cum (31.13%) out of 512000cum completed <b>E&amp;M Works:-</b> Unit-1: Turbine Stay Ring and Spiral Case erection completed. Unit-2: Turbine Stay Ring and Spiral Case erection completed. <b>HM Works:</b> Erection of Diversion Tunnel Gates: 51.80% completed. Erection of Intake Gates: 8% completed. Out of total 1594m, 293m pressure shaft steel liner erected.  All work except safety works were stalled from December, 2011 to September, 2019 due to agitation launched by various activists against construction of Subansiri Lower HE Project and as per directions of NGT. Works restarted w.e.f. 15.10. 2019 after clearance from NGT. However, work initially remained suspended w.e.f. 24.03.2020 to 20.04.2020 due to COVID -19 lockdown and further got affected due to Monsoon Period from May 2020. Left Bank approach road to dam got damaged due to slope failure at left bank on 26.05.2020. Also, a part of coffer wall of powerhouse got collapsed on 22.07.2020 resulting in flooding of powerhouse and disruption of right bank road to dam. An alternate approach to left bank of dam by extension of existing road tunnel and Deo-Nallah slope protection work is in progress. Restoration of approach road to right bank of Dam near Power House is also being done. Power House Civil works package has been awarded to M/s Patel Engineering Ltd on 01.09.2020.	
7	<b>Teesta-VI</b> NHPC 08.3.2019 4x125= 500 MW <b>Broad Features:</b> Barrage: 26.5m high HRT- 2nos,27.52km long Pressure shaft: 4nos. 5.4m dia. 151m to 198m length, TRT: 4nos 247m each length, 7.5x7.0m D-shaped. PH- Under ground Turbine- Francis <b>Cost: Original:</b> <u>3283.08</u> Latest : 5748.04 (07/2018 PL) <b>Contractors</b> Civil : JAL & Gammon E&M : Alstom	<u>Sikkim</u>  <u>2012-13</u> <u>2023-24</u> (Mar'24)	<b>Barrage and Desilting:</b> Excavation completed & concreting 98% of 380003 cum completed. <b>HRT:</b> Heading excavation 10650m and benching excavation 4270 m out of total 27505 m completed. Overt lining 1550 m completed. <b>Surge Tank:</b> Excavation completed & concreting under progress. <b>Pressure Shaft:</b> Underground excavation of 4 no. pressure shaft completed, lining of one no. pressure shaft completed, balance lining under progress. <b>HM works:</b> 2 nos. radial gates erection in bay 1&2 completed. Erection of 1 <sup>st</sup> stage embedded parts of radial gates in bay 3&4 under progress. <b>Power House:</b> Excavation completed & conc. 21945 / 44578 cum completed. Concreting to Draft Tube Liners for all the 4 nos. Units completed. Erection of spiral casing of Unit #1 completed. <b>Transformer Cavern:</b> Excavation completed & concreting 2539/7101 cum completed. <b>TRT:</b> Excavation & Lining almost completed.	- Works stalled since April, 2014 due to financial crunch with the earlier developer LTHPL. - Accordingly, the Corporate Insolvency Resolution Process (CIRP) was initiated vide order dated 16.03.2018 of Hon'ble NCLT, Hyderabad Bench. In the Bidding process, NHPC emerged as successful bidder for acquisition of LTHPL. Subsequently, the investment proposal for an estimated cost of Rs 5748.04 crore (Jul'18 PL), which

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State <u>Comm. Sch.</u> (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
				includes Bid amount of Rs 907 crore for acquisition of LTHPL; was approved by the CCEA on 08.03.2019 for investment, acquisition of M/s LTHPL and execution of balance works of Teesta-VI HE Project by NHPC. Taking over along with all assets and documents as 'Going concern' completed on 09.10.2019. -Civil works awarded in two LOT on 31.03.20 & 15.03.20 to M/s. JAL & M/s. Gammon respectively.
8	<b>Kameng</b> NEEPCO 02.12.2004 4x150 = 600 MW (2 units in operation, 2 units under construction) <b>Broad Features:</b> Dam :Bichom-69m High, 247.3m long. Tenga – 24.4 High, 103m long. HRT- 6.7m dia, 14.45 km. High Pressure Tunnel (HPT)Total length 3.64 km Surge Shaft: 25m dia, 70m Height P.House- semi-U/G Turbine- Francis  <b>Cost: Original:</b> <u>2496.90</u> Latest: 7927.34 <b>Contractors</b> Civil : Patel HM : Om Metals & JSC JV E&M : BHEL	Arunachal Pradesh <u>2009-10</u> 2020-21 (Mar'21)	All major works related to commissioning of project completed. All Units Boxed up. Leakage observed in penstocks during water filling in March, 2018. Thereafter, complete NDT of all joints of pressure shaft / penstock is in progress along with rectification of defects.  Progress of Rectification :-  <b>Penstock-1 :-</b> Rectification / Repair works completed.  <b>Penstock -2 :</b> i) Repair Welding of WELD DEFECT 4732 RM completed out of 5079 RM. ii) Repair Welding of OFFSETS:- 885 RM completed out of 936 RM.  <b>Unit # 1 &amp; 2 taken as Capacity addition on 10.02.2020 &amp; 03.02.2020 respectively.</b>  Balance two units are scheduled to be commissioned in December, 2020.	Rectification / repair works of penstock 2 to be expedited by M/s. Om Metals / NEEPCO.
9	<b>Ramam-III</b> NTPC Hydro Ltd. 10.09.14 3x40 = 120 MW	<u>West Bengal</u> <u>2019-20</u> 2022-23	First stage river diversion done on 23.03.2016. First phase Barrage excavation completed and Raft concreting in progress. <b>Intake structure</b> 1 & 2: Excavation completed, SFT	- Works affected due to GJMM Andolan.

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	<b>Broad Features :</b> Run of the River Scheme <b>Cost : Original:</b> <u>1381.84</u> Latest : 1592.34 <b>Contractors</b> Civil & HM : Simplex-Apex JV / Sew E&M : BHEL	(Nov,22)	excavation 20% completed. <b>HRT</b> excavation 7% completed. Excavation of Desilting chamber completed. <b>Surge Shaft:</b> Excavation completed. <b>Pressure Shaft:</b> Excavation 50% completed <b>Power House:</b> Excavation 94% completed. <b>TRC:</b> Excavation and concreting completed Switchyard : Excavation and filling completed	- Funds flow constraints with the contractor - PPA with West Bengal - Associated Transmission system
10	<b>Naitwar Mori</b> SJVN Limited 16.10.2017 2x30=60 MW Broad Features : Barrage: 30.5m height HRT: 5.6m horse shoe, 4330m long Pressure shaft: 4m dia, 109m long Surge shaft: 18m dia, 51.65m height <b>Cost : Original:</b> 648.33 Latest : 648.33 <b>Contractors</b> Civil : JP Associates HM : GMW E&M : Voith	<u>Uttara khand</u> <u>2021-22</u> 2021-22 (Dec,21)	River Diverted on 31.01.2019 <b>Desilting Tank:</b> Excavation completed and concreting 7807cum out of 59000cum completed. <b>Barrage:</b> 1,37,875 cum out of 1,40,000 cum excavation completed and concreting 12747cum out of 47700cum. <b>HRT:</b> Excavation 3850m out of 4317m completed. <b>Surge Shaft :</b> 950cum out of 15700 cum excavation completed. <b>Power House &amp; Transformer Hall:</b> 30400cum out of 37400 cum excavation completed. <b>TRT:</b> 87 m out of 174m completed. <b>HM works :</b> LoA issued to M/s GMW Private Ltd. on 18.04.18. <b>E&amp;M works :</b> Works awarded to M/s. Voith Hydro Pvt. Ltd. On 11.06.2018. Embedded part of EOT crane installed.	- Powerhouse & Barrage works critical. - Associated Transmission system
11	<b>Pakal Dul</b> CVPPL 03.10.2006 4x250 = 1000 MW <b>Broad Features :</b> Dam – 167m High, Width-305m), CFRD, HRT- 2 nos. 7.2m dia 1000m long S.Shaft-16m dia 200m Height P.House- Underground (157mx20.20mx49m) TRT- 5.5m dia, 125m long. <b>Cost: Original:</b> 8112.12 Latest: 8112.12 <b>Contractors</b> Civil : Afcons – JAL - JV E&M : Voith Hydro Ltd	<u>J&amp;K</u> <u>2020-21</u> 2025-26 (July.'25)	<b>Infrastructural works:</b> Excavation of MAT and adit to Powerhouse completed. <b>Dam:</b> Letter of Acceptance issued to M/s Jaiprakash Associates on 21.06.18. 379 m excavation of access adit to HRT-I have been completed out of a total of 698.2m. <b>Surge Shaft:</b> Access road to Surge shaft top completed on 30.11.18. <b>Pressure Shaft:</b> Excavation of 156.2 m from adit to Pressure shaft bottom has been completed out of a total of 238.7m <b>Power House(157mx20.20mx49m):</b> Letter of Acceptance issued to M/s. AFCON-JP Associates JV on 21.02.18. Excavation of MAT completed on 20.12.18  E&M Package: Letter of Award issued to M/s. Voith Hydro Ltd. On 02.01.2019. HM Works Package: Letter of Award issued to M/s. PES Engineers Pvt. Ltd. on 26.08.2019. HRT-TBM package: LoA issued to M/s L&T Ltd. On 3.7.2020. Survey and initial works are in progress.	The work at Dam site and Power house site of the project partially restored after lockdown with limited Manpower after obtaining the permission from District Administration.
12	<b>Kiru</b> CVPPL 13.06.2016 4x156=624 MW <b>Broad Features :</b> Dam – 135m High, Width-193m), Concrete gravity, Penstock 4nos., 5.5m dia. P.House- Underground	<u>J&amp;K</u> <u>2023-24</u> 2024-25 (Aug.'24)	Civil, HM and E&M works awarded on 24.02.2020. Construction of approach roads for Dam top(215m), DT inlet (1.6 KM) and outlet (1.2 Km) completed.	Construction works of the project have been delayed in view of the lockdown ordered w.e.f.23.3.2020.

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	(182mx23.6mx51.2m) TRT- 4 nos., 7.0m dia, 165 to 190m long. <b>Cost:</b> <u>Original:4287.59</u> Latest: 4287.59 <b>Contractors</b> Civil : Patel Engg. HM: PES Engineers E&M : Andritz Hydro			
13	<b>Ratle</b> Ratle Hydro Electric Project Pvt. Ltd. / NHPC 19.12.2012 4x205+1x30= 850 MW <b>Broad Features :</b> Dam Height-133m Length-194.8m Spillway-Radia Gate- (5) Size-10.75x1420 m Diversion Tunnel:2 Nos., Circular (Right back) Pressure Tunnel:11m dia each. Pressure Shaft : 6.6 m each steel lined. P.House-Underground Turbine- Francis Average Gross Head- 100.39m Addl. Unit(30MW) Housed in Main P.H. Cavity) Rated Head-98.9m <b>Cost :</b> <u>Original: 5718.85</u> Latest 5718.85 (11/2018 PL) <b>Contractors</b> Civil & HM : GVK E&M : Alstom	<u>J&amp;K</u> <u>2017-18</u> <u>2025-26</u> (Subject to re-start of works)	EPC Contract for Civil & HM works awarded to M/s GVK Projects & Technical Services Limited on 04.07.2013. Excavation of DT1 (298m out of 472m) & DT2 (192m out of 552m) completed.  -Works have been suspended at Project site due to frequent local disturbances since 11.07.2014.  -Govt. of J&K, PDD have terminated PPA on 09.02.2017 and directed JKSPDC to take over the project and implement in JV mode with Gol. MoU for execution of project in JV mode was signed on 03.02.2019 between JKPDD, JKSPDC & NHPC. Cost estimate vetted by CEA on 7.5.2019. PIB Memo circulated by MoP on 08.08.2019.	- Presently works are under hold.  - The State Govt. has decided to develop the project through JKSPDC. The matter is now pending adjudication before the Arbitration Tribunal constituted by the Hon'ble High court of J&K State in terms of the PPA. - JV formation and PIB approval pending.
	<b>State Sector</b>			
14	<b>Parnai</b> JKSPDC 21.10.2013 3x12.5= 37.5 MW <b>Broad Features:</b> Barrage: 107m Long, 11.7m High HRT: D Shape, 9236m long, 3.2m dia Surge Shaft: 3.2m Dia Power House- Surface- 60x12x28 <b>Cost:</b> <u>Original: 640.86</u> Latest 640.86 <b>Contractors</b> Civil : Patel & Alstom E&M : Andritz	<u>J&amp;K</u> <u>2017-18</u> <u>2022-23</u> (Mar,23)	The implementation of the project has been undertaken by awarding the EPC contract in favour of M/s. Patel Engg. Ltd. in 2013. <b>Barrage:-</b> Excavation 33581 cum out of total 46364 cum completed. Concreting 20031 cum out of 34589 cum completed. <b>HRT (D-shaped, 3.2m diameter, 9.236km long):-</b> 4911m out of 9236m excavation completed. <b>Pressure shaft (1no. 2mdia, 1733mlong):</b> Excavation: 11254 cum out of 80,000 cum completed. Concreting: 536cum out of 7212 cum completed.  <b>Surge shaft (3.2m dia.) :</b> Excavation: 704cum out of 14000cum completed.	- Slow progress of works - Contractual Issues.

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15	<b>Lower Kalnai</b> JKSPDC 16.08.2013 2x24= 48 MW <b>Broad Features:</b> Dam: 110m Span, 49m High HRT: D Shape, 3960m long, 4m dia Surge Shaft: 14m Dia Power House- 55x23.45x32.4 <b>Cost: Original: 576.87</b> Latest 576.87 <b>Contractors</b> Civil : Coastal E&M : GE	<u>J&amp;K</u>  <u>2017-18</u> 2025-26 (Subject to re-start of works)	EPC contract awarded to M/s. CPL in Sept., 2013. Diversion tunnel has been completed and river diversion made on 30.11.2016. Work on coffer dams has been started <b>Dam:-</b> Excavation work completed for right abutment of the dam bridge. Excavation of left abutment completed upto 50%. <b>HRT:-</b> Adit excavation is in progress. After suspending works in January, 2017, works resumed at site since 12 <sup>th</sup> April, 2017. Due to poor progress of the Contractor, JKSPDC has revoked the advance payment and the performance bank guarantee aggregating to Rs.79.21 Crores.  Now the contract with M/s. Coastal Project Ltd. has been terminated and the process of retendering is under progress.	- Project stalled - Re-award of works
16	<b>Shahpurkandi</b> Irrigation Deptt. &PSPCL 04.05.2011 3x33+3x33+1x8=206 MW <b>Cost: Original: 1835.50</b> Latest 1938.74 (Power Component) <b>Contractors</b> Civil & HM : Soma – BUREYA JV E&M : BHEL	<u>Punjab</u>  <u>2015-16</u> 2023-24 (Dec.23)	<b>Main Dam:</b> 13.62 lacs cum Excavation out of 18.40 lacs cum and 4.93 lacs cum concreting out of 11.05 lacs cum completed. <b>Hydel Channel:</b> Excavation / concreting is in advance stage of completion. Works of Dam stopped since 29.08.2014 due to inter-state dispute between states of J&K & Punjab on sharing of waters of river Ravi & tariff. An agreement was signed on 8.9.2018 between Chief Secretary, Govt. of Jammu & Kashmir and Chief Secretary, Govt. of Punjab. The Punjab Cabinet ratified the above agreement. Zero date of the project is 1st November, 2018. NIT for Civil works of Power House is being floated and award of works is expected soon. E&M contract work earlier accorded to BHEL has been revived, Project is programmed for Commission by Mar,2023.	- Power House civil works to be awarded.
17	<b>Uhi-III</b> Beas Valley Power Corporation Ltd. (HPSEB) 19.09.02 / (TEC -2x50 MW) 3x33.3 =100 MW (Revised vide HPSEB letter dt. 19.01.07. <b>Broad Features:</b> HRT-4.15m x 8.47 km S.Shaft- 13m x 57m Penstock- 3.4m x 1860m P.House- Surface Turbine- V. Francis <b>Cost: Original: 431.56</b> Latest: 1281.52 <b>Contractors</b> Civil : Continental / Abir HM : PES E&M : BHEL	<u>H.P.</u>  <u>2006-07</u> 2022-23 (Dec'22)	All works completed in July, 2018. During Hydro Static pressure Test (HST) of Penstock, some leakage was observed. Repair of penstock & HST completed by March, 2020. On 17.05.2020 after Trial run of Unit-1, during synchronisation to grid transmission load rejection was done but the penstock ruptured along penstock ferrule # 345 which is about 110m upstream of surface power house.  Detailed investigations are being carried out by project developer. Revised commissioning schedule shall be decided thereafter.	
18	<b>Sawra Kuddu</b> H.P. Power Corpn. Ltd. Clearance: 10.11.2004 3x37= 111 MW	<u>H.P.</u>  <u>2011-12</u> 2020-21	All the works related to commissioning of the project completed. Filling of water conductor system resumed from 12.05.2020. Some leakage is observed in adit to HRT which is being attended. The project is programmed to be	

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	<b>Broad Features:</b> Diversion Structure: 10.45m high Piano Key Weir. HRT- D-Shaped, 5m dia, 11.145Km long. Power House- Under ground Turbine- 500 rpm VF. Switchyard: 220 Kv. <b>Cost: Original: 558.53</b> Latest: 1181.90 <b>Contractors</b> Civil & HM : HCC / Patel E&M : Andritz	(Mar,21)	commissioned in December, 2020.	
19	<b>Shongtong Karcham</b> H.P. Power Corpn. Ltd. Clearance: 16.08.2012 3x150= 450 MW <b>Broad Features:</b> Intake Tunnel: 4 Nos. Horse shoe 6.4m dia 192 to 280m length HRT- Circular, 10.5m dia, 8096m long. Power House- Under ground Turbine- VF. Switchyard: 400 Kv. <b>Cost: Original:</b> <u>2807.83</u> Latest: 2807.83 <b>Contractors</b> Civil & HM : Patel E&M : Andritz	<u>H.P.</u>  <u>2016-17</u> <u>2024-25</u> (Mar'25)	River Diversion achieved on 10.02.2017. <b>Barrage:</b> Drawings are to be submitted by contractor. <b>HRT:</b> Heading excavation of HRT 6.19 km out of 7.712km completed. <b>Surge shaft:</b> 95m out of 100m pilot hole completed. <b>Power House:</b> 98% excavation of Power House completed.  Works hampered in some portion of HRT due to re-location of Army ammunition depot. Issue is under resolution between Army, GoHP & HPPCL.	-Issues with Army authorities for shifting of ammunition depot.  - Slow progress of works
20	<b>Vyasi</b> UJVNL 25.10.2011 (TEC) 2x60= 120 MW <b>Broad Features:</b> Dam: Conc. Gravity H- 86m L-207.2m HRT- Circular, 7m dia, 2.7Km long. Power House- Surface Turbine- VF. Switchyard: 220 Kv. <b>Cost: Original: 936.23</b> Latest: 1581.01 <b>Contractors</b> Civil : Gammon / MPCC E&M : BHEL	<u>Uttarakhand</u>  <u>2014-15</u> <u>2022-23</u> (Apr,22)	<b>Civil Works:</b> <b>Dam :</b> Excavation completed. 3.55 Lakh cum out of 3.6 lakh cum of Concreting completed. <b>Diversion Channel :</b> Completed. <b>Head Race Tunnel (2.7 Km):</b> Excavation of HRT completed. 2641.97m overt Lining and 2544.25m Invert Lining out of 2655m has been done. <b>Pressure Shaft:</b> 4939cum out of 5000cum Excavation completed. <b>Surge Shaft :</b> Excavation completed. Concreting-5920.75 cum out of 6626cum completed. <b>Power House:</b> 2,58,500 cum out of 270,000cum Excavation completed. 16036 cum out of 17,800 cum Concreting of Sub structure completed. Erection of Draft Tube in both the units completed.	-Dam and E&M works are Critical.
21	<b>Koyna Left Bank PSS</b> WRD, Mah. 20.02.2004 2x40 = 80 MW <b>Broad Features:</b>	<u>Maha rashtra</u>  <u>2014-15</u> <u>2025-26</u> (Subject to	<b>Civil Works:</b> Excavation of intake structure 4781 cum out of 14105 cum and lining 2485 cum out of 3381 cum completed. Excavation of Switchyard completed. Excavation of Approach tunnel & Ventilation tunnel is in progress.	-Slow progress of works. -Funds constraints due to increase in Project cost. RCE



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	<p>Water from the existing Shivaji Sagar Lake (Koyana reservoir) is to be utilized for generation. Intake Tunnel: Dia – 7.20 M Length – 235.5 M (including Lake tap) HRT: Dia – 7.20 M Length – 80 M Penstock – 2 nos , Dia – 2.9M Length – 10 M each P.House – Underground Turbine – Reversible <b>Cost: Original: 245.02</b> Latest: 1403.77 <b>Contractors</b> Civil &amp; HM : BT Patil – Malaxmi JV / Patel E&amp;M : Litostroj Slovenia &amp; Koncar, Croatia</p>	re-start of works)	<p><b>Tail surge shaft</b> : Excavation in soft strata completed. Excavation for inclined / vertical / lateral shafts in hard rock 6448 / 9223 cum completed. <b>TRT</b> : 364 / 24003 cum excavation completed. <b>Machine Hall</b> : Underground Excavation is under progress. 22600 cum excavation out of 55050 cum completed. <b>E&amp;M works:</b> The contract for details engineering manufacturing supply, supervision erection, testing commissioning and putting into commercial use of pump turbine, generator motor and associated equipments is signed with M/s IVRCL Ltd., Pune on 16.12.2010. Further TG set has been ordered as under: Turbine/Pump: M/s Litosroj Power, Slovenia (European Union) Generator/Motor: M/s Koncar Power, Plant &amp; Electric Traction Engineering, Croatia (European Union). EOT Crane :- Works awarded to M/s Pedvak Cranes Private Limited Hyderabad on 12.04.2013.</p>	<p>under approval. - Contractual Issues - The proposal to construct the project on BOT basis had been sent to State Govt., as no response has been received from State Govt., WRD is planning to take up the project after availability of funds. The project works are stalled since March, 2015.</p>
22	<p><b>Polavaram</b> APGENCO / Irrigation Deptt., A.P. 21.07.2010/ 25.02.2009 12x80= 960 MW <b>Broad Features:</b> ECRF Dam- L-2454 m, H-57.9m, Spillway- L-1128m, Spill gate -48 Nos. Approach channel- 175m. Intake tunnel: Ø 9m, L- 130m (12 Nos) Power House- Surface type, Turbine- Vertical Kaplan Tail Race Channel- 1130m. <b>Cost:</b> <u>Original: 4956.39</u> Latest: 5338.95 (Power Component) <b>Contractors</b> Civil : Navyug HM : PES E&amp;M : GE</p>	<p>Andhra Pradesh <u>2017-18</u> <u>2023-25</u> (Subject to re-start of works)</p>	<p><b>Spillway, Earth cum Rockfill Dam, Power House Foundations Works awarded in March, 2013 to M/s. Transtroy- JSC EC UES JV.</b> <b>ECRF DAM:</b> Earth work of 508.06 L.Cum /833.169L.Cum is completed. <b>Diaphragm Wall</b> concreting – completed. <b>SPILLWAY:</b> Excavation-838.80 L Cum out of 1115.59 L Cum completed. Concreting 9.60 L Cum out of 36.79 L cum completed. <b>Gates:</b> Radial Gate fabrication – 11010 MT completed out of 18000 MT (61.17%). <b>Power House:</b> Earth work of 112.20 L Cum / 114 L.Cum is completed &amp; embankment of 9.79 L.Cum / 10 L.Cum is completed. <b>B) The LoA for works of Power House on turnkey basis</b> was issued to M/s Navayuga Engineering company Limited (NECL) on 06.12.2017. Contract was terminated by APGENCO on 14.08.2019. M/s. NECL challenged the termination order in Hon'ble High Court of A.P. on 19.08.2019. Hon'ble High Court granted interim stay on 22.08.2019. In the meanwhile, on retendering, LOI was issued to M/s Megha Engg. Infrastructure Limited. (MEIL) on 01.11.2019. Since stay order is in force. No further action could be initiated.</p>	<p>- Works stalled since July, 2019. - Matter is presently sub-judice in Hon'ble High Court of A.P.</p>
23	<p><b>Pallivasal</b> KSEB 2x30= 60 MW 31.01.2007 <b>Broad Features:</b></p>	<p><u>Kerala</u> <u>2010-11</u> <u>2022-23</u> (Dec,22)</p>	<p><b>Intake structure:</b> Excavation completed. Leading channel of Water conductor system replaced by cut &amp; cover/soil tunnel and accordingly intake is shifted. <b>HRT:</b> Excavation –3230/3347 m completed. Overt conc. 1634/3347 m completed.</p>	<p>- Poor Geology - Contractual Issues - Contract for Civil &amp;HM works has been terminated</p>

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	<p>HRT: 3.50m X 3396m Surge Shaft: 7.0m X 49m Pressure Shaft: 2.50m X 1019.20m Penstock: 2.nos., 1161.20m each. Power House: Surface Turbine: Pelton S. Yard: 220kV – Single bus <b>Cost:</b> Original: <u>222.00</u> Latest: 550.00</p> <p><b>Contractors</b> Single Package (Except Intake &amp; balance Tunneling works) ESSAR – DEC – CPPL JV -M/s Bumi-Zillion JV (for Intake works &amp; balance Tunneling works) -M/s Anchor structure-PSE-SSIPCV, M/s. Shri Sarvasana Industries Pvt. Ltd.</p>		<p>Invert Conc.. – 1637/3347 m completed. <b>SurgeTank / Forebay:</b> Excavation completed. Concreting.423/843 m<sup>3</sup> completed. <b>Pressure Shaft:</b> Excavation completed. Fabrication of steel liner completed and erection of 525/1096 m completed. <b>Surface penstock:</b> Excavation –111168/122600 m<sup>3</sup>. Concreting- 12604/12850 m<sup>3</sup> and 1905m out of 2036m erection completed. <b>Power House:</b> Excavation &amp; Concreting completed. <b>Tail race Channel (2 Nos.):</b> Excavation &amp; lining completed. <b>E&amp;M Works:</b> 75% supply completed, balance of E&amp;M works –Tendering process is on go. The overall progress achieved :- 84.40%.</p>	<p>w.e.f. 13.09.18. Balance work has been re-tendered on the risk &amp; cost of Contract, Subsequently balance works have been awarded to M/s. Sri Sarvasna Industries Pvt. Ltd. and M/s. DSE Anchor Structure. Tender for Erection of Supplied Electro Hydro Mechanical Equipment &amp; Supply and Erection of BoP equipment is under progress.</p>
24	<p><b>Thottiyar</b> KSEB 1x30 + 1x10= 40 MW 05.06.2008 <b>Broad Features:</b> Weir: 222m Long 11 blocks 7.5m height Tunnel: Circular 2.6m dia 199m long. Power House: Surface Turbine : Vertical Pelton <b>Cost:</b> Original: <u>136.79</u> Latest: 280</p> <p><b>Contractors</b> Civil &amp; HM : PRIL- Sri Sarvasna Industries</p>	<p><u>Kerala</u> <u>2012-13</u> <u>2021-22</u> (Mar'22)</p>	<p><b>Civil Works:</b> <b>Weir:</b> 3915.17 m<sup>3</sup> excavation out of 10208 m<sup>3</sup> &amp; 6362.59 m<sup>3</sup> concreting out of 10928 m<sup>3</sup> completed. <b>Approach Channel &amp; Intake:</b> 3454.00 m<sup>3</sup> excavation out of 9584 m<sup>3</sup>. done. <b>Power Tunnel:</b> Excavation completed &amp; Concreting 17 m<sup>3</sup> Out of 615 m<sup>3</sup> completed. Steel line fabrication 22.5 MT out of 27 MT and erection 3MT completed. <b>Penstock, Anchor, Rocker support:</b> - Excavation 32150.37 m<sup>3</sup> out of 37839.37 m<sup>3</sup>, concreting 3951.12 m<sup>3</sup> out of 12082 m<sup>3</sup> completed, Fabrication of penstock 1424.81MT out of 2286.32MT completed and erection 50 MT out of 2341 completed. <b>Power House, switchyard &amp; allied works:</b> 36575/43690 cum excavation and 5026.18/16209 cum concreting done. <b>E&amp;M Works:</b> Tender for erection of supplied Electro/ Hydro Mechanical equipment for power house was awarded to M/s Fitwell. Over all Progress of the project is around 50% and it is expected that the project can be commissioned during March,22.</p>	<p>-Original contract for Civil &amp; HM works foreclosed without risk &amp; cost of Contractor M/s. Coastal Project Ltd. -Civil &amp; HM works re-awarded to M/s PRIL-Sri Sarvasna Industries Pvt. Ltd. on 05.01.2018. KSEB decided to execute E&amp;M works departmentally &amp; tendering was awarded to M/s Fitwell.</p>
25	<p><b>Kundah Pumped storage (Phase-I, Phase-II &amp; Phase-III)</b> TANGEDCO 4x125= 500 MW <b>Broad Features:</b> HRT: Ø 8.5mX1247.33m. Surge Shaft: Ø (28m/16m/10m) x68m depth.</p>	<p><u>Tamil Nadu</u> <u>2022-23</u> <u>2023-24</u></p>	<p><b>Civil &amp; HM Works:</b> LOI issued to M/s Patel Engg. Ltd. for Package-I &amp; M/s Kundah PSP Consortium for Package-II on 15-02-2018. <b>HRT:</b> Excavation 562 out of 1247 m completed. <b>Pressure Shaft:</b> Excavation 377m out of total length 926 m completed. <b>Surge Shaft:</b> Surface excavation 44m depth out of 68 m completed. <b>Power House:</b> Slashing completed, Benching 14m level out of total 48m level completed. <b>Transformer cavern:</b> slashing completed, benching 8.5 m level out of total 18.5 m level</p>	<p>Environmental clearance validity expired on 07.05.2020. MoEF &amp;CC issued TOR for Project works at site for a period of 6 Months from date of issue of TOR or grant of new E.C. Action is being taken to</p>

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
	Pressure Shaft: 2 Nos. Ø 5.50m X 463.38 m (each) Penstock: 4.nos. Ø 3.9m x45.4m each. Power House: Under Ground. Tail race surge chamber: 10m(W);52m(L):48m(H) Tail Race Tunnel: Ø 8.5mx895m Turbine: Francis reversible turbine. <b>Cost: Original:</b> <u>1216.59</u> Latest: 1831.29 <b>Contractors</b> Civil & HM : Patel / Kundah PSP E&M: MEIL		completed. <b>Tail Race Surge Chamber:</b> - Excavation 10% completed. <b>TRT:</b> Excavation 864m out of 895 completed. <b>E&amp;M Works:</b> - <b>Phase-I</b> , Package –III, 1st unit of 125 MW and <b>Phase-II</b> (2x125MW) & <b>Phase –III</b> (1x125 MW) Supply, erection, testing & commissioning works awarded to M/s Megha Engineering & Infrastructure Ltd. on 28.11.2019. Preliminary planning and Engineering works are under progress.	obtained fresh E.C
	<b>Private Sector</b>			
26	<b>Sorang</b> Himachal Sorang Power corporation Ltd. June, 2006/ 2x50= 100 MW <b>Broad Features:</b> HRT- 1.5 km Trench Weir-59 m P.House- underground Turbine- Pelton Gross Head-626 m SWYD- 11/400 kV (GIS) <b>Cost: Original:</b> <u>586.00</u> Latest: <u>586.00</u> <b>Contractors</b> Civil & HM : NCC – Maytas – SS JV E&M : Voith Siemens	<u>H.P.</u>  <u>2011-12</u> <u>2021-22</u> (Dec-21)	All Civil Works completed.  Both the units are boxed up. During the filling of water conductor system in 1 <sup>st</sup> week of Nov., 2013, leakage occurred in penstock due to cracks. Rectification work completed in April, 2015. Unit #1 synchronized with grid on 30.10.2015, however, could not be commissioned due to non-availability of rated discharge. On 18-11-2015 when Unit # 2 was under trial run, there was rupture in the surface penstock pipe. The incidence caused loss of lives and property. The rectification work is under progress. Land acquisition for new alignment of Penstock & other infrastructure is completed. Fabrication of Ferrules under progress.	- Repair of penstock work -Arrangement of funds to carry out repair works.
27	<b>Tangnu Romai-I</b> M/s Tangnu Romai Power generation 2x22= 44 MW 30.11.2007 (TEC by HPSEB) <b>Broad Features:</b> Barrage at EL ± 2555 m HRT-3.1m dia & 7.220 km length Surge Shaft- 5m dia, Top Level 2570 m & Bottom Level 2520 m Penstock- 2 m dia & 609.3 m length P.House- Surface Turbine – Vertical	<u>H.P.</u>  <u>2014-15</u> <u>2024-25</u> (Subject to re-start of works)	Civil works awarded on 14.06.2010 to M/s Sai Urja Hydel Project (P) Ltd. <b>Barrage and Diversion Cannel:</b> 26211 cum out of 93800 cum excavation completed. <b>Desilting Chambers &amp; SFTPC:</b> Excavation completed. SFT excavation 420 / 450.66 m completed. <b>HRT:</b> 2826m out of 6300m excavation completed. <b>Power House, Switchyard &amp; Misc.:</b> 60275 m <sup>3</sup> out of 72000 m <sup>3</sup> excavation completed. In February-2015, due to land slide the steel bridge on Pabbar River, connecting Project components has been completely damaged. The restoration works are completed.	- Slow progress of works HRT critical, poor geology. - Works are stalled due to finance issues since Jan, 2015. - Developer have initiated the sale of the Project and are in the process of negotiating with Potential Buyers.

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	Francis <b>Cost:</b> Original: 255.00 Latest: 641.89 <b>Contractors</b> Civil & HM : Sai Urja E&M : Andritz			
28	<b>Bajoli Holi</b> M/s GMR Bajoli Holi Hydro Power Pvt. Limited 31.12.2011 3x60= 180 MW <b>Broad Features</b> Dam Height-66 M Dam Length-178 M Desilting Chamber- 2 Nos. 240 Mx14.5 MX 10.8 M HRT- Length-15.538 Km., 5.6 M dia P.H. –Surface <b>Cost: Original 1696.93</b> Latest 2689.00 <b>Contractors</b> Civil & HM : Gammon E&M : Alstom/ GE	<u>H.P.</u>  <u>2018-19</u> <u>2021-22</u> (Dec,21)	<b>Civil Works:</b> 86% works completed. <b>Dam:</b> Excavation completed. Concreting 1,69,801 cum out of 2,10,000 cum completed. <b>HRT:</b> Excavation completed. 10.7 km lining out of 15.9 km completed. <b>Surge Shaft:</b> Excavation completed. Lining-72/117m completed. <b>Pressure shaft:</b> Excavation completed. Lining-664MT / 2440MT completed. <b>Power house:</b> Excavation completed and concreting almost completed.  <b>HM Works:</b> 72% works completed.  <b>E&amp;M Works:</b> 83% works completed.	-Slow progress of works -Poor approach roads -Power evacuation system is critical. - Due to excessive snowfall on 6 <sup>th</sup> & 7 <sup>th</sup> Feb 2019, in the entire region up to Chamba, access roads got severely damaged. Power Supply remained completely cut off to the entire region during 6 <sup>th</sup> ~25 <sup>th</sup> Feb 2019.
29	<b>Tidong-I</b> M/s Statkraft India Pvt. Ltd. 2x50 = 100 MW 28.07.2006 <b>Broad Features:</b> HRT–D-3.5m L- 8461 m P.H. Surface Turbine –Vertical Pelton <b>Cost: Original 543.15</b> Latest 1286.27 <b>Contractors</b> Civil & HM : SCL Infratech / Himalaya E&M : Alstom	<u>H.P.</u>  <u>2013-14</u> <u>2022-23</u> (Jun. 22)	<b>Barrage &amp; River Diversion Works:</b> Common Excavation completed and 71700.84/73409.00 open cut rock excavation completed. 32144 cum out of 37159 cum concreting done. <b>Head Regulator &amp; Desilting arrangement:</b> Common excavation completed. 9763 cum open cut rock excavation out of 10,000 cum completed. <b>HRT (8526m):</b> Excavation completed and 6511/8534 m lining concreting has been completed. <b>Surge Shaft:</b> Excavation 66m/89m completed. <b>Pressure Shaft:</b> Excavation completed. 370m / 1310m lining completed. <b>Power house and Tail race channel-</b> 87709 cum out of 92500 cum excavation completed. 11237 cum out of 16156 cum concreting completed. Overall 72 % of Powerhouse civil works completed.  M/s Statkraft India Pvt Ltd has acquired the 100% equity of the project on 04.09.2018 and remobilization of manpower on the project is in progress. Presently project is scheduled to be commissioned by June 2021.	- Slow progress of works. - Transmission Line critical.
30	<b>Kutehr</b> M/s JSW Energy (Kutehr) Ltd. 3x80 = 240 MW 31.08.2010 <b>Broad Features:</b>  <b>Cost: Original :</b> <u>1798.13</u> Latest : 1798.13	<u>H.P.</u>  <u>2024-25</u> <u>2025-26</u> (Nov'25)	Civil works, HM works and E&M works awarded on 20.10.2019, 19.09.2019 and 13.02.2020 respectively. River diversion achieved on 25.01.2020.	-

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
	<b>Contractors</b> Civil & HM : M/s Angelique – PCC consortium, M/s MF Bumi Geotech Pvt. Ltd. & M/s. PES Engineers Pvt. Ltd. E&M : M/s Andritz Hydro Pvt Ltd.			
31	<b>Phata Byung</b> M/s Lanco 06.10.2008 2x38 MW = 76 MW Broad Features: Dam – 26m high HRT- 3.2 m dia & 9.38 km length Turbine – Frances <b>Cost: Original: 520.00</b> Latest : 1133 <b>Contractors</b> Civil : Lanco HM : Cimmco E&M : Alstom	Uttara khand  <u>2012-13</u> 2023-24 (Subject to re-start of works)	<b>Dam concreting:</b> 17800/18000 cum concreting completed. <b>P.H.:</b> Excavation completed & Concreting in progress. <b>HRT:</b> Excavation almost completed. 1400 m Lining has been completed. Excavation and lining of Intake-I & Intake-II completed. <b>Pressure shaft:</b> Excavation completed & lining is under progress. <b>TRT:</b> Excavation 178/235m completed. <b>E&amp;M Works:</b> Pit liner erection of units completed. EOT Crane installed and Commissioned. Ferrule Fabrication work is in progress.	<ul style="list-style-type: none"> <li>- Works severely affected due to flash floods in June, 2013.</li> <li>- Works are stalled since July, 2017 due to Funds constraints with the developer.</li> <li>- Presently, the company is undergoing corporate insolvency resolution process initiated under IBC for resolution and revival of the project.</li> </ul>
32	<b>Singoli Bhatwari</b> M/s L&T 11.07.2008 3x33 MW = 99 MW <b>Broad Features:</b> Barrage-FRL 1017 m, MDDL 1009 m, Barrage Top 1020m HRT- 4.65m dia & 11.870m length Surge Shaft-10 m dia & 102.85 m length Pressure Shaft-One, 3.80m dia & 358m length Penstock- 3 Nos., 2.20 m dia & 34m, 42m, 48m long. P. House-Surface Turbine-Vertical Francis TRT- Open Channel, 650m length <b>Cost : Original :</b> <b>666.47</b> Latest: 2168 (PL-2019) <b>Contractors</b> Civil : L&T HM : General Mechanical Works E&M : Voith	Uttara khand  <u>2012-13</u> 2020-21 (Dec,20)	<b>Dam &amp; Dykes/Barrage:</b> Excavation almost completed and concreting 66169 out of 70220 cum completed. <b>HRT:</b> Excavation and lining completed <b>Pressure Shaft::</b> Excavation and concreting completed. <b>Power House:</b> Excavation completed & concreting 29365cum out of 29959cum completed. <b>Surge Tank:</b> Excavation completed. 4114 cum out of 5349cum concreting completed. <b>E&amp;M Works:</b> Boxing up of all the Units completed. Dry commissioning of Unit-1, Unit-2 & Unit-3 completed. Wet Commissioning also started with reservoir filling and consequently filling of the water conductor system.  Project is programmed to be commissioned by December, 2020.	<ul style="list-style-type: none"> <li>- Works severely affected due to flash floods in June, 2013.</li> <li>- HRT Critical</li> </ul>

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33	<p><b>Maheshwar,</b> SMHPCL 30 12 96/ 29.9.2006 (FC) 10x40= 400 MW <b>Broad Features:</b> Dam-35m High, concrete gravity P.Shaft-10x7.82m x 52m P.House - Surface Turbine- Kaplan <b>Cost:</b> <u>Original: 1569.27</u> <u>Latest: 8121.00</u> <b>Contractors</b> Civil &amp; HM : Sew E&amp;M : BHEL</p>	<p><u>M. P.</u> <u>2001-02</u> <u>2023-24</u>  (Subject to re-start of works)</p>	<p><b>Civil &amp; HM Works:</b> All major civil works completed. All 27 nos radial gates commissioned. <b>Unit Erection:</b> Unit-10: Initial spinning achieved on 14.10.2011. Unit-9 &amp; 8: Ready for spinning. Unit-7: Guide apparatus trial assembly in progress. Unit-6: Erection of turbine embedded parts &amp; foundation parts completed. Unit-5 to 1: Erection of units is in initial stages. <b>Works suspended since Nov-11 due to cash flow problem with developer.</b>  Recently, the GoMP constituted a High-Level Task Force vide Energy Department Order dtd. 18.04.2019, under the Chairmanship of Dr. Rajan Katoch (IAS Retd.) and having Senior IAS Officers from GoMP among others as members to examine the difficulties in implementation of the project and suggest the way forward.  In the first meeting of the Task Force held on 25.05.2019, the Chairman of the Task Force directed the Promoter and Lenders to engage in discussions to reach an understanding on the way forward.  Pursuant to the directions of the Task Force, a Memorandum of Understanding (MoU) has been executed on 22.07.2019 between the Entegra Limited (Promoter), Power Finance Corporation (Lead Lender) and SMHPCL. As agreed in the MoU, new Management nominated by the Promoter has taken over charge of SMHPCL, in August 2019. Mr. M L Gupta, former CMD, THDCIL, who was also MD of SMHPCL during 2005-2010, has taken over as CMD of SMHPCL.  Efforts are being made to initially commission the 3 machines already installed since 2011 and start generation with part filling of reservoir after completing R&amp;R to that level. BHEL has agreed to supervise the restoration and commissioning of 3 machines. Action for arrangement of funds required is being taken.  <b>M.P. Power Management Company Ltd. has terminated the Power Purchase Agreement, R&amp;R Agreement &amp; Escrow Agreement with SMHPCL on 18.04.2020 &amp; 20.04.2020 respectively .</b></p>	<ul style="list-style-type: none"> <li>- Completion of R&amp;R works and E&amp;M works.</li> <li>- Works held up due to Fund constraints with developer.</li> <li>- Sub-Judice in NCLT.</li> </ul>
34	<p><b>Rangit-IV</b> Jal Power corp. Ltd. 06.07.2007 3x40= 120 MW <b>Broad Features:</b> Dam: Concrte 44m high .HRT : D- 6.4m L- 6.5km Power House : Surface Turbine: Francis <b>Cost: Original:726.17</b> <u>Latest : 1692.60</u> <b>Contractors</b> Civil : Coastal HM : Texmacho</p>	<p><u>Sikkim</u> <u>2011-12</u> <u>2025-26</u> (Subject to re-start of works)</p>	<p><b>Dam &amp; Intake works:</b> Excavation 409184 / 492775 cum completed and concreting 61045 cum out of 173229 cum completed. Excavation of road diversion tunnel has been completed.  <b>HRT:</b> Excavation in progress and 3794 m out of 6488 m completed.  <b>Surge Shaft:</b> Excavation has been completed &amp; concreting yet to start.  <b>Pressure Shaft:</b> Excavation of Horizontal Pressure Shaft completed. Vertical Pressure Shaft 60.5 m out of 84.7m completed.</p>	<p>Financial crunch with the developer. Work held up since Oct, 2013 due to fund constraints. Project is under CIRP.</p>

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
	E&M : Andritz		<p><b>Power House:</b> Excavation in Power House completed. Concreting 8565 cum out of 19900 cum completed.</p> <p><b>Desilting chamber:</b> Excavation 2143 m out of 3360 m completed.</p> <p>In the Joint Lenders Forum meet held in PFC on 5<sup>th</sup> April, 18, Lenders decided to file application in NCLAT and the same has been filed on 24<sup>th</sup> April, 18. Last hearing of NCLT held on 29.03.2019 and order pronounced on 9.04.2019. As per the order IRP has been appointed.</p> <p>NHPC Ltd. submitted EOI on dated 08.07.2019 and was shortlisted under final list of Prospective Resolution Applicants on dated 23.08.2019. The Resolution Plan submitted by NHPC on 04.12.2019.</p> <p>The Resolution Plan Approval Application was listed for hearing on 17.02.2020 before NCLT, Hyderabad ("Tribunal"). Final hearing was held on 31.07.2020. Order has been reserved.</p>	
35	<p><b>Bhasmey</b> Gati Infrastructure 2x25.5= 51 MW <b>Broad Features :</b> Dam-33.2m High, Symmetrical gravity HRT-5.3m dia &amp; 5.132 km length , Circular. Surge Shaft- 89.8m Hight &amp; 14m dia. P.House-Outdoor Turbine-VF TRT-2 Nos, L- 50m Swityard-132/11 KV <b>Cost ;Original : 408.50</b> Latest : 690.30 <b>Contractors</b> Civil : Simplex E&amp;M : Voith</p>	<p><u>Sikkim</u>  <u>2012-13</u> <u>2024-25</u> (Subject to re-start of works)</p>	<p>Project is in initial stage of construction. River diversion achieved.</p> <p><b>Barrage:</b> 61555cum/194600cum excavation completed. <b>HRT:</b> 1670m/4460m excavation completed. <b>PH:</b> 136105 cum/185937cum excavation completed.</p> <p><b>Surge Shaft :</b> 8567cum / 22000cum Surface excavation completed.</p>	<p>- Slow progress of works - Works stalled since Sept., 2016 due to paucity of funds.</p>
36	<p><b>Rangit-II</b> Sikkim Hydro Power Limited 10.02.2010 2x33= 66 MW <b>Broad Features :</b>  Dam-47m High, Concrete Gravity HRT-3.9m dia &amp; 4.745 km length , Surge Shaft- 65.5m High &amp; 10m dia. Underground Pressure Shaft : 1.7 m dia &amp; 2.5 km length. P.House-Outdoor Turbine- Pelton Vertical</p>	<p><u>Sikkim</u>  <u>2015-16</u> <u>2024-25</u> (Subject to re-start of works)</p>	<p>EPC contract awarded to M/s Coastal in February, 2012.</p> <p><b>Diversion Tunnel:</b> River diversion through diversion tunnel has been achieved.</p> <p><b>Dam :</b> Excavation 53100cum out of 85000cum completed. <b>HRT:</b> Excavation 623m out of 4745m completed. <b>Surge Shaft:</b> Excavation completed. Concreting 37/1667 cum done. <b>Pressure shaft:</b> Excavation of pressure shaft I - 25m out of 128m and pressure shaft II - 154m out of 377m completed <b>Power House:</b> Excavation of surface power house is being taken up.</p>	<p>Works are stalled due to non releasing of funds by lenders because of Power evacuation and land acquisition issues. Works restarted. A meeting with financiers were held on 23.09.2016 for release of funds. The developer was asked to submit certain document for release of funds. Works are stalled since December, 2017 due to funds constraints with developer.</p>

Sl. No.	Name of Project Executing Agency Date of CEA clearance / Approval Capacity (MW) Broad Features Cost (original/latest) In Rs. Crores.	State Comm. Sch. (original/ Now Ant.	Broad Present Status / Critical Area	Remarks/ Critical issues
	Swityard- GIS, 132/11KV <b>Cost : Original :</b> <u>496.44</u> Latest : 496.44 <b>Contractors</b> Civil & HM : Coastal E&M : Gammon			
37	<b>Rongnichu</b>  Madhya Bharat Power Corporation Ltd. 01.10.2008 2x48= 96 MW  <b>Broad features :</b> Barrage : Height 14m, length 120.00m Desilting Basin : Size (60Lx18Wx7H)m. HRT : Horse shoe type, 12.302km, 4.00m dia Surge shaft : 85m high, 10m dia, orifice dia 1.7m Pressure shaft : 3.0m dia, 415m long steel lined Penstock 812m long Power house : Surface (61.5Lx47.75Wx38.0H) m Turbine : Pelton, vertical shaft, 2nos. <b>Cost : Original :</b> <u>491.32</u> Latest : 1453.34 <b>Contractors</b> Civil & HM : Sew E&M : Voith	<u>Sikkim</u>  <u>2014-15</u> <u>2020-21</u> (Mar'21)	The civil works have been re-awarded to M/s Moshvaraya Infrastructure Ltd. and E&M works to M/s Litosroj Power, Slovenia & CG Electric system, Hungary.  <b>Barrage:</b> Excavation & concreting completed.  <b>HRT:</b> Excavation completed. Overt lining 175m and Invert lining 2km is balance.  <b>Surge shaft:</b> Excavation & Concreting completed.  <b>Pressure Shaft:</b> 236m out of 1426.50m of steel lining is balance.  <b>Power House:</b> Excavation & concreting completed. <b>E&amp;M works:</b>  <b>Unit #1 :</b> Stator & Rotor Lowered. <b>Unit #2 :</b> Stator Lowered.	
38	<b>Panan</b> Himagiri Hydro Energy Pvt. Ltd. 07.03.2011 4x75= 300 MW  <b>Broad Features :</b> Dam-115m from deepest foundation level Desilting Chambers : Underground, 2 Size (14Lx22Wx2.5H) HRT- modified horse shoe, 6 m dia & 9549m length ,	<u>Sikkim</u>  <u>2018-19</u> <u>2025-26</u> (Subject to re- start of works)	Civil works awarded on 22.02.2014. Infrastructural works and geological investigations are in progress.  Starting of civil construction works is held up for want of the National Board of Wild Life (NBWL) clearance. There was a case challenging the Eco-Sensitive zone notification of MoEF & Climate Change in NGT. The case is disposed on 21.8.2017. The developer applied for issuance of clearance from Forest, Environment & Wild Life Management Dept., Govt. of Sikkim from NBWL angle.  In August, 2016, there was a huge land slide thereby creating a lake which obstruct the approach to project components. Developer are pursuing with concerned department of GoS for early decision on dismantling of Mantham Lake or developing an alternative road to reach	-Works stalled for want of NoC from State Govt. from NBWL angle.



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	Surge Shaft- 102 m High & 15m dia. Pressure Shaft : 2/4, 3.4/2.4m dia, 707.4 m- Long P.House-Surface Turbine-Vertical Francis <b>Cost : Original:</b> <u>1833.05</u>  Latest :2671.00 <b>Contractors</b> Civil : Essar		the dam site to start main project civil works in full swing at the earliest.	

**Grand Total : 38 nos. – 12,973.5 MW**

## Status of Under Execution Hydro Electric Projects in Bhutan

Sl. No.	Name of Project / Capacity(MW)/Executing Agency/Date of CEA clearance / Approval / Broad Features/Commissioning Schedule	Award of works	Broad Present Status
1.	<p><b>Punatsangchhu-I</b> 6x200=1200 MW PHPA, Bhutan Date of TEA: 27.07.2007 Broad Features : Dam – 136m High, 279.2m long, Concrete gravity (RCC) HRT- 10m x 8.948 km Pressure Shaft: Two nos. 6.0mx482.20m each Surge Shaft: 24.5mx128.5m TRT: 10.0m x1182.20m P.House-Underground Turbine- Vertical Francis SWYD- 400 kV Original Commissioning Schedule: Nov' 2016 <b>Anticipated commissioning schedule : 2024-25</b></p>	<p><b>Civil Works:</b> Package-I: L&amp;T Ltd. on 27.03.2009 Package-II: Gammon India Ltd on 27.03.2009 Package-III:HCC ltd. 27.03.09 <b>E&amp;M Main Works:</b> Package-I : BHEL Ltd. on 04.02.2010 Package-II: BHEL Ltd. on 27.02.2012 Package-III:Hyosung Corporation on 28.02.2012 Package-IV: SudkabelGmbh on 27.05.2011 Package-V: Schneida Electric Ltd. on 21.11.2013. <b>Transmission Works:</b> Joyti Structures &amp; Gammon (India) JV on 12.08.2010 (Ammended on 10.6.2013)</p>	<p><b>Dam (136m high and 239m long):-</b> 69.913 lac cum excavation out of 71.177 lac cum is completed (69.87%). <b>Desilting chamber (4 nos. each of 330 m length x 18m width x 24 m depth):-</b> Excavation/ Concreting completed (100%). <b>HRT (10m diameter, 8.9 km long):-</b> Excavation and lining completed (100%). <b>Surge Shaft (24.5m diameter 128.5m height):-</b> Boring &amp; lining completed (100%). <b>Pressure Shaft (2nos. Each of 6m diameter 433m long and 6 penstocks of 3.32m diameter):-</b> 99.81% works completed. <b>Power House (236.5m x 22.9m x 53m size):-</b>Excavation completed. Concreting 32,300 cum out of 33,300 cum completed (99.99%). <b>TRT (10.0 m diameter and 1182.20m long):</b> Excavation and lining completed. <b>E&amp;M Works:-</b>Box-up of U#1 &amp; U#2 is in progress and rest of units are in various stages of construction (94.37%). <b>Cumulative Physical Progress is 86.84%.</b></p> <p><b>Critical:</b> Movement &amp; subsidence at right bank hill. Completion of dam works.</p>
2.	<p><b>Punatsangchhu-II</b> 6x170=1020 MW PHPA, Bhutan Date of TEA: 30.04.2010 Broad Features : Dam – 86m High, 213.5m long, concrete gravity HRT- 11m x 8.585 km Pressure Shaft: 3 nos. 5.5mx997m each Surge Shaft:31 m x137m TRT: 11.0m x3163m P.House-Underground Turbine- Vertical Francis SWYD- 400 kV Original Commissioning Schedule: June' 2017</p>	<p><b>Civil Works:</b> Package- CI : JP Associate Ltd. on 25.07.2011 Package-CII: Gammon India Ltd on 25.07.2011 Package-CIII: JP Associate Ltd. on 25.07.2011 <b>E&amp;M Main Works:</b> Package-I: BHEL Ltd. on 18.07.2012 Package-II: BHEL Ltd. on 7.05.2013 Package-III: Hyosung Corporation on 7.05.2013 Package-IV:LS Cables &amp; System Ltd. on 7.05.2013 <b>Transmission Works:</b></p>	<p><b>Dam (86m high and 213.5m wide):-</b> Excavation completed. Adverse geological situation faced at the left bank of the dam. Conc.8.311 lakh cum completed out of 9.08 lakh cum. (87%) <b>Desilting Chamber:-</b> Excavation completed and lining 147769 cum out of 153176 cum completed. (97.50%) <b>HRT (11m diameter, 8.58 km long):-</b> Excavation in benching completed, overt lining completed and invert lining 6294 m out of 6314 m completed. (98.98%) <b>Surge Shaft (31m diameter 137 m height):-</b> Excavation and lining completed. <b>Pressure Shaft:-</b>Erection &amp; conc. of Steel Liner 1236 M completed out of 1454 M. (93.70%)</p>

Sl. No.	Name of Project / Capacity(MW)/Executing Agency/Date of CEA clearance / Approval / Broad Features/Commissioning Schedule	Award of works	Broad Present Status
	<p><b>Anticipated commissioning schedule: 2022-23 (Likely to shift due to effect of floods on E&amp;M equipments)</b></p>	<p>Bhutan Power Corp.Ltd on 21.03.2013 (on deposit work basis)</p>	<p><b>Power House (236m x 23m x 51m size):-</b>  M/C Hall Excavation completed and Benching from EL 582 m to EL 555.50 m completed . Erection of D/T liners for U# 2&amp;3 completed and for U# 1,4,5 &amp;6 is in progress. Transformer hall excavation completed. (76.70%)  <b>TRT (11m diameter 3.3 km long):-</b>  Heading Excavation completed. 39 m overt conc. from face-V and 1250m invert lining from face-III is also completed. (93%)  <b>E &amp; M Works:</b> Erection and Commissioning of EOT crane has been completed. (78.71%)  <b>Cumulative Physical Progress is 87.52%.</b>  <b>Critical:</b>  - Restoration &amp; completion of downstream Surge gallery works.  - E&amp;M works.</p>

## Chapter-7

## Financial Status of Under Construction H.E.P.

Sl. No.	Name of project/ State	Capacity (MW)	Benefits (MW)	Cost	Ant .Cost.	Total Expend. Upto Mar'18	Total Expend. Upto Mar'19	Total Expend. Upto (Mar' 20)	Total Expend. Upto (Month)	Expend. During 2020-21
	(State)			(PL)	(PL)					
<b>Under Execution</b>										
<b>Central Sector</b>										
1	Pakai Dul (CVPPPL) J&K	4x250	1000	8112.12 (03/2013)	8112.12 (03/2013)	993.93	1086.32	1337.36	1565.12 (Sept.,20)	227.76 (Sept.,20)
2	Parbati -II(NHPC) H.P.	4x200	800	3919.59 (12/2001)	9997.11 (04/2019)	6670.12	7277.60	7876.76	8451.59 (Sep.,20)	574.83 (Sep.,20)
3	Tehri PSP (THDC), Uttarakhand	4x250	1000	1657.60 (12/2005)	5024.35 (02/2019)	2540.27	2792.49	3374.95	3614.66 (Sept.,20)	239.71 (Sept.,20)
4	Tapovan Vishnugad (NTPC) Uttarakhand	4x130	520	2978.48 (03/2004)	5867.38 (04/2019)	3521.00	3938.20	4465.27	4610.76 (Aug,20)	145.49 (Aug,20)
5	Lata Tapovan(NTPC) Uttarakhand	3x57	171	1527.00 (07/2012)	1801.07 (NA)	148.00	149.16	148.91	149.21 (Aug, 20)	0.30 (Aug, 20)
6	Vishnugad Pipalkoti (THDC) Uttarakhand	4x111	444	2491.58 (03/2008)	3860.35 (02/2019)	1393.66	1604.36	1936.99	2039.32 (Sept,20)	102.33 (Sept,20)
7	Ramam-III (NTPC) West Bengal	3x40	120	1381.84 (NA)	1592.34 (NA)	322.00	447.75	517.86	592.11 (Aug,20)	74.25 (Aug,20)
8	Subansiri Lower (NHPC) Ar. Pradesh/Assam	8x250	2000	6285.33 (12/2002)	20368.90 (01/2020)	9966.92	10749.37	12157.04	12482.40 (Aug,20)	325.36 (Aug,20)
9	Kameng (NEEPCO) Ar. Pradesh	4x150	300	2496.90 (03/2004)	6179.96 (03/2015)	6424.41	7120.47	7945.62	8123.12 (Sept,20)	177.50 (Sept,20)
10	Naitwar Mori (SJVN) Uttarakhand	2x30	60	648.33 (10/2016)	648.33 (10/2016)	100.37	198.68	355.65	393.69 (Aug,20)	38.04 (Aug,20)
11	Teesta St. VI (NHPC) Sikkim	4x125	500	5748.04 (07/2018)	5748.04 (07/2018)		897.50		920.00 (Aug,20)	920.00 (Aug,20)
12	Ratle J&K	x205 + 1x3	850	5517.02 (NA)	5281.94 (Nov,18)	1451.00 (Mar-16)			1451.00 (Mar-16)	
13	Kiru (CVPPPL) J&K	4x156	624	4287.59 (9/2014)	4287.59 (9/2014)		128.10	305.35	363.65 (Sept.,20)	58.30 (Sept.,20)
<b>Sub Total: Central Sector</b>			<b>8389</b>	<b>42763.83</b>	<b>78769.48</b>					
<b>State Sector</b>										
14	Parnai J&K	3x12.5	37.5	640.86 (NA)	640.86 (NA)	136.50	189.62	216.71	216.71 (Mar,20)	0.00
15	Lower Kalnai J&K	2x24	48	576.87 (NA)	576.87 (NA)	87.94 (Dec-17)			87.94 (Dec,17)	
16	Uhl-III H.P.	3x33.33	100	431.56 (09/2002)	1281.52 (12/2012)	1459.21 (Feb-18)	1602.78 (Feb-19)		1810.81 (Nov,19)	
17	Sawara Kuddu H.P.	3x37	111	558.53 (03/2003)	1181.90 (03/2012)	1232.00	1609.98	1648.31	1655.92 (July,20)	7.61 (July,20)
18	Shontong Karcham H.P.	3x150	450	2807.83 (07/2011)	2807.83 (07/2011)	657.56	918.05	1090.20	1120.70 (July,20)	30.50 (July,20)
19	Vyasi Uttarakhand	2x60	120	936.23 (02/2010)	1581.01 (2019)	430.67	825.73	1213.14	1359.55 (Sept.,20)	146.41 (Sept.,20)
20	Shahpurkandi Punjab	33+3x33+1	206	1835.50 (NA)	1938.74 (NA)	650.00 (Mar-18)	729.96	1062.81	1065.45 (Aug,20)	2.64 (Aug,20)
21	Koyna Left bank PSS Maharashtra	2x40	80	245.02 (NA)	1403.77 (NA)	334.59 (Mar-17)			354.01 (Mar,19)	
22	Indrasagar Polavaram (PPA) Andhra Pradesh	12x80	960	3013.68 (2011)	5338.95 (2017)	608.74	758.71	765.55	765.55 (Mar, 20)	0.00
23	Pallivasal (KSEB) Kerala	2x30	60	283.19 (1999)	550 (2018)	259.35	302.36	355.67	363.42 (Aug,20)	7.75 (Aug,20)
24	Thottiyar (KSEB) Kerala	1x30 + 1x10	40	145.47 (1999)	280 (2018)	61.08	63.61	77.20	78.27 (June,20)	1.07 (June,20)
25	Kundah Pumped Storage-I Tamil Nadu / (TANGENDCO)	4x125	500	1216.59 (2007-08)	1831.29 (2014)	136.74	221.52	300.91	342.50 (Aug,20)	41.59 (Aug,20)
<b>Sub-total: State Sector</b>			<b>2712.5</b>	<b>12262.67</b>	<b>19412.74</b>					
<b>Private Sector</b>										
26	Sorang H.P.	2x50	100	586.00 (2006)	586.00 (2006)	1380.00 (Jun-17)			1380.00 (Jun-17)	
27	Tidong-I H.P.	2x50	100	940.00 (06/2018)	1475.00		163.74	780.00	827.50 (July,20)	47.50 (July,20)
28	Tangnu Romai- I H.P.	2x22	44	255.00 (2006)	641.89 (2018)	329.36 (Mar-18)			329.36 (Mar-18)	
29	Bajoli Holi H.P.	3x60	180	1696.93 (NA)	2689 (NA)	1740.00 (Mar-18)	2188.00	2282.00	2766.00 (May,19)	
30	Phata Byung	2x38	76	520.00	1132.00	1135.00	1263.00		1263.00	

	Uttarakhand			(2007)	(NA)	(Dec-17)	(Dec-18)		(Dec-18)	
31	Singoli Bhatwari	3x33	99	666.47	2168.00	1474.00	1741.00	2131.00	2133.00	2.00
	Uttarakhand			(2008)					(Aug,20)	(Aug,20)
32	Maheshwar	10x40	400	1569.27	8121.00				5443.00	
	M.P.			(1996-97)	(NA)				(Sept.16)	
33	Rangit-IV	3x40	120	726.16	1692.60	818.44			818.44	
	Sikkim			(NA)	(06/2016)	(Jun-17)			(Jun-17)	
34	Bhasmey	2x25.5	51	408.50	746.01	353.00			353.00	
	Sikkim			(NA)	(03/2018)	(Jun-17)			(Jun-17)	
35	Rangit- II	2x33	66	496.44	496.44	125.76	126.83		126.83	
	Sikkim			(2011-12)	(2011-12)	(Feb-18)	(June-18)		(June-18)	
36	Rongnichu	2x48	96	491.32	1453.34	126.53	1085.00	1256.39	1256.39	
	Sikkim			(NA)	(NA)	(Mar-18)	(Mar.19)	(Nov,19)	(Nov,19)	
37	Panan	4x75	300	1833.05	2671.00	165.00	170.00	179.00	179.00	
	Sikkim			(2009)			(Nov.18)	(Jun-19)	(Jun-19)	
38	Kutehr (JSW Energy (Kuteh	3x80	240	1798.13	1798.13					
	H.P.			09/2011	09/2011					
	<b>Sub-total: Private Sector</b>		<b>1872</b>	<b>10189.14</b>	<b>25670.41</b>					
	<b>Total : (Under Execution):</b>		<b>12973.5</b>	<b>65215.64</b>	<b>123852.63</b>				<b>70852.98</b>	

**Note:-** It is to mention that investment data is tentative (un-audited ) as furnished by the developers in the monthly progress reports

## Chapter 8

### Status of Environmental and Forest Clearance of Under Construction Hydro Electric Projects

Sl. No.	Name of Project	State	I.C. (No.xMW)	Benefits (MW)	Date of Clearance	Date of Env. Clearance	Date of Forest Clearance	Date of Approval
<b>A Commissioned during 2019-20</b>								
1	Kameng (NEEPCO). 2 unit commissioned.	Ar.Pr.	4x150	300.00	30.04.91	29.03.01	03.08.2000	02.12.04
			#REF!	<u>300.00</u>				
<b>B Under Execution</b>								
<b>Central Sector</b>								
1	Pakal Dul (CVPPL)	J&K	4x250	1000	03.10.06	12.07.12	15.12.15	28.10.14
2	Parbati-II (NHPC)	H.P.	2x400	800.00	03.01.01	04.06.01	04.09.2001	11.09.02
3	Tehri PSS (THDC)	Utt.	4x250	1000.00	10.10.88	19.07.90	04.06.87	18.07.06
4	Tapovan Vishnugad (NTPC)	Utt.	4x130	520.00	11.08.04	08.02.05	22.04.06	11/2006
5	Lata Tapovan (NTPC)	Utt.	3x57	171.00	08.02.06	21.02.07	30.04.07	41122.00
6	Vishnugad Pipalkoti (THDC)	Utt.	4x111	444.00	09/2006	22.08.07	28.05.13	21.08.08
7	Ramam-III (NTPC)	W.B.	3x40	120.00	12.09.06	17.08.07	18.10.08	10.09.14
8	Subansiri Lower (NHPC)	Ar. Pr./Asm.	8x250	2000.00	13.01.03	16.07.03	24.06.2004	09.09.03
9	Kameng (NEEPCO)	Ar. Pr.	4x150	300.00	30.04.91	29.03.01	03.08.2000	02.12.04
10	Naitwar Mori (SJVN)	Uttarakhand	2x30	60.00	02.03.10	16.06.2016	05.08.2016	16.10.17
11	Teesta St. VI	Sikkim	4x125	500.00	-	21.09.06	25.04.08	27.12.06
12	Ratle (Ratle Hydro) #	J&K	4x205+1x30	850.00	-	12.12.12	27.04.12	19.12.12
13	Kiru (CVPPL)	J&K	4x156	624.00		24.06.16	19.05.16	08.03.19
	<b>Sub-total (Central Sector):</b>			<u><b>8389.00</b></u>				
<b>State Sector</b>								
14	Parnai (JKSPDC)	J&K	3x12.5	37.50	11.12.1992	24.12.2010	17.05.2013	25.10.2013
15	Lower Kalnai (JKSPDC)	J&K	2x24	48.00	16.08.2013	22.08.2014		16.08.2013
16	Uhl-III	H.P.	3x33.33	100.00	19.09.02	15.11.02	20.12.02	26.09.03
17	Sawara Kuddu	H.P.	3x37	111.00	June, 07	May, 07	June, 06	June, 07
18	Shongtong Karcham	H.P.	3x150	450.00	16.8.12	19.05.11	22.03.11	-
19	Vyasi	Uttarakhand	2x60	120.00	25.10.2011	22.04.10	14.10.13	25.10.2011
20	Shahpurkandi	Punjab	3x33+3x33+1x8	206.00	08/2009	18.11.81	Not Reqd.	04.05.11
21	Koyna Left Bank PSS	Mah.	2x40	80.00	-	16.05.07	Not Reqd.	20.02.04
22	Indrasagar Polavaram (PPA)	Andhra Pr.	12x80	960.00	21.07.2010	28.07.10	21.07.10	25.02.09
23	Pallivasal Extn.	Kerala	2x30	60.00	31.01.07	Not Reqd.	11.07.07	31.01.07
24	Thottiyar	Kerala	1x30 + 1x10	40.00	05.06.08	Not Reqd.	11.07.07	05.06.08
25	Kundah Pumped Storage-I (T)	Tamil Nadu	4x125	500.00	15.02.18	08.05.07	27.11.08	03.12.08
	<b>Sub-total (State Sector):</b>			<u><b>2712.50</b></u>				
<b>Private Sector</b>								
26	Sorang	H.P.	2x50	100.00	-	07.09.06	Nov, 06	June, 06
27	Tidong-I	H.P.	100.00	100.00	-	18.06.08	18.06.08	23.07.07
28	Tangnu Romai- I	H.P.	2x22	44.00	-	01.05.09	19.01.10	30.11.07
29	Bajoli Holi	H.P.	3x60	180.00	-	24.01.11	08.07.11	30.12.11
30	Phata Byung	Uttarakhand	2x38	76.00	-	01.05.09	-	30.11.07
31	Singoli Bhatwari	Uttarakhand	3x33	99.00	-	24.08.07	16.01.09	11.07.08
32	Maheshwar	M.P.	10x40	400.00	-	07.01.94	Not Reqd.	29.09.06
33	Rangit-IV	Sikkim	3x40	120.00	-	16.05.07	26.12.07	06.07.07
34	Bhasmey	Sikkim	2x25.5	51.00	-	15.05.07	13.09.10	-
35	Rangit- II	Sikkim	2x33	66.00	-	16.04.10	22.10.10	10.2.10
36	Rongnichu	Sikkim	2x48	96.00	-	04.04.07	18.05.09	01.10.08
37	Panan	Sikkim	4x75	300.00	-	02.01.07	21.09.10	07.03.11
38	Kutehr	H.P.	3x80	240.00		05.07.11	19.02.13	31.03.10
	<b>Sub-total (Private Sector):</b>			<u><b>1872.00</b></u>				
	<b>Total : Under Execution</b>			<u><b>12973.50</b></u>				

## Chapter 9

### Status of Civil Package Award (First Package) of Under Construction Hydro Electric Projects

Sl. No.	Name of Project	State	Capacity (MW)	Benefits	Date of CCEA/ Investment	Date of letter of award
<b>Central Sector</b>						
1	Pakal Dul(CVPPL)	J&K	4x250	1000.00	28.10.14	21.02.2018
2	Parbati-II (NHPC)	H.P.	4x200	800.00	11.09.02	09/2002
3	Tehri PSP	Uttarakhand	4x250	1000.00	18.07.06	23.06.2011
4	Tapovan Vishnugad (NTPC)	Uttarakhand	4x130	520.00	11/06	11/2006
5	Lata Tapovan (NTPC)	Uttarakhand	3x57	171.00	08/2012	17.08.2012
6	Vishnugad Pipalkoti (THDC)	Uttarakhand	4x111	444.00	21.08.08	17.01.2014
7	Ramam-III	W.B.	3x40	120.00	10.9.14	10.09.2014
8	Subansiri Lower (NHPC)	Ar.Pr./ Assam	8x250	2000.00	09.09.03	19.12.2003
9	Kameng (NEEPCO) (2 units in operation, 2 units under construction)	Ar. Pr.	4x150	300.00	02.12.04	08.12.2004
10	Naitwar Mori (SJVN)	Uttarakhand	2x30	60.00	16.10.2017	05.12.2017
11	Teesta St. VI	Sikkim	4x125	500.00	08.03.19	03/2007
12	Ratle (Ratle Hydro) #	J&K	4x205+1x30	850.00	19.12.12	04.07.2013
13	Kiru (CVPPL)	J&K	4x156	624.00	08.03.2019	24.02.2020
<b>Sub-total (Central Sector):</b>				<b>8389.00</b>		
<b>State Sector</b>						
14	Parnai (JKSPDC)	J&K	3x12.5	37.50	21.10.2013	25.10.2013
15	Lower Kalnai (JKSPDC)	J&K	2x24	48.00	16.08.2013	12.09.2013
16	Uhl-III	H.P.	3x33.33	100.00	19.09.02	02.04.2003
17	Sawara Kuddu	H.P.	3x37	111.00	06/07	17.07.2007
18	Shongton Karcham	H.P.	3x150	450.00	16.08.12	04.08.2012
19	Vyasi	Uttarakhand	2x60	120.00	25.10.11	10.12.2013
20	Shahpurkandi	Punjab	3x33+3x33+1x8	206.00	04.05.11	11.02.2013
21	Koyna Left Bank PSS	Mah.	2x40	80.00	20.02.04	20.06.2007
22	Indrasagar Polavaram (PPA)	Andhra Pr.	12x80	960.00	21.02.2012	20.12.2017
23	Pallivasal	Kerala	2x30	60.00	31.01.07	31.01.2007
24	Thottiyar	Kerala	1x30 + 1x10	40.00	05.06.08	22.12.2008
25	Kundah Pumped Storage-I (TAI)	Tamil Nadu	4x125	500.00	03.12.08	15.02.2018
<b>Sub-total (State Sector):</b>				<b>2712.50</b>		
<b>Private Sector</b>						
26	Sorang	H.P.	2x50	100.00	06/06	06/2007
27	Tidong-I	H.P.	100.00	100.00	23.07.07	07.11.2008
28	Tangnu Romai- I	H.P.	2x22	44.00	2014-15	14.06.2010
29	Bajoli Holi	H.P.	3x60	180.00	30.12.11	29.05.2013
30	Phata Byung	Uttarakhand	2x38	76.00	06.10.08	12.04.2008
31	Singoli Bhatwari	Uttarakhand	3x33	99.00	11.07.08	20.06.2008
32	Maheshwar	M.P.	10x40	400.00	30.12.96	22.02.2097
33	Rangit-IV	Sikkim	3x40	120.00	06.07.07	22.11.2007
34	Bhasmey	Sikkim	2x25.5	51.00	Dec-08	12.04.2010
35	Rangit-II	Sikkim	2x33	66.00	10.02.10	24.10.2011
36	Rongnichu	Sikkim	2x48	96.00	01.10.08	07.04.2010
37	Panan	Sikkim	4x75	300.00	07.03.11	22.02.2014
38	Kutehr (JSW Energy (Kutehr)Lt	H.P.	3x80	240.00	31.03.10	20.10.2019
<b>Sub-total (Private Sector):</b>				<b>1872.00</b>		
<b>Total - Under Execution:</b>				<b>12973.50</b>		

## Chapter 9.1

<b>Ordering Status of TG sets for Under Construction Hydro Electric Projects</b>					
<b>Summary- Units Ordered</b>					
<b>Sector</b>	<b>Benefits</b>	<b>Capacity Ordered</b>			<b>Not yet ordered</b>
	<b>(MW)</b>	<b>BHEL</b>	<b>Others</b>	<b>Total Ordered</b>	
<b>Central Sector</b>	<b>8389.00</b>	<b>2355.00</b>	<b>6034.00</b>	<b>8389.00</b>	<b>0.00</b>
<b>State Sector</b>	<b>2712.50</b>	<b>426.00</b>	<b>826.50</b>	<b>1252.50</b>	<b>1460.00</b>
<b>Private Sector</b>	<b>1872.00</b>	<b>400.00</b>	<b>1172.00</b>	<b>1572.00</b>	<b>300.00</b>
<b>Total: Under Execution</b>	<b>12973.50</b>	<b>3181.00</b>	<b>8032.50</b>	<b>11213.50</b>	<b>1760.00</b>



## Chapter 9.2

### Ordering Status of TG sets of Under Construction Hydro Electric Projects

Sl. No.	Name of the Project/State	Capacity (No.x MW)	Benefits (MW)	Make/Supplier of TG set	Date of Order
<b>Central Sector</b>					
<b>BHEL Units</b>					
1	Parbati-II (NHPC),(H.P.	4x200	800.00	BHEL	24.12.02
2	Tapovan Vishnugad (NTPC), Utt.	4x130	520.00	BHEL	01/2008
3	Lata Tapovan, Uttarakhand	3x57	171.00	BHEL	12/2012
4	Vishnugad Pipalkoti (THDC)	4x111	444.00	BHEL	18.11.14
5	Kameng (NEEPCO), Ar. Pr. (2 units in operation, 2 units under construction)	4x150	300.00	BHEL	03.12.04
6	Ramam-III (NTPC)	3x40	120.00	BHEL	10.09.14
<b>Sub-total- BHEL</b>			<b>2355.00</b>		
<b>Other Units</b>					
7	Tehri PSP (THDC)	4x250	1000.00	Alstom, France	23.06.11
8	Subansiri Lower (NHPC), Ar. Pr.	8x250	2000.00	Alstom, France & India	11.02.05
9	Naitwar Mori (Uttarakhand)	2x30	60.00	Voith Hydro Pvt. Ltd.	20.07.18
10	Teesta St. VI, (Sikkim)	4x125	500.00	Alstom, India	04/2009
11	Pakal Dul(J&K)	4x250	1000.00	Voith Hydro Pvt. Ltd.	01/2019
12	Ratle (J&K)	4x205+1x30	850.00	Alstom, India	31.12.12
13	Kiru (CVPPPL)	4x156	624.00	M/s Andritz Hydro Pvt. Ltd.	24.02.20
<b>Sub-total- Others</b>			<b>6034.00</b>		
<b>Sub-total (Central Sector):</b>			<b>8389.00</b>		
<b>State Sector</b>					
<b>BHEL Units</b>					
14	Uhl-III (H.P.) BVPCL	3x33.33	100.00	BHEL	15.02.07
15	Shahpurkandi, Punjab ; PSPCL	3x33+3x33+1x8	206.00	BHEL	28.02.14
16	Vyasi , Uttarakhand UJVNL	2x60	120.00	BHEL	26.03.14
<b>Sub-total- BHEL</b>			<b>426.00</b>		
<b>Chinese</b>					
17	Pallivasal, Kerala ;KSEB	2x30	60.00	Dongfang Elec.Corp., China	31.01.07
18	Thottiyar, Kerala KSEB	1x30 + 1x10	40.00	Chongqing, China	22.12.08
<b>Sub-total- Chinese</b>			<b>100.00</b>		
<b>OTHER UNITS</b>					
19	Sawara Kuddu, H.P.	3x37	111.00	Andritz Hydro, India	05.02.09
20	Koyna Left Bank PSS, Maharashtra	2x40	80.00	Litostroj Slovenia, Koncar, Croatia	16.12.10
21	Shontong Karcham, H.P.	3x150	450.00	Andritz Hydro, India	04.03.15
22	Parnai (JKSPDC) J&K	3x12.5	37.50	Andritz Hydro, India	-
23	Lower Kalnai (JKSPDC) J&K	2x24	48.00	GE Power India Pvt. Ltd.	-
<b>Sub-total- Others</b>			<b>726.50</b>		
<b>Sub-total (State Sector):</b>			<b>1252.50</b>		

Sl. No.	Name of the Project/State	Capacity (No.x MW)	Benefits (MW)	Make/Supplier of TG set	Date of Order
<b>Private Sector</b>					
<b>BHEL Units</b>					
24	Maheshwar (M.P.)	4x100	400.00	BHEL	25.06.07
<b>Sub-total- BHEL</b>			<b>400.00</b>		
<b>OTHER UNITS</b>					
25	Sorang (H.P.)	2x50	100.00	Voith Siemens, India	06/2007
26	Tidong-I, (H.P.)	100.00	100.00	Alstom, India	28.02.11
27	Tangnu Romai- I, (H.P.)	2x22	44.00	Andritz Hydro, India	17.04.13
28	Phata Byung, (Uttarakhand)	76.00 3x33	76.00 99.00	Alstom, India Voith Hydro, India	12.04.08 15.06.11
29	Singoli Bhatwari, Uttarakhand	3x40			
30	Rangit-IV, (Sikkim)	2x25.5	120.00 51.00	Andritz Hydro, India Voith Hydro, India	28.08.09 14.04.10
31	Bhasmey, (Sikkim)	2x48	96.00	Voith Hydro, India	28.09.11
32	Rongnichu, (Sikkim)	2x33	66.00		
33	Rangit-II, (Sikkim)	3x60	180.00	Gammon India Ltd.	24.03.12
34	Bajoli Holi, (H.P.)	3x80	240.00	Alstom, India	20.02.15
35	Kutehr(HP)			Andritz Hydro Pvt. Ltd., India	13.02.20
<b>Sub-total- Others</b>			<b>1172.00</b>		
<b>Sub-total (Private Sector):</b>			<b>1572.00</b>		
<b>Under Execution Total (Units Ordered):</b>			<b>11213.50</b>		
<b><u>Units not yet ordered</u></b>					
<b>Sub-total (Central Sector):</b>			<b>0.00</b>		
<b>State Sector</b>					
36	Polavaram (PPA) Andhra Pr.	12x80	960.00		
37	Kundah Pumped Storage-I (Tamil Nadu)	4x125	500.00		
<b>Sub-total (State Sector):</b>			<b>1460.00</b>		
<b>Private Sector</b>					
38	Panan, Sikkim	4x75	300.00		
<b>Sub-total (Private Sector):</b>			<b>300.00</b>		
<b>Total: (Units not yet ordered)</b>			<b>1760.00</b>		
<b>Total: Under execution</b>			<b>12973.50</b>		

## Chapter 9.3

### Status of ordering of various packages for Under Construction Hydro Electric Projects

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
<b>Under Execution</b>							
<b>Central Sector</b>							
1	Pakal Dul CVPPPL 03.10.2006/ 28.10.2014 4x250 = 1000MW	J&K NR	Civil works	Power House Package- Letter of Acceptance issued to M/s. Afcons-JP Associates JV on 21.02.2018	M/s. Afcons-Jaiprakash Associates JV	1051.00	<u>21.02.2018</u>
				Dam Pkg. Letter of Acceptance issued to M/s Jaiprakash Associates on 21.06.2018	M/s Jaiprakash Associates	2853.00	<u>21.06.2018</u>
			E&M Works	Letter of Award Issued	M/s. Voith Hydro Limited	703.63	<u>02.01.2019</u>
			H&M Works	Bids have been evaluated. The package is likely to be awarded by May'2019	-		
2	Parbati-II NHPC 12.10.1999/ 11.09.2002 4x200 = 800 MW	H.P. NR	Civil works	Lot-1: Civil & HM works for Dam and Part HRT (0-3500m)	M/s Patel-SEW JV,	322.9	<u>11.09.2002</u> <u>10.09.2007</u>
				Lot-2: Civil & HM works of HRT (3500-24733m)	M/s Himachal JV	419.89	<u>11.09.2002</u> <u>10.09.2007</u>
				<b>Contract terminated in March-12 and Fresh awarded as under.</b>			
				Lot-2A: Balance civil works of HRT by TBM	M/s Gammon-CMS JV, Mumbai	455.63	<u>13.08.2013</u> <u>12.08.2017</u>
				Lot-2B: Balance civil works of HRT by DBM and associated HM works	M/s Valecha Engg. Ltd, Mumbai	176.29	<u>21.11.2013</u> <u>20.11.2017</u>
				Lot-3: Civil & HM works of Power House, Pressure Shaft, Surge Shaft & Part HRT (24733-31525)	M/s Gammon India Ltd.	603.69	<u>13.09.2002</u> <u>13.03.2007</u>
				Lot-4: Jiwa Nallah Works	M/s BJ_Techno-HAS (JV)	56.47	<u>11.09.2002</u> <u>10.09.2007</u>
				<b>Contract terminated and Fresh awarded as under:</b>			
				Lot-4A: Balance Civil & HM works of Jiwa Nallah and associated works	M/s Coastal Projects, Noida	78.34	<u>22.06.2011</u> <u>21.04.2014</u>
				E&M works	Generating Units, EOT Crane	M/s BHEL	354.44
Main step up Transformers, Switch Yard and Electrical & Mechanical Auxiliaries	M/s BHEL	34.2	<u>24.12.2002</u> <u>23.04.2007</u>				
E&M works	Design, Manufacture, Supply, Erection , Testing & commg.	M/s BHEL	391.11	<u>29.12.2006</u> <u>02/2011</u>			
H&M works	Hydro-Mechanical Packages	M/s Om Metals-SPML (JV)	96.08	<u>26.07.07</u> <u>15.8.10</u>			
3	Tehri PSS, THDC, 18.7.06 Nov-11 (Revised CCEA) 4x250=1000 MW	Uttara. khand NR	EPC/ Turnkey Contract	i. Planning, Design and Engg. ii. Civil works iii. Supply of EM & HM (off shore) iv. Supply of E&M and HM (on shore) E&M and HM services	Consortium of M/S Alstom Hydro France and Hindustan Construction Company with M/s Alstom Hydro, France as lead partner	Total in 1843.49 E&M equip:-  Euro 62.92 million + 474.43 Cr.	<u>23.06.2011</u> <u>27.07.11</u> <u>26.01.2016</u> (Commencem ent Date)

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
							U-1: 48 Mth. U-2: 50 Mth. U-3: 52 Mth. U-4: 54 mth. (from commenc.)
4	Tapovan Vishnugad NTPC 11.08.2004/Nov, 2006 4x130 = 520 MW	Uttara khand NR	Civil works	Construction of Barrage and De- siltng chambers	M/s SSJV Projects Pvt. Ltd. and M/s ZVS, Russia	276.91	01/2007 07/2012 Contract terminated in Nov-10.
				<b>Contract terminated in November-10 and fresh award made in July-12</b>			
				Construction of Barrage and De- siltng chambers (Balance Works)	M/s Rithwik Projects Pvt. Ltd., Hyderabad.	457.57	07/2012 03/2015
				Works have been re-awarded. Details to be provided.	M/s L&T Ltd. and M/s Alpine Mayreder Bau GmbH	455.921	11/2006 08/2012
			E&M works	Power House & Penstock package	M/s Patel Engg. Pvt. Ltd.	221.28 Cr. + Euro 37.58m	05/2007 08/2012
			H&M works	Turbine generating units and associated auxiliaries	M/s BHEL	328.28 crs.	1/2008 12/12
				Manufacturing, erection & Commissioning of various gates.	M/s Om Metal Infra project Ltd.	64.19 Cr. + €1.26m	10./07 09/12
5	Lata Tapovan, NTPC Aug-2012 3x57= 171 MW	Uttara khand NR	Civil & HM works	EPC Contract	M/s L&T	780.54	17.08.2012 16.08.2017
			E&M Package		BHEL	2611.04	Dec, 12 June, 17
6	Vishnugad Pipalkoti, THDC 21.08.2008 4x111= 444 MW	Uttara khand NR	Civil & HM works	EPC Contract	M/s HCC Ltd	1597.30	17.01.2014 16.07.2018
			E&M Package	EPC Contract	BHEL	360.36	18.11.2014 17.11.2018
7	Teesta-VI NHPC 08.03.2019/ 07/2007(FC) 4x125= 500MW	Sikkim NER	Civil works	Dam, Tunnel , Power House, Surge-Shaft, Intake	<b>EPC contract To M/s Lanco Infratech Ltd.</b>	2260.00	03/2007 10/2011
			H&M works	Design Engineering Fabrication & Erection of Gates			
			E&M works	Main Plant Generating units, and auxiliaries	M/s Alstom Projects, India	568.00	04/2009
8	Subansiri Lower NHPC 07.06.2001/09.09. 03 8x250= 2000 MW	Ar.Pr/ Assam NER	Civil works	Dam/Barrage, Water conductor system	M/s BGS – SGS - Soma JV, Hyderabad	1098.32	19.12.2003 12/2009
				Power House & Tail Race civil works	M/s L & T LTD, Chennai	921.59	19.12.2003 12/2009
				Supply of CIF/CIP: Supply of all off shore equipments and material including general and specified spares.	Consortium of M/s Alstom Power Hydraulique, France And M/s Alstom Project India Ltd.	Euro 76.80 million + US\$ 6,779,760.	11.02.2005 08/2010
			E&M works	Ex-works supply of all equipment and material including general and specified spares of Indian origin.	Consortium of M/s Alstom Power Hydraulique, France and M/s Alstom Project India Ltd.	€ 23.21 million + US\$ 14,56 million + 727.97 crs	11.02.2005 08/2010
				Local transportation including port clearance and port charges and inland insurance and installation services.	M/s Alstom Project India Ltd.	1,23,74,37,486. 00	11.02.2005 08/2010
			H&M works	Supply, erection & commng. of gates	M/s Texmaco Ltd.	283.48 Cr. + Euro 2.22 M	19.06.2006 04/2010

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State <u>Region</u>	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
9	Kameng NEEPCO 12 2004/ 4x150 = 600	Ar. Pr. NER	Civil and H&M works	<b>Package-I</b> Bichom Dam & part of Bichom & Tenga tunne	M/s Patel – Unity JV, Mumbai	143.81	08.12.2004 08.02.2009
				<b>Package-II</b> Tenga Dam & part of Bichom & Tenga Tunnel & part of Tenga kimi tunnel		116.40	08.12.2004 08.02.2009
				<b>Package-III</b> P.H. civil works & part of Tenga kimi tunnel		131.65	08.12.2004 08.02.2009
				<b>Package-IV</b> Hydro-mechanical works & penstock lining.		M/s OMML & JSC-JV, New Delhi	236.14
				Diversion Tunnel (Re-awarded)	M/s SEW Coastel-JV Hyderabad	39.44	07.01.2010 07/2010
	<b>E&amp;M works</b>	<b>Package-V</b> Generating Units	M/s. BHEL, New Delhi.	241.11	03.12.2004 12/2009		
10	Ramam-III NTPC Ltd. 3x40= 120 MW	W.B. E.R.	Civil works & HM works	Approach road to right bank of barrage to access various project component, Barrage construction, Under ground de- silting chamber with SFT and 5.1 km HRT	M/s. Simplex-Apex-JV	360.83	<u>10.09.14</u> 09/2019
				Access from bridge on Rammam river to various proj. <b>components, 3.1 km HRT</b> , Surface Power House, 740 m TRC and 132 KV Switchyard.	M/s. SEW Infrastructure Ltd.	265.39	<u>12.12.14</u> <u>12/2019</u>
			<b>E&amp;M works</b>	Design, Engineering, Manufacturing, Supply, Insurance, Erection, Testing & Commissioning works for EM works EPC contract package.	M/s. BHEL	224.67	<u>19.02.2015</u> <u>11/2018</u>
11	Naitwar Mori (SJVN Ltd.) 02.03.2010 (2x30=60 MW)	Uttra khand	Civil Works	Major Civil works	M/s. Jaiprakash Associates Ltd.	370.87	<u>05.12.2017</u> <u>04.09.2021</u>
			<b>E&amp;M works</b>	-	M/s. Voith Hydro Pvt. Ltd.		<u>11.06.2018</u> 11.10.2021
			<b>H&amp;M works</b>	-	M/s GHW Pvt. Ltd.		<u>18.04.2018</u> 18.06.2022
12	Ratle GVK Ratle HEP Pvt. Ltd. (GRHEPPL) 19-12-2012 <u>4x205+1x30= 850</u> <u>MW</u>	J&K NR	<b>Civil &amp; HM Works</b>	EPC contract for Civil & HM works including infrastructure works	GVK Projects & Technical Services Ltd.	2400	<u>20.07.2012</u> 31.12.2017
			<b>E&amp;M works</b>	EPC contract for E&M Works	M/s Alstom, India	800 Cr. + Euro 600000 + USD 4200000	<u>31.12.2012</u> 31.12.2017
			<b>Review of Design of EPC Contractors</b>		Lahmeyer International (India) Pvt. Ltd.	8.30 Cr. + Euro 580000	23.03.2013

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
13.	Kiru CVPPL 13.06.2016 4x156=624 MW	J&K NR	Civil Works	Civil and HM works of DT, concrete gravity Dam, Intake, Pressure shaft, TRT and underground Power House.	M/s. Patel Engineering Ltd.	2240.27	<u>24.02.2020</u> <u>23.04.2024</u>
			HM Works	Providing all service, Model testing, transportation, testing, Commissioning of Radial Gates, Vertical Gate, Gantry Cranes, Stoplogs, Steel liner for Pressure Shaft and Trash racks.	M/s PES Engineers Pvt. Ltd.	202.10	<u>24.02.2020</u> <u>23.01.2020</u>
			E & M works	Design, Manufacture, Supply Erection, Testing & commissioning of TG, 400 KV GIS, 400 KV outdoor pothead yard equipment, Associated Accessories and Auxiliaries,	M/s Andritz Hydro Pvt. Ltd.	552.52	<u>24.02.2020</u> <u>23.07.204</u>
<b>State Sector</b>							
14	Parnai JKSPDC 21.10.2013 3x12.5= 37.5 MW	NR J&K	Civil works	EPC contract	M/s. Patel Engineering Ltd. & M/s. Alstom India.		<u>25.10.2013</u>
			E&M works	T.G. Set	M/S.Andritz Hydro, India		
15	Lower Kalnai JKSPDC 16.08.2013 2x24= 48 MW	NR J&K	Civil works	EPC contract	M/s Coastal Projects Ltd.		<u>12.09.2013</u>
			E&M works	T.G. Set	M/s. GE Power India Pvt. Ltd.		
16	Uhl-III, BVPC Ltd. 19.09.02 / ----- (TEC -2x50 MW) 3x33.3 =100	H.P. NR	Civil works  & HM Works	Neri Intake works & power channel	M/s SSJVPP Ltd. 12 <sup>th</sup> floor S.N.Tower 25/2 M.G.Road, Banglore Fresh Package awarded on 25.10.08 to: Continental Corp Project Ltd.	8.68	<u>18.04.05</u> <u>15.8.07</u>  Re-awarded on 25.10.08
				Head Race Tunnel (HRT)	M/s SSJVPP Ltd. 12 <sup>th</sup> floor S.N.Tower 25/2 M.G.Road, Banglore 560001 Package re- awarded to: Continental Corp Project Ltd.. Re- awarded to M/s Abir Infrastructure Pvt. Ltd., Gurgaon.	69.58	<u>02.04.03</u> <u>30.04.07</u>  15.10.2010
				Rana Intake Works & Power channel	M/sTRG Industries Pvt Ltd E- 461 Greater Kailash –II New Delhi	17.53	<u>26.07.05</u> <u>26.10.07</u>
				Penstock fabrication, erection	M/s PES.Engineers Pvt. Ltd. Hyderabad-500016	57.26	<u>27.05.05</u> <u>27.11.07</u>
				Power House	M/s Pilot Engg., Ludhiana	9.87	<u>19.6.2007</u> <u>12/2009</u>
				E&M works	Generating Equipment & Associated Aux, Transformers	M/s BHEL	117.36

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
17	Sawara Kuddu HP Power Corporation, 3x36.67=110	H.P. NR	Civil and H&M works	Package-I : Barrage, Power Intake, Desanding Arrangements and Gates & Hoisting Arrangements	M/s Patel Engineering Ltd.	283.49	<u>08.10.2009</u> 07.06.2012
				Package-II : Construction of HRT	M/s Aban Coastal JV	115.92	<u>17.07.2007</u> 16.07.2011
				Contract Terminated on 09.01.2014. Re-awarded on 03.11.2014 to M/s. HCC.			
			Package-III : Power House Complex, Surge Shaft, Pressure shaft, Machine Hall, Erection Bay, Transformer Cavern, Pot Head Yard, Cable Tunnel, MAT & other Tunnels and TRT	M/s Patel Engineering Ltd.	153.37	<u>04.03.2009</u> 03.06.2012	
			E&M works	Package-IV: Generating Units with associated Auxiliaries, Generator Transformers, 245 KV GIS, XLPE Cable and other power equipment	M/s Andritz Hydro Pvt.Ltd.	180.54	<u>28.04.2009</u> 27.04.2012
18	<u>Shongtong Karcham</u> H.P. Power Corpn. Ltd. Clearance: 16.08.2012/ 3x150= 450 MW	H.P. 2017-18 2017-18	Civil And H&M works	EPC Contract Package for Civil & HM works	M/s Patel Engineering Ltd.	103.24	<u>04.08.2012</u> 03.08.2017
19	Shahpurkandi, Irrigation Deptt/PSPCL 04.05.2011 3x33+3x33+1x8= 206 MW	Punjab NR	Civil works & HM works	Main Dam alongwith Two head regulators	SOMA-BUREYA Joint Venture	687.51	<u>11.02.2013</u> Oct- 2016
				Hydel Channel	M/s Gurinder Singh Contractor	90.11	<u>26.02.2013</u> Oct- 2015
			E&M works	EPC Contract	BHEL		<u>28.02.14</u>
20	Koyna Left Bank PSS WRD, Govt. of Mah. 20.02.2004 2x40 = 80 MW	Maha. WR	Civil and H&M works	Barrage, Intake tunnel, Twin lake tap, Ventilation tunnel, Power house, Intake structure ,HRT, Pressure shaft, tail surge shaft, pen stoke, TRT, Bus duct tunnel, Lower intake structure	M/s B.T. Patil-Malaxmi (JV), Pune  M/s Patel Engg. Ltd. Mumbai	131.91 Crs.  118.86 Crs.	<u>20.06.2007</u> 30.06.2013  <u>03.10.2007</u> 30.06.2016
				E&M works	Design, manufacture, testing & commissioning of TG unit and auxiliaries	M/s IVRCL Ltd. Pune <b>Turbine-</b> Litostroj Slovenia <b>Generator-</b> Koncar, Croatia	Euro 4.03 Crs + 177.99 Crs
			21	Polavaram (PPA) 21.07.10/ 25.02.09 12x80 = 960MW	Andhra Pradesh  S.R.	Civil works & HM works & E&M works	Investigation and L.P schedules etc., (Balance) &
EPC contract on TURNKEY basis.	M/s. Navayuga Engineering Company Contract terminated on 14.08.2019 & re-awarded to M/s Megha Engineering and Infrastructure Limited on 01.11.2019	3220.28 Crs  2810.88 Cr.					<u>20.12.2017</u>  <u>01.11.2019</u>
22	Pallivasal KSEB/ Not Req./31.1.2007 2x30=60	Kerala SR	Civil, H&M works and E&M works	The work was awarded to M/s ESSAR – DEC – CPPL consortium as a single package and an agreement in this regard was executed on 31.01.2007. The contractual date of completion is 48 months i.e. 01.3.2011. E&M: Dongfang Electric Corporation, China (DEC)		242.96 Crs + US\$57 million	<u>31.01.2007</u> 01.03.2011

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
23	Thottiyar KSEB 1x30 + 1x10= 40 MW	Kerala SR	Civil works	Dam, Water Conductor System, power House	M/s Coastal Projects Private Ltd- Chongqing Joint Venture, Hyderabad E&M: Chongqing, China	44.23	<u>22.12.2008</u> 19.05.2012
			H&M works	Gates, erection, commissioning		24.09	<u>22.12.2008</u> 19.05.2012
			E&M works	Planning, Engineering, Manufacture, Supply, Erection, testing & commissioning		75.68	<u>22.12.2008</u> 19.05.2012
24	Vyasi UJVNL 2x60=120 MW	Uttra khand	Civil works	Intake, Dam half portion of HRT 1.35 km.	M/s. Gammon India Ltd.	317 Crs.	
				Half porstrion of HRT 1.35 km, Surge Shaft, Penstock, Powerhouse, TRC	M/s. NPCC Contract value	114.59 Crs.	
			E&M works	EPC contract for E&M Works	M/s. BHEL	125 Crs.	<u>26.03.2014</u>
25	Kundah Pumped Storage Phase -4 x125=125 MW  Phase-I, II &III	Tamil Nadu	Civil & HM Works	Package-I: Power House HM works on the Downstream side of P/House (Phase-I).	M/s. Patel Engg., Mumbai - Package-I	346.48	<u>15.02.18</u> 15.02.22
				Package-II: Head Race Tunnel, Head Surge Shaft, Pressure Shafts, HM works on the Upstream side of P/House (Phase-I).	M/s. Kundah PSP Consortium - Package-II	321.34	<u>15.02.18</u> 15.11.21
			E & M Works	Phase -I, Package-III: 1x125 MW Phase-II: 2x125 MW. Phase-III: 1x125 MW. (Complete design, Engineering, Procurement, Manufacturing assembly, Inspection, Testing, Trans porting, Supply of complete reversible pump turbine, Generating M/c, Gen. Tx. and common accessories.including C&P system etc.,as specified at site erection ,testing and commissioning of unit)	M/s Megha Engineering Infrastructure Ltd,Hydrabad.	604.62 (Phase-I, Package-III)  756.54 (Phase-II)  401.85 (Phase-III)	<u>28.11.2019</u> 28.05.2023  <u>28.11.2019</u> 28.05.2023  <u>28.11.2019</u> 28.05.2023
<b>Private Sector</b>							
26	Sorang Himachal Sorang Power Pvt. Ltd 2x50=100 MW	H.P. NR	Civil works	Power house, and other works	M/s NCC-Maytas- SSJV Consortium	184	<u>06/2007</u>
			E&M works	Manufacturing., Supply, erection & commng. of TG units	M/s Voith Siemens, India	146	<u>06/2007</u>
27	Tidong-I M/s NSL Tidong Power Gen. Ltd. 2x50 = 100 MW	HP NR	Civil works	Construction of River diversion, barrage, intake, Desilting basins, storage reservoir & HRT (RD 0 m -905 m)	M/s SCL Infratech Ltd. Hyderabad	127.996	<u>07.11.2008</u> 06.11.2011
				Construction of HRT (RD 905 m-RD 5537 m)	M/s SCL Infratech Ltd. Hyderabad	83.327	<u>7.11.2008</u> 09/2014
				Construction of HRT (RD 5537 m -RD 8537 m)	M/s Himalaya Construction (P) Ltd.	31	<u>07.07.2011</u> 06.07.2015
				Construction of Surge Shaft, Pressure Shaft, Power House and Tail Race Channel	M/s Himalaya Construction (P) Ltd.	40	<u>07.07.2012</u> 06.06.2015



Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
			<b>E&amp;M works</b>	Supply, Installation, testing & commissioning of TG sets	M/s Alstom Projects, India	84	<u>28.02.2011</u> 27.05.2013
28	Tangu Romai-I M/s Tangu Romai Power generation 2x22= 44 MW 30.11.2007 HPSEB	HP NR	<b>Civil works</b>	Construction of Diversion Barrage, Intake, desilting, HRT, Surge Shaft, Penstock, Power House & Tail Race Channel	M/s Sai Urja Hydel Projects (P) Ltd., Shimla	164.7	<u>14.06.2010</u> 06/2014
			<b>E&amp;M works</b>	Supply, installation, T&C of TG set, Switchyard equipment & associated auxiliaries	M/s Andritz Hydro, India	56	<u>17.04.2013</u> 16.07.2015
29	Bajoli Holi M/s GMR Bajoli Holi Hydro Power Pvt. Limited 31.12.2011	HP NR	<b>Civil works</b>	Lot-I & Lot-II All Major Civil Works	M/s Gammon India Ltd.	369 +400	<u>29.05.2013</u> 30.11.2017
			<b>E&amp;M works</b>	E&M works	M/s. Alstom, India		
30	Phata Byung M/s Lanco 06.10.2008 2x38 MW = 76 MW	Uttarakh and NR	<b>Civil works</b>	Dam, water conductor System, power House	Lanco Infratech Ltd.	206	<u>12.04.2008</u> 07/2012
			<b>H&amp;M works</b>	Design, Engineering, Manufacture, Farication & Erectio,n of all hydro-mechanical equipment	M/s CIMMCO	34	<u>12.04.2008</u> 08/2012
			<b>E&amp;M works</b>	Manufacturing., Supply, erection & commng. of TG units	M/s Alstom Project, India	84	<u>12.04.2008</u> 08.2012
31	Singoli Bhatwari M/s L&T 11.07.2008 3x33 MW = 99 MW		<b>Civil works</b>	P-1 (Project Roads & Bridges)	M/s L&T DPBU	34.2214	<u>2.5.2008</u> ---
				P-2 (Dam/Barrage, Tunnels)		381.7573	<u>6.10.2008</u> ---
				P-39Power House, Tail Race Tunnel &Associated works)		87.7931	<u>20.6.2008</u> ---
			<b>H&amp;M works</b>	Supply, fabrication, Manufacturing, commissioning of Gates and Hoists	M/s General Mechanical Works Private Limited	25.45	<u>4.12.2011</u> 12/2014
				Supply, fabrication, Manufacturing, commissioning of Steel Liners	NA		
			<b>E&amp;M works</b>	Generating units and auxiliaries	M/s Voith Hydro, India	EURO 1813069 + \$ 3006954 + 963332930 + 122570000	<u>15.06.2011</u>
32	Maheshwar, SMHPCL 12 96/ 29.9.2006 (FC) 10x40= 400MW	M. P. WR	<b>Civil and HM works</b>	All civil works like dam, Power Dam, HRC, Penstock PH etc.	M/s SEW Construction –Prasad and Company Ltd.	275.0 Crs. 22.02.97	<u>22.02.1997</u> 03/2005
			<b>E&amp;M works</b>	Manuf., Supply, erection & commng. of TG units	M/s BHEL	470.5 Crs. + USD \$ 11.74 M 18.05.2001	<u>25.06.2007</u> 10/ 2009
33	Rangit-IV Jal Power Corp. Ltd. 06.07.2007/23.10. 2007(FC) 3x40 MW= 120	Sikkim NER	<b>Civil works</b>	Dam, Intake, desilting chamber Package	M/s Coastal Projects Pvt. Ltd	125.297	<u>01.02.2008</u> 46 months
				HRT Package		127.9	<u>22.11.2007</u> 47 months
				Power House, Surge-Shaft, Pressure Shaft, Switchyad & Tail race Channel		77.789	<u>23.05.2008</u> 48 months
				Road diversion Tunnel		7.938	<u>6.12.2007</u> 4 months
				Hill slopes Stabilization		M/s Bumi Engineering	19.951

Sl. No	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	State Region	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
			<b>H&amp;M works</b>	Supply , Fabrication,Assembly, testing, painting, erection of various gates and their operating equipment including accessories, auxillaries etc.	M/s Texmaco Rail & Engg. Ltd.	36.7	
			<b>E&amp;M works</b>	Package-I (Generating units and auxiliaries)	M/s Andritz Hydro, India	111.11	<u>28.08.2009</u> 12/2012
				Package-II (Balance of Plant)	M/s Siemens Ltd.	53.9	<u>14.04.2011</u> 04/2013
34	<b>Bhasmey</b> Gati Infrastructure 2x25.5 = 51 MW	<u>Sikkim</u> <u>NER</u>	<b>Civil works</b>	Dam, Tunnels , Power House, Surge Shaft, Pressure Shaft, Intake	M/s Simplex Infrastructure Ltd.	160	<u>12.04.2010</u> 11/2012
			<b>H&amp;M works</b>	N.A.			
			<b>E&amp;M works</b>	Manufacturing., Supply, erection & commng. of TG units	M/s Voith Hydro, India	93	<u>14.04.2010</u> 10/2012
35	<b>Rangit-II</b> Sikkim Hydro Power Limited 2x33= 66 MW	<u>Sikkim</u> <u>NER</u>	<b>Civil &amp;HM works</b>	EPC Contract	M/s Coastal Project Limited	220.35	<u>13.12.2011</u> 23.10.2013
			<b>E&amp;M works</b>		M/s. Gammon India Ltd.		<u>24.03.2012</u>
36	<b>Rongnichu</b> Madhya Bharat Power Corporation Ltd. 2x48= 96 MW	<u>Sikkim</u> <u>NER</u>	<b>Civil works</b>	Barrage, Desilting Basin, Tunnel , Power House, Surge Shaft, Pressure Shaft, Intake etc.	M/s SEW Infrastructure Ltd.	157.298	<u>07.04.2010</u> 05.10.2013
			<b>E&amp;M works</b>	Manufacturing., Supply, erection & commng. of TG units	M/s Voith Hydro, India	101.100	28.09.2011
37	<b>Panan</b> Himagiri Hydro Energy Pvt. Ltd. 07.03.2011 4x75= 300 MW	<u>Sikkim</u> <u>NER</u>	<b>Civil works</b>	Coffer Dam, Diversion Tunnel, Dam, Desilting Basin, Power House, Surge Shaft, Pressure Shaft, Intake etc.	M/s Essar Projects (India) Ltd..	392.40 (Excl. cost of cement, Steel, explosives)	<u>22.02.2014</u> 21.02.2018 (48 months)
			<b>E&amp;M works</b>	Manufacturing., Supply, erection & commng. of TG units	Under Award		
38	<b>Kutehr</b> M/s JSW Energy (Kutehr) Ltd. 3x80 = 240 MW 31.08.2010	<u>HP</u> <u>NR</u>	<b>Civil works</b>	Lot-1 Civil works for River diversion, Barrage,Power intake & Part of HRT.	-M/s Angelique-PCC Constorium.	567.00	<u>20.10.2019</u> 19.06.2023
				Lot-2 Civil works for balance HRT, Surge Shaft, Pr. Shaft, Steel liner, under ground power house, TRT, and Pothead yard.	-M/s MF Bumi Geotech private ltd.	507.40	<u>25.11.2019</u> <u>19.05.2023</u>
				Lot-3 Complete HM works	-M/s P.E.S. Engineers Pvt Ltd.	60.00	19.09.2019 (LOI date)
			Lot-1D Design, fabrication ,supply and erection of steel liner and pen stock.	-M/s Greyhound Engineers India Private Ltd.	18.00	19.09.2019 (LOI date)	
			<b>E&amp;M works</b>	Electro Mechanical works.	M/s Andritz Hydro Pvt. Ltd.	270.74	13.02.2020 (LOI date)

**CHAPTER – 10**

**Status of financial closure of Under Execution Private Sector H. E. Projects**

<b>I. No.</b>	<b>Name of Project, State, Capacity, Date of TEC</b>	<b>Implementing Agency</b>	<b>Financial Closure Status</b>	<b>Remarks/ Constraints</b>
<b>Under Execution</b>				
1.	Sorang H.P. 2x50 MW June, 2006	M/s Sorang Power Pvt. Ltd.	Financial closure achieved in June, 07.	
2.	Maheshwar, M.P., 10x40 MW, 30.12.96	Shree Maheshwar Hydel Power Corporation Ltd.	Financial closure achieved on 29.9.2006.	
3.	Teesta-VI, Sikkim 4x125 MW 27.12.2006	M/s Lanco Energy Pvt. Ltd.	Financial closure achieved in July, 07.	
4.	Rangit-IV, Sikkim 3x40 MW 06.07.2007	M/s Jal Power corporation Ltd.	Financial closure achieved on 25.01.2010.	
5.	Tidong-I ,H.P. 100 MW 23.07.2007	M/s Nuziveedu Seeds	Financial closure achieved on 25.03.2010.	
6.	Tangu Romai,H.P. 2x22 MW 30.11.2007	Tangu Romai Power Gen. Pvt. Ltd.	Financial closure achieved on 22.01.2010.	
7.	Phata Byung Uttarakhand 2x38 MW 06.10.2008	M/s Lanco	Financial closure achieved on 25.07.2009.	
8.	Singoli Bhatwari Uttarakhand 3x33 MW 11.07.2008	M/s L&T	Financial closure achieved on 9.5.2011.	
9.	Bhasmey, Sikkim 2x25.5= 51 MW Dec, 2008	M/s Gati Infrastructure	Financial closure achieved on 25.03.2010	
10.	Rangit Stage- II Sikkim 2x33= 66 MW 10.02.2010	M/s Sikkim Hydro Power Ventures Limited	Financial closure achieved on 15 <sup>th</sup> Jan, 2014, 31 <sup>st</sup> March 2015 (Revised).	
11.	Rongnichu,Sikkim 2x48= 96 01.10.2008	M/s Madhya Bharat Power Corporation Ltd.	Financial closure achieved. Loan agreement signed on 21.03.2011	
12.	Bajoli Holi, H.P. 3x60= 180 MW 30.12.2011	M/s GMR Bajoli Holi Hydro Power Pvt. Ltd.	Financial closure achieved. Loan agreement signed with IDBI Bank.	
13.	Ratle, J&K 4x205+1x30= 850 MW	M/s GVK Ratle HEP Pvt. Ltd. (GRHEPPL)	Financial closure achieved.	
14.	Panan, Sikkim 4x75= 300 MW 07.03.2011	Himagiri Hydro Energy Pvt. Ltd.	Financial closure with total debt of Rs. 1516.42 is tied up with PFC ((808.76 Crores), PTC (Rs. 120 Crores) & REC (Rs 587.67 Crores).	
15.	Kutehr,H.P. 3x80=240 MW	M/s JSW Energy (Kutehr) Ltd	Financial closure under Process.	

**CHAPTER - 11**

**DETAILS OF UNDER CONSTRUCTION HYDRO ELECTRIC PROJECTS (ABOVE 25 MW)  
HAVING TIME/COST OVERRUN**

As on 30.09.2020

Sl. No	Project Name/(I.C.)/ Executing Agency	State	Unit No.	Cap. (MW)	Org. Comm. Sched.	Rev. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Rev. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Reasons for time and cost over run
1	2	3	4	5	6		7	8	9		10	11	12
<b>CENTRAL SECTOR</b>													
1	Tapovan Vishnughad (4x130 = 520 MW) NTPC	Uttara khand	1 2 3 4	130 130 130 130	2012-13 2012-13 2012-13 2012-13 (Mar'13)	2015-16 2015-16 2015-16 2015-16 (Mar'16)	2021-22 2021-22 2021-22 2021-22 (Dec'21)	} 105	2978.48 (11/06)	3846.30 (01/14)	5867.38 (04/19)	2888.90 (96.99)	<ul style="list-style-type: none"> <li>➤ Heavy water ingress due to bad geology in HRT and rock fall on TBM. TBM stuck up thrice.</li> <li>➤ Flash flood in Aug'12 &amp; June, 2013 damaging coffer dam.</li> <li>➤ Termination of civil contracts for Barrage and HRT.</li> <li>➤ Cash flow issues with civil contractors..</li> </ul>
2	Lata Tapovan (3x57 = 171 MW) NTPC	Uttara khand	1 2 3	57 57 57	2017-18 2017-18 2017-18 (Aug'17)		2025-26 2025-26 2025-26 (subject to re-start of works(4 years))	} 103	1527.00 (07/12)		1801.07 (NA)	247.07 (16.18)	<ul style="list-style-type: none"> <li>➤ Flash flood during June, 2013 in Uttarakhand.</li> <li>➤ Local issues leading to non-start of works in Barrage area</li> <li>➤ <b>Hon'ble Supreme court ban on construction works since May, 2014.</b></li> </ul>
3	Rammam-III (3x40= 120 MW)	West Bengal	1 2 3	40 40 40	2019-20 2019-20 2019-20 (Sep'19)		2022-23 2022-23 2022-23 (Nov,22)	} 38	1381.84 (10/14)		1592.34 (NA)	210.50 (15.23)	<ul style="list-style-type: none"> <li>➤ Delay in getting permission for tree felling from Govt. of West Bengal for Access road from Adit-1 to Adit-2.</li> <li>➤ Cash flow issues with civil contractors.</li> <li>➤ Strike / bandh during Gorkhaland agitation in 2017.</li> </ul>
4	Kameng (4x150 = 600 MW) NEEPCO 2 units taken in operation	Central	3 4	150 150	2009-10 2009-10 (Dec'09)		2020-21 2020-21 (Mar'21)	} 135	2496.90 (03/04)		6179.96 (03/15)	3683.06 (147.50)	<ul style="list-style-type: none"> <li>➤ Change in dam parameters.</li> <li>➤ Slow progress in dam &amp; HRT due to bad geology, heavy seepage, inadequate machinery.</li> <li>➤ Flash flood in Oct. 08 and Sept. 2012.</li> <li>➤ Ingress of water in HRT.</li> <li>➤ Poor approach roads.</li> <li>➤ Contractual issues.</li> <li>➤ Shortage of aggregate.</li> <li>➤ Delay in clearance for quarry from State Govt.</li> <li>➤ Leakage from penstocks &amp; rectification of defects.</li> <li>Cash flow issues with civil contractor</li> </ul>

Sl. No	Project Name/(I.C.)/ Executing Agency	State	Unit No.	Cap. (MW)	Org. Comm. Sched.	Rev. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Rev. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Reasons for time and cost over run
1	2	3	4	5	6		7	8	9		10	11	12
5	Tehri PSS (4x250 = 1000 MW) THDC	Uttara khand	1 2 3 4	250 250 250 250	2010-11 2010-11 2010-11 2010-11 (July'10)	2015-16 2015-16 2015-16 2015-16 (Feb'16) RCE-I	2022-23 2022-23 2022-23 2022-23 (Dec'22)	143 145 147 149	1657.60 (Dec-05)	2978.86 (Apr'10)	5024.35 (02/19)	3366.75 (203.10)	<ul style="list-style-type: none"> <li>➤ Cash flow problem with contractor.</li> <li>➤ Litigation by bidders.</li> <li>➤ Poor geology.</li> <li>➤ Local agitation at Asena Quarry.</li> <li>➤ Agitation at muck disposal area.</li> <li>➤ Poor preparedness of contractor.</li> <li>➤ Revision of Lay out of machine hall due to poor geology.</li> <li>➤ Funds constraints with contractor.</li> </ul>
6	Parbati - II (4x200 = 800 MW) NHPC	Himachal Pradesh	1 2 3 4	200 200 200 200	2009-10 2009-10 2009-10 2009-10 (Sept'09)		2021-22 2021-22 2021-22 2021-22 (Mar,22)	150	3919.59 (12/01)		9394.80 (04/18)	5475.21 (139.68)	<ul style="list-style-type: none"> <li>➤ Delay in revised forest clearance.</li> <li>➤ TBM suffered extensive damage due to heavy ingress of water and slush in TBM face in Nov, 2006.</li> <li>➤ Slide in Power House area in Apr-04, Jun-06 and Feb-07.</li> <li>➤ Flash flood in 2004,2005,2010 and 2011.</li> <li>➤ Contractual issues.</li> <li>➤ Poor geology in HRT.</li> <li>➤ Cash flow issues with civil contractors.</li> </ul>
7	Subansiri Lower (8x250 = 2000 MW) NHPC	Arunachal Pradesh	1 2 3 4 5 6 7 8	250 250 250 250 250 250 250 250	2009-11 2009-11 2009-11 2009-11 2009-11 2009-11 2009-11 2009-11 (Sep'10)		2023-24 2023-24 2023-24 2023-24 2023-24 2023-24 2023-24 2023-24 (Aug'23)	156	6285.33 (12/02)		19496.34 (04/17)	13211.01 (210.18)	<ul style="list-style-type: none"> <li>➤ Delay in transfer of forest land.</li> <li>➤ Disruption of works by locals in Ar. Pradesh side.</li> <li>➤ Slope failure in Power House in Jan, 2008.</li> <li>➤ Damage to bridge on Ranganadi river.</li> <li>➤ Change in design of surge shafts to surge tunnels.</li> <li>➤ <b>All works except safety works were stalled from December, 2011 to October, 2019 due to agitation launched by Anti Dam activists in Assam against construction of Project. Work restarted w.e.f. 15.10.2019.</b></li> </ul>
8	Vishnugad Pipalkoti (4x111 = 444 MW) THDC	Uttara khand	1 2 3 4	111 111 111 111	2013-14 2013-14 2013-14 2013-14 (Jun'13)		2023-24 2023-24 2023-24 2023-24 (Dec'23)	126	2491.58 (03/08)	3860.35 (02/19)	3860.35 (02/19)	1368.77 (54.93)	<ul style="list-style-type: none"> <li>➤ CCEA approval in Aug-2008 but works could not be awarded due to Forest clearance/diversion of forest land. Forest land was acquired in January-14 and subsequently works awarded in January-2014.</li> <li>➤ Disruption of works by local people.</li> <li>➤ Cash flow problem with contractor.</li> </ul>
9	Pakal Dul (4x250= 1000 MW) CVPPL	Jammu & Kashmir	1 2 3 4	250 250 250 250	2020-21 2020-21 2020-21 2020-21		2025-26 2025-26 2025-26 2025-26	63	8112.12 (03/13)		8112.12 (03/13)	Nil	<ul style="list-style-type: none"> <li>➤ Delay in award of works due to higher bids.</li> </ul>

Sl. No	Project Name/(I.C.)/ Executing Agency	State	Unit No.	Cap. (MW)	Org. Comm. Sched.	Rev. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Rev. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Reasons for time and cost over run
1	2	3	4	5	6		7	8	9		10	11	12
					(Apr'20)		(July'25)						
10	Ratle (4x205+1x30) = 850 MW RHPPL / NHPC	J&K	1 2 3 4 5	205 205 205 205 30	2017-18 2017-18 2017-18 2017-18 2017-18		2025-26 2025-26 2025-26 2025-26 2025-26 (subject to re-start of works(5 years))	96	5517.02 (03/12)		6275.00 (09/13)	757.98 (13.73)	<ul style="list-style-type: none"> <li>➤ Works suspended since 11.7.14 due to frequent local disturbance.</li> <li>➤ Developer wanted to surrender the Project to State Govt. Govt. of J&amp;K, terminated PPA on 09.02.2017 and directed JKSPDC to take over the project.</li> <li>➤ JV of JKSPDC &amp; NHPC to be formed for implementation of project.</li> </ul>
11	Kiru (4x156=624 MW) CVPPPL	Jammu & Kashmir	1 2 3 4	156 156 156 156	2023-24 2023-24 2023-24 2023-24 (Aug,23)		2024-25 2024-25 2024-25 2024-25 (Aug,24)	12	4287.59		4287.59		<ul style="list-style-type: none"> <li>➤ Slow mobilization due to lockdown</li> </ul>
<b>STATE SECTOR</b>													
12	Parnai 3x12.5= 37.5 MW JKSPDC	Jammu & Kashmir	1 2 3	12.5 12.5 12.5	2017-18 2017-18 2017-18 (Jan'18)		2022-23 2022-23 2022-23 (Mar,23)	62	640.86 (Completion cost)		640.86 (Completion cost)	Nil	<ul style="list-style-type: none"> <li>➤ Delay in Land acquisition.</li> </ul>
13	Lower Kalnai 2x24= 48 MW JKSPDC	Jammu & Kashmir	1 2	24 24	2017-18 2017-18 (Sep'17)		2025-26 2025-26 (subject to re-start of works (4 years))	102	576.87 (12/12) (Completion cost)		576.87 (12/12) (Completion cost)	Nil	<ul style="list-style-type: none"> <li>➤ Inadequate mobilization of man &amp; machinery by Contractor.</li> <li>➤ Delay in finalization of R&amp;R Plan.</li> <li>➤ Funds constraints with contractor. Contractor under Corporate Debt Restructuring.</li> </ul>
14	Uhl-III (3x33.33 = 100 MW) BVPCL	Himachal Pradesh	1 2 3	33.33 33.33 33.33	2006-07 2006-07 2006-07 (Mar'07)		2022-23 2022-23 2022-23 (Dec,22)	189 189 189	431.56 (09/02)		1281.52 (12/12)	849.96 (196.95)	<ul style="list-style-type: none"> <li>➤ Delay in transfer of forest land.</li> <li>➤ Delay in acquisition of private land</li> <li>➤ Delay in transfer of quarry sites.</li> <li>➤ Contract for construction of HRT rescinded twice i.e. during April, 2008 &amp; July, 2010 due to slow progress and non-performance by the contractor.</li> <li>➤ Poor geology in HRT.</li> <li>➤ Leakage in Penstock in July,2018</li> <li>➤ Rupture in Penstock in May,2020</li> </ul>

Sl. No	Project Name/(I.C.)/ Executing Agency	State	Unit No.	Cap. (MW)	Org. Comm. Sched.	Rev. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Rev. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Reasons for time and cost over run
1	2	3	4	5	6		7	8	9		10	11	12
15	Sawra Kuddu (3x37 =111MW) HPPCL	Himachal Pradesh	1 2 3	37 37 37	2011-12 2011-12 2011-12 (Jan'12)		2020-21 2020-21 2020-21 (Mar,21)	112	558.53 (03/03)		1181.90 (06/09)	623.37 (111.60)	<ul style="list-style-type: none"> <li>➤ Delay in MOEF clearance.</li> <li>➤ Poor geology in HRT.</li> <li>➤ Slow progress of HRT Lining.</li> <li>➤ Contract for HRT package terminated on 9.1.14. Re-awarded in Nov,2014 to M/s. HCC.</li> </ul>
16	Shongtom Karcham (3x150 = 450 MW) HPPCL	Himachal Pradesh	1 2 3	150 150 150	2016-17 2016-17 2016-17 (Mar'17)		2024-25 2024-25 2024-25 (Mar,25)	92 94 96	2807.83 (06/11)		2807.83 (06/11)	Nil	<ul style="list-style-type: none"> <li>➤ Shifting of Army Ammunition Depot.</li> <li>➤ Disruption of works by local people.</li> </ul>
17	Pallivasal 2x30 = 60 MW KSEB	Kerala	1 2	30 30	2010-11 2010-11 (Mar'11)		2022-23 2022-23 (Dec,22)	141	222.00 (2004)		550.00 (2018)	328.00 (147.74)	<ul style="list-style-type: none"> <li>➤ Slow progress of civil works.</li> <li>➤ Delay in land acquisition.</li> <li>➤ Change in alignment of Adit to HRT.</li> <li>➤ Poor geology strata in HRT.</li> <li>➤ Works stopped by contractor since 28.1.15 to 11.04.2017 due to contractual issues.</li> <li>➤ Contract terminated on 13.09.2018. Matter in Hon'ble High Court of Kerala.</li> </ul>
18	Thottiyar (1x30+1x10)= 40MW KSEB	Kerala	1 2	30 10	2012-13 2012-13 (Apr'12)		2021-22 2021-22 (Mar'22)	119	136.79 (2007)		280 (2018)	143.21 (104.69)	<ul style="list-style-type: none"> <li>➤ Land acquisition issue.</li> <li>➤ The works of weir and approach channel stopped from 2010 to 2012 by local people.</li> <li>➤ The work stopped by Court from 12.12.2012 to April-2013.</li> <li>➤ Financial crunch with contractor.</li> <li>➤ Foreclosure of earlier contract in April,2017 and balance works re-awarded in January, 2018.</li> </ul>
19	Shahpurkandi 3x33+3x33+1x8	Punjab	1 2	33 33	2015-16 2015-16		2023-24 2023-24		1835.50 (04/08)		1938.74 (02/18)	103.24 (5.62)	<ul style="list-style-type: none"> <li>➤ Works of Dam stopped since 29.08.2014 due to inter-state dispute between states of J&amp;K &amp; Punjab on</li> </ul>

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1	2	3	4	5	6		7	8	9		10	11	12
	=206 MW, Irrigation Deptt. &PSPCL		3 4 5 6 7	33 33 33 33 8	2015-16 2015-16 2015-16 2015-16 2015-16		2023-24 2023-24 2023-24 2023-24 2023-24 (Dec, 23)	93 93	(Power Component)		(Power Component)		sharing of waters of river Ravi and Tariff.
20	Koyna Left Bank PSS 2x40 = 80 MW WRD, Maha	Maha rashtra	1 2	40 40	2014-15 2014-15 (Oct'14)		2025-26 (subject to re-start of works (4 years)	137	245.02 (1999)		1403.77 (2014)	1158.75 (472.92)	➤ Fund constraints due to increase in project cost.
21	Vyasi 2x60=120 MW, UJVNL	Uttara khand	1 2	60 60	2014-15 2014-15 (Dec'14)		2022-23 2022-23 (Apr,22)	88	936.23 (02/10)		1581.01	644.78 (68.86)	➤ Delay in award of works. ➤ Agitation by Local people.
22	Polavaram (12x80 = 960 MW) APGENCO / Irr. Deptt., A.P.	Andhra Pradesh	1 2 3 4 5 6 7 8 9 10 11 12	80 80 80 80 80 80 80 80 80 80 80 80	2016-17 2016-17 2016-17 2016-17 2016-17 2016-17 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 (Mar'18)		2023-24 2023-24 2023-24 2023-24 2023-24 2023-24 2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 (Mar,25) (subject to re-start of works)	84 84	3013.68 (2010-11 PL) (Power Component)		5338.95 (2016-17 PL) (Power Component)	2325.27 (77.15)	➤ Funds constraints ➤ Works stalled since July,2019 as Contract has been terminated by APGENCO. Contractor challenged the termination in Hon'ble High Court of Andhra Pradesh. Matter is sub judice
23	Kundah PSP (Phase-I, Phase-II & Phase-III) (4x125=500 MW) TANGEDCO	Tamil Nadu	1 2 3 4	125 125 125 125	2021-22 2021-22 2021-22 2021-22	2022-23 2022-23 2022-23 2022-23	2023-24 2023-24 2023-24 2023-24	21	1216.59	1831.29 (2014-15)		614..7 (50.52)	➤ Civil & HM works have been taken up from 05/2018 only
	<b>PRIVATE SECTOR</b>												



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1	2	3	4	5	6		7	8	9		10	11	12
24	Tidong-I 2x50 =100 MW NSL Tidong (w.e.f. 04.09.2018 Statkraft India Pvt. Ltd. Has acquired the 100% equity in the project)	Himachal Pradesh	1 2  1 2	50 50  50 50	Under 2013-14 2013-14 (Dec'13)  Under 2021-22 2021-22 (Oct'21)	Previous    New	Developer Till 04.09.2018 56  Developer 2022-23 2022-23 (Jun 22)	94   8	543.15 (01/07)  940.00 (06/18)		1286.27 (01/17)  1472.00	743.12 (136.81)  532.00 (56.59)	<ul style="list-style-type: none"> <li>➤ Delay in NOC by Projects affected Panchayats.</li> <li>➤ Suspension of works by Govt. for one year.</li> <li>➤ Funds constraints with the developer</li> </ul>
25	Tangnu Romai-I (2x22 = 44 MW) TRPGPL	Himachal Pradesh	1 2	22 22	2014-15 2014-15 (Jun'14)		2024-25 2024-25 (subject to re-start of works(4 years))	129	255.00 (01/07)		641.89 (2018)	386.89 (151.72)	<ul style="list-style-type: none"> <li>➤ Poor geology.</li> <li>➤ Weather conditions &amp; accessibility.</li> <li>➤ Financial constraints with the developer.</li> </ul>
26	Sorang (2x50 = 100 MW), HSPPL	Himachal Pradesh	1 2	50 50	2011-12 2011-12 (Nov'11)		2021-22 2021-22 (Dec'21)	133	586.00 (04/2005)		Under revision	N.A.	<ul style="list-style-type: none"> <li>➤ Poor geology.</li> <li>➤ Bad weather conditions, difficult &amp; poor accessibility.</li> <li>➤ Penstock cracks / leakage during filling of Water conductor System in Nov '13.</li> <li>➤ Rupture in surface penstock in Nov-15 during trial run.</li> <li>➤ Funds constraints with developer.</li> </ul>
27	Singoli Bhatwari (3x33 = 99 MW) L&T	Uttarakhand	1 2 3	33 33 33	2012-13 2012-13 2012-13 (Dec'12)		2020-21 2020-21 2020-21 (Dec,20)	96	666.47 (2008)		2168 (2019)	1501.53 (225.29)	<ul style="list-style-type: none"> <li>➤ Poor geology in HRT.</li> <li>➤ Agitation by local people.</li> <li>➤ Flash flood in June,2013.</li> </ul>
28	Phata Byung (2x38 = 76 MW), LANCO	Uttara khand	1 2	38 38	2012-13 2012-13 (Jun'12)		2023-24 2023-24 (subject to re-start of works(3 years))	141	520.00 (2013-14)		1132 (NA)	612 (117.69)	<ul style="list-style-type: none"> <li>➤ Flash flood in June,2013.</li> <li>➤ Poor geology in HRT.</li> </ul>
29	Maheshwar (10x40 = 400 MW) SMHPCL	Madhya Pradesh	1 2 3 4 5 6	40 40 40 40 40 40	2001-02 2001-02 2001-02 2001-02 2001-02 2001-02		2023-24 (subject to re-start of works(1-½ years)	264	1569.27 (96-97)		8121.00 (2016-17)	6551.73 (417.50)	<ul style="list-style-type: none"> <li>➤ R&amp;R issues</li> <li>➤ Cash flow problem with developer</li> <li>➤ PFC as lead lender have acquired majority equity i.e. 51% in the SMHPCL w.e.f. 1<sup>st</sup> June, 2016. Matter Sub-judice.</li> </ul>

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1	2	3	4	5	6		7	8	9		10	11	12
			7 8 9 10	40 40 40 40	2001-02 2001-02 2001-02 2001-02 (Mar'02)								
30	Rangit-IV HE Project (3X40 = 120 MW) JPCL	Sikkim	1 2 3	40 40 40	2011-12 2011-12 2011-12 (Jan'12)		2025-26 2025-26 2025-26 (subject to re-start of works(3-½ year)	170	726.17 (2011-12)		1692.60 (06/16)	966.43 (133.08)	<ul style="list-style-type: none"> <li>➤ Slow progress of HRT &amp; Surge Shaft works due to poor geology.</li> <li>➤ Works hampered due to earthquake in September, 2011.</li> <li>➤ Financial constraints with developer</li> <li>➤ Works stopped since October, 2013 due to paucity of funds.</li> </ul>
31	Bhasmey (2x25.5 =51 MW) Gati Infrastructure	Sikkim	1 2	25.5 25.5	2012-13 2012-13 (Jun'12)		2024-25 2024-25 (subject to re-start of works(3 years))	153	408.50 (2012-13)		746.01 (03/18)	337.51 (82.62)	<ul style="list-style-type: none"> <li>➤ Delay in award of Forest clearance</li> <li>➤ Financial constraints with developer</li> <li>➤ Works stopped since September, 2016 due to paucity of funds.</li> </ul>
32	Rongnichu (2x48 =96 MW) Madhya Bharat Pvt. Ltd.	Sikkim	1 2	48 48	2014-15 2014-15 (Jul'14)		2020-21 2020-21 (Mar,21)	80	491.32 (NA)		1453.34 (NA)	962.02 (195.80)	<ul style="list-style-type: none"> <li>➤ Land Acquisition</li> <li>➤ Poor geology.</li> </ul>
33	Bajoli Holi 3x60= 180 MW M/s GMR Bajoli Holi	H.P.	1 2 3	60 60 60	2018-19 2018-19 2018-19 (May'18)		2021-22 2021-22 2021-22 (Dec,21)	43	1696.93 (NA)		2689.00 (NA)	992.07 (58.46)	
34	Rangit-II 2x33= 66 MW Sikkim Hydro Power Ltd.	Sikkim	1 2	33 33	2015-16 2015-16 (Apr'15)		2024-25 2024-25 (subject to re-start of works(2-½ years))	119	496.44 (2011-12)		496.44 (2011-12)	Nil	<ul style="list-style-type: none"> <li>➤ Financial constraints with the developer.</li> <li>➤ Works stopped since December, 2017 due to paucity of funds.</li> </ul>
35	Panan 4x75= 300 MW Himagiri Hydro Energy Pvt. Ltd.	Sikkim	1 2 3 4	75 75 75 75	2018-19 2018-19 2018-19 2018-19		2025-26 2025-26 2025-26 2025-26	84	1833.05 (2009)		2671.00 (2018)	837.95 (45.71)	<ul style="list-style-type: none"> <li>➤ Clearance from NWLB received in December, 2015.</li> <li>➤ Clearance from NGT obtained in August, 2017</li> <li>➤ Applied for NoC from Govt. of Sikkim from National Wild Life Board angle</li> </ul>

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1	2	3	4	5	6		7	8	9		10	11	12
							(subject to re-start of works(4-½ years)						
36	Kutehr 3x80=240 MW JSW Energy (Kutehr) Ltd	Himachal Pradesh	1 2 3	80 80 80	2024-25 2024-25 2024-25 (Nov'24)		2025-26 2025-26 2025-26 (Nov'25)	12	1798.13		1798.13		➤

**Note:-** The cost figures are as furnished by the developers in the monthly progress reports. Further, the latest / anticipated cost has not been updated at the latest price level by most of the developers.