

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. 114

QUARTERLY REVIEW No. 114

जुलाई ~ सितम्बर, 2023

जल विद्युत् परियोजना प्रबोधन प्रभाग
नई दिल्ली

नवंबर-2023

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PREFACE

Present Review

This quarterly review which is **114th** in the series covers the period from **July ~ Septemebr, 2023**. The objective of this review is to provide up to date information in respect of Hydro Electric (HE) Projects above 25 MW, which are 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, contractors, suppliers of equipment and other stakeholders from time to time.

Milestone Achieved During July ~ September,2023

Details of HE Units/Projects synchronised/ Rolled/Commissioned and other major milestones achieved during the Quarter is indicated in Chapter-1.

Plan / Year wise Hydro Capacity Addition / Under Execution

Hydro Capacity Addition – Financial Year Wise Lists are placed in Chapter 2.2(a) to 2.2 (j).
Summary of Hydro Capacity Addition is in Ch. 2.2(a) (2023-32), Hydro Electric Projects Under Execution – Year wise Lists are placed in Chapter 2.2(b) to 2.2(i).

Growth of Installed Capacity, Hydro Capacity Addition

A Graphical representation of Trends & Growth of Installed Capacity, Hydro Capacity Addition of Hydro-Thermal-Nuclear HEPs during Plans/Years is placed in Chapter 3 & 4.

Sanctioned Hydro Electric Projects

A Sector wise list of Sanctioned H.E. project Under Execution is placed in Chapter 5.

Status of Sanctioned Hydro Electric Projects

Broad present status of HE projects commissioned during the financial year & Under Execution is given in Chapter 6.

Financial Status of Hydro Electric Projects

Financial status of HE projects supplied by project authorities (unaudited) is given in Chapter 7.

Status of Environment & Forest Clearances of H.E. Projects.

The status of Environmental & Forest clearance of HE projects is given in Chapters 8.

Dates of Award of First Civil Package

The date of award of First Civil Package for HE projects under execution is indicated in Chapter 9.

Ordering Status of TG set.

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

ALL INDIA POWER SECTOR INSTALLED CAPACITY (AS ON 30.09.2023)

Installed Capacity (IC)	MW	Percentage of total IC
Thermal (Coal, Lignite, Gas & Diesel)	239292.91	(56.25%)
Renewable		
a) Large hydro (above 25MW)	46850.17	(11.01%)
b) Other Renewables (solar, wind, biomass small hydro etc.)	131783.39	(30.97%)
Nuclear	7480	(1.75%)
TOTAL (IC)	425406.47	

Sector wise Hydro Capacity under Execution: A hydro capacity (from hydro projects >25 MW) of **18033.5 MW** is under execution. Sector wise summary is given as under: -

Sector	Under Active construction		Presently stalled		Under Execution (MW)	
	Nos	MW	Nos	MW	Nos	MW
Central	17	12116	1	171	18	12287.00
State	13	3091.5	2	128	14	3219.5
Private	3	1590	6	937	9	2527
Total:	33	16797.5	9	1236	42	18033.5

Monitorable Targets for Hydro Capacity Addition for the year 2023-24:

Monitorable Targets for hydro capacity addition for the year 2023-24 is **2880 MW** (2060 MW in the Central Sector, 100 MW in State Sector and 720 MW in Private Sector). Details are as under: -

Sl. No.	Name of Project	State/ Implem. Agency	Unit No.	Capacity (MW)	Date of Commissioning during start of year(As per developer)	Latest commissioning
	Central Sector					
1	Naitwar Mori 2x30=60 MW	Uttarakhand /SJVN Ltd.	U-1 U-2	30 30	May'23 May' 23	Nov'23 Nov'23
2	Subansiri Lower 8x250=2000 MW	Arunachal Pradesh/NHPC	U-1 U-2 U-3 U-4	250 250 250 250	June'23 July'23 Aug'23 Dec'23	Mar'24 Mar'24 Slipping to 2024-25 Slipping to 2024-25
3	Parbati St. II 4X200=800 MW	Himachal Pradesh/NHPC	U-1 U-2 U-3 U-4	200 200 200 200	Mar'24 Mar'24 Mar'24 Mar'24	Not likely during 2023-24
4	Tehri PSS 4x250= 1000 MW	Uttarakhand/THDC	U-1 U-2 U-3 U-4	250 250 250 250	Aug'23 Sept'23 Nov.'23 Dec'23	Not likely during 2023-24
		Sub- total (Central):		2860	2860	560
	State Sector					
5	Pallivasal 2x30= 60 MW	Kerala/ KSEB Ltd.	U-1 U-2	30 30	June'23 June'23	Mar'24 Mar'24
6	Thottiyar 1x30 + 1x10= 40 MW	Kerala/ KSEB Ltd.	U-1 U-2	30 10	Jul'23 Nov'23	Mar'24 Mar'24
		Sub- total (State):		100	100	100
	Private Sector					
7	Tidong-I 3x50=150 MW	Himachal Pradesh/ M/s Statkraft India Pvt. Ltd.	U-1 U-2 U-3	50 50 50	June'24 June'24 June'24	Not likely during 2023-24
8	Pinnapuram 4X240+2X120= 1200 MW	M/s Greenko Energies Pvt. Ltd.	U-1 U-2 U-3 U-4 U-5 U-6	240 240 240 240 120 120	Jan'24 Jan'24 Feb'24 Feb'24 Mar'24 Mar'24	Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25
		Sub- total (Private):		1350	1350	0
Total (CS+SS+PS)				4310	4310	660

Total capacity likely to be achieved by 31.03.2024 – 660 MW

CHAPTER- 1

Milestones achieved during the Quarter July ~ September, 2023

- Guidelines for slope stability released.

CHAPTER - 2

Plan wise Hydro capacity Target Vs Achievement since 4th Plan

Plan / Year	Target (MW) (Original)	Capacity Addition (MW)	% Achieved
4th Plan (1969-74)	3518.00	1058.39	30.08
5th Plan (1974-79)	4654.00	3867.77	83.11
Annual Plan (1979-80)	548.00	550.9	100.53
6th Plan (1980-85)	4768.00	3076.05	64.51
7th Plan (1985-90)	5541.25	3828.41	69.09
Annual Plan (1990-91)	1006.50	445.5	44.26
Annual Plan (1991-92)	754.30	436	57.8
8th Plan (1992-97)	9282.15	2427.65	26.15
9th Plan (1997-02)	9817.70	4538.25	46.23
10th Plan (2002-07)	14393.20	7886	54.79
11th Plan (2007-12)	15627.00	5544	35.48
12 th Plan (2012-17)	10897.00	5479	50.28
2017-18	1305.00	795	60.92
2018-19	840.00	140	16.67
2019-20	1190.00	300	25.21
2020-21	606.00	510	84.16
2021-22	493.00	393	79.72
2022-23	1080	120	11.11
2023-24	2880.00		

CHAPTER - 2.1

Year/Plan wise Hydro Capacity Addition in the Country

S.No.	Year	Target (Original)	Capacity Addition (MW)	% Achieved	Remarks
1st Five Year Plan (1.1.51 to 31.12.55)					
1	1951		15.89		
2	1952		140.00		
3	1953		16.00		
4	1954		62.17		
5	1955		<u>146.13</u>		
	Total :		<u>380.19</u>		
2nd Five Year Plan (1.1.56 to 31.03.61)					
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>		
	Total :		<u>977.18</u>		
3rd Five Year Plan (1.4.61 to 31.03.66)					
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>		
	Total :		<u>2207.08</u>		
Annual Plans (1966-67, 67-68, 68-69)					
16	1966-67		633.48		
17	1967-68		729.70		
18	1968-69		419.99		
4th Five Year Plan (1.4.69 to 31.03.74)					
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>		
	Total :	3518	<u>1058.39</u>	30.08	
5th Five Year Plan (1.4.74 to 31.03.79)					
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>		
	Total :	4654	<u>3867.77</u>	81.11	
Annual Plan (1979-80)					
29	1979-80	548	550.90	100.18	
6th Five Year Plan (1.4.80 to 31.03.85)					
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>		
	Total :	4768	<u>3076.05</u>	64.51	

S.No.	Year	Target (Original)	Capacity Addition (MW)	% Achieved	Remarks
7th Five Year Plan (1.4.85 to 31.03.90)					
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>		
	Total :	5541.25	<u>3828.41</u>	69.09	
Annual Plans (1990-91, 91-92)					
40	1990-91	1006.5	445.50	44.26	
41	1991-92	754.3	436.00	57.8	
8th Five Year Plan (1.4.92 to 31.03.97)					
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>		
	Total :	9282.15	<u>2427.65</u>	26.15	
9th Five Year Plan (1.4.97 to 31.03.2002)					
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	2001-02	5506.7	<u>1106.25</u>		
	Total :	9817.7	<u>4538.25</u>	46.22	
10th Five Year Plan (1.4.02 to 31.03.07)					
52	2002-03	585	635.00		
53	2003-04	3740	2590.00		Highest till date.
54	2004-05	2401	1015.00		
55	2005-06	2010	1340.00		
56	2006-07	5657	2306.00		3rd Highest
	Total :	14393	7886.00	54.79	
11th Five Year Plan (1.4.07 to 31.03.12)					
57	2007-08	2423	2423		2nd Highest.
58	2008-09	1097	969		
59	2009-10	1805	39		
60	2010-11	1741	690		
61	2011-12	8561	1423		
	Total :	15627	5544.00	35.48	
12th Five Year Plan (1.4.12 to 31.03.17)					
62	2012-13	802 ★	510		
63	2013-14	1198 ★	1058		
64	2014-15	842 ★	736		
65	2015-16	1691 ★	1516		
66	2016-17	1714 ★	1659		4th Highest
	Total :	10897	5479	50.23	
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 ★	510	84.16	
71	2021-22	493 ★	393	79.72	
72	2022-23	1080 ★	120	11.11	
73	2023-24	2880 ★			

★ Targets set at the beginning of the year.

Chapter- 2.1a

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	
A. Central Sector							
1	Parbati-III NHPC, HP 4x130= 520 MW	Unit # 4	130	130	Aug- 14	22.05.2014 (A)	Commissioned
2	Rampur 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	31.07.2014(A) 12.06.2014(A) 04.12.2014(A)	Commissioned
Out side the Programme							
3	Koldam NTPC, H.P. 4x200 = 800 MW	Unit # 1 Unit # 2	200 200	200 200	Mar-15 Mar-15	31.03.2015 (A) 30.03.2015 (A)	Commissioned
	Sub- total (A):		736	736			
B. State Sector							
4	Lower Jurala 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	Nagarjuna Sagar 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.
	Sub- total (B):		210	0			
C. Private Sector							
6	Jorethang Loop 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	Teesta-III Teesta Urja, Sikkim 6x200= 1200 MW	Unit # 6	200	0	Mar-15	Slipped	- Slipped due to Financial crunch with the Developer.
	Sub- total (C):		296	0			
	Total (A+B+C)		842	736			

Out side RFD achievements:

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

Chapter- 2.1b

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	
A.	Central Sector						
1	Koldam 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)	Commissioned
2	Teesta Low Dam-IV NHPC, W.B 4x40 = 160 MW	Unit # 1 Unit # 2	40 40	40 40	2/16 3/16	14.02.2016 16.03.2016	Commissioned
3	Pare 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 Coffey Dam in June'15 and many times thereafter. Slow progress of works in Dam concreting.
	Sub- total (A):		590	480			Achieved:-480 MW
B.	State Sector						
4	Baglihar - II 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)	Commissioned
5	Kashang – I HPPCL, H.P. 1x65=65 MW	Unit # 1	65		3/16	Slipped	Slow progress of E&M works.
6	Lower Jurala 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)	Commissioned
7	Nagarjuna Sagar TR 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.
	Sub- total (B):		575	610			Achieved:-610 MW
C.	Private Sector						
8	Sorang HSPCL, H.P. 2x50 = 100 MW	Unit # 1 Unit # 2	50 50		11/11 12/11	Slipped Slipped	Unit # 1 synchronized, but could not be commissioned due to non-availability of rated discharge. Penstock ruptured on 18.11.2015.
9	Srinagar 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)	Commissioned
10	Jorethang Loop 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)	Commissioned
	Sub- total (C):		526	426			Achieved:-426 MW
	Total (A+B+C)		1691	1516			Achieved:-1516 MW
Note: 1516 MW out of 1691 MW is Commissioned during 2015-16.							

Out side RFD achievements:

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

Chapter- 2.1c

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	
A.	Central Sector						
1	Teesta Low Dam IV NHPC, West Bengal 4x40 = 160 MW	Unit # 3 Unit # 4	40 40	40 40	Jun.16 Sep.16	03.07.2016(A) 11.08.2016(A)	Commissioned
2	Pare 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	Kameng NEEPCO, Ar. Pradesh 4x150= 600 MW	Unit # 1 Unit # 2	150 150	- -	Dec.'09 Dec.'09	Slipped Slipped	Slow progress in Dam & HM works.
	Sub- total (C.S.):		490	80			
B.	State Sector						
1	Sainj 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	Kashang – I HPPCL, H.P. 1x65=65 MW	Unit # 1	65	65	May 16	10.10.2016(A)	Commissioned
3	Lower Jurala TSGENCO, Telangana 6x40= 240 MW	Unit # 5 Unit # 6	40 40	40 40	Sept.16 Nov.16	20.08.2016(A) 29.09.2016(A)	Commissioned
4	Pulichintala TSGENCO,Telangana 4x30=120 MW	Unit # 1 Unit # 2	30 30	30 -	Aug.16 Dec16	25.09.2016(A) Slipped	Commissioned Due to non-availability of water in the Dam.
5	New Umtru MePGCL,Meghalaya 2x20=40 MW	Unit # 1 Unit # 2	20 20	- -	Nov.16 Dec.16	Slipped Slipped	Slow progress of works.
6	Teesta-III Teesta Urja Ltd. Sikkim 6x200= 1200 MW	Unit #1 Unit # 2 Unit # 3	200 200 200	200 200 200	Dec.16 Jan.17 Feb.17	15.01.2017(A) 27.01.2017(A) 14.01.2017(A)	Commissioned
7	Nagarjuna Sagar TR APGENCO, Telangana 2x25= 50 MW	Unit #1 Unit #2	25 25	25 25	Aug.16 Aug.16	05.01.2017(A) 28.01.2017(A)	Commissioned
	Sub- total (B):		995	825			
C.	Private Sector						
1	Chanju-I IA Energy ; H.P. 3x12= 36 MW	Unit # 1 Unit # 2 Unit # 3	12 12 12	12 12 -	July 16 Sept.16 Dec.16	17.02.2017(A) 01.02.2017(A) Slipped	Commissioned Commissioned Slow progress of E&M works.
2	Dikchu 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	Tashiding 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.
	Sub- total (P.S.):		229	24			

Chapter- 2.1c

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

Chapter- 2.1d

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	
A.	Central Sector						
1	Tuirial NEEPCO, Mizoram 2x30 = 60 MW	Unit # 1 Unit # 2	30 30	30 30	Jun '17 Sep '17	25.08.2017(A) 28.11.2017(A)	Commissioned
2	Kishanganga NHPC, J&K 3x110 = 330 MW	Unit #1 Unit # 2 Unit # 3	110 110 110	110 110 110	Jan '18 Feb '18 Mar '18	13.03.2018(A) 21.03.2018(A) 30.03.2018(A)	Commissioned
3	Pare 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	Kameng 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
	Sub- total (A):		800	390	Total Commissioned in Central Sector : 390 MW		
B.	State Sector						
1	Sainj HPPCL, H.P. 2x50= 100 MW	Unit # 1 Unit # 2	50 50	50 50	May.17 Jun.17	04.09.2017(A) 04.09.2017(A)	Commissioned
2	Uhl - III 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	Pulichintala TSGENCO,Telangana 4x30=120 MW	Unit # 2 Unit # 3	30 30	30 30	Aug.17 Oct.17	26.10.2017(A) 01.11.2017(A)	Commissioned
4	New Umtru MePGCL, Meghalaya 2x20=40 MW	Unit # 1 Unit # 2	20 20	20 20	Apr.17 Jul.17	22.04.2017 (A) 30.06.2017 (A)	Commissioned
	Sub- total (B):		300	200	Total Commissioned in State Sector :200 MW		
C.	Private Sector						
1	Chanju-I IA Energy, H.P. 3x12 = 36 MW	Unit # 3	12	12	May.17	26.07.2017 (A)	Commissioned
2	Dikchu Sneha Kinetic Power Projects Pvt. Ltd., Sikkim, 2x48MW= 96	Unit # 1 Unit # 2	48 48	48 48	Apr.17 May.17	11.04.2017 (A) 12.04.2017 (A)	Commissioned
3	Tashiding Shiga Energy Pvt. Ltd. Sikkim 2x48.5= 97 MW	Unit # 1 Unit # 2	48.5 48.5	48.5 48.5	Jul.17 Aug.17	06.11.2017 (A) 06.11.2017(A)	Commissioned
	Sub- total (C):		205	205	Total Commissioned in Private Sector : 205 MW		
	Total (A+B+C)		1305	795	Total Commissioned during 2017-18 : 795 MW.		

Chapter- 2.1e

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	
A.	Central Sector						
1	Pare NEEPCO, Arunachal Pradesh 2x55=110 MW	Unit # 1 Unit # 2	55 55	55 55	May'18 May'18	28.05.2018 21.05.2018	Commissioned
2	Kameng 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..
	Sub- total (A):		710	110	Total Commissioned in Central Sector :110 MW		
B.	State Sector						
3	Uhl - III 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	Pulichintala TSGENCO, Telangana 4x30=120 MW	Unit # 4	30	30	Sep.18	08.09.2018(A)	Commissioned
	Sub- total (B):		130		30		
	Total (A+B)		840		140	Total Comm. 140 MW	

Chapter-2.1f

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	
A.	Central Sector						
1	Kameng 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.
	Sub- total (A):		600	300			
B.	State Sector						
2.	Uhl - III 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	Sawra Kuddu 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
	Sub- total (B):		211				
C.	Private Sector						
4.	Bajoli Holi 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.	Singoli Bhatwari L&T, Uttarakhand 2x33=99 MW	Unit #1 Unit # 2 Unit # 3	33 33 33		Mar.,20 Mar.,20 Mar.,20	Slipping to (Dec,20)	-Commissioned
6.	Sorang 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.
	Sub- total (C):		379				
	Total (A+B+C)		1190	300			

Hydro Capacity Addition during the Year 2020-21

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Commissioning		Remarks / Critical Issues
			Target	Actual	As Programmed	Actual (A)/ Anticipated	
A.	Central Sector						
1	Kameng NEEPCO, Arunachal Pradesh 4x150=600 MW	Unit # 3 Unit # 4	150 150	300	March,21 March,21	21.01.2021 11.02.2021	Commissioned Commissioned
	Sub- total (A):		300	300			
B.	State Sector						
2	Sawra Kuddu HPPCL, H.P. 3x37=111 MW	Unit #1 Unit # 2 Unit # 3	37 37 37	111	(March,21) (March,21) (March,21)	12.11.2020 05.12.2020 16.12.2020	Commissioned Commissioned Commissioned
	Sub- total (B):		111	111			
C.	Private Sector						
3.	Singoli Bhatwari L&T, Uttarakhand 2x33=99 MW	Unit #1 Unit # 2 Unit # 3	33 33 33	99	March.,20 March.,20 March.,20	19.11.2020 18.12.2020 25.12.2020	Commissioned Commissioned Commissioned
4.	Rongnichu 2x48= 96 MW* Madhya Bharat Power Corpn., Sikkim	Unit #1 Unit # 2	48 48	--	March,21 March,21	*To be commissioned in FY 2021-22 with 17 MW enhanced capacity	
	Sub- total (C):		195				
	Total (A+B+C)		606	510			

Note: 510 MW capacity addition has been achieved in FY 2020-21 out of programmed capacity of total 606 MW

Chapter -2.1 h

Hydro Capacity Addition during the Year 2021-22

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Capacity Addition		Remarks/Critical Issues
			Target	Actual	As Programmed	Actual/ Anticipated	
A.	State Sector						
1	Pallivasal KSEB, Kerala 2x30=60 MW	Unit #1 Unit # 2	30 30		December'21 December'21	2022-23 2022-23	Slipped to 2022-23
2	Thottiyar KSEB, Kerala 1x30+1x10=40MW	Unit #1 Unit # 2	10 30		December'21 December'21	2022-23 2022-23	Slipped to 2022-23
	Sub- total (A):		100 MW				
B.	Private Sector						
3	Sorang HSPCL, H.P. 2x50=100 MW	Unit #1 Unit # 2	50 50	100	June'21 June'21	23.09.2021 21.09.2021	Commissioned Commissioned
4	Bajoli Holi GMRBHHPL, H.P. 3x60=180 MW	Unit #1 Unit # 2 Unit # 3	60 60 60	60 60 60	June'21 June'21 June'21	25.03.2022 27.03.2022 28.03.2022	Commissioned Commissioned Commissioned
5	Rongnichu MBPCL, Sikkim 2x56.5=113 MW	Unit #1 Unit # 2	56.5 56.5	113	May'21 May'21	25.06.2021 30.06.2021	Commissioned Commissioned
	Sub- total (B):		393 MW	393 MW			
	Total (A+B)		493 MW				

Chapter -2.1 i

Hydro Capacity Addition during the Year 2022-23

Sl. No.	Particular	Unit Nos.	Capacity (MW)		Capacity Addition		Remarks/Critical Issues
			Target	Actual	As Programmed	Actual(A)/ Anticipated	
A	Central Sector						
1	Naitwar mori 2X30=60MW	Unit #1 Unit # 2	30 30		Dec'22 Jan'23	Mar'23 Mar'23	-
2	Subansiri Lower 8x250= 2000 MW	Unit #1 Unit #2	250 250		Jan'23 Feb'23	Slipped to 2023-24	Extended Monsoon & damage to protection wall of power house / collapse of DT-2
3	Tehri PSS 4x250= 1000 MW	Unit #1	250		Mar'23	Slipped to 2023-24	Geological constraints
	Sub total (A)		810 MW				
B	State Sector						
1	Pallivasal KSEB, Kerala 2x30=60 MW	Unit #1 Unit # 2	30 30		Mar'23 Mar'23	Slipped to 2023-24	-Extended Monsoon -Slow progress of works
2	Thottiyar KSEB, Kerala 1x30+1x10=40 MW	Unit #1 Unit # 2	10 30		Feb'23 Mar'23	Slipped to 2023-24	-Extended Monsoon -Slow progress of works
3	Vyasi 2x60=120 MW	Unit #1 Unit # 2	60 60	60 60	Apr'22 May'22	May'22 (A) April'22(A)	U#1 Commissioned on 24.05.2022 U# 2 Commissioned on 22.04.2022
	Sub- total (B):		220 MW	120 MW			
C.	Private Sector						
1	Tidong-I 2x50= 100 MW	Unit #1	50		Mar'23	Slipped to 2023-24	-Delay in clearance of transmission line -Pressure shaft misalignment issues
	Sub- total (C):		50MW				
	Total (A+B +C)		1080MW	120MW			

Chapter -2.1 j

Hydro Capacity Addition Programme for 2023-24

Sl. No.	Name of Project	State/ Implem. Agency	Unit No.	Capacity (MW)	Date of Commissioning during start of year(As per developer))	Latest commissioning
	Central Sector					
1	Naitwar Mori 2x30=60 MW	Uttarakhand /SJVNL	U-1 U-2	30 30	May'23 May' 23	Nov'23 Nov'23
2	Subansiri Lower 8x250= 2000 MW	Arunachal Pradesh/NHPC	U-1 U-2 U-3 U-4	250 250 250 250	June'23 July'23 Aug'23 Dec'23	Mar'24 Mar'24 Slipping to 2024-25 Slipping to 2024-25
3	Parbati St. II 4X200=800 MW	Himachal Pradesh/NHPC	U-1 U-2 U-3 U-4	200 200 200 200	Mar'24 Mar'24 Mar'24 Mar'24	Not likely during 2023-24
4	Tehri PSS 4x250= 1000 MW	Uttarakhand/THDC	U-1 U-2 U-3 U-4	250 250 250 250	Aug'23 Sept'23 Nov.'23 Dec.'23	Not likely during 2023-24
		Sub- total (Central):		2860	2860	560
	State Sector					
5	Pallivasal 2x30= 60 MW	Kerala/ KSEB Ltd.	U-1 U-2	30 30	June'23 June'23	Mar'24 Mar'24
6	Thottiyar 1x30 + 1x10= 40 MW	Kerala/ KSEB Ltd.	U-1 U-2	30 10	Jul'23 Nov'23	Mar'24 Mar'24
		Sub- total (State):		100	100	100
	Private Sector					
7	Tidong-I 3x50=150 MW	Himachal Pradesh/ M/s Statkraft India Pvt. Ltd.	U-1 U-2 U-3	50 50 50	June'24 June'24 June'24	Not likely during 2023-24
8	Pinnapuram 4X240+2X120= 1200 MW	M/s Greenko Energies Pvt. Ltd.	U-1 U-2 U-3 U-4 U-5 U-6	240 240 240 240 120 120	Jan'24 Jan'24 Feb'24 Feb'24 Mar'24 Mar'24	Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25 Slipping to 2024-25
		Sub- total		1350	1350	0

		(Private):				
Total (CS+SS+PS)				4310	4310	660

Total capacity likely to be achieved by 31.03.2024 – 660 MW

CH. 2.2(a)

SUMMARY**Tentative Year-wise Hydro Capacity Addition for the period 2023-24 till 2031-32**

															Stalled		Total	
Sector	2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2031-32					
	MW	Nos.	MW	Nos.	MW	Nos.	MW	Nos.	MW	Nos.	MW	Nos.	MW	Nos.	MW	Nos.	MW	Nos.
Central Sector	560	2#	2920	4#	1920	5#	3454	6	382	1	0	0	2880	1	171	1	12287	18
State Sector	100	2	1077.5	5#	1076	3#	490	2	48	1	300	1	0	0	128	2	3219.5	15
Private Sector	0	0	1350	2#	240	1#	0	0	0	0	0	0	0	0	937	6	2527	9
Total	660	4#	5347.5	11#	3236	9#	3944	8	430	2	300	1	2880	1	1236	9	18033.5	42

Note:-Presently 42 no. of hydroelectric project (above 25 MW) totaling to 18033.5 MW are under implementation (CS-18 nos.(12287 MW),SS-15 nos.(3219.5 MW),PS-9 nos. (2527 MW)). Out of these,32 no. HEPs totaling to 16797.5 MW are under active construction (CS – 17 nos. (12116 MW), SS – 13 nos. (3091.5 MW), PS – 3 nos. (1590 MW) and 9 no. HEPs totaling to 1236 MW are presently stalled.

#Polavaram, Subansiri Lower HEP are bifurcated for benefits during more than one year.

Ch. 2.2(b) – Hydro Capacity addition program for 2023-2024

			FY: 2023-24		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	Central Sector				
1	Subansiri Lower 8x250= 2000 MW	U-1 to U-2	Arunachal Pradesh/NHPC	500	
2	Naitwar Mori 2x30=60 MW	U-1 to U-2	Uttarakhand/SJVNL	60	
			Sub- total (Central):	560	
	State Sector				
3	Pallivasal 2x30= 60 MW	U-1 to U-2	Kerala/ KSEB Ltd.	60	
4	Thottiyar 1x30+1x10= 40 MW	U-1	Kerala/ KSEB Ltd.	40	
			Sub- total (State):	100	
Total (CS+SS+PS)				660	

Ch. 2.2(c) – Hydro Capacity addition program for 2024-2025

			FY: 2024-25		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	Central Sector				
1	Tehri PSS 4x250= 1000 MW	U-1 to U-4	Uttarakhand/THDC	1000	
2	Rangit-IV 3x40= 120 MW	U-1 to U-3	Sikkim/NHPC Ltd.	120	
3	Subansiri Lower 8x250= 2000 MW	U-3 to U-6	Arunachal Pradesh/NHPC	1000	
4	Parbati-II 4x200=800 MW	U-1 to U-4	Himachal Pradesh/ NHPC	800	
			Sub- total (Central):	2920	
	State Sector				
5	Kundah Pumped Storage (Phase-I, Phase-II & Phase-III) 4x125=500 MW	U-1 to U-4	Tamil Nadu/TANGEDCO	500	
6	Polavaram 12x80= 960 MW	U-1 to U-4	Andhra Pradesh/ Polavaram Project Authority	320	
7	Lower Kopili 2x55+2x2.5+1x5=120 MW	U-1 to U-5	Assam/APGCL	120	
8	Parnai 3x12.5= 37.5 MW	U-1 to U-3	Jammu & Kashmir/JKSPDC	37.5	
9	Uhl-III 3x33.33=100 MW	U-1 to U-3	Himachal Pradesh/ BVPCL	100	
			Sub- total (State):	1077.5	
	Private Sector				
10	Tidong-I 3x50= 150 MW	U-1 to U-3	Himachal Pradesh/M/s Statkraft India Pvt. Ltd.	150	

11	Pinapuram 4x240+2x120	U-1 to U-6	Andhra Pradesh/Greenko	1200	
			Sub- total (Private):	1350	
Total (CS+SS+PS)				5347.5	

Ch. 2.2(d) – Hydro Capacity addition program for 2025-2026

			FY: 2025-26		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	Central Sector				
1	Kiru 4x156=624 MW	U-1 to U-4	Jammu & Kashmir/CVPPL	624	
2	Luhri-I 2x80+2x25= 210MW	U-1 to U-4	Himachal Pradesh/SJVN	210	
3	Dhulasidh 2x33=66 MW	U-1 to U-2	Himachal Pradesh/SJVN	66	
4	Tapovan Vishnugad 4x130=520 MW	U-1 to U-4	Uttarakhand /NTPC	520	
5	Subansiri Lower 8x250= 2000 MW	U-7 to U-8	Arunachal Pradesh/NHPC	500	
			Sub- total (Central):	1920	
	State Sector				
5	Polavaram 12x80= 960 MW	U-5 to U-12	Andhra Pradesh/ Polavaram Project Authority	640	
6	Shahpurkandi 3x33+3x33+1x8= 206 MW	U-1 to U-7	Punjab/Irr. Deptt. & PSPCL	206	
7	Lower Sileru Extension (APGENCO)	U-1 to U-2	Andhra Pradesh/ APGENCO	230	
			Sub- total (State):	1076	
	Private Sector				
8	Kutehr 3x80=240 MW	U-1 to U-3	Himachal Pradesh/JSW Energy	240	
Sub- total (Private):				240	
Total (CS+SS+PS)				3236	

Ch. 2.2(e) – Hydro Capacity addition program for 2026-2027

			FY: 2026-27		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	Central Sector				
1	Kwar 4x135=540 MW	U-1 to U-4	Jammu & Kashmir/CVPPL	540	
2	Teesta- VI 4x125= 500 MW	U-1 to U-4	Sikkim/NHPC	500	
3	Ratle 4x205+1x30= 850 MW	U-1 to U-5	Jammu & Kashmir/ NHPC	850	
4	Rammam - III 3x40=120 MW	U-1 to U-3	West Bengal/ NTPC Ltd.	120	
5	Vishnugad Pipalkoti 4x111= 444 MW	U-1 to U-4	Uttarakhand/THDC	444	
6	Pakal Dul 4x250= 1000 MW	U-1 to U-4	Jammu & Kashmir/CVPPL	1000	
			Sub- total (Central):	3454	
	State Sector				
5	Shongtong Karcham 3x150= 450 MW	U-1 to U-3	Himachal Pradesh/HPPCL	450	
6	Mankulam 2x20= 40 MW	U-1 to U-2	Kerala/ KSEB Ltd.	40	
			Sub- total (State):	490	
Total (CS+SS)				3944	

Ch. 2.2(f) – Hydro Capacity addition program for 2027-2028

			FY: 2027-28		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	Central Sector				
1	Sunni Dam 4x73+1x73+1x17=382 MW	U-1 to U-6	Himachal Pradesh/SJVNL	382	
			Sub- total (Central):	382	
	State Sector				
2	Chanju-III 3x16= 48 MW	U-1 to U-3	Himachal Pradesh/HPPCL	48	
			Sub- total (State):	48	
Total (CS+SS)				430	

Ch. 2.2(g) – Hydro Capacity addition program for 2028-2029

			FY: 2028-29		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	State Sector				
1	Lakhwar Multipurpose Project (3x100=300 MW)	U-1 to U-3	Uttarakhand/UJVNL	300	
			Sub- total (State):	300	
Total				300	

Ch. 2.2(h) – Hydro Capacity addition program for 2031-2032

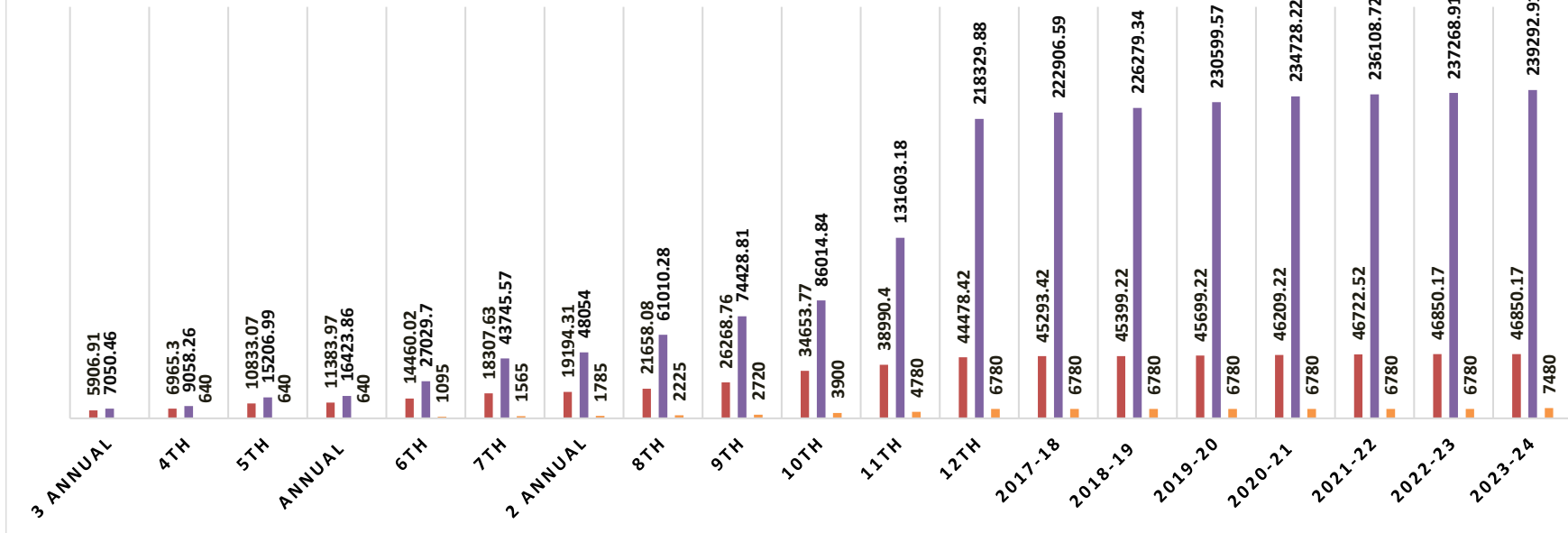
			FY: 2031-32		
Sl. No.	Name of Project	Unit No.	State/ Implem. Agency	Capacity (MW)	Remarks
	Central Sector				
1	Dibang Multipurpose Project 240x12=2880	U-1 to U-12	Arunachal Pradesh/NHPC	2880	
			Sub- total (Central):	2880	
	Total			2880	

CH. 2.2(i)					
Stalled HEPs					
Sl.	Name of Project	Unit No.	State/	Capacity	Remarks
	Central Sector				
1*	Lata Tapovan 3X57=171 MW	U-1 to U-3	Uttarakhand/NTPC	171	Infrastructure works almost completed. Hon'ble SC stayed construction of 24 HE projects in Uttarakhand including Lata Tapovan. Project is likely to be commissioned 4 years after restart of works. Work stalled since May, 2014
			Sub- total (Central):	171	
	State Sector				
2*	Koyna Left Bank 2X40=80 MW	U-1 to U-2	Maharashtra/WRD	80	Project stalled since July, 2015. The current expenditure on the project has already reached to almost original administrative approved cost level. The proposal for execution with various options (By WRD/ Through BOT/ By MSPGCL in collaboration with WRD) is under process. Project is likely to be commissioned 4 years after restart of works
3*	Lower Kalnai 2X24=48 MW	U-1 to U-2	Jammu & Kashmir/JKSPDC	48	Works on all fronts at Dam and Power House site are stalled since the contract has been terminated by JK Govt. order no. 115-PDD of 2019 dated 08.06.2019. The Balance Work stands tendered out by JKSPDC in EPC mode vide E-NIT on 24.03.2022. Technical evaluation of the bids is completed and financial bids are slated to be opened. Project is likely to be commissioned 4 years after restart of works.
			Sub- total (State):	128	
	Private Sector				
4*	Tangnu Romai 2X22=44 MW	U-1 to U-2	Himachal Pradesh/TRPG	44	Works on hold since Aug 2016 due to fund constraints with the developer. Project is likely to be commissioned 4 years after restart of works.
5*	Maheshwar 10X40=400 MW	U-1 to U-10	Madhya Pradesh/SMHPCL	400	Works suspended since Nov-11 due to cash flow problem with developer. M.P. Power Management Company Ltd. has terminated the Power Purchase Agreement with SMHPCL on 18.04.2020. The application of PFC has been admitted in NCLT on 27.09.2022 under IBC. Project is likely to be commissioned 2 years after restart of works.
6*	Bhasmey 2X25.5=51 MW	U-1 to U-2	Sikkim/Gati Infrastructure	51	Works stalled since Sept., 2016 due to funds constraints. Project is likely to be commissioned 4 years after restart of works
7*	Rangit-II 2X33=66 MW	U-1 to U-2	Sikkim/Sikkim Hydro	66	Works stalled since Dec., 2017 due to funds constraints. Project is in NCLT since 30.07.2020. Project is likely to be commissioned 3 years after restart of works
8*	Phata Byung 2X38=76 MW	U-1 to U-2	Uttarakhand/ LANCO	76	Works stalled since July, 2017 due to Financial crunch. Company undergoing corporate insolvency resolution process initiated under IBC for
9*	Panan 4X75=300 MW	U-1 to U-4	Sikkim/Himagiri	300	The permanent bridge over Mantam Lake for accessibility to Dam site is being constructed by SPWD. Project is likely to be commissioned 5 years after restart of works
			Sub- total (Private):	937	
			Total (CS+SS+PS)	1236	
* Construction is presently held up					

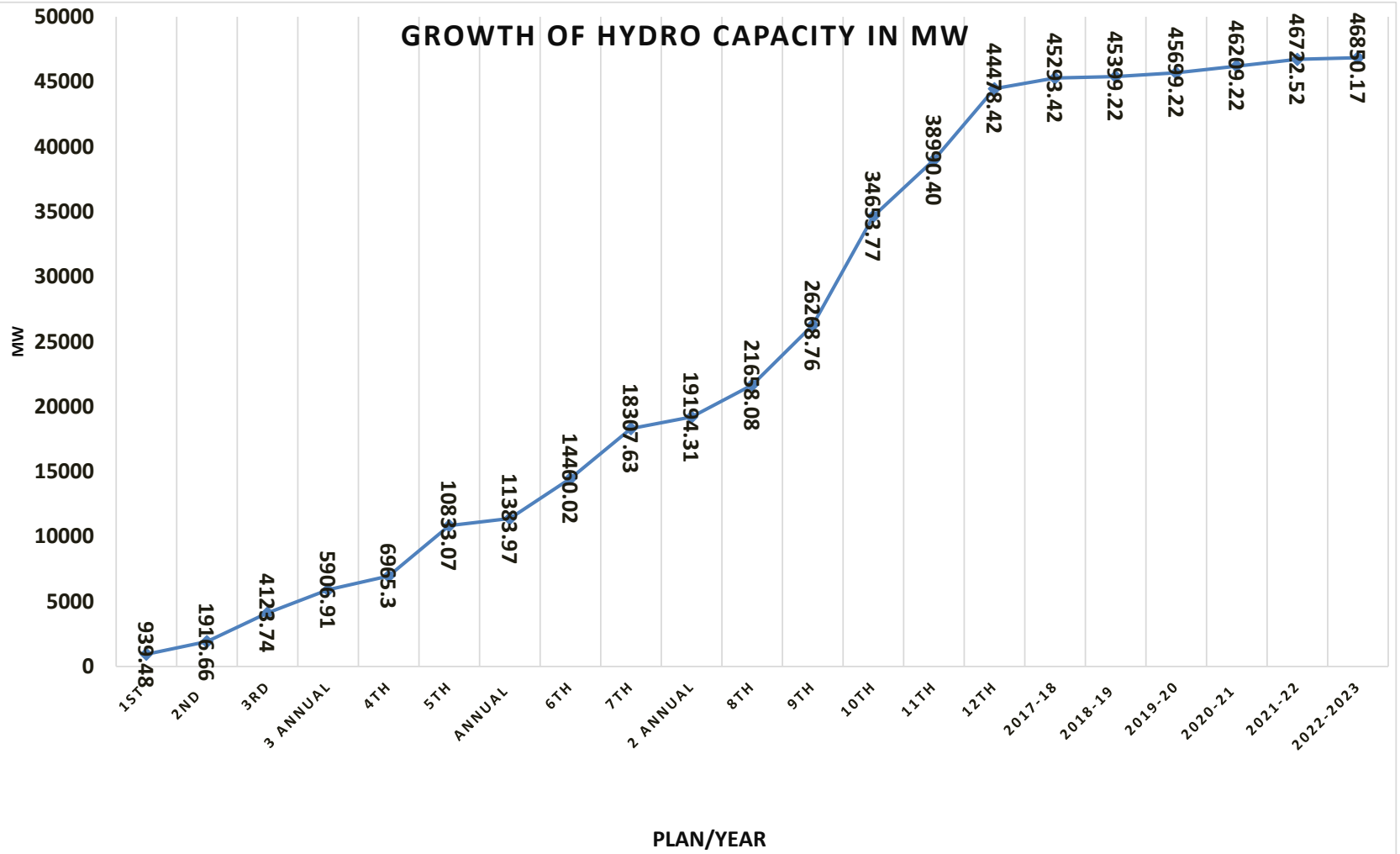
Chapter- 3

GROWTH OF INSTALLED CAPACITY (EXCLUDING RES PROJECTS))

■ Hydro ■ Thermal ■ Nuclear

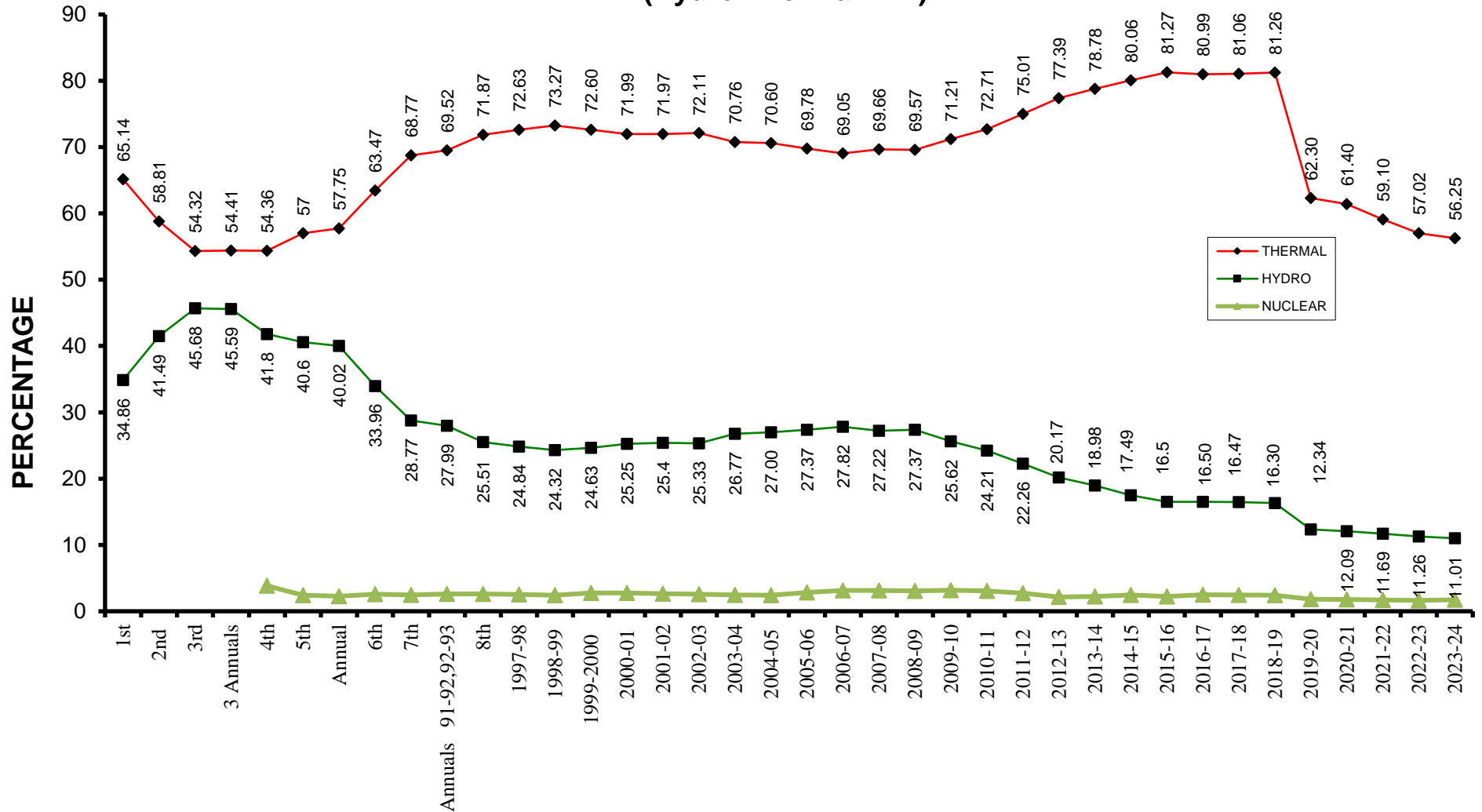


Chapter- 3.1



CHAPTER - 4

TREND OF CAPACITY ADDITION AS % OF TOTAL (Hydro Thermal mix)



Note: Till 2018-19 the percentage of Hydro and Thermal had been calculated based on total installed capacity excluding RES and since 2019-20 the percentage Hydro /Thermal has been calculated on total installed capacity including RES

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

(Excluding projects under Ministry of New & Renewable Energy)						
Sl. No.	Name of Scheme	State	I.C. (No. x MW)	Benefits (MW)	Date of Approval	Scheduled Commissioning
Central Sector						
1	Pakal Dul (CVPPL)	J&K	4x250	1000.00	28.10.14	2026-27
2	Parbati St. II (NHPC)	H.P.	4x200	800.00	11.09.02	2024-25
3	Tapovan Vishnugad (NTPC)	Uttarakhand	4x130	520.00	11/2006	2025-26
4	Subansiri Lower (NHPC)	Ar. Pr./Assam	8x250	2000.00	09.09.03	2023-26
5	Tehri PSS (THDC)	Uttarakhand	4x250	1000.00	18.07.06	2024-25
6	Lata Tapovan (NTPC)	Uttarakhand	3x57	171.00	17.07.12	2028-29*
7	Vishnugad Pipalkoti (THDC)	Uttarakhand	4x111	444.00	21.08.08	2026-27
8	Naitwar Mori (SJVN)	Uttarakhand	2x30	60.00	16.10.17	2023-24
9	Ramam-III (NTPC)	West Bengal	3x40	120.00	10.09.14	2026-27
10	Teesta St. VI (NHPC)	Sikkim	4x125	500.00	08.03.19	2026-27
11	Ratle (Ratle Hydro) (NHPC)	J&K	4x205+1x30	850.00	11.02.21	2026-27
12	Kiru (CVPPL)	J&K	4x156	624.00	08.03.19	2025-26
13	Rangit-IV (NHPC)	Sikkim	3x40	120.00	30.03.21	2024-25
14	Luhri -I (SJVN)	H.P.	2x80+2x25	210.00	20:11:20	2025-26
15	Dhaulasidh (SJVN)	H.P.	2x33	66.00	01:10:20	2025-26
16	Kwar (CVPPPL)	J&K	4x135	540.00	11.05.22	2026-27
17	Dibang Multipurpose Project (NHPC)	Arunachal Pradesh	12x240	2880.00		2031-32
18	Sunni Dam (SJVN)	HP	4x73+1x73+1x17	382.00	04.01.2023	2027-28
Sub- total (Central Sector) :				12287.00		
State Sector						
19	Parnai (JKSPDC)	J&K	3x12.5	37.50	25.10.13	2024-25
20	Lower Kalnai (JKSPDC)	J&K	2x24	48.00	16.08.13	2026-27*
21	Uhl-III (BVPCL)	H.P.	3x33.33	100.00	26.09.03	2024-25
22	Shongtom Karcham (HPPCL)	H.P.	3x150	450.00	16.08.12	2026-27
23	Shahpurkandi (PSPCL)	Punjab	3x33+3x33+1x8	206.00	04.05.11	2025-26
24	Koyna Left Bank (WRDMah)	Maharashtra	2x40	80.00	20.02.04	2027-28*
25	Indrasagar Polavaram (PPA)	Andhra Pradesh	12x80	960.00	25.02.09	2024-26
26	Pallivasal (KSEB)	Kerala	2x30	60.00	31.01.07	2023-24
27	Thottiyar (KSEB)	Kerala	1x30+1x10	40.00	05.06.08	2023-24
28	Kundah Pumped Storage-I (TANGENDCO)	Tamil Nadu	4x125	500.00	03.12.08	2024-25
29	Lower Kopli (APGCL)	Assam	2x55+2x2.5+1x5	120.00	Nov.2020	2024-25
30	Chanju-III (HPPCL)	Himachal Pradesh	3x16	48.00		2027-28
31	Mankulam (KSEB)	Kerala	2x20	40.00	03.03.2022	2026-27
32	Lower sileru Extension (APGENCO)	Andhra Pradesh	2x115	230.00	24.08.2020	2025-26
33	Lakhwar Multipurpose Project (UJVNL)	Uttarakhand	3x100	300.00	23.12.2021	2028-29
Sub- total (State Sector) :				3219.50		
Private Sector						
34	Tidong-I (Statkraft India Pvt. Ltd.)	H.P.	3x50	150.00	23.07.07	2024-25
35	Tangnu Romai- I (Tangnu Romai Power Generatic	H.P.	2x22	44.00	30.11.07	2027-28*
36	Phata Byung (LANCO)	Uttarakhand	2x38	76.00	30.11.07	2025-26*
37	Maheshwar (SMHPCL) #	M.P.	10x40	400.00	29.09.06	2027-28*
38	Bhasmey (GATI Infrstructure)	Sikkim	2x25.5	51.00	Dec-08	2027-28*
39	Rangit-II (Sikkim Hydro Power)	Sikkim	2x33	66.00	10.02.10	2027-28*
40	Panan (Himagiri Hydro Energy)	Sikkim	4x75	300.00	07.03.11	2028-29*
41	Kutehr (JSW Energy (Kutehr)Ltd.	H.P.	3x80	240.00	31.03.10	2025-26
42	Pinnapuram (Greenko AP01 IREP Private Ltd)	A.P.	4x240+2x120	1200.00	20.04.22	2024-25
Sub- total (Private Sector) :				2527.00		
Total - Under execution (as on 30.06.2023)				18033.50		
# 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.						

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Chapter – 6A

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

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
A	Central Sector			
1	Parbati-II NHPC 11.09.2002 4x200 = 800 MW Broad Features : 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 Cost: <u>Original:</u> 3919.59 Latest: 9897.59 (04/20 PL) Contractors Civil : Gammon / Valecha HM : Om Metals E&M : BHEL	<u>H.P.</u> <u>2009-10</u> 2024-25 (Jun'24)	CIVIL WORKS Dam & Intake Structure (83.7m high and 3.7m D-shaped intake structure) - Completed. Head Race Tunnel (6m diameter, 31.545Km long) – 31419.10 m (99.6%) excavation out of 31545 m completed. Total Overt lining: 28646 m (90.81%) lining out of 31545 m completed. Power House (23.5m x 39.7m x 123m size): Completed. Nallah Works -Completed ELECTROMECHANICAL WORKS: All units synchronized with grid HYDROMECHANICAL WORKS: All the major HM works completed.	Slow progress of HRT excavation due to geological constraints.
2	TapovanVishnugad NTPC 11.08.2004/Nov, 2006 4x130 = 520 MW Broad Features : Barrage–5 bays of 12m HRT- 5.4m x 11.97km P.House- underground Turbine- V.Pelton Cost: Original: 2978.48 Latest: 7700 (4 th qtr 22) Agencies: <ul style="list-style-type: none"> Barrage Package: M/s RPPL HRT Package: M/s HCC Powerhouse and Penstock Package: Ms Patel Engineering Ltd. HM Package: Om Metals E&M Package: BHEL Switchyard Package: M/s GE T&D India Ltd. 	<u>Uttarakhand</u> <u>2012-13</u> <u>2025-26</u> (Dec'25)	Barrage: Excavation Completed and Concreting almost completed. HRT& Adits: Excavation of 9.69 km(71.29%) out of 13.595 km completed. 6.98 km concrete lining out of 12.09km completed. Intake concreting completed. PH : Completed. Desilting Chamber: Concreting under progress. Gate erection completed. TRT, Pressure shaft, Surge shaft completed. E&M works: Pit liner erection on all 4 units completed. Turbine housing erection of all 4 units completed. Unit #1 & 2: Boxed up and other auxiliary mechanical work completed. Unit #3: Turbine & generator erection completed. Other Auxiliary works in progress. Unit #4: Turbine and Generator erection is in progress. Generation transformers, Bus duct, Switchyard & 400 kV cable erection completed. Muck removal (Flash flood occurred on 07 Feb 2021) from all faces almost completed except at SFT. Automatic Flood Warning System has been commenced. HRT Intake Adit Portal Approach Road restored	- Work on the project stopped since 05.01.2023 by the district administration due to subsidence in Joshimath area. Hon'ble High Court allowed for some essential works vide order dated 23.05.2023

	<ul style="list-style-type: none"> GT Package: ABB Ltd. 			
3	<p>Tehri PSS, THDC, 18.7.06 Nov-11 (Revised CCEA) 4x250=1000 MW Broad Features : Surge Shaft: U/s – 2 nos. D/s – 2 nos Power House: U/G TRT: 2, Dia 9m and Length 1070m & 1160m Turbine: VF reversible pump turbine Cost: Original: 1657.60 Latest: 6439.60 (Oct-22PL) Contractors Turnkey : Alstom, France/ HCC</p>	<p><u>Uttara khand</u> <u>2010-11</u> <u>2024-25</u> (Sep'24)</p>	<p>Upstream (Tehri Dam) and Downstream (Koteswar Dam), intake and Head Race Tunnels (2 Nos.) already completed along with Tehri Stage-I works. Widening of Upstream Surge Shaft-3 & 4 (Depth 145m each): In USSS- 3, reinforcement work for 10th lift of shaft lining is in progress. In USSS-4, liner erection in transition portion at HRT-4 completed and bifurcation work along with shackle plate is in progress. Downstream Surge Shaft-3&4 (Depth 80.9 m each): Around 90% shaft lining work already completed and further reinforcement and shuttering work in progress. Butterfly Valve Chamber (BVC 78X10X26m): Excavation completed. Penstock Assembly Chamber (PAC 95X12X19.30 m): Excavation completed. Penstocks (4 Nos.): : Liner erection in Vertical Penstock-5 completed. Erection of liner in Vertical Penstock -06, 07 & 08 are in progress. Power House (203m x 28.20m x 56m size): Excavation completed and erection of EM equipment is in progress. Control Room: Work of erection of electrical equipment, illumination, ducting etc. are in progress in all floors. Tail Race Tunnels- 3 & 4 (2406 m): Around 96% concrete lining completed. Lining of all four limbs also completed. Outlet works including gate lowering: Concreting work for gate grooves in all structure is under progress and micro piling work in 3A has been completed and in 3B is under progress at outlet area River dredging: River dredging work is in progress despite constraints of heavy rains and limited working hours due to plant operation of both the plants i.e. Tehri HPP and KHEP. Electro-mechanical/ Hydro- mechanical works: EM-HM Supplies: Supply of almost all EM equipment received. EM Erection / fabrication: Both EOT cranes have been commissioned in service bay. Unit-5: Unit has been successfully boxed up on 30.03.2023. Unit-6: Rotor lowering scheduled by 31.07.2023. Boxing up is expected by Oct'23.. Unit-7: Stator successfully lowered in generator pit and further installation of EM equipment in progress Unit-8: Lowering of bottom ring completed in pit and further lowering of EM equipment in progress.</p>	-
4	<p>Lata Tapovan, NTPC Aug-2012 3x57= 171 MW Broad Features : Barrage–14 bays of 11m each HRT- 7.51 Km, 4.7m dia P.House- underground Turbine- V.Francis Cost: Original: 1527.00 Latest: 1801.07 Contractors Civil & HM : L&T E&M : BHEL</p>	<p><u>Uttara khand</u> <u>2017-18</u> <u>2028-29</u> (Subject to re-start of works)</p>	<p>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. MoWR vide letter dated 24.01.2019 to MoEF has communicated that only 7 out of 51 Hydro Projects which are under various stages of construction in Uttarakhand has been recommended for implementation. LataTapovan project is not included in the 7 recommended projects. ➤ Barrage (29 m high)-Not started yet.</p>	<p>Construction work stopped vide Hon'ble Supreme Court order dated 7.5.14. Clearance from Hon'ble Supreme Court for resumption of works.</p>

			<ul style="list-style-type: none"> ➤ Desilting chamber (135 m L x 33m W x 17.5 m H)--Not started yet. ➤ HRT (4.7 m diameter, 7.51 km long)-Not started yet. ➤ Surge Shaft (7 m diameter 144.8 m height)-Not started yet. ➤ Pressure Shaft (3no. 2.0 m diameter 297 m long)-Not started yet. ➤ Power House (85mx 17mx 40.5m)-Not started yet. <p>On 08.07.2020, Director /Conservator forest NDNP, submitted report to Chief Conservator forest Dehradun for LTHEPP mentioning that as per revised notification, project is out of ESZ boundaries.</p>	
5	<p>Vishnugad Pipakoti THDC 21.08. 2008 4x111= 444 MW Broad Features : 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 Cost:Original: 2491.58 Latest:3860.35 (02/2019 PL) Contractors Civil &HM : HCC E&M : BHEL</p>	<p><u>Uttara khand</u> <u>2013-14</u> <u>2026-27</u> (Jun'26)</p>	<p>Civil & HM Works:</p> <ul style="list-style-type: none"> ➤ River Diversion has been completed. ➤ Construction of U/S Coffor Dam has been completed. ➤ Dam excavation: Around 71.14% completed. ➤ De-silting Chambers: In overall, excavation around 90.10% and lining work 48.60% has been completed in all 3 DCs. ➤ HRT Concreting: Kerb concreting and over lining completed in the length of 293 m and 146 m respectively.. ➤ TBM Operation: TBM cutter head is at Ch. 173.50 m. After resumption of works on 01.04.23 in TBM area, work of required cradle casting has been completed and dragging of TBM in TBM Entry Adit for taking up mining through TBM is in progress. Casting of segments for tunnel lining already completed for around 1568 m length. ➤ In Machine Hall, Earth mat work in Service Bay area completed and handed over to M/s HCC on 01.06.2023 for taking up further civil works ➤ In TRT, approx. 50.55% heading excavation has been completed. ➤ At TRT outlet area, around 95% slope stabilization work has been completed. <p>Electro - Mechanical Works: 47.27% supply of equipment/ material has been completed.</p>	<p>-Financial crunch with the civil contractor -Intermittent stoppage of works after the Joshimath subsidence issue Jan'23</p>
6	<p>Subansiri Lower NHPC 09.09.2003 8x250= 2000 MW (1000 MW in 12th Plan) Broad Features : Dam –116m High, concrete gravity HRT- 8 x 9.5m x 1145m Power House- Surface Turbine- Francis SWYD- 16/400 kV Cost: Original: 6285.33 Latest:19992.43 (04/17 PL) Contractors Civil : BGS-SGS-Soma JV HM : Texmaco E&M : Alstom</p>	<p>Arunachal Pradesh Assam <u>2009-11</u> <u>2023-25</u> (May'25)</p>	<ul style="list-style-type: none"> ➤ Dam (116m high and 284m long):- Cumulative concreting of 99.8 percent achieved. ➤ Power House (285m x 61m x 64m size):- cumulative qty. achieved 83.72 percent. ➤ E&M Works- unit-1 boxed up and unit-2 boxing is in advanced stage (expected by Dec'23) ➤ HM Works: Erection of Diversion Tunnel Gates: Erected. Radial Gate: Erection in progress. Fabrication of ferrule and erection work of Penstock Liner is in progress (82.97 percent completed). 	<p>Radial Gates erection and Diversion Tunnel plugging are critical activities.</p>
7	<p>Teesta-VI NHPC</p>	<p><u>Sikkim</u></p>	<p>(A) Civil works:</p>	<p>Poor geology in HRT.</p>

	<p>08.3.2019 4x125= 500 MW Broad Features: 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-shapped. PH- Under ground Turbine- Francis Cost: Original: 3283.08 Latest : 5748.04 (07/2018 PL) Contractors Civil : JAL & Gammon E&M : Alstom</p>	<p><u>2012-13</u> 2026-27 (Aug'26)</p>	<p>Barrage (31.5 high and 105 m long)</p> <p>Excavation (7.81) lac cum (79%) out of 9.83 lac cum completed</p> <p>Concreting (2.43) lac cum (97%) out of 2.51 lac cum completed</p> <p>HRT (9.8m diameter)</p> <p>Heading excavation of (14.90) km (54%) executed out of total 27.51 km, benching excavation of (3.98) km (14%), Overt Lining of (3.59) km (13.0%), Invert lining of (1.60) km (6%) has been completed.</p> <p>Desilting Basin</p> <p>Surface Excavation of approx. 2.53 lac cum (74%) executed out of 3.42 lac cum, concreting of 0.89 lac cum (35%) executed out of 2.57 lac cum.</p> <p>Surge Shaft/Surge Gallery: Excavation 67 % & concreting 66% completed</p> <p>Pressure Shaft (2 nos. steel lined 5.4 internal dia.): Excavation 100 % & Backfill concrete 70% completed</p> <p>Power House (142m x 18.5m x 52.44m size): Excavation 100 %, cumulative concrete qty. achieved 51045cum out of 52289 cum (99%).</p> <p>Power House (142m x 18.5m x 52.44m size): Excavation 100 %, cumulative concrete qty achieved 89.04 %.</p> <p>Downstream Surge Chamber: Excavation of Adit has been completed; however concrete lining is still to be taken up.</p> <p>Tail Race Tunnel: Excavation of all four tail race tunnel (TRT-I, TRT-II, TRT-III &, TRT-IV) have been completed. The concrete lining of all four TRT's are almost completed.</p> <p>(B) HM works are in progress (57.52%).</p> <p>(C) E & M works are in progress (44.92%).</p>	
8	<p>Rammam-III NTPC Hydro Ltd. 10.09.14 3x40 = 120 MW Broad Features : Run of the River Scheme Cost :Original: 1381.84 Latest : 1592.34 Contractors</p> <ul style="list-style-type: none"> Barrage and Part HRT Package: M/s Simplex Infrastructures Ltd & M/s Apex-Encon Project Pvt Ltd (JV))- Power-House and Part HRT Package: M/s SEW Infra Ltd. – EM Package: M/S BHEL- 	<p>West Bengal <u>2019-20</u> 2026-27 (Sep'26)</p>	<ul style="list-style-type: none"> Barrage (27m height and 122.5 m length): - River diversion completed. Excavation of 140666 cum (88%) (out of 1,59,000 cum) and concreting of 37257 cum(30%) (out of 1, 22,750 cum) have been completed. De-silting chamber (U/G, 2 nos. each of 140 m length x 7.5 m width x 12.55 m depth):- Excavation of both De-silting chamber completed, DC-1 lining completed DC-2 lining under progress. SFT excavation: - Out of 360m of SFT, 75m (21%) has been completed. HRT (3.5 m diameter, 8.2 km long): - As of now, 2411 m (29%) HRT have been excavated. Adit-2 excavation: 604m/800m (76%) have been done. Adit-1 completed. 	<ul style="list-style-type: none"> Signing of PPA/ATS: - Clearance for signing of PPA by West Bengal Govt. awaited. Power Evacuation Line: Power Evacuation line/ ATS also not getting finalized due to pending decision for PPA. <p>Poor financial condition of existing vendors- Financial Assistance/ Support is being provided by NTPC</p>

			<ul style="list-style-type: none"> • Intake tunnel, Branch tunnel and Adit-1 to GOC –DC: - excavation completed. Lining is in progress. • Surge Shaft (14.50 m diameter 53.75 m height): - Surge Shaft excavation & Orifice slab casting is completed. • Pressure Shaft/Penstock (1591m long): – Vertical pressure shaft excavation of 74m completed. Horizontal Pressure shaft excavation 260m (54%) out of 484m is completed. • Powerhouse (73.50m x 22.40 m x 41.60 m): - Out of 1,56,099 cum of excavation, 1,49,499 cum (96%) has been excavated. Concreting also started. • EM Works: -Tower, Beam, AC kiosk, Bus stringing, Equipment structure and main equipment installation completed. Earth mat laying work is under progress completion. • Switchyard: -Civil works completed & handed over to EM agency and under progress. <p>TRC (657m): - Excavation & Concreting completed.</p>	
9	<p>Naitwar Mori 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 Cost : Original: 648.33 (10/2016 PL) Latest Generation component: 1272.29 Transmission: 120.44 (estimated completion cost under approval) Contractors Civil : JP Associates HM : GMW E&M : Voith</p>	<p><u>Uttara khand</u> <u>2021-22</u> 2023-24 (Nov'23)</p>	<ul style="list-style-type: none"> ➤ Barrage (30.5m high above deepest foundation, Length at top 48.9m):- Barrage excavation completed. Concreting almost completed. Desilting tank excavation & concreting completed.. ➤ HRT- (5.6m modified Horse Shoe Shape, 4329 m long):- Excavation of HRT completed, Overt lining completed and Invert lining about 300m only to be completed. ➤ Surge Shaft (18m dia, 50.28m height):- Excavation and lining completed. ➤ Pressure shaft (4.0m dia, 97.50 m long):- Excavation completed and all ferrules erected except 1 on upper bend. ➤ Power House (Underground 57.70m x 18.60m x 33.07m size):- Civil works completed. ➤ Tail Race Tunnel (D-shaped, 8.0m (W) x 8m(H), 235.62m long, TRC- 6.0m(W)x5.75m(H), 60.39m long):- Outfall structure and Tail race channel work completed. Erection of gate in progress. • E&M works: Erection of both units completed. Boxing up of unit-1 already done. Switchyard equipment, and cable lying works in progress. Transmission line works completed 	<ul style="list-style-type: none"> • Leftover civil and HM works including gates & hoists and completion and testing of EM works including switchyard.
10	<p>Pakal Dul CVPPL 03.10.2006 4x250 = 1000 MW Broad Features : 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. Cost: Original:8112.12 Latest: 8112.12 Contractors</p>	<p><u>J&K</u> <u>2020-21</u> 2026-27 (Sept'26)</p>	<p>Civil Works:</p> <ul style="list-style-type: none"> ➤ Dam Package (CFRD 167m high and 305m width).- Access adit to HRT-1 & 2 have been completed of a total of 1637 m and 1727 m respectively. ➤ Diversion Tunnel (1 no, diameter 11 m, length 851 m.): River Diversion achieved on 01.11.2021. Construction of upstream and downstream coffer dam is in progress. ➤ HRT-TBM Package (HRT 2Nos., 7.2m dia, 9.6 km long each (7.3 Km through TBM))- All 97 nos. consignments of TBM-1 and 95 nos. consignment of TBM-2 have also been reached at site. Construction of TBM Adit portal, development of platform and associated infrastructure works are in progress. TBM assembly in progress. 	<ul style="list-style-type: none"> • HRT & Dam works are critical.

	<p>Civil : Afcons – JAL – JV L&T,JAL HM: PES E&M : Voith Hydro Ltd</p>		<p>HM Works: - In progress.</p> <p>Power House Civil Works (PH Cavern 166m (L) x 20.2 m(W) x 50.5 m(H))- Construction of Power House Cavern, MIV cavern Transformer Hall cavern, Valve House, Adit to Pressure Shafts, Surge shaft, TRT and part-HRTs are in progress..</p> <p>➤ E&M Works - Detailed Engineering of E&M equipment's including submission/checking of drawings, layout plan and equipment manufacturing/supply/inspection is in progress. Installation of MIV Crane Embedments in MIV Service bay has been completed. Installation of GT rails and embedments in service bay, Connecting Tunnel and Transformer Cavern upto GT-4 (Grid-9) has been completed. Erection of MIV EOT Crane, Erection of Draft Tube of Unit-1 & Unit -2, Erection of draft tube of Unit#3, Earthmat erection in U#4 have been completed.</p>	
11	<p>Kiru CVPPL 13.06.2016 4x156=624 MW Broad Features : Dam – 135m High, Width-193m), Concrete gravity, Penstock 4nos., 5.5m dia. P.House- Underground (182mx23.6mx51.2m) TRT- 4 nos., 7.0m dia, 165 to 190m long. Cost: Original:4287.59 Latest: 4287.59 Contractors Civil : Patel Engg. HM: PES Engineers E&M : Andritz Hydro</p>	<p><u>J&K</u> <u>2023-24</u> <u>2025-26</u> (Mar'26)</p>	<p>Civil works - Construction of Cofferdam, PH Cavern, TH Cavern, Adit to Pressure Shaft top & bottom is in progress. Activity for filling of material for construction of u/s and D/s Cofferdam has been completed on 08.05.2022. Dam abutment stripping and dam excavation below river bed is in progress. Dam concreting has been started on 05.05.2022 and is in progress.</p> <p>Diversion Tunnel (1 no, diameter 9 m, length 666 m): River Diversion achieved on 31.12.2021.</p> <p>HM Works: Detailed Design Engineering/ manufacturing & supply of HM components is in progress.</p> <p>Power House Civil Works (182m (L)x 23.6m(W) x 51.2m(H))– Power House Pilot Excavation (182m) completed on 31.03.22. Benching in progress.</p>	<ul style="list-style-type: none"> • The project is in initial stage of construction.
12	<p>Ratle Ratle Hydro Electric Project Pvt. Ltd. / NHPC 19.12.2012 4x205+1x30= 850 MW Broad Features : 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 Cost : <u>Original: Rs 5281.94 Crore</u> Latest Rs. <u>5281.94 Crore</u> Contractors Civil & HM : GVK E&M : Alstom</p>	<p><u>J&K</u> <u>2017-18</u> <u>2026-27</u> (May'26)</p>	<ul style="list-style-type: none"> • Improvement / Construction of Roads: - Completed. • Excavation of Diversion Tunnels / MAT: In progress. Excavation in Power House Access Tunnels (78%), Power House Cavern (80%), Dam abutment excavation (7%) achieved. 	<ul style="list-style-type: none"> •

13	<p>Rangit-IV Jal Power corp. Ltd. 06.07.2007 3x40= 120 MW Broad Features: Dam: Concrte 44m high .HRT : D- 6.4m L- 6.5km Power House : Surface Turbine: Francis Cost: Original:726.17 Latest : 938.29 (10/19 PL) Contractors Civil : Ritwik (27.08.2021) HM : PES (28.06.2021) E&M : Andritz (08.07.2021)</p>	<p><u>Sikkim</u> <u>2011-12</u> <u>2024-25</u> (Aug'24)</p>	<p>CIVIL WORKS: Dam (44 m high and 135.35 m long) - Excavation 91.58% completed. Concreting 77.55% completed. Removal/ clearance of material deposited due to flooding in working area. 0.91 lac cum (45.90%) out of 2.0 lac cum completed. HRT (6.4 m diameter) - Heading excavation of approx. 5.05 km (77.89%) executed out of total 6.48 km, benching excavation of approx. 4.91km (75.82%), Overt lining of 923.50 m (14.23%) has been completed. Desilting Chamber (3 nos. each of 120 m length x 13m width x 15 m depth) - 2749 m (81.83%) excavation out of 3360 m is completed. 1505 m (44.79%) concreting out of 3360 m is completed. Surge Shaft (1 nos., 18 M dia., 56 M height): Excavation 100% completed, concreting 82.2% completed. Pressure Shaft (1 no. 5.5m dia., 236m length) : Excavation 100.00 % completed Surface Power House (75.3m (L) x 20.20m (W) x 41.35 m (H): Excavation 96.88% & concreting 74% has been completed. ELECROMECHANICAL WORKS: In progress (34.71%). Hydro Mechanical works: In progress (17.7% achieved).</p>	<p>-Slow progress of works on account of Covid-19 associated lockdowns and restrictions. -Poor geology in HRT. -Methane in HRT</p>
14	<p>Luhri Stage-1 SJVN Ltd. 01.05.2018 2x80+2x25=210 MW Broad Features: Dam: 86 m high HRT: 9m dia 38 km length Power House:Underground Turbine: Francis Cost: Original - 1810.56(05/2020) Contractor : Civil: Luhri Hydro Power Consortium dt. 24.11.2020 E&M works: Voith Hydro dt. 16.7.2021 Transmission line from Switchyard to Polling station: M/s Kalpatru Power dt. 6.7.2022</p>	<p><u>Himachal Pradesh</u> <u>2025-26</u> <u>2025-26</u> (Jan'26)</p>	<p>Investment approval accorded on 20.11.2020. Civil & Hydro-mechanical Works awarded on 24.11.2020. Electro-mechanical package awarded on 16.07.2021. ➤ Diversion Tunnel (617 m): Completed. River diverted during June, 22. ➤ Dam: 261713 cum (81%) out of total 322863 cum stripping of right bank and 32,615 cum (45%) out of 72,982 cum left bank completed. River bed excavation of 1,79,951 cum (41%) out of 4,42,067 cum completed ➤ Power House: 350479 cum (74%) out of total 4,99,615 cum stripping of power house area completed ➤ Tail race channel: 409227 cum (70%) out of total 494207 cum stripping completed. ➤ Construction of Permanent Steel Bridge: Construction of abutments completed and erection of superstructure is in progress. ➤ Realignment of NH almost completed. E&M Works: Draft tube liner for unit-1 (Main) and unit-3 (Auxiliary) delivered. Manufacturing of DT liners (Main Unit-2 and Auxiliary Unit-4), spiral case & EOT crane is in progress .</p>	
15	<p>Dhulasidh Hydro Electric Project SJVN Ltd (2x33 MW = 66 MW) Cost: <u>Original: Rs. 687.97 Cr</u></p>	<p><u>Himachal Pradesh</u> <u>2025-26</u> <u>2025-26</u> (Nov '25)</p>	<p>Investment approval accorded on 1.10.2020. ➤ Diversion tunnel (253 m), River Diversion achieved on 15.02.2022 ➤ Dam: Dam excavation including River Bed excavation completed. Concreting 15600 cum (5%) out of 3,00,000 cum completed</p>	

	<p>Civil & HM works: M/s Rithwik Projects Pvt. Ltd. dt. 6.5.2021</p> <p>EM works: M/s Voith Hydro dt. 19.1.2022</p>		<ul style="list-style-type: none"> ➤ Power house excavation: completed. Concreting started ➤ Tail Race Channel: Excavation completed. ➤ EM Works: Design/ drawings of DT liner, stay ring, spiral casing, generator foundation and generator barrel have been approved. Fabrication of Draft tube liners for both units completed. DT liner for unit-1 received at site on 17.05.2023. EOT crane is under manufacturing. ➤ Transmission Line: Work was awarded on 14.6.2022 and application for Forest Clearance is in under process. 	
16	<p>Kwar Hydro Electric Project, CVPPPL (4x135 MW = 540 MW)</p> <p>Cost: Original: Rs. 4526.12 Cr</p> <p>Civil works: M/s Patel Engg. Limited dtd. 11.05.2022</p>	<p><u>UT of J&K</u> <u>2026-27</u> (Nov'26)</p>	<p>Mobilization in progress. DT outlet portal development & DT inlet portal development have been completed & further work of tunnel excavation work from DT outlet side and DT inlet side, Excavation of MAT portal & Dam excavation (stripping of dam abutments) are under progress.</p> <ul style="list-style-type: none"> • DT Excavation (heading) from outlet side - 326.5m progress out of cumulative 343 m made. • DT Inlet (heading) Excavation - 287m progress out of cumulative 343 m made. <p>Construction of main approach road (4480 m): Completed.</p> <p>•Construction of 81m span 70R double lane bridge over River Chenab – completed.</p>	The works have recently been awarded.
17	<p>Sunni Dam SJVN 4x73+1x73+1x17=382 MW</p> <p>Cost: Original: Rs. 2614.51 crs (05/21)</p> <p>Civil & HM works: M/s Rithwik Projects Pvt. Ltd. dt. 14.1.2023</p> <p>EM works: Yet to be awarded</p>	<p><u>Himachal Pradesh</u> <u>2027-28</u> 2027-28 (Mar'28)</p>	<p>Investment approval accorded on 4.1.2023</p> <ul style="list-style-type: none"> ➤ Mobilization of manpower and machinery by contractor is in progress. ➤ Construction of approach road to Diversio Tunnel is in progress. ➤ Design & drawings of project component under progress. ➤ Suspension Bailey bridge is in progress. 	
18	<p>Dibang HEP, NHPC (12x240=2880MW)</p> <p>Cost: Rs. 31876.39 Cr</p> <p>Infrastructure Works: M/s L&T dated 27.02.2023</p>	<p><u>Arunachal Pradesh</u> <u>2031-32</u> (Feb'32)</p>	The works have recently been awarded.	

B	<u>State Sector</u>			-
19	<p>Parnai JKSPDC 21.10.2013 3x12.5= 37.5 MW Broad Features: Barrage: 107m Long, 11.7m High HRT: D Shape, 9236m long, 3.2m dia Surge Shaft: 3.2m Dia</p>	<p><u>UT of J&K</u> <u>2017-18</u> 2024-25 (Mar'25)</p>	<p>The implementation of the project has been undertaken by awarding the EPC contract in favour of M/s. Patel Engg. Ltd. in 2013.</p> <ul style="list-style-type: none"> ➤ Barrage (107m long, 11.7m high and 7m wide concrete structure) & Desilting Chamber (Dufor type triple barrel (90x7x5m):- Excavation 46364 cum out of total 46364 cum completed.33914 cum out of 34589 cum concreting has been completed. ➤ HRT (D-shaped, 3.2m diameter, 9.156km long):- 5827 m out of 9236 m excavation 	<ul style="list-style-type: none"> - Slow progress of works - Contractual Issues.

	Power House- Surface- 60x12x28 Cost: <u>Original:</u> 640.86 <u>Latest</u> 640.86 Contractors Civil : Patel & Alstom E&M : Andritz		completed. ➤ Surge Shaft (3.2m dia):- ➤ Pressure shaft (1 no., 2m dia, 1733m long) :- Excavation 18319 cum out of total 34560 cum completed. 919 cum out of 7212 cum concreting has been completed. ➤ Power House (Surface 60x12x28m):- Excavation 57440 cum out of total 60000 cum completed .	
20	Lower Kalnai JKSPDC 16.08.2013 2x24= 48 MW Broad Features: Dam: 110m Span, 49m High HRT: D Shape, 3960m long, 4m dia Surge Shaft: 14m Dia Power House- 55x23.45x32.4 Cost: <u>Original:</u> 576.87 <u>Latest</u> 576.87 Contractors Civil : Coastal E&M : GE	<u>UT of J&K</u> <u>2017-18</u> 2026-27 (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 Dam:- Excavation work completed for right abutment of the dam bridge. Excavation of left abutment completed upto 50%. HRT:- Adit excavation is in progress. . 'Works on all fronts at Dam and Power House site are stalled since 24.01.2018 due to payment dispute with subcontractors and due to non-settlement of extension of time of the contract by the JKSPDC .The contract with M/s. Coastal Projects Ltd. has been terminated and The Balance Work stands tendered out by JKSPDC in EPC mode vide E-NIT No 01 on 24-03-2022.	- Project stalled - Re-award of works
21	Shahpurkandi Irrigation Deptt. & PSPCL 04.05.2011 3x33+3x33+1x8=206 MW Cost: <u>Original:</u> 1835.50 <u>Latest</u> 2368.55 (Power Component) Contractors Civil & HM for Main Dam with two Head Regulators : Soma – BUREYA JV Power Houses : M/s OMIL JV E&M : BHEL	<u>Punjab</u> <u>2015-16</u> 2025-26 (Oct'25)	Main Dam: Overall 90% work of Main Dam portion has been completed. Hydel Channel: Almost 95% works has been completed. Power House: Excavation 90% completed. Concreting started and 8% completed. E&M: Initial stage of procurement of equipment. Draft tube liner works for two units are in progress.	Power house civil works is critical for E&M works.
22	Uhl-III Beas Valley Power Corporation Ltd. (HPSEB) 19.09.02 / (TEC -2x50 MW) 3x33.3 =100 MW (Revised vide HPSEB letter dt. 19.01.07. Broad Features: HRT-4.15m x 8.47 km S.Shaft- 13m x 68.8m Penstock- 3.4m x 1851.946 m (main) P.House- Surface Turbine- V. Francis Cost: <u>Original:</u> 431.56 <u>Latest:</u> 1281.52 Contractors Civil : Continental / Abir HM : PES E&M : BHEL	<u>H.P.</u> <u>2006-07</u> 2024-25 (Dec'24)	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. The restoration of the Penstock works awarded to M/S P&R Infraprojects Pvt Ltd on November 06, 2021. The work of dismantling of ruptured penstock almost completed and design of penstock rehabilitation work has been approved by GM (D). Procurement order for ASTM grade steel has already The supply of 1 st lot of 17 steel plates by SAIL to the contractor has been received on site and 2 nd lot of 12 plates is under transportation stage.	
23	Shongtong Karcham H.P. Power Corpn. Ltd. Clearance: 16.08.2012 3x150= 450 MW Broad Features:	<u>H.P.</u> <u>2016-17</u> 2026-27 (Nov'26)	➤ Barrage (95.40m long at top):- Downstream Cofferdam completed. Upstream Cofferdam 84% completed. ➤ Barrage Work:- 32.22% of excavation completed	Dam is critical due to change in design and approval of same.

	<p>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. Cost: <u>Original: 2807.83</u> Latest:2807.83 Contractors Civil & HM : Patel E&M : Andritz</p>		<ul style="list-style-type: none"> ➤ Power Intake:- 29% Excavation completed. ➤ Desilting chamber (4 nos. each of 260 m length x 17m width x 22.80 m depth):- Excavation of Desilting chambers 74% completed. ➤ Silt Flushing Tunnel (SFT):- Excavation of SFT 39% completed. ➤ HRT (10.5m diameter, 7.7125 km long):- Heading excavation 90% completed. Benching excavation 62% completed. ➤ Surge Shaft (30.6m diameter 98.5m height):- Excavation-90%completed ➤ Pressure Shaft (3nos. 5.0m diameter, Length I&III = 230m, II = 220m):-Excavation of PAC along with rock supports 63.23% completed. ➤ Power House (131.15m (L) x 23m (W) x 44.29m (H)):-100% excavation of Powerhouse Cavern, 100% excavation of Transformer hall completed. Concreting of EOT crane beam completed. ➤ TRT(includingadit, Main TRT, Unit TRTs & manifold): Excavation 74.88% completed. ➤ E&M Works:- Supply 63.9% completed. Erection yet to start. Overall E&M works 57.51% completed ➤ Draft Tube:- 67% excavation completed 	
24	<p>Koyna Left Bank PSS WRD, Mah. 20.02.2004 2x40 = 80 MW Broad Features: Water from the existing ShivajiSagar Lake (Koyna 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 Cost: <u>Original: 245.02</u> Latest:1403.77 Contractors Civil &HM : BT Patil – Malaxmi JV / Patel E&M : LitostrojSlovania&Koncar, Croatia</p>	<p><u>Maharashtra</u> <u>2014-15</u> <u>2027-28</u> (Subject to re-start of works)</p>	<p>Civil Works: 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. Tail surge shaft :Excavation in soft strata completed. Excavation for inclined / vertical / lateral shafts in hard rock 6448 / 9223 cum completed. TRT : 364 / 24003 cum excavation completed. Machine Hall : Underground Excavation is under progress. 31500 cum excavation out of 55050 cum completed. E&M works: The contract for details engineering manufacturing supply, supervision erection, testing and commissioning of pump turbine, generator motor and associated equipment 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 & Electric Traction Engineering, Croatia (European Union). EOT Crane :- Works awarded to M/s Pedvak Cranes Private Limited Hyderabad on 12.04.2013. Tail surge shaft: Excavation for inclined/vertical/lateral shafts in hard rock 6448 cum out of 9223 completed. Excavation in soft strata completed.</p>	<p>'Project stalled since July, 2015. The current expenditure on the project has already reached to almost original administrative approved cost level. The proposal for execution with various options (By WRD/ Through BOT/ By MSPGCL in collaboration with WRD) is under process.</p>
25	<p>Polavaram APGENCO / Irrigation Deptt., A.P. 21.07.2010/ 25.02.2009 12x80= 960 MW Broad Features:</p>	<p>Andhra Pradesh <u>2017-18</u> <u>2024-26</u> <u>(Mar'26)</u></p>	<p>D/s TRANSITION: Tunnel-1,2,3,4,5,6: Qty executed- 2623 cum, Qty balance – 5777 cum. Pressure Tunnels (1 to 12) works:</p>	

	<p>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.</p> <p>Cost: Original: 4956.39 Latest:5338.95 (Power Component)</p> <p>Contractors Civil :Navyug contract terminated and awarded to M/s Megha Engineering and Infrastructure Ltd. (MEIL) (EPC contractor) E&M : BHEL</p> <p>Overall Physical progress: 14%</p> <p>Overall financial progress: 18.46%</p>		<p>Concreting around steel liners 1,2,3,4,5, 6,8 &9 is under progress. Concreting around steel liners 11 nos. segments completed during the month of february23 and total 96 nos out of 264 Nos.</p> <p>Power House area - E&M works for Unit - 1to 11: Location and fixing of anchor hooks for U nit 8, 9, 10,11 & 12 is in progress. Installation of field efficiency test pipes: Extension of 50 m length FET pipe arrangement in the DT vent slab was completed for unit 1. DT Elbow liner Installation for unit 2: Installation of DT Elbow liner completed. DT Elbow liner installation for unit 3: Installation of DT Elbow liner completed. DT Elbow liner installation for unit 4: Alignment and locking of DT elbow liner is in progress. DT Elbow liner installation for Unit 5: Placement and matching of segments are completed. Welding of segments is in progress. DT Elbow liner Installation for Unit 6: Placement of 10 out of 18 segments is completed, matching and temporary locking is in progress. Installation of Base plates for unit 7: installation of Base plates @ El 4.92 m & -2.42 m in the DT cavity area was completed. Installation of embedded pipes in first stage concreting: Installation of 300 NB spiral drain pipes was completed for units 8 and 9. Installation of embedded pipes in first staBe concreting for unit 12: Installation of 100 NB drain pipe in the valve niche was completed.</p>	
26	<p>Lower Sileru extention APGENCO 2x115 = 230 MW 24.08.2020</p> <p>Contractors M/s SSEL-PES Consortium</p> <p>Cost: Original: 571 (2020-21) Latest: 571 (2020-21)</p>	<p>Andhra Pradesh 2025-26 (Mar'26)</p>	<p>Project is in initial stage of construction</p>	
27	<p>Pallivasal KSEB 2x30= 60 MW 31.01.2007</p> <p>Broad Features: 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</p> <p>Cost: Original: 222.00 Latest: 550.00</p> <p>Contractors</p>	<p><u>Kerala</u> 2010-11 2023-24 (Mar'24)</p>	<p>Contract for Civil &HM works has been terminated w.e.f. 13.09.18. Balance work has been re-rendered on the risk & cost of Contract, Subsequently balance works have been awarded to M/s. Sri Sarvasna Industries Pvt. Ltd. and M/s. DSE Anchor Structure.</p> <p>Civil Works: 97.55% completed. HM Works: 98.80% completed. E&M Works: 71% completed. Intake structure: Intake structure completed including gate erection. Leading channel of Water conductor system replaced by cut & cover/soil accordingly intake is shifted HRT: Excavation 3347m/3347m completed. Overt conc. 3347m/3347m completed. Invert conc. 3347m/3347m completed. Surge Tank/Forebay : Excavation completed. Conc.843/843 cum.</p>	

	Single Package (Except Intake & balance Tunneling works) ESSAR – DEC – CPPL JV -M/s Bumi-Zillion JV (for Intake works & balance Tunneling works) -M/s Anchor structure-PSE-SSIPCJV, M/s. Shri Sarvasana Industries Pvt. Ltd.		Pressure Shaft: Excavation - Completed. fabrication of steel Liner completed and erection of 1096/1906 m completed. Surface penstock: Excavation 122500/122600 cum. Concreting- 12850/12850 cum. Fabrication of ferrule completed, Erection completed. Power House: Excavation and Concreting completed. Tail race Channel (2 Nos.): Excavation & lining completed. The overall progress achieved :- 92.70%. The overall financial progress achieved:- 92.1%.	
28	Thottiyar KSEB 1x30 + 1x10= 40 MW 05.06.2008 Broad Features: Weir: 222m Long 11 blocks 7.5m height Tunnel: Circular 2.6m dia 199m long. Power House: Surface Turbine : Vertical Pelton Cost: Original: 136.79 Latest: 280 Contractors Civil & HM : PRIL- Sri Sarvana Industries	<u>Kerala</u> <u>2012-13</u> <u>2023-24</u> (Mar'24)	Original contract for Civil & HM works foreclosed without risk & cost of Contractor M/s. Coastal Project Ltd. -Civil & HM works re-awarded to M/s PRIL-Sri Sarvana Industries Pvt. Ltd. on 05.01.2018. KSEB decided to execute E&M works departmentally & tendering was awarded to M/s Fitwell. Civil Works: Weir: 100% works completed. Approach Channel & Intake: 98% works completed. Penstock, civil: 92% overall works at penstock track completed. H&M: 100% fabrication and supply completed. 98% erection work completed Power House: 97% civil works and 73% E&M works completed. Tail race: 80% concreting completed. Physical Progress 95% Financial Progress 81%	
29	Mankulam KSEB 2 X 20 = 40 MW 03.03.2022 Broad features: Dam: Concrete, straight gravity HRT:3.6mX2473m Surge shaft: Dia- 8m , top level of surge – 719.11m Pressure shaft: 1 no. Dia- 3m, Area – 7.07m ² , Length – 398m Penstock: 2 Nos. 30m x2.3m Turbine: Pelton Max. gross head: 323.43m Cost: 600Cr. (2016) Contractors CIVIL & HM: M/s. PES Engineers Private Limited - M/s KSR Infracon Private Limited, Joint Venture (PES-KSR JV)	<u>Kerala</u> <u>2026-27</u> (May'26)	Civil Works : 4.03% completed. HM Works: Not yet started. E&M Works: Not yet tendered. Intake structure: Leading channel of Water conductor system excavated. HRT: Excavation -400 m completed. , Surge Tank/Forebay: Approach road under construction. Pressure Shaft: Excavation -335m. Power House: Excavation progressing Bridge and road: All spans competed approach Road work in progress.	
30	Kundah Pumped storage (Phase-I, Phase-II & Phase-III) TANGEDCO	<u>Tamil Nadu</u> <u>2022-23</u> <u>2024-25</u>	Civil & H&M Works: - Phase-I, Package I & II (Civil and HM works), LOI issued for package - I to M/s Patel engineering, and for package - II M/s Kundah PSP Consortium on 15.02.2018. The site	

	<p>4x125= 500 MW</p> <p>Broad Features: HRT: Ø 8.5mX1247.33m. Surge Shaft: Ø (28m/16m/10m) x68m depth. 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. Cost: <u>Original: 1216.59</u> <u>Revised: 3401</u> EPC cost: Rs. 2424.09 crore (capital cost under revision by TANGEDCO)</p> <p>Contractors Civil &HM : Patel / Kundah PSP E&M: MEIL</p>	(Oct'24)	<p>was handed over on 05.03.2018. Electro-Mechanical works was awarded to M/s Megha Engg. & Infrastructure Ltd. on 28.11.2019</p> <p>HRT: Heading and Benching almost completed (1251 M completed) and Kerb Wall Concrete under progress. HRT intake - Excavation under progress.</p> <p>Pressure Shaft: : Excavation of Lower Horizontal Portion of Pressure Shafts PS1 & PS2 Completed. Pilot tunnel excavation in Inclined portion completed and shaft widening is under progress..</p> <p>Head race Surge Shaft: excavation completed.</p> <p>Tail Race Surge Chamber: excavation completed</p> <p>Power House: Civil works almost completed.</p> <p>Transformer Cavern: : excavation is completed and Concrete under progress</p> <p>TRT: Mining completed and Concrete lining under progress. Lower intake works under progress.</p> <p>E&M Works: - procurement of materials/ equipment started at site. Draft tube erection is in progress and completed for two units. Earth Mat works completed. Most of the equipment for two units received at site.</p>	
31	<p>Lower Kopli APGCL 2x55+2x2.5+1x5= 120 MW</p> <p>Broad Features: Dam: Conc. Gravity HRT- Circular, 7m dia, 3.64Km long. Power House- Surface Turbine- VF. Switchyard: 220 Kv. Cost: <u>Original:1115.91</u> <u>Latest:1795</u></p> <p>Contractors Civil : L&T</p>	<p><u>Assam</u> <u>2023-24</u> <u>2024-25</u> (Mar'25)</p>	<p>At present detailed survey work, geotechnical investigation work etc. are being carried out by M/s L&T. Civil work preliminary survey and geotechnical investigations going on at site .</p> <p>Overall Physical progress – 46.07%</p> <p>Overall financial progress – 47.99%</p> <p>HM work – not yet started</p> <p>E&M works – contract awarded to M/S Andritz Hydro Pvt. Ltd on 09.09.21</p>	
32	<p>Chanju-III H.P. Power Corpn. Ltd. Clearance: 14.07.2015 3x16= 48 MW</p> <p>Broad Features: HRT- D shape, 5090m long. Power House- Under ground Turbine- Vertical shaft Pelton Cost: <u>Original: 418.57</u> <u>Latest: 418.57</u></p> <p>Contractors Civil & HM : MFB- ACNC (JV)</p> <p>E&M :</p>	<p><u>H.P.</u> <u>2027-28</u> <u>2027-28</u> (Jun'27)</p>	<p>➤ Mobilization by Civil Contractor in respect of Package-I & II:- Contractor mobilizing at site.</p> <p>➤ Construction of Approach Roads: Power House of Chanju-III: 1920m out of 2500m road has been completed. The slip removal & cleared up to RD 1600m & protection works yet to be started.</p> <p>Intake of Chanju-III: 1850 m out of 2400m road works completed. The work of removal of slips started by main civil contractor on 06.04.2023 (from RD 1800m to RD 0.0m) completed upto RD 1740 m (backward) as on dated 12.04.2023. Stacking of material for construction of protection walls at site has been started.</p> <p>MAT Portal: The MAT Portal has been completed. The tunnel profile is given to the contractor and drilling started</p>	
33	<p>Lakhwar Multipurpose Project (UJVNL) Clearance: 23.12.2021 3x100= 300 MW Cost: <u>Original: 5747.17.</u> <u>Latest: 5747.17</u></p>	<p><u>Uttara khand</u> <u>2028-29</u> <u>2028-29</u> (Oct'28)</p>	<p>Letter of Acceptance (LOA) has been issued to M/s L&T Limited for the work of "Balance civil works for Construction of 204m high concrete gravity dam, Intake, (3X100 MW) capacity underground Power House and appurtenant works on river Yamuna of Lakhwar Multipurpose</p>	

			Project in District- Dehradun/Tehri Garhwal (Uttarakhand)" on 01.02.2023.	
C	Private Sector			
34	Tangnu Romai-I M/s Tangnu Romai Power generation 2x22= 44 MW 30.11.2007 (TEC by HPSEB) Broad Features: Barrage at EL \pm 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 Francis Cost: Original:255.00 Latest:641.89 Contractors Civil & HM : Sai Urja E&M : Andritz	<u>H.P.</u> <u>2014-15</u> <u>2027-28</u> (Subject to re-start of works)	Civil works awarded on 14.06.2010 to M/s Sai Urja Hydel Project (P) Ltd. Barrage and Diversion Cannel: 26211 cum out of 93800 cum excavation completed. Desilting Chambers & SFTPC: Excavation completed. SFT excavation 420 / 450.66 m completed. HRT: 2826m out of 6300m excavation completed. Power House, Switchyard & Misc.: 60275 m ³ out of 72000 m ³ 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.	- Works are stalled since Jan, 2015 due to finance issues. Developer has earlier initiated the sale of project and in the process of negotiating with potential buyers to enable the project implementation. The company is presently engaged in discussion to complete the settlements with the Lenders consortium of Banks and after settlement the project activities are expected to start by March/April 2023
35	Tidong-I M/s Statkraft India Pvt. Ltd. 3x50 = 150 MW 28.07.2006 Broad Features: HRT–D-3.5m L- 8461 m P.H. Surface Turbine –Vertical Pelton Cost: Original 543.15 Latest 1850 Contractors Civil &HM : SCL Infratech / Himalaya E&M : Alstom	<u>H.P.</u> <u>2021-22(</u> <u>New</u> <u>Developer)</u> <u>2024-25</u> (June'24)	River Diversion Works: Excavation completed and 32144/37159 cum concreting completed . Head Works: Head works for the project are nearing completion. HRT (8409m): HRT Excavation completed. Overt and Invert lining is nearing completion and grouting 6.5 km out of 8.46 km completed. Surge Shaft: Surge shaft Excavation completed & Lining (10 m) out of 89m completed. Pressure Shaft: Pressure Shaft excavation completed (1.4 km) and Ferrule erection 683m out of 1.4 km completed. Power house: Power house civil works of all three units almost completed and Unit 1&2 E&M works fully completed & works of unit#3 are under progress(45% completed). Negotiations are going with villagers regarding transmission line clearance with help of state administration. Overall physical progress achieved is 91% . M/s Statkraft India Pvt Ltd has acquired the 100% equity of the project on 04.09.2018	- Pressure shaft &Transmission Line critical.
36	Kutehr M/s JSW Energy (Kutehr) Ltd. 3x80 = 240 MW 31.08.2010 Broad Features: Cost: Original: 1798.13 Latest : 2879 Contractors Civil &HM : M/s Angelique – PCC consortium, M/s MF BumiGeotech Pvt. Ltd. &	<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. Barrage (27m high): Barrage excavation (left bank) completed to the tune of 146631 Cum out of 158696 Cum. Barrage excavation (right bank) completed to the tune of 9072 Cum out of 52101 Cum HRT : Five out of Six Construction Adits to HRT completed (i.e. 1453.5 m out of 1612 m completed). 9385m out of 14538 m of Head Race Tunnel excavation completed.	-

	M/s. PES Engineers Pvt. Ltd. E&M : M/s Andritz Hydro Pvt Ltd.		Physical Progress 64% Financial Progress 59.02%	
37	Phata Byung 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 Cost: <u>Original: 520.00</u> Latest : 1132 Contractors Civil : Lanco HM : Cimmco E&M : Alstom	<u>Uttara khand</u> <u>2012-13</u> <u>2025-26</u> (Subje to re-start of works)	Dam concreting: 17800/18000 cum concreting completed. P.H.: Excavation completed & Concreting in progress. HRT: Excavation almost completed. 1400 m Lining has been completed. Excavation and lining of Intake-I & Intake-II completed. Pressure shaft: Excavation completed & lining is under progress. TRT: Excavation 178/235m completed. E&M Works: Pit liner erection of units completed. EOT Crane installed and Commissioned. Ferrule Fabrication work is in progress. Work progress is stalled since July'17 on account of main EPC contractor and holding Company M/s Lanco Infratech Limited (LITL) being referred to NCLT under the Corporate Insolvency Resolution Process (CIRP) and subsequently, the initiation of liquidation proceeding as per NCLT Liquidation order in August 2018. However, the preservation works of Project are being carried out regularly at site by the Company, Lanco Mandakini Hydro Energy Private Limited (LMHEPL). Presently, the company is undergoing a corporate insolvency resolution process initiated under IBC for resolution and revival of the project since June 2020. Under this process, the resolution professional appointed by the NCLT has initiated the process for inviting prospective investors for the project.	- Works severely affected due to flash floods in June, 2013. - Works stalled since July, 2017 due to Financial crunch with the contractor / developer. The company is undergoing a corporate insolvency resolution process initiated under IBC for resolution and revival of the project since June 2020. Under this process, the resolution professional appointed by the NCLT initiated the process for inviting prospective investors for the project. On 25.02.2022, the CoC approved the Final Statkraft IH Holding AS Resolution Plan by a majority of 100%. The Resolution Professional has filed for approval of the resolution Plan Application before the Hon'ble NCLT. The Allahabad bench of the National Company Law Tribunal approved the resolution. According to the resolution plan, Statkraft will pay a total of ₹180 crore including ₹149.61 crore to secured financial creditors within 90 days of approval of the resolution plan and ₹27.8 crore towards meeting the payment for costs of the corporate insolvency resolution proceedings. - Hon'ble NCLT bench has approved the Resolution plan of Statkraft IH Holding as on 23.03.2023.
38	Maheshwar, SMHPCL 30 12 96/ 29.9.2006 (FC) 10x40= 400 MW Broad Features: Dam-35m High, concrete gravity P.Shaft-10x7.82m x 52m P.House - Surface Turbine- Kaplan Cost: <u>Original: 1569.27</u> Latest: 8121.00 Contractors Civil & HM : Sew E&M : BHEL	<u>M. P.</u> <u>2001-02</u> <u>2027-28</u> (Subje to re-start of works)	Civil & HM Works: All major civil works completed. All 27 nos radial gates commissioned. Unit Erection: Unit-10: Initial spinning achieved on 14.10.2011. Unit-9 & 8: Ready for spinning. Unit-7: Guide apparatus trial assembly in progress. Unit-6: Erection of turbine embedded parts & foundation parts completed. Unit-5 to 1: Erection of units is in initial stages. Works suspended since Nov-11 due to cash flow problem with developer. M.P. Power Management Company Ltd. has terminated the Power Purchase Agreement, R&R Agreement & Escrow Agreement with SMHPCL on 18.04.2020 & 20.04.2020 respectively .	Works suspended since Nov-11 due to cash flow problem with developer. M.P. Power Management Company Ltd. has terminated the Power Purchase Agreement with SMHPCL on 18.04.2020. The application of PFC has been admitted in NCLT on 27.09.2022 under IBC CIRP has been put on hold by NCLT vide order dated 17.03.2023 in an application filed by Entegra Ltd. PFC has filed an Appeal before the NCLAT against the NCLT Order dated 17.03.2023 for recommencement of CIRP.

39	<p>Bhasmey Gati Infrastructure 2x25.5= 51 MW Broad Features : Dam-33.2m High, Symmetrical gravity HRT-5.3m dia&5.132 km length , Circular. Surge Shaft- 89.8m Hight& 14m dia. P.House-Outdoor Turbine-VF TRT-2 Nos, L- 50m Swityard-132/11 KV Cost :Original : 408.50 Latest :746.01 Contractors Civil : Simplex E&M : Voith</p>	<p><u>Sikkim</u> <u>2012-13</u> <u>2027-28</u> (Subject to re-start of works)</p>	<p>Project is in initial stage of construction. River diversion achieved. Barrage: 61555cum/194600cumexcavation completed. HRT: 1670m/4460m excavation completed. PH: 136105 cum/185937cum excavation completed. Surge Shaft : 8567cum / 22000cum Surface excavation completed. Overall Physical progress: 38% .</p>	<p>- Slow progress of works - Works stalled since Sept., 2016 due to paucity of funds. -No investor showing interest for executing the project.</p>
40	<p>Rangit-II Sikkim Hydro Power Limited 10.02.2010 2x33= 66 MW Broad Features : Dam-47m High, Concrete Gravity HRT-3.9m dia&4.745 km length , Surge Shaft- 65.5m High & 10m dia. Underground Pressure Shaft : 1.7 m dia& 2.5 km length. P.House-Outdoor Turbine- Pelton Vertical Swityard- GIS, 132/11KV Cost :Original : 496.44 Latest : 496.44 Contractors Civil &HM : Coastal E&M : Gammon</p>	<p><u>Sikkim</u> <u>2015-16</u> <u>2027-28</u> (Subject to re-start of works)</p>	<p>EPC contract awarded to M/s Coastal in February, 2012. Diversion Tunnel: River diversion through diversion tunnel has been achieved. Dam :Excavation 53100cum out of 85000cum completed. HRT: Excavation 623m out of 4745m completed. Surge Shaft: Excavation completed. Concreting 37/1667 cum done. Pressure shaft: Excavation of pressure shaft I - 25m out of 128m and pressure shaft II - 154m out of 377m completed Power House: Excavation of surface power house is being taken up. Overall Physical progress: 40% .</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. Project is in NCLT since 30.07.2020.</p>
41	<p>Panan Himagiri Hydro Energy Pvt. Ltd. 07.03.2011 4x75= 300 MW Broad Features : Dam-115m from deepest foundation level Desilting Chambers : Underground, 2 Size (14Lx22Wx2.5H) HRT- modified horse shoe, 6 m dia& 9549m length , 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 Cost :Original: 1833.05 Latest :2675.00 Contractors Civil : Essar</p>	<p><u>Sikkim</u> <u>2018-19</u> <u>2028-29</u> (Subject to re- start of works)</p>	<p>Civil works awarded on 22.02.2014. Infrastructural works and geological investigations are in progress. Starting of civil construction works was held up for want of the National Board of Wild Life (NBWL) clearance. On dismissal of the case in NGT on 21.08.17, the developer has made an application to PCCF cum-Secretary, Forests, Environment & Wild Life Management Department for grant of NOC, in National Board for Wildlife (NBWL) angle. Now, the NoC in regard to NBWL has been received vide state Govt letter dated 4.10.2019. In view of the new hydro policy announced by Ministry of Power, GOI, which will help in convincing the investors to release the funds to start the project works. An artificial lake (Mantham Lake) created in August 2016 due to heavy landslide resulting no accessibility for several years to the Upper Dzongu/ Dam site, which are beyond the control of the company/ force majeure. It is being understood that now Road and Bridge Department of Govt of Sikkim started erecting 60 Tonne Bridge, but work may progress in full stretch only after this rainy season i.e. of year</p>	<p>-Works was stalled for want of NOC from State Govt. from NBWL angle and now it is received. - Construction of bridge on Mantham lake for accessibility of site is now being started. The works are likely to start soon after accessibility to Dam site is achieved. - Some of the infrastructure works developed earlier to be redone.</p>

			<p>2022 and the construction work is likely to be completed by 4th quarter of 2022 then the project work will re-start. The project is likely to be commissioned in 2025-26, subject to restart of works.</p> <p>Overall Physical progress: NIL</p>	
42	<p>Pinnapuram PSP Greenko Energy 20.4.2022 4x240+2x120=1200 MW</p> <p>Broad Features : Upper reservoir: FRL 463m Dam height-40m from ground level</p> <p>Lower reservoir: FRL 337m Dam height-38m from ground level</p> <p>Pressure Shaft : 5, 7.5m dia, 83.5 m- long P.House-Surface Turbine-Vertical Francis reversible pump turbine Cost :Original: 6465.22 Latest :6465.22</p> <p>Contractors E&M : M/s Andritz Civil : M/s Megha</p>	Andhra Pradesh <u>2024-25</u> (Dec'24)	<p>Upper Reservoir and Upper Intake: Excavation almost completed and Upper Reservoir – Rock fill Embankment works (72%) out of 62,03,401cum , Graded filter embankments (72%) out of 6,14,126 cum and Rip Rap (64%) completed.</p> <p>Pressure Shaft: Excavation (5,08,644 cum), Fabrication (17,667 cum) and Erection(17,667 cum)-92% & 64% and 52% completed respectively.</p> <p>Power House: Excavation (11,67,862 cum) completed. & Concreting (64%) completed.</p> <p>Lower Reservoir, Lower Intake and Tail Race Channel: All Excavation & lower reservoir embankments completed. Out of (40,834 cum) Tail Race Channel lining works 32% completed.</p> <p>E&M works: Power House – Concreting (64%) completed. Generator stator and rotor installation are in progress at service bay.</p>	-Developer is planning additional two units of 240MW each.

Grand Total : 42 nos. – 18033.5 MW

Chapter 6 B

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	Present Status/ Issue
1.	<p>Punatsangchhu-I</p> <p>6x200=1200 MW</p> <p>PHPA, Bhutan</p> <p>Date of TEA: 27.07.2007</p> <p>Broad Features :</p> <p>Dam – 130m High, 249m long, Concrete gravity (RCC)</p> <p>HRT- 10m x 8.9 km</p> <p>Pressure Shaft: Two nos. 6.0mx936.42 m each</p> <p>Surge Shaft: 24.5mx128.5m</p> <p>TRT: 10.0m x1182.20m</p> <p>P.House-Underground</p> <p>Turbine- Vertical Francis</p> <p>SWYD- 400 kV</p> <p>Original Commissioning Schedule: Nov' 2016</p> <p>Anticipated commissioning schedule : 2025-26</p>	<p>Civil Works:</p> <p>Package-I: L&T Ltd. on 27.03.2009</p> <p>Package-II: Gammon India Ltd on 27.03.2009</p> <p>Package-III:HCC ltd. 27.03.09</p> <p>E&M Main Works:</p> <p>Package-I : BHEL Ltd. on 04.02.2010</p> <p>Package-II: BHEL Ltd. on 27.02.2012</p> <p>Package-III: Hyosung Corporation on 28.02.2012</p> <p>Package-IV: SudkabelGmbh on 27.05.2011</p> <p>Package-V: Schneida Electric Ltd. on 21.11.2013.</p> <p>Transmission</p>	<ul style="list-style-type: none"> • Dam (130 m high and 249 m long):- The works of Cofferdam, Diversion Tunnels, and major excavation of Dam are complete. The balance works left are concreting of Dam, Intake Structures and related HM works.100% reinforcement and concreting of Power Intake structure completed. • Desilting chamber (4 nos. each of 330 m length x 18 m width x 24 m depth):- Both excavation and concreting completed (100%). • Progress for MC-I Package is 69.87%. • HRT (10m diameter, 8.9 km long):- Both excavation and lining completed (100%). • Surge Shaft (24.5 m diameter 128.5 m height):- Both boring & lining completed (100%). • Progress for MC-II Package is 100%. • Pressure Shaft (2 nos. each of 6 m diameter 936.42 m long and 6 penstocks of 3.32 m diameter):- Boring, steel liner fixing and backfill concreting works completed (100%). • Power House MC-III package (power house inc. HM) is 100% • Finishing works of power house is 97.25% completed. • (236.9 m x 22.9 m x 53 m size):- Both excavation and concreting completed (100%). • TRT (10.0 m diameter and 1182 m long): Both excavation and lining completed (100%). • Progress for MC-III Package is 99.05%. • E&M Works:- <ul style="list-style-type: none"> • Over all 88.82% works completed for Unit # 1 • Over all 99.87% works completed for Unit # 2 • Over all 99.98% works completed for Unit # 3 • Over all 99.95% works completed for Unit # 4

Sl. No.	Name of Project / Capacity (MW)/Executing Agency/Date of CEA clearance / Approval / Broad Features/Commissioning Schedule	Award of works	Present Status/ Issue
	<p>(As presented in the 22nd PPHA-I meeting held on 25.09.2019 which will be revised after decision on Dam Vs Barrage)</p> <p>Original Cost: Rs.3514.80 Crores</p> <p>Latest revised Cost: Rs9375.60Cr.(Dec 2013 PL)</p> <p>Expenditure: Rs. 8360.99 Crores (Oct, 2022)</p>	<p>Works:</p> <p>Joyti Structures & Gammon (India) JV on 12.08.2010 (Amended on 10.6.2013)</p>	<ul style="list-style-type: none"> • Over all 82.5% works completed for Unit # 5 • Over all 99.85% works completed for Unit # 6 • Progress for E&M works is 98.64%. • Progress for Transmission work is 99.94%. • Overall physical progress achieved is 87.74%. <p>Critical/ Major issue:</p> <p>Pending decision on the construction of Dam/ Barrage.</p> <p>Due to pending decision on construction of Dam/Barrage, the work is on hold at the present Dam site. As per the decision of both Governments and subsequent 23rd PPHA-I Authority Meeting held on 24.11.2022 at Thimphu, an 8-Member Inter Governmental Group (IGG) was constituted on 16.01.2023 to review the Dam and Barrage option so as to find a technically safe and cost effective way forward. The IGG held 5 rounds of meetings between January-June 2023. Before submission of its final report, IGG made presentation before both Governments during the meeting held on 14th August 2023 at Delhi wherein it was agreed for construction of Dam with a condition to further deliberate the NGI report in next TCC. Accordingly, 31st TCC (Phase-I) was held on 12th September 2023 through VC and subsequent Phase-II TCC meeting was held on 27-28th September 2023 at Wangdue along with site visits, wherein it has been decided for drilling of boreholes in three phases for ascertaining the geological model at Right Bank Slope. TCC also suggested Project Management to carry out other parallel activities of Dam work planning for appraisal of TCC/Authority members.</p>

Sl. No.	Name of Project / Capacity (MW)/Executing Agency/Date of CEA clearance / Approval / Broad Features/Commissioning Schedule	Award of works	Present Status/ Issue
	<p>Punatsangchhu-II</p> <p>6x170=1020 MW</p> <p>PHPA, Bhutan</p> <p>Date of TEA: 30.04.2010</p> <p>Broad Features :</p> <p>Dam – 91m High, 225m long, concrete gravity</p> <p>HRT- 11m x 8.51 km</p> <p>Pressure Shaft: 3 nos. 5.5mx997m each</p> <p>Surge Shaft:31 m x137m</p> <p>TRT: 11.0m x2869 m</p> <p>P.House-Underground</p> <p>Turbine- Vertical Francis</p> <p>SWYD- 400 kV</p> <p>Original Commissioning Schedule: Dec' 2017</p> <p>Anticipated commissioning schedule: 2024-25 (Dec. 2024)</p> <p>Original Cost: Rs.3777.80 Crores (03/2009PL)</p> <p>Latest1st revised Cost: Rs7290.62Cr.(03/ 2015 PL)</p> <p>Latest 2nd revised Cost:8977.045 Crore (to be approved by MEA)</p>	<p>Civil Works:</p> <p>Package- CI : JP Associate Ltd. on 25.07.2011</p> <p>Package-CII: Gammon India Ltd on 25.07.2011</p> <p>Package-CIII: JP Associate Ltd. on 25.07.2011</p> <p>E&M Main Works:</p> <p>Package-I: BHEL Ltd. on 18.07.2012</p> <p>Package-II: BHEL Ltd. on 7.05.2013</p> <p>Package-III: Hyosung Corporation on 7.05.2013</p> <p>Package-IV:LS Cables & System Ltd. on 7.05.2013</p> <p>Package V : M/s ABB Ltd. on 18.11.2014</p> <p>Package VI : M/s BAEL, Bhutan on 31.12.2018</p> <p>Package VII (A) : M/s S.K. Systems on 13.02.2017</p> <p>Package VII (B) : M/s Technico (India) on 21.03.2017</p>	<p>Dam Package:</p> <ul style="list-style-type: none"> • 99.32 % of Concrete Dam completed. • 90.75 % of all HM works in Dam, Desilting Chamber and SFT Gates completed. HRT Package: <p>Excavation completed and concreting in progress. Adverse geological situation faced at the left bank of the dam stands resolved. Conc.8.765 lakh cum completed out of 9.08 lakh cum.</p> <p>Desilting Chamber and Silt Flushing Tunnel</p> <p>All works of Desilting Chamber and Silt Flushing Tunnel stand completed except Concreting of 2063 cum and silt flushing gate and miscellaneous work which are pending due to unavailability of manpower.</p> <p>Total Progress for C-I Package(inc.HM) – 99.32%</p> <p>HRT (11m diameter, 8.51 km long)</p> <p>HRT Package:</p> <ul style="list-style-type: none"> • 99.73 % of Head Race Tunnel completed. <p>All the works in HRT under of C-2 Package is completed (99.73%) and concrete lining works of HRT under C-3 package is 91.04% completed. (Total Progress for C-II Package – 99.73%)</p> <p>Power House (240 m x 23.5m x 51m size)</p> <p>Powerhouse Package:</p>

Sl. No.	Name of Project / Capacity (MW)/Executing Agency/Date of CEA clearance / Approval / Broad Features/Commissioning Schedule	Award of works	Present Status/ Issue
	<p>Expenditure: Rs. 7578.98 Crores(June'2022)</p>	<p>Package VIII (A) : M/s Aavids Technovators Pvt Ltd. on 18.11.2019</p> <p>Transmission Works:</p> <p>Bhutan Power Corp.Ltd</p> <p>on 16.01.2014 (on deposit work basis)</p>	<ul style="list-style-type: none"> • 94.01 % of Civil works completion in Machine Hall achieved. • 100 % of Strengthening & Restoration works completed in Downstream Surge Gallery. • 97.42 % of works completion achieved in Transformer Hall. • 86.90 % of civil works completed in Southern and Northern Downstream Surge Gallery. <p>Electromechanical Package:</p> <ul style="list-style-type: none"> • Erection of Stator of Unit-I & II completed. • Stator of Unit-I lowered on 14.02.2023 and Unit-II lowered on 03.05.2023. • Winding of Stator for Unit-III, IV & V is in progress. • Rotor for Unit-I lowered in barrel on 25.08.2023. • Assembly of Rotor for Unit-II is completed and Unit-III has been started from 19.09.23. • Lowering of MIV for Unit-I & II completed. • Assembly of MIV for Unit-III is in progress. • Erection of Turbine for Unit-I & II is in Progress. • Erection of Spiral Casing in Unit-IV completed, Testing is in progress. <p>Total Progress for C-III Package – 91.04%</p> <p>E&M Works:</p> <p>Total Progress for E&M Package – 84.74% Total Progress for Transmission work – 100%</p>

Sl. No.	Name of Project / Capacity (MW)/Executing Agency/Date of CEA clearance / Approval / Broad Features/Commissioning Schedule	Award of works	Present Status/ Issue
			<p>Overall Cumulative Physical Progress of the Project on 30.09.2023 is 95.91%.</p> <p>Any Other Relevant Information:- The total progress is calculated by considering weightage of 40% for Dam, 5.92% for HRT, 17.08 % for Power House, 15% for E&M and 2% for Transmission works. 20% progress is added on account of infra works, approach roads & site facilities..</p>

Chapter-7

Financial Status of Under Construction H.E.P.

Sl. No.	Name of project/ State	Capacity (MW)	Benefits (MW)	Cost (PL)	Ant .Cost. (PL)	Cost Overrun	Total Expend. Upto Mar'21	Actual Expenditur e till March 2022	Actual Expend. During FY2022- 23 (till Mar'2023)	Total Expend. (till Mar'2023)	Actual Expend. During FY2023- 24 (till SEP'23)
	<u>Under Execution</u>										
	<u>Central Sector</u>										
1	Pakal Dul (CVPPL) J&K	4x250	1000	8112.12 (03/2013)	8112.12 (03/2013)	—	1894.99	2223.86	698.42	2922.28	435.68
2	Parbati -II(NHPC) H.P.	4x200	800	3919.59 (12/2001)	11134.54 (07/2022)	7214.95	8848.44	9596.51	833.94	10430.45	256.04
3	Tehri PSP (THDC), Uttarakhand	4x250	1000	1657.60 (12/2005)	6439.60 (10/2022)	4782	3940.54	4497.78	792.97	5290.75	492.23
4	Tapovan Vishnugad (NTPC) Uttarakhand	4x130	520	2978.48 (03/2004)	7700.00 (4th Qtr/2022)	4721.52	4893.42	5292.43	512.13	5804.56	261.02
5	Lata Tapovan(NTPC) Uttarakhand	3x57	171	1527.00 (07/2012)	1527.00 (07/2012)	0	149.21	149.93		149.93	0.00
6	Vishnugad Pipalkoti (THD) Uttarakhand	4x111	444	2491.58 (03/2008)	3860.35 (02/2019)	1368.77	2207.95	2454.35	534.70	2989.05	250.71
7	Ramam-III (NTPC) West Bengal	3x40	120	1381.84 09/2014	1381.84 09/2014	0	660.06	774.98	96.06	871.04	85.89
8	Subansiri Lower (NHPC) Ar. Pradesh/Assam	8x250	2000	6285.33 (12/2002)	19992.43 (01/2020)	13707.1	13606.68	15506.40	2603.69	18110.09	1349.22
9	Naitwar Mori (SVVN) Uttarakhand	2x30	60	648.33 (10/2016)	1272.29	—	569.80	905.80	319.83	1225.63	71.31
10	Teesta St. VI (NHPC) Sikkim	4x125	500	5748.04 (07/2018)	5748.04 (07/2018)	—		1440.5	877.84	2318.34	655.63
11	Ratle (NHPC) J&K	4x205 + 1x30	850	5281.94 (11/2018)	5281.94 (11/2018)	0		10.36	152.38	162.74	267.94
12	Kiru (CVPPL) J&K	4x156	624	4287.59 (07/2018)	4287.59 (07/2018)		491.03	707.60	292.40	1000.00	257.90
13	Luhri-I H.P.	2x80+2x25	210	1810.56 (05/2020)	1810.56 (05/2020)		417.96	645.19	448.60	1093.79	116.31
14	Rangit-IV (NHPC) Sikkim	3x40	120	726.16 (2011-12)	938.29 (10/2019)	212.13		209.43	347.17	556.60	235.09
15	Dhaulasidh (SVVN) Himachal Pradesh	2x33	66	688 (05/2020)	688 (05/2020)		144.32	226.89	152.63	379.52	76.65
16	Kwar (CVPPPL) Himachal Pradesh	4x135	540	4526.12 (09/2020)	4526.12 (09/2020)			136.17	245.38	381.55	73.74
17	Dibang (NHPC) Arunachal Pradesh	12x240	2880	31876.39 (05/2021)	31876.39 (05/2021)			2000.14	91.16	2091.30	176.30

18	Sunni Dam (SJVN)	4x73 +1x72+1x17	382	2614.51	2614.51	Nil		265.99	178.62	444.61	73.57
				(03/2021)	(03/2021)						
A	Sub Total: Central Sector		12287.00	86561.15	119191.61		37824.40	44778.18	8999.90	56222.23	5135.23
	State Sector										
19	Parnai	3x12.5	37.50	640.86	640.86	—	241.17	287.25	62.82	350.07	29.40
	J&K			(NA)	(NA)						
20	Lower Kalnai	2x24	48	576.87	576.87	—		*	0		0.00
	J&K			(NA)	(NA)						
21	Uhl-III	3x33.33	100	431.56	2400	1968.44	2084.87	2150.91	336.35	2487.26	58.46
	H.P.			(09/2002)							
22	Shontong Karcham	3x150	450	2807.83	2807.83	—	1320.32	1503.74	189.63	1892.14	118.99
	H.P.			(07/2011)	(07/2011)						
23	Shahpurkandi #	3x33+3x33+1x8	206	1835.50	2368.55	533.05	1483.42	1799.12	427.28	2226.40	312.03
	Punjab			(4/2008)	(2/2018)						
24	Koyna Left bank PSS	2x40	80	245.02	379.78	134.76	165.39	*	0.00		0.00
	Maharashtra			(1999)	(2014)						
25	Polavaram HEP (PPA)	12x80	960	3013.68	5338.95	2325.27		802.18	230.11	884.89	234.47
	Andhra Pradesh			(2010-11)	(2016-17)						
26	Pallivasal (KSEB)	2x30	60	222	550	328	395.43	436.76	63.66	500.42	26.56
	Kerala			(1999)	(2018)						
27	Thottiyar (KSEB)	1x30 + 1x10	40	136.79	280	143.21	124.24	134.95	30.86	165.82	9.40
	Kerala			(2007)	(2018)						
28	Kundah Pumped Storage-I	4x125	500.00	1216.59	3401	2184.41	340.71	476.83	927.31	1404.14	596.28
	Tamil Nadu / (TANGENDCO)			(2007-08)	(2014)						
29	Lower Kopili	2x55+2x2.5+1x5	120	1116	1795			478.63	2.00	808.93	178.14
	Assam				(2021)						
30	Mankulam	2x20	40	600	600				104.38	104.38	15.29
	Kerala(KSEB)			(2016)	(2016)						
31	Chanju-III (HPPCL)	3x16	48.00	418.57	418.57					45.41	3.54
	H.P.										
32	Lakhwar Multipurpose Pro	3x100	300.00	5747.17	5747.17					438.46	55.30
	Uttarakhand										
33	Lower Sileru Extension	2x115	230.00								68.40
	Andhra Pradesh										
B	Sub-total: State Sector		3219.50	19008.44	27304.58		6155.55	8070.37	2374.40	11308.32	1706.25
	Private Sector										
34	Tidong-I	3x50	150	543.15	1850.00	—	858.00	1174.10	257.00	1431.50	110.72
	H.P.			(06/2018)	(06/2018)						
35	Tangnu Romai- I	2x22	44	255.00	641.89	386.89		*			0.00
	H.P.			(1/2007)	(2018)						
36	Phata Byung	2x38	76	520.00	1132.00	612		*			0.00
	Uttarakhand			(2013-14)	(9/2016)						
37	Mareshwar	10x40	400	1569.27	6793.00	5223.73		Nil			0.00
	M.P.			(1996-97)	(2016-17)						
38	Bhasmey	2x25.5	51	408.50	746.01	337.51		Nil			0.00
	Sikkim			(2012-13)	(03/2018)						
39	Rangit- II	2x33	66	496.44	496.44	—		*			0.00
	Sikkim			(2011-12)	(2011-12)						

40	Panan	4x75	300	1833.05	2671.00	837.95	155.10	0.05	100.38	100.43	0.00
	Sikkim			(2009)	(2018)						
41	Kutehr (JSW Energy (Kute	3x80	240.00	1798.13	1798.13		412.97	995.00	427.22	1579.49	295.62
	H.P.			(09/2011)	(09/2011)						
42	Pinnapuram (Greenko)	4x240+2x120	1200.00	6465.22	6465.22			1632.26	3657.34	5289.26	1422.00
C	Sub-total: Private Sector		2527.00	13888.76	22593.69		1426.07	3801.41	4441.94	8400.68	1727.91
	Total : (Under Execution):		18,033.50	119,458.35	169,089.88	47021.69	45,406.02	56,649.96	15,816.24	75931.23	8569.39
	<i>Note:-It is to mention that investment data is tentative (un-audited) as furnished by the developers in the monthly progress reports</i>										
	<i>Naitwari Mori expenditure includes 107.02 cr cost of transmission line against the estimated cost of transmission line Rs. 120.44 crore.</i>										

Total expenditure excludes the stalled projects of state and private sector.

Chapter 8
Status of Environmental and Forest Clearance of Under Construction Hydro Electric Projects

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 TEC Clearance	Date of Env. Clearance	Date of Forest Clearance	Date of I. Approval
I	Central Sector							
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	01.08.12
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	Naitwar Mori (SJVN)	Uttarakhand	2x30	60.00	02.03.10	16.06.2016	05.08.2016	16.10.17
10	Teesta St. VI	Sikkim	4x125	500.00	27.12.2006	21.09.06	23.05.2008	08.03.2019
11	Ratle (NHPC)	J&K	4x205+1x30	850.00	19.12.2012	12.12.12	15.10.14	11.02.2021
12	Kiru (CVPPL)	J&K	4x156	624.00	13.06.2016	24.06.16	19.05.16	08.03.19
13	Rangit-IV	Sikkim	3x40	120.00	06.07.2007	16.05.07	26.12.07	30.03.2021
14	Luhri -I (SJVN)	H.P.	2x80+2x25	210.00	01.05.2018	17.03.2020	28.03.2019	20.11.2020
15	Dhaulasidh (SJVN)	H.P.	2x33	66.00	25.06.2011	21.02.2013	11.08.2020	01.10.2020
16	Dibang Multipurpose Project (NHPC)	Arunachal Pradesh	12x240	2880.00	18.09.2017	19.05.2015	12.03.2020	27.02.2023
17	Sunni Dam (SJVN)	HP	4x73+1x73+ 1x17	382.00	11.02.2021	04.02.2022	23.08.2022	04.01.2023
18	Kwar (CVPPL)	J&K	4x135	540.00	23.02.2017	10.04.2017	08.08.2014	11.05.2022
Sub-total (Central Sector):				12287.00				
II	State Sector							
19	Parnai (JKSPDC)	J&K	3x12.5	37.50	11.12.1992	24.12.2010	17.05.2013	25.10.2013
20	Lower Kalnai (JKSPDC)	J&K	2x24	48.00	16.08.2013	22.08.2014		16.08.2013
21	Uhl-III	H.P.	3x33.33	100.00	19.09.02	15.11.02	20.12.02	26.09.03
22	Shongtong Karcham	H.P.	3x150	450.00	16.8.12	19.05.11	22.03.11	-
23	Shahpurkandi	Punjab	3x33+3x33+1x1	206.00	08/2009	18.11.81	Not Req.	04.05.11
24	Koyna Left Bank PSS	Mah.	2x40	80.00	-	16.05.07	Not Req.	20.02.04
25	Indrasagar Polavaram (PPA)	Andhra Pr.	12x80	960.00	21.07.2010	28.07.10	21.07.10	25.02.09
26	Pallivasal Extn.	Kerala	2x30	60.00	31.01.07	Not Req.	11.07.07	31.01.07
27	Thottiyar	Kerala	1x30 + 1x10	40.00	05.06.08	Not Req.	11.07.07	05.06.08
28	Kundah Pumped Storage-I (TANGENDC)	Tamil Nadu	4x125	500.00	15.02.18	08.05.07	27.11.08	03.12.08
29	Lower Kopli (APGCL)	Assam	2x55+2x2.5+1	120.00	24.05.16	04.09.2019	04.12.2020	Nov,2020
30	Chanju-III (HPPCL)	H.P.	3x16	48	14.07.2015	29.09.2017	11.10.2019	
31	Mankulam (KSEB)	Kerala	2 x 20	40.00	03.03.2022	Not required	11.07.2007	03.03.2022
	Lakhwar Multipurpose Project (UJVNL)	Uttarakhand	3x100	300.00	14.12.2012	02.02.2021	31.01.2014	23.12.2021
32								
	Lower Sileru Extension	Andhra Pradesh	2x115	230.00	Not required	24.04.2023	04.08.2022	24.08.2020
33								
Sub-total (State Sector):				3219.50				
III	Private Sector							
34	Tidong-I	H.P.	3X50	150.00	-	18.06.08	18.06.08	23.07.07
35	Tangnu Romai- I	H.P.	2x22	44.00	-	01.05.09	19.01.10	30.11.07
36	Phata Byung	Uttarakhand	2x38	76.00	-	01.05.09	-	30.11.07
37	Maheshwar	M.P.	10x40	400.00	-	07.01.94	Not Req.	29.09.06
38	Bhasmey	Sikkim	2x25.5	51.00	-	15.05.07	13.09.10	-
39	Rangit- II	Sikkim	2x33	66.00	-	16.04.10	22.10.10	10.2.10
40	Panan	Sikkim	4x75	300.00	-	02.01.07	21.09.10	07.03.11
41	Kutehr	H.P.	3x80	240.00	-	05.07.11	19.02.13	31.03.10
42	Pinnapuram (Greenko AP01 IREP Private)	A.P.	4x240+2x120	1200.00	20.04.22	14-07-2020	23-04-2020 Stage-I	
Sub-total (Private Sector):				2527.00				
Total : Under Execution				18033.50				

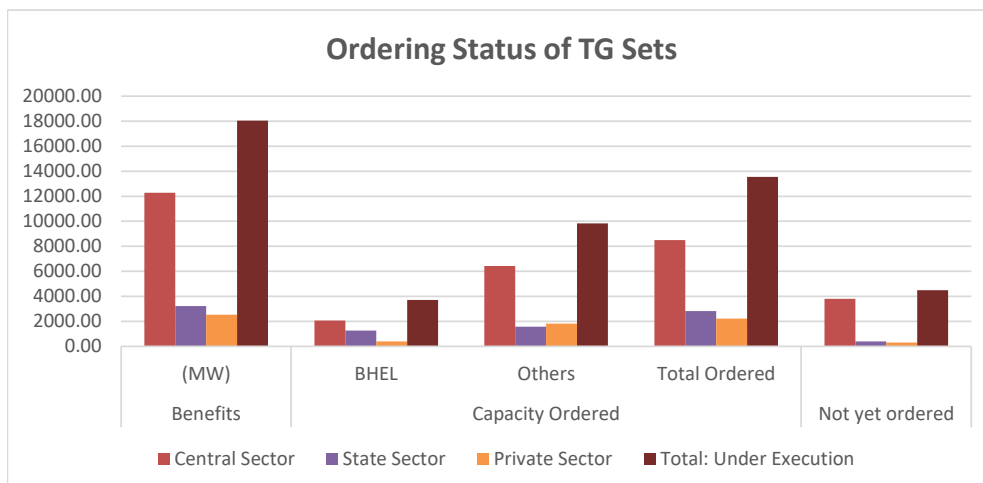
Chapter 9

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
Central Sector						
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	11.09.2002
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	Naitwar Mori (SJVN)	Uttarakhand	2x30	60.00	16.10.2017	05.12.2017
10	Teesta St. VI	Sikkim	4x125	500.00	08.03.19	31.03.2020
11	Ratle (NHPC)	J&K	4x205+1x30	850.00	11.02.2021	18.01.2022
12	Kiru (CVPPL)	J&K	4x156	624.00	08.03.2019	24.02.2020
13	Rangit-IV	Sikkim	3x40	120.00	30.03.2021	27.08.2021
14	Luhri -I (SJVN)	H.P.	2x80+2x2	210.00	20.11.20	24.11.2020
15	Dhaulasidh (SJVN)	H.P.	2x33	66.00	01.10.2020	06.05.2021
16	Dibang (NHPC)	Arunachal Pradesh	12x240	2880.00	27.02.2023	27.02.2023
17	Sunni Dam (SJVN)	H.P.	4x73+1x73+1x17	382.00		
18	Kwar (CVPPPL)	J&K	4x135	540.00	11.05.2022	11.05.2022
Sub-total (Central Sector):				12287.00		
State Sector						
19	Parnai (JKSPDC)	J&K	3x12.5	37.50	21.10.2013	25.10.2013
20	Lower Kalnai (JKSPDC)	J&K	2x24	48.00	16.08.2013	12.09.2013
21	Uhl-III	H.P.	3x33.33	100.00	19.09.02	02.04.2003
22	Shongton Karcham	H.P.	3x150	450.00	16.08.12	04.08.2012
23	Shahpurkandi	Punjab	3x33+3x33+1x8	206.00	04.05.11	11.02.2013
24	Koyna Left Bank PSS	Mah.	2x40	80.00	20.02.04	20.06.2007
25	Indrasagar Polavaram (PPA)	Andhra Pr.	12x80	960.00	21.02.2012	20.12.2017
26	Pallivasal	Kerala	2x30	60.00	31.08.07	31.01.2007
27	Thottiyar	Kerala	1x30 + 1x10	40.00	05.06.08	22.12.2008
28	Kundah Pumped Storage-I (TANGENDCO)	Tamil Nadu	4x125	500.00	03.12.08	15.02.2018
29	Lower Kopli (APGCL)	Assam	2x55+2x2.5+1x5	120.00	Nov,2020	21.08.2020
30	Chanju-III (HPPCL)	H.P.	3x16	48.00	14.07.2015	07.10.2022
31	Mankulam (KSEB)	Kerala	2 x 20	40.00	03.03.2022	03.03.2022
32	Lakhwar Multipurpose Project (UJVNL)	Uttarakhand	3x100	300.00	23.12.2021	01.02.2023
33	Lower Sileru Extension	Andhra Pradesh	2x115	230.00	24.08.2020	24.08.2020
Sub-total (State Sector):				3219.50		
Private Sector						
34	Tidong-I	H.P.	3X150	150.00	23.07.07	07.11.2008
35	Tangnu Romai- I	H.P.	2x22	44.00	2014-15	14.06.2010
36	Phata Byung	Uttarakhand	2x38	76.00	06.10.08	12.04.2008
37	Maheshwar	M.P.	10x40	400.00	30.12.96	20.02.1997
38	Bhasmey	Sikkim	2x25.5	51.00	Dec-08	12.04.2010
39	Rangit-II	Sikkim	2x33	66.00	10.02.10	24.10.2011
40	Panan	Sikkim	4x75	300.00	07.03.11	22.02.2014
41	Kutehr (JSW Energy (Kutehr)Lt	H.P.	3x80	240.00	31.03.10	20.10.2019
42	Pinnapuram (Greenko AP01 IR	A.P.	4x240+2x120	1200.00	—	—
Sub-total (Private Sector):				2527.00		
Total - Under Execution:				18033.50		

Chapter 9.1

Ordering Status of TG sets for Under Construction Hydro Electric Projects					
Summary- Units Ordered					
Sector	Benefits	Capacity Ordered			Not yet ordered
	(MW)	BHEL	Others	Total Ordered	
Central Sector	12287.00	2055.00	6430.00	8485.00	3802.00
State Sector	3219.50	1266.00	1565.50	2831.50	388.00
Private Sector	2527.00	400.00	1827.00	2227.00	300.00
Total: Under Execution	18033.50	3721.00	9822.50	13543.50	4490.00



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
A.	Central Sector				
	BHEL Units				
1	Parbati-II (NHPC), (H.P.	4x200	800.00	BHEL	24.12.02
2	Tapovan Vishnugad (NTPC), Utt.	4x130	520	BHEL	01/2008
3	Lata Tapovan, Uttarakhand	3x57	171	BHEL	12/2012
4	Vishnugad Pipalkoti (THDC)	4x111	444	BHEL	18.11.14
5	Ramam-III (NTPC)	3x40	120	BHEL	19.02.15
	Sub-total- BHEL		2055.00		
	Other Units				
6	Tehri PSP (THDC)	4x250	1000.00	Alstom, France	27.07.11
7	Subansiri Lower (NHPC), Ar.	8x250	2000.00	Alstom, France & India	11.02.05
8	Naitwar Mori (Uttarakhand)	2x30	60.00	Voith Hydro Pvt. Ltd.	11.06.18
9	Teesta St. VI, (Sikkim)	4x125	500.00	Alstom, India	04/2009
10	Pakal Dul(J&K)	4x250	1000.00	Voith Hydro Pvt. Ltd.	01/2019
11	Rangit-IV, (Sikkim)	3x40	120.00	Andritz Hydro, India	28.08.09
12	Kiru (CVPPPL)	4x156	624.00	M/s Andritz Hydro Pvt. Ltd.	24.02.20
13	Luhri -I (SJVN)	2x80+2x25	210.00	Voith Hydro Pvt. Ltd.	16.07.21
14	Dhauasidh (SJVN)	2x33	66.00	Voith Hydro Pvt. Ltd.	19.01.2022
15	Ratle (J&K)	4x205+1x30	850.00	M/s Megha Engineering & Infrastructures Limited	18.01.2022
	Sub-total- Others		6430.00		
	Sub-total (Central Sector):		8485.00		
B	State Sector				
	BHEL Units				
16	Uhl-III (H.P.) BVPCL	3x33.33	100.00	BHEL	15.02.07
17	Shahpurkandi, Punjab ; PSPCL	3x33+3x33+1x8	206.00	BHEL	28.02.14
18	Polavaram (PPA) Andhra Pr.	12x80	960.00	BHEL	30.03.21
	Sub-total- BHEL		1266.00		
	Chinese				
19	Pallivasal, Kerala ;KSEB	2x30	60.00	Dongfang Elec.Corp., China	31.01.07
20	Thottiyar, Kerala KSEB	1x30 + 1x10	40.00	Chongqing, China	22.12.08
	Sub-total- Chinese		100.00		
	OTHER UNITS				
21	Koyna Left Bank PSS, Mahar	2x40	80.00	IVRCL Ltd	16.12.10
22	Shontong Karcham, H.P.	3x150	450.00	Andritz Hydro, India	04.03.15
23	Parnai (JKSPDC) J&K	3x12.5	37.50	Andritz Hydro, India	-
24	Lower Kalnai (JKSPDC) J&K	2x24	48.00	GE Power India Pvt. Ltd.	-
25	Kundah Pumped Storage-I (Tamil Nadu)	4x125	500.00	Megha Engineering & Infrastructure Ltd.	28.11.2019
26	Lower Kopli (APGCL)	2x55+2x2.5+1x5	120.00	M/s ANDRITZ HYDRO Private Ltd	09.09.2021
27	Lower Sileru Extension	2x115	230.00	M/s Shirdi Sai Electricals & M/s PES Engineers Private Ltd	13.04.2022
	Sub-total- Others		1466		
	Sub-total (State Sector):		2831.50		

Sl. No.	Name of the Project/State	Capacity (No.x MW)	Benefits (MW)	Make/Supplier of TG set	Date of Order
C Private Sector					
BHEL Units					
28	Maheshwar (M.P.)	4x100	400.00	BHEL	25.06.07
	Sub-total- BHEL		400		
OTHER UNITS					
29	Tidong-I, (H.P.)	3X50	150.00	Alstom, India	28.02.11
30	Tangnu Romai- I, (H.P.)	2x22	44.00	Andritz Hydro, India	17.04.13
31	Phata Byung, (Uttarakhand)	76.00	76.00	Alstom, India	12.04.08
32	Bhasmey, (Sikkim)	2x25.5	51.00	Voith Hydro, India	14.04.10
33	Rangit-II, (Sikkim)	2x33	66.00	Gammon India Ltd.	24.03.12
34	Pinnapuram (Greenko)	4x240+2x120	1200.00	Andritz Hydro Pvt. Ltd., India	
35	Kutehr(HP)	3x80	240.00	Andritz Hydro Pvt. Ltd., India	13.02.20
	Sub-total- Others		1827.00		
	Sub-total (Private Sector):		2227.00		
	Under Execution Total (Units Ordered):		13543.50		
s not yet ordered					
A Central Sector					
36	Dibang Multipurpose Project (NHPC)	12x240	2880.00		
37	Sunni Dam (SJVN)	4x73+1x73+1x17	382.00		
38	Kwar (CVPPPL)	4x135	540.00		
	Sub-total (Central Sector):		3802.00		
B State sector					
39	Chanju-III (HPPCL)	3x16	48.00		
40	Mankulam (KSEB)	2 x20	40.00		
41	Lakhwar Multipurpose Project (UJVNL)	3 x 100	300.00		
	Sub-total (State Sector):		388.00		
C Private Sector					
42	Panan, Sikkim	4x75	300.00		
	Sub-total (Private Sector):		300.00		
Total: (Units not yet ordered)			4490.00		
Total: Under execution			18033.50		

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
Under Execution							
A Central Sector							
1	Pakal Dul CVPPL 03.10.2006/ 28.10.2014 4x250 = 1000MW	UT of J&K North Region	Civil works	Power House Package- Power House, Transformer Cavern, MIV cavern, Valve House, TRT , Pressure shaft , Surge Shaft and associated works.	M/s. Afcons- Jaiprakash Associates JV	1051.00	<u>21.02.2018</u> 20.12.2022
				Dam Pkg. - Diversion Tunnel works, Dam works, Spillways, and Part of HRT by DBM and associated works.	M/s Jaiprakash Associates	2853.00	<u>21.06.2018</u> 20.03.2023
			E&M Works	Letter of Award Issued: Supply, Erection & commissioning of E&M components.	M/s. Voith Hydro Limited	703.63	<u>02.01.2019</u> 01.11.2023
			H&M Works	Letter of Award Issued: Supply, Erection & commissioning of HM components.	M/s PES Engineers Pvt. Ltd	286.58	<u>26.08.2019</u> 25.06.2023
			HRT- TBM	Letter of Award Issued- HRT by TBM	M/s L&T Ltd.	2575.63	<u>03.07.2020</u> 02-01-2025
2	Parbati-II NHPC 12.10.1999/ 11.09.2002 4x200 = 800 MW	Himachal Pradesh, North Region	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>13.08.2011</u> (revised)
				Lot-2: Civil & HM works of HRT (3500-24733m)	M/s Himachal JV	419.89	11.09.2002 10.09.2007
				Contract terminated in March-12 and Fresh awarded as under.			
				Lot-2A: Balance civil works of HRT by TBM	M/s Gammon-CMC JV, Mumbai	455.63	<u>13.08.2013</u> 27.01.2020 (revised)
				Lot-2B: Balance civil works of HRT by DBM and associated HM works *contract has been terminated on 22.12.2018	M/s Valecha Engg. Ltd, Mumbai	176.30	<u>21.11.2013</u> 24.01.2018 (revised)
				Lot 2C : Execution of 1500 m Head Race Tunnel by DBM	M/s Gammon Engineers Contractors Pvt Limited	211.64	<u>02.06.2020</u> <u>01.03.2023</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> 24.05.2016 (revised)
				Lot-4: Jiwa Nallah Works	M/s BJ_Techno-HAS (JV)	56.47	<u>11.09.2002</u> 10.09.2007
				Contract terminated and Fresh awarded as under:			
				Lot-4A: Balance Civil & HM works of Jiwa Nallah and associated works *contract has been terminated on 25.05.2019	M/s Coastal Projects, Noida	78.34	<u>22.06.2011</u> 24.03.2015 (revised)

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 (commencement)/ Completion
			E&M works	Generating Units, EOT Crane Main step up Transformers, Switch Yard and	M/s BHEL	354.44	<u>24.12.2002</u> 23.04.2007
				Electrical & Mechanical Auxiliaries	M/s BHEL	34.2	<u>24.12.2002</u> 23.04.2007
				Design, Manufacture, Supply, Erection, Testing & commg.	M/s BHEL	391.11	<u>29.12.2006</u> 02/2011
			H&M Works	Hydro-Mechanical Packages	M/s Patel-Sew JV	23.61	<u>11.09.2002</u> 13.08.2011 (revised)
3	Tehri PSS, THDC, 18.7.06 Nov-11 (Revised CCEA) 4x250=1000 MW	<u>Uttara khand NR</u>	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> 27.07.11 26.01.2016 (Commencement Date)
							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	<u>Uttara khand NR</u>	Civil works	Construction of Barrage and De-silting chambers	M/s SSJV Projects Pvt. Ltd. and M/s ZVS, Russia	269..15	01/2007 07/2012
				Contract terminated in November-10 and fresh award made in July-12			
				Construction of Barrage and De-silting chambers (Balance Works)	M/s Rithwik Projects Pvt. Ltd., Hyderabad.	457.57	07/2012 03/2015
				Construction of HRT	M/s L&T Ltd. and M/s Alpine Mayreder Bau GmbH	455.921	11/2006 08/2012
				HRT contract terminated on 09.01.2014. HRT package re-awarded on 09.03.2016.			
				Construction of HRT(Balance Works)	M/s HCC	634.03	03/2016 01/2019
				Power House & Penstock package	M/s Patel Engg. Pvt. Ltd.	221.28 Cr. + Euro 37.58m	05/2007 08/2012
			E&M works	Turbine generating units and associated auxiliaries	M/s BHEL	321.28 crs.	1/2008 12/12
5	Lata Tapovan, NTPC Aug-2012 3x57= 171 MW	<u>Uttara khand NR</u>	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	<u>Uttara khand NR</u>	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

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 (commencement)/ Completion
7	Teesta-VI NHPC 08.03.2019/ 07/.2007(FC) 4x125= 500MW	<u>Sikkim</u> <u>NER</u>	Civil works	Barrage, Desilting Basin, SFT, Intake part of HRT-I & HRT-II & other associated structure	M/s Jaiprakash Associate Limited	1710	31.03.2020
				Part of HRT-I & HRT-II, Surge Shaft, Power House, TRT & other associated structure	M/s Patel Engineering Limited	1251	22.09.2021
			H&M works		M/s PES Engineers Private Limited	INR 100.76 & EURO 17.5 lakhs	27.10.2021
			E&M works	E&M Package, EM-I	M/s GE Power India Ltd.	107.49	14.12.2020
				E&M Package, EM-II	M/s BHEL	150.10	04.09.2020
				E&M Package, EM-III	M/s Technico India Pvt Ltd	3.98	22.09.2020
				E&M Package, EM-IV	M/s Jakson Ltd	3.07	1.10.2021
				E&M Package, EM-V	M/s SHES Air and Automation	5.63	06.08.2021
				E&M Package, EM-VI	M/s Aavids Technovators Pvt. Ltd.,	3.89	16.04.21
				E&M Package, EM-VII	M/s PGCIL	55.57	21.12.2021
				E&M Package, EM-VIII	M/s B. C. Technomation	6.23	28.08.2021
8	Subansiri Lower NHPC 07.06.2001/09.09.03 8x250= 2000 MW	<u>Ar.Pr/</u> <u>Assam</u> <u>NER</u>	Civil works	Dam/Barrage	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 (Contract Foreclosed on 28.04.2015)
				Surge Tunnel Works	M/s L & T LTD, Chennai	422.50	14.05.2009 11/2012 (Contract Foreclosed on 28.04.2015)
				Balance civil work of Powerhouse complex from HRT to Tail Race Channel	M/s Patel Engineering Ltd, Mumbai	1564.41	01.09.2021 12/2023
			E&M works	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
				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

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
				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
9	Ramam-III NTPC Ltd. 3x40= 120 MW	<u>W.B.</u> <u>E.R.</u>	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. components, 3.1 km HRT, 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>
			E&M works	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>
10	Naitwar Mori (SJVN Ltd.) 02.03.2010 (2x30=60 MW)	Uttrakha nd	Civil Works	C/o all civil works of barrage, intake, desilting tank, HRT, Power house, surge shaft, TRT, Adits & infra works etc.	M/s. Jaiprakash Associates Ltd.	370.87	05.12.2017/ 04.09.2021
			E&M works	Design, engineering, manufacture, transportation, erection and commissioning of all EM components of project.	M/s. Voith Hydro Pvt. Ltd.	113.49	11.06.2018/ 10.10.2021
			H&M works	Design, engineering, procurement, fabrication, transportation, erection and commissioning of all HM components incl. Pressure shaft liner of project.	M/s GMW Pvt. Ltd.	34.44	18.04.2018/ 17.06.2022
			Transmis sion Line	Construction of 220KV single zebra, Double Circuit Transmission line from Mori (Uttarakhand) to Snail (Himachal Pradesh)	M/s KEC International Limited	81.46	30.04.2021/ 29.04.2022
11	Ratle GVK Ratle HEP Pvt. Ltd. (GRHEPPL) 19-12-2012 <u>4x205+1x30=</u> <u>850 MW</u>	<u>J&K</u> <u>NR</u>	Turnkey execution of 850MW Ratle Hydroelectric project has been awarded to M/s Megha Engineering & Infrastructures Limited on 18.01.2022 on EPC basis for 52 months at contract value Rs. 3485.14 crores.				

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
12.	Kiru CVPPL 13.06.2016 4x156=624 MW	<u>J&K</u> <u>NR</u>	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>23.01.2024</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>23.07.2024</u>
13.	Rangit-IV Jal Power Corp. Ltd. 06.07.2007/23. 10.2007(FC) 3x40 MW= 120	<u>Sikkim</u> <u>NER</u>	Civil works	Construction of Balance Civil works package: Diversion Channel, Coffey Dams, Dam, Spillway & Stilling Basin, Intake structure, Desilting Chambers, SFT, HRT, Surge Shaft, Pressure Shaft, Surface power house, TRC & other associated structures etc.	M/s Rithwik-HIPL Joint Venture	452.11	27.08.2021
			H&M works	Hydro-mechanical Works package of Rangit Stage-IV HE Project,	M/s PES Engineers Private Limited	100.40	28.06.2021
			E&M works	Electromechanical Works Package EM-2 for Design, Supply, Erection, Testing 7 Commissioning of Balance of Plant (BOP) items	M/s Andritz HydroPrivate Limited	80.12	08.07.2021
14.	Luhri Stage-1 SJVN Ltd. 01.05.2018 2x80+2x25=210 MW	Himachal Pradesh	Civil and HM works	Design & engineering services, Civil and HM works of project.	M/s Luhri Hydro Power Consortium (A consortium of Patel Engineering and HES Infra Pvt. Ltd.)	976.50	24.11.2020/ 23.11.2025
			E&M works	Design, engineering, manufacture, transportation, erection and commissioning of all EM components of project.	M/s. Voith Hydro Pvt. Ltd.	420.28	16.07.2021/ 16.05.2025
15	Dhulasidh Hydro	Himachal Pradesh NR	Civil and HM works	Design & engineering services, Civil and HM works of project.	M/s Rithwik Projects Pvt Ltd	526.92	06.05.2021/ 05.05.2025

Sl. No.	Project name/ Exec. Agency CEA clearance/ Approval Capacity (MW)	<u>State Region</u>	Contract	Scope of works & brief details	Contracting Agency (Name & Location)	Contract value (Rs. Crs.)	Date of Contract (commencem ent)/ Completion
	Electric Project SJVN Ltd (2x33 MW = 66MW)		E&M works	Design, engineering, manufacture, transportation, erection and commissioning of all EM components of project.	Voith Hydro Pvt. Ltd.	136.64	19.01.2022/ 18.01.2025
16	Kwar (CVPPPL)	J&K	Civil and HM works	Civil Works of DT, Dam, Intake Pressure, Shafts, Power House, TRT.	M/s Patel Engineering Limited	2461	11.05.2022/ 10.05.2026
			E&M works				
17	Dibang Multipurpose Project (NHPC)	<u>Arunachal Pradesh</u>	Infrastru cture works/ Civil Works	Construction of Access Roads to Project Dam Site, Left Bank Road Network, Dibang Bridges, Dam Site Right Bank Road Network and Temporary Haulage Road to Pathar Camp From ADC Morh Including All Civil and HM Works Of Diversion Tunnel'	M/s L&T	1622	27.02.2023 / 05.03.2026
18	Sunni Dam (SJVN) 4.1.2023 4x73+1x73+1x1 7=382 MW	<u>Himachal Pradesh</u>	Civil and HM works	Design & engineering services, Civil and HM works of project.	M/s Rithwik Projects Pvt Ltd		14.1.2023
			E&M works	Yet to be awarded			
B	State Sector						
19	Parnai JKSPDC 21.10.2013 3x12.5= 37.5 MW	<u>NR J&K</u>	Civil works	EPC contract	M/s. Patel Engineering Ltd. & M/s. Alstom India.		25.10.2013
			E&M works	T.G. Set	M/S.Andritz Hydro, India		
20	Lower Kalnai JKSPDC 16.08.2013 2x24= 48 MW	<u>NR J&K</u>	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.		
21	Uhl-III, BVPC Ltd. 19.09.02 / ----- - (TEC -2x50 MW) 3x33.3 =100	<u>H.P. NR</u>	Civil works & HM Works	Neri Intake works & power channel	M/s SSJVPP Ltd. 12 th 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> 15.8.07 Re-awarded on 25.10.08
				Head Race Tunnel (HRT)	M/s SSJVPP Ltd. 12 th 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> 30.04.07 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> 26.10.07

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 (commencement)/ Completion
				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	<u>15.02.07</u> <u>15.04.10</u>
22	Shongtong Karcham 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> <u>03.08.2017</u>
23	Shahpurkandi, Irrigation Deptt/PSPCL 04.05.2011 3x33+3x33+1x8 = 206 MW	<u>Punjab</u> <u>NR</u>	Civil works & HM works	Main Dam alongwith Two head regulators	SOMA-BUREYA Joint Venture	687.51	<u>11.02.2013</u> <u>Oct- 2016</u>
				Hydel Channel	M/s Gurinder Singh Contractor	90.11	<u>26.02.2013</u> <u>Oct- 2015</u>
			E&M works	EPC Contract	BHEL		<u>28.02.14</u>
24	Koyna Left Bank PSS WRD, Govt. of Mah. 20.02.2004 2x40 = 80 MW	<u>Maha.</u> <u>WR</u>	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> <u>30.06.2013</u> <u>03.10.2007</u> <u>30.06.2016</u>
				Design, manufacture, testing & commissioning of TG unit and auxiliaries	M/s IVRCL Ltd. Pune Turbine- Litostroj Slovania Generator- Koncar, Croatia	Euro 4.03 Crs + 177.99 Crs	<u>16.12.2010</u> <u>15.12.2014</u>
			E&M works				
25	Polavaram (PPA) 21.07.10/ 25.02.09 12x80 = 960MW	<u>Andhra</u> <u>Pradesh</u> <u>S.R.</u>	Civil works & HM works & E&M works	Investigation and L.P schedules etc., (Balance) &	M/s. Trans stroy- JSCECUES (JV), Hyderabad	4054.00	<u>02.03.2013</u> <u>01.03.2018</u>
				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>
26	Pallivasal KSEB/ Not Req./31.1.2007 2x30=60	<u>Kerala</u> <u>SR</u>	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> <u>01.03.2011</u>
27	Thottiyar KSEB 1x30 + 1x10= 40 MW	<u>Kerala</u> <u>SR</u>	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> <u>19.05.2012</u>
			H&M works	Gates, erection, commissioning		24.09	<u>22.12.2008</u> <u>19.05.2012</u>
			E&M works	Planning, Engineering, Manufacture, Supply, Erection, testing & commissioning		75.68	<u>22.12.2008</u> <u>19.05.2012</u>
28	Kundah Pumped Storage Phase -4 x125=125 MW	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> <u>15.02.22</u>

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
	Phase-I, II & III			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, Transporting, 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, Hyderabad.	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
29	Lower Kopli APGCL 2x55+2x2.5+1x 5= 120 MW	<u>Assam</u> NER	Civil & HM Works	Civil, Road & HM works awarded on 21.08.2020.	M/s L&T	1163.04	<u>June 2024</u>
			EM Works	E&M work awarded on 09.09.2021.	M/s Andritz Hydro Pvt. Ltd.	306.72	<u>June 2024</u>
30	Chanju-III (HPPCL)	<u>H.P.</u> <u>NR</u>	Civil Works	Civil works {Package-I and Package -II} awarded on 07.10.2022	(M/s. MFB-ACNC (JV))	350.52	<u>07.10.2022</u>
31	Mankulam (KSEB)	<u>Kerala</u> SR	Civil & HM works	Construction of Dams, Power Tunnel, Surge Shaft, Valve house, Pressure Shaft, Power House, Switch Yard, Access Roads, Bridge and Hydro Mechanical Works.	M/s. PES Engineers Private Limited - M/s KSR Infracon Private Limited, Joint Venture (PES-KSR JV) ,1st Floor, Pancom Chambers, 6-3-1096 /IIA, Somajiguda, Raj Bhavan Road, Hyderabad- 500082, Telanoana	250.22	21.05.2022/ 14.05.2026
32	Lakhwar Multipurpose Project (UJVNL)	<u>Uttarakha</u> <u>nd</u> <u>NR</u>	Civil Works	Civil works awarded on 01.02.2023	M/s L&T	3241.08	01.02.2023

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
33	Lower Sileru Extension (APGENCO)	Andhra Pradesh	Civil & HM Works	Civil works awarded on 13.04.2022	M/s Shirdi Sai Electricals Ltd. & M/s. PES Engineers Pvt. Ltd.	131.61	13.04.2024
			E&M Works	E&M works awarded on 13.04.2022	M/s Shirdi Sai Electricals Ltd. & M/s. PES Engineers Pvt. Ltd.	283.77	13.04.2024
C	Private Sector						
34	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	07.11.2008 06.11.2011
				Construction of HRT (RD 905 m-RD 5537 m)	M/s SCL Infratech Ltd. Hyderabad	83.327	7.11.2008 09/2014
				Construction of HRT (RD 5537 m -RD 8537 m)	M/s Himalaya Construction (P) Ltd.	31	07.07.2011 06.07.2015
				Construction of Surge Shaft, Pressure Shaft, Power House and Tail Race Channel	M/s Himalaya Construction (P) Ltd.	40	07.07.2012 06.06.2015
			E&M works	Supply, Installation, testing & commissioning of TG sets	M/s Alstom Projects, India	84	28.02.2011 27.05.2013
35	Tangu Romai-I M/s Tangu Romai Power generation 2x22= 44 MW 30.11.2007 HPSEB	HP NR	Civil works	Construction of Diversion Barrage, Intake, desilting, HRT, Surge Shaft, Penstok, Power House & Tail Race Channel	M/s Sai Urja Hydel Projects (P) Ltd., Shimla	164.7	14.06.2010 06/2014
			E&M works	Supply, installation, T&C of TG set, Switchyard equipment & associated auxiliaries	M/s Andritz Hydro, India	56	17.04.2013 16.07.2015
36	Phata Byung M/s Lanco 06.10.2008 2x38 MW = 76 MW	Uttarakha nd NR	Civil works	Dam, water conductor System, power House	Lanco Infratech Ltd.	206	12.04.2008 07/2012
			H&M works	Design, Engineering, Manufacture, Farication & Erectio,n of all hydro- mechanical equipment	M/s CIMMCO	34	12.04.2008 08/2012
			E&M works	Manufacturing., Supply, erection & commng. of TG units	M/s Alstom Project, India	84	12.04.2008 08.2012
37	Maheshwar, SMHPCL 12 96/ 29.9.2006 (FC) 10x40= 400MW	M. P. WR	Civil and HM works	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	22.02.1997 03/2005
			E&M works	Manuf., Supply, erection & commng. of TG units	M/s BHEL	470.5 Crs. + USD \$ 11.74 M 18.05.2001	25.06.2007 10/ 2009
38	Bhasmey Gati Infrastructure 2x25.5 = 51 MW	Sikkim NER	Civil works	Dam, Tunnels , Power House, Surge Shaft, Pressure Shaft, Intake	M/s Simplex Infrastructure Ltd.	160	12.04.2010 11/2012
			H&M works	N.A.			
			E&M works	Manufacturing., Supply, erection & commng. of TG units	M/s Voith Hydro, India	93	14.04.2010 10/2012

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 (commencement)/ Completion
39	Rangit-II Sikkim Hydro Power Limited 2x33= 66 MW	Sikkim NER	Civil &HM works	EPC Contract	M/s Coastal Project Limited	220.35	<u>13.12.2011</u> 23.10.2013
			E&M works		M/s. Gammon India Ltd.		<u>24.03.2012</u>
40	Panan Himagiri Hydro Energy Pvt. Ltd. 07.03.2011 4x75= 300 MW	Sikkim NER	Civil works	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)
			E&M works	Manufacturing., Supply, erection & commng. of TG units	Under Award		
41	Kutehr M/s JSW Energy (Kutehr) Ltd. 3x80 = 240 MW 31.08.2010	HP NR	Civil works	Lot-1 Civil works for River diversion, Barrage, Power intake & Part of HRT. Lot-2 Civil works for balance HRT, Surge Shaft, Pr. Shaft, Steel liner, under ground power house, TRT, and Pothead yard. Lot-3 Complete HM works Lot-1D Design, fabrication ,supply and erection of steel liner and pen stock.	-M/s Angelique-PCC Constorium. -M/s MF Bumi Geotech private ltd. -M/s P.E.S. Engineers Pvt Ltd. -M/s Greyhound Engineers India Private Ltd.	567.00 507.40 60.00 18.00	<u>20.10.2019</u> 19.06.2023 <u>25.11.2019</u> <u>24.05.2023</u> <u>06.01.2020</u> <u>05.05.2023</u> <u>21.07.2020</u> <u>20.07.2023</u>
			E&M works	Electro Mechanical works.	M/s Andritz Hydro Pvt. Ltd.	220	<u>29.07.2020</u> 28.07.2023
			Design	Project Design and Engineering	M/s AF Consult India Private Ltd, Tower 1, Steller IT Park, Sector 62, NOIDA- 201 301	11.5	<u>11.04.2019</u> <u>10.05.2024</u>
			Colony	Construction of Jura Colony	M/s Swastik Prefab Private Limited, Sector - 16, NOIDA-201 031	16	<u>06.02.2020</u> <u>30.11.2022</u>
42	Pinnapuram (Greenko AP01 IREP Private Ltd)	A.P.	Civil works & HM		M/s Megha Engineering		
			E&M works		M/s Andritz Hydro Pvt. Ltd.		

CHAPTER – 10

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

I. No.	Name of Project, State, Capacity, Date of TEC	Implementing Agency	Financial Closure Status	Remarks/ Constraints
	Under Execution			
1	Maheshwar, M.P., 10x40 MW, 30.12.96	Shree Maheshwar Hydel Power Corporation Ltd.	Financial closure achieved on 29.9.2006.	
2.*	Teesta-VI, Sikkim 4x125 MW 27.12.2006	M/s Lanco Energy Pvt. Ltd.	Financial closure achieved in July, 07.	
3.*	Rangit-IV, Sikkim 3x40 MW 06.07.2007	M/s Jal Power corporation Ltd.	Financial closure achieved on 25.01.2010.	
4.	Tidong-I ,H.P. 150 MW 23.07.2007	M/s NSL Tidong.	Financial closure achieved on 25.03.2010.	
5.	Tangu Romai,H.P. 2x22 MW 30.11.2007	Tangu Romai Power Gen. Pvt. Ltd.	Financial closure achieved on 22.01.2010.	
6.	Phata Byung Uttarakhand 2x38 MW 06.10.2008	M/s Lanco	Financial closure achieved on 25.07.2009.	
7.	Bhasmey, Sikkim 2x25.5= 51 MW Dec, 2008	M/s Gati Infrastructure	Financial closure achieved on 25.03.2010	
8.	Rangit Stage- II Sikkim 2x33= 66 MW 10.02.2010	M/s Sikkim Hydro Power Ventures Limited	Financial closure achieved on 15 th Jan, 2014, 31 st March 2015 (Revised).	
9.*	Ratle, J&K 4x205+1x30= 850 MW	M/s GVK Ratle HEP Pvt. Ltd. (GRHEPPL)	Financial closure achieved.	
10.	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).	
11.	Kutehr,H.P. 3x80=240 MW	M/s JSW Energy (Kutehr) Ltd	Financial closure achieved on 14.01.2021	
12.	Pinnapuram, Andhra pradesh 4x240 + 2x120 = 1200 MW	Greenko AP01 IREP Private Limited)		

*Now these are CPUS's Projects

Chapter - 11

DETAILS OF TIME/COST OVERRUN OF UNDER DEVELOPMENT HYDRO ELECTRIC PROJECTS (ABOVE 25 MW) – STATE WISE

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Original Comm. Sched.	Latest/ Anticipated Comm. Sched.	Time over run (month s)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Major reasons for time over run
1	2	4	5	6	7	8	9	10	11	12
	Andhra Pradesh									
1	Polavaram (12x80 = 960 MW) APGENCO / Irr. Deptt., A.P.	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)	2024-25 2024-25 2024-25 2024-25 2025-26 2025-26 2025-26 2025-26 2025-26 2025-26 2025-26 2025-26 (Mar,26)	96	3013.68 (2010-11 PL) (Power Component)	5338.95 (2016-17 PL) (Power Component)	2325.27 (77.15)	Works stalled since 19.07.2019 till 30.03.2021 as APGENCO asked contractor Navayuga Engineering Company Ltd. (NECL) to stop all works and termination of contract issued on 14.08.2019. The writ petition filed by NECL was disposed by Hon'ble High Court against NECL on 14.12.2020. Final Contract concluded with new contractor M/s MEIL for execution of PHEP works on 30.03.2021
2	Pinnapuram (4x240+2x120 MW) M/s Greenko	1 2 3 4 5 6	240 240 240 240 120 120	2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 (Mar'25)	2023-24 2024-25 2024-25 2024-25 2024-25 2024-25 (Dec'24)	Nil	6465.22 (Feb'2021 PL)	6465.22 (Feb'2021 PL)	Nil	Not applicable/ No time overrun
3	Lower Sileru Extension (2x115MW)(APGENCO)	1 2	115 115	2025-26 2025-26 (Mar'26)	2025-26 2025-26 (Mar'26)	NIL	571 (2020-21 PL)	571 (2020-21 PL)	NIL;	The project is in initial stage of construction.
	Arunachal Pradesh									
4	Subansiri Lower (8x250 = 2000 MW) NHPC	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 2024-25 2024-25 2024-25 2024-25 2025-26 2025-26 (May'25)	176	6285.33 (12/02)	21247.54 (Completion Cost)	14962.21 (238)	<ul style="list-style-type: none"> ➤ Delay in transfer of forest land. ➤ Disruption of works by locals in Ar. Pradesh side. ➤ Slope failure in Power House in Jan, 2008. ➤ All works except safety works were stalled from December, 2011 to October, 2019 due to agitation launched by activists in Assam against construction of Project. Work restarted w.e.f. 15.10.2019.

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Original Comm. Sched.	Latest/ Anticipated Comm. Sched.	Time over run (month s)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Major reasons for time over run
1	2	4	5	6	7	8	9	10	11	12
										➤ DT-2 Inlet Area collapse and flooding of PH in September 2022.
5	Dibang Multipurpose Project (12x240 = 2880 MW) NHPC	1 2 3 4 5 6 7 8 9 10 11 12	240 240 240 240 240 240 240 240 240 240 240 240	2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 (Feb'32)	2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 2031-32 (Feb'32))	NIL	31876.39 (05/21)	31876.39 (05/21)	NIL	The project is in initial stage of construction.
	Assam									
6	Lower Kopili (2x55+2x2.5+1x5 =120MW)	1 2 3 4 5	55 55 5 2.5 2.5	2024-25 2024-25 2024-25 2024-25 2024-25 (Jun'24)	2024-25 2024-25 2024-25 2024-25 2024-25 (March'25)	9	1115.91 (01/15)	1795 (2021)	679.09 (60.86)	The project is in initial stage of construction.
	Himachal Pradesh									
7	Parbati - II (4x200 = 800 MW) NHPC	1 2 3 4	200 200 200 200	2009-10 2009-10 2009-10 2009-10 (Sept'09)	2024-25 2024-25 2024-25 2024-25 (Jun,24)	177	3919.59 (12/01)	11134.54 (07/22)	7214.95 (184.07)	➤ Delay in revised forest clearance. ➤ TBM suffered extensive damage due to heavy ingress of water and slush in TBM face in Nov, 2006. Due to poor geology. ➤ Flash flood in 2004,2005,2010 and 2011. ➤ Contractual issues. ➤ Cash flow issues with civil contractors.
8	Uhl-III (3x33.33 = 100 MW)	1 2	33.33 33.33	2006-07 2006-07	2024-25 2024-25	213	431.56 (09/02)	2400 (2022)	1968.44 (456.12)	➤ Delay in transfer of forest land. ➤ Delay in acquisition of private land

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Original Comm. Sched.	Latest/ Anticipated Comm. Sched.	Time over run (month s)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Major reasons for time over run
1	2	4	5	6	7	8	9	10	11	12
	BVPCL	3	33.33	2006-07 (Mar'07)	2024-25 (Dec,24)					<ul style="list-style-type: none"> ➤ Delay in transfer of quarry sites. ➤ Contract for construction of HRT rescinded twice i.e. during April, 2008 & July, 2010 due to slow progress and non-performance by the contractor. ➤ Poor geology in HRT. ➤ Leakage in Penstock in July,2018 and Rupture in May,2020
9	Shongtom Karcham (3x150 = 450 MW) HPPCL	1 2 3	150 150 150	2016-17 2016-17 2016-17 (Mar'17)	2026-27 2026-27 2026-27 (Nov,26)	116	2807.83 (07/11)	2807.83 (07/11)	NIL	<ul style="list-style-type: none"> ➤ Shifting of Army Ammunition Depot. ➤ Disruption of works by local people.
10*	Tangnu Romai-I (2x22 = 44 MW) TRPGPL	1 2	22 22	2014-15 2014-15 (Jun'14)	2027-28 2027-28 (subject to re-start of works(4 years))	165	255.00 (01/07)	641.89 (2018)	386.89 (151.72)	<ul style="list-style-type: none"> ➤ Works are stalled since January, 2015 due to fund constraints with developer.
11	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)	1 2 3	50 50 50	2021-22 2021-22 (Oct'21) New Developer	2024-25 2024-25 (Jun'24)	32	543.15 (01/2007)	1850.00 (06/2018)	1306.85 (240.6)	<ul style="list-style-type: none"> ➤ Delay in NOC by Projects affected Panchayats. ➤ Suspension of works by Govt. for one year. ➤ Funds constraints with the developer ➤ Trans.line forest clearance, stuck with Supreme court .
12	Kutehr 3x80=240 MW JSW Energy (Kutehr) Ltd	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 (09/2011)	2879 (03/2019)	1080.87 (60.11)	<ul style="list-style-type: none"> ➤ Slow mobilization due to Covid-19 Lockdown.
13	Luhri Hydro Electric Project Stage-I (2X 80+2X25 MW = 210 MW)	1 2 3 4	80 80 25 25	2025-26 2025-26 2025-26 (Jan'26)	2025-26 2025-26 2025-26 (Jan'26)	NIL	1810.56 (05/20)	1810.56 (05/20)	NIL	<ul style="list-style-type: none"> ➤ Rs. 1810.56 Crore which includes project cost of Rs. 1744.37 Crores (05/2020 PL) and Rs. 66.19 Crore for enabling infrastructure (to be availed as budgetary support from GoI)
14	Dhaulasidh (SJVN) 2x 33=66MW Hamirpur/ Kangra	1 2	33 33	2025-26 2025-26 (Nov'25)	2025-26 2025-26 (Nov'25)	NIL	687.97 (05/2020)	687.97 (05/2020)	NIL	<ul style="list-style-type: none"> • (Rs. 687.97 Crores which includes project cost of Rs. 666.32 Crores (05/2020 PL) and Rs. 21.65 Crores for

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Original Comm. Sched.	Latest/ Anticipated Comm. Sched.	Time over run (month s)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Major reasons for time over run
1	2	4	5	6	7	8	9	10	11	12
										enabling infrastructure (to be availed as budgetary support from GoI)
15	Sunni Dam (SJVN) 4x 73+1x73+1x17=382 MW	1 2 3 4 5	73 73 73 73 17	2027-28 2027-28 2027-28 2027-28 2027-28 (Mar'28)	2027-28 2027-28 2027-28 2027-28 2027-28 (Mar'28)	Nil	2614.51 (Mar'21)	2614.51 (Mar'21)	Nil	The project is in initial stage of construction including infrastructure works.
16	Chanju-III (3x16 = 48 MW) HPPCL	1 2 3	16 16 16	2027-28 2027-28 2027-28 (Jun'27)	2027-28 2027-28 2027-28 (Jun'27)	Nil	418.57 (01/15)	418.57 (01/15)	Nil	The project is in initial stage of construction
	Govt. of UT of J&K									
17	Pakal Dul (4x250= 1000 MW) CVPPL	1 2 3 4	250 250 250 250	2020-21 2020-21 2020-21 2020-21 (Apr'20)	2026-27 2026-27 2026-27 2026-27 (Sept'26)	72	8112.12 (03/13)	8112.12 (03/13)	#	<ul style="list-style-type: none"> ➤ Contractual and Legal issues before award of works. (40 Months) ➤ Delay in award of works due to higher bids. ➤ Impact of COVID-19.
18	Parnai 3x12.5= 37.5 MW JKSPDC	1 2 3	12.5 12.5 12.5	2017-18 2017-18 2017-18 (Jan'18)	2024-25 2024-25 2024-25 (Mar,25)	86	640.86 (Completion cost)	640.86 (Completion cost)	#	<ul style="list-style-type: none"> ➤ Delay in Land acquisition. ➤ Slow progress in HRT. ➤ Contractual issues
19*	Lower Kalnai 2x24= 48 MW JKSPDC	1 2	24 24	2017-18 2017-18 (Sep'17)	2026-27 2026-27 (subject to re-start of works (4 years))	114	576.87 (12/12) (Completion cost)	576.87 (12/12) (Completion cost)	#	<ul style="list-style-type: none"> ➤ Works on all fronts at Dam and Power House site are stalled since 24.01.2018 due to payment dispute with subcontractors and due to non-settlement of extension of time of the contract by the JKSPDC. The contract with M/s. Coastal Projects Ltd. has been terminated and re-tendering for selection of EPC contractor is under process.
20	Kiru (4x156=624 MW) CVPPL	1 2 3 4	156 156 156 156	2023-24 2023-24 2023-24 2023-24 (Aug,23)	2025-26 2025-26 2025-26 2025-26 (Mar,26)	31	4287.59 (07/18)	4287.59 (07/18)	Nil	<ul style="list-style-type: none"> ➤ Delay in award of works due to issue regarding sanction of Sub debt for the project between GoI and GoJK. ➤ Slow mobilization due to Covid-19 lockdown

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Original Comm. Sched.	Latest/ Anticipated Comm. Sched.	Time over run (month s)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	Major reasons for time over run
1	2	4	5	6	7	8	9	10	11	12
21	Ratle (4x205+1x30) = 850 MW RHPPL / NHPC	1 2 3 4 5	205 205 205 205 30	2025-26 2025-26 2025-26 2025-26 2025-26 (Feb'26)	2026-27 2026-27 2026-27 2026-27 2026-27 (May'26)	3	5281.94 (11/18)	5281.94 (11/18)	Nil	➤ Project was stalled since 11.07.2014 due to various issues viz. R&R issues, Local issues, Law & order problem, etc. Earlier, it was under execution by private sector developer and some works have already been done. There was no progress from 11.07.2014 to 18.01.2022. JV of Govt. of UT of J&K and NHPC was formed and contract was awarded on turnkey basis on 18.01.2022.
22	Kwar (4x135=540 MW) CVPPL	1 2 3 4	135 135 135 135	2026-27 2026-27 2026-27 2026-27 (Nov'2026)	2026-27 2026-27 2026-27 2026-27 (Nov'2026)	Nil	4526.12 (Sep.'20)	4526.12 (Sep.'20)	Nil	➤ The project is in initial stage of construction.
	Kerala									
23	Pallivasal 2x30 = 60 MW KSEB	1 2	30 30	2010-11 2010-11 (Mar'11)	2023-24 2023-24 (Mar,24)	156	222 (1999)	550.00 (2018)	328 (147.74)	➤ Delay in land acquisition. ➤ Poor geology strata in HRT. ➤ Works stopped by contractor since 28.1.15 to 11.04.2017 due to contractual issues. Contract terminated on 13.09.2018 and re-awarded in August, 2019.
24	Thottiyar (1x30+1x10)= 40MW KSEB	1 2	30 10	2012-13 2012-13 (Apr'12)	2023-24 2023-24 (Ma,24)	143	136.79 (2007)	280 (2018)	143.21 (104.69)	➤ Land acquisition issue. ➤ The works of weir and approach channel stopped from 2010 to 2012 by local people. ➤ The work stopped by Court from 12.12.2012 to April-2013. ➤ Financial crunch with contractor leading to foreclosure of contract in April,2017 and balance works re-awarded in January, 2018.
25	Mankulam (2x20)= 40MW KSEB	1 2	20 20	2026-27 2026-27 (May 26)	2026-27 2026-27 (May 26)	Nil	600 (08/22)	600 (08/22)	Nil	➤ The project is in initial stage of construction.
	Madhya Pradesh									
26*	Maheshwar	1 2	40 40	2001-02 2001-02	2027-28	312	1569.27 (96-97)	6793 (2016-17)	5223.73 (332.87)	Works suspended since Nov-11 due to cash flow problem with developer. M.P. Power

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1	2	4	5	6	7	8	9	10	11	12
	(10x40 = 400 MW) SMHPCL	3 4 5 6 7 8 9 10	40 40 40 40 40 40 40 40	2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 (Mar'02)	(subject to re- start of works(Two years)					Management Company Ltd. has terminated the Power Purchase Agreement with SMHPCL on 18.04.2020. The application of PFC has been admitted in NCLT on 27.09.2022 under IBC.
	Maharashtra									
27*	Koyna Left Bank PSS 2x40 = 80 MW WRD, Maha	1 2	40 40	2014-15 2014-15 (Oct'14)	2027-28 (subject to re- start of works (4 years)	161	245.02 (1999)	379.78 (2014)	134.76 (54.99)	Project stalled since July, 2015. The current expenditure on the project has already reached to almost original administrative approved cost level.
	Punjab									
28	Shahpurkandi 3x33+3x33+1x8 =206 MW, Irrigation Deptt. &PSPCL	1 2 3 4 5 6 7	33 33 33 33 33 33 8	2015-16 2015-16 2015-16 2015-16 2015-16 2015-16 2015-16 (Mar,16)	2025-26 2025-26 2025-26 2025-26 2025-26 2025-26 2025-26 (Oct, 25)	115	1835.50 (04/08) (Power Component)	2368.55 (02/2018) (Power Component)	533.05 (29.04)	Works of Dam stopped since 29.08.2014 to sept. 2018 due to inter-state dispute between states of J&K & Punjab on sharing of waters of river Ravi and Tariff. Slow progress of EM works (BHEL)
	Sikkim									
29	Teesta Stage VI (4x125 = 500 MW) LancoTeesta Hydro Power Ltd. (LTHPL) (Project taken over by NHPC w.e.f. 08.03.2019)	1 2 3 4	125 125 125 125	2023-24 2023-24 2023-24 2023-24 (March'24)	2026-27 2026-27 2026-27 2026-27 (Aug,26)	29	5748.04 (07/2018)	5748.04 (07/2018)	Nil	➤ Poor geology. ➤ Land acquisition. ➤ Contractual issues ➤ Funds constraints with developer (Private) and stalled from April, 2014 to October, 2019. ➤ M/s. LTHPL came under Corporate Insolvency Resolution Process. NHPC Ltd. emerged as H1 bidder. CCEA approval was accorded to NHPC on 08.03.2019. NCLT on 26.07.2019 approved resolution plan of NHPC for acquisition of LTHPL.
30*	Bhasmey (2x25.5 =51 MW)	1 2	25.5 25.5	2012-13 2012-13	2027-28 2027-28	189	408.50 (2012-13)	746.01 (03/18)	337.51 (82.62)	➤ Works are stalled since Sept., 2016 due to funds constraints with developer

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1	2	4	5	6	7	8	9	10	11	12
	Gati Infrastructure			(Jun'12)	(subject to re-start of works(3 years))					
31	Rangit-IV HE Project (3X40 = 120 MW) NHPC	1 2 3	40 40 40	2023-24 2023-24 2023-24 (March'24)	2024-25 2024-25 2024-25 (Aug'24)	5	938.29 (10/19)	938.29 (10/19)	Nil	<ul style="list-style-type: none"> ➤ Poor geology in HRT. ➤ Project was stalled since October, 2013 due to funds constraints with the developer. The project was under NCLT process since 9th April, 2019. The project has been awarded to NHPC. CCEA approval was accorded on 30.03.2021. The contract was awarded in 2021.
32*	Rangit-II 2x33= 66 MW Sikkim Hydro Power Ltd.	1 2	33 33	2015-16 2015-16 (Apr'15)	2027-28 2027-28 (subject to re-start of works(2-½ years))	155	496.44 (2011-12)	496.44 (2011-12)	#	<ul style="list-style-type: none"> ➤ Works are stalled since December, 2017 due to funds constraints with developer. Project is in NCLT since 30.07.2020.
33*	Panan 4x75= 300 MW Himagiri Hydro Energy Pvt. Ltd.	1 2 3 4	75 75 75 75	2018-19 2018-19 2018-19 2018-19	2028-29 2028-29 2028-29 2028-29 (subject to re-start of works(4-½ years))	120	1833.05 (2009)	2675.00 (2020)	841.95 (45.93)	<ul style="list-style-type: none"> ➤ Project was under construction in the private sector but stalled due to Issue of construction of bridge on Mantham Lake for accessibility of site which is pending with the State Govt. The works was stalled for want of NOC from State Govt. from NBWL angle and now it has been received. It is being understood that concerned deptt of Govt of Sikkim started erecting 60 Tonne Bridge, but work may progress in full stretch only after this rainy season and will take atleast 12 to 18 months resulting delay in getting the civil bids price to start the project works.
	Tamil Nadu									
34	Kundah PSP (Phase-I, Phase-II & Phase-III) (4x125=500 MW) TANGEDCO	1 2 3 4	125 125 125 125	2021-22 2021-22 2021-22 2021-22 (Aug,21)	2024-25 2024-25 2024-25 2024-25 (Oct,24)	38	1216.59 (2007-08)	3401 (2014)	2184.41 (179.55)	<ul style="list-style-type: none"> ➤ Delay in award of civil works. ➤ Civil & HM works have been taken up from 05/2018 & EM works awarded in 11/2019
	Uttartakhand									
35*	Lata Tapovan (3x57 = 171 MW) NTPC	1 2 3	57 57 57	2017-18 2017-18 2017-18 (Aug'17)	2028-29 2028-29 2028-29	139	1527.00 (07/12)	1527.00 (07/12)	#	<ul style="list-style-type: none"> ➤ Infrastructure works almost completed. As per Hon'ble Supreme Court vide its order dated 07.05.2014 stayed the construction of 24 Hydro projects in

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1	2	4	5	6	7	8	9	10	11	12
					(subject to re-start of works(4 years))					Uttarakhand including Lata Tapovan HEPP. According all construction activities stopped since 08.05.14. Main works to re-start after clearance from Hon'ble Supreme Court.
36	Tapovan Vishnughad (4x130 = 520 MW) NTPC	1 2 3 4	130 130 130 130	2012-13 2012-13 2012-13 2012-13 (Mar'13)	2025-26 2025-26 2025-26 2025-26 (Dec'25)	153	2978.48 (03/04)	7700 (09/22)	4721.52 (158.52)	<ul style="list-style-type: none"> ➤ Heavy water ingress due to bad geology in HRT and rock fall on TBM. TBM stuck up thrice. ➤ Flash flood in Aug'12 & June, 2013 damaging coffer dam. ➤ Termination of civil contracts for Barrage and HRT. ➤ Cash flow issues with civil contractors.. ➤ The unprecedented, devastating flash flood on 07.02.2021,due to glacial outburst, avalanching into Rishiganga River has hit the project Components. ➤ Barrage DC basin, Intake Part HRT and SFT was filled with Muck. Radial gates of barrage packages were washed away. ➤ Work on the project stopped since 05.01.2023 by the district administration due to subsidence in Joshimath area. Hon'ble High Court allowed for some essential works vide order dated 23.05.2023 ➤ Matter will be taken by Hon'ble High Court on 10.11.2023 for start of project works
37	Tehri PSS (4x250 = 1000 MW) THDC	1 2 3 4	250 250 250 250	2015-16 2015-16 2015-16 2015-16 (Feb'16)	2024-25 2024-25 2024-25 2024-25 (Sep'24)	103	1657.60 (12/05)	6439.60 (10/22)	4782 (288.48)	<ul style="list-style-type: none"> ➤ Poor geology. ➤ Local agitation at Asena Quarry / muck disposal area. ➤ Revision of Lay out of machine hall due to poor geology. ➤ Funds constraints with contractor.
38	Naitwar Mori (2x30 = 60 MW) SJVN	1 2	30 30	2021-22 2021-22 (Dec'21)	2022-24 2023-24 (Nov'-23)	23	648.33 (10/2016)	1272.29 (completion cost of generation comp.)	623.96 (96.24)	<ul style="list-style-type: none"> ➤ COVID-19 related restrictions. ➤ Delay in Environment Clearance for Quarry site. ➤ Slow progress by civil/HM contractors.
39	Vishnugad Pipalkoti (4x111 = 444 MW)	1 2	111 111	2013-14 2013-14	2026-27 2026-27	156	2491.58 (03/08)	3860.35 (02/19)	1368.77 (54.93)	<ul style="list-style-type: none"> ➤ CCEA approval in Aug-2008 but works could not be awarded due to Forest

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1	2	4	5	6	7	8	9	10	11	12
	THDC	3 4	111 111	2013-14 2013-14 (Jun'13)	2026-27 2026-27 (Jun'26)					clearance/diversion of forest land. Forest land was acquired in January-14 and subsequently works awarded in January-2014. ➤ Disruption of works by local people. ➤ Cash flow problem with contractor.
40	Lakhwar Multipurpose project (3x100=300 MW) UJVNL	1 2 3	100 100 100	2028-29 2028-29 2028-29 (Oct. 28)	2028-29 2028-29 2028-29 (Oct. 28)	Nil	5747.17 (07/18)	5747.17 (07/18)	Nil	➤ The project is in initial stage of construction.
41*	Phata Byung (2x38 = 76 MW), LANCO	1 2	38 38	2012-13 2012-13 (Jun'12)	2025-26 2025-26 (subject to re-start of works(3 years))	165	520.00 (2013-14)	1132 (09/16)	612 (117.69)	➤ Works stalled since July, 2017 due to Financial crunch with the contractor / developer. ➤ The Project has been recently allotted to M/s. Statkraft through NCLT.
	West Bengal									
42	Rammam-III (3x40= 120 MW)	1 2 3	40 40 40	2019-20 2019-20 2019-20 (Sep'19)	2026-27 2026-27 2026-27 (Sept,26)	84	1381.84 (09/14)	1381.84 (09/14)	#	➤ Delay in getting permission for tree felling from Govt. of West Bengal for Access road from Adit-1 to Adit-2. ➤ Cash flow issues with civil contractors ➤ Strike / bandh during Gorkhaland agitation in 2017.

Note:- It is to mention that cost overrun has been calculated as the difference between the Latest Cost (provided by the developer to CEA along with the Price Level) and the Original Cost approved by the Central Government / State Government. In most of the cases the Latest cost at the current Price Level has not been provided by the developers.

* Construction is held-up.

Cost overrun could not be calculated due to non-availability of latest cost.