

Chapter -11

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

Sl. No	Project Name/(I.C.)/ Executing Agency	State	Unit No.	Cap. (MW)	Org. Comm. Sched.	Rev. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores)	Rev. Cost (Rs. in Crores)	Ant. Cost (Rs. in Crores)	Cost over run (Rs. in Crores)	Reasons for time and cost over run
1	2	3	4	5	6		7	8	9		10	11	12
	CENTRAL SECTOR												
1	Tapovan Vishnughad (4x130 = 520 MW) NTPC	Uttara khand	1 2 3 4	130 130 130 130	2012-13 2012-13 2012-13 2012-13 (Mar'13)	2015-16 2015-16 2015-16 2015-16 (Mar'16)	2019-20 2019-20 2019-20 2019-20 (June'19)	84	2978.48 (11/06)	3846.30 (01/14)	3846.30 (01/14)	867.82	<ul style="list-style-type: none"> ➤ Heavy water ingress due to bad geology in HRT and rock fall on TBM. TBM struck up thrice. ➤ Flash flood in June, 2013 & Aug'12 damaging coffer dam. ➤ Termination of civil contracts for Barrage and HRT.
2	Lata Tapovan (3x57 = 171 MW) NTPC	Uttara khand	1 2 3	57 57 57	2017-18 2017-18 2017-18 (Aug'17)		2021-22 2021-22 2021-22 (subject to re-start of works)	48	1527.00 (12/06)		1801.07 (12/13)	274.07	<ul style="list-style-type: none"> ➤ Flash flood during June, 2013 in Uttarakhand. ➤ Local issues / non-start of works in Barrage area ➤ Hon'ble Supreme court ban on construction works since May-14..
3	Rammam-III (3x40= 120 MW)	West Bengal	1 2 3	40 40 40	2019-20 2019-20 2019-20		2020-21 2020-21 2020-21	12	1381.84		1592.34	210.50	<ul style="list-style-type: none"> ➤ Delay in getting permission for tree felling from Govt. of West Bengal for Access road from Adit-1 to Adit-2.
4	Pare (2x55 = 110 MW) NEEPCO	Arunachal Pradesh	1 2	55 55	2012-13 2012-13 (Aug'12)		2017-18 2017-18 (Mar'18)	60	573.99 (06/07)		1339.57 (01/16)	765.58	<ul style="list-style-type: none"> ➤ Law & Order problem. ➤ Poor geology. ➤ Poor approach roads. ➤ Flash flood during Jun-Sep -2015. Dam area inundated with water, Concreting of Dam effected for 04 months.
5	Tuirial (2x30 = 60 MW) NEEPCO	Mizoram	1 2	30 30	2006-07 2006-07 (July'06) (Jan'14) RCE-I	2013-14 2013-14 (Jan'14) RCE-I	2017-18 2017-18 (Sep'17)	132	368.72 (06/97)	913.63 (June'10)	1441.52 (12/14)	1072.80	<ul style="list-style-type: none"> ➤ Works suspended earlier due to local agitation for about 7 yrs. (June-2004 to Jan-2011). As a result Revised approval (RCE-I) accorded in Jan. 2011. ➤ Poor approach roads. ➤ Slope failure in Power House. ➤ Inadequate mobilization by contractor. ➤ Late mobilization of erection contractor for E&M works.
6	Kameng (4x150 = 600 MW) NEEPCO	Arunachal Pradesh	1 2 3 4	150 150 150 150	2009-10 2009-10 2009-10 2009-10 (Dec'09)		2017-18 2017-18 2018-19 2018-19	120	2496.90 (03/04)		6179.96	3683.06	<ul style="list-style-type: none"> ➤ Change in dam parameters. ➤ Slow progress in dam & HRT due to bad geology, heavy seepage, inadequate machinery. ➤ Flash flood in Oct. 2008 and Sept. 2012. ➤ Ingress of water in HRT. ➤ Poor approach roads. ➤ Contractual issues. ➤ Shortage of aggregate.

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1	2	3	4	5	6		7	8	9		10	11	12
													<ul style="list-style-type: none"> ➤ Clearance for quarry from State Govt. ➤ Slow Progress of works.
7	Tehri PSS (4x250 = 1000 MW) THDC	Uttara khand	1 2 3 4	250 250 250 250	2010-11 2010-11 2010-11 2010-11 (July'10)	2015-16 2015-16 2015-16 2015-16 (Feb'16) RCE-I	2019-20 2019-20 2019-20 2019-20 (Sept'19)	108	1657.60 (Dec-05)	2978.86 (Apr'10)	2978.86	1321.26	<ul style="list-style-type: none"> ➤ Approval of RCE as L-1 price bid was more than cost estimate. RCE approved in Nov-2011. ➤ Cash flow problem with contractor. ➤ Litigation by bidders. ➤ Poor geology. ➤ Local agitation at Asena Quarry. ➤ Agitation at muck disposal area. ➤ Poor preparedness of contractor. ➤ Revision of Lay out of machine hall due to poor geology.
8	Parbati - II (4x200 = 800 MW) NHPC	Himachal Pradesh	1 2 3 4	200 200 200 200	2009-10 2009-10 2009-10 2009-10 (Sept'09)		2018-19 2018-19 2018-19 2018-19 (Dec'18)	108	3919.59 (12/01)		8398.75 (03/15)	4479.16	<ul style="list-style-type: none"> ➤ Hon'ble High Court of Himachal Pradesh ban on stone crusher operation. ➤ Delay in revised forest clearance. ➤ TBM suffered extensive damage due to heavy ingress of water and slush in TBM face in Nov, 2006. ➤ Slide in Power House area in Apr-04, Jun-06 and Feb-07. ➤ Flash flood in 2004,2005,2010 and 2011. ➤ Jiwa Nallah works affected due to cavity treatment. ➤ Contractual issues. ➤ Poor geology in HRT.
9	Subansiri Lower (8x250 = 2000 MW) NHPC	Arunachal Pradesh/ Assam	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		2020-21 2020-21 2020-21 2020-21 2020-21 2020-21 2020-21 2020-21 (subject to re-start of works)	120	6285.33 (12/02)		17435.15 (02/16)	11149.82	<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. ➤ Damage to bridge on Ranganadi river. ➤ Change in design of surge shafts to surge tunnels. ➤ Stoppage of works due to agitation launched by Anti Dam activists in Assam against construction of Project. Work stopped since 16.12.2011. ➤ Issue of D/s impact studies. ➤ Case in NGT.
10	Kishanganga (3x110 = 330 MW) NHPC	Jammu & Kashmir	1 2 3	110 110 110	2014-15 2014-15 2014-15 (July'14)	2015-16 2015-16 2015-16 (Jan'16) RCE-I	2017-18 2017-18 2017-18 (Mar-18)	36	2238.67 (11/05)	3642.04 (09/07)	5783.17 (09/15)	3544.50	<ul style="list-style-type: none"> ➤ Approval of RCE as L-1 price bid was more than cost estimate. RCE approved in Jan.-2009. ➤ Heavy Rainfall in March, 2011. ➤ Cavity in HRT – TBM portion. ➤ Poor geology in Access tunnel. ➤ Dam works affected due to arbitration proceedings at International Court of Arbitration. ➤ Local people demanding Employment in NHPC.

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1	2	3	4	5	6		7	8	9		10	11	12
													<ul style="list-style-type: none"> ➤ R&R Issues. ➤ Completion of power evacuation arrangement (PGCIL) ➤ Stoppage of works in Power House area since 09.07.2016 due to disturbance in Kashmir valley. Works partially resumed in Jan 2017.
11	Vishnugad Pipalkoti (4x111 = 444 MW) THDC	Uttara khand	1 2 3 4	111 111 111 111	2013-14 2013-14 2013-14 2013-14 (Jun'13)		2019-20 2019-20 2019-20 2019-20 (Dec'19)	72	2491.58 (03/08)		2491.58 (03/08)	Nil	<ul style="list-style-type: none"> ➤ CCEA approval in Aug-2008 but works could not be awarded due to Forest clearance/diversion of forest land. Forest land was acquired in January-14 and subsequently works awarded in January-2014. ➤ Disruption of works by local people. ➤ Cash flow problem with contractor.
	STATE SECTOR												
12	Parnai 3x12.5= 37.5 MW JKSPDC	Jammu & Kashmir	1 2 3	12.5 12.5 12.5	2018-19 2018-19 2018-19		2020-21 2020-21 20 20-21	24	640.41		640.41	Nil	<ul style="list-style-type: none"> ➤ Slow progress of works. ➤ Delay in Land acquisition.
13	Lower Kalnai 2x24= 48 MW JKSPDC	Jammu & Kashmir	1 2	24 24	2017-18 2017-18		2020-21 2020-21 (Subject to re-start of works)	36	576.87 (12/12)		576.87 (12/12)	Nil	<ul style="list-style-type: none"> ➤ Inadequate mobilization of man & machinery by Contractor. ➤ Delany in finalization of R&R Plan. ➤ Slow progress of works. ➤ Funds constraints with contractor. Contractor under CDR.
14	Uhl-III (3x33.33 = 100 MW) BVPCL	Himachal Pradesh	1 2 3	33.33 33.33 33.33	2006-07 2006-07 2006-07		2017-18 2017-18 2017-18	132	431.56 (09/02)		940.84 (03/08)	509.28	<ul style="list-style-type: none"> ➤ Delay in transfer of forest land. ➤ Delay in acquisition of private land ➤ Delay in transfer of quarry sites. ➤ Delay in award of works. ➤ 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.
15	Sawra Kuddu (3x37 =111MW) HPPCL,	Himachal Pradesh	1 2 3	37 37 37	2010-11 2010-11 2010-11		2018-19 2018-19 2018-19	96	558.53 (03/03)		1181.90 (03/12)	623.37	<ul style="list-style-type: none"> ➤ Delay in MOEF clearance. ➤ Delay in award of Civil & E&M works. ➤ Poor geology in HRT. ➤ Slow progress of HRT Lining. ➤ Contractual issues. ➤ Contract for HRT package terminated on 9.1.14. Re-awarded in Nov,2014 to M/s. HCC.
16	Sainj (2x50 = 100 MW) HPPCL	Himachal Pradesh	1 2	50 50	2014-15 2014-15		2017-18 2017-18	36	784.56		784.56	Nil	<ul style="list-style-type: none"> ➤ Slow progress of HRT and Barrage works ➤ Local issues ➤ Cash flow problem with Contractor. ➤ Contractual issues.

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17	Shongtom Karcham (3x150 = 450 MW) HPPCL 16.08.2012	Himachal Pradesh	1 2 3	150 150 150	2017-18 2017-18 2017-18		2019-20 2019-20 2019-20	24	2807.83		3316.35	508.52	➤ Shifting of Army Ammunition Depot. ➤ Local Issues.
18	Pulichintala (4x30 = 120 MW) TGENCO	Telengana	1 2 3 4	30 30 30 30	2009-11 2009-11 2009-11 2009-11		2016-17 2017-18 2017-18 2018-19	Comm. 96	380.00 (2006-07)		563.49	183.49	➤ Delay in award of E&M works. ➤ Unprecedented floods in Oct.2009 & Sept.2011. ➤ Contractual issues. ➤ Slow progress of Power House works. ➤ Delay in Commission due to non-availability of water.
19	Pallivasal 2x30 = 60 MW KSEB	Kerala	1 2	30 30	2010-11 2010-11		2019-20 2019-20 (subject to re-start of works)	108	222.00 (1999)		284.69 (2007)	62.69	➤ Slow progress of civil works. ➤ Delay in land acquisition. ➤ Change in alignment of Adit to HRT. ➤ Poor geology strata in HRT. ➤ Heavy Monsoon ➤ Works stopped by contractor since 28.1.15 due to contractual issues.
20	Thottiyar (1x30+1x10)= 40MW KSEB	Kerala	1 2	30 10	2012-13 2012-13		2019-20 2019-20 (subject to re-start of works)	84	136.79 (2007)		150.02 (2007)	13.23	➤ 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. ➤ Contractual issues. ➤ Financial crunch with contractor.
21	New Umtru (2x20 =40 MW) MePGCL	Meghalaya	1 2	20 20	2011-12 2011-12		2017-18 2017-18	72	226.40		599.00	372.60	➤ Delay in Start of works. ➤ Fund Constraints. ➤ Slow progress of civil works.
22	Shahpurkandi 3x33+3x33+1x8 =206 MW, Irrigation Deptt. &PSPCL	Punjab	1 2 3 4 5 6 7	33 33 33 33 33 33 8	2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18		2019-20 2019-20 2019-20 2019-20 2019-20 2019-20 2019-20 (subject to re-start of works)	24 24	2285.81 (04/08)		2285.81 (04/08)	Nil	➤ Works of Dam stopped since 29.08.2014 due to inter-state dispute between states of J&K & Punjab on sharing of waters of river Ravi and Tariff.
23	Koyna Left Bank PSS 2x40 = 80 MW WRD, Maha	Maharashtra	1 2	40	2017-18		2019-20 (subject to re-start of works)	24	245.02 (1999)		1494.94 (2014)	1249.92	➤ Slow progress of works. ➤ Fund constraints due to increase in project cost. RCE under approval.

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1	2	3	4	5	6		7	8	9		10	11	12
24	Vyasi 2x60=120 MW, UJVNL	Uttara khand	1 2	60 60	2014-15 2014-15		2018-19 2018-19	48	936.23		936.23	Nil	➤ Delay in award of works. ➤ Local Issues.
25	Polavaram (12x80 = 960 MW) PPA	Andhra Pradesh	1 2 3 4 5 6 7 8 9 10 11 12	80 80 80 80 80 80 80 80 80 80 80 80	2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18		2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22	48	16010.45		16010.45	Nil	➤ Slow progress of works ➤ Funds constraints ➤ E&M works yet to be awarded
	PRIVATE SECTOR												
26	Tidong-I 2x50 =100 MW NSL Tidong	Himachal Pradesh	1 2	50 50	2013-14 2013-14		2018-19 2018-19 (subject to re-start of works)	60	543.15 (08/05)		1286.27 (01/17)	743.12	➤ Delay in NOC by Projects affected Panchayats. ➤ Suspension of works by Govt.for one year. ➤ Funds constraints with the developer
27	Tangnu Romai-I (2x22 = 44 MW) TRPGPL	Himachal Pradesh	1 2	22 22	2014-15 2014-15		2018-19 2018-19 (subject to re-start of works)	48	255.00 (2006)		562.97 (01/17)	307.97	➤ Slow progress of civil works. ➤ Poor geology. ➤ Difficult area. ➤ Weather conditions & accessibility. ➤ Financial constraints with the developer.
28	Sorang (2x50 = 100 MW), HSPPL	Himachal Pradesh	1 2	50 50	2012-13 2012-13		2018-19 2018-19 (subject to re-start of works)	72	586.00 (2006)		586.00 (Under revision)	-	➤ Poor geology. ➤ Poor weather conditions, difficult & poor accessibility. ➤ Penstock cracks / leakage during filling of Water conductor System in Nov '13. ➤ Rupture in surface penstock in Nov-15 during trial run. ➤ Funds constraints with developer.
29	Singoli Bhatwari (3x33 = 99 MW) L&T	Uttarakhand	1 2 3	33 33 33	2012-13 2012-13 2012-13		2019-20 2019-20 (subject to active start	84	666.47 (2008)		1577 (2008)	910.53	➤ Poor geology in HRT. ➤ Agitation by local people. ➤ Flash flood in June,2013.

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1	2	3	4	5	6		7	8	9		10	11	12
							of works)						
30	Phata Byung (2x38 = 76 MW), LANCO	Uttara khand	1 2	38 38	2013-14 2013-14		2019-20 2019-20 (subject to active start of works)	72	520.00		1225.53	705.53	<ul style="list-style-type: none"> ➤ Flash flood in June,2013. ➤ Poor geology in HRT.
31	Maheshwar (10x40 = 400 MW) SMHPCL	Madhya Pradesh	1 2 3 4 5 6 7 8 9 10	40 40 40 40 40 40 40 40 40 40	2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 2001-02 2001-02		2018-19 (subject to re-start of works)	204	1569.27 (96-97)		6793.00	5223.73	<ul style="list-style-type: none"> ➤ R&R issues ➤ Cash flow problem with developer
32	Teesta Stage VI (4x125 = 500 MW) Lanco Energy Pvt. Ltd.	Sikkim	1 2 3 4	125 125 125 125	2012-13 2012-13 2012-13 2012-13		2021-22 2021-22 2021-22 2021-22 (subject to re-start of works)	108	3283.08 (2008)		7542.00 (12/16)	4258.92	<ul style="list-style-type: none"> ➤ Poor geology. ➤ Land acquisition. ➤ Contractual issues ➤ Funds constraints with developer
33	Rangit-IV HE Project (3X40 = 120 MW) JPCL	Sikkim	1 2 3	40 40 40	2011-12 2011-12 2011-12		2019-20 2019-20 2019-20 (subject to re-start of works)	96	726.17 (09/07)		1692.60 (06/16)	966.43	<ul style="list-style-type: none"> ➤ Slow progress of HRT & Surge Shaft works due to poor geology. ➤ Works hampered due to earthquake in September, 2011. ➤ Financial constraints with developer
34	Bhasmey (2x25.5 =51 MW) Gati Infrastructure	Sikkim	1 2	25.5 25.5	2012-13 2012-13		2019-20 2019-20	84	408.50		690.30	281.80	<ul style="list-style-type: none"> ➤ Forest clearance ➤ Financial constraints with developer
35	Rongnichu (2x48 =96 MW) Madhya Bharat Pvt. Ltd.	Sikkim	1 2	48 48	2015-16 2015-16		2019-20 2019-20	48	491.32		1187	695.68	<ul style="list-style-type: none"> ➤ Land Acquisition ➤ Poor geology.
36	Ratle (4x205+1x30) = 850 MW Ratle HEP Pvt .Ltd.	J&K	1 2 3 4	205 205 205 205	2017-18 2017-18 2017-18 2017-18		2021-22 2021-22 2021-22 2021-22	48	5517.02 (03/12)		6257.00 (09/2013)	739.98	<ul style="list-style-type: none"> ➤ Slow progress of works. ➤ Works suspended since 11.7.14 due to frequent local disturbance. ➤ Developer wants to surrender the Project to State Govt.

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			5	30	2017-18		2021-22 (subject to re-start of works)						
37	Gongri 2x72= 144 MW Dirang Energy (P)Ltd	Ar. Pradesh	1 2	72 72	2017-18 2017-18		2020-21 2020-21 (subject to re-start of works)	36	1436.27 (05/12)		1535.91 (10/16)	99.64	➤ Works awarded on 22.11.2011. However, consent to establish from State Pollution Control Board was issued on 19-5-14. ➤ Financial constraints with the developer.
38	Bajoli Holi 3x60= 180 MW M/s GMR Bajoli Holi	H.P.	1 2 3	60 60 60	2017-18 2017-18 2017-18		2019-20 2019-20 2019-20	24	1696.93		2205.00	508.07	➤ Slow progress of works.
39	Dikchu 2x48= 96 MW Sneha Kinetic Power Projects Pvt. Ltd.	Sikkim	1 2	48 48	2013-14 2013-14		2017-18 2017-18	48	639.57		1140.00	500.43	➤ Poor Geology ➤ Delay in completion of Transmission Line.
40	Rangit-II 2x33= 66 MW Sikkim Hydro Power Ltd.	Sikkim	1 2	33 33	2017-18 2017-18		2019-20 2019-20 (subject to re-start of works)	24	496.44		496.44	Nil	➤ Slow progress of works. ➤ Financial constraints with the developer.
41	Panan 4x75= 300 MW Himagiri Hydro Energy Pvt. Ltd.	Sikkim	1 2 3 4	75 75 75 75	2018-19 2018-19 2018-19 2018-19		2020-21 2020-21 2020-21 2020-21 (subject to active start of works)	24	1833.05 (2009)		2400.00 (09/16)	566.95	➤ Clearance from NWLB received in December, 2015. ➤ Clearance from NGT.
42	Tashiding 2x48.5=97 MW Shiga Energy Pvt Ltd.	Sikkim	1 2	48.5 48.5	2015-16 2015-16		2017-18 2017-18	24	465.95		465.95	Nil	➤ Poor geology ➤ Local issues
43	Chanju-I 3x12=36 IA Energy	HP	1 2 3	12 12 12	2014-15 2014-15 2014-15		2016-17 2016-17 2017-18	Commnd. Commnd. →36	295.09		295.09	Nil	➤ Slow progress of works ➤ Poor geology