

## 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.	Latest Comm. Sched.	Time over run (month s)	Org. Cost (Rs. in Crores)	Latest 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
<b>CENTRAL SECTOR</b>											
1	Tapovan Vishnughad (4x130 = 520 MW) NTPC	Uttara khand	1 2 3 4	130 130 130 130	2012-13 2012-13 2012-13 2012-13	2018-19 2018-19 2018-19 2018-19	72	2978.48 (11/06)	3846.30 (01/14) Latest approved	867.82	<ul style="list-style-type: none"> <li>➤ Delay in procurement/deployment of Tunnel Boring Machine by Civil Contractor.</li> <li>➤ Slow progress in Power house due to poor rock strata.</li> <li>➤ Heavy water ingress due to bad geology in HRT and rock fall on TBM.</li> <li>➤ Flash flood in June, 2013 &amp; Aug ' 12 damaging Coffor Dam.</li> <li>➤ Termination of civil contracts for Barrage and HRT.</li> </ul>
2	Lata Tapovan (3x57 = 171 MW) NTPC	Uttara khand	1 2 3	57 57 57	2017-18 2017-18 2017-18	2021-22 2021-22 2021-22 (subject to re-start of works)	48	1527.00	1527.00	Nil	<ul style="list-style-type: none"> <li>➤ Flash flood during June, 2013 in Uttarakhand.</li> <li>➤ Local issues / non-start of works in Barrage area</li> <li>➤ Hon'ble Supreme court ban on construction works since May-14..</li> </ul>
3	Pare (2x55 = 110 MW) NEEPCO	Arunachal Pradesh	1 2	55 55	2012-13	2016-17 2016-17 (Critical)	48	573.99 (06/07)	1226.27 (12/14)	688.28	<ul style="list-style-type: none"> <li>➤ Law &amp; Order problem.</li> <li>➤ Poor geology.</li> <li>➤ Poor approach roads.</li> <li>➤ Flash flood during May-Aug, 2014</li> <li>➤ Flash flood during Jun-Sep, 2015. Dam area inundated with water, Concreting of Dam effected for 04 months.</li> </ul>
4	Tuirial (2x30 = 60 MW) NEEPCO	Mizoram	1 2	30 30	2006-07 2006-07	2017-18 2017-18	132	368.72	1381.71	1012.99	<ul style="list-style-type: none"> <li>➤ Suspension of Project activities due to local agitation for about 7 yrs. (June-2004 to May-2011)</li> <li>➤ Poor approach roads.</li> <li>➤ Slope failure in Power House.</li> <li>➤ Insufficient resources by contractor.</li> </ul>
5	Kameng (4x150 = 600 MW) NEEPCO	Arunachal Pradesh	1 2 3 4	150 150 150 150	2009-10 2009-10 2009-10 2009-10	2016-17 2016-17 2016-17 2016-17 (Critical)	84	2496.90 (03/04)	6085.84 (03/15)	3588.94	<ul style="list-style-type: none"> <li>➤ Change in dam parameters.</li> <li>➤ Slow progress in dam &amp; HRT due to Bad geology, heavy seepage, inadequate machinery.</li> <li>➤ Flash flood in Oct. 2008 and Sept. 2012.</li> <li>➤ Ingress of water in HRT.</li> <li>➤ Poor approach roads.</li> <li>➤ Contractual issues.</li> </ul>

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1	2	3	4	5	6	7	8	9	10	11	12
											<ul style="list-style-type: none"> <li>➤ Shortage of aggregate.</li> <li>➤ Clearance for quarry from State Govt.</li> </ul>
6	Tehri PSS (4x250 = 1000 MW) THDC	Uttara khand	1 2 3 4	250 250 250 250	2010-11 2010-11 2010-11 2010-11	2019-20 2019-20 2019-20 2019-20	108	1657.60	2978.86	1321.26	<ul style="list-style-type: none"> <li>➤ Approval of RCE as L-1 price bid was more than cost estimate. RCE approved in Nov-2011.</li> <li>➤ Litigation by bidders.</li> <li>➤ Poor geology.</li> <li>➤ Local agitation at Asena Quarry.</li> <li>➤ Agitation at muck disposal area.</li> <li>➤ Poor preparedness of contractor.</li> <li>➤ Revision of Lay out of machine hall due to poor geology.</li> </ul>
7	Teesta Low Dam– IV (4x40 = 160 MW) NHPC	West Bengal	1 2 3 4	40 40 40 40	2009-10 2009-10 2009-10 2009-10	2015-16 2015-16 2016-17 2016-17	72 84	1061.38 (03/05)	1929.15	867.77	<ul style="list-style-type: none"> <li>➤ Delay in forest clearance.</li> <li>➤ Flash flood in July, 2007, May, 2009 &amp; July, 2010.</li> <li>➤ Gorkha Jan Mukti agitations/bandhs.</li> <li>➤ Cash crunch of Civil contractor (M/s HCC), the civil works were at halt from March, 2013 to November, 2014.</li> </ul>
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	2018-19 2018-19 2018-19 2018-19	108	3919.59 (12/01)	7818.68 (03/15)	3899.09	<ul style="list-style-type: none"> <li>➤ Hon'ble High Court of Himachal Pradesh ban on stone crusher operation.</li> <li>➤ Delay in revised forest clearance.</li> <li>➤ TBM suffered extensive damage due to heavy ingress of water and slush in TBM face in Nov, 2006.</li> <li>➤ Slide in Power House area in Apr-04, Jun-06 and Feb-07.</li> <li>➤ Flash flood in 2004,2005,2010 and 2011.</li> <li>➤ Jiwa Nallah works affected due to cavity treatment.</li> <li>➤ Contractual issues.</li> </ul>
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 (subject to re-start of works)	120	6285.33 (12/02)	18063.89 (04/15)	11778.36	<ul style="list-style-type: none"> <li>➤ Disruption of works by locals in Ar. Pradesh side.</li> <li>➤ Slope failure in Power House in Jan, 2008.</li> <li>➤ Damage to bridge on Ranganadi river.</li> <li>➤ Change in design of surge shafts to surge tunnels.</li> <li>➤ Stoppage of works due to agitation launched by Anti Dam activists in Assam against construction of Project. Work stopped since 16.12.2011.</li> <li>➤ Issue of D/s impact studies.</li> </ul>
10	Kishanganga (3x110 = 330 MW) NHPC	Jammu & Kashmir	1 2 3	110 110 110	2015-16 2015-16 2015-16	2016-17 2016-17 2016-17 (Critical)	12	3642.04 (09/07)	5497.72	1855.68	<ul style="list-style-type: none"> <li>➤ Heavy Rainfall in March, 2011.</li> <li>➤ Cavity in HRT – TBM portion.</li> <li>➤ Poor geology in Access tunnel.</li> <li>➤ Dam works affected due to arbitration proceedings at International Court of Arbitration.</li> </ul>

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											<ul style="list-style-type: none"> <li>➤ Local people demanding Employment in NHPC.</li> <li>➤ R&amp;R Issues.</li> <li>➤ Completion of power evacuation arrangement (PGCIL)</li> </ul>
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	2019-20 2019-20 2019-20 2019-20	72	2491.58 (03/08)	2491.58 (03/08)	Nil	<ul style="list-style-type: none"> <li>➤ CCEA approval in Aug-2008 but works could not be awarded due to Forest clearance/diversion of forest land. Forest land was acquired in January-14 and subsequently works awarded in January-2014.</li> <li>➤ Disruption of works by local people.</li> </ul>
<b>STATE SECTOR</b>											
12	Kashang-I (1x65 = 65 MW) HPPCL	Himachal Pradesh	1	65	2013-14	2015-16	24	478.02 (03/08)	478.02 (03/08)	Nil	<ul style="list-style-type: none"> <li>➤ Slow progress of civil and E&amp;M works.</li> <li>➤ Flash flood in June, 2013.</li> <li>➤ Approach roads washed off during heavy rains in Monsoon 2013.</li> </ul>
13	Kashang-II & III (1x65 + 1x65 MW) =130 MW HPPCL	Himachal Pradesh	1 2	65 65	2013-14 2013-14	2019-20 2019-20 (subject to re-start of works)	72	601.78 (03/08)	601.78 (03/08)	Nil	<ul style="list-style-type: none"> <li>➤ Local issues. Works could not be started due to continuous agitation by Lipa villagers. Matter is sub-judice.</li> <li>➤ Flash flood in June, 2013.</li> <li>➤ Works stopped by contractor.</li> <li>➤ Works stuck by NGT.</li> </ul>
14	Uhl-III (3x33.33 = 100 MW) BVPCL (HPSEB)	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"> <li>➤ Delay in award of works.</li> <li>➤ Contract for construction of HRT rescinded twice i.e. during May, 2008 &amp; July, 2010 due to slow progress and non-performance by the contractor.</li> <li>➤ Poor geology in HRT.</li> </ul>
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"> <li>➤ Delay in MOEF clearance.</li> <li>➤ Delay in award of Civil &amp; E&amp;M works.</li> <li>➤ Poor geology in HRT.</li> <li>➤ Slow progress of HRT Lining.</li> <li>➤ Contractual issues</li> <li>➤ Contract for HRT package terminated on 9.1.14. Re-awarded in Nov,2014 to M/s. HCC.</li> </ul>
16	Sainj (2x50 = 100 MW) HPPCL	Himachal Pradesh	1 2	50 50	2014-15 2014-15	2016-17 2016-17	24	784.56	784.56	Nil	<ul style="list-style-type: none"> <li>➤ Slow progress of HRT and Barrage works</li> <li>➤ Local issues</li> </ul>
17	Shongtom Karcham (3x150 = 450 MW) HPPCL 16.08.2012	Himachal Pradesh	1 2 3	150 150 150	2017-18 2017-18 2017-18	2018-19 2018-19 2018-19	12	2807.83	3316.35	508.52	<ul style="list-style-type: none"> <li>➤ Shifting of Army Ammunition Depot.</li> <li>➤ Local Issues.</li> </ul>

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18	Lower Jurala (6x40 = 240 MW) TGENCO	Telangana	1 2 3 4 5 6	40 40 40 40 40 40	2011-13 2011-13 2011-13 2011-13 2011-13 2011-13	2015-16 2015-16 2015-16 2015-16 2016-17 2016-17	Comm. Comm. 36 48	908.34 (05/07)	1969.14	566.49	<ul style="list-style-type: none"> <li>➤ Delay in award of E&amp;M works.</li> <li>➤ Slow progress in civil works. Land acquisition problem.</li> <li>➤ Unprecedented flood in 2009, 2010, 2012 &amp; 2013.</li> <li>➤ Frequent bandh by TJAC for Telangana State.</li> <li>➤ Agitation by local villagers.</li> <li>➤ Right flank Dam concreting was stopped by the villagers from 23.04.2011 to 30.11.2012.</li> <li>➤ Slow progress of HM works.</li> <li>➤ Unit-1 &amp; 2 could not be commissioned in 2013-14 due to less availability of water.</li> <li>➤ Submergence of Power House on 30.07.2014 due to release of flood water from Priyadarshni Jurala.</li> </ul>
19	Pulichintala (4x30 = 120 MW) TGENCO	Telangana	1 2 3 4	30 30 30 30	2009-11 2009-11 2009-11 2009-11	2016-17 2016-17 2016-17 2016-17	72	380.00 (2006-07)	563.49	183.49	<ul style="list-style-type: none"> <li>➤ Delay in award of E&amp;M works.</li> <li>➤ Unprecedented floods in Oct.2009 &amp; Sept.2011.</li> <li>➤ Contractual issues.</li> <li>➤ Slow progress of Power House works.</li> </ul>
20	Nagarjuna Sagar Tail Pool Dam (2x25 = 50 MW) APGENCO	Andhra Pradesh	1 2	25 25	2008-09 2008-09	2015-16 2015-16	84	464.63 (2002-03)	958.67	494.04	<ul style="list-style-type: none"> <li>➤ Slow progress of dam due to frequent flooding during 2009, 2011 &amp; 2013.</li> <li>➤ Delay in award of HM works.</li> <li>➤ Contractual issues in Dam works.</li> <li>➤ Non-availability of water.</li> </ul>
21	Pallivasal 2x30 = 60 MW KSEB	Kerala	1 2	30 30	2010-11 2010-11	2018-19 2018-19 (subject to re-start of works)	96	222.00 (2004)	284.69 (2007)	62.69	<ul style="list-style-type: none"> <li>➤ Slow progress of civil works.</li> <li>➤ Delay in land acquisition.</li> <li>➤ Change in alignment of Adit to HRT.</li> <li>➤ Poor geology strata in HRT.</li> <li>➤ Heavy Monsoon</li> <li>➤ Works stopped by contractor since 28.1.15 due to contractual issues.</li> </ul>
22	Thottiyar (1x30+1x10)= 40MW KSEB	Kerala	1 2	30 10	2012-13 2012-13	2018-19 2018-19 (subject to re-start of works)	72	136.79 (2007)	150.02	13.23	<ul style="list-style-type: none"> <li>➤ Land acquisition issue.</li> <li>➤ The works of weir and approach channel stopped from 2010 to 2012 by local people.</li> <li>➤ The work stopped by Court from 12.12.2012 to April-2013.</li> <li>➤ Contractual issues.</li> <li>➤ Financial crunch with contractor.</li> </ul>
23	New Umtru (2x20 =40 MW) MePGCL	Meghalaya	1 2	20 20	2011-12 2011-12	2016-17 2016-17	60	226.40	461.27	234.87	<ul style="list-style-type: none"> <li>➤ Delay in award of works.</li> <li>➤ Slow progress of civil works.</li> </ul>

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24	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	2019-20 (subject to re-start of works)	24	2285.81	2285.81	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.
25	Koyna Left Bank PSS 2x40 = 80 MW WRD, Mah.	Maharashtra	1 2	40 40	2017-18 2017-18	2018-19 2018-19	12	226.40	379.78	153.38	➤ Slow progress of works. ➤ Fund constraints due to increase in project cost. RCE under approval.
PRIVATE SECTOR											
26	Tidong-I 2x50 =100 MW NSL Tidong	Himachal Pradesh	1 2	50 50	2013-14 2013-14	2017-18 2017-18	48	543.15 (08/05)	543.15 (08/05)	Nil	➤ Delay in NOC by Projects affected Panchayats, suspension of works by Govt.for one year.
27	Tangnu Romai-I (2x22 = 44 MW) TRPGPL	Himachal Pradesh	1 2	22 22	2014-15 2014-15	2018-19 2018-19	48	255.00 (2006)	255.0 (2006)	Nil	➤ Slow progress of civil works. ➤ Poor geology. ➤ Difficult area. ➤ Weather conditions & accessibility.
28	Sorang (2x50 = 100 MW), HSPPL	Himachal Pradesh	1 2	50 50	2012-13 2012-13	2015-16 2015-16	36	586.00 (2006)	586.00 (2006)	Nil	➤ Poor geology. ➤ Difficult area. ➤ Weather conditions & accessibility. ➤ Penstock cracks / leakage during filling of Water conductor System. ➤ Rupture in surface penstock in Nov-15 during trial run.
29	Singoli Bhatwari (3x33 = 99 MW) L&T	Uttarakhand	1 2 3	33 33 33	2014-15 2014-15 2014-15	2019-20 2019-20 2019-20 (subject to active start of works)	60	666.47 (2008)	666.47 (2008)	Nil	➤ Poor geology in HRT. ➤ Agitation by local people. ➤ Flash flood in June,2013.
30	Phata Byung (2x38 = 76 MW), LANCO	Uttarakhand	1 2	38 38	2013-14 2013-14	2017-18 2017-18 (subject to active start of works)	48	520.00	520.00	Nil	➤ Flash flood in June,2013. ➤ Poor geology in HRT.
31	Maheshwar (10x40 = 400 MW) SMHPCL	Madhya Pradesh	1 2 3 4 5	40 40 40 40 40	2001-02 2001-02 2001-02 2001-02 2001-02	2017-18 (subject to re-start of works)	192	1569.27 (96-97)	6793.00	5223.73	➤ R&R issues ➤ Cash flow problem with developer

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1	2	3	4	5	6	7	8	9	10	11	12		
			6 7 8 9 10	40 40 40 40 40	2001-02 2001-02 2001-02 2001-02 2001-02	2017-18							
32	Teesta Stage III (6x200 = 1200 MW) Teesta Urja Limited (w.e.f. 6.8.15, TUL is a Govt. of Sikkim enterprise.)	Sikkim	1 2 3 4 5 6	200 200 200 200 200 200	2011-12 2011-12 2011-12 2011-12 2011-12 2011-12		60	5705.55	11382.00	5676.45	➤ Delay in forest clearance. ➤ Works suffered due to earthquake in Sept.2011. ➤ Financial constraints with developer ➤ Delay in Pressure shaft works. ➤ Delay in Power Evacuation arrangement. ➤ Works stuck up for 13-months due to cash flow problem with developer.		
33	Teesta Stage VI (4x125 = 500 MW) Lanco Energy Private Limited	Sikkim	1 2 3 4	125 125 125 125	2012-13 2012-13 2012-13 2012-13			108	3283.08	5400.00	2116.92	➤ Poor geology. ➤ Land acquisition. ➤ Contractual issues ➤ Funds constraints with developer	
34	Rangit-IV HE Project (3X40 = 120 MW) JPCL	Sikkim	1 2 3	40 40 40	2012-13 2012-13 2012-13				72	726.16	726.16	Nil	➤ Slow progress of HRT & Surge Shaft works due to poor geology. ➤ Works hampered due to earthquake in September, 2011. ➤ Financial constraints with developer
35	Bhasmey (2x25.5 =51 MW) Gati Infrastructure	Sikkim	1 2	25.5 25.5	2012-13 2012-13					84	408.50	408.50	Nil
36	Rongnichu (2x48 =96 MW) Madhya Bharat Pvt. Co.Ltd.	Sikkim	1 2	48 48	2015-16 2015-16	48					491.32	491.32	Nil
37	Ratle (4x205+1x30) = 850 MW Ratle HEP Pvt .Ltd.	J&K	1 2 3 4 5	205 205 205 205 30	2017-18 2017-18 2017-18 2017-18 2017-18		48				5517.02	5517.02	Nil

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						(subject to re-start of works)					
38	Gongri 2x72= 144 MW Dirang Energy (P)Ltd	Ar. Pradesh	1 2	72 72	2017-18 2017-18	2020-21 2020-21	36	1436.27	1436.27	Nil	➤ Works awarded on 22.11.2011. However, consent to establish from State Pollution Control Board was issued on 19-5-14.
39	Bajoli Holi 3x60= 180 MW M/s GMR Bajoli Holi	H.P.	60 60 60	180	2017-18	2019-20	24	1696.93	1696.93	Nil	➤ Slow progress of works.
40	Rangit-II 2x33= 66 MW Sikkim Hydro Power Ltd.	Sikkim	33 33	66	2017-18	2019-20	24	498.00	498.00	Nil	➤ Slow progress of works.
41	Panan 4x75= 300 MW Himagiri Hydro Energy Pvt. Ltd.	Sikkim	75 75 75 75	300	2018-19	2020-21 (subject to active start of works)	24	1833.05	1833.05	Nil	➤ Clearance from NWLB received in December, 2015.