

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.2186
TO BE ANSWERED ON 08.03.2018**

HYDRO POWER PROJECTS

2186. SHRI RAJENDRA AGRAWAL:

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

- (a) the total number of hydro power projects sanctioned across the country currently;**
- (b) whether a number of hydro projects have not been completed as per their scheduled period of completion;**
- (c) if so, the details thereof and the reasons therefor; and**
- (d) the corrective steps taken by the Government in this regard?**

A N S W E R

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

(SHRI R. K. SINGH)

(a) : As per electricity Act, 2003, the generating company intending to set up hydro generating station is required to obtain concurrence of Central Electricity Authority (CEA) for schemes involving capital expenditure of Rs.1000 crores and above. Since, 2002-03, CEA has concurred 86 Hydro Electric Projects (HEPs) with an aggregate installed capacity of 45,912 MW.

(b) & (c) : At present, there are 38 HEPs, above 25 MW, under construction in the country. Out of these, 37 Hydro Electric Projects are presently experiencing delays/time overrun. The details of such projects along with reasons for its non- completion as per their schedule is given at Annex.

(d) : The steps taken by the Government for timely completion of HEPs across the Country are as under:

- **Central Electricity Authority (CEA) monitors the progress of under construction power projects through frequent site visits and interaction with the developers and equipment suppliers. CEA holds review meetings periodically with the developers and other stakeholders to identify and resolve issues critical for commissioning of Projects.**
- **Regular reviews are also undertaken in Ministry of Power (MoP) to identify the constraints areas and facilitate faster resolution of inter-ministerial and other outstanding issues.**
- **A Power Project Monitoring Panel (PPMP), set up by the MoP, independently follows up and monitors the progress of the hydro projects.**
- **Issues are also raised in PRAGATI, for proactive governance and timely implementation, as and when required.**
- **In case of CPSU's, the project implementation parameters/milestones are incorporated in the annual MoU signed between respective CPSU's and MoP and the same are monitored during the Quarterly Performance Review (QPR) meetings of CPSU's and other meetings held in MoP/CEA.**
- **The issues related to erection and supply of Electro-Mechanical equipment is expedited in various meetings held in CEA / MoP and other local issues affecting the progress of works are taken up with respective State Governments by the Concerned CPSU / MoP.**

ANNEX REFERRED TO IN REPLY TO PARTS (b) & (c) OF UNSTARRED QUESTION NO. 2186 TO BE ANSWERED IN THE LOK SABHA ON 08.03.2018.

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

As on 31.01.2018

Sl. No	Project Name/(I.C.)/ Executing Agency	State	Unit No.	Capacity (MW)	Original Commissioning Schedule	Revised Commissioning Schedule	Latest Commissioning Schedule	Time over run (months)	Reasons for time over run
1	2	3	4	5	6	7	8	9	10
	CENTRAL SECTOR								
1	Tapovan Vishnughad (4x130 = 520 MW) NTPC	Uttarakhand	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 (Mar'20)	84	<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. ➤ Funds constraints with contractor
2	Lata Tapovan (3x57 = 171 MW) NTPC	Uttarakhand	1 2 3	57 57 57	2017-18 2017-18 2017-18 (Aug'17)		2022-23 2022-23 2022-23 (subject to re-start of works(4 years))	67	<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 (Sep'19)		2020-21 2020-21 2020-21 (Mar,21)	18	<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. ➤ Local issues/bandhs ➤ Financial constraints with contractor
4	Pare (2x55 = 110 MW) NEEPCO	Arunachal Pradesh	1 2	55 55	2012-13 2012-13 (Aug'12)		2017-18 2017-18 (Mar'18)	67	<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. ➤ Funds constraints with contractor
5	Kameng (4x150 = 600 MW) NEEPCO	Central	1 2 3 4	150 150 150 150	2009-10 2009-10 2009-10 2009-10 (Dec'09)		2017-18 2017-18 2017-18 2017-18 (Mar,18)	99	<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.

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1	2	3	4	5	6	7	8	9	10
									2012. > Ingress of water in HRT. > Poor approach roads. > Contractual issues. > Shortage of aggregate. > Clearance for quarry from State Govt. > Slow Progress of works. > Funds constraints with contractor

6	Tehri PSS (4x250 = 1000 MW) THDC	Uttarakhand	1	250	2010-11	2015-16	2020-21	125	> 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.
			2	250	2010-11	2015-16	2020-21		
			3	250	2010-11	2015-16	2020-21		
			4	250	2010-11 (July'10)	2015-16 (Feb'16)	2020-21 (Dec'20)		
7	Parbati - II (4x200 = 800 MW) NHPC	Himachal Pradesh	1	200	2009-10		2021-22	147	> 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.
			2	200	2009-10		2021-22		
			3	200	2009-10		2021-22		
			4	200	2009-10 (Sept'09)		2021-22 (Dec,21)		
8	Subansiri Lower (8x250 = 2000 MW) NHPC	Arunachal Pradesh/ Assam	1	250	2009-11		2022-23	150	> 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.
			2	250	2009-11		2022-23		
			3	250	2009-11		2022-23		
			4	250	2009-11		2022-23		
			5	250	2009-11		2022-23		
			6	250	2009-11		2022-23		
			7	250	2009-11		2022-23		
			8	250	2009-11 (Sep'10)		2022-23 (subject to re-start of works (4 years))		

9	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)	44	<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. ➤ 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. ➤ Funds constraints with contractor
10	Vishnugad Pipalkoti (4x111 = 444 MW) THDC	Uttarakhand	1 2 3 4	111 111 111 111	2013-14 2013-14 2013-14 2013-14 (Jun'13)		2020-21 2020-21 2020-21 2020-21 (Nov'20)	89	<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									
11	Parnai 3x12.5= 37.5 MW JKSPDC	Jammu & Kashmir	1 2 3	12.5 12.5 12.5	2017-18 2017-18 2017-18 (Jan'18)		2019-20 2019-20 2019-20 (Mar,20)	26	<ul style="list-style-type: none"> ➤ Slow progress of works. ➤ Delay in Land acquisition.
12	Lower Kalnai 2x24= 48 MW JKSPDC	Jammu & Kashmir	1 2	24 24	2017-18 2017-18 (Sep'17)		2020-21 2020-21 (Mar,21)	42	<ul style="list-style-type: none"> ➤ Inadequate mobilization of man & machinery by Contractor. ➤ Delay in finalization of R&R Plan. ➤ Slow progress of works. ➤ Funds constraints with contractor. Contractor under CDR.
13	Uhl-III (3x33.33 = 100 MW) BVPCL	Himachal Pradesh	1 2 3	33.33 33.33 33.33	2006-07 2006-07 2006-07 (Mar'07)		2017-18 2017-18 2017-18 (Mar,18)	132	<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.
14	Sawra Kuddu (3x37 =111MW) HPPCL,	Himachal Pradesh	1 2 3	37 37 37	2011-12 2011-12 2011-12 (Jan'12)		2019-20 2019-20 2019-20 (May,19)	88	<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.
15	Shongtom Karcham (3x150 = 450 MW) HPPCL 16.08.2012	Himachal Pradesh	1 2 3	150 150 150	2016-17 2016-17 2016-17 (Mar'17)		2021-22 2021-22 2021-22 (Jan,22)	58	<ul style="list-style-type: none"> ➤ Shifting of Army Ammunition Depot. ➤ Local Issues. ➤ Funds constraints with contractor
16	Pulichintala (4x30 = 120 MW) TGENCO	State	1 2 3 4	30 30 30 30	2009-11 2009-11 2009-11 2009-11 (Jun'10)		2016-17 2017-18 2017-18 2018-19 (Aug,18)	98 Comm.	<ul style="list-style-type: none"> ➤ 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.

17	Pallivasal 2x30 = 60 MW KSEB	Kerala	1 2	30 30	2010-11 2010-11 (Mar'11)		2020-21 2020-21 (Dec,20)	117	<ul style="list-style-type: none"> ➤ 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.
18	Thottiyar (1x30+1x10)= 40MW KSEB	Kerala	1 2	30 10	2012-13 2012-13 (Apr'12)		2020-21 2020-21 (subject to re-start of works(3 years))	107	<ul style="list-style-type: none"> ➤ 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.
19	Shahpurkandi 3x33+3x33+1x8 =206 MW, Irrigation Deptt. &PSPCL	Punjab	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		2020-21 2020-21 2020-21 2020-21 2020-21 2020-21 2020-21 (subject to re-start of works(4 years))	60 60	<ul style="list-style-type: none"> ➤ 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.
20	Koyna Left Bank PSS 2x40 = 80 MW WRD, Maha	Maharashtra	1 2	40 40	2014-15 2014-15 (Oct'14)		2019-20 (subject to re-start of works (4 years))	65	<ul style="list-style-type: none"> ➤ Slow progress of works. ➤ Fund constraints due to increase in project cost. RCE under approval.
21	Vyasi 2x60=120 MW, UJVNL	Uttarakhand	1 2	60 60	2014-15 2014-15 (Dec'14)		2019-20 2019-20 (Mar,20)	63	<ul style="list-style-type: none"> ➤ Delay in award of works. ➤ Local Issues.
22	Polavaram (12x80 = 960 MW) PPA	Andhra Pradesh	1 2 3 4 5 6 7 8 9 10 11	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		2020-21 2020-21 2020-21 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2021-22 2022-23 2022-23	36 48	<ul style="list-style-type: none"> ➤ Slow progress of works ➤ Funds constraints.

			12	80	2017-18 (Mar'18)		2022-23 (Sep,22)	60	
PRIVATE SECTOR									
23	Tidong-I 2x50 =100 MW NSL Tidong	Himachal Pradesh	1 2	50 50	2013-14 2013-14 (Dec'13)		2018-19 2018-19 (subject to re- start of works(1-½ years)	63	<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
24	Tangnu Romai-I (2x22 = 44 MW) TRPGPL	Himachal Pradesh	1 2	22 22	2014-15 2014-15 (Jun'14)		2019-20 2019-20 (subject to re- start of works(4 years))	69	<ul style="list-style-type: none"> ➤ Slow progress of civil works. ➤ Poor geology. ➤ Difficult area. ➤ Weather conditions & accessibility. ➤ Financial constraints with the developer.

25	Sorang (2x50 = 100 MW), HSPPL	Himachal Pradesh	1 2	50 50	2011-12 2011-12 (Nov'11)		2019-20 2019-20 (subject to re- start of works (1 Year))	100	<ul style="list-style-type: none"> ➤ 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.
26	Singoli Bhatwari (3x33 = 99 MW) L&T	Uttarakhand	1 2 3	33 33 33	2012-13 2012-13 2012-13 (Dec'12)		2018-19 2018-19 2018-19 (Mar,19)	75	<ul style="list-style-type: none"> ➤ Poor geology in HRT. ➤ Agitation by local people. ➤ Flash flood in June,2013.
27	Phata Byung (2x38 = 76 MW), Lanco	Uttarakhand	1 2	38 38	2012-13 2012-13 (Jun'12)		2019-20 2019-20 (subject to re- start of works(3 years))	93	<ul style="list-style-type: none"> ➤ Flash flood in June,2013. ➤ Poor geology in HRT. ➤ Funds constraints with contractor
28	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 (Mar'02)		2019-20 (subject to re- start of works(1-½ years)	216	<ul style="list-style-type: none"> ➤ R&R issues ➤ Funds constraints with the developer
29	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 (Jul'12)		2021-22 2021-22 2021-22 2021-22 (subject to re- start of works(3 years))	116	<ul style="list-style-type: none"> ➤ Poor geology. ➤ Land acquisition. ➤ Contractual issues ➤ Funds constraints with developer
30	Rangit-IV HE Project (3X40 = 120 MW) JPCL	Sikkim	1 2 3	40 40 40	2011-12 2011-12 2011-12 (Jan'12)		2020-21 2020-21 2020-21 (subject to re- start of works(3-½ year)	110	<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

31	Bhasmey (2x25.5 =51 MW) Gati Infrastructure	Sikkim	1 2	25.5 25.5	2012-13 2012-13 (Jun'12)		2020-21 2020-21 (subject to re-start of works (3 years))	105	<ul style="list-style-type: none"> ➤ Forest clearance ➤ Financial constraints with developer
32	Rongnichu (2x48 =96 MW) Madhya Bharat Pvt. Ltd.	Sikkim	1 2	48 48	2014-15 2014-15 (Jul'14)		2019-20 2019-20 (Mar,20)	68	<ul style="list-style-type: none"> ➤ Land Acquisition ➤ Poor geology.
33	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		2022-23 2022-23 2022-23 2022-23 2022-23 (subject to re-start of works (5 years))	60	<ul style="list-style-type: none"> ➤ Slow progress of works. ➤ Works suspended since 11.7.14 due to frequent local disturbances. ➤ The parties namely, GVKRHEPPL and JKPDD have contested their respective claims and matter is now Sub-judice.

34	Gongri 2x72= 144 MW Dirang Energy (P)Ltd	Ar. Pradesh	1 2	72 72	2016-17 2016-17 (Oct'16)		2021-22 2021-22 (subject to re-start of works(3-½ years)	65	<ul style="list-style-type: none"> ➤ 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.
35	Bajoli Holi 3x60= 180 MW M/s GMR Bajoli Holi	H.P.	1 2 3	60 60 60	2018-19 2018-19 2018-19 (May'18)		2019-20 2019-20 2019-20 (Aug,19)	15	<ul style="list-style-type: none"> ➤ Slow progress of works.
36	Rangit-II 2x33= 66 MW Sikkim Hydro Power Ltd.	Sikkim	1 2	33 33	2015-16 2015-16 (Apr'15)		2019-20 2019-20 (Mar'20)	59	<ul style="list-style-type: none"> ➤ Slow progress of works. ➤ Financial constraints with the developer.
37	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		2022-23 2022-23 2022-23 2022-23 (subject to re-start of works(4-½ years)	48	<ul style="list-style-type: none"> ➤ Clearance from NWLB received in December, 2015. ➤ Clearance from NGT.
