GOVERNMENT OF INDIA MINISTRY OF POWER

LOK SABHA UNSTARRED QUESTION NO.812 TO BE ANSWERED ON 20.07.2017

CONSTRUCTIONS OF HYDRO POWER PROJECTS

812. SHRI RAMESWAR TELI: SHRI PASHUPATI NATH SINGH:

Will the Minister of POWER be pleased to state:

- (a) the details of hydro electric projects being constructed in various parts of the country, State-wise;
- (b) whether these has been inordinate delay in completion of many of these projects and if so, the details thereof, State-wise and project-wise;
- (c) whether any time limit has been fixed by which such projects are expected to be completed;
- (d) whether non-completion of such projects have caused serious financial losses; and
- (e) the steps taken/being taken for timely completion of hydro-electric projects across the country?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER, COAL, NEW & RENEWABLE ENERGY AND MINES

(SHRI PIYUSH GOYAL)

- (a): As on 30.06.2017, 41 Hydro-electric projects (above 25 MW), aggregating to 11792.50 MW are under construction in the country. The State-wise details of such projects are furnished at Annex-I.
- (b) to (d): The above hydro projects are delayed due to various reasons viz. Land acquisition issues, Environment & Forest issues, Rehabilitation & Resettlement (R&R) issues, Natural calamities, Law & Order problems, Local issues, Contractual problems, Geological uncertainties, difficult terrain & poor accessibility, funds constraints, Inter State issues, etc. It is not possible to fix any time limit for completion of these projects for the same reasons. Non completion of the projects in time causes cost overrun due to general price escalation and increase in Interest During Construction (IDC). The state-wise and project-wise details of these projects along with Cost Overrun and reasons for delay are furnished at Annex-II.

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- (e): The action taken by the Government for early completion of these projects are:
 - 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.
 - 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 PART (a) OF UNSTARRED QUESTION NO. 812 TO BE ANSWERED IN THE LOK SABHA ON 20.07.2017.

SI.	Name of Scheme	Sector	I.C.	Cap. Under
No.	(Executing Agency)		(No. x MW)	Execution (MW)
	Andhra Pradesh		,	•
1	Polavaram (PPA)	State	12x80	960.00
	Sub-total: An	dhra Pradesh	960.00	
	Arunachal Pradesh			
2	Kameng (NEEPCO)	Central	4x150	600.00
3	Pare (NEEPCO)	Central	2x55	110.00
4	Subansiri Lower (NHPC)	Central	8x250	2000.00
5	Gongri (Dirang Energy)	Private	2x72	144.00
	Sub-total: Arun	achal Pradesh		2854.00
	Himachal Pradesh			
6	Parbati St. II (NHPC)	Central	4x200	800.00
7	Uhl-III (BVPCL)	State	3x33.33	100.00
8	Sawra Kuddu (HPPCL)	State	3x37	111.00
9	Sainj (HPPCL)	State	2x50	100.00
10	Shongtong Karcham (HPPCL)	State	3x150	450.00
11	Bajoli Holi (GMR)	Private	3x60	180.00
12	Sorang (HSPCL)	Private	2x50	100.00
13	Tangnu Romai (TRPG)	Private	2x22	44.00
14	Tidong-I (NSL Tidong)	Private	100.00	100.00
15	Chanju-I (IA Energy)	Private	3x12	12.00
	Sub-total: Him	achal Pradesh		1997.00
	Jammu & Kashmir			
16	Kishanganga (NHPC)	Central	3x110	330.00
17	Parnai (JKSPDC)	State	3x12.5	37.50
18	Lower Kalnai (JKSPDC)	State	2x24	48.00
19	Ratle (RHEPPL)	Private	4x205 + 1x30	850.00
	Sub-total: Jam	mu & Kashmir		1265.50
	Kerala			
20	Pallivasal (KSEB)	State	2x30	60.00
21	Thottiyar (KSEB)	State	1x30+1x10	40.00
	Sub-tota	l: Kerala		100.00
	Madhya Pradesh			
22	Maheshwar (SMHPCL)	Private	10x40	400.00
	Sub-total: Ma	dhya Pradesh		400.00
	Maharashtra			
23	Koyna Left Bank (WRD,MAH)	State	2x40	80.00
	Sub-total: N	laharashtra		80.00
	Mizoram			
24	Tuirial (NEEPCO)	Central	2x30	60.00
	Sub-total:	Mizoram		60.00

	Punjab			
25	Shahpurkandi (PSPCL)	State	3x33+3x33+1x8	206.00
	Sub-to	tal: Punjab		206.00
	Sikkim			
26	Bhasmey (Gati Infrastructure)	Private	3x17	51.00
27	Rangit-IV (JAL Power)	Private	3x40	120.00
28	Rangit-II (Sikkim Hydro)	Private	2x33	66.00
29	Rongnichu (Madhya Bharat)	Private	2x48	96.00
30	Tashiding (Shiga Energy)	Private	2x48.5	97.00
31	Teesta St. VI (LANCO)	Private	4x125	500.00
32	Panan (Himagiri)	Private	4x75	300.00
	Sub-to	tal: Sikkim		1230.00
	Telangana			
33	Pulichintala (TSGENCO)	State	4x30	90.00
	Sub-tota	al: Telangana		90.00
	Uttarakhand			
34	Lata Tapovan (NTPC)	Central	3x57	171.00
35	Tapovan Vishnugad (NTPC)	Central	4x130	520.00
36	Tehri PSS (THDC)	Central	4x250	1000.00
37	Vishnugad Pipalkoti (THDC)	Central	4x111	444.00
38	Vyasi (UJVNL)	State	2x60	120.00
39	Phata Byung (LANCO)	Private	2x38	76.00
40	Singoli Bhatwari (L&T)	Private	3x33	99.00
	Sub-total	: Uttarakhand		2430.00
	West Bengal			
41	Rammam-III (NTPC)	Central	3x40	120.00
	Sub-total		120.00	
		Total:		11792.50

ANNEX REFERRED TO IN REPLY TO PARTS (b) to (d) OF UNSTARRED QUESTION NO. 812 TO BE ANSWERED IN THE LOK SABHA ON 20.07.2017.

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

As on 30.06.2017

									3 011 30.00.2017
SI.	Project	Sector		_	Org.	Org.	Ant.	Cost	Reasons for time and
No	Name/(I.C.)/		No.	(MW)	Comm.	Cost	Cost	over	cost over run
	Executing				Sched.	(Rs. in	(Rs. in	run	
	Agency					Crores)	Crores)	(Rs. in	
								Crores)	
1	2	3	4	5	6	9	10	11	12
	Andhra								
	Pradesh								
1	Polavaram	State	1	80	2017-18		4956.39	Nil	Slow progress of
	(12x80 = 960		2	80	2017-18		(2016-17		works
	MW)		3	80	2017-18	PL)	PL)		Funds constraints
	PPA		4	80	2017-18	•	(Power		> E&M works yet to
			5	80		Component)	Component)		be awarded
			6	80	2017-18				
			7	80	2017-18				
			8 9	80	2017-18				
			10	80 80	2017-18				
			11	80	2017-18 2017-18				
			12	80	2017-18				
			12	80	2017-10				
	Arunachal I	1	1	1		T	T	I	
2	Kameng	Central		150	2009-10		6179.96	3683.06	Change in dam
	(4x150 = 600		2	150	2009-10	(03/04)			parameters.
	MW)		3	150	2009-10				Slow progress in
	NEEPCO		4	150	2009-10				dam & HRT due
					(Dec'09)				to bad geology,
									heavy seepage,
									inadequate
									machinery. > Flash flood in Oct.
									2008 and Sept.
									2006 and Sept. 2012.
									> Ingress of water
									in HRT.
									> Poor approach
									roads.
									> Contractual
									issues.
									➤ Shortage of
									aggregate.
									Clearance for
									quarry from
									State Govt.
									Slow Progress of
									works.
3	Pare	Central	1	55	2012-13	573.99	1339.57	765.58	> Law & Order
	(2x55 = 110		2	55	2012-13	(06/07)	(01/16)		problem.
	MW)				(Aug'12)				Poor geology.
	NEEPCO								Poor approach
									roads.
									Flash flood during
									Jun-Sep -2015.
									Dam area
									inundated with

SI. No	Project Name/(I.C.)/ Executing Agency	Sector		-	Org. Comm. Sched.	Org. 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	9	10	11	12
									water, Concreting of Dam effected for 04 months.

_	T				T	Т		1		
4	Subansiri	Central	1	250	2009-11	6285.33		11149.82	>	Delay in transfer of
	Lower		2	250	2009-11	(12/02)	(02/16)		7	forest land.
	(8x250 = 2000		3 4	250	2009-11				>	Disruption of works
	MW) NHPC		5	250 250	2009-11 2009-11					by locals in Ar. Pradesh side.
	МПРС		6	250	2009-11				Α	Slope failure in
			7	250	2009-11					Power House in
			8	250	2009-11					Jan, 2008.
									A	Damage to bridge
										on Ranganadi
										river.
									\triangleright	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.
<u> </u>										Case in NGT.
5		Private	1	72	2017-18	4455	4=		\triangleright	Works awarded on
	2x72= 144		2	72	2017-18	1436.27	1535.91	99.64		22.11.2011.
	MW					(05/12)	(10/16)			However, consent
	Dirang Energy (P)Ltd									to establish from State Pollution
	(F)Eta									Control Board
										was issued on 19-
										5-14.
									A	Financial
										constraints with
										the developer.
	Himachal I	Pradesh								
	Parbati - II	Central	1	200	2009-10	3919.59	8398.75	4479.16	A	Hon'ble High Court
6	(4x200 = 800		2	200	2009-10	(12/01)	(03/15)			of Himachal
	MW)		3	200	2009-10					Pradesh ban on
	NHPC		4	200	2009-10					stone crusher
					(Sept'09)				1	operation. Delay in revised
										Delay in revised forest clearance.
									>	TBM suffered
										extensive damage
										due to heavy
										ingress of water
										and slush in TBM
										face in Nov, 2006.
									A	Slide in Power
										House area in Apr-
										04, Jun-06 and
1		1							D	Feb-07. Flash flood in
						•		Ī		1 14511 11000 IN
										2004-2005-2040
										2004,2005,2010 and 2011.
									A	and 2011.
									A	
									A	and 2011. Jiwa Nallah works
										and 2011. Jiwa Nallah works affected due to
									A	and 2011. Jiwa Nallah works affected due to cavity treatment. Contractual issues. Poor geology in
									A	and 2011. Jiwa Nallah works affected due to cavity treatment. Contractual issues.

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7	Uhl-III (3x33.33 = 100 MW) BVPCL	State	1 2 3	33.33	2006-07 2006-07 2006-07	431.56 (09/02)	940.84 (03/08)	509.28	 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 nonperformance by the contractor. Poor geology in HRT.
8	Sawra Kuddu (3x37 =111MW) HPPCL,	State	1 2 3	37 37 37	2010-11 2010-11 2010-11	558.53 (03/03)	1181.90 (03/12)	623.37	 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. Reawarded in Nov,2014 to M/s. HCC.
9	Sainj (2x50 = 100 MW) HPPCL	State	1 2	50 50	2014-15 2014-15	784.56	Under Revision	-	 Slow progress of HRT and Barrage works Local issues Cash flow problem with Contractor. Contractual issues.
10	Shongtom Karcham (3x150 = 450 MW) HPPCL 16.08.2012	State	1 2 3	150 150 150	2017-18 2017-18 2017-18	2807.83	3316.35	508.52	 Shifting of Army Ammunition Depot. Local Issues.
11	Bajoli Holi 3x60= 180 MW M/s GMR Bajoli Holi	Private	1 2 3	60 60 60	2017-18 2017-18 2017-18	1696.93	2205.00	508.07	> Slow progress of works.
12	Sorang (2x50 = 100 MW), HSPPL	Private	1 2	50 50	2012-13 2012-13	586.00 (2006)	586.00 (Under revision)	-	 Poor geology. Poor weather conditions, difficult & poor accessibility. Penstock cracks / leakage during filling of Water

12	Tangnu	Private	1	22	2014-15	255.00	562.97	307.97	conductor System in Nov '13. > Rupture in surface penstock in Nov- 15 during trial run. > Funds constraints with developer.
13	Romai-I (2x22 = 44 MW) TRPGPL	Private	2	22	2014-15	(2006)	(01/17)	307.87	 Slow progress of civil works. Poor geology. Difficult area. Weather conditions & accessibility. Financial constraints with the developer.
14	Tidong-I 2x50 =100 MW NSL Tidong	Private	1 2	50 50	2013-14 2013-14	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
15	Chanju-I 3x12=36 IA Energy	Private	1 2 3	12 12 12	2014-15 2014-15 2014-15	295.09	295.09	Nil	Slow progress of worksPoor geology
	Jammu & Kashmir								
16	Kishanganga (3x110 = 330 MW) NHPC	Central	1 2 3	110 110 110	2014-15 2014-15 2014-15 (July'14)	2238.67 (11/05)	5783.17 (09/15)	3544.50	Approval of RCE as L-1 price bid was more than cost estimate. RCE approved in Jan2009.
									 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 velley.
									Works partially resumed in Jan 2017.

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17	Parnai 3x12.5= 37.5 MW JKSPDC	State	1 2 3	12.5 12.5 12.5	2018-19 2018-19 2018-19	640.41	640.41	Nil	 Slow progress of works. Delay in Land acquisition.
18	Lower Kalnai 2x24= 48 MW JKSPDC	State	1 2	24 24	2017-18 2017-18	576.87 (12/12)	576.87 (12/12)	Nil	 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.
19	Ratle (4x205+1x30) = 850 MW Ratle HEP Pvt .Ltd.	Private	1 2 3 4 5	205 205 205 205 30	2017-18 2017-18 2017-18 2017-18 2017-18	5517.02 (03/12)	6257.00 (09/2013)	739.98	 Slow progress of works. Works suspended since 11.7.14 due to frequent local disturbance. Developer wants to surrender the Project to State Govt.
	Kerala								
	Pallivasal 2x30 = 60 MW KSEB	State	1 2	30 30	2010-11	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.
21	Thottiyar (1x30+1x10)= 40MW KSEB	State	1 2	30	2012-13 2012-13	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.
	Madhya Pra			I					
22	Maheshwar (10x40 = 400 MW) SMHPCL	Private	1 2 3 4 5 6 7 8 9	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	1569.27 (96-97)	6793.00	5223.73	 R&R issues Cash flow problem with developer

			10	40	2001-02	I			
			10	40	2001-02				
	Maharashtra	1	I	I					
23	Koyna Left Bank PSS 2x40 = 80 MW WRD, Maha	State	1 2	40	2017-18	245.02 (1999)	1494.94 (2014)	1249.92	 Slow progress of works. Fund constraints due to increase in project cost. RCE under approval.
	Mizoram			T	T		T	T	
24	Tuirial (2x30 = 60 MW) NEEPCO	Centra	1 2	30 30	2006-07 2006-07 (July'06) (Jan'14) RCE-I	368.72 (06/97)	1329.43 (12/14)	960.71	 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.
25	Shahpurkandi	State	1	33	2017-18			Nil	➤ Works of Dam
	3x33+3x33+1x8 =206 MW, Irrigation Deptt. &PSPCL		2 3 4 5 6 7	33 33 33 33 33 8	2017-18 2017-18 2017-18 2017-18 2017-18 2017-18	2285.81 (04/08)	2285.81 (04/08)		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.
	Sikkim								
26	Bhasmey (2x25.5 =51 MW) Gati Infrastructure	Private	e 1 2	25.5 25.5	_	408.50	690.30	281.80	 Forest clearance Financial constraints with developer
27	Rangit-IV HE Project (3X40 = 120 MW) JPCL	Privato	e 1 2 3	40 40 40	2011-12 2011-12 2011-12	726.17 (09/07)	1692.60 (06/16)	966.43	 Slow progress of HRT & Surge Shaft works due to poor geology. Works hampered due to earthquake in September, 2011. Financial constraints with developer
28	Rangit-II 2x33= 66 MW Sikkim Hydro Power Ltd.	Private	e 1 2	33 33	2017-18 2017-18	496.44	496.44	Nil	 Slow progress of works. Financial constraints with the developer.
29	Rongnichu (2x48 =96 MW)	Private	e 1 2	48 48	2015-16 2015-16	491.32	1187	695.68	 Land Acquisition Poor geology.

	Madhya Bharat Pvt. Ltd.								
30	Tashiding 2x48.5=97 MW Shiga Energy Pvt Ltd.	Private	1 2	48.5 48.5		465.95	465.95	Nil	Poor geologyLocal issues
31	Teesta Stage VI (4x125 = 500 MW) Lanco Energy Pvt. Ltd.	Private	1 2 3 4	125 125 125 125	2012-13 2012-13 2012-13 2012-13	3283.08 (2008)	7542.00 (12/16)	4258.92	 Poor geology. Land acquisition. Contractual issues Funds constraints with developer
32	Panan 4x75= 300 MW Himagiri Hydro Energy Pvt. Ltd.	Private	1 2 3 4	75 75 75 75	2018-19 2018-19 2018-19 2018-19	1833.05 (2009)	2400.00 (09/16)	566.95	 Clearance from NWLB received in December, 2015. Clearance from NGT.
33	Telangana Pulichintala (4x30 = 120 MW) TGENCO	State	1 2 3 4	30 30 30 30	2009-11 2009-11 2009-11 2009-11	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.
	Uttarakhan	d		[
34	Lata Tapovan (3x57 = 171 MW) NTPC	Central	1 2 3	57 57 57	2017-18 2017-18 2017-18 (Aug'17)	1527.00 (12/06)	1801.07 (12/13)	274.07	 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
35	Tapovan Vishnughad (4x130 = 520 MW) NTPC	Central	1 2 3 4	130 130 130 130	2012-13 2012-13 2012-13 2012-13 (Mar'13)	2978.48 (11/06)	3846.30 (01/14)	867.82	 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.
36	Tehri PSS (4x250 = 1000 MW) THDC	Central	1 2 3 4	250 250 250 250 250	2010-11 2010-11 2010-11 2010-11 (July'10)	1657.60 (Dec-05)	2978.86	1321.26	 Approval of RCE as L-1 price bid was more than cost estimate. RCE approved in Nov- 2011. Cash flow problem with contractor.

37	Vishnugad Pipalkoti (4x111 = 444 MW) THDC	Central	1 2 3 4	111 111 111 111	2013-14 2013-14 2013-14 2013-14 (Jun'13)	2491.58 (03/08)	2491.58 (03/08)	Nil	 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. 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
<u></u>				<u> </u>					with contractor.
38	Vyasi 2x60=120 MW, UJVNL	State	1 2	60 60	2014-15 2014-15	936.23	936.23	Nil	Delay in award of works.Local Issues.
39	Phata Byung	Private	1	38	2013-14	520.00	1225.53	705.53	> Flash flood in
	(2x38 = 76 MW), LANCO		2	38	2013-14				June,2013. > Poor geology in HRT.
40	Singoli Bhatwari (3x33 = 99 MW) L&T	Private	1 2 3	33 33 33	2012-13 2012-13 2012-13	666.47 (2008)	1577 (2008)	910.53	 Poor geology in HRT. Agitation by local people. Flash flood in June,2013.
	West Bengal								,
41	Rammam-III (3x40= 120 MW)	Central	1 2 3	40 40 40	2019-20 2019-20 2019-20	1381.84	1592.34	210.50	 Delay in getting permission for tree felling from Govt. of West Bengal for Access road from Adit-1 to Adit-2.
