

Hydro Power Development in Andhra Pradesh

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		10	2341
I	Capacity in operation	7	1610
II	Capacity under construction	1	960

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Machkund	Machkund	205
2	Balimela	Sileru	65
3	Upper Sileru	Sileru	150
4	Lower Sileru	Sileru	385
5	Donkarai Canal	Sileru	44
6	Polavaram	Godavari	545
7	Pondugala	Krishna	95
8	Nagarjunasagar RBC	Krishna	45
9	Srisaillam	Krishna	775
10	Tungbhadra HLC	Bhadra	32
TOTAL		2341	

2. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Upper Sileru I	APGENCO	120	1967-68
2	Upper Sileru St.II	APGENCO	120	1994-95
3	Srisailam	APGENCO	770	1982-87
4	Lower Sileru	APGENCO	460	1976-78
5	N.J. Sagar RBC	APGENCO	60	1983-90
6	N.J. Sagar RBC Ext.	APGENCO	30	
7	N.J. Sagar TPD	APGENCO	50	2017
	Total		1610	

3. Hydel Generation Performance for three years:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	3442	3854.04	111.97
2015-16	3773	2511.31	66.56
2016-17	3604	2605.99	72.31

4. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning	Issues / Constraints
1	Indirasagar (Polavaram)	Polavaram Project Authority	960	2021-22	Slow pace of works due to fund constraints. Further, Public hearing for construction of protective embankment to be held in Oddisha and Chhattisgarh as desired by MOEF at later stage.
	Total		960		

5. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Locatio n (State)	States Involved	Status
1.	Inchampalli MPP (13x75= 975MW)	975	A.P.	A.P./M.P./ Chhatisgarh/ Maharashtra	• DPR with estimated cost of Rs.1110 crores (1987-88 PL) returned in 05/1989. • Requires Resolution of inter-state aspects and submergence with MP, Chhatisgarh and Maharashtra.

Hydro Power Development in Arunachal Pradesh

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		87	50064
I	Capacity in operation	1	405
II	Capacity under construction	4	2854
III	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	18	17972
	(ii) Schemes under Examination in CEA	3	2576
	(iii) Schemes returned to project authorities	11	4433
	(iv) Schemes under S&I	27	3728
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	20	9462
Total (i-v)		79	38171

1. H.E. Projects in Operation:

Sl.No.	Name of Project	I.C. (MW)	Year of Commissioning
1	Ranganadi(NEEPCO)	405	2002
	Total	405	

2. H.E. Schemes Under Construction:

Sl. No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning
1	Subansiri Lower	NHPC	2000	2020-21*
2	Pare	NEEPCO	110	2017-18
3	Kameng	NEEPCO	600	2017-19
4	Gongri	Diran Energy Pvt. Ltd.	144	2020-21*

	Total		2854	
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* subject to re-start of works.

3. H.E. Projects Cleared/Appraised by CEA:

Sl No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Dibbin	KSKDHPL	120	04.12.09	EC accorded on 23.7.2012. FC-I accorded on 7.2.2012 & FC-II awaited.
2	Lower Siang	JAVL	2700	16.02.10	EC & FC awaited.
3	Nafra	SNEL	120	11.02.11	EC accorded on 19.08.13. FC-I accorded on 12.7.11 and FC-II accorded in 26.06.12. Financial closure cancelled. Project held up for want of final orders on diversion of forest land.
4	Nyamjang Chhu	BEL	780	24.03.11	EC accorded on 19.4.12. FC-I accorded on 9.4.2012 & FC-II awaited.
5	Tawang St-I	NHPC	600	10.10.11	EC accorded on 10.6.11. FC proposal forwarded by State Govt. to MOEF on 21.08.11. FC-I & II awaited..
6	Tato-II	THPPL	700	22.5.12	EC accorded on 27.6.11. FC is linked to Cumulative Impact Assessment Study of Siang Basin which has been carried out and accepted by MoEF.
7	Tawang St-II	NHPC	800	22.09.11	EC accorded on 10.06.11. FC-I accorded on 8.01.14. FC-II awaited
8	Demwe Lower	ADPL	1750	20.11.09	EC accorded on 12.02.10. FC accorded on

					26.07.13. Financial closure yet to be obtained. Petition filed in NGT against the project.
9	Hirong	JAPL	500	10.04.2013	EC & FC awaited.
10	Talonga Londa	GMR	225	16.08.2013	EC cleared on 07.08.2015 & FC awaited.
11	Etalin	EHEPCL	3097	12.07.2013	EC & FC awaited.
12	Naying HEP	NDSCPL	1000	11.09.2013	EC & FC awaited
13	Siyom	SHPPL	1000	17.12.2013	EC accorded 31.01.08. FC awaited. Forest clearance is linked to Cumulative Impact Assessment Study of Siang Basin which has been carried out and accepted by MoEF.
14	Kalai –II HEP	Kalai PPL	1200	27.3.2015	EC accorded 20.5.15. FC awaited
15	Heo	HHPPL	240	28.07.2015	EC accorded on 31.03.15. Letter is yet to be issued. FC-I accorded 27.10.15. FC-II awaited
16	Tato-I	SHPPL	186	28.10.2015	EC accorded on 10.11.15. FC-I accorded 27.10.15. FC-II awaited
17	Tagurshit	L&T	74	21.10.16	EC & FC awaited.
18	Dibang	NHPC	2880	02.05.2017	EC accorded on 19.05.15. FC-I accorded 15.04.15. FC-II awaited.
	Total		17972		

4. Hydro Schemes Under Examination/Scrutiny in CEA:

Sl. No.	Name of Project	Agency	I.C. (MW)	Month of receipt
1	Subansiri Middle (Kamla)	KHEPCL	1800	Oct-13
2	Attunli	AHEPCL	680	Oct-14
3	Magochu	SMCPCL	96	March'16
	Total		2576	

5. Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations:

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Reason of Return
1	Ranganadi St-II	NEEPCO	130	NEEPCO has been asked to review the scheme and resubmit DPR after cost and tariff are brought down. MOU with State Govt. yet to be signed.
2	Yamne St-II	SSYEVPL	84	DPR returned due to inadequate geological investigations at dam site, diversion tunnel, surge shaft & power house etc.
3	Hutong –II	MEIPL	1200	Presentation was held on 23.03.2012 and DPR taken under examination. The DPR was returned on 24.5.12 as the scheme is now to be developed as storage scheme. Hydrology & PPS cleared on 9.5.2011 & 27.3.2012.
4	Kalai-I	MFIPL	1352	STC decided that M/S MFIPL should carry out the detailed investigation for the revised DPR as per CEA's letter dt 24.5.2012.
5	Pemashelphu HEP		90	Due to non replying of the comments and likely change in location of Dams benefits from the project, DPR of project has been returned.
6	Sissiri HEP		100	PPS & Hydrology cleared. Project was under consideration of STC due to conversion of storage Scheme to ROR Scheme. STC Cleared the Scheme as ROR scheme vide letter dated-14.12.2012. presentation meeting held on 21.02.2013. DPR could not be accepted to detailed examination as representation of State Govt. pointed out that irrigation and drinking water component should be internal part of two project and cost of same should be included in cost of project. DPR returned to developer for sort out

				the issue with State Govt.
7	Gimiliang		80	DPR returned during presentation meeting held on 03.5.2013 due to inadequate geological investigation. Developer was told to submit revised DPR after carrying out necessary investigation and IC got fixed by CEA.
8	Raigam		141	DPR returned during presentation meeting held on 03.5.2013 due to inadequate geological investigation. Developer was told to submit revised DPR after carrying out necessary investigation and IC got fixed by CEA.
9	Kangtangshiri	KHPPL	80	Returned on 29.07.2013 due to inadequate investigation and in proper layout etc.
10	Demwe Upper	LUPL	1080	Developer informed that due to lack of confidence in constructability of Dam considering its deep foundation, they are not in a position to finalize the type of dam and are still in consultation with the contractors in this regard. Hence the project was returned vide secretary CEA ltr. Dtd.26/03/2015
11	Nyukcharong Chu	SNCPL	96	Returned due to non submission of investigation suggested by GSI.
	Total		4433	

6. Hydro Schemes Under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	Agency for DPR	Original I.C. (MW)	Date of MOA	Target date of Preparation of DPR
1	Oju	Subansiri	Navayuga Engg. Co. Ltd.	1800	June'2010 for Oju-I & Oju-II, Revised MoU for Single Scheme is received in April'13	3/18
2	Pauk	Siang	Velcan Energy Pvt Ltd	145	30.06.2007 (rev MOA-31.07.09)	03/18
3	Chomi	Subansiri	Adveta Power	80	14.2.2013	12/19
4	Chela	Subansiri	Adveta Power	75	14.2.2013	12/19

5	Badao	Kameng	Coastal Projects Pvt. Ltd.	70	19.11.2008	12/17
6	Para	Kameng	Coastal Projects Pvt. Ltd.	55	19.11.2008	12/17
7	Pachuk-II	Kameng	Energy development Co. Ltd	60	27.08.2010	12/17
8	Tsa Chu - I Lower	Tawang	Energy development Co. Ltd	50	27.08.2010	12/17
9	Tsa Chu - II	Tawang	Energy development Co. Ltd	90	27.08.2010	12/17
10	Pachuk-II Lower	Kameng	Energy development Co. Ltd	45	27.8.2010	12/17
11	Marijingla	Kameng	Energy development Co. Ltd	60	12.1.2008 (Amended on 27.8.2010)	12/17
12	Marijingla Lower	Kameng	Energy development Co. Ltd	48	27.8.2010	12/17
13	Rego	Siang	Greenko Energies Ltd.	70	25.09.2012	06/18
14	Rapum	Siang	Greenko Energies Ltd.	80	27.12.2007	06/18
15	Jameri	Kameng	KSK Energy Ventures Ltd	50	27.12.2007	07/17
16	Pango	Siang	Meenakshi Power Ltd.	96	27.08.2010	12/18
17	Sippi	Siang	Meenakshi Power Ltd.	96	20.7.2011	06/18

18	Jidu (Yangsang)	Siang	Meenakshi Power Ltd.	92	20.7.2011	03/18
19	Digin	Kameng	Patel Hydro Power Pvt.Ltd.	46	15.11.2010	09/17
20	Meyong	Kameng	Patel Hydro Power Pvt.Ltd.	38	15.11.2010	09/17
21	Panyor	Dikrong	Rajratna Energy Holding Pvt. Ltd.	80	25.02.2009	09/18
22	Doimukh	Dikrong	SJVN Ltd.	80	28.08.2014	-
23	Tidding-I	Lohit	Sai Krishnodaya Ind. (P) Ltd.	68	26.02.2009	06/18
24	Tidding-II	Lohit	Sai Krishnodaya Ind. (P) Ltd.	96	26.02.2009	06/18
25	New Melling	Tawang	SEW Energy	96	2.3.2009	
26	Lower Yamne-II	Siang	Yamne Power Pvt. Ltd.	87	29.11.2008	12/17
27	Lower Yamne -I	Siang	Yamne Power Pvt. Ltd	75	29.11.2009	12/17
	Total			3728		

7. H.E. schemes allotted for development on which Survey & Investigation is held up/ yet to be taken up:

Sl. No.	Name of Scheme	I.C. (MW)	Agency	Date of Allotment/ MoA	Status
1	Bhareli-II (Kameng-II)	600	Mountain Falls Ltd.	23.11.2006	S&I held up due to project lie in Pakke Wild life Sanctuary.

2	Papu	90	CESC Ltd.	16.05.2012	S&I held up. Project lies in Pakke wild life sanctuary.
3	Kameng Dam	600	KSK Energy Ventures Ltd.	25.01.2007	S&I held up. The project may be dropped due to vicinity of wild life sanctuary.
4	Emra-I	275	Athena Energy Ventures Pvt. Ltd.	02.02.2008	S&I not taken up due to inaccessibility of the site.
5	Amulin	420	Reliance Power Ltd.	03.02.2009	S&I held up and slow progress due to road/infrastructure issues.
6	Emini	500	Reliance Power Ltd.	03.02.2009	S&I held up and slow progress due to road/infrastructure issues.
7	Mihumdon	400	Reliance Power Ltd.	03.02.2009	S&I held up and slow progress due to road/infrastructure issues.
8	Nalo	635	Indus Hydro Power	16.11.2010	First consultation meeting held on 27.11.2013. S&I will be taken up after transfer of project in the name of Asian Genco Pvt. Ltd.
9	Rho	93	SEW Energy	2.3.2009	First consultation meeting held on 30.10.2013. S&I held up due to the inability shown by the Developer to carry out investigations suggested by GSI
10	Dardu	60	KVK Energy & Infrastructure Ltd.	26.12.2007	S&I held up due to non-resolution of Highway issue.
11	Naba	1000	Abir Infrastructure Pvt. Ltd.	21.06.2010	S&I held up due to unapproachable area/difficult & inhospitable terrain & local law & order problem.
12	Dengser	552	Coastal Infrastructre Pvt. Ltd.	26.04.2011	S&I held up due to unapproachable area/difficult & inhospitable terrain & local law & order problem.

13	Niare	800	Coastal Infrastructre Pvt. Ltd.	26.04.2011	S&I held up due to unapproachable area/difficult & inhospitable terrain & local law & order problem.
14	Anjaw	270	Athena Energy Ventures Ltd.	09.07.2007	First consultation meeting held on 30.07.2014. S&I held up .
15	Emra-II	390	Athena Energy Ventures Ltd.	02.02.2009	S&I held up. No road connectivity to project site. Local issues, communication problem
16	Yamne-I	111	S.S. Yamne Power Pvt Ltd	05.03.2009	First consultation meeting held on 30.07.2014. S&I held up. Local Problems in Siang Valley. Problems of law and order
17	Dinchang	252	KSK Energy Ventures Ltd	11.9.2007	S&I works to be taken up after finalization of JV with NEEPCO
18	Ithun-I	84	JVKIL Consortium	29.8.2008	Non-operationalization of Hunli-Desali road
19	Subansiri Upper	2000	KSK Energy Ventures Ltd.	18.03.2010	S&I held up due to lack of clarity on funding of flood moderation cost.
20	Kurung	330	NEEPCO	27.01.2015	S&I held up as the proposal for sanction of Pre-Investment activities is under examination at MoP.
	Total	9462			

Hydro Power Development in Assam

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		9	650
I	Capacity in operation	3	375
II	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	120
	(ii) Schemes returned to project authorities	1	60
	Total (i-ii)	2	180

1. Identified Projects during Reassessment study :

Sl.No.	Name of Project	River	I. C. (MW)
1	Dilli Stor.	Disang	33
2	Jamuna Dam P/H	Jamuna	28
3	Diyung Dam P/H	Diyung	47
4	Langey	Borpani	37
5	Kopili I	Kopili	50
6	Kopili II	Kopili	265
7	Lower Borpani	Borpani	90
8	Amring	Amring	40
9	Upper Borpani	Borpani	60
TOTAL			650

2. H.E. Projects in Operation:

Sl.No.	Name of Project	I. C (MW)	Year of Commissioning
1	Karbi Langpi (L. Borpani)	100	2007
2	Kopili	225	1988-2003
3	Khandong	50	1984
	Total	375	

3. H.E. Projects Cleared/Appraised by CEA:

Sl No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence
1	Lower Kopli	APGCL	120	24.05.2016
	Total		120	

4. H.E. Projects Returned to Project Authorities for re-submission after compliance of observations:

Sl. No	Name of Scheme	Agency	I.C. (MW)	Reason of Return
1	Karbi langpi(U.Borpani)	ASEB	60	Returned due to involvement of interstate aspects with Meghalaya, updated hydrology not been utilized for carrying out power potential study, cost estimates not framed at current PL and inadequate geological investigations etc.

5. H.E. schemes involving Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1.	Karbi Langpi (Upper Borpani) (2x30 = 60 MW)	60	Assam	Meghalaya/ Assam	DPR with estimated cost of Rs 127.47 crores (1984 PL) returned in 04/1988 DPR resubmitted in Nov., 08 and returned in Dec., 2008 due to involvement of interstate aspects still remaining un-resolved with Meghalaya and inadequate geological investigations etc.

Hydro Power Development in Bihar

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	1	40
Schemes allotted by States for development		
Schemes under Examination in CEA	1	130

Identified project namely East Gandak Canal has been developed with installed capacity below 25 MW

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Eastern Gandak Canal	Gandak	40
TOTAL			40

2. Hydroelectric Schemes under operation in Bihar (above 25 MW):

At present, no hydroelectric scheme (above 25 MW) is under operation in Bihar. Four H.E. Schemes having installed capacity of 44.9MW, consisting of Kosi (20MW), Sone Western Canal (6.6MW), Sone Eastern Canal (3.3MW) and Eastern Gandak (15MW), are in operation in Bihar which are all below 25MW capacity each.

3. Schemes under Construction:

At present no hydro scheme is under construction in Bihar.

4. Schemes under Examination in CEA:

Sl. No.	Scheme/ State/ Agency/ MW	Month of Receipt	I. C. (MW)	Est. Cost (Rs. Crs.) Price Level	Status
1	Dagmara /Bihar/ BSHPCL/(17x7. 65 MW)	04/12	130	1172.33 (without IDC) (03/2011)	Concurrence meeting held on 20.03.2013. Concurrence was not accepted by the Authority due to high Project cost & tariff. Developer submitted reduced cost of the project which was on higher side and to comply with the observations of CEA, CWC & GSI which are awaited. Complete information regarding reduction / review of cost is still awaited.

Hydro Power Development in Chhattisgarh

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		15	2202
I	Capacity in operation	1	120
II	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	60

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Joka	Kanhar	28
2	Kharauli	Mahan	46
3	Pasal	Rihand	55
4	Duniadhin	Rihand	80
5	Karri	Rihand	70
6	Hasdeo (Bango)	Hasdeo	55
7	Konta	Sabari	65
8	Chitrakot	Indravati	38
9	Bodhghat	Indravati	295
10	Kutru-I	Indravati	100
11	Kutru-II	Indravati	155
12	Nugur-I	Indravati	160
13	Bhopalapatnam	Indravati	715

14	Nugur-II	Indravati	270
15	Kotri	Kotri	70
Total		2202	

2. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning
1	Hasdeo Bango	CSPGCL	120	1994, 95
	Total		120	

3. H.E. Projects Cleared/Appraised by CEA:

Sl No	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Matnar HEP	CSPCPL	60	19.08.04	EC & FC awaited.
		Total	60		

4. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	I.C. (MW)	Location (State)	States Involved	Status
1.	Matnar (3x20 =60 MW)	60	Chhattisgarh	Chhatisgarh/ Andhra Pradesh/ Orissa	- Cleared by CEA on 19.08.2004 at an estimated cost of Rs. 313.35 crores (3/2004 PL). - Indravati is one of the tributary of Godavari and flows through Orissa, Chattisgarh and Andhra Pradesh. It is an inter State river between Chattisgarh and Orissa. Chattisgarh (erstwhile Madhya Pradesh) and Orissa entered into an inter-State agreement for

					sharing of Indravati river water on 11th July, 1979. • Chhattisgarh State Power Generation Company Ltd. (CSPGCL) has informed in April, 2009 that the concerned neighboring State will not have any problem as Matnar HEP is a Run-of-river scheme and would not affect the existing pattern of river flow. • CSPGCL has also informed that distribution pattern of agreed water quantity to be made available by Govt. of India in Indravati river and the matter has been taken up at highest level by the Water Resource Department of the two States. • Project involves 92 ha of forest land. Case of diversion of forest land was submitted to forest Dept. of Govt. of Chhattisgarh in March 2004. Case is under consideration of State Forest Dept. and yet to be forwarded by State Forest Dept to MOEF. • Issue of identifying degraded catchment area and submission of CAT plan is required for final clearance.
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Hydro Power Development in Goa

Identified Hydro Power Potential and its status of Development :

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	1	55

1. Identified Projects during Reassessment study :

Sl.No.	Name of Project	River	I. C. (MW)
1	Sonai	Mandavi	55
TOTAL		55	

2. H.E. schemes held up due to Inter-State aspects. :

Sl. No.	Name of Scheme/ (I. C.)	Total I.C. (MW)	Location (State)	States Involved	Status
1.	Dudhsagar (2x15 =30 MW)	30	Goa	Goa/ Karnataka	- DPR with project estimated cost of Rs 11.67 crores (1971 PL) was returned. - Involves submergence in Karnataka.

Hydro Power Development in Gujarat

Identified Hydro Power Potential and its status of development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	2	590
I Capacity in operation	2	550

#Two schemes namely Ukai Dam and Sardar Sarovar were identified for an I.C of 590 MW. However as per actual, the I.C. is 550 MW

1. Identified Projects during Reassessment study :

Sl.No.	Name of Project	River	I. C. (MW)
1	Ukai Dam PH	Tapti	120
2	Sardar Sarovar	Narmada	470
TOTAL		590	

2. H.E. Projects in Operation:

Sl. No.	Name of Project	I. C. (MW)	Year of Commissioning
1.	Ukai	300	1974-76
2.	Sardar Sarovar-CPH	250	2004
	Total	550	

3. Pumped Storage H.E. Projects in operation:

Sl. No.	Name of Project	I. C. (MW)	Year of Commissioning
1.	Kadana St. I&II #	240	1990-98

1.	Sardar Sarovar *	1200	2005-06
	Total	1440	

***Note:** Not operational in pumping mode because Garudeshwar weir is in under construction. This will work as Lower reservoir. As per information available in CEA the project has been awarded in 2012 and further information will be available from Sardar Sarovar Narmada Nigam Limited.

Not operating in pumping mode due to vibration problem.

Hydro Power Development in Haryana

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)	Percentage (%)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)#	1	64	100

#Western Yamuna Canal project (64 MW) has been developed in 4 stages each having Installed Capacity below 25 MW.

Hydro Power Development in Himachal Pradesh

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		68	18540
I	Capacity in operation	26	9643
II	Capacity under construction	10	1997
III	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	7	1782
	(ii) Schemes under Examination in CEA	1	210
	(iii) Schemes returned to project authorities	1	200
	(iv) Schemes under S&I	5	1669
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	5	1313
	Total (i-v)	19	5174

1. H.E. Projects in Operation:

Sl.No.	Name of Project	I.C.(MW)	Year of Commissioning
Satluj Basin			
1	i) Bhakra (L)	540	1960, 61
2	ii) Bhakra (R)	785	1966, 68
3	Dehar	990	1977-83
4	Pong	396	1978-83
5	Rampur	412	2014-15
6	Kol dam (NTPC)	800	2015
7	Karcham Wangtoo	1000	2011-12
8	Kashang-I	65	2016
9	Kashang-II & III	130	2016-17
10	Nathpa Jhakari	1500	2003-04
11	Baspa	300	2003
12	Sanjay	120	1989
	Sub Total	7038	
Ravi Basin			
1	Baira Siul	180	1980, 81

2	Chamera St.I	540	1994
3	Chamera St.II	300	2003-04
4	Chamera St-III	231	2012
5	Budhil	70	2012
6	Chanju-I	24	2017
	Sub Total	1345	
	Beas Basin		
1	Parbati St.III	520	2014
2	Bassi	66	1970-81
3	Malana-II	100	2011-12
4	Larji	126	2006
5	Malana	86	2001
6	Allain Duhangan	192	2010-11
7	Shanan	110	1932-82
	Sub Total	1200	
	Yamuna Basin		
1	Giri Bata	60	1978
	Sub Total	60	
	Total	9643	

2. H.E. Schemes Under Construction:

Sl. No.	Name of Project	Agency	I.C. (MW)	Likely Commissioning
	Beas Basin			
1	Parbati St--II	NHPC	800	2018-19
2	Sainj	HPPCL	100	2017-18
3	Uhl- III	Beas Valley Power Corp. Ltd. (BVPC)	100	2017-18
	Sub Total		1000	
	Satluj Basin			
1	Sorang	Himachal Sorang Power	100	2018-19
2	Tidong-I	M/s NSL Tidong	100	2018-19
3	Shontong Karcham	HPPCL	450	2019-20
	Sub Total		650	
	Yamuna Basin			
1	Sawara Kuddu	HPPCL	111	2018-19

2	Tangu Romai-I	Tangu Romai Power Generation	44	2018-19
	Sub Total		155	
	Ravi Basin			
1	Bajoli Holi	GMR Bajoli Holi Hydro Power Pvt. Ltd.	180	2019-20
2	Chanju-I	IA Energy	12	2017-18
	Sub Total		192	
	Total		1997	

3. H.E. Projects Cleared/Appraised by CEA:

Sl. No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
	Chenab Basin				
1	Chhatru	DSC	126	15.1.2015	EC & FC awaited.
2	Miyar	MHPCL	120	07.02.2013	Environment cleared on 30.07.2012 Forest Clearance is awaited.
3	Dugar	DHPL	449	20.12.16*	EC & FC awaited.
	Sub Total		695		
	Satluj Basin				
1	Chango Yangthang	MPCL	180	31.03.14	EC & FC awaited.
	Sub Total		180		
	Ravi Basin				
1	Kutehr	JSWEPL	240	31.8.10	EC accorded on 05.07.2011. FC-I accorded 22.06.2011 and FC-II accorded on 19.02.2013. Validity of earlier bids has expired due to delay in obtaining FC-II and acquisition of Pvt. Land.
	Indus Basin				
1	Seli	SHPCL	400	27.10.16*	EC and FC awaited
2	Sanch Khas	L&T HHPL	267	27.10.16*	EC and FC awaited
	Sub Total		667		

	Total	1782		
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*Concurrence meeting date

4. Hydro Schemes Under Examination/Scrutiny in CEA:

Sl. No.	Name of Scheme	Sector	I.C. (MW)	Agency	Month of receipt
1.	Luhri-I	Central	210	SJVNL	01/17
	Total		210		

5. H.E. Returned to Project Authorities for re-submission after compliance of observations:

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Reason of Return
	Ravi Basin			
1	Bara Banghal	MPCL	200	DPR returned due to inadequate geological investigations, environmental & wild life issues, review of I.C. & Cost.
	Total		200	

6. H.E. Schemes Under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	Agency for DPR	Original I.C. (MW)	Date of MOA	Target date of Preparation of DPR
	Beas Basin					
1	Thana Plaun	Beas	HPPPCL	141	22.9.2009	07/17
2	Nakhtan (Parbati-I)	Parbati	HPPPCL	520	22.9.2009	12/17
	Sub Total			661		
	Chenab Basin					
1	Reoli Dugli	Chenab	L&T Power Ltd.	420	15.3.2011	07/17
	Sub Total			420		
	Satluj Basin					

1.	Tidong-II	Tidong	Tidong Hydro Power Ltd.	60	20.1.2012	
2.	Sunni Dam	Satluj	SJVN Ltd.	528	23.01.2017	
			Sub Total	588		
Total				1669		

7. H.E. schemes allotted for development on which Survey & Investigation is held up/ yet to be taken up :

Sl. No.	Scheme	I.C. (MW)	Agency	Date of Allotment/ MoA	Status
	Satluj Basin				
1	Khab	636	HPPCL	22.09.2009	S&I held up due to non- confirmation of firm levels
2	Sumte Kothang	130	Reliance Power Ltd.	31.12.2012	S&I held up due to opposition from locals and NGOs
3	Lara Sumta	104	Reliance Power Ltd.	31.12.2012	S&I held up due to opposition from locals and NGOs
4	Luhri st-II	143	SJVNL	-	SPV is to be formed between SJVN and State Govt . and MoA yet to be finalised.
	Sub Total	1013			
	Chenab Basin				
1	Gyspa Dam	300	HPPCL	22.09.2009	S&I held up due to local agitation
	Sub Total	300			
	Total	1313			

Hydro Power Development in Jammu and Kashmir

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		54	13543
I	Capacity in operation	12	3119
II	Capacity under construction	4	1265.5
III	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	6	5043
	(ii) Schemes under Examination in CEA	1	390
	(iii) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	1	370
Total (i-iii)		8	5803

1. H.E. Projects in Operation :

Sl.No.	Name of Project	I.C. (MW)	Year of Commissioning
1	Salal-I	345	1987
2	Salal-II	345	1993-95
3	Uri-I	480	1996-97
4	Dulhasti	390	2007
5	Sewa-II	120	2010-11
6	Chutak	44	2012-13
7	Uri-II	240	2013-14
8	Nimoo Bazgo	45	2013
9	Lower Jhelum	105	1978-79
10	Upper Sindh st-II	105	2001-02
11	Baglihar	450	2008

12	Baglihar-II	450	2015
	Total	3119	

2. H.E. Schemes Under Construction:

Sl. No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning
1	Kishan Ganga	(NHPC)	330	2017-18
2	Ratle	(RHEPPL)	850	2021-22
3	Parnai	JKSPDC	37.5	2020-21
4	Lower Kalnai	JKSPDC	48	2020-21
	Total		1265.5	

3. H.E. Projects Cleared/Appraised :

Sl No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	New Ganderwal	JKSPC	93	10.06.14	EC obtained on 27.9.13 and FC obtained on 02.04.2012.
2	Pakal Dul	CVPP	1000	03.10.06	EC accorded on 29.2.08 and FC-I accorded on 16.5.05 & FC-II on 15.12.15. Decision on finalization of bidding is under approval of Board of Directors.
3	Kiru	CVPPL	624	13.06.16	EC obtained on 24.06.16 and FC obtained on 19.05.2016.
4	Kwar	CVPP	540	23.02.17	EC accorded by EAC on 10.04.1017 & FC recommended by EAC on 08.08.2014.
5	Kirthai-II	JKPDC	930	27.12.16*	EC & FC awaited
6	Sawalkote	JKSPC	1856	27.12.16*	EC was recommended on 31.01.2017 & FC awaited
	Total		5043		

* Concurrence meeting date

4. Hydro Schemes Under Examination in CEA:

Sl. No.	Name of Scheme	Sector	I.C. (MW)	Agency	Month of receipt
1.	Kirthai -I	State	390	JKPDC	07/17
	Total		390		

5. H.E. schemes allotted for development on which Survey & Investigation is held up/ yet to be taken up:

Sl. No.	Scheme	I. C. (MW)	Agency	Date of Allotment/ MoA	Status
1	Shamnot	370	NHPC	-	S&I held up as the project will submerge National Highway.
	Total	370			

Hydro Power Development in Jharkhand

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	8	582
Capacity in operation	2	170

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Panchet Hill	Damodar	40
2	Maithon	Damodar	60
3	Subernrekha MPP	Subernrekha	30
4	Koel Karo St-I (Lumpungkhel PH)	N.Koel	145
5	Serengada	N.Koel	37
6	Upper Sankh St-II	Sankh	55
7	Lower Sankh	Sankh	55
8	Khadwan	Sone	160
TOTAL			582

2. H.E. Projects in Operation:

Sl. No.	Name of Project	River	I.C. (MW)	Year of Commissioning
1.	Subernrekha I&II	Subernrekha	130	1977,80

2.	Panchet	Damodar	40	1990
TOTAL			170	

3. Pumped storage Projects in Operation:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Panchet Hill-DVC	40	Not Working in Pumping Mode -Tail Pool dam not constructed. Land acquisition issue involved.

4. Pumped storage Projects Proposed:

Sl. No.	Name of Project	I. C. (MW)	Upper Reservoir	Lower Reservoir	Remarks
1.	Lungupahar	2800	Damodar River	Bokaro River	The consent of state Government is required by DVC to be take-up in Survey and Investigation.

Hydro Power Development in Karnataka

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		38	6459
I	Capacity in operation	16	3657.4
II	Schemes allotted by States for development		
	(i) Schemes returned to project authorities	2	665

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Krishnapur	Mandavi	210
2	Kalinadi I (Supa)	Kalinadi	140
3	Kalinadi I (Dandeli II)	Kalinadi	60
4	Kalinadi I (Nagjhari)	Kalinadi	855
5	Kalinadi I (Kadassali)	Kalinadi	95
6	Kalinadi I (Kadra)	Kalinadi	100
7	Kalinadi I (Mardi)	Kalinadi	175
8	Gangavali (Bedti) St.I	Gangavali	380
9	Gangavali (Sonda) St.II	Gangavali	105
10	Aghnashini	Aghnashini	370
11	Bannehole	Bannehole	55

12	Linganamakki	Saravathi	125
13	Saravathi	Saravathi	1365
14	Saravathi Tail Race	Saravathi	157
15	Varahi	Varahi	305
16	Machchattu	Varahi	35
17	Netravathy	Netravathy	60
18	Sirpadi	Netravathy	38
19	Kumaradhari	Kumaradhari	49
20	Barapole I	Barapole	335
21	Jaldurg	Krishna	270
22	Narayanpur	Krishna	70
23	Almatti	Krishna	160
24	Ghataprabha	Tungabhadra	41
25	Shivpur	Tungabhadra	26
26	Munirabad	Tungabhadra	41
27	Hampi	Tungabhadra	34
28	Tungbhadra RBC	Tungabhadra	27
29	Tungbhadra Dam PH	Bhadra	36
30	Krishnarajasagar	Cauvery	55
31	Shivasamudram	Cauvery	44
32	Shimsa PH-I	Cauvery	31
33	Cauvery PH-I	Cauvery	235
34	Shimsa PH-II	Shimsa	42
35	Arkavathi	Arkavathi	42

36	Cauvery PH-II	Cuvery	165
37	Cauvery PH-III	Cauvery	90
38	Cauvery PH-IV	Cauvery	36
TOTAL			6459

2. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Sharavathy	KPCL	1035	1965-77
2	Lingnamakki	KPCL	55	1979-80
3	Bhadra	KPCL	39.20	1962-98
4	Kalinadi	KPCL	855	1979-84
5	Kalinadi (Supa)	KPCL	100	1985
6	Varahi	KPCL	460	1989-09
7	Ghatprabha	KPCL	32	1992
8	Kadra	KPCL	150	1997, 99
9	Kodasali	KPCL	120	1998, 99
10	Sharavathy TR	KPCL	240	2000-02
11	Almatti dam	KPCL	290	2003-04,04-05
12	Jog	KPCL	139.2	1949-02
13	Sivasamudram	KPCL	42	1922, 34
14	Munirabad	KPCL	28	1962-65
15	T.B.Dam*	APGENCO	36	1957-64
16	Hampi*	APGENCO	36	1958-64
	Total		3657.4	

* Utilities are in Andhra Pradesh

3. Hydel Generation Performance for three years:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	12763	13160.30	103.11
2015-16	12905	7479.37	57.96
2016-17	11609	6772.35	58.34

4. List of Pumped storage schemes identified for development:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Sharavathy	450	S&I likely to start soon
2.	Varahi	700	S&I likely to start soon.
Total		1150	

5. Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations:

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Reason of Return
1	Sivasamudram	KPCL	345	Presentation meeting held on 16.5.2012 as it involves interstate issues; DPR could not be processed and returned the same for resubmission after resolution of interstate aspects.
2	Mahadayi	KPCL	320	Returned due to non-tie up of inputs/clearances, the project involves interstate aspects.
	Total		665	

6. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1	Brindavan (2x6=12 MW)	12	Karnataka	TN/Karnataka	- Sanctioned by Planning Commission in 4/1990 at an estimated cost of Rs.15.08 crores (3/1989 PL). - On the objections of GOTN regarding clearance of the project, CEA indicated that the consumptive water use normally takes place in irrigation, drinking water etc and Brindavan HEP has no consumptive use implications.
2	Cauvery Power Projects- Mekadatu (400 MW)	400	Karnataka	Kerala/TN/ Karnataka	- Preliminary report of Stage-I was returned in 10/1996. - Sharing of Cauvery water awarded by CWDT. - With the consent of GOTN and GOK, NHPC took up S&I and preparation of DPR. - In the Core Group Meeting taken by secretary (Power) on 27.10.2004, it was agreed by GOK and GOTN that Shivasamudram (Karnataka) and Hogenekkal (T.N.)

					should be taken up simultaneously in the first phase and remaining two projects viz. Mekadatu and Rasimanal in the next phase. • In the Core Group Meeting taken by Secretary (Power) on 21.06.2006, it was agreed that execution of these four projects through NHPC would be most viable proposition. It was decided that representatives of both the Govts. would take up the matter with their respective Govts. and seek their approval and thereafter necessary agreement will be signed between NHPC and the two State Govts. Consent by both the State Govts. was to be communicated to MOP by 31.07.2006. The State of Karnataka in June, 2007 informed that Shivasamudram and Mekadatu will be executed by them in State sector. • KPCL informed in April, 2009 that the tribunal award is with Supreme Court. • Subsequently, a meeting was held on 08.07.2009 under the chairmanship of Secretary (Power) to discuss the pending
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					issue of development of Hydroelectric Projects in Cauvery Basin. Secretary (Power) expressed that Shivasamudram being a Run of River Project with in the territory of Karnataka, Tamil Nadu should not have any objection to the development of the Project by the State Government. He further opined that there should not be any problem in taking up Shivasamudram Project by the State of Karnataka provided there is joint mechanism for monitoring the water level/releases of water to Tamil Nadu. He suggested that the CWC could act as an observer in this regard and directed that the GOK would provide/share all the technical details of the Project to/with Tamil Nadu. Both the States Government were advised to consult CEA and CWC before finalization of designing of the Project. • As regards other projects located in Tamil Nadu but whose submergence area partly falls in Karnataka, it was suggested the two
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					Governments need to arrive at an arrangement for power sharing.
3	Cauvery Power Projects- Sivasamudram Seasonal (2x135=270 MW)	270	Karnataka	Kerala/TN/Karnataka	• Sharing of Cauvery water awarded by CWDT. • With the consent of GOTN and GOK, NHPC took up S&I and preparation of DPR. • In the Core Group Meeting taken by secretary (Power) on 27.10.2004, it was agreed by GOK and GOTN that Shivasamudram (Karnataka) and Hogenekkal (TN) should be taken up simultaneously in the first phase and remaining two projects viz. Mekadatu (Karnataka) and Rasimanal (T.N.) in the next phase. • In the Core Group Meeting taken by Secretary (Power) on 21.06.2006, it was agreed that execution of these four projects through NHPC would be most viable proposition. It was decided that representatives of both the Govts. would take up the matter with their respective Govts. and seek their approval and thereafter necessary agreement will be signed between NHPC and the two State Govts. Consent by both the State Govts.

					was to be communicated to MOP by 31.07.2006. The State of Karnataka in June, 2007 informed that Shivasamudram and Mekadatu will be executed by them in State sector. • Subsequently, a meeting was held on 08.07.2009 under the chairmanship of Secretary (Power) to discuss the pending issue of development of Hydroelectric Projects in Cauvery Basin. Secretary (Power) expressed that Shivasamudaram being a Run of River Project with in the territory of Karnataka, Tamil Nadu should not have any objection to the development of the Project by the State Government. He further opined that there should not be any problem in taking up Shivasamudram Project by the State of Karnataka provided there is joint mechanism for monitoring the water level/ releases of water to Tamil Nadu. He suggested that the CWC could act as an observer in this regard and directed that the GOK would provide/share all the technical details of the Project to/with Tamil Nadu Both the States Government were advised to consult CEA
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					and CWC before finalization of designing of the Project. - As regards other projects located in TN but whose submergence area partly falls in Karnataka, it was suggested the two Governments need to arrive at an arrangement for power sharing. - KPCL submitted revised DPR of Shivasamudram Run of River Power Project(3x100+3x15=345 MW) in Cauvery Basin to CEA vide their letter dated 30.03.2012. In the presentation meeting held in CEA on 16.05.2012, it was decided in the meeting that due to non-resolution of Inter-State issues the DPR can not be examined and the same is returned.
4.	Katla & Palna Diversion (Augmentation)	Augmentation	Karnataka	Goa/ Karnataka	- DPR with estimated cost of Rs 8.13 crores (1979 PL) returned in 10/1987. - These two schemes are on tributaries to Mahadayi river. Unless inter-state dispute is resolved, this project cannot be taken up.
5.	Mahadayi (2x10+2x150 = 320 MW)	320	Karnataka	Goa/ Karnataka	- DPR with estimated cost of Rs 850.05 crores returned in 08/2002. - Involves trans - basin diversion of waters of Mahadayi river to Malaprabha river (Krishna basin). - State Govt. has

					constituted a Committee to prepare Master Plan for utilization of water available as Karnataka share. • Power project will be reviewed based on the revised allotment of water for power.
	Total	1002			

Hydro Power Development in Kerala

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		28	3378
I	Capacity in operation	13	1881.5
II	Capacity under construction	2	100
III	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	163

1. Hydro Electric Projects in Operation:

Sl.No.	Name of Project	I.C. (MW)	Year of Commissioning
1	Idukki	780	1976 & 1985-86
2	Sabaragiri	300	1960-67
3	Kuttiadi & K Extension	125	1972-2001
4	Sholoyar	54	1956-68
5	Sengulam	48	1954 - 01
6	Nariamanglam	70	1961-63,2008-09
7	Pallivasal	37.5	1948-01
8	Poringalkuttu	32	1957-60
9	Panniar	30	1963-01
10	Idamalayar	75	1987
11	Lower Periyar	180	1997
12	Kakkad	50	1999
13	Kuttiyadi Addln Extn	100	2010
	Total Kerala	1881.5	

4. List of Pumped storage schemes identified for development:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Idukki	300	Existing Idukki reservoir. Yet to be taken up under S&I. Involves less Forest land and DPR can be prepared within 2-3 year.
2.	Pallivasal	600	Existing Idukki reservoir. Yet to be taken up under S&I. Involves less Forest land and DPR can be prepared within 2-3 year.
	Total	900	

5. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	I.C. (MW)	Likely Commissioning
1	Pallivasal	KSEB	60	2019-20
2	Thottiyar	KSEB	40	2019-20
	Total		100	

6. H.E. Projects Cleared/Appraised by CEA and yet to be taken up for construction:

Sl. No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Athirappilly	KSEB	163	31.03.05	EC restored on 9.10.15. FC accorded.
	Total		163		

7. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/Installed Capacity	I.C. MW	Location (State)	States Involved	Status
1*	Kerala Bhavani (MPP) (3x50= 150 MW)	150	Kerala	Kerala/T.N./Karnataka	- DPR with estimated cost of Rs 168.75 crores (1990-91 PL) returned in 01/1992. - Final award of CWDT stated that the scheme involves trans- basin diversion of water of Bhavani, therefore it is not possible to allocate water for this project. - Since the tribunal has ruled out trans-basin transfer (from inter state rivers), this project remains a non-starter. The final award of CWDT has been challenged by Kerala State before the Hon'ble Supreme Court of India.
2.*	Mananthvady MPP (5x45 =225MW)	225	Kerala	Kerala/T.N./Karnataka	- Earlier DPR with estimated cost of Rs 69.17 crores (1980 PL) returned in 07/1980. - Final award of CWDT stated that the scheme involves trans- basin diversion of water of Kabini, therefore it is not possible to allocate water for this project. - Since the tribunal has ruled out transbasin transfer (from inter state rivers), this project remains as a non-starter. - The final award of CWDT has been challenged by Kerala State before the

					Honourable Supreme Court of India.
3.	Pandiar Punnapuzha Tail Race (105 MW)	105	Kerala	TN/Kerala	• Earlier DPR with estimated cost of Rs 22.00 crores (12/1972 PL) returned in 07/82 • Pproject envisages utilisation of tailrace waters of the proposed Pandiar Punnapuzha HEP of Tamil Nadu. • The project would be taken up if GOTN and Kerala come to a mutual agreement. • Inter-state issue is not resolved.
4.*	Pambar (40 MW)	40	Kerala	T.N./Kerala/ Karnataka	• Earlier DPR for 30 MW with estimated cost of Rs.65.46 crores (1989 PL) returned in 03/1990. • The project is also entangled with Cauvery Waters Disputes Tribunal (CWDT). • KSEB revised the scheme from earlier proposal of storage scheme to run-of-river scheme. • Non-Consumptive use of 5.6 TMC was proposed for power generation, which has been allowed by Tribunal subject to agreement with Tamil Nadu for schedule of water release. • DPR is yet to be finalized.

(*) Projects located in Cauvery basin.

Hydro Power Development in Madhya Pradesh

Identified Hydro Power Potential as per reassessment Study:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		13	1970
I	Capacity in operation	9	2235
II	Capacity under construction	1	400
III	Schemes allotted by States for development		
	(i) Schemes returned to project authorities	1	100

1. H.E. Projects in Operation:

Sl. No.	Name of Project	Agency	I.C (MW)	Year of Commissioning
1.	Indira Sagar	NHDC	1000	2004-05
2.	Omkareshwar	NHDC	520	2007
3.	Gandhi Sagar	MPPGCL	115	1960-66
4.	Bargi	MPPGCL	90	1988
5.	Ban Sagar Tons-I	MPPGCL	315	1991- 92
6.	Rajghat	MPPGCL	45	1999
7.	Bansagar Tons PH-III	MPPGCL	60	2000- 02
8.	Bansagar Tons PH-II	MPPGCL	30	2002
9.	Madhikhera	MPPGCL	60	2006-07
	Total		2235	

2. H.E. Schemes Under Construction :

Sl. No.	Name of Project	I. C. (MW)	Agency	Likely Commissioning
1.	Maheshwar (pvt)*	400	SMHPCL	2018-19
	Total	400		

*- Works suspended since Nov-11 due to cash flow problem with developer- A high level committee under the chairmanship of Additional Chief Secretary (Finance) GoMP, was formed on 16th Oct, 2014 to find ways to complete the project. The committee has submitted its report on 2.5.2015. The committee has recommended three scenarios for commissioning the Maheshwar Project. Under the first scenario, another attempt to complete the project with the present private developer has been envisaged. Timeline for first scenario has elapsed (2nd August, 2015) without the promoter complying with its requirements. Currently, the process for revival of project under second scenario is underway which envisages government companies to take over the project company with the private developer being kept as a minority shareholder. Accordingly, lenders being Govt. companies are planning to acquire the majority equity by way of conversion of sub-debt into equity and invocation of pledge share.

- Likely commissioning after 1-½ year of restart of works.

3. Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations:

Sl. No.	Name of Scheme	Sector	I.C. (MW)	Month of Return
1.	Sone	State	100	Apr-03
		Total	100	

4. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/I. C.	I.C. MW	Location (State)	States Involved	Status
1.	Orcha MPP (2x30+2x15 = 90 MW)	90	M.P.	U.P./M.P.	• DPR with estimated cost of Rs. 89.01 crores (3/1980 PL) returned in 07/1985. • Inter-state aspects mainly relate to submergence

					under the reservoir as well as sharing of water below Orcha.
2.	Ken (2x15+2x10 = 50 MW)	50	M.P.	U.P./M.P.	• DPR with estimated cost of Rs 202.06 crores returned in 2/1987. • The yield at the project site and sharing of water u/s & d/s of the project has been agreed between U.P. & M.P. Both the States have also agreed for preparation of DPR for the Ken MPP and NWDA proposal for transfer of surplus water of Ken to Betwa u/s of Rajghat Dam. • DPR for Ken-Betwa River Linking Project has been prepared by NWDA in Dec., 2008, copies of which were forwarded by them to Govt. of M.P. and Govt. of U.P. The status of the project was discussed by the respective Govts./NWDA/ MOWR in the meeting taken by Secretary (WR) on 04.08.2010 and it was decided that S&I works will be taken up by NWDA on priority.

Hydro Power Development in Maharashtra

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	25	3314
Capacity in operation	12	2647

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Vaitarna I	Vaitarna	28
2	Bhira Tail Race	Kundalik	55
3	Tillari	Tillari	39
4	Pench	Pench	85
5	Pathri	Wainganga	40
6	Wainganga	Wainganga	150
7	Samda	Pranhita	95
8	Ghargaon	Pranhita	105
9	Kunghara	Pranhita	115
10	Pranhita	Pranhita	310
11	Sahasrakund I	Penganga	29
12	Bhivpuri	Andhra	85
13	Khopoli	Ganga	70
14	Bhira	Mula	215
15	Koyna St-IV	Koyna	350
16	Koyna St-III	Koyna	145
17	Koyna St-I & II	Koyna	245
18	Koyna Dam PH	Koyna	65
19	Patharpunj	Varna	29
20	Kadvi	Varna	215
21	Varna	Varna	27
22	Kasari-I	Kasari	215
23	Kubhi-I	Penganga	170
24	Kumbhi-II	Penganga	27
25	Hiranyakeshi II	Vedganga	405
TOTAL			3314

2. H.E. Projects in Operation:

Sl.No.	Name of Scheme	Agency	I.C. (MW)	Year of Commissioning
1	Koyna I & II	MAHAGENCO	600	1962-67
2	Koyna III	MAHAGENCO	320	1975-78
3	Koyna DPH	MAHAGENCO	36	1980-81
4	Vaitarna	MAHAGENCO	60	1976
5	Bhira Tail Race	MAHAGENCO	80	1987-88
6	Tillari	MAHAGENCO	60	1986
7	Koyna St-IV	MAHAGENCO	1000	1999-2000
8	Bandhardhara-II	DLHP(Private)	34	1996
9	Bhira	Tata (Private)	150	1927-49
10	Bhivpuri	Tata (Private)	75	1997-1999
11	Khopoli	Tata (Private)	72	2001-2003
12.	Pench	MPPGCL	160	1986-87
TOTAL			2647	

3. Hydel Generation Performance for three years:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	5652	5678.01	100.46
2015-16	5842	5078.88	86.94
2016-17	6208	5923.70	95.42

4. Pumped storage H.E Projects in operation:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Bhira	1x150=150	Pumping Mode- Working
2.	Ghatgar	2x125=250	Pumping Mode- Working
	Total	400	

5. Pumped storage H.E. Projects under Construction:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Koyna Left Bank	2x40=80	The current expenditure on the project has already reached to original administrative approval cost level hence expenditure on the project is stopped & project works are stalled. Revised cost is under approval by State Government.
	Total	80	

6. List of Pumped storage schemes identified for development:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Malshej Ghat	700	In a Meeting dated 19.11.15 Govt. of Maharashtra agreed to implement the Malshej Ghat and other PSS through the JV company of THDC India Limited (THDCIL), Nuclear Power Corporation of India Limited (NPCIL) and Govt. of Maharashtra. IA yet to be signed with State Govt.
2.	Humbarli	400	Project planned on existing Koyna Dam i. e. Shivsagar Reservoir at Koyna Nagar. DPR to be prepared. Expenditure on S&I / DPR could incurred only after a firm commitment on the part of GoM, on allotment of project to JV, signing of IA and signing of PPA for entire power from the project.
3.	Varasgaon	1200	DPR is being prepared by GoMWRD.
	Total	2300	

7. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1	Bhivpuri (Private) (1x90=90 MW)	90	Maharashtra	Maha/ Karnataka / AP	Cleared by CEA in 5/1991 at an estimated cost of Rs. 89.87 crores (11/1989 PL). Involves interstate aspect with A P & Karnataka regarding Westward Diversion of Krishna Waters.

Hydro Power Development in Manipur

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		15	1761
I	Capacity in operation	1	105
II	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	66

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Laniye-II	Laniye	27
2	Laniye-I	Laniye	34
3	Khongnem Chakha-II	Barak	90
4	Khongnem Chakha-III	Barak	48
5	Nungnang	Irang	70
6	Nungliban	Leimatek	85
7	Khunou	Leimatek	115
8	Thinghat	Tuivai	41
9	Sinjal	Tuivai	39
10	Bungpuilong	Tuivai	80
11	Tipaimukh	Barak	510

12	Irang	Irang	75
13	Pabaram Stor.	Barak	232
14	Loktak	Loktak	105
15	Tuivai	Tuivai	210*
TOTAL		1761	

*Tuivai is being developed in Mizoram

2. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Loktak	NHPC	105	1983
	Total		105	

3. H.E. Projects cleared by CEA:

Sl No	Name of Project	Agency	I.C. (MW)	Date of concurrence	Status
1	Loktak D/S	LDHCL	66	4.11.2016 (concurrence meeting date)	EC & FC accorded. Tendering work to be done.
	Total		66		

Hydro Power Development in Meghalaya

Identified Hydro Power Potential as per reassessment Study:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		25	2298
I	Capacity in operation	5	322
II	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	270
	(ii) Schemes under Examination in CEA	1	210
	(iii) Schemes under S&I	4	384
	(iv) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	2	620
	Total (i-iv)	8	1484

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Umlamphang	Umiam	28
2	Umiam Umtru-III	Umiam	41
3	Umiam Umtru-IV	Umiam	38
4	Umiam Umtru-V	Umiam	27
5	Umiam Umtru-VI	Umiam	145
6	Simsang Dam P.H.	Someshri	65
7	Kynshi-I Stor.	Kynshi	295
8	Sushen	Myntdu	150
9	Selim	Myntdu	125
10	Umjaut	Umjaut	85
11	Umduma	Umtrew	95

12	Manhu	Umtru	90
13	Nonglyngkien	Umtru	47
14	Umngi Storage	Umngi	35
15	Rangmaw	Umngi	42
16	Nongkolait	Umngi	180
17	Nongnam	Umngi	36
18	Mawpat	Umngi	55
19	Kynshi-II	Umrilang	175
20	Nongmawlar	Kynshi	29
21	Mawsyrpat	Kynshi	45
22	Mawthaba	Kynshi	70
23	Mawblei Storage	Kynshi	100
24	Amagam Storage	Rongdi	35
25	Umngot Stor.	Umngot	265
TOTAL		2298	

2. H.E. Projects in Operation:

Sl.No.	Name of Project	I. C. (MW)	Year of Commissioning
1	Kyrdemkulai	60	1979
2	Umiam St.I	36	1965
3	Umiam St.IV	60	1992
4	Myntdu St.-I	126	2012
5	New Umtru	40	2017
	Total	322	

3. H.E. Projects Cleared/Appraised by CEA:

Sl No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Kynshi-I	AKPPL	270	31.3.2015	EC & FC awaited
	Total		270		

4. Hydro Schemes Under Examination/Scrutiny in CEA:

Sl. No.	Name of Project	Agency	I.C. (MW)	Month of receipt
1	Umangot HEP	MePGCL	210	Mar-13
	Total		210	

5. Hydro Schemes Under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	Agency	Original I.C. (MW)	Date of MOA	Target date of Preparation of DPR
1	Umiew (Mawphu St.-II)	Umiew	NEEPCO	85	20.4.12	07/17
2	Umduna	Barak	ETA Star Infrastructure Ltd	90	Dec. 2007/ Rev. Nov. 2008	12/17
3	Umjaut	Umiew	ETA Star Infrastructure Ltd	69	Dec. 2007/ Rev. Nov. 2008	12/17
4	Myntdu Leshka st-II	Myntdu	MePGCL	140	20.4.12	2019
	Total			384		

6. H.E. schemes allotted for development on which Survey & Investigation is held up/ yet to be taken up:

Sl. No.	Name of Scheme	I. C. (MW)	Agency	Date of Allotment/ MoA	Status
1	Kynshi-II	450	GoMe & Jaiprakash Power Venture Ltd. (JV)	11.12.2007	S&I held up on account of non-finalisation of dam location/height due to deposit of Uranium.
2	Selim	170	NEEPCO	2008	First Consultation meeting held on 28.05.2014. STC has given clearance for conversion from Storage to Run-of-River Scheme in its 10th meeting held on 11.06.2015.
	Total	620			

Hydro Power Development in Mizoram

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	7	2131
Capacity under construction	1	60

1. Identified schemes during reassessment study.

S. No.	Name of Scheme	River	IC (As per Reassessment)
1	Lunglang Stor.	Tyao	690
2	Boinu Stor.	Kaldan	635
3	Mat	Mat	90
4	Sonai	Sonai	55
5	Deh	Deh	26
6	Bhairabi	Dhaleshwari	90
7	Kaldan Stor.	Kaldan	545
TOTAL			2131

2. H.E. Schemes Under Construction

Sl. No.	Name of Project	Implementing Agency	Installed Capacity (MW)	Likely Commissioning
1	Tuirial	NEEPCO	60	2017-18
	Total		60	

- Tuivai scheme (210 MW) was identified in Manipur during the reassessment study. The scheme was concurred by CEA during 1999. The scheme is yet to be taken up under construction.

Hydro Power Development in Nagaland

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		11	1452
I	Capacity in operation	1	75
II	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	186

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Dikhu Lift Dam	Dikhu	125
2	Yangnyu Stor.	Dikhu	135
3	Jhanji storage	Jhanji	75
4	Doyang-V	Doyang	55
5	Dikhu Dam P.H.	Dikhu	470
6	Sakhai-II	Tizu	31
7	Khuzami	Tizu	32
8	Rurrur	Zangki	36
9	Zungki	Zangki	48
10	Laruri	Tizu	80
11	Tizu	Tizu	365
TOTAL		1452	

2. H.E. Projects in Operation:

Sl.No.	Name of Project	I. C. (MW)	Year of Commissioning
1	Doyang	75	2000
	Total	75	

3. H.E. Projects Cleared/Appraised by CEA :

Sl No.	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Dikhu HEP	NMPPL	186	31.03.2014	FC not applicable as forest land is not involved. EC awaited
	Total		186		

Hydro Power Development in Odisha

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	13	2981
Capacity in operation	7	2142.3

1. H.E. Projects in Operation:

Sl.No.	Name of Project	I.C. (MW)	Year of Commissioning
1	Hirakud I (Burla)	275.5	1956-63, 90
2	Hirakud II (Chiplima)	72	1962-64
3	Balimela	510	1973-77
4	Rengali	250	1985-92
5	Upper Kolab	320	1988-93
6	Upper Indravati	600	1999, 2000-01
7	Machkund	114.75	1959
	Total	2142.25	

2. H.E. schemes involving Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1	Sindol	320	Orissa	MP/ Chhatisgarh/	DPR with estimated cost of Rs.2246.14 crores (1994 PL) returned in 07/96 due

	(5x20+5x20+6x20=320 MW)			Bihar/ Jharkhand/ Orissa / Maharashtra	to non-resolution of interstate aspect. The consent of the upstream States viz. Jharkhand, Bihar, M.P, Chhatisgarh and Maharashtra is not available. DPR is being revised by reducing Installed Capacity. Revised DPR yet to be submitted to CEA. Revised hydrology of Sindol-I for 100 MW has been submitted to CWC for clearance.
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Hydro Power Development in Punjab

Identified Hydro Power Potential and its status of Development :

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	5	971
I Capacity in operation	9	1096.3
II Capacity under construction	1	206

1. Identified Projects during Reassessment study :

Sl.No.	Name of Project	River	I. C. (MW)
1	Mukerian Canal	Beas	207
2	Anadpur Sahib, Ph-I & II	Sutlej	134
3	Thein	Ravi	325
4	Shahpur	Ravi	215
5	UBDC	Ravi	90
TOTAL			971

2. H.E. Projects in Operation :

Sl.No.	Name of Project	Agency	I.C. (MW)	Year of Commissioning
1	Ganguwal	BBMB	77.65	1952, 62
2	Kotla	BBMB	77.65	1956, 61
3	Mukerian St-I	PSPCL	45	1983
4	Mukerian St-II	PSPCL	45	1988-89

5	Mukerian St-III	PSPCL	58.5	1989
6	Mukerian St-IV	PSPCL	58.5	1989
7	A.P. Sahib St.I	PSPCL	67	1985
8	A.P. Sahib St.II	PSPCL	67	-
9	Ranjit Sagar (Thein Dam)	PSPCL	600	2000
Total			1096.3	

3. H.E. Schemes under Construction:

Sl. No.	Name of Project	Implementing Agency	I. C. (MW)	Likely Commissioning
1	Shahpurkandi*	Irr. Deptt. & PSPCL	206	2019-20**
	Total		206	

*- Works of Dam (J&K side) stopped since 30.08.2014 due to inter-state disputes between Punjab and J&K Government.

** Subject to re-start of works

4. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I. C.	I.C. MW	Location (State)	States Involved	Status
1	SYL (2x18+2x7=50 MW)	50	Punjab	Punjab/ Haryana/ Rajasthan.	- Cleared by CEA in 12/1987 at an estimated cost of Rs.101.28 crores (5/1985 PL). - Work on the canal on which project is located is held up. - Haryana and Rajasthan have raised question regarding their shares of power as it envisages utilizing common facilities and water belonging to all three states, viz. Haryana, Punjab & Rajasthan.

Hydro Power Development in Rajasthan

Identified Hydro Power Potential and its status of Development :

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	5	483
Capacity in operation	4	411

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Gandhi Sagar	Chambal	115
2	Rana Pratap Sagar	Chambal	172
3	Jawahar Sagar	Chambal	99
4	Mahi Bajaj Sagar St-II	Mahi	60
5	Mahi Bajaj Sagar St-I	Mahi	37
TOTAL			483

2. H.E. Projects in Operation:

Sl.No	Name of Project	Agency	I.C. (MW)	Likely Commissioning
1	R.P. Sagar	RRVUNL	172	1968
2	J. Sagar	RRVUNL	99	1972-73
3	Mahibajaj I	RRVUNL	50	1986

4	Mahibajaj II	RRVUNL	90	1989
Total			411	

Note:

- Mahi Bajaj Sagar I & II (140 MW) were identified for I.C. of 97 MW.
- Gandhi Sagar (115 MW) was identified in Rajasthan but has been developed in Madhya Pradesh.

Hydro Power Development in Sikkim

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		24	4248
I	Capacity in operation	6	2061
II	Capacity under construction	7	1230
III	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	520
	(ii) Schemes returned to project authorities	2	576
	(iii) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	2	112
	Total (i-iii)	5	1208

1. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I.C. (MW)	Year of Commissioning
1	Teesta- V (NHPC)	NHPC	510	2008
2	Chujachen (Pvt)	GIPL	99	2013
3	Jorethang Loop(pvt)	DEPL	96	2015
4	Rangit-III	NHPC	60	2000
5	Teesta-III (Pvt)	Teesta Urja Ltd	1200	2017
6	Dikchu(Pvt)	Sneha Kinetic Power Projects Pvt. Ltd.	96	2017
	Total		2061	

2. H.E. Projects under Construction:

Sl. No	Name of Project	Agency	I.C. (MW)	Likely Commissioning
1	Teesta-VI (pvt)*	LANCO	500	2021-22
2	Rangit IV (Pvt)*	Jal Power corp. Ltd	120	2019-20
3	Bhasmey(Pvt.)	Gati Infrastructure	51	2019-20
4	Tashiding(Pvt)	Shiga Energy Pvt. Ltd	97	2017-18
5	Rangit-II(Pvt)#	Sikkim Hydro Power Ltd	66	2019-20
6	Rongnichu	Madhya Bharat Power corporation Ltd.	96	2019-20
7	Panan	Himgiri Hydro Energy Pvt. Ltd.	300	2020-21
	Total		1230	

* Subject to re-start of works. # subject to active start of works.

3. H.E. Projects Cleared/Appraised by CEA:

Sl. No	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Teesta St-IV	NHPC	520	13.05.10	EC cleared on 09.01.14. FC-I cleared on 26.02.2013.FC-II awaited.
		Total	520		

4. Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations:

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Reason of Return
1	Teesta st.-II	HUIPL	480	Incomplete geological investigations. Review of dam location. Back water studies to be carried out.

2	Lethang	KHCHPL	96	lack of barrage v/s dam design, review of I.C.,review of spillway capacity etc.
	Total		576	

5. Hydro Schemes on which Survey & Investigation held up:

Sl. No.	Name of Scheme	Basin/River	Agency	Original I.C. (MW)	Date of MOA
1	Kalez khola	Kalez khola/ Rangit	CWC	72	12.2.2007
2	Suntaleytar	Rangpochu	Hindustan Electric Power Ltd.	40	LOI date 23.02.12
	Total			112	

Hydro Power Development in Tamil Nadu

Identified Hydro Power Development and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	23	1693
Capacity in operation	17	1803.2

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Pandiyar-Punnapuzha I	Pandiyar	125
2	Upper Aliyar	Bharatpuzha	90
3	Periyar Lake	Periyar	145
4	Nirar	Idamalayar	26
5	Sholaiyar- I	Sholaiyar	75
6	Sarkarpathi	Periyar	33
7	Kodayar I	Kodayar	65
8	Kodayar II	Kodayar	30
9	Paraliyar	Paraliyar	39
10	Mettur Dam PH	Cauvery	32
11	Mettur Tunnel PH	Cauvery	100
12	Lower Mettur	Cauvery	115
13	Bhawani Kattalai	Cauvery	115
14	Lower Bhawani	Bhavani	34
15	Lower Moyar	Moyar	33
16	Moyar	Moyar	75
17	Pykara (Singara)	Moyar	115
18	Pykara (Ultimate)	Moyar	60
19	Avalanche Em'ld (Kundah-I)	Kundah	70
20	Kundapallam (Kundah 2)	Kundah	160
21	Pengumbahalla (Kundah 3)	Kundah	95
22	Surullar	Suruliar	30
23	Papanasam	Tambraparni	31
TOTAL			1693

2. H.E. Projects in Operation:

Sl.No.	Name of Project	I.C. (MW)	Year of Commissioning
1	Aliyar	60	1970
2	Bhawani Katlai Br-III	30	2012
3	Bhawani Katlai Br-II	30	2013
4	Bhawani Katlai	30	2006
5	Kodayar I&II	100	1970-71
6	Kundah I-V	555	1960-88
7	LowerMettur. I-IV	120	1988-89
8	Mettur Dam Tunnel	250	1937-66
9	Moyar	36	1952-53
10	Papanasam	32	1944-51
11	Parson'sValley	30	2000
12	Periyar	161	1958-65
13	Pykara	59.2	1932-05
14	Pykara Ultimate	150	2005
15	Sarkarpathy	30	1966
16	Sholayar I & II	95	1971
17	Suruliyar	35	1978
Total		1803.2	

3. Hydel Generation Performance for three years:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	5061	5058.96	99.96
2015-16	4962	4474.27	90.17
2016-17	4901	2397.12	48.91

4. Pumped Storage H.E. Projects in Operation :

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Kadamparai PSS	400	Pumping Mode- Working
	Total	400	

5. Hydro Projects under construction:

Presently, no HE Project in Tamil Nadu is under construction.

6. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1*	Nellithorai (1x50 = 50 MW)	50	T.N.	TN/ Kerala.	- Sanctioned by Planning Commission in 1974 at an estimated cost of Rs.10.04 crores. - Concurrence not issued by CEA due to objections received from Govt. of Kerala.
2*	Cauvery Power Projects (Hogenekkal & Rasimanal) (120 + 360 = 480 MW)	480	T.N.	Kerala/ TN/ Karnataka	- Returned in 2/1997. - In the Core Group Meeting taken by Secretary (Power) on 27.10.2004, it was agreed by GOK and GOTN that Shivasamudram (in Karnataka) and Hogenekkal (in TN) should be taken up simultaneously in the first phase and remaining two projects viz. Mekadatu (in Karnataka) and Rasimanal (in TN) in the next phase. - In the Core Group Meeting taken by Secretary (Power) on 21.06.2006, it was agreed that execution of these four projects through NHPC would be most viable proposition. It was decided that

					representatives of both the Govts. would take up the matter with their respective Govts. and seek their approval and thereafter necessary agreement will be signed between NHPC and the two State Govts. Consent by both the State Govts. was to be communicated to MOP by 31.07.2006. Tripartite agreement between Govt. of Tamil Nadu, Govt. of Karnataka and NHPC was to be signed. However, in June, 2007 the State of Karnataka informed that Shivasamudram and Mekadatu will be executed by Karnataka in State Sector. • TNEB informed in April, 2009 that Tamil Nadu has given its concurrence to MOP's draft tripartite agreement and sent it to MOP, GOI on 15.12.2008. Tamil Nadu insists the execution of the projects by neutral agency under Govt. of India. Final award of CWDT is yet to be notified in the Gazette of Govt. of India, as the case has been filed in the Supreme Court of India. • Subsequently, a meeting was held on 08.07.2009 under the chairmanship of Secretary (Power) to discuss the pending issue of development of Hydroelectric Projects in Cauvery Basin. Secretary (Power) expressed that
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					Shivasamudram being a Run of River Project with in the territory of Karnataka, Tamil Nadu should not have any objection to the development of the Project by the State Government. He further opined that there should not be any problem in taking up Shivasamudram Project by the State of Karnataka provided there is joint mechanism for monitoring the water level/releases of water to Tamil Nadu. He suggested that the CWC could act as an observer in this regard and directed that the GOK would provide/share all the technical details of the Project to/with Tamil Nadu. Both the States Governments were advised to consult CEA and CWC before finalization of designing of the Project. As regards other projects located in Tamil Nadu but whose submergence area partly falls in Karnataka, it was suggested that the two Governments need to arrive at an arrangement for power sharing.
3.	Pandiar Punnapuzha (2x50 =100 MW)	100	T.N.	T.N./ Kerala	- DPR with estimated cost of Rs 73.90 crores (11/1976 PL) returned in 07/1982. - Project is located in TN on West flowing Pandiar Punnapuzha river

					(Chaliyar river). • Concurrence of Govt. of Kerala is required, as per agreement in 1965, for revised project proposal, which is yet to be communicated by Govt. of Kerala. • Based on Ministerial level meeting between Kerala and Tamil Nadu on 10.06.2002, modified proposal was evolved by TNEB and has been sent to Govt. of Kerala on 10.04.2007 for its consideration. • Concurrence of Govt. of Kerala is yet to be received.
4	Cholatipuzha (1x60 =60 MW)	60	T.N.	T.N./ Kerala	• DPR with estimated cost of Rs7.39 crores (1976 PL) returned in 07/1982 • As per agreement between Tamil Nadu & Kerala reached in Oct., 1965, cost and benefits from the project located on their border are to be shared equally by the two States. • Kerala has not communicated its concurrence to the project investigated by TNEB. • This scheme will be finalized while finalizing the scheme of Pandiar-Punnappuzha with Kerala.
5*	Kundah Pumped Storage H.E. Project (4x125 = 500 MW)	500	Tamil Nadu	Kerala/TN/ Karnataka/ Puduchery	• DPR was returned on 26.12.2007 because of non resolution of inter-state issues. • In a meeting taken by Chairman (CWC) on 11.6.2008, GOTN was requested to discuss the issue mutually with other basin States & obtain their consent or

					no objection for construction of the project. Representatives of Govt. of Karnataka could not attend the meeting. • In the 24th meeting of Cauvery Monitoring Committee that Cauvery basin States may mutually exchange their proposal of hydel/modernization projects in Cauvery basin for concurrence/comments. • MOWR vide letter dated 23.02.2011 has also requested Govts. of Karnataka and Kerala to send comments on Kundah PS HE Project for taking further action in the matter.
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(*) Projects located in Cauvery basin.

Hydro Power Development in Telangana

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		8	2019
I	Capacity in operation	6	701
II	Capacity under construction	1	90
III	Schemes allotted by States for development		
	(i) Schemes returned to project authorities	1	320

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Pochampad	Godavari	47
2	Inchampalli	Godavari	920
3	singareddi	Godavari	250
4	Dummagudem	Godavari	360
5	Pulichintala	Krishna	180
6	Nagarjunasagar LBC	Krishna	42
7	Nagarjunasagar Dam PH	Krishna	115
8	Priyadarshini	Krishna	105
TOTAL		2019	

2. H.E. Projects in Operation:

Sl. No.	Name of Project	Agency	I.C. (MW)	Year of Commissioning
1.	N.J. Sagar	TSGENCO	110	1978
2.	N.J. Sagar LBC	TSGENCO	60	1983
3.	Pochampad	TSGENCO	27	1987, 88
4.	Pridarshani jurala	TSGENCO	234	2008-11
5.	Lower Jurala	TSGENCO	240	2015-16
6	Pulinchinthala	TSGENCO	30	2016
	Total		701	

3. Pumped Storage H.E. Projects in Operation:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Srisaillam LBPH	900	Pumping Mode- Working.
2.	Nagarjuna Sagar	705.60	Tail pool dam constructed but not yet operational.
	Total	1605.60	

4. Hydel Generation Performance for three years:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	3632	3113.81	85.73
2015-16	3606	282.33	7.83
2016-17	3132	1279.99	40.87

5. H.E. Projects under Construction:

Sl. No.	Name of Project	I.C. (MW)	Agency	Likely Commissioning
1.	Pulichintala	90	TSGENCO	2017-19
	Total	90		

6. H.E. Schemes Returned to project Authorities:

Sl. No.	Name of Project	I.C. (MW)	Agency	Month of Return	Reason for Return
1.	Dummugudem	320	APGENCO	Mar-06	Returned due to non-replying of various comments such as hydro planning, cost of E&M works, hydel civil Engineering, geological aspects etc.
	Total	320			

Hydro Power Development in Tripura

Identified Hydro Power Potential and its status of Development :

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	0	0

Hydro Power Development in Uttar Pradesh

Identified Hydro Power Potential and its status of Development:

	Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	6	664
Capacity in operation	4	501.6

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Khara	Yamuna	160
2	Matatila	Betwa	31
3	Orchha	Betwa	39
4	Rihand	Rihand	300
5	Obra	Rihand	99
6	Eastern Yamuna Canal	Yamuna	35
TOTAL		664	

2. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Rihand	UPJVNL	300	1961-65
2	Obra	UPJVNL	99	1970-71
3	Matatilla	UPJVNL	30.6	1965
4	Khara	UPJVNL	72	1992
Total			501.6	

3. H.E. schemes held up due to Inter-State aspects:

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1	Panchnad MPP (6x15 = 90MW)	90	U.P.	U.P./M.P/ Rajasthan	• DPR with Project estimated cost of Rs 559 Crores (6/1983 PL) returned. • Involves submergence in MP and Rajasthan.

Status of Hydro Power Development in Uttarakhand

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		84	17998
I	Capacity in operation	16	3756.4
II	Capacity under construction	6	1430
III	Schemes allotted by States for development		
	(i) a Schemes cleared by CEA and yet to be taken up for construction	6	1858
	(ii)a Schemes under Examination in CEA	2	408
	(iii) Schemes returned to project authorities	5	762
	(iv) Schemes under S&I	3	663
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	15	2537
	Total (i-v)	31	6228

Excluding schemes cleared/under examination by State Govt.

1. H.E. Projects in Operation:

2.

Sl. No.	Name of Project	Agency	River	I.C. (MW)	Year of Commissioning
1.	Tanakpur	NHPC	Sharda	94.2	1992
2.	Dhauliganga	NHPC	Dhauliganga	280	2005
3.	Tehri ST.I	THDC	Bhagirathi	1000	2006-07
4.	Koteshwar	THDC	Bhagirathi	400	2010-12
5.	Dhakrani	UJVNL	Yamuna	33.75	1965-70
6.	Dhalipur	UJVNL	Yamuna	51	1965-70
7.	Kulhal	UJVNL	Yamuna	30	1975
8.	Chibro(Yamuna)	UJVNL	Tons	240	1975,76
9.	Khodri	UJVNL	Tons	120	1984
10.	Ramganga	UJVNL	Ramganga	198	1975-77

11.	Chilla	UJVNL	Ganga	144	1980-81
12.	Maneribhali St.I	UJVNL	Bhagirathi	90	1984
13.	Khatima	UJVNL	Sharda	41.4	1955, 56
14.	Maneri Bhali-II	UJVNL	Bhagirathi	304	2008
15.	Vishnu Prayag	JPPVL	Alaknanda	400	2006
16.	Srinagar	AHPC	Alaknanda	330	2015-16
	Total			3756.4	

2. H.E. Schemes under Construction:

Sl. No.	Name of Project	River	I.C. (MW)	Agency	Likely Commissioning
1.	Tapovan Vishnugad	Dhauliganga	520	NTPC	2019-20
2.	Vishnugad Pipalkoti	Alaknanda	444	THDC	2019-20
3.	Lata Tapovan@	Dhauliganga	171	NTPC	2021-22
4.	Phata Byung#	Mandakini	76	Lanco	2019-20
5.	Singoli Bhatwari#	Mandakini	99	L&T Uttaranchal Hydro Power Ltd.	2019-20
6.	Vyasi	Yamuna	120	UJVNL	2018-19
	Total		1430		

@ Subject to restart of work - # Subject to active start of works

3. H.E. Projects Concurred by CEA:

Sl. No.	Name of Scheme	River	Agency	Sector	I.C. (MW)	Status
1.	Kotlibhel St-IA#	Bhagirathi	NHPC	Central	195	CEA Concurrence: 03.10.06 EC - obtained on 9.5.2007 FC - I obtained on 13.10.2011 & FC- II awaited.
2.	Kotlibhel St-IB#	Alaknanda	NHPC	Central	320	CEA Concurrence: 31.10.06 E.C. - Given earlier on 14.08.07 is withdrawn on 22.11.10. F.C. - Declined by MOEF
3.	Kotlibhel St-II#	Ganga	NHPC	Central	530	CEA Concurrence: 30.11.06 E.C. - accorded on

						23.08.2007. F.C. - Declined by MOEF
4.	Devsari	Pindar	SJVNL	Central	252	CEA Concurrence: 07.08.12 E.C. - EAC meeting held on 27.12.2011 recommended for EC. Formal letter to be issued after FC. F.C. - linked with vacation of stay imposed by Hon'ble Supreme Court.
5.	Rupsiyabagar Khasiyabara	Gori Ganga	NTPC	Central	261	CEA Concurrence: 16.10.2008 E.C. - accorded on 26.03.09 F.C. awaited
6.	Alaknanda#	Alaknanda	GMR	Private	300	CEA Concurrence: 08.08.08 (Validity extended up to 7.8.15) E.C. - Obtained on 12.3.08 F.C. - St-I obtained on 8.11.11. St-II obtained on 09.11.2012.
	Total				1858	

Matter is under sub judice in Hon'ble Supreme Court.

4. Hydro Schemes Under Examination/Scrutiny in CEA:

Sl. No.	Name of Scheme	River	Sector	I.C. (MW)	Agency
1.	Jhelam Tamak#	Dhauliganga	Central	108	THDCIL
2.	Bowala Nand Paryag	Alaknanda	State	300	UJVNL
	Total			408	

Matter is under sub judice in Hon'ble Supreme Court.

5. Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations:

Sl. No.	Name of Scheme	River	Agency	Sector	I.C. (MW)	Month of Return
1.	Bhaironghati*	Bhagirathi	UJVNL	State	381	02/08
2.	Nand Prayag	Alaknanda	UJVNL	State	100	04/11

	Langasu					
3.	Mori Hanol	Tons		Private	63	01/10
4.	Bogudiyar Sirkari Bhyol	Gori Ganga		Private	146	09/10
5.	Tiuni Plasu	Tons		State	72	10/10
	Total				762	

* As per MoP letter dated 24.12.2010 in the meeting of NGRBA held on 1.11.2010 under the chairmanship of Hon'ble Prime Minister, it was decided to discontinue Loharinag Pala, Pala Maneri and Bhaironghati H.E. Projects on Bhagirathi.

6. Hydro Schemes under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	I.C. (MW)	Agency	Target date of preparation of DPR
1.	Sirkari Bhyol Rupsiabagar	Gori Ganga	168	UJVNL	12/17
2.	Goriganga III-A	Gori Ganga	165	NHPC	09/17
3.	Bokang Bailing	Dhauliganga	330	THDC	04/19
	Total		663		

7. H.E. schemes allotted for development on which Survey & Investigation is held up/ yet to be taken up:

Sl. No.	Scheme	River	I. C. (MW)	Agency	Date of Allotment/ MoA	Status
1	Arakot Tiuni	Uttarakhand	72	UID	-	MOEF clearance awaited. S&I yet to be taken up.
2	Chhunger - Chal	Uttarakhand	240	NHPC	21.11.2005	S&I held up due to non-clearance of MOEF
3	Garba Tawaghat	Uttarakhand	630	NHPC	21.11.2005	S&I held up. MoP approached MEA for taking up the matter of dev. of Garba Tawaghat H.E. Project under the aegis of Mahakali treaty.

4	Urthing Sobla	Uttarakhand	280	Reliance Power Ltd.	-	MoEF Clearance awaited . S7I heldup as the project area falls under ASkot Musk deer Sanctuary
5	Sela Urthing	Uttarakhand	230	UJVNL	09.12.2004	Road connectivity is not proper upto the project site. S&I shall be taken up after carrying out detail survey at project site & confirmation of levels.
6	Jadh Ganga	Jadh Ganga	50	THDC	21.11.2005	• S&I yet to be taken up. • Located in Eco sensitive Zone of Gangotri National Park.
7	Karmoli	Jadh Ganga	140	THDC	21.11.2005	• S&I yet to be taken up. • Located in Eco sensitive Zone of Gangotri National Park.
8	Rishi Ganga - I	Rishi Ganga	70	UJVNL	09.12.2004	• S&I yet to be taken up. • Located in Nanda Devi National Park. MoEF Clearance awaited.
9	Rishi Ganga - II	Rishi Ganga	35	UJVNL	09.12.2004	• S&I yet to be taken up. • Located in Nanda Devi National Park. MoEF Clearance awaited.
10	Taluka Sankri	Uttarakhand	140	UJVNL	09.12.2004	S&I yet to be taken up. Project falls under Govind Pashu Vihar WLS.
11	Gohana Tal	Birahi Ganga	60	THDC	21.11.2005	Project included in the list of 24 HE project named in PIL under consideration by Hon'ble Supreme court
12	Khartoli Lumti Talli	Uttarakhand	55	NHPC	07.04.2005	S & I was held up. PCCF (Wildlife) and chief Warden Wildlife, Dehradun has since granted permission for S& I on 13. 12. 2016. Preparation of PFR is in

						progress for obtaining approval of ToR from MoEF & CC for carrying out S&I works.
13	Maleri Jhelam	Dhauliganga	55	THDC	21.11.2005	Project included in the list of 24 HE project named in PIL under consideration by Hon'ble Supreme court
14	Mapang - Bogidiyar	Uttarakhand	200	GVK-L&T	07.05.2005	S&I held up due to Supreme Court order directing MoEF and State of Uttarakhand not to grant any Environmental Clearance or Forest Clearance for any hydro electric project in the State of Uttarakhand until further orders.
15	Tamak Lata	Dhauliganga	280	UJVNL	09.12.2004	Project included in the list of 24 HE project named in PIL under consideration by Hon'ble Supreme court
	Total		2537			

8. Achievements during the last two years:

- i) Srinagar H.E. Project (4x82.50=330 MW) of Alaknanda Hydro Power Company Ltd. in Uttarakhand was commissioned during the year 2015-16.

9. Pumped storage H.E. Projects under Construction:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Tehri St.II	4x250=1000	Likely commissioning by 2019-20
	Total	1000	

Hydro Power Development in West Bengal

Identified Hydro Power Potential and its status of Development:

		Nos.	Capacity (MW)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)		6	2829
I	Capacity in operation	5	441.2
II	Capacity under construction	1	120
III	Schemes allotted by States for development		
	(i) Schemes on which S&I heldup	1	81

1. Identified Projects during Reassessment study

Sl.No.	Name of Project	River	I. C. (MW)
1	Balason	Balason	33
2	Teesta High Dam	Teesta	2505
3	Ramam-I	Rmmam	70
4	Ramam-II	Rmmam	85
5	Ramam-III	Rmmam	100
6	Jaldhaka-I	Jaldhaka	36
TOTAL		2829	

2. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Jaldhaka	WBSEDCL	36	1967- 72,2012
2	Rammam II	WBSEDCL	50	1995-96
3	Teesta low dam-III	NHPC	132	2013-14

4	Maithon	DVC	63.2	1957-58
5	Teesta Low Dam-IV	NHPC	160	2016
	Total		441.2	

3. Pumped Storage H.E. Projects in Operation:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Purulia	900	Pumping Mode- Working
	Total	900	

4. List of Pumped storage schemes identified for development:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Bandhu PSS	900	S&I likely to start soon PFR prepared First stage Topographical Survey work has been carried out by Survey of India(SOI) and a preliminary Geotechnical investigation has also been carried out by Geological Survey of India (GSI) DPR preparation likely by 2019
	Total	900	

5. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning
1.	Rammam-III	NTPC	120	2020-21
	Total		120	

6. Pumped Storage H.E. Schemes concurred by CEA:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Turga	1000	Concurred on 5.10.2016. EC & FC awaited.
	Total	1000	

7. Hydro Schemes on which Survey & Investigation held up:

Sl.No.	Name of Scheme	Basin/River	Agency	Original I.C. (MW)	Date of MOA
1	TLDP-I&II	Teesta/Badi(Great Rangit)	NHPC	81	30.07.15
Total				81	