

Hydro Power Development in Andhra Pradesh (Installed Capacity-above 25 MW)

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)	18	2341	100
I Capacity in operation	7	1610	68.77
II Capacity under construction	1	960	41.01

1 . 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	Srisaillam	APGENCO	770	1982-87
4	Lower Sileru	APGENCO	460	1976-78
5	N.J. Sagar RBC	APGENCO	60	1983
6	N.J. Sagar RBC Ext.	APGENCO	30	1990
7	N.J. Sagar TPD	APGENCO	50	2017
	Total	1610		

2. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning	Issues / Constraints
1	Indirasagar (Polavaram)	APGENCO	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		

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.	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 (Schemes having capacity above 25 MW)

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)		87	50064	100
I	Capacity in operation	1	405	0.81
II	Capacity under construction	4	2854	5.7
III	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	17	15092	30.15
	(ii) Schemes under Examination in CEA	4	5456	10.9
	(iii) Schemes returned to project authorities	11	4433	8.85
	(iv) Schemes under S&I	28	4058	8.11
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	19	9132	18.24
	Total (i-v)	79	38171	76.2
IV	Capacity yet to taken up for development	3	8634	17.25

1. H.E. Projects in Operation :

Sl.No.	Name of Project	I.C. (MW)	Year of Commissioning
1	Ranganadi(NEEPCO)	405	2001-02
	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	144	2020-21*
	Total		2854	

* 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 & FC awaited. FC is linked to Cumulative Impact Assessment Study of Siang Basin which has been carried out and accepted by MoEF
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.
	Total		15092		

Note:- DPR of Dibang H.E. Project (2880 MW) likely to be submitted by Dec.2016.

***Concurrence meeting date**

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	Jindal Power	680	Oct-14
3	Magochu	SMCPCL	96	March'16
4	Dibang	NHPC	2880	Nov.'16
	Total		5456	

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 yet to be signed	12/17
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	10/18
4	Chela	Subansiri	Adveta Power	75	14.2.2013	09/18
5	Badao	Kameng	Coastal Projects Pvt. Ltd.	70	19.11.2008	06/17

6	Para	Kameng	Coastal Projects Pvt. Ltd.	55	19.11.2008	06/17
7	Pachuk-II	Kameng	Energy development Co. Ltd	60	27.08.2010	06/17
8	Tsa Chu - I Lower	Tawang	Energy development Co. Ltd	50	27.08.2010	06/17
9	Tsa Chu - II	Tawang	Energy development Co. Ltd	90	27.08.2010	06/17
10	Pachuk-II Lower	Kameng	Energy development Co. Ltd	45	27.8.2010	06/17
11	Marijingla	Kameng	Energy development Co. Ltd	60	12.1.2008 (Amended on 27.8.2010)	06/17
12	Marijingla Lower	Kameng	Energy development Co. Ltd	48	27.8.2010	06/17
13	Rego	Siang	Greenko Energies Ltd.	70	25.11.2012	06/17
14	Rapum	Siang	Greenko Energies Ltd.	80	27.12.2007	06/17
15	Jameri	Kameng	KSK Energy Ventures Ltd	50	27.12.2007	06/17
16	Pango	Siang	Meenakshi Power Ltd.	96	27.08.2010	12/17
17	Sippi	Siang	Meenakshi Power Ltd.	96	20.7.2011	06/17
18	Jidu (Yangsang)	Siang	Meenakshi Power Ltd.	92	20.7.2011	06/17

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	06/17
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	06/17
26	Lower Yamne-II	Siang	Yamne Power Pvt. Ltd.	87	29.11.2008	06/17
27	Lower Yamne -I	Siang	Yamne Power Pvt. Ltd	75	29.11.2009	06/17
28	Kurung	Subansiri/ Kurung	NEEPCO	330	27.1.2015	11/18
	Total			4058		

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
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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 may be dropped due to vicinity of Pakke Tiger Reserve.
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 due to Basin studies recommendations and road/infrastructure issues.
6	Emini	500	Reliance Power Ltd.	03.02.2009	S&I held up due to Basin studies recommendations and road/infrastructure issues.
7	Mihumdon	400	Reliance Power Ltd.	03.02.2009	S&I held up due to Basin studies recommendations and road/infrastructure issues.
8	Nalo	635	Indus Hydro Power	16.11.2010	Transfer from Coastal Infrastrcture to Indus Hydro Power awaited.
9	Rho	93	SEW Energy	2.3.2009	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.Reduction of FRL due to basin study recommendation

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 in which dropping of project recommended. Awaiting approval of subansiri basin study
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.Awaiting approval of Subansiri Basin study in which dropping of project recommended
14	Anjaw	270	Athena Energy Ventures Ltd.		First consultaion meeting held on 30.07.2014.Geological investigation associated with the outcome of the Lohit Basin Study.
15	Emra-II	390	Athena Energy Ventures Ltd.	02.02.2008	S&I held up. No road connectivity to project site. Local issues, communication problem
16	Yamne-I	111	S.S. Yamne Power Pvt Ltd	05.03.2008	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.TOR extended upto 08.11.2016
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	Due to lack of clarity on funding of flood moderation cost which is about Rs. 14,000 Crs.
	Total	9132			

Hydro Power Development in Assam (Schemes having capacity above 25 MW)

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)		9	650	100
I	Capacity in operation	4	375	57.69
II	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	120	18.46
	(ii) Schemes returned to project authorities	1	60	9.23
	Total (i-ii)	2	180	27.7
III	Capacity yet to taken up for development	3	95	15

1. H.E. Projects in Operation:

Sl.No.	Name of Project	I. C (MW)	Year of Commissioning
1	Karbi Langpi (L. Borpani)	100	2006-07
2	Kopili	100	1988
3	Khandong	75	1984
4	Kopili Extn	100	1996-97
	Total	375	

2. 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	24.08.2015
	Total		120	

3. 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.

4. 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 (Schemes having capacity above 25 MW)

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	40	100
Schemes allotted by States for development			
(i) Schemes under Examination in CEA	1	130	100

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

1. 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.

2. Schemes under Construction:

At present no hydro scheme is under construction in Bihar.

3. 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/(17x7.6 5 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.
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4. 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 (5x20+5x20+6x20 =320 MW)	320	Orissa	MP/ Chhatisgarh/ Bihar/ Jharkhand/ Orissa / Maharashtra	- DPR with estimated cost of Rs.2246.14 crores (1994 PL) returned in 07/96 due 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.

Hydro Power Development in Chhattisgarh (Installed capacity-above 25 MW)

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)		15	2202	100
I	Capacity in operation	1	120	5.45
II	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	60	2.72
III	Capacity yet to taken up for development	13	2022	91.83

1. 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	

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

Sl No	Name of Project	Agency	I.C. (MW)	Date of CEA Concurrence	Status
1	Matnar HEP	CSPCP	60	19.08.04	Yet to be cleared by MOEF.
		Total	60		

3. 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	Chhattis- garh	Chhattis- garh/ 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, Chhattisgarh and Andhra Pradesh. It is an inter State river between Chhattisgarh and Orissa. Chhattisgarh (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.

Hydro Power Development in Goa (Installed capacity-above 25 MW)

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	55	100
I Capacity yet to taken up for development	1	55	100

1. 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 (Installed capacity-above 25 MW)

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)	2	590	100
I Capacity in operation	2	550	100

#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 (a). 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	2002-03, 04-05
	Total	550	

(b). 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	

Hydro Power Development in Haryana (Installed Capacity above 25 MW)

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.

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

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1	SYL (2x18+2x7=50MW)	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 Himachal Pradesh (Installed Capacity above 25 MW)

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)		68	18540	100
I	Capacity in operation	26	9643	52.01
II	Capacity under construction	10	1997	10.77
III	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	7	1782	9.61
	(ii) Schemes under Examination in CEA	1	210	1.13
	(iii) Schemes returned to project authorities	1	200	1.08
	(iv) Schemes under S&I	4	1141	6.15
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	6	1841	9.93
	Total (i-v)	19	5091	27.5
IV	Capacity yet to taken up for development	13	1809	9.76

*Excluding Schemes cleared by State Govt.

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
6	Kol dam (NTPC)	800	2015-16
7	Karcham Wangtoo	1000	2011-12
8	Kashang-I (Satluj Basin)	65	2016-17
9	Kashang-II & III(Satluj Basin)	130	2016-17
10	Nathpa Jhakari	1500	2003-04
11	Baspa-II	300	2002-03,03-04
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	2012-13
5	Budhil	70	2012-13
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	2006-07
5	Malana	86	2001
6	Allain Duhangan	192	2010-11
7	Shanan & Extn	110	110
	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	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(Ravi)	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(Private)	DSC	126	15.1.2015	EC & FC awaited.
2	Miyar(Private)	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. Fresh bidding is being invited.
	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		

*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	2/17
2	Nakhtan (Parbati-I)	Beas	HPPPCL	520	22.9.2009	3/17
	Sub Total			661		
	Chenab Basin					
1	Reoli Dugli	Chenab	L&T Power Ltd.	420	15.3.2011	04/17
	Sub Total			420		
	Satluj Basin					
1.	Tidong-II	Sutlej	Tidong Hydro Power Ltd.	60	20.1.2012	

			Sub Total	60		
Total				1141		

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 local agitation
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	Sunni Dam	528	SJVNL	-	SPV is to be formed between SJVN and State Govt . and MoA yet to be finalised.
5	Luhri st-II	143	SJVNL	-	SPV is to be formed between SJVN and State Govt . and MoA yet to be finalised.
	Sub Total	1541			
	Chenab Basin				
1	Gyspa Dam	300	HPPCL	22.09.2009	S&I held up due to local agitation
	Sub Total	300			
	Total	1841			

Hydro Power Development in Jammu and Kashmir (Schemes having capacity above 25 MW)

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)		54	13543	100
I	Capacity in operation	12	3119	23.03
II	Capacity under construction	4	1265.5	9.34
III	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	6	5043	37.24
	(ii) Schemes returned to project authorities	1	390	2.88
	(iii) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	1	370	2.73
	Total (i-iii)	8	5803	43.5
IV	Capacity yet to taken up for development	28	3355	24.78

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	480	1996
4	Dulhasti	390	2006-07
5	Sewa-II	120	2010
6	Chutak	44	2012-13
7	Uri-II (NHPC)	240	2013-14
8	Nimoo Bazgo	45	2013
9	Lower Jhelum	105	1978-79

10	Upper Sindh st-II & Extn	105	2000, 01-02
11	Baglihar-I	450	2008-09
12	Baglihar-II	450	2015-16
	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	(RHPPL)	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	JKSPDCL	93	10.06.14	EC obtained on 27.9.13 and Forest clearance awaited.
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 & FC awaited
4	Kwar	CVPP	540	15.11.16*	EC & FC awaited
5	Kirthai-II	JKPDC	930	27.12.16*	EC & FC awaited
6	Sawalkote	JKPDC	1856	27.12.16*	EC & FC awaited
	Total		5043		

* Concurrence meeting date

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

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Remarks
1	Kirthai-I	JKPDC	390	Returned due to non submission of investigation suggested by GSI.
	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	22.09.2009	S&I held up as the project will submerge National Highway.
	Total	370			

Hydro Power Development in Jharkhand (Installed capacity-above 25 MW)

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)		8	582	100
I	Capacity in operation	2	170	29.21
II	Schemes involving interstate aspects	320		

1). Hydel Generation performance:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	256	162.99	63.67
2015-16	271	120.21	44.36
2016-17	262	148.98	56.86

2a). H.E. Projects in Operation:

Sl. No.	Name of Project	River	I.C. (MW)	Year of Commissioning
1.	Subernrekha I&II	Sharda	130	1977,80
2.	Panchet	Dhauliganga	40	1959 & 90
	Total		170	

2b). Pumped storage H.E. Projects in Operation:

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

3. 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 (5x20+5x20+6x20 =320 MW)	320	Orissa	MP/ Chhatisgarh / Bihar/ Jharkhand/ Orissa / Maharashtra	- DPR with estimated cost of Rs.2246.14 crores (1994 PL) returned in 07/96 due 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.

Hydro Power Development in Karnataka (Installed capacity-above 25 MW)

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)		38	6459	100
I	Capacity in operation	17	3657.4	56.62
II	Schemes allotted by States for development			
	(i) Schemes returned to project authorities	2	665	10.30
III	Capacity yet to taken up for development	19	2136.6	33.08

1. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Sharavathy	KPCL	1035	1964-77
2	Lingnamakki	KPCL	55	1979-80
3	Bhadra (L) (R) (RBC)	KPCL	39.20	1962-63
4	Kalinadi	KPCL	855	1979-84
5	Kalinadi-I (Supa DPH)	KPCL	100	1985
6	Varahi	KPCL	230	1989, 90
7	Ghatprabha	KPCL	32	1992
8	Kalinadi st II (Kadra)	KPCL	150	1997, 99
9	Kalinadi st II (Kodasil)	KPCL	120	1998, 99
10	Sharavathy TR	KPCL	240	2000-02
11	Almatti dam	KPCL	290	2003-04,04-05

12	Varahi Extn	KPCL	230	2008-09
13	Jog	KPCL	139.2	1947-52
14	Sivasamudram	KPCL	42	1922, 34
15	Munirabad	KPCL	28	1962-65
16	T.B.Dam	APGENCO	36	1957-64
17	Hampi	APGENCO	36	1958-64
	Total		3657.4	

2. 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	

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	Brindavan (2x6=12 MW)	12	Karna- taka	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	Karnatak a	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 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
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					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 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 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
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					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)	Augmen- tation	Karna- taka	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	Karna- taka	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			

Status of Hydro Electric Power Development in Kerala (Schemes having capacity above 25 MW)

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)	28	3378	100
I Capacity in operation	14	1881.5	55.7
II Capacity under construction	2	100	2.96
III Schemes allotted by States for development			
(i) Schemes cleared by CEA and yet to be taken up for construction	1	163	4.82
IV Capacity yet to taken up for development	11	1233.5	36.52

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	1966-67
3	Kuttiadi	75	1972
4	Sholoyar	54	1966-68
5	Sengulam	48	1954, 55
6	Nariamanglam & Extn.	70	1961-63
7	Pallivasal	37.5	1940-51
8	Poringalkuttu	32	1957-60
9	Panniar	30	1963-64
10	Idamalayar	75	1987
11	Lower Periyar	180	1996-97
12	Kakkad	50	1999
13	Kuttiyadi Extn	50	2001
14	Kuttiyadi Addln Extn	100	2010
	Total Kerala	1881.5	

2. 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	

3. 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 & FC awaited.
	Total		163		

4. 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 Kerela

					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.
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(*) Projects located in Cauvery basin.

5. Pumped Storage Schemes Planned on Existing Hydro Projects:

Sl.N.	Name of Scheme	State	IC (MW)	Agency	Status
1	Kakkayam	Kerala	110	KSEB	Existing Kuttiyadi Reservoir. Yet to be taken up under S&I.

2	Kakki	Kerala	480	KSEB	Existing Kakki reservoir. Yet to be taken up under S&I.
3	Sholayar I	Kerala	810	KSEB	Existing Sholayar reservoir. Yet to be taken up under S&I.
4	Sholayar II	Kerala	390	KSEB	Existing Sholayar reservoir. Yet to be taken up under S&I.
5	Sholayar III	Kerala	105	KSEB	Existing Sholayar reservoir. Yet to be taken up under S&I.
6	Idamalayar-I	Kerala	180	KSEB	Existing IHEP reservoir. Yet to be taken up under S&I.
7	Idamalayar-II	Kerala	180	KSEB	Existing IHEP reservoir. Yet to be taken up under S&I.
8	Poringal Kuthu	Kerala	80	KSEB	Existing Poringalkuthu reservoir. Yet to be taken up under S&I.

6. Pumped Storage Projects identified as Doable :

Sl.N.	Name of Scheme	State	IC (MW)	Agency	Status
1	Idukki	Kerala	300	KSEB	Existing Idukki Reservoir. Yet to be taken up under S&I. Involves less forest land and DPR can be prepared within 2-3 years.
2	Pallivasal	Kerala	600	KSEB	Existing Pallivasal reservoir. Yet to be taken up under S&I. Involves less forest land and DPR can be prepared within 2-3 years

Hydro Power Development in Madhya Pradesh (Installed capacity-above 25 MW)

1. Identified Hydro Power Potential as per reassessment Study :

	Nos.	Capacity (MW)	Percentage (%)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	13	1970	100
I Capacity in operation	9	2235	100
II Capacity under construction	1	400	20.30
III Schemes allotted by States for development			
(i) Schemes returned to project authorities	1	100	5.08

1. H.E. Projects in Operation:

Sl. No.	Name of Project	Agency	I.C (MW)	Year of Commissioning
1.	Indira Sagar (NHDC)	NHDC	1000	2003-04,04-05
2.	Omkareshwar (NHPC)	NHDC	520	2007-08
3.	Gandhi Sagar	MPPGCL	115	1960-66
4.	Bargi	MPPGCL	90	1988
5.	Ban Sagar Tons-I	MPPGCL	315	1990, 92
6.	Rajghat	MPPGCL	45	1999
7.	Bansagar Tons PH-III	MPPGCL	60	2001- 02
8.	Bansagar Tons PH-II	MPPGCL	30	2001-02
9.	Madhikhera	MPPGCL	60	2006-07
	Total		2235	

2. Hydel Generation performance:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	2575	2628.93	102.09
2015-16	2621	1940.60	74.04
2016-17	607	704.90*	116.13

* Tentative generation upto 31st August, 2016

3. H.E. Schemes Under Construction :

Sl. No.	Name of Project	I. C. (MW)	Agency	Likely Commissioning
1.	Maheshwar (pvt)*	400	SMHPCL	2017-19
	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.

4. 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	

5. 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 Manipur (Installed capacity-above 25 MW)

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)		15	1761	100
I	Capacity in operation	1	105	5.96
II	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	66	3.74
III	Capacity yet to taken up for development	13	1590	90

1. H.E. Projects in Operation:

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

2. H.E. Projects cleared by CEA :

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

Hydro Power Development in Maharashtra (Installed Capacity above 25 MW)

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)	25	3314	100
I Capacity in operation	12	2647	79.87
II Capacity yet to taken up for development	13	667	20.13

1a. H.E. Projects in Operation:

Sl.No.	Name of Scheme	Agency	I.C. (MW)
1	Koyna I & II	MAHAGENCO	600
2	Koyna III	MAHAGENCO	320
3	Koyna DPH	MAHAGENCO	36
4	Vaitarna	MAHAGENCO	60
5	Bhira Tail Race	MAHAGENCO	80
6	Tillari	MAHAGENCO	60
7	Koyna St-IV	MAHAGENCO	1000
8	Bandhardhara-II	DLHP(Private)	34
9	Bhira	Tata (Private)	150
10	Bhivpuri	Tata (Private)	75
11	Khopoli	Tata (Private)	72
12.	Pench	MPPGCL	160
		Total	2647

1b. Pumped storage H.E 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	

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

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Koyna Left Bank	2x40=80	Likely commissioning by 2019-20
	Total	80	

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	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 Meghalaya (Schemes having capacity above 25 MW)

Identified Hydro Power Potential as per reassessment Study:

	Nos.	Capacity (MW)	Percentage (%)
Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)	25	2298	100
I Capacity in operation	5	302	13.14
II Capacity under construction	1	20	0.87
III Schemes allotted by States for development			
(i) Schemes cleared by CEA and yet to be taken up for construction	1	270	11.75
(ii) Schemes under Examination in CEA	1	210	9.14
(iii) Schemes under S&I	4	384	16.71
(iv) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	2	620	26.98
Total (i-iv)	8	1484	64.6
IV Capacity yet to taken up for development	12	492	21

1. 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-Umtru St.IV	60	1992
4	Myntdu	126	2011
5	New Umtru	20	2017
	Total	302	

2. H.E. Schemes Under Construction :

	Name of Project	Agency	I.C. (MW)	Likely Commissioning
1	New Umtru	MePGCL	20	2017
	Total		20	

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	MCPGCL	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	03/17
2	Umduna	Barak	ETA Star Infrastructure Ltd	90	Dec. 2007/ Rev. Nov. 2008	06/17
3	Umjaut	Umiew	ETA Star Infrastructure	69	Dec. 2007/ Rev. Nov.	06/17

			Ltd		2008	
4	Myntdu Leshka st-II	Muntdu	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	ASEB		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 (Schemes having capacity above 25 MW)

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)		11	2131	100
I	Capacity under construction	1	60	2.82
II	Capacity yet to taken up for development	10	2071	97.18

1. H.E. Schemes Under Construction:

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

Hydro Power Development in Nagaland (Schemes having capacity above 25 MW)

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)		11	1452	100
I	Capacity in operation	1	75	5.17
II	Schemes allotted by States for development			
	(i) Schemes cleared by CEA and yet to be taken up for construction	1	186	12.81
III	Capacity yet to taken up for development	9	1191	82.02

1. H.E. Projects in Operation :

Sl.No.	Name of Project	I. C. (MW)	Year of Commissioning
1	Doyang (NEEPCO)	75	2000-01
	Total	75	

2. 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	EC & FC awaited
	Total		186		

Hydro Power Development in Odisha (Installed Capacity above 25 MW)

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)		13	2981	100
I	Capacity in operation	8	2142.3	71.86
II	Capacity yet to taken up for development	5	838.75	28.14

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	360	1973-77
4	Rengali	250	1985-92
5	Upper Kolab	320	1988-93
6	Upper Indravati	600	1999, 2000-01
7	Balimela Extn	150	2007-08
8	Machkund	114.75	1955-59
	Total HP	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 (5x20+5x20+6x20 =320 MW)	320	Orissa	MP/ Chhatisgarh/ Bihar/ Jharkhand/ Orissa / Maharashtra	- DPR with estimated cost of Rs.2246.14 crores (1994 PL) returned in 07/96 due 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.
2	Matnar (3x20 =60 MW)	60	Chhattisgarh	Chhatis-garh/ 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. - Chhatisgarh 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 Punjab (Installed capacity-above 25 MW)

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)	6	971	100
I Capacity in operation	9	1096.3	100
II Capacity under construction	1	206	21.22

1. 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	1985
9	Ranjit Sagar (Thein Dam)	PSPCL	600	2000
Total			1096.3	

2. 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

3. 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 (Installed capacity -above 25 MW)

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)	5	483	100
I Capacity in operation	4	411	85.09

1. H.E. Projects in Operation :

Sl.No	Name of Project	Agency	I.C. (MW)	Likely Commissioning
1	R.P. Sagar	RRVUNL	172	1968-69
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.

2. Hydel Generation performance:

Year	Target (MU)	Actual Generation (MU)	% of Actual Generation Vs Target
2014-15	535	863.33	161.37
2015-16	700	1033.80	147.69
2016-17	20	13.18*	65.90

* Tentative generation upto 30th July, 2016

3. H.E. Projects under construction:

Presently no HE scheme is under construction.

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

Sl. No.	Name of Scheme/ I.C.	Total I.C. (MW)	Location (State)	States Involved	Status
1	SYL (2x18+2x7=50MW)	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.
2	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 Electric Potential Development in Sikkim (Installed capacity-above 25 MW)

1. 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)			24	4248	100
I	Capacity in operation		6	2061	48.52
II	Capacity under construction		7	1230	28.95
III	Schemes allotted by States for development				
	(i)	Schemes cleared by CEA and yet to be taken up for construction	1	520	12.24
	(ii)	Schemes returned to project authorities	2	576	13.56
	(iii)	H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	2	112	2.64
	Total (i-iii)		5	1208	28.44

1 H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I.C. (MW)	Year of Commissioning
1	Teesta- V (NHPC)	NHPC	510	2007-08
2	Chujachen (Pvt)	GIPL	99	2013
3	Jorethang Loop(pvt)	DEPL	96	2015
4	Rangit-III	NHPC	60	1999
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 orporation 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
		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	

Status of Hydro Power Development in Tamil Nadu (Installed capacity-above 25 MW)

Identified Hydro Power Development 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)	23	1693	100
I Capacity in operation	17	1803.2	100

1a. 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	2013
3	Bhawani Katlai Br-II	30	2006-07
4	Bhawani Katlai Br-I	30	2006-07
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, 54
14	Pykara Ultimate	150	2005-06
15	Sarkarpathy	30	1966
16	Sholayar I & II	95	1971
17	Suruliyar	35	1978
	Total	1803.2	

1b. 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	

2. Hydro Projects under construction:

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

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*	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 Shivasamudaram being a Run of River Project with in the territory of Karnataka, Tamil Nadu should not have
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					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- Punnapuzha 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 (Installed capacity-above 25 MW)

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)			2019	100
I	Capacity in operation	5	701	34.72
II	Capacity under construction	1	90	4.46
III	Schemes allotted by States for development			
	(i) Schemes returned to project authorities	1	320	15.85
IV	Capacity yet to taken up for development	3	908	44.97

1a. H.E. Projects in Operation:

Sl. No.	Name of Project	Agency	I.C. (MW)	Year of Commissioning
1.	N.J. Sagar	TSGENCO	110	1978-85
2.	N.J. Sagar LBC	TSGENCO	60	1991, 92
3.	Pochampad	TSGENCO	27	1987, 88
4.	Pridarshani jurala	TSGENCO	234	2007-08
5.	Lower Jurala	TSGENCO	240	2015-16
	Total		701	

1b. 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	Pumping Mode- Not Working. Works of Tail pool dam completed,

			however, yet not functional.
	Total	1605.60	

2. H.E. Projects under Construction:

Sl. No.	Name of Project	I.C. (MW)	Agency	Likely Commissioning
1.	Pulichintala	90	TSGENCO	2016-18
	Total	90		

3. 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
(Schemes having capacity above 25 MW)**

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)	0	0	0

Hydro Power Development in Uttar Pradesh (Installed Capacity above 25 MW)

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)	6	664	100
I Capacity in operation	4	501.6	75.54
IV Capacity yet to taken up for development	2	39	5.87

1. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	River	I. C. (MW)	Year of Commissioning
1	Rihand			300	1962-66
2	Obra			99	1970-71
3	Matatilla			30.6	1965
4	Khara			72	1992
Total				501.6	

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	Pachnad 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 (Installed capacity-above 25 MW)

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)		84	17998	100
I	Capacity in operation	16	3756.4	20.87
II	Capacity under construction	6	1430	7.95
III	Schemes allotted by States for development			
	(i) a Schemes cleared by CEA and yet to be taken up for construction	6	1858	10.32
	(ii)a Schemes under Examination in CEA	2	408	2.27
	(iii) Schemes returned to project authorities	5	762	4.23
	(iv) Schemes under S&I	3	663	3.68
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	15	2537	14.10
	Total (i-v)	31	6228	34.6
IV	Capacity yet to taken up for development	30	6583.7	36.58

Excluding schemes cleared/under examination by State Govt.

1 H.E. Projects in Operation:

Sl. No.	Name of Project	Agency	River	I.C. (MW)	Year of Commissioning
1.	Tanakpur	NHPC	Sharda	94.2	1992
2.	Dhauliganga St.I	NHPC	Dhauliganga	280	2005
3.	Tehri	THDC	Bhagirathi	1000	2006-07
4.	Koteshwar	THDC	Bhagirathi	400	2011-12
5.	Dhakrani	UJVNL	Yamuna	33.75	1965-70
6.	Dhalipur	UJVNL	Yamuna	51	1965-70
7.	Kulhal	UJVNL	Yamuna	30	1975
8.	Chibro	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	2007-08
15.	Vishnu Prayag	JPVL	Alaknanda	400	2006-07
16.	Shrinagar	GVK	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.	Tehri PSS*	Bhagirathi	1000	THDC	2019-20
3.	Vishnugad Pipalkoti	Alaknanda	444	THDC	2019-20
4.	Lata Tapovan@	Dhauliganga	171	NTPC	2021-22
5.	Phata Byung#	Mandakini	76	Lanco	2019-20
6.	Singoli Bhatwari#	Mandakini	99	L&T Uttaranchal Hydro Power Ltd.	2019-20
7.	Vyasi	Yamuna	120	UJVNL	2018-19
	Total		2430		

* Pumped Storage Scheme - @ 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. 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 Langasu	Alaknanda	UJVNL	State	100	04/11
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	03/17
3.	Bokang Bailing	Dhauliganga	330	THDC	-
	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	-	S&I yet to be taken up.
2	Chhunger - Chal	Uttarakhand	240	NHPC	07.04.2005	S&I held up due to non-clearance MoEF non-clearance. Falls under wild life Sanctuary.
3	Garba Tawaghat	Uttarakhand	630	NHPC	07.04.2005	S&I held up due non clearance of NBWL. Falls under wild life Sanctuary
4	Urthing Sobla	Uttarakhand	280	Reliance Power Ltd.		S&I yet to be taken up. Falls under wild life Sanctuary.

5	Sela Urthing	Uttarakhand	230	UJVNL	09.12.2004	S&I yet to be taken up. Falls under wild life Sanctuary..
6	Jadh Ganga	Jadh Ganga	50	THDC	07.04.2005	• S&I yet to be taken up. • Located in Eco sensitive Zone of Gangotri National Park.
7	Karmoli	Jadh Ganga	140	THDC	07.04.2005	• 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	07.04.2005	• S&I yet to be taken up. • Feasibility report with I.C. as 50 MW submitted to GoUK in Jan,2013. • Approval from GoUK for preparation of DPR is awaited.
12	Khartoli Lumti Talli	Uttarakhand	55	NHPC	07.04.2005	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.

13	Maleri Jhelam	Dhauliganga	55	THDC	07.04.2005	S&I held up due to Supreme Court order directing MoEF and GoUK not to grant Environmental or Forest Clearance for any H.E. Project in Uttarakhand until further orders.
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	S&I held up due to Supreme Court order directing MoEF and GoUK not to grant Environmental or Forest Clearance for any H.E. Project in Uttarakhand until further orders.
	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 (Installed Capacity above 25 MW)

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)		6	2829	100
I	Capacity in operation	5	441.2	15.60
II	Capacity under construction	1	120	4.24
III	Schemes allotted by States for development			
	(i) Schemes under S&I	1	81	2.86
IV	Capacity yet to taken up for development	0	2186.8	77.30

1a. H.E. Projects in Operation:

Sl.No.	Name of Project	Agency	I. C. (MW)	Year of Commissioning
1	Jaldhaka I	WBSEDCL	36	1967, 72
2	Rammam II	WBSEDCL	50	1995-96
3	Teesta low dam-III	NHPC	132	2013
4	Maithon	DVC	63.2	1957-58
5	Teesta Low Dam-IV	NHPC	160	2015-17
	Total		441.2	

1b. Pumped Storage H.E. Projects in Operation:

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

2. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	I. C. (MW)	Likely Commissioning
1.	Rammam-III	NTPC	120	2019-20
	Total		120	

3. Pumped Storage H.E. Schemes under Examination :

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Turga	1000	TEC meeting held on 4.08.2016. Concurrence letter yet to be issued.
	Total	1000	

4. 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	TLDP-I&II	Teesta/Badi(Great Rangit)	NHPC	81	30.07.15	-
Total				81		