

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	3449
II	Capacity under construction		4	1935.5
III	Schemes allotted by States for development			
	(i)	Schemes cleared by CEA and yet to be taken up for construction	5	4043
	(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
IV	H. E. Projects yet to be allotted for development*		25	2837

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. H.E. Projects in Operation:

UTILITY/ STATIONS	NO. OF STATIONS	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER/ BASIN	DISTRICT	CAPACITY (MW)	YEAR OF COMMISSIONING
JKSPDC			-	-	-	-	-
BAGLIHAR	1	3	(3X150)	CHENAB	RAMBAN	450.00	2008
BAGLIHAR II	1	3	(3X150)	CHENAB	RAMBAN	450.00	2015
LOWER JHELM	1	3	(3X35)	JHELM	BARAMULLAH	105.00	1978-1979
UPPER SINDH-II	1	3	(3X35)	SINDH	GANDERBAL	105.00	2001-2002
TOTAL JKSPDC	4	12				1110.00	
NHPC			-	-	-	-	-
DULHASTI	1	3	(3X130)	CHENAB	KISTWAR	390.00	2007
SALAL -I&II	1	6	(6X115)	CHENAB	REASI & UDAMPUR	690.00	1987-95
URI-I	1	4	(4X120)	JHELM	BARAMULA	480.00	1996-1997
URI-II	1	4	(4X60)	JHELM	BARAMULA	240.00	2013-14
SEWA-II	1	3	(3X40)	SEWA II	MAHASKA	120.00	2010-11
CHUTAK	1	4	(4X11)	INDUS	KARGIL	44.00	2012-13
NIMOO BAZGO	1	3	(3X15)	INDUS	LEH	45.00	2013
KISHENGANGA	1	3	(3X110)	KISHENGANGA		330.00	2018

SUB-TOTAL NHPC	8	30				2339.00	
TOTAL J&K	12	42				3449.00	

* ALL PROJECTS ARE IN INDUS BASIN.

2. H.E. Schemes Under Construction:

Sl. No.	Name of Scheme	Agency	District	I.C. (MW)	River/Basin	Likely Commissioning
1	Pakal Dul	CVPPL	Kishtwar	1000.00	Marusadar/ Chenab / Indus	2023-24
2	Parnai	JKSPD C	Poonch	37.50	Jhelum/ Indus	2021-22 (Mar'22)
3	Lower Kalnai	JKSPD C	Kishtwar	48.00	Chenab/ Indus	2022-23 *
4	Ratle	RHEPP L	Kishtwar	850.00	Chenab/Indus	2023-24 *
	Total			1935.50		

3. H.E. Projects Cleared/Appraised:

Sl No	Name of Project	Agency	River	District	I.C. (MW)	Date of CEA Concurrence	Status
1	New Ganderwal	JKSPC	Jhelum/Sindh	Ganderwal	93	10.06.14	EC obtained on 27.9.13 and FC obtained on 02.04.2012.
2	Kiru	CVPPL	Chenab	Doda	624	13.06.16	EC accorded on 24.06.2016 & FC accorded on 19.05.2016. Tendering for all the packages issued and packages will be awarded after PIB approval. PIB circulated by MoP on 8.05.2018. PIB at updated PL circulated by MoP on 11.06.2018.
3	Kwar	CVPP	Chenab	Kishtwar	540	23.02.17	EC accorded on 10.04.17. FC accorded on 08.08.14. Tenders for Civil, HM and E&M packages issued. Works will be awarded after investment approval by Government. PIB circulated by MoP on 10.05.2018. PIB at updated PL circulated by MoP on 22.06.2018.
4	Kirthai-II	JKPDC	Chandrabhaga /Chenab	Kishtwar	930	27.12.16*	EC & FC awaited
5	Sawalkot	JKSPC	Chenab	Ramban & Udhampur	1856	18.04.18	EC was recommended on 31.01.2017 & FC awaited. Joint survey under process.
	Total				4043		

Note: All projects are in Indus basin

* 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	JKSPDC	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			

6. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1.	Shuas	Chenab	R	505
2.	Berinaum	Chenab	R	435
3.	Naga	Kal Nai	R	29
4.	Kiwa	Kal Nai	R	37
5.	Tipri	Kal Nai	R	36
6.	Kiari	Indus	R	28
7.	Parfila	Zaskar	S	45
8.	Paidar	Zaskar	R	46
9.	Tillarchu	Zaskar	R	39
10.	Nurla	Indus	R	65
11.	Khalsi	Indus	R	170
12.	Takmaching	Indus	R	75
13.	Dumkar	Indus	R	130
14.	Achinthang	Indus	R	140
15.	Kanyunche	Indus	R	105
16.	Batalik	Indus	R	235

17.	Parkhachik	Suru	R	110
18.	Dandal	Drass	R	26
19.	Khahru	Drass	R	30
20.	Tahanus	Shingo	R	120
21.	Karkit	Shingo	R	190
22.	Gunderman	Suru	R	120
23.	Chalunka	Shyok	R	45
24.	Chechesna	Suru	R	47
25.	Leh	Indus	R	29
	Total	25 Nos. of Schemes		2837

Note: R –Run off the River & S- storage

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	9755
II	Capacity under construction		8	1885
III	Schemes allotted by States for development			
	(i)	Schemes cleared by CEA and yet to be taken up for construction	7	1812
	(ii)	Schemes under Examination in CEA	2	621
	(iii)	Schemes returned to project authorities	1	200
	(iv)	Schemes under S&I	4	1074
	(v)	H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	4	1170
IV	H. E. Projects yet to be allotted for development*		19	2332

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. H.E. Projects in Operation:

S. NO	UTILITY/STATIONS	NO. OF STN S.	No. of Unit s	NO. OF UNITS X CAPACITY (MW)	RIVER /BASIN*	DISTRICT	CAPACITY (MW)	YEAR OF COMMIS SIONING
	CENTRAL SECTOR							
	BBMB			-	-	-	-	-
1	BHAKRA LEFT	1	5	(5X108)	SUTLEJ	BILASPUR	540.00	1960-1961
2	BHAKRA RIGHT	1	5	(5X157)	SUTLEJ	BILASPUR	785.00	1966-1968
3	DEHAR	1	6	(6X165)	BEAS	MANDI	990.00	1977-1983
4	PONG	1	6	(6X66)	BEAS	KANGRA	396.00	1978-1983
	SUB-TOTAL BBMB	4	22				2711.00	
	NHPC			-	-	-	-	-
5	BAIRA SIUL	1	3	(3X60)	RAVI	CHAMBA	180.00	1980-1981
6	CHAMERA- I	1	3	(3X180)	RAVI	DALHOUSI E	540.00	1994
7	CHAMERA- II	1	3	(3X100)	RAVI	CHAMBA	300.00	2003-2004
8	CHAMERA- III	1	3	(3X77)	RAVI	CHAMBA	231.00	2012
9	PARBATI-III	1	4	(4X130)	SAINJ	KULLU	520.00	2014

	SUB-TOTAL NHPC	5	16				1771.00	
	SJVNL			-	-	-	-	-
10	NATHPA JHAKRI	1	6	(6X250)	SATLUJ	SHIMLA	1500.00	2003-2004
11	RAMPUR	1	6	(6X68.67)	SATLUJ	SHIMLA	412.02	2014-15
	SUB-TOTAL SJVNL	2	12				1912.02	
	NTPC LTD.							
12	KOLDAM	1	4	(4X200)	SATLUJ	BILASPUR	800.00	2015
	SUB-TOTAL NTPC LTD.	1	4				800.00	
	TOTAL CENTRAL SECTOR	12	54				7194.02	
	STATE SECTOR							
	HPSEBL			-	-	-	-	-
13	BASSI	1	4	(4X16.5)	BEAS	MANDI	66.00	1970-1981
14	GIRI BATA *	1	2	(2X30)	YAMUNA	SIRMAUR	60.00	1978
15	LARJI	1	3	(3X42)	Beas River & its tributaries Sainj & Tirthan	KULLU	126.00	2006
16	SANJAY	1	3	(3X40)	SATLUJ	KINNAUR	120.00	1989
	TOTAL HPSEBL	4	12				372.00	
	HPPCL							
17	INTEGRATED KASHANG	1	3	(3X65)	SATLUJ	KINNAUR	195	2016-17
18	SAINJ	1	2	(2X50)	SAINJ	KULLU	100	2017
	TOTAL HPPCL	2	5				295.00	
	PSPCL							
19	SHANAN	1	5	(1X50)+(4X15)	UHL & Lamba Dug River	MANDI	110.00	1932-1982
	TOTAL PSPCL	1	5				110.00	
	TOTAL STATE SECTOR	7	22				777.00	
	PRIVATE SECTOR							
	MPCL			-	-	-	-	-
20	MALANA	1	2	(2X43)	MALANA	KULLU	86.00	2001
	TOTAL MPCL	1	2				86.00	
	GBHPPL							
21	BUDHIL	1	2	(2X35)	RAVI	CHAMBA	70.00	2012
	TOTAL GBHPPL	1	2				70.00	
	EPPL							
22	MALANA-II	1	2	(2X50)	MALANA	KULLU	100.00	2011-12
	TOTAL EPPL	1	2				100.00	
	IA ENERGY							
23	CHANJU-I	1	3	(3X12)	RAVI	CHAMBA	36.00	2017

	TOTAL IA ENERGY	1	3				36.00	
24	ALLAIN DUHANGAN	1	2	(2X96)	ALLAIN NALLAH		192.00	2010-11
	TOTAL ADHPL	1	2				192.00	
	HBPCL			-	-	-	-	-
25	BASPA	1	3	(3X100)	BASPA	KINNAUR	300.00	2003
26	KARCHAM WANGTOO	1	4	(4X250)	SATLAJ	KINNAUR	1000.00	2011-12
	TOTAL HBPCL	2	7				1300.00	
	TOTAL PVT	7	18				1784.00	
	TOTAL HP	26	94				9755.02	

* ALL PROJECTS EXCEPT GIRI BATA (GANGA BASIN) ARE IN INDUS BASIN

2. H.E. Schemes Under Construction:

Sl. No.	Name of Project	Agency	District	River/Basin	I.C. (MW)	Likely Commissioning
1	Parbati St--II	NHPC	Kullu	Parbati/Beas/Indus	800	2021-22 (Dec.'21)
2	Uhl- III	Beas Valley Power Corp. Ltd. (BVPC)	Mandi	Uhl/Beas/Indus	100	2018-19 (Dec.'18)
3	Sorang	Himachal Sorang Power	Kinnaur	Sorang/Satluj/Indus	100	2019-20*
4	Tidong-I	M/s NSL Tidong	Kinnaur	Tidong/Satluj/Indus	100	2019-20*
5	Shontong Karcham	HPPCL	Kinnaur	Satluj/Indus	450	2021-22 (Jan.'22)
6	Sawara Kuddu	HPPCL	Shimla	Pabbar/Tons/Yamuna/Ganga	111	2019-20 (May'19)
7	Tangu Romai-I	Tangu Romai Power Generation	Shimla	Pabbar/Tons/ Yamuna/Ganga	44	2021-22*
8	Bajoli Holi	GMR Bajoli Holi Hydro Power Pvt. Ltd.	Chamba	Ravi/Indus	180	2019-20 (Aug.'19)
	Total				1885	

- Subject to re-start of works

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

Sl. No.	Name of Project	Agency	River	District	I.C. (MW)	Date of CEA Concurrence	Status
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1	Chhatru	DCM Shriram Infrastructure Company Ltd. (DSC)	Chenab /Chandra	Lahul & Spiti	126	15.1.2015	EC recommended by EAC on 24.02.15, Letter will be issued after FC-I. FC-I & FC-II yet to be obtained. Land acquisition under process. As per MoEF&CC, developer is not responding.
2	Miyar	Miyar Hydro Power Company Ltd. (MHPCL)	Chenab /Miyar Nallah	Lahul & Spiti	120	07.02.2013	EC accorded on 30.07.2012. FC-I accorded on 27.07.2012. For FC-II, Compliance Report is awaited from State Govt. Financial closure is in process.
3	Dugar	Dugar Hydro Power Ltd. (DHPL)	Chenab	Chamba	449	20.12.16*	EC & FC yet to be obtained by developer. The proposal has been forwarded by MoEF&CC to RO for site inspection. Site inspection is to be carried out. M/s. DHPL vide ltr dtd 8.3.2018 informed that they have withdrawn from the project. On request of Developer, GoHP vide ltr dtd 23.09.2017 cancelled allotment of Dugar HEP & reverted back to Govt. of HP without any liability of Govt. In view of above, Secretary, CEA vide ltr dtd 23.4.2018 requested GoHP to furnish the status of Dugar HEP (449 MW) DPR. Secretary, CEA vide letter dated 14.06.18 informed that Dugar HEP stands cancelled vide GoHP cancellation order dated 23.09.17. The project has been advertised by GoHP

							for fresh allotment through ICB route on BOOT basis under Private Sector during March, 2018.
4	Seli	Seli Hydro Electric Power Company Ltd. (SHPCL)	Chenab	Lahul & Spiti	400	27.10.16*	EC accorded on 3.7.13. FC-I accorded on 01.07.13. FC-II yet to be obtained. Compliance Report is awaited from State Govt. Govt. of HP vide ltr dtd 23.09.17 have cancelled the allotment of Seli HEP in favour of M/s. Seli Hydro Electric Power Company Ltd. and reverted back to GoHP since Developer has failed to sign the implementation agreement within stipulated period given in PIA. PIA also stands cancelled. In view of above, Secretary, CEA requested to GoHP vide ltr dtd 8.05.18 to furnish the status of the project. Secretary, CEA vide letter dated 18.06.18 informed that Seli HEP stands cancelled vide GoHP cancellation order dated 23.09.17. The project has been advertised for fresh allotment by GoHP through ICB route on BOOT basis under Private Sector during March, 2018.
5	Sanch Khas	L&T Himachal Hydro Power	Chenab	Chamba	267	27.10.16*	EC recommended by EAC on 11.07.14. Letter will be issued after FC-I. FC-I &

		Ltd. (L&T HHPL)					FC-II yet to be obtained. FRA compliance under process.
6	Kutehr	JSW Energy (Kutehr) Power Ltd. (JSWEPL)	Ravi	Chamba	240	31.8.10	EC accorded on 05.07.2011. FC-I accorded on 22.06.2011 & 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. Award of main works is almost finalized but contract is not signed in absence of PPA. Registry of 6.46 ha land out of 7.82 ha land completed. Award of balance land of 17 Bigha announced by LAO on 30th Sept and Rs. 246 lakhs deposited on 6.10.2015. LoI issued to L-I bidder. Financial closure and financial tie-up is under process. Construction work of 33/11 KV (3 MVA) electrical sub-station for construction power is almost completed.
7	Luhri Stage-I	Satluj Jal Vidyut Nigam Ltd. (SJVNL)	Satluj	Shimla & Kullu	210	1.05.18	EC& FC yet to be obtained by developer. EAC considered the case in its meeting held on 27.03.2018. Clarification has been sought by EAC and the proposal has been deferred for subsequent EAC meeting. Supplementary Report incorporating replies to the comments of EAC are being prepared

							through EIA/ EMP consultant. Application for grant of FC-I submitted on 19.12.17 and after attending observations of DFO (Anni) case submitted on 08.02.2018 which is under examination with forest deptt., GoHP. After processing at different levels, the proposal submitted to GoHP by PCCF, Shimla on 8.05.2018. Case under process with GoHP.
	Sub Total				450		
	Total				1812		

Note: All projects are in Indus basin

*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.	Reoli Dugli	Private	430	L&THHPL	09/17
2.	Thana Plaun	State	191	HPPCL	02/18
	Total		621		

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	I.C. (MW)	Date of MOA	Target date of
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						Preparation of DPR
	Beas Basin					
1	Nakhtan (Parbati-I)	Parbati	HPPPCL	460	22.9.2009	12/18
	Sub Total			460		
	Chenab Basin					
	Satluj Basin					
1.	Tidong-II	Tidong	Tidong Hydro Power Ltd.	60	20.1.2012	
2.	Sunni Dam	Satluj	SJVN Ltd.	382	23.01.2017	03/19
3.	Luhri st-II	Satluj	SJVNL	172	Project allocated to SJVN on standalone basis. MoA yet to be finalized.	
			Sub Total	587		
	Total			1074		

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	Govt. of HP has confirmed the TWL of Upstream project i.e. Yangthang Khab and FRL of Downstream project Jhangi Thopan vide letter dated 15.06.2017. Accordingly a revised PFR for Khab HEP is being prepared considering the scheme to be single stage RoR and considering the virgin stretch of river as per MoEF&CC guidelines.

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
	Sub Total	870			
	Chenab Basin				
1	Gyspa Dam	300	HPPCL	22.09.2009	S&I held up due to local agitation
	Sub-Total	300			
	Total	1170			

8. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1.	Kyurik	Spiti	R	41
2.	Ropa	Ropa	S	31
3.	Taiti-I	Taiti	S	50
4.	Jangi Thopan	Sutlej	R	410
5.	Thopan Powari	Sutlej	R	650
6.	Homte	Bhaba	R	60
7.	Gandharni	beas	R	49
8.	Gharopa	Beas	R	85
9.	Tirthan-I	Tirthan	R	32
10.	Tirthan-III	Tirthan	R	26
11.	Rana Khad	Rana Khad	R	29
12.	Tundah	Tundah	R	34
13.	Baroti	Siul	S	40
14.	Chhota Dara	Chandra	R	50
15.	Khoksar	Chandra	R	80
16.	Telling (Railing)	Chandra	S	155
17.	Gondhala	Chandra	R	90
18.	Jhalma	Chenab	R	275
19.	Bardang	Chenab	R	145

	Total	19 Nos. of Schemes	2332
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Note: R –Run off the River & S- storage

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:

S.no	UTILITY /STATIONS	NO. OF STAT IONS	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER/ BASIN*	DISTRICT	CAPAC ITY (MW)	YEAR OF COMMI SSIONI NG
	PSPCL			-	-		-	-
1.	ANANDPUR SAHIB-I	1	2	(2X33.5)	AHC (CANAL)	RUPNAGAR	67.00	1985
2.	ANANDPUR SAHIB-II	1	2	(2X33.5)	AHC (CANAL)	RUPNAGAR	67.00	1985
3.	MUKERIAN-I	1	3	(3X15)	TAIL WATER OF PONG DAM	HOSHIARPUR	45.00	1983
4.	MUKERIAN-II	1	3	(3X15)	TAIL WATER OF PONG DAM	HOSHIARPUR	45.00	1988-89

5.	MUKERIAN-III	1	3	(3X19.5)	TAIL WATER OF PONG DAM	HOSHIARPUR	58.50	1989
6.	MUKERIAN-IV	1	3	(3X19.5)	TAIL WATER OF PONG DAM	HOSHIARPUR	58.50	1989
7.	RANJIT SAGAR	1	4	(4X150)	Reservoir on River Ravi	PATHANKOT	600.00	2000
	TOTAL PSPCL	7	20				941.00	
	BBMB							
8.	GANGUWAL	1	3	(2X24.2)+(1X 29.25)	SATLUJ	RUPNAGAR	77.65	1955-1962
9.	KOTLA	1	3	(2X24.2)+(1X 29.25)	SATLUJ	RUPNAGAR	77.65	1956-1961
	SUB-TOTAL BBMB (PUNJAB)	2	6				155.30	
	TOTAL PUNJAB	9	26				1096.30	

* ALL PROJECTS ARE IN INDUS BASIN

3. H.E. Schemes under Construction:

Sl. No.	Name of Project	Implementing Agency	District	River/Basin	I. C. (MW)	Likely Commissioning
1	Shahpurkandi*	Irr. Deptt. & PSPCL	Gurdaspur	Ravi/Indus	206	2020-21**
	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.
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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 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 . N O.	UTILITY/STA TIONS	NO. OF STATI ONS	No. of Uni ts	NO. OF UNITS X CAPACI TY (MW)	RIVER/ BASIN	DISTRICT	CAPAC ITY (MW)	YEAR OF COMMISSIO NING
1.	JAWAHAR SAGAR	1	3	(3X33)	CHAMBAL/ GANGA	BUNDI	99.00	1972-1973
2.	MAHI BAJAJ-I	1	2	(2X25)	MAHI/ CIR	BANSWARA	50.00	1986
3.	MAHI BAJAJ-II	1	2	(2X45)	MAHI / CIR	BANSWARA	90.00	1989
4.	R P SAGAR	1	4	(4X43)	CHAMBAL/ GANGA	CHITTORGAR	172.00	1968
	TOTAL RRVUNL	4	11				411.00	

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.

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	7	1490
III	Schemes allotted by States for development		
	(i) Schemes cleared by CEA and yet to be taken up for construction	5	1328
	(ii) Schemes under Examination in CEA	3	558
	(iii) Schemes returned to project authorities	5	762
	(iv) Schemes under S&I	2	450
	(v) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	15	2537
IV	H. E. Projects yet to be allotted for development*	25	3011

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. H.E. Projects in Operation:

S. NO.	UTILITY/STATIONS	NO. OF STNS.	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER	DISTRICT	CAPACITY (MW)	YEAR OF COMMISSIONING
	CENTRAL SECTOR							
	NHPC			-	-	-	-	-
1	DHAULI GANGA	1	4	(4X70)	DHAULIGANGA	PITHORAGARH	280.00	2005
2	TANAKPUR	1	3	(3X31.4)	SARDA	CHAMPAVAT	94.20	1992
	SUB-TOTAL NHPC	2	7				374.20	
	THDC			-	-	-	-	-
3	TEHRI ST-I	1	4	(4X250)	BHAGIRATHI	TEHRI GARHWAL	1000.00	2006-2007
4	KOTESHWAR	1	4	(4X100)	BHAGIRATHI	TEHRI GARHWAL	400.00	2010-12
	TOTAL THDC	2	8				1400.00	

	SUB TOTAL CENTRAL	4	15				1774.20	
	STATE SECTOR							
	UJVNL							
5	CHIBRO (YAMUNA)	1	4	(4X60)	Tons River at Ichari Dam	DEHRADUN	240.00	1975-1976
6	CHILLA	1	4	(4X36)	GANGA	HARIDWAR	144.00	1980-1981
7	DHAKRANI	1	3	(3X11.25)	Tons & Yamuna Rivers at Dakpathar Barrage	DEHRADUN	33.75	1965-1970
8	DHALIPUR	1	3	(3X17)	Tons & Yamuna Rivers at Dakpathar Barrage	DEHRADUN	51.00	1965-1970
9	KHATIMA	1	3	(3X13.8)	SHARDA	UDHAM SINGH NAGAR	41.40	1955-1956
10	KHODRI	1	4	(4X30)	TONS	DAK PATHAR	120.00	1984
11	KULHAL	1	3	(3X10)	TONS	DEHRADUN	30.00	1975
12	MANERI BHALI- I	1	3	(3X30)	BHAGIRATHI	UTTARKASHI	90.00	1984
13	MANERI BHALI- II	1	4	(4X76)	BHAGIRATHI	UTTARKASHI	304.00	2008
14	RAMGANGA	1	3	(3X66)	RAMGANGA	PAURI GARHWAL	198.00	1975-1977
	TOTAL UJVNL	10	34				1252.15	
	PRIVATE							
	AHPC							
15	SHRINAGAR	1	4	(4X82.50)	ALAKNANDA	TRHRI & PAURI	330.00	2015
	JPPVL			-	-	-	-	-
16	VISHNU PRAYAG	1	4	(4X100)	ALAKNANDA		400.00	2006
	SUB TOTAL PRIVATE	2	8				730.00	
	TOTAL UTTARAKHAND	16	57				3756.35	

* ALL PROJECTS ARE IN GANGA BASIN

2. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	District	I.C. (MW)	River /Basin	Likely Commissioning
1	Lata Tapovan	NTPC	Chamoli	171.00	Dhauliganga /Alaknanada & Ganga	2022-23 *
2	Tapovan Vishnugad	NTPC	Chamoli	520.00	Dhauliganga / Alaknanada & /Ganga	2020-21 (Dec'20)
3	Vishnugad Pipalkoti	THDC	Chamoli	444.00	Alaknanada/Ganga	2021-22 (Dec'21)
4	Naitwar Mori	SJVNL	Uttarkashi	60.00	Tons/Yamuna/Ganga	2021-22 (Dec-21)
5	Vyasi	UJVNL	Dehradun	120.00	Yamuna/Ganga	2019-20 (Mar'20)
6	Phata Byung	LANCO	Rudraprayag	76.00	Mandakini/Alaknanda Ganga	2021-22 *
7	Singoli Bhatwari	L&T	Rudraprayag	99.00	Mandakini/Alaknanda Ganga	2019-20 (Jun'19)
Sub-total: Uttarakhand				1490.00		

* Subject to restart of work

3. H.E. Projects Concurred by CEA:

Sl. No.	Name of Scheme	River	Agency	District	I.C. (MW)	Status
1.	Kotlibhel St-IA#	Bhagirathi	NHPC	Tehri Garhwal	195	CEA Concurrence: 03.10.06 EC - obtained on 9.5.2007 FC - I obtained on 13.10.2011 & FC- II awaited. The project is included in the list of 24 projects under review by Hon'ble Supreme Court.
2.	Kotlibhel St-IB#	Alaknanda	NHPC	Pauri & Tehri Garhwal	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. The project is included in the list of 24 projects under review by Hon'ble Supreme Court.
3.	Devsari	Pindar	SJVNL	Chamoli	252	EC recommended by EAC on 27.03.18 with additional conditions such as submission of Technical feasibility report of constructing a wall around Debal SHEP and provision of e-flows as per recommendations of report on CIA and CCS by Expert Body-II. Matter in this regard is being taken up with MoEF&CC by Developer.

						FC-I accorded by MoEF&CC on 26.02.18. FC-II yet to be obtained.
4.	Rupsiyabagar Khasiyabara	Gori Ganga	NTPC	Pithoragarh	261	CEA Concurrence: 16.10.2008 E.C. - accorded on 26.03.09 F.C. awaited
5.	Alaknanda#	Alaknanda	GMR	Chamoli	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				1328	

Note: All projects are in Ganga Basin # 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
3.	Goriganga-IIIA	Goriganga	Central	150	NHPC
	Total			558	

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	GVK L&T	Private	146	09/10
5.	Tiuni Plasu	Tons	UID	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
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1.	Sirkari Bhyol Rupsiabagar	Gori Ganga	120	UJVNL	12/18
2.	Bokang Bailing	Dhauliganga	330	THDC	04/19
	Total		450		

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	Pabar , Tons	72	UID	-	MOEF clearance awaited. S&I yet to be taken up.
2	Chhunger - Chal	Dhauliganga	240	NHPC	21.11.2005	S&I held up due to non-clearance of MOEF
3	Garba Tawaghat	Goriganga	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	Dhauliganga	280	Reliance Power Ltd.	-	MoEF Clearance awaited. S&I heldup as the project area falls under ASkot Musk deer Sanctuary
5	Sela Urthing	Dhauliganga	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	Tons	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	Goriganga	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	Goriganga	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 hydroelectric 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. Pumped storage H.E. Projects under Construction:

Sl. No.	Name of Project	I. C. (MW)	Remarks
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1.	Tehri St.II	4x250=1000	Likely commissioning by 2021-22 (May'21)
	Total	1000	

9. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1.	Nakot Patlasu	Pabar	R	43
2.	Pisha Naitwar	Rupin	R	30
3.	Taluka Saul	Tons	R	39
4.	Kuwa ford	Yamuna	R	42
5.	Nelang	Jadh Ganga	R	190
6.	Gangotri	Bhagirathi	R	70
7.	Diulong Sumangaon	Bhagirathi	R	26
8.	Dhargaon Jhandarwali	Bhagirathi	R	29
9.	Jamolna Ghansyali	Bhagirathi	R	44
10.	Nayar Dam	Nayar	S	34
11.	Benakuli	Alaknanda	R	40
12.	Khel Kuran Neti	Dhauli Ganga	R	49
13.	Niti Ghansali	Dhauli Ganga	R	32
14.	Bampa Kurkuti	Dhauli Ganga	R	60
15.	Girithi Ganga	Girithi Ganga	R	34
16.	Deodi	Rishi Ganga	R	65
17.	Tikh Gurupha	Pindar	R	26
18.	Malkhet Dam	Pindar	S	37
19.	Banoli Nalgam	Pindar	R	55
20.	Mandakini	Mandakini	R	36
21.	Uttyasu Dam	Alaknanda	S	1140
22.	Sobla Jhimirigaon	Dhauli Ganga	R	145

23.	Tawaghat Dharchula	Sarda	R	310
24.	Kalika Dantu	Sarda	R	140
25.	Garjia Dam	Gori Ganga	S	295
	Total	25 Nos. of Schemes		3011

Note: R –Run off the River & S- storage

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
H. E. Projects yet to be allotted for development	1	39

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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.	UTILITY/ STATIONS	NO. OF STATIONS	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER/ BASIN*	DISTRICT	CAPACITY (MW)	YEAR OF COMMISSIONING
5.	KHARA	1	3	(3X24)	YAMUNA LINK CHANNEL	SUNEBHADRA	72.00	1992
6.	MATATILLA	1	3	(3X10.2)	BETWA	LALITPUR	30.60	1965
7.	OBRA	1	3	(3X33)	RIHAND	SUNEBHADRA	99.00	1970-1971
8.	RIHAND	1	6	(6X50)	Govind Ballabh Pant Sagar	SINGRAULI	300.00	1961-1965

	TOTAL UPJVNL	4	15				501.60	
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* ALL PROJECTS ARE IN GANGA BASIN.

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	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.

4. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Orcha	Betwa	R	39
	Total	1 No. of Scheme		39

Note: R –Run off the River & S- storage

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
H. E. Projects yet to be allotted for development			NIL	NIL

1. H.E. Projects in Operation:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River /Basin	District	Capacity (mw)	Year of commissioning
	NHDC							
1.	INDIRA SAGAR	1	8	(8X125)	NARMADA/ CIR	KHANDWA	1000.00	2004-2005
2.	OMKARESHWAR	1	8	(8X65)	NARMADA/ CIR	KHANDWA	520.00	2007
	SUB-TOTAL NHDC	2	16				1520.00	
	TOTAL CENTRAL	2	16				1520.00	
	MPPGCL							
3.	BANSAGAR TONS-I	1	3	(3X105)	TONS /GANGA	SATNA	315.00	1991-1992
4.	BANSAGAR-II	1	2	(2X15)	TONS /GANGA	REWA	30.00	2002
5.	BANSAGAR-III	1	3	(3X20)	SONE /GANGA	SATNA	60.00	2000-2002
6.	BARGI	1	2	(2X45)	NARMADA/ CIR	JABALPUR	90.00	1988
7.	GANDHI SAGAR	1	5	(5X23)	CHAMBAL/ GANGA	MANDSAUR	115.00	1960-1966
8.	MADHIKHERA	1	3	(3X20)	KALI SINDH /GANGA	SHIVPURI	60.00	2006-2007
9.	RAJGHAT	1	3	(3X15)	BETWA /GANGA	ASHOK NAGAR	45.00	1999
	SUB-TOTAL MPPGCL	7	21				715.00	
	TOTAL MP	9	37				2235	

2. H.E. Schemes Under Construction:

Sl. No.	Name of Project	I. C. (MW)	District	River/Basin	Agency	Likely Commissioning
1.	Maheshwar (pvt)*	400	Khargone & Khandwa	Narmada/CIR	SMHPCL	2019-20
	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.
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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
H. E. Projects yet to be allotted for development*	12	1814

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River /Basin	District	Capacity (mw)	Year of commissioning
	CSPGCL							
1	HASDEOBANGO	1	3	(3X40)	HASDEO /CIR	KORBA	120.00	1994-1995
	TOTAL CSPGCL	1	3				120.00	

3. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Joka	Kanhar	S	28
2	Kharauli	Mahan	R	46
3	Pasal	Rihand	S	55
4	Duniadhin	Rihand	S	80
5	Karri	Rihand	R	70
6	Konta	Sabari	R	65
7	Kutru-I	Indravati	S	100
8	Kutru-II	Indravati	S	155
9	Nugur-I	Indravati	S	160
10	Bhopalapatnam	Indravati	S	715
11	Nugur-II	Indravati	S	270
12	Kotri	Kotri	S	70
	Total	12 Nos. of Schemes		1814

Note: R –Run off the River & S- storage

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	Chhattis- garh	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. • 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 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
H. E. Projects yet to be allotted for development	NIL	NIL

#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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	GSECL							
1	UKAI	1	4	(4X75)	TAPI	TAPI	300.00	1974-1976
	SUB-TOTAL GSECL	1	4				300.00	
	SSNNL							
2	S SAROVAR CHPH	1	5	(5X50)	NARMADA	NARMADA	250.00	2004
	SUB-TOTAL SSNNL	1	5				250.00	
	TOTAL GUJARAT	2	9				550.00	

* All projects are in CIR Basin

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
2.	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 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
H. E. Projects yet to be allotted for development*	12	1878

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River /Basin	District	Capacity (mw)	Year of commissioning
	MAHAGENCO							
1.	BHIRA TAIL RACE	1	2	(2X40)	KUNDALIKA /WFR	RAIGAD	80.00	1987-1988
2.	KOYNA DPH	1	2	(2X18)	KOYNA /EFR	SATARA	36.00	1980-1981
3.	KOYNA-I&II	1	8	(4X70)+(4X80)	KOYNA /EFR	PATAN	600.00	1962-1967
4.	KOYNA-III	1	4	(4X80)	Water let out through ulestward units (St-I,II & IV) /EFR	RATNAGI RI	320.00	1975-1978
5.	KOYNA-IV	1	4	(4X250)	KOYNA /EFR	SATARA	1000.00	1999-2000
6.	TILLARI	1	1	(1X60)	TILLARI /WFR	KOLHAP UR	60.00	1986
7.	VAITARNA	1	1	(1X60)	VAITARNA /WFR	NASIK	60.00	1976
	SUB-TOTAL MAHAGENCO	7	22				2156.00	
	MPPGCL							
8.	PENCH	1	2	(2X80)	PENCH /EFR	CHINDW ARA	160.00	1986-1987
	SUB-TOTAL MPPGCL	1	2				160.00	
	TOTAL STATE SECTOR	8	24				2316.00	
	PRIVATE							
	DODSON-LINDBLOM HYDRO POWER PVT. LTD. (DLHP)							
9.	BHANDARDHARA ST-II	1	1	(1X34)	PRAVARA /EFR		34.00	1996
	SUB-TOTAL DLHP	1	1				34.00	
	TATA POWER COMPANY (PVT.)							
10.	BHIRA	1	6	(6X25)	NEELA & MULA /EFR	RAIGAD	150.00	1927-1949
11.	BHIVPURI	1	5	(3X24) + (2X1.5)	ANDHRA /EFR	RAIGAD	75.00	1997-1999
12.	KHOPOLI	1	3	(3X24)	INDRAYANI /EFR	RAIGAD	72.00	2001-2003
	SUB-TOTAL TPCL	3	14				297.00	
	TOTAL PVT (MAHARASHTRA)	4	15				331.00	
	TOTAL MAHARASHTRA	12	39				2647.00	

3. 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	

4. 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 approved cost level hence expenditure on the project is stopped & project works are stalled. Revised cost is under approval by State Government.
	Total	80	

5. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Pathri	Wainganga	S	40
2	Wainganga	Wainganga	S	150
3	Samda	Pranhita	R	95
4	Ghargaon	Pranhita	R	105
5	Kunghara	Pranhita	R	115
6	Pranhita	Pranhita	S	310
7	Sahasrakund I	Penganga	S	29
8	Patharpunj	Varna	S	29
9	Kadvi	Varna	S	215
10	Kasari-I	Kasari	S	215
11	Kubhi-I	Penganga	S	170
12	Hiranyakeshi II	Vedganga	S	405
	Total	12 Nos. of Schemes		1878

Note: R –Run off the River & S- storage

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	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 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
H. E. Projects yet to be allotted for development*	1	55

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. Identified Projects during Reassessment study:

Sl.No.	Name of Project	River	I. C. (MW)
1	Sonal	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.

3. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Sonal	Mandavi	S	55
	Total	1 Nos. of Schemes		55

Note: R –Run off the River & S- storage

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	5	1610
II	Capacity under construction	1	960
H. E. Projects yet to be allotted for development		NIL	NIL

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	APGENCO			-	-	-	-	-
1.	LOWER SILERU	1	4	(4X115)	SILERU	KHAMMAM	460.00	1976-1978

2.	NAGARJUNA SGR RBC & EXT.	1	3	(3X30)	KRISHNA	SATRASALA	90.00	1983-90
3.	SRISAILAM	1	7	(7X110)	KRISHNA	MAHABUBNAGAR	770.00	1982-1987
4.	UPPER SILERU-I&II	1	4	(4X60)	SILERU	VISHAKAPATNAM	240.00	1967-1995
5.	NJ SAGAR TPD	1	2	(2X25)	KRISHNA	GUNTUR	50.00	2017
	TOTAL APGENCO	5	20				1610.00	

* All projects are in EFR Basin

3. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	District	River/ Basin	I. C. (MW)	Likely Commissioning	Issues / Constraints
1	Indirasagar (Polavaram)	Polavaram Project Authority	East & West Godavari	Godavari / EFR	960	2020-23	Public hearing for construction of protective embankment to be held in Odisha and Chhattisgarh as desired by MOEF at later stage.
	Total				960		

4. 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./ Chhattisgarh/ 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, Chhattisgarh and Maharashtra.

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	770
II	Capacity under construction	1	30
III	Schemes allotted by States for development		
	(i) Schemes returned to project authorities	1	320
H. E. Projects yet to be allotted for development*		1	250

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	TSGENCO							
1.	PRIYADARSHNI JURALA	1	6	(6X39)	KRISHNA	MAHABOONAGAR	234.00	2008-2011
2.	POCHAMPAD	1	4	(4X9)	GODAVARI	NIZAMABAD	36.00	1987-1988, 2010

3.	NAGARJUNA SGR	1	1	(1X110)	KRISHNA		110.00	1978-85
4.	NAGARJUNA SGR LBC	1	2	(2X30)	KRISHNA	GUNTUR	60.00	1983
5.	LOWER JURALA	1	6	(6X40)	KRISHNA	WANPARTHY	240.00	2015-16
6.	PULINCHINTH ALA	1	3	(3X30)	KRISHNA	SURAPETA	90.00	2016-17
	TOTAL TSGENCO	6	22				770.00	

* All projects are in EFR Basin

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

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

4. H.E. Projects under Construction:

Sl. No.	Name of Project	I.C. (MW)	District	River /Basin	Agency	Likely Commissioning
1.	Pulichintala	30	Nalgonda	Krishna/ EFR	TSGENCO	2018-19
	Total	30				

5. 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			

6. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Singareddi	Godavari	R	250
	Total	1 No. of Schemes		250

Note: R –Run off the River & S- storage

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	3644.2
II	Schemes allotted by States for development		
	(i) Schemes returned to project authorities	2	665
III	H. E. Projects yet to be allotted for development*	15	2289

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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	Shimsha	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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River /Basin	District	Capacit y (mw)	Year of commissioning
	KPCL							
1.	ALMATTI	1	6	(5X55)+(1X15)	KRISHNA /EFR	BIJAPUR	290.00	2004-2005
2.	GERUSOPPA (SHARAVATHY TAIL RACE)	1	4	(4X60)	SHARAVATHY /WFR	UTTARA KANNADA	240.00	2001-2002

3.	GHAT PRABHA	1	2	(2X16)	GHATPRABHA /EFR	BELGAUM	32.00	1992
4.	MAHATMA GANDHI JOG	1	8	(4X21.6)+(4X13.2)	SHARAVATHY /WFR	SHIMOGA	139.20	1949-1952
5.	KADRA	1	3	(3X50)	KALI /WFR	UTTARA KANNADA	150.00	1997-1999
6.	KALINADI (NAGJHARI)	1	6	(3X135)+(3X150)	KALI/WFR	UTTARA KANNADA	855.00	1979-1984
7.	KALINADI SUPA	1	2	(2X50)	KALI/WFR	UTTARA KANNADA	100.00	1985
8.	KODASALI	1	3	(3X40)	KALI/WFR	UTTARA KANNADA	120.00	1998-1999
9.	LINGNAMAKKI	1	2	(2X27.5)	SHARAVATHY /WFR	SHIMOGA	55.00	1979-1980
10.	MUNIRABAD	1	3	(2X9)+(1X10)	TUNGABHADRA /EFR	KOPPAL	28.00	1962-1965
11.	SHARAVATHY	1	10	(10X103.5)	SHARAVATHY /WFR	SHIMOGA	1035.00	1965-1977
12.	SIVASAMUNDRUM	1	10	(4X6)+(6X3)	CAUVERY /EFR	MANDYA	42.00	1922-1934
13.	VARAHI	1	4	(4X115)	VARAHI/ WFR	UDUPI	460.00	1989-2009
14.	BHADRA	1	3	(2x12)+(1x2)	BHADRA /EFR	CHICKMAGALUR	26.00	1965
	TOTAL KPCL	14	66				3572.20	
	APGENCO							
15.	T B DAM *	1	4	(4X9)	TUNGABHADRA /EFR	BELLARI	36.00	1957-1964
16.	HAMPI *	1	4	(4X9)	TUNGABHADRA /EFR	BELLARI	36.00	1958-1964
	SUB-TOTAL APGENCO	2	8				72.00	
	TOTAL KARNATAKA	16	74				3644.20	

* 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. Pumped Storage Schemes under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	I.C. (MW)	Agency	Target date of preparation of DPR
1.	Sharavathy	Sharavathy	2000	KPCL	12/18
	Total		2000		

7. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Krishnapur	Mandavi	R	210
2	Gangavali (Sonda) St.II	Gangavali	S	105
3	Bannehole	Bannehole	S	55
4	Machchattu	Varahi	R	35
5	Netravathy	Netravathy	S	60
6	Sirpadi	Netravathy	R	38
7	Kumaradhari	Kumaradhari	S	49
8	Barapole I	Barapole	S	335
9	Jaldurg	Krishna	R	270
10	Arkavathi	Arkavathi	R	42

11	Kalinadi I (Dandeli II)	Kalinadi	R	60
12	Kalinadi I (Mardi)	Kalinadi	R	175
13	Gangavali (Bedti) St.I	Gangavali	S	380
14	Gangavali (Sonda) St.II	Gangavali	S	105
15	Aghnashini	Aghnashini	S	370
	Total	15 Nos. of Schemes		2289

Note: R –Run off the River & S- storage

8. 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 issue of development of Hydroelectric Projects in Cauvery Basin. Secretary (Power) expressed that Shivasamudram being a Run of River Project within 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 Governments need to arrive at an arrangement for power sharing.
3	Cauvery Power Projects- Sivasamudram Seasonal	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

	(2x135=270 MW)				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 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
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					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		14	1856.5
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
IV	H. E. Projects yet to be allotted for development*		10	938

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. Hydro Electric Projects in Operation:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	KSEB							
1.	IDAMALAYAR	1	2	(2X37.5)	IDAMALAYAR		75.00	1987
2.	IDUKKI	1	6	(6X130)	PERIYAR	IDUKKI	780.00	1976-1986
3.	KAKKAD	1	2	(2X25)	PAMBA	PATHANAMTHITTA	50.00	1999
4.	KUTTIYADI	1	3	(3X25)	KUTTIYADI	KOZHIKODE	75.00	1972
5.	KUTTIYADI EXTN.	1	1	(1X50)	KUTTIYADI	KOZHIKODE	50.00	2001
6.	KUTTIYADI ADDN EXTN	1	2	(2X50)	KUTTIYADI	KOZHIKODE	100.00	2010
7.	LOWER PERIYAR	1	3	(3X60)	PERIYAR	IDUKKI	180.00	1997
8.	NERIAMANGLAM	1	3	(3X15)	MUTHIRAPUZHA	IDUKKI	45.00	1961-63
9.	PALLIVASAL	1	6	(3X5)+(3X7.5)	MUTHIRAPUZHA	IDUKKI	37.50	1948-2001
10.	PANNIAR	1	2	(2X15)	PANNIAR	IDUKKI	30.00	1963-2001
11.	PORINGALKUTTU	1	4	(4X8)	CHALAKUDY	COIMBATORE	32.00	1957-1960
12.	SABARIGIRI	1	6	(6X50)	PAMBA	PATHANAMTHITTA	300.00	1960-1967
13.	SENGULAM	1	4	(4X12)	MUTHIRAPUZHA	IDUKKI	48.00	1954-2001
14.	SHOLAYAR	1	3	(3X18)	SHOLAYAR	COIMBATORE	54.00	1956-1968
	TOTAL KSEB	14	47				1856.50	

* All projects are in WFR Basin

2. 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	

3. H.E. Schemes under Construction:

Sl. No.	Name of Project	Agency	District	River / Basin*	I.C. (MW)	Likely Commissioning
1	Pallivasal	KSEB	Idukki	Mudirapuzha/ Periyar/ Baypore Periyar	60	2020-21
2	Thottiyar	KSEB	Idukki	Thottiyar/ Periyar/ / Baypore Periyar	40	2020-21
Total					100	

* All projects are in WFR Basin

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

Sl. No.	Name of Project	Agency	District	River / Basin	I.C. (MW)	Date of CEA Concurrence	Status
1	Athirappilly	KSEB	Thrishur	Chalakkudy / WFR	163	31.03.05	EC restored on 9.10.15. FC accorded. Fresh tenders are under process.
Total					163		

5. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Baraple II	Barapole	R	85
2	Chalipuzha	Baypore	S	50
3	Silent Valley	Kundipuzha	S	130
4	Perinjankutty	Perinjankutty	S	120
5	Manali	Idamlayar	S	36
6	Kudal	Idamlayar	S	47
7	Puyanukutty	Puyanukutty	S	285
8	Kuriakutty	Kuriakutty	S	65
9	Lower Sabarigiri	Kakkad	S	55
10	Twin Kallar Multipurpose	Achankovil	S	65
	Total	10 Nos. of Schemes		938

Note: R –Run off the River & S- storage

6. 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 interstate 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 interstate rivers), this project remains as a non-starter. • The final award of CWDT has been challenged by Kerela 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 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	26	1778.2
H. E. Projects yet to be allotted for development	NIL	NIL

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River/ Basin	District	Capacity (mw)	Year of commissioning
	TANGEDCO							
1.	ALIYAR	1	1	(1X60)	MASONARY DAM/WFR	COIMBAT ORE	60.00	1970
2.	BHAVANI KATTALAI BARRAGE-I	1	2	(2X15)	CAUVERY /EFR	ERODE	30.00	2006
3.	BHAVANI KATTALAI BARRAGE-II	1	2	(2X15)	CAUVERY /EFR	ERODE	30.00	2013
4.	BHAVANI KATTALAI BARRAGE-III	1	2	(2X15)	CAUVERY /EFR	ERODE	30.00	2012
5.	KODAYAR-I	1	1	(1X60)	KODAYAR/ WFR	KANYAK UMARI	60.00	1970
6.	KODAYAR-II	1	1	(1X40)	KODAYAR/ WFR	KANYAK UMARI	40.00	1971
7.	KUNDAH-I	1	3	(3X20)	AVLANCHE STREAM /EFR	NILGRIS	60.00	1960-1964
8.	KUNDAH-II	1	5	(5X35)	KUNDAH /EFR	NILGRIS	175.00	1960-1965
9.	KUNDAH-III	1	3	(3X60)	PENGUNBA HALLAH /EFR	COIMBAT ORE	180.00	1965-1978
10.	KUNDAH-IV	1	2	(2X50)	BHAVANI /EFR	COIMBAT ORE	100.00	1966-1978
11.	KUNDAH-V	1	2	(2X20)	BHAVANI /EFR	NILGRIS	40.00	1964-1988
12.	LOWER METTUR-I	1	2	(2X15)	CAUVERY /EFR	SALEM	30.00	1988
13.	LOWER METTUR-II	1	2	(2X15)	CAUVERY /EFR	SALEM	30.00	1988
14.	LOWER METTUR-III	1	2	(2X15)	CAUVERY /EFR	SALEM	30.00	1987-1988
15.	LOWER METTUR-IV	1	2	(2X15)	CAUVERY /EFR	SALEM	30.00	1988-1999
16.	METTUR DAM	1	4	(4X12.5)	CAUVERY /EFR	SALEM	50.00	1937-1946
17.	METTUR TUNNEL	1	4	(4X50)	CAUVERY /EFR	SALEM	200.00	1965-1966
18.	MOYAR	1	3	(3X12)	MOYAR /EFR	NILGRIS	36.00	1952-1953
19.	PAPANASAM	1	4	(4X8)	THAMBRAP ARANI /EFR	TIRUNEL VELI	32.00	1944-1951
20.	PARSON'S VALLEY	1	1	(1X30)	BHAVANI /EFR	NILGIRIS	30.00	2000
21.	PERIYAR	1	4	(3X42)+(1X35)	PERIYAR /WFR	IDUKKI	161.00	1958-1965
22.	PYKARA	1	6	(3X7)+(2X13.6)+(1X11)	Glenmorgan Forebay dam /EFR	NILGRIS	59.20	1932-2005
23.	PYKARA ULTIMATE	1	3	(3X50)	PYKARA /EFR	NILGRIS	150.00	2005
24.	SARKARPATHY	1	1	(1X30)	PARABIKUL AM/WFR	KOZHIKO DE	30.00	1966
25.	SHOLAYAR I	1	2	(2X35)	SHOLAYAR/ WFR	COIMBAT ORE	70.00	1971
26.	SURULIYAR	1	1	(1X35)	ERAVANGA LAR /EFR	TIRUNEL VELI	35.00	1978
	TOTAL TANGEDCO	26	65				1778.20	

3. 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	

4. Pumped Storage H.E. Projects Under construction:

Sl. No.	Name of Project	I. C. (MW)	Remarks
1.	Kundah Pumped Storage –Phase I	125	Under Construction
	Total	125	

5. 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)
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					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 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 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
Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations	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. 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	Dagmara	BSHPCL	130	Returned on 29.01.2018. All the partial clearances issued till date were rescinded as no progress has been made by the developer towards resolving the issues pending with various appraising groups.
	Total		130	

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	3	170
H. E. Projects yet to be allotted for development*	3	147

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S. NO.	UTILITY/STATIONS	NO. OF STNS.	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER / BASIN*	DISTRICT	CAPACITY (MW)	YEAR OF COMMISSIONING
	DVC							
1	PANCHET	1	1	(1X40)	RAIN & RIVER	DHANBAD	40.00	1990
	SUB-TOTAL DVC	1	1				40.00	
	JUUNL							

1	SUBERNREKHA -I	1	1	(1X65)	SUBERNAREKHA	RANCHI	65.00	1977
2	SUBERNREKHA -II	1	1	(1X65)	SUBERNAREKHA	RANCHI	65.00	1980
	TOTAL JUUNL	2	2				130.00	
	TOTAL JHARKHAND	3	3				170.00	

* Panchet is in Ganga and Subernrekha-I & II are in CIR Basin.

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.

5. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Serengada	N.Koel	R	37
2	Upper Sankh St-II	Sankh	R	55
3	Lower Sankh	Sankh	S	55
	Total	3 Nos. of Schemes		147

Note: R –Run off the River & S- storage

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	2142.25
Capacity under S & I	2	276
H. E. Projects yet to be allotted for development*	6	896

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. H.E. Projects in Operation:

S. NO.	UTILITY/STATIONS	NO. OF STNS.	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER / BASIN*	DISTRICT	CAPACITY (MW)	YEAR OF COMMISSIONING
	OHPC							
1	BALIMELA	1	8	(6X60)+(2X75)	SILERU	MALKANGIRI	510.00	1973-1977, 2008
2	HIRAKUD (BURLA)	1	7	(3X37.5)+(2X49.5)+(2X32)	MAHANADI	SAMBALPUR	275.50	1956-1990
3	HIRAKUD (CHIPLIMA)	1	3	(3X24)	MAHANADI	SAMBALPUR	72.00	1962-1964
4	RENGALI	1	5	(5X50)	BRAHMANI	ANGUL	250.00	1985-1992
5	UPPER INDRAVATI	1	4	(4X150)	INDRAVATI	KALAHANDI	600.00	1999-2001
6	UPPER KOLAB	1	4	(4X80)	KOLAB	KORAPUT	320.00	1988-1993
	TOTAL OHPC	6	31				2027.50	
	APGENCO							
1	MACHKUND	1	6	(3X17)+(3X21.25)	MACHKUND	KORAPUT	114.75	1959
	SUB-TOTAL APGENCO	1	6				114.75	
	TOTAL ODISHA	7	37				2142.25	

* Hirakud (Burla & Chiplima) and Rengali are in CIR basin & others are in EFR Basin.

2. H.E. Projects under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	I.C. (MW)	Agency	Target date of preparation of DPR
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1.	Salki	Salki	165	OHPCL	
2.	Kharag	Kharag	111	OHPCL	
	Total		276		

3. Pumped Storage Projects under Survey & Investigation:

Sl. No.	Name of Scheme	Basin/River	I.C. (MW)	Agency	Target date of preparation of DPR
1.	Upper Indravati	Indravati	600	OHPCL	
2.	Upper Kolab	Kolab	320	OHPCL	
	Total		920		

4. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Bhimkund	Baitarni	S	29
2	Baljori	Baitarni	S	230
3	Lodani	Brahmani	S	42
4	Naraj	Mahanadi	S	215
5	Tikkarpara	Mahanadi	S	205
6	Hirakud St-III	Mahanadi	R	175
	Total	6 Nos. of Schemes		896

Note: R –Run off the River & S- storage

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	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.
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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 held up	1	81
H. E. Projects yet to be allotted for development*	3	2608

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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	District	River /Basin*	I. C. (MW)	Year of Commissioning
1	Jaldhaka	WBSEDCL	KALIMPONG	Di chu, Ni chu & Bindu Khola River	36	1967- 72,2012
2	Rammam II	WBSEDCL	DARJEELING	Rammam	50	1995-96
3	Teesta low dam-III	NHPC	DARJEELING	Teesta	132	2013-14
4	Maithon	DVC	WEST DHANBAD	Basakar	63.2	1957-58
5	Teesta Low Dam-IV	NHPC	DARJEELING	Teesta Kalikhola confluence	160	2016
	Total				441.2	

* Maithon is in Ganga and others are in Brahmaputra Basin.

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	District	River / Basin	I. C. (MW)	Likely Commissioning
1.	Rammam-III	NTPC	Darjeeling	Rammam/ Rangit/Teesta/Brahmaputra	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	

8. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Balason	Balason	R	33
2	Ramamam-I	Ramam	R	70
3	Teesta High Dam	Teesta		2505
	Total	3 Schemes		2608

Note: R –Run off the River & S- storage

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	7	2169
II	Capacity under construction	6	1133
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	92
	Total (i-iii)	5	1188
H. E. Projects yet to be allotted for development		NIL	NIL

1. H.E. Projects in Operation:

S. NO.	UTILITY/ STATIONS	NO. OF STNS.	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER / BASIN*	DISTRICT	CAPACITY (MW)	YEAR OF COMMISSIONING
	NHPC			-	-	-	-	-
1	RANGIT-III	1	3	(3X20)	RANGIT	GANGTOK	60.00	2000
2	TEESTA-V	1	3	(3X170)	TEESTA	EAST SIKKIM	510.00	2008
	SUB-TOTAL NHPC	2	6				570.00	
	STATE							
	TEESTA URJA LTD. (TUL)							
3	TEESTA-III	1	6	(6X200)	TEESTA	NORTH SIKKIM	1200.00	2017
	SUB-TOTAL TUL	1	6				1200.00	
	PRIVATE							
	GIPL (GATI INFRA PRIVATE LTD.)							
4	CHUZACHEN	1	2	(2*55)	RONGLI & RANGPO	EAST SIKKIM	110.00	2013
	SNEHA KINETIC POWER PROJECTS							

	PVT LTD (SKPPPL)							
5	DIKCHU	1	2	(2*48)		EAST & NORTH SIKKIM	96.00	2017
	SHIGA ENERGY PVT LTD (SEPL)							
6	TASHIDING	1	2	(2*48.50)	RATHANG CHU		97.00	2017
	DANS ENERGY PVT LTD. (DEPL)							
7	JORETHANG LOOP	1	2	(2*48)	RANGIT	SOUTH/WE ST	96.00	2015
	SUB-TOTAL PRIVATE	4	8				399.00	
	TOTAL SIKKIM	7	20				2169.00	

* All projects are in Brahmaputra Basin

2. H.E. Projects under Construction:

Sl. No.	Name of Project	Agency	District	I.C. (MW)	River/ Basin	Likely Commissioning
1	Bhasmey	Gati Infrastructure	East Sikkim	51.00	Rangpo/ Teesta/ Brahmaputra	2021-22 *
2	Rangit-IV	JAL Power	West Sikkim	120.00	Rangit/ Teesta/ Brahmaputra	2021-22 *
3	Rangit-II	Sikkim Hydro	West Sikkim	66.00	Greater Rangit/ Teesta/ Brahmaputra	2019-20 (Mar'20)
4	Rongnichu	Madhya Bharat	East Sikkim	96.00	Rongnichu/ Teesta/ Brahmaputra	2019-20 (Mar'20)
5	Teesta St. VI	LANCO	South Sikkim	500.00	Teesta/ Brahmaputra	2021-22 *
6	Panan	Himagiri	North Sikkim	300.00	Rangyongchu/ Teesta/ Brahmaputra	2022-23 *
	Total			1133.00		

* Subject to re-start of works

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

Sl. No	Name of Project	Agency	District	River / Basin*	I.C. (MW)	Date of CEA Concurrence	Status
1	Teesta St-IV	NHPC	North Sikkim	Teesta	520	13.05.10	EC accorded on 09.01.14. FC-I accorded on 26.02.13. FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 08.08.2017. MOU with State Govt. to be amended by developer. State Forest Department on 31.01.2018 submitted compliance report of

							FC-I to MoEF for issuance of FC-II. Observations on compliance report issued by MoEF & CC on 3.04.2018 and NHPC submitted its comments on 20.04.2018 on the observations raised by MoEF&CC.
		Total			520		

* All projects are in Brahmaputra Basin

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

5.

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Month of return/Reason of Return
1	Teesta st.-II	HUIPL	480	Returned on 05/17 due to Incomplete geological investigations. Review of dam location. Back water studies to be carried out.
2	Lethang	KHCHPL	96	Returned on 04/2010 due to lack of barrage v/s dam design, review of I.C.,review of spillway capacity etc.
	Total		576	

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	52	12.2.2007
2	Suntaley tar	Rangpochu	Hindustan Electric Power Ltd.	40	LOI date 23.02.12
	Total			92	

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		2	515
II	Capacity under construction		3	2744
III	Schemes allotted by States for development			
	(i)	Schemes cleared by CEA and yet to be taken up for construction	17	16952
	(ii)	Schemes returned to project authorities	13	6329
	(iii)	Schemes under S&I	26	3707
	(iv)	H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	20	9462
IV	H. E. Projects yet to be allotted for development*		17	13205

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

1. H.E. Projects in Operation:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	NEEPCO			-	-	-	-	-
1	RANGANADI	1	3	(3X135)	RANGANADI	LOWER SUBANSIRI	405	2002
2	PARE	1	2	(2X55)	BRAHMAPUTRA		110	2018
	TOTAL	2	5				515	

Note: All projects are in Brahmaputra Basin

2. H.E. Schemes Under Construction:

Sl. No.	Name of Project	Agency	District	I.C. (MW)	River/Basin	Likely Commissioning
1	Kameng	NEEPCO	West Kameng	600.00	Bichom & Tenga / Kameng/Brahmaputra	2018-19 (Oct'18)
2	Subansiri	NHPC	L.Subansiri/ Dhemaji	2000.00	Subansiri/ Brahmaputra	2022-23 *
3	Gongri	Dirang Energy	West Kameng	144.00	Gongri / Bichom/ Kameng/ Brahmaputra	2021-22 *
	Total			2744		

* subject to re-start of works.

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

Sl No.	Name of Project	Agency	District	River / Basin*	I.C. (MW)	Date of CEA Concurrence	Status
1	Dibbin	KSKDHPL	West Kameng	Bichomchhu	120	04.12.09	EC accorded on 23.7.12. FC-I accorded on 7.2.12. FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 08.08.2017. Developer to submit revised PPS based on BSR to CEA. Project being transferred to State Govt./ NEEPCO
2	Lower Siang	JAVL	East Siang	Siang	2700	16.02.10	EC & FC yet to be obtained by developer. Facing difficulties in conducting public hearing due to local protest. However, as per MoEF&CC, matter of FC is closed vide letter dated 19.01.2016.
3	Nafra	SNEL	West Kameng	Bichom	120	11.02.11	EC accorded on 19.08.13. FC-I accorded on 12.7.11 & FC-II accorded on 19.11.2012. PPA yet to be signed. Thereafter Financial agreement to be made to resume works.
4	Nyamjang Chhu	NJCHPL	Tawang	Nyamjang Chhu	780	24.03.11	EC accorded on 19.4.12. FC-I accorded on 9.4.2012. NGT vide judgement dated 7.4.2016, has suspended EC till the time the studies as directed are to be carried out. WII study is under process.
5	Tawang St-I	NHPC	Tawang	Tawang Chu	600	10.10.11	EC accorded on 10.6.11. FC-I & FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 13.06.17. Land acquisition in process. Local resident are not cooperating. As per MOM chaired by Secretary (Power) on 13.10.17, pending issues with

							MoEF&CC to be taken up after FC-II is accorded to Tawang-II HE Project.
6	Tawang St-II	NHPC	Tawang	Tawang Chu	800	22.09.11	EC accorded on 10.06.11. FC-I accorded on 8.01.14. FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 23.02.2017. Local resident are not cooperating. Hon'ble Minister of State (I/C), MOP through DO letter dated 2.02.2018 requested Hon'ble CM, Ar. Pr. to intervene in the matter for submitting compliance report under FRA 2006 by State Govt. to MoEF for accord of FC-II.
7	Demwe Lower	ADPL	Lohit	Lohit	1750	20.11.09	EC accorded on 12.02.10. FC-II accorded on 03.05.2013. As per NGT order dated 24.10.17, NBWL issue to be reconsidered by MoEF&CC. Financial closure yet to be obtained. Developer informed that interim Resolution Professional (IRP) has been appointed by The National Company Law Tribunal (NCLT) to resolve financial issues of the firm.
8	Hirong	JAPL	West Siang	Siang	500	10.04.2013	EC & FC yet to be obtained by developer. EIA/EMP report being revised as per Siang BSR. FC-I under process at state level. However, as per MoEF&CC, matter of FC is closed vide letter dated 02.12.2015. Developer to submit revised PPS based on BSR to CEA.

9	Talonga Londa	GMR	East kameng	Kameng	225	16.08.2013	EC accorded on 07.08.15. FC-I & FC-II yet to be obtained. Pending with State Govt. Additional information sought by MoEF&CC vide letter 08.02.17
10	Etalin	EHEPCL	dibang Valley	Dri & Tangon	3097	12.07.2013	EC recommended by EAC on 31.01.17. Letter will be issued after FC-I. FC-I & FC-II yet to be obtained. Additional information sought by MoEF&CC vide letter 28.03.2017. WII study is to be carried out.
11	Naying HEP	NDSCPL	West Siang	Siang	1000	11.09.2013	EC & FC yet to be obtained by developer. EC is linked with Siang BSR which is completed and accepted by MoEF&CC. FC-I pending with State Govt. For FC-I, additional information sought by MoEF&CC vide letter 26.05.2015. Developer to submit revised PPS based on BSR to CEA. DISCOMs are reluctant to sign PPA.
12	Kalai –II HEP	Kalai PPL	Anjaw	Lohit	1200	27.3.2015	EC accorded 20.5.15. FC-I and FC-II yet to be obtained. Developer to submit revised PPS based on BSR to CEA.
13	Heo	HHPPL	West Siang	Yarjep	240	28.07.2015	EC accorded on 10.11.15. FC-I accorded on 27.10.15. FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 11.01.17, which was furnished to MoEF&CC on

							2.11.17. Infrastructure to be developed by State Govt./ BRO.
14	Tato-I	SHPPL	West Siang	Yarjep	186	28.10.2015	EC accorded on 10.11.15. FC-I accorded on 27.10.15. FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 11.01.17. Infrastructure to be developed by State Govt./ BRO.
15	Tagurshit	L&T	West Siang	Tagurshit	74	21.10.16	EC recommended by EAC in Oct, 2016. Letter will be issued after FC-I. FC-I & FC-II yet to be obtained. FRA compliance under process.
16	Dibang	NHPC	lower Dibang Valley	Dibang	2880	18.09.2017	EC accorded on 19.05.15. FC-I accorded on 15.04.15. FC-II yet to be obtained. Land acquisition in process. For FC-II, compliance Report awaited from State Govt.
17	Attunli	AHEPCL	Dibang Valley	Tangon	680	15.03.18	Both EC and FC are yet to be obtained by developer
	Total				16952		

Note: All projects are in Brahmaputra Basin

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

Sl. No.	Name of Scheme	Agency	I.C. (MW)	Month of Return/Reason of Return
1	Ranganadi St-II	NEEPCO	130	Returned on 04/06 and 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 on 05/11 due to inadequate geological investigations at dam site, diversion tunnel, surge shaft & power house etc.
3	Hutong –II	MEIPL	1200	The DPR was returned on 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	Returned on 05/12 and 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	MHPL	90	Returned on 02/13 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	SSHPL	100	Returned on 06/13 reason being 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	SKI Pvt. Ltd.	80	DPR returned on 06/13 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	SKI Pvt. Ltd.	141	DPR returned on 06/13 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	Returned on 03/15 as 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	SNCPCL	96	Returned on 04/15 due to non-submission of investigation suggested by GSI.
12	Subansiri Middle (Kamla)	KHEPCL	1800	Returned on 29.01.2018. All the partial clearances issued till date were rescinded as no progress has been made by the Developer towards resolving the issues pending with various appraising groups.
13	Magochu	SMCPCL	96	
	Total		6329	

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.	1878	June'2010 for Oju-I & Oju-II, Revised MoU for Single Scheme is received in April'13	12/18
2	Pauk	Siang	Velcan Energy Pvt Ltd	145	30.06.2007 (rev MOA-31.07.09)	06/19
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.	66	19.11.2008	12/18
6	Para	Kameng	Coastal Projects Pvt. Ltd.	45	19.11.2008	12/18
7	Pachuk-II	Kameng	Energy development Co. Ltd	61	27.08.2010	03/19
8	Tsa Chu - I Lower	Tawang	Energy development Co. Ltd	77	27.08.2010	03/19
9	Tsa Chu - II	Tawang	Energy development Co. Ltd	67	27.08.2010	03/19
10	Pachuk-II Lower	Kameng	Energy development Co. Ltd	51	27.8.2010	12/18
11	Marijingla	Kameng	Energy development Co. Ltd	39	12.1.2008 (Amended on 27.8.2010)	12/18
12	Marijingla Lower	Kameng	Energy development Co. Ltd	37	27.8.2010	12/18
13	Rego	Siang	Greenko Energies Ltd.	97	25.09.2012	-

14	Rapum	Siang	Greenko Energies Ltd.	66	27.12.2007	-
15	Jameri	Kameng	KSK Energy Ventures Ltd	60	27.12.2007	09/18
16	Pango	Siang	Meenakshi Power Ltd.	96	27.08.2010	01/20
17	Sippi	Siang	Meenakshi Power Ltd.	96	20.7.2011	11/19
18	Jidu (Yangsang)	Siang	Meenakshi Power Ltd.	96	20.7.2011	12/19
19	Digin	Kameng	Patel Hydro Power Pvt.Ltd.	46	15.11.2010	09/18
20	Meyong	Kameng	Patel Hydro Power Pvt.Ltd.	38	15.11.2010	09/18
21	Panyor	Dikrong	Rajratna Energy Holding Pvt. Ltd.	80	25.02.2009	10/19
22	Tidding-I	Lohit	Sai Krishnodaya Ind. (P) Ltd.	84	26.02.2009	06/19
23	Tidding-II	Lohit	Sai Krishnodaya Ind. (P) Ltd.	75	26.02.2009	06/19
24	New Melling	Tawang	SEW Energy	90	2.3.2009	-
25	Lower Yamne-II	Siang	Yamne Power Pvt. Ltd.	87	29.11.2008	-
26	Lower Yamne -I	Siang	Yamne Power Pvt. Ltd	75	29.11.2009	-
	Total			3707		

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 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			

8. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Siang Upper St. I	Siang	S	6000
2	Siang Upper St. II	Siang	S	3750
3	Agoline	Dibang	R	235
4	Mulinye	Tangon	R	335
5	Elango	Ahi	R	180
6	Rigong	Rigong	R	130
7	Mirak	Sigong	R	160
8	Minnying	Sigong	R	195
9	Hegio	Kurung	R	250

10	Dudmukh Storage	Dikrong	S	170
11	Yazali Div.II	Ranga	R	415
12	Bichom-II	Bichom	R	205
13	Bhareli Lift Dam-I	Kameng	R	240
14	Kimi	Bichom	R	535
15	Chanda	Kameng	R	110
16	Bichom Storage-I	Bichom	S	190
17	Seba	Pakke	R	105
	Total	17 Nos. of Schemes		13205

Note: R –Run off the River & S- storage

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	350
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
III	H. E. Projects yet to be allotted for development *	5	185

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S.No	UTILITY /STATIONS	NO. OF STAT IONS	No. of Units	NO. OF UNITS X CAPACITY (MW)	RIVER/ BASIN*	DISTRICT	CAPAC ITY (MW)	YEAR OF COMMI SSIONI NG
	NEEPCO							
1.	KOPILI	1	4	(4X50)	KOPILI	DIMA HASAO	200.00	1988
2.	KHONDONG	1	2	(2X25)	KOPILI	DIMA HASAO	50.00	1984
	SUB-TOTAL NEEPCO	2	6				250.00	
	APGCL							
3.	KARBI LANGPI	1	2	(2X50)	BORPANI	KARBI ANGLONG	100.00	2007
	SUB-TOTAL APGCL	1	2				100.00	
	TOTAL ASSAM	3	8				350.00	

Note: All projects are in Brahmaputra Basin

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

Sl No.	Name of Project	Agency	District	River / Basin*	I.C. (MW)	Date of CEA Concurrence	Status
1	Lower Kopili	APGCL	Karbi Anglong & Dima Hasao	Kopili	120	24.05.2016	EC recommended by EAC on 5 Dec, 2017. Letter will be issued after FC-I. FC-I pending with Nodal Officer. As per developer, the proposal of FC-I was to be approved by State Govt. and thereafter it will be sent to MoEF&CC
	Total				120		

* All projects are in Brahmaputra Basin

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

Sl. No	Name of Scheme	Agency	I.C. (MW)	Month of Return/Reason of Return
1	Karbi langpi(U.Borpani)	ASEB	60	Returned on 12/08 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. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Dilli Stor.	Disang	S	33
2	Jamuna Dam P/H	Jamuna	S	28
3	Diyung Dam P/H	Diyung	S	47
4	Langey	Borpani	R	37
5	Amring	Amring	S	40
	Total	5 Nos. of Schemes		185

Note: R –Run off the River & S- storage

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
H. E. Projects yet to be allotted for development*		12	936

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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	Bungpui long	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)	River/Basin	District	Year of Commissioning
	NHPC					
1	Loktak	NHPC	105	Loktak Lake/ Brahmaputra	Churachandpur	1983
	Total		105			

3. H.E. Projects cleared by CEA:

Sl No	Name of Project	Agency	River/ Basin	District	I.C. (MW)	Date of concurrence	Status
1	Loktak D/S	LDHCL	Leimatak/ Brahmaputra	Tamenglong	66	4.11.2016 (concurrence meeting date)	EC accorded on 16.01.2013. FC-I accorded on 03.03.2011 & FC-II accorded on 22.12.2014. Due to no response from bidders, retendering of main packages are under process. PIB proposal returned by MoP on 11.07.17 seeking firm commitment regarding grant from State Government. Draft PIB memo with JICA financing Debt Equity ratio of 80:20 and Rs. 400 Crs. grant from DoNER submitted to MoP on 9.04.2018
	Total				66		

4. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Laniye-II	Laniye	R	27

2	Laniye-I	Laniye	S	34
3	Khongnem Chakha-II	Barak	S	90
4	Khongnem Chakha-III	Barak	R	48
5	Nungnang	Irang	S	70
6	Nungliban	Leimatek	S	85
7	Khunou	Leimatek	R	115
8	Thinghat	Tuivai	S	41
9	Sinjal	Tuivai	S	39
10	Bungpuilong	Tuivai	S	80
11	Irang	Irang	S	75
12	Pabaram Stor.	Barak	S	232
	Total	12 Nos. of Schemes		936

Note: R –Run off the River & S- storage

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	85
	(iii) Schemes under S&I	1	210
	(iv) H.E. Schemes allotted for development on which S&I is held up/ yet to be taken up	2	620
	(v) Hydro Schemes Returned to Project Authorities for re-submission after compliance of observations	1	210
III	H. E. Projects yet to be allotted for development*	12	746

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	MePGCL							
1.	KYRDEMKULA I	1	2	(2X30)	Tail water of Umiam stage- II & Umtru river	RI-BHOI	60.00	1979
2.	UMIAM ST-I	1	4	(4X9)	UMIAM	RI-BHOI	36.00	1965
3.	NEW UMTRU	1	2	(2X20)	UMTRU	RI-BHOI	40.00	2017
4.	UMIAM ST-IV	1	2	(2X30)	Tail water of Stage-III PH & own catchment	RI-BHOI	60.00	1992
5.	MYNTDU ST-I	1	3	(3X42)	MYNTDU	JAINTIA HILLS	126.00	2012
	TOTAL MePGCL	5	13				322.00	

* All projects are in Brahmaputra Basin

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

Sl No .	Name of Project	Agency	District	River / Basin	I.C. (MW)	Date of CEA Concurrence	Status
1	Kynshi-I	AKPPL	West Kashi Hills	Kynshi / Brahamputra	270	31.3.2015	EC & FC yet to be obtained by developer. EIA/EMP report under preparation. EC proposal will be submitted by Sept, 2018. FC-I proposal will be submitted to State Govt. Issue of funding for Flood Moderation component to be resolved.
	Total				270		

4. Hydro Schemes Under Examination/Scrutiny in CEA:

Sl. No.	Name of Project	Agency	I.C. (MW)	Month of receipt
1	Umiew (Mawphu St.-II)	Umiew (Mawphu St.-II)	85	08/08/2017
	Total		85	

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

Sl. No.	Name of Project	Agency	I.C. (MW)	Month of Return
1	Umangot HEP	MePGCL	210	Jan-18
	Total		210	

6. 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	Myntdu Leshka st-II	Myntdu	MePGCL	210	20.4.12	2019
	Total			210		

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	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. The installed capacity is revised to 325 MW.
2	Selim	170	MePGCL	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. The installed capacity is revised to 80 MW. S&I held up due to financial constraints, the hostile terrain and non-availability of geologists from GSI, India.
	Total	620			

8. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Uiam Umtru-V	Uiam	R	27
2	Uiam Umtru-VI	Uiam	S	145
3	Simsang Dam P.H.	Someshri	S	65
4	Sushen	Myntdu	R	150
5	Nonglyngkien	Umtru	R	47
6	Rangmaw	Umngi	R	42
7	Nongnam	Umngi	R	36
8	Mawpat	Umngi	R	55
9	Nongmawlar	Kynshi	R	29

10	Mawsyrpat	Kynshi	R	45
11	Mawthaba	Kynshi	S	70
12	Amagam Storage	Rongdi	S	35
	Total	12 Nos. of Schemes		746

Note: R –Run off the River & S- storage

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 in operation	1	60
H. E. Projects yet to be allotted for development*	7	2131

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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. Projects in Operation:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin*	District	Capacity (mw)	Year of commissioning
	NEEPCO							
1	TUIRIAL	1	2	(2X30)	TUIRIAL	KOLASIB	60.00	2017
	TOTAL MIZORAM	1	2				60.00	

Note: All projects are in Brahmaputra Basin

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.

3. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Lunglang Stor.	Tyao	S	690
2	Boinu Stor.	Kaldan	S	635
3	Kaldan Stor.	Kaldan	S	545
4	Bhairabi	Dhaleshwari	S	90
5	Sonai	Sonai	S	55
6	Mat	Mat	S	90
7	Deh	Deh	S	26
	Total	7 Nos. of Schemes		2131

Note: R –Run off the River & S- storage

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
H. E. Projects yet to be allotted for development*		8	802

*The numbers and capacity yet to be allotted for development is different from arithmetic calculation from the potential assessed due to change in capacity of the schemes, addition/deletion of the schemes and merger of two schemes into one etc.

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:

S. No.	Utility/ Stations	No. Of stns.	No. Of units	No. Of units x capacity (mw)	River / Basin	District	Capacity (mw)	Year of commissioning
	NEEPCO							
1	DOYANG	1	3	(3X25)	DOYANG / Brahmaputra	WOKHA	75.00	2000
	TOTAL NAGALAND	1	3				75.00	

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

Sl No.	Name o Project	Agency	District	River / Basin	I.C. (MW)	Date of CEA Concurrence	Status
1	Dikhu HEP	NMPPL	Longleng	Dikhu and Yangnyu / Brahmaputra	186	31.03.2014	EC yet to be obtained by developer. FC not applicable as forestland is not involved. EC proposal will be submitted in next 6-7 months. Property survey in progress
	Total				186		

4. H. E. Projects yet to be allotted for development

Sl.No.	Name of Scheme	River	Type	Probable I.C.(MW)
1	Yangnyu Stor.	Dikhu	S	135
2	Jhanji storage	Jhanji	S	75
3	Sakhai-II	Tizu	R	31
4	Khuzami	Tizu	S	32
5	Rurrur	Zangki	S	36
6	Zungki	Zangki	S	48
7	Laruri	Tizu	R	80
8	Tizu	Tizu	S	365
	Total	8 Nos. of Schemes		802

Note: R –Run off the River & S- storage

Hydro Power Development in Tripura

Identified Hydro Power Potential and its status of Development:

No major/medium hydroelectric project has been identified in the Tripura State. However, a small Hydel power station in south Tripura named Gumti Hydel project having only 3x5 MW capacities. The details are as under:

Name of Project	Unit	Installed Capacity	Year of Installation	Phase
Gumti H.E. Project	Unit-I	5.00 MW	1976	Phase I
	Unit-II	5.00 MW	1976	
	Unit-III	5.00 MW	1984	Phase II