

STATUS OF PUMPED STORAGE DEVELOPMENT IN INDIA
(Installed Capacity above 25 MW)

As on 30.06.2021

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S.No.	SCHEMES	STATE	INSTALLED CAPACITY		REMARKS
			No. of units x Unit size(MW)	MW	
A. <u>SCHEMES CONSTRUCTED</u>					
a) Working in Pumping Mode					
1	Nagarjuna Sagar	Telangana	7x100.80	705.60	
2	Srisailem LBPH	Telangana	6x150	900	
3	Kadamparai	Tamil Nadu	4x100	400	
4	Bhira	Maharashtra	1x150	150	
5	Ghatgar	Maharashtra	2x125	250	
6	Purulia	West Bengal	4x225	900	
			Sub Total	3305.60	
b) Presently not working in Pumping Mode					
1	Kadana St. I&II (KHEP)	Gujarat	2x60+2x60	240	Two units of the project were commissioned during 1990 & two units in 1998. Machines operated in generation mode till 2004 and trial for pump mode operation was done during 2004-05. However, operation in pumping mode was not taken up subsequently due to vibration problem in the machines. CKD Blanksko (OEM) was contacted by the project authorities and they submitted their offer for rectification of the problem. This offer was discussed in a meeting by GSECL and it's management decided to rectify the problem on their own (through in house expertise) as the offer of CKD Blanksko was costlier. The Kadana unit no 3 was identified as the pilot unit for revival of Pump Mode Operation of KHEP. As per the report of vibration analysis of unit no 3, necessary corrections like replacement of both the bearings, alignment and centering of turbine shaft is completed recently. The stop log gates of Kadana Unit no 3 are removed. The protection testing of Kadana Unit no 3 is completed and found OK. The trial run of unit in generation mode is also completed. At present the vibration report of unit in generation mode is under analysis and on the basis of vibration analysis report on generation mode, the trial run of unit under pump mode operation will be planned subsequently. On successful trial of unit no 3 under pump mode, similar corrections/rectification activities will be replicated in other units also.
2	Panchet Hill (DVC)	Jharkhand	1x40	40	This project is an extension unit in the existing Panchet Hill Power Station of Damodar Valley Corporation (DVC). Panchet reservoir is already existing and would serve as upper reservoir of this project. The Hydel unit -2 was commissioned in April, 1991. The construction of Tail Pool dam could not be completed due to persistent obstructions by land awardees of two states- West Bengal and Bihar (presently Jharkhand)-demanding regular employment in DVC & Law and order situation was not conducive to start project. Thus construction work was not started. Corporation in its board meeting resolved on 13.2.1996 to discontinue construction of Tail pool dam and thereafter took decision to close down project of Tail Pool dam on 27.9.1996.
3	Sardar Sarovar Project	Gujarat	6x200	1200	Sardar Sarovar Pumped Storage Hydro Electric Project(1200 MW) was commissioned during 2004-06. The Generation of SSHEP is shared between Gujarat (16%), Maharashtra (27%) & Madhya Pradesh (57%) States, as per the Narmada Water Disputes Tribunal (NWDt) Award. The entire operations of the Project are based on the directives by Narmada Control Authority (NCA) under Ministry of Jal Shakti, Indore and as per Narmada Water Disputes Tribunal (NWDt) award. There was no mention of pump storage operation of the project in NWDt award. The project was not operating in Pumping mode as the lower reservoir at Garudeshwar weir was not operational and the equipments required to operate it in pumping mode were also not installed. Now, the lower reservoir at Garudeshwar weir has been made operational by Gujarat. Govt. of M.P. and Maharashtra are of the opinion that pumping in the project is not as per NWDt award. Both the states are ready to participate if water sharing, cost apportionment, power distribution, O&M issues, operational methodology and Legal issues are resolved by NCA taking into consideration the NWDt award in the new scenario of pumping mode operation of the project. Further, NCA has to take a decision to operate the project in pumping mode in consultation with the states of Maharashtra, M.P. and Gujarat.
			Sub total	1480	
			Grand Total	4785.60	

S.No.	SCHEMES	STATE	INSTALLED CAPACITY		REMARKS
			No. of units x Unit size(MW)	MW	
B. <u>SCHEMES UNDER CONSTRUCTION</u>					
a) Under Active Construction					
1	Tehri St.-II	Uttarakhand	4x250	1000	Likely commissioning by 2022-23 (Dec.'22)
2	Kundah (Stage I,II,III&IV)	Tamil Nadu	4x125	500	Likely commissioning by 2023-24 (Apr. 2023)
			Total	1500	
b) On which Construction is held up					
1	Koyna Left Bank	Maharashtra	2x40	80	Likely commissioning by 2025-26*
			Total	80	
			Grand Total	1580	
C. <u>DPR CONCURRED BY CEA</u>					
1	Turga	West Bengal	4x250	1000	EC & FC-I obtained. FC-II is awaited.
			Total	1000	
D. <u>SCHEME UNDER EXAMINATION IN CEA</u>					
1	Pinnapuram	Andhra Pradesh	4x240+2x120	1200	Off-River project; Both Reservoirs to be constructed
			Total	1200	
E. <u>SCHEMES UNDER SURVEY & INVESTIGATION</u>					
1	Upper Indravati	Odisha	4x150	600	Upper Reservoir existing; Lower Reservoir to be constructed; Target date for preparation of DPR – 12/2021
2	Upper Kolab	Odisha	2x160	320	Upper Reservoir existing; Lower Reservoir to be constructed; Target date for preparation of DPR – 05/2022
3	Balimela	Odisha	2x250	500	Upper Reservoir existing; Lower Reservoir to be constructed; Target date for preparation of DPR – 08/2022
4	Upper Sileru	Andhra Pradesh	9x150	1350	Both Reservoirs existing; Target date for preparation of DPR – 09/2021
5	Kodayar	Tamil Nadu	4x125	500	Both Reservoirs existing; Target date for preparation of DPR – 12/2021
6	Sillahalla St.-I	Tamil Nadu	4x250	1000	Upper Reservoir & Lower Reservoir to be constructed; Target date for preparation of DPR – 02/2022
7	Sharavathy	Karnataka	8x250	2000	Both Reservoirs existing; Target date for preparation of DPR – 12/2021
8	Saundatti	Karnataka	4x252+2x126	1260	Lower Reservoir existing; Upper Reservoir to be constructed; Target date for preparation of DPR – 08/2021
			Total	7530	
F. <u>SCHEMES UNDER PRE-FEASIBILITY REPORT PREPARATION (PFR)</u>					
1	Gandikota	Andhra Pradesh		600	
2	Chitravathi	Andhra Pradesh		500	
3	Somsila	Andhra Pradesh		1200	
4	Owk reservoir	Andhra Pradesh		800	
5	Kurukutti	Andhra Pradesh		1200	
6	Yerravaram	Andhra Pradesh		1000	
7	Karrivalasa	Andhra Pradesh		1000	
8	Velimalai	Tamil Nadu		200	
9	Bandhu	West Bengal		900	
			Total	7400	

* Subject to re-start of work in immediate future.