Pumped Storage Projects: Capacity, Stages and Dates

Energy / storage and renewable integration | News context: Lok Sabha answer, 30 July 2026 | Published: 19 October 2026

Background and Context

Before saying "how much capacity" a project has, one must ask which stage it is at: identified, under survey, concurred, under construction or operating. The same word "MW" can sit ahead of all of these, but they mean different things. This answer of the Ministry of Power carries lists of pumped storage projects (PSPs) in three different stages and a separate list for Assam, and that is why it is a good example for understanding the difference between stages.

Why in the News

In the answer to Lok Sabha unstarred question 2069 on 30 July 2026, Minister of State for Power Shri Shripad Naik gave information about the measures being taken to promote PSPs, projects under construction and at the approval stage across the country, and the list for Assam. The question had specifically mentioned Karbi Anglong and Dima Hasao. This article is based on that very answer; the fact-check date is 19 October 2026.

Six cautions for reading the answer

(1) 15,870 MW is "under construction" and 8,140 MW is "concurred/appraised ... yet to be taken up for construction"; these are stages, not operating capacity. We have not added them together. (2) Annexure-I's "Target for Commissioning" is a target; whether any project finishes on time is not an achievement given in the answer. (3) Of Assam's 6 projects (6,220 MW), 4 are at the "Survey & Investigation" stage and 2 are "identified"; the answer gives no date for their construction or approval, and Assam's name does not appear in the lists of Annexure-I, II or III. (4) The answer gives MW (capacity); storage energy (MWh), or how many hours of storage, is not in the answer. (5) Of the ten measures in the answer, only budgetary support for enabling infrastructure has a direct link with central financial assistance; its amount or project-wise share is not in the answer. (6) All four annexures carry the question number "2060" in their headings, while the question is 2069; we have kept this as printed and drawn no conclusion.

Key Facts and Figures

Details of the answer (as printed)	**Lok Sabha unstarred question 2069, answer 30.07.2026; Ministry of Power; answered by: Minister of State Shri Shripad Naik; questioner: Shri Amarsingh Tisso; title: "Development of Pumped Storage Projects in Assam"; 6 pages in all (the answer and four annexures). All four annexures carry the question number "2060" in their headings, while the question is 2069; we have kept this as printed.**
The four parts of the question	(a) whether the government is promoting PSPs for renewable-energy integration and peak demand; (b) PSPs under construction and at various stages of approval in the country, state-wise; (c) any PSP identified, proposed or under survey in Assam (especially Karbi Anglong and Dima Hasao); (d) central financial assistance or other incentives.
Under construction (b), Annexure-I	"At present" 11 PSPs, total installed capacity 15,870 MW. State-wise (our sum): Andhra Pradesh 3 projects, 2,850 MW; Karnataka 2, 3,600; Maharashtra 4, 7,000; Tamil Nadu 1, 500; Madhya Pradesh 1, 1,920 (state table below). With each project a "Target for Commissioning" (month and year) is printed: from December 2026 to May 2032.
Concurred/appraised (b), Annexure-II	6 PSPs, totalling 8,140 MW, which the CEA has "concurred/appraised" and which are "yet to be taken up for construction": Chichlik (Uttar Pradesh, 1,560 MW, 08.07.2026, marked "Appraised"); Pane (Maharashtra, 1,500, 09.10.2025); Shirwata (Maharashtra, 1,800, 01.09.2025); Kandhaura (Uttar Pradesh, 1,680, 13.06.2025); Upper Indravati (Odisha, 600, 19.08.2024); Turga (West Bengal, 1,000, 05.10.2016).

Under examination (b), Annexure-III	**1 PSP under examination in the CEA: Indirasagar Omkareshwar (Madhya Pradesh, NHDC Limited), 640 MW.**
Assam (c), Annexure-IV	Per the CEA's records, 6 PSPs in Assam are "identified", totalling 6,220 MW; 4 of these are at the survey and investigation (S&I) stage. Annexure-IV: 4 projects under S&I, 4,900 MW (table below) and 2 projects under "PSPs Identified in Assam", 1,320 MW (Kopili 320, Dima Hasao; Tharakunchi 1,000, West Karbi Anglong). The answer's text says "6 identified" and the annexure divides them 4 + 2; we have kept the annexure's division.
Incentives (a) and (d)	Ten measures in the answer (table below): the PSP guidelines (10.04.2023), budgetary support for the cost of enabling infrastructure, the TBCB guidelines (06.02.2025), CERC's 25-year ISTS charge waiver, the ₹3,000 crore limit on capital expenditure (01.08.2025), the CEA's DPR guidelines, and four MoEF&CC decisions. No amount of project-wise central assistance is in the answer.
What is directly not in the answer	The amount of project-wise or total central financial assistance; storage energy (MWh) or hours; the reason the "yet to be taken up" projects remain stalled; the status of meeting the target dates; operating capacity; the future timeline, cost or construction decision of Assam's S&I projects; which date in Annexure-II is of concurrence and which of appraisal (only Chichlik carries an "Appraised" mark). All of this is "not in the answer"; it does not mean that no such thing exists.

Projects under construction: state-wise (Annexure-I)

State (Annexure-I)	Projects (our count)	Capacity, MW (our sum)	Targets (as printed)
Andhra Pradesh	3	2,850	Feb'27, Feb'29, Mar'29
Karnataka	2	3,600	Dec'27, May'32
Maharashtra	4	7,000	Dec'28, Feb'29, Jun'29, Dec'29

Tamil Nadu	1	500	Feb'27
Madhya Pradesh	1	1,920	Dec'26
Total	11	15,870	Dec'26 to May'32

The Assam list (Annexure-IV)

Project	District (as printed)	Developer	Stage	MW
AS-01	West Karbi Anglong	M/s Greenko	S&I	900
Howraghat	Karbi Anglong & Marigaon	M/s Adani Green	S&I	1,500
Moti Hojai	Dima hasao	M/s Adani Green	S&I	1,200
Assam PSP-05	West Karbi Anglong	M/s Hinduja Renewable	S&I	1,300
Kopili	Dima Hasao	Not in the answer	identified	320
Tharakunchi	West Karbi Anglong	Not in the answer	identified	1,000
Total				**6,220**

The district, developer and stage are as printed in the answer. The district names "West Karbi Anglong" and "Karbi Anglong" are written differently in the answer; we have not treated them as one.

The ten measures counted in the answer (a) and (d)

No.	Measure (as per the answer)	Date
1	PSP guidelines notified (Ministry of Power)	10.04.2023
2	Budgetary support for the cost of enabling infrastructure (roads/bridges, railway siding, ropeway, communication, transmission line from the powerhouse to the nearest pooling point)	Date and amount not in the answer
3	TBCB guidelines for procuring storage capacity/stored energy from PSPs	06.02.2025
4	CERC: 100% ISTS charge waiver for 25 years from COD, for projects whose construction is awarded on or before 30.06.2028	26.06.2025
5	CEA-concurrence capital-expenditure limit of ₹3,000 crore for hydro stations; off-stream closed-loop PSPs exempt from CEA concurrence, whatever the expenditure	01.08.2025
6	CEA's DPR guidelines: the concurrence timeline cut from 90 to 50 days; approval of inter-state aspects not required	Date not in the answer
7	MoEF&CC: appraisal of PSPs in category B2, with certain conditions	18.05.2023
8	MoEF&CC: special ToR for off-stream PSPs (one season's baseline data for closed-loop, two seasons' for open-loop)	14.08.2023
9	MoEF&CC: the mining-related provisions for survey in forest areas extended to other development projects, including hydel/PSP	20.08.2024
10	MoEF&CC: the number of boreholes for survey and exploration in forest areas increased	10.09.2025

Our calculation

Sums (our calculation from the answer's figures; the answer did not give them): under construction: 2,850 + 3,600 + 7,000 + 500 + 1,920 = 15,870 MW, matching the printed total. The concurred/appraised list: 1,560 + 1,500 + 1,800 + 1,680 + 600 + 1,000 = 8,140 MW, matching the printed total. Assam: 4,900 + 1,320 = 6,220 MW, matching the answer's text.

Grouping by target year: by the under-construction projects' targets: 1 project (1,920 MW) in 2026; 3 in 2027 (500 + 500 + 1,600 = 2,600 MW); 1 in 2028 (1,500 MW); 5 in 2029 (1,350 + 1,000 + 1,000 + 1,500 + 3,000 = 7,850 MW); 1 in 2032 (2,000 MW). These dates are targets; they do not make a claim of "how much capacity will be added when".

Maharashtra's share: 7,000 / 15,870 ≈ 44.1% of the under-construction capacity (our calculation). This is a count of the list, not an indicator of any state's comparative readiness.

Implementing agencies (our classification; the answer does not classify): the list has 3 projects of APGENCO, KPCL and TANGEDCO (state generation companies) totalling 3,850 MW; the remaining 8 projects (Greenko, Adani Renewable Energy, Tata Power, JSW Energy, Torrent) total 12,020 MW; 3,850 + 12,020 = 15,870 MW.

Assam, district-wise (from the printed names): West Karbi Anglong: 3 projects, 900 + 1,300 + 1,000 = 3,200 MW; Karbi Anglong and Marigaon (one project): 1,500 MW; Dima Hasao: 2 projects, 1,200 + 320 = 1,520 MW; total 6,220 MW.

Turga's date: in Annexure-II, the Turga PSP's (West Bengal) "concurrence/appraisal" date is 05.10.2016, that is 3,585 days (about 9 years 9 months) before the answer's date of 30.07.2026. The answer does not give the reason this project remains "yet to be taken up", so this gap cannot be taken as proof of delay or of anyone's responsibility.

Analysis: the meaning of stage, MW and date

Stage versus capacity. The answer shows five kinds of status: "identified" (Assam's 2), "Survey & Investigation" (Assam's 4), "under examination in CEA" (1), "concurred/appraised ... yet to be taken up for construction" (6) and "under construction" (11). Each stage carries an MW figure, and no stage is operating capacity. So an addition such as "24,650 MW in preparation" would not be a valid fact: different stages carry different kinds of certainty, and the answer does not add them together.

MW versus storage. A pumped storage project's job is to store energy, but everywhere in the answer the installed capacity is in MW. How much energy (MWh) and for how many hours it will be stored is not in the answer. So no direct conclusion about storage capacity or contribution to the grid follows from 15,870 MW.

Target versus achievement. Annexure-I's nearest target date is December 2026 (Madhya Pradesh, 1,920 MW) and the furthest is May 2032 (Karnataka, 2,000 MW). These are "Target for Commissioning"; the answer does not say any date has changed or been met. In the same way, the dates in Annexure-II's list are of concurrence or appraisal, not of construction start.

Incentive versus assistance. Part (d) asks about "Central financial assistance or other incentives". Of the answer's ten measures, there is budgetary support (one), a charge waiver (CERC, one), a procurement framework (one), and the rest are decisions tied to guidelines, approval limits and the environmental process (this is our classification). No

measure with an amount is in the answer, so "how much has the Centre given" is not answered by this answer.

About Assam. Part (c) asks whether any PSP is identified, proposed or under survey in Assam, especially Karbi Anglong and Dima Hasao. The answer lists 6 projects, of which 4 are at the S&I stage, with their developers' names printed. This is not a project's approval or construction. No Assam project is in Annexure-I (under construction), II (concurred/appraised) or III (CEA examination).

Way Forward: the unanswered questions

The following are not separately in the answer, and they will become clear only from later parliamentary answers or the Ministry of Power/CEA's figures: (i) the amount of project-wise central assistance; (ii) storage energy (MWh) and hours; (iii) progress against the target dates and operating capacity; (iv) the reason the "yet to be taken up" projects remain stalled; (v) the future timeline of Assam's S&I projects. These are "unanswered", not "non-existent".

Exam-useful points

Prelims: per the answer, 11 PSPs under construction, 15,870 MW; 6 PSPs with CEA concurrence/appraisal, 8,140 MW; 1 PSP under examination in the CEA, 640 MW (Indirasagar Omkareshwar); 6 PSPs in Assam, 6,220 MW (4 S&I, 2 identified); the PSP guidelines of 10.04.2023; the TBCB guidelines of 06.02.2025; CERC's 25-year ISTS charge waiver (on construction being awarded by 30.06.2028, notification 26.06.2025); the CEA-concurrence capital limit of ₹3,000 crore and the exemption for off-stream closed-loop PSPs; the DPR-concurrence timeline cut from 90 to 50 days; MoEF&CC's B2 category (18.05.2023).

Mains, GS-III (energy/infrastructure): the role of storage for renewable integration and peak demand; policy measures (charge waivers, procurement frameworks, approval processes) versus financial assistance; the care needed in reading project stages.

UPSC CSE Mains style: original practice question

When reading government figures for storage projects such as pumped storage, why is it essential to distinguish a project's stage (from identified to under construction), MW versus storage energy, and a target date versus an achievement? Which pieces of information remain missing when assessing policy incentives? (150 words, 10 marks)

Answer Outline

Introduction: The question of storage in renewable integration.

Main Body: The ladder of stages (identified, S&I, examination, concurrence, under construction) and each stage's certainty; MW versus MWh; target versus achievement; the kinds of incentives (policy/charges/process versus financial amount) and the absence of amounts; the additional information needed (MWh, progress on targets, reasons for stalling).

Conclusion: Draw policy conclusions only after seeing a figure's definition.

Sources

- Lok Sabha unstarred question 2069, answer 30.07.2026

Everything is from the answer of 30 July 2026; there is no outside background source in this article. "Our calculation" is ours, not the government's.

Remember: per the answer, 11 PSPs under construction (15,870 MW, targets from December 2026 to May 2032), 6 concurred/appraised (8,140 MW), 1 under CEA examination (640 MW); 6 in Assam (6,220 MW: 4 S&I, 2 identified); these are stages, not operating capacity; targets are not achievements; MWh and the amount of project-wise central assistance are not in the answer; the annexures carry the printed question number "2060".