

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.6323
ANSWERED ON 02.04.2026**

GREEN ENERGY PROJECTS

6323. SHRI P V MIDHUN REDDY:

**Will the Minister of POWER
be pleased to state:**

the details of carbon capture and utilization projects that are operational, under development or proposed in the country along with their current status, State/UT-wise?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

Several Carbon Capture and utilization projects are currently operational, under development, or proposed, across different States/UTs. The details are given at Annexure.

ANNEXURE**ANNEXURE REFERRED IN REPLY TO UNSTARRED QUESTION NO. 6323 ANSWERED
IN THE LOK SABHA ON 02.04.2026**

**State/UT-wise Details of Carbon Capture Utilization Projects (Operational, Under
Construction, Proposed)****A. Operational Carbon Capture & Utilisation Projects**

S. No.	State / UT	Project	Implementing Agency	Status: Commissioned/ Operational
1.	Madhya Pradesh	3,000 Tonnes Per Annum (TPA) Flue Gas CO₂-to-Methanol Plant at NTPC Vindhyachal, Vindhyanagar, Singrauli	NTPC Ltd.	Commissioned
2.	Tamil Nadu	60,000 TPA CO₂ Capture Facility, Tuticorin (Thoothukudi)	M/s Tuticorin Alkali Chemicals & Fertilizers Ltd.	Operational
3.	Maharashtra	500 Tonnes Per Day (TPD) CO₂ Capture from Direct Reduced Iron (DRI) Unit at Salav	M/s JSW Steel	Operational

B. Carbon Capture & Utilisation Projects Under Construction / Under Execution

Sl. No.	State / UT	Project	Implementing Agency	Status
1.	Andhra Pradesh	3,000 TPA Flue Gas CO₂-to-Ethanol (Gen-4) Project at Pudimadaka	NTPC Ltd.	Under Execution
2.	Andhra Pradesh	1,800 TPA Flue Gas CO₂-to-Sustainable Aviation Fuel (SAF) project at Pudimadaka	NTPC Ltd	Under Execution
3.	Andhra Pradesh	24 Kilo Tonne Per Annum (KTPA CCU) Unit at HPCL Visakh Refinery, Malkapuram, Visakhapatnam	Hindustan Petroleum Corporation Limited (HPCL)	Under Execution - Mechanically Completed
4.	Telangana	Carbonated Fly-Ash Brick (C-brick) Plant (capacity 2 Lakh C-Brick/Day) at NTPC Ramagundam	NTPC Ltd	Under Execution
5.	Maharashtra	Development and demonstration of an indigenously developed integrated technology of CO₂ capture from the recently demonstrated 1 TPD coal-to-methanol pilot plant and its conversion to methanol at Pune, Maharashtra	Knowledge Partner: IIT Delhi Industry Partner: Thermax Ltd.	Under Commissioning
6.	Telangana	To develop an indigenous catalytic process for coal derived CO₂ hydrogenation to Dimethyl-ether (DME) at moderate temperature and pressures at Hyderabad	Knowledge Partner: CSIR-IICT Industry Partner: BHEL Ltd	Under Commissioning

C. Proposed Carbon Capture & Utilisation Projects

S. No.	State / UT	Project	Implementing Agency
1.	Assam	Carbonated Water Injection (CWI) is planned in one of OIL's reservoirs in Dikom field located in its operational areas in Assam.	Oil India Ltd (OIL)
2.	Assam	Feasibility Study of CO ₂ EOR Including CO ₂ Transportation & Injection in Makum-North Hapjan Field of Assam	Oil India Ltd (OIL)
3.	Assam	Revitalization of Kathaloni LK+TH Sand (KLN001 Block) Reservoir through Modelling Study along with Identification of Potential for Amenable EOR Scheme in Kathaloni Oilfield	Oil India Ltd (OIL)
4.	Assam	CO + CO ₂ Recovery (270 TPD + 190 TPD) at Numaligarh	Numaligarh Refinery Limited (NRL)
5.	Andhra Pradesh	Vacuum Swing Adsorption Process for Carbon dioxide Capture from Cement Kiln Gas and its Utilization within the Construction Material Value Chain.	Knowledge Partner- CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun, IIT-Tirupati and IISc, Bengaluru. Industry Partner- JSW Cement Ltd.
6.	Gujarat	1,500 TPD CO ₂ -Enhanced Oil Recovery (EOR) at Gujarat refinery, Vadodara	Indian Oil Corporation Ltd (IOCL) + Oil and Natural Gas Corporation Limited (ONGC Ltd.)
7.	Gujarat	Initiative on the feasibility of CCUS in form of CO ₂ -EOR in the mature water flooded reservoirs of Gandhar in Gujarat.	Oil and Natural Gas Corporation Limited (ONGC Ltd.)
8.	Madhya Pradesh	15 TPD CO ₂ -to-Calcium Carbonate Plant (Bina Refinery) at Bina	Bharat Petroleum Corporation Limited (BPCL)
9.	Haryana	440 TPD CO ₂ -to-Acetic Acid (Panipat Refinery) at Panipat	Indian Oil Corporation Ltd (IOCL)
10.	Odisha	132 TPD CO ₂ -to-Polycarbonate at Paradip Refinery	Indian Oil Corporation Ltd (IOCL)

11.	Odisha	348 TPD of CO ₂ to Acetic Acid at Paradip Refinery	Indian Oil Corporation Ltd (IOCL)
12.	Odisha	Water-based catalyst-driven CO ₂ capture process, at a scale of 2 TPD, designed for integration within a live cement plant, enabling conversion of captured CO ₂ into calcium carbonate, sodium bicarbonate and formic acid.	Knowledge Partner: Indian Institute of Technology Bombay (IIT-B) Industry Partner: Dalmia Cement (Bharat) Limited
13.	Odisha	Carbon-negative using solvent-based carbon capture technology at a scale of 1 TPD and utilizing captured CO ₂ for mineralisation into concrete using ICCM (Integrated Carbon Capture and Mineralization) technology.	Knowledge Partner: IIT Kanpur Industry Partner: JSW Cement
14.	Rajasthan	Oxygen-based Calcination to capture 2 TPD (Tonnes Per Day) of CO ₂ and its utilization (0.4 TPD) in lightweight concrete products and olefins.	Knowledge Partner: National Council for Cement and Building Material, Ballabgarh (NCCBM), IIT Roorkee Industry Partner: JK Cement Ltd.
15.	Rajasthan	Feasibility Study of CO ₂ Transportation and Storage in Saline Aquifers/Reservoirs of Jaisalmer Basin, Rajasthan	Oil India Ltd (OIL)
16.	Tamil Nadu	Innovative Interventions in Cement Industry for Lowering Carbon Impact. New kiln burning technology based on oxygen-enriched burning, capture using adsorption/absorption, and mineralization of captured CO ₂ (2 TPD) using concrete blocks, waste concrete fines and concrete plant sludge.	Knowledge Partner- IIT Madras & BITS Goa Industry Partner- Ultratech Cement Ltd
