GREEN ENERGY PROJECTS

Posted On: 02 APR 2026 3:52PM by PIB Delhi

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

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 CO_2- to-Methanol Plant at NTPC Vindhyachal, Vindhyanagar, Singrauli	NTPC Ltd.	Commissioned
2.	**Tamil Nadu**	60,000 TPA CO_2 Capture Facility, Tuticorin (Thoothukudi)	M/s Tuticorin Alkali Chemicals & Fertilizers Ltd.	Operational
3.	**Maharashtra**	500 Tonnes Per Day (TPD) CO_2 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 CO_2- to-Ethanol (Gen-4) Project at Pudimadaka	NTPC Ltd.	Under Execution

2.	**Andhra Pradesh**	1,800 TPA Flue Gas CO_2- 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 CO2 EOR Including CO2 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 CO2-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 CO2 to Acetic Acid at Paradip Refinery	Indian Oil Corporation Ltd (IOCL)

12.	**Odisha**	Water-based catalyst-driven CO2 capture process, at a scale of 2 TPD, designed for integration within a live cement plant, enabling conversion of captured CO2 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 CO2 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 CO2 and its utilization (0.4 TPD) in lightweight concrete products and olefins.	Knowledge Partner: National Council for Cement and Building Material, Ballabhgarh (NCCBM), IIT Roorkee Industry Partner: JK Cement Ltd.
15.	**Rajasthan**	Feasibility Study of CO2 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 CO2 (2 TPD) using concrete blocks, waste concrete fines and concrete plant sludge.	Knowledge Partner- IIT Madras & BITS Goa Industry Partner- Ultratech Cement Ltd

This Information was given by The Minister of State in the Ministry Of Power, Shri Shripad Naik, in a written reply in the Lok Sabha today.

****

NR/MD