

ECCSELLENT CCUS Training Courses series

The ECCSELLENT (Development of ECCSEL-R.I. Italian facilities: user access, services and long-term sustainability) project offers a series of training courses on CCUS (Carbon Capture Utilisation and Storage). The series of courses will provide an overview of the capture, transport, utilisation and storage aspects of CCUS. The technical and safety requirements of each phase of the chain will be assessed and put into a wider context using case studies and real-life examples. Special focus will be given to Italian CCUS infrastructures. The courses will take place online.

Calendar

TOPIC	DATE
Training Course on research infrastructure for CO ₂ Capture R&D	January 31, 2025
Training Course on research infrastructure for CO ₂ Transport R&D	February 6, 2025
Training Course on research infrastructure for CO ₂ Storage R&D	March 13, 2025
Training course on research infrastructure for CO ₂ Utilisation R&D	March 26, 2025

Program of Course 1 – Capture (January 31, 2025)

[Link to the training course](#) (ID meet: 375296185416 Passcode: j6Jg2Wh2)

Time	Title	Speakers	Institution
9:00	Welcome and Introduction to the ECCSELLENT project	Manuele Gatti, Matteo C. Romano, Antonio Conversano, Valeria Venturelli	POLIMI
9:30	CO ₂ capture technologies for the decarbonization of the industrial sector	Matteo C. Romano	POLIMI
10:00	DAC (Direct Air Capture) and BECCS (Bioenergy with Carbon Capture and Storage) for negative CO ₂ emissions	Manuele Gatti	POLIMI
10:30	CO ₂ capture with membranes: processes and materials	Maria-Chiara Ferrari	University of Edinburgh
11:00	Break		
11:15	CO ₂ capture with sorbents: technologies and porous materials synthesis and characterization	Michela Alfé	CNR
11:45	Sorption enhanced gasification for green hydrogen production	Umberto Pasqual Laverdura	ENEA
12:15	CO ₂ Capture Utilisation and Storage as a decarbonization strategy for the Italian hard-to-abate industry	TBC	TBC
13:00	Closing remarks		

ECCSELLENT Project

CCUS is a cross-sector solution essential to mitigate carbon emission in many sectors, including power and industry. CO₂ is captured at the source of emission and either used to create valuable products (CCU) or for underground permanent confinement (CCS) in deep geological formations. CCUS is identified as a future key technology for reducing emissions from fossil fuels to be consistent with the goals of the Paris Agreement.

The general objective of the **ECCSELLENT** project is to upgrade most of the Italian facilities part of **ECCSEL ERIC** and to expand the Italian node to promote the development and internationalization of our country's research in the full chain of CCUS (CO₂ Capture, Utilisation, Transport and Storage).



Facility Name	Access Provider	ECCSEL ERIC Catalogue
POLICAP	POLITECNICO MILANO 1883	
CO ₂ -BOX	LEAP	
MEMLAB	ENEA	
ZECOMIX	ENEA	
MADE4CO ₂ Lab	STEMS	
GTL4CCU	ITAE	
Sotacarbo FAULT lab		
ADVANTEST ROCK		
MECO ₂	SOTACARBO	
PEC lab		
COHYGEN		
XtL Pilot plant		
PITOP		
CTMO		
Research Aircraft		
BioMarineLab	OGS	
DeepLab		
Latera NatLab-Italy		
Panarea NatLab-Italy		



ECCSELLENT partners are: **OGS** – Coordinator, www.ogs.it; **Politecnico di Milano**, www.polimi.it; **Bologna University**, www.unibo.it; **ENEA**, www.enea.it; **CNR-STEMS**, www.stems.cnr.it; **CNR-ITAE**, www.itaie.cnr.it.

Transnational Access

In **June 2024**, the Italian National Node **launched a call**, funded by PNRR ECCSELLENT project, to finance the **transnational access** to all Italian ECCSEL ERIC facilities.

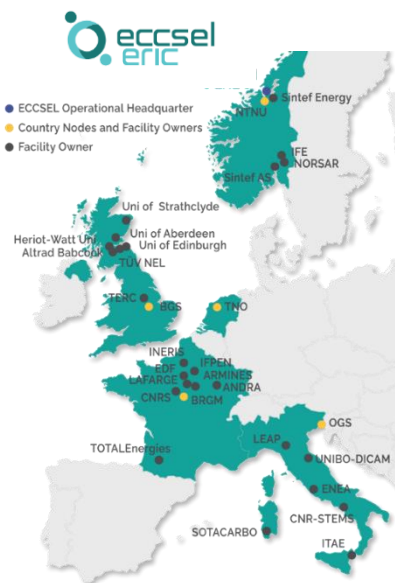
The call is open to applications from European industry, small-medium enterprises (SMEs), Universities, and Research Institutes.

Each project will be reviewed by a panel set up by the Italian National Node.

[Link to the call](#)

ECCSEL-ERIC

ECCSEL, founded in 2017 on EU level, as an ERIC, HQ in Trondheim, Norway, is the European Research Infrastructure for CO₂ Capture, Utilisation, Transport and Storage (CCUS) and Carbon Dioxide Removal (CDR).



5

28

100+

Member
Countries

Research
Facility
Owners

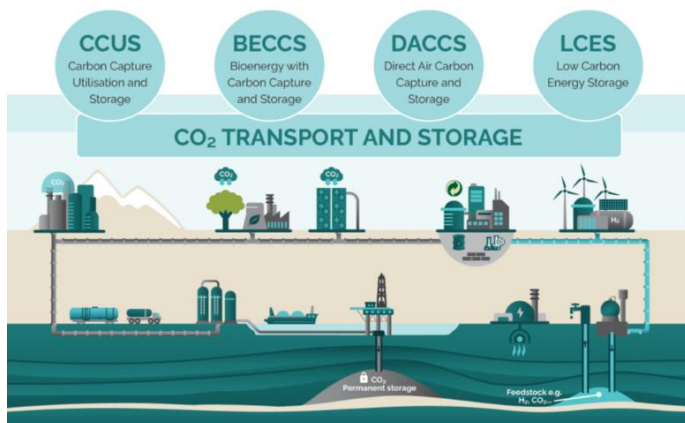
Research
Facilities



The ECCSEL vision is to empower Research, Academia, and Industry to accelerate Research & Development to achieve net-zero CO₂ emissions across industrial sectors and power generation.

Mission:

ECCSEL facilitates and coordinates open access to over 100 world-class CCUS & CDR research facilities across Europe, bolstering both national and EU Industrial Carbon Management Strategies. The R.I. actively engages with pertinent industry, academia, and research communities to address identified research needs across



the TRL1 to TRL7 spectrum. ECCSEL offers a comprehensive single-point open access of research and validation resources to accelerate the development and industrialization process, and eventual scaling up of the CCUS and CDR value chain to:

Reduce costs > make CCUS&CDR commercially feasible;

De-risk Investment > to ensure asset integrity;

Support safe operation > to achieve societal acceptance.