

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

[Link to the Course](#) - ID Meet: **372 642 737 87** Passcode: **2Kw3ZS3R**

Program of Course 4 – Utilization (March 26, 2025)

Time	Title	Speakers	Institution
9:30	Welcome and introduction to the webinar	Giuseppe Bonura	CNR
9:45	Lecture on CO ₂ Utilization technologies – <i>CO₂ as an added value, an introduction</i>	Cataldo De Blasio	Åbo Academy University, Finland
10:15	Case study 1: <i>Dual-site functionality of methanol catalysts during CO₂ conversion in presence of green hydrogen</i>	Mariarita Santoro	CNR
10:35	Case study 2: <i>Direct production of dimethyl ether via CO₂ hydrogenation over 3D-printed “zebra” structures</i>	Serena Todaro	CNR
10:55	Case study 3: <i>Low temperature co-electrolysis of CO₂ and water to produce electrical energy</i>	Fausta Giacobello	CNR
11:15	Break		
11:30	Facility presentation #1 – <i>Power to e-fuels synthesis</i>	Mauro Mureddu	Sotacarbo S.p.A.
12:00	Facility presentation #2 – <i>GTL4CCU</i>	Catia Cannilla	CNR
12:30	Facility presentation #3 – <i>Microalgae Biomarine Lab</i>	Manuela Bordiga	OGS
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	QR
CO ₂ -BOX	LEAP	QR
MEMLAB	ENEA	QR
ZECOMIX	ENEA	QR
MADÉ4CO ₂ Lab	STEMS	QR
GTL4CCU	ITAE	QR
Sotacarbo FAULT lab	SOTACARBO	QR
ADVANTEST ROCK		QR
MECO ₂	SOTACARBO	QR
PEC lab		QR
COHYGEN		QR
XtL Pilot plant		QR
PITOP		QR
CTMO		QR
Research Aircraft		QR
BioMarineLab	OGS	QR
DeepLab		QR
Latera NatLab-Italy		QR
Panarea NatLab-Italy		QR

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.itae.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.

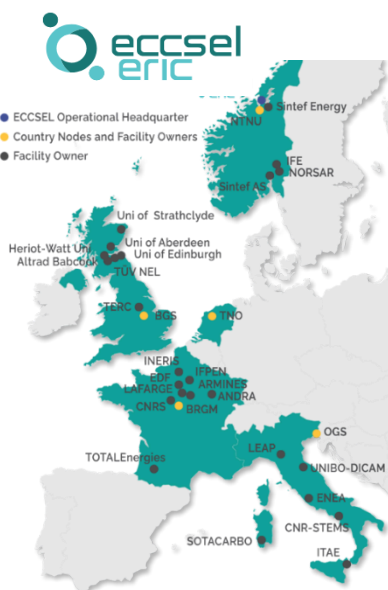
The call is open to applications from European industry, small-medium enterprises (SMEs), Universities, and Research Institutes.

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

Member
Countries

28

Research
Facility
Owners

100+

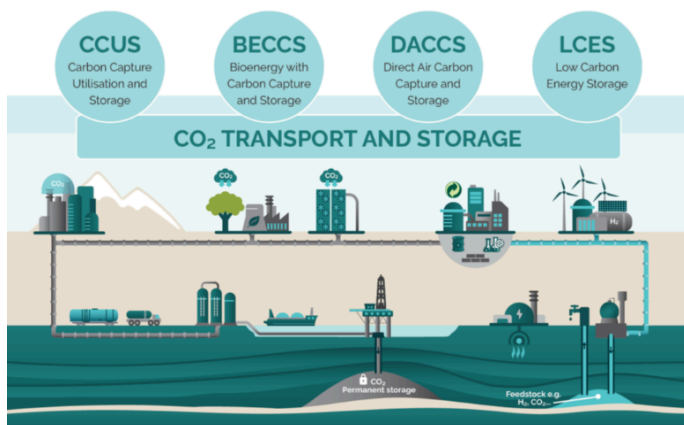
Research
Facilities



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.