WHY ECCSEL?

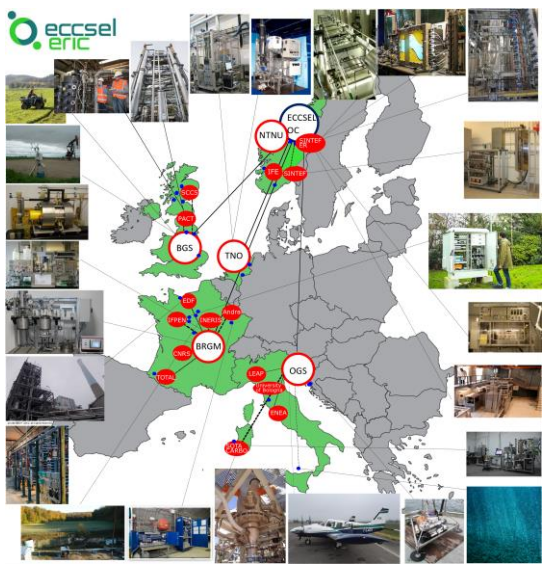
What is ECCSEL?

European Carbon Dioxide Capture and Storage Laboratory Infrastructure

- ECCSEL is the European Research Infrastructure for CO_2 Capture, Utilisation, Transport and Storage (CCUS).
- ECCSEL is a distributed, integrated research infrastructure encompassing interlinked national nodes and facilities.
- The ECCSEL infrastructure consists of over 80 research facilities.
- ECCSEL covers research infrastructure across the CCUS value chain, such as:
  - Capture: membranes, solvents, sorbents, combustion, cryogenic, integrated CCUS system.
  - Storage: pressure/injection, migration, caprock/well integrity, leakage, mitigation/remediation, microseismicity, reactivity/mineralisation, leakage, monitoring, static modelling, dynamic modelling.
  - Transport Storage: Security/troubleshooting, fluid characterisation, flow characterisation, material testing, CO_2 pipeline transport and integrity, shipping of CO_2.
  - Utilisation: thermochemical conversion and hydrogenation of CO_2, electrochemical and photochemical conversion of CO_2, CO_2 conversion to solid carbonates, smart integrations with carbon capture and re-use into valuable products

Who are ECCSEL?

- ECCSEL's founding members are Norway, the Netherlands, Italy, France, and the UK. http://eccsel.org/aboutmembers/member-countries/
- ECCSEL is a legal entity, with ERIC statutes (European Research Infrastructure Consortium) with its headquarters (Operations Centre) in Norway.
- Each Member country is represented by a National Node.
- ECCSEL is made up of leading CCUS facilities provided by over 20 European institutions.



What does ECCSEL do?

ECCSEL Integrates, Updates and Constructs

- Facilitates and coordinates requests for access to facilities within the ECCSEL Research Infrastructure.
- Reaches out to relevant industry and research communities to determine their research infrastructure needs to enable full-scale deployment of CCUS in Europe.
- Coordinates European development of facilities and their services to meet identified needs.
- Represents European Research Infrastructure for CCUS in relevant fora.

How does ECCSEL fit with…?

- **European Energy Research Alliance – EERA**
  Closely linked. EERA CCS Joint Programme provides European strategic research direction, ECCSEL ensures infrastructure/facilities are available.
- **SET-Plan**
  Development of CO_2 storage technologies to 2030 and beyond will require availability of world class R&D infrastructure. ECCSEL plays a key role in this pathway as specified in the SET-Plan IWG9 on CCS and CCU Implementation Plan: '*(ECCSEL is) a world-class research infrastructure facilitating ambitious R&D activities, European industrial initiatives, and education of specialists for the new CCUS industry'.*
- **Mission Innovation**
  ECCSEL is aligned with the implementation of the Innovation Challenge IC3 (Carbon Capture) to enable the development and testing of new and novel technologies.

What does ECCSEL offer?

- Access to leading research facilities for users worldwide.
- Single contact point for the facilities included in the ECCSEL Research Infrastructure.
- Facilitation of fundamental and applied research leading to commercial applications that help advance CCUS deployment in Europe and worldwide.
- Coordination of CCUS Research Infrastructure in Europe, creating synergies and opportunities to increased efficiency in research investments.
- Increased researcher mobility.
- Improvement of the competitiveness of the European industry and SMEs by raising their CCUS TRLs.

Who pays for ECCSEL?

- Preparation, implementation and development of ECCSEL has been supported through the European Union FP7 and HORIZON 2020 research and innovation programmes.
- The operation of the ECCSEL Research Infrastructure is financed by its Member countries through a yearly fee.
- Operation of ECCSEL facilities is financed by the facility owners and relevant projects.
- Access is financed by the users or by linked projects.
- ECCSEL is closely aligned with European and national CCUS implementation and research funding programmes, e.g.,. H2020 & Horizon Europe, ERA-NET ACT, CLIMIT…

What is the future of ECCSEL?

- ECCSEL is not a traditional project with a finite lifetime. As an ESFRI landmark, ECCSEL ERIC is a legal entity with an indefinite lifespan.
- ECCSEL will address infrastructure needs identified in its Research Priorities through its Infrastructure Development Plan.
- ECCSEL ERIC Roadmap leads the way to CCUS technologies advancement for enabling low to zero CO_2 emissions from industry and power generation to combat global climate change, as well as CO_2 reduction in the-atmosphere.
- Find out more about facilities and how to access them: www.eccsel.org/news

> *My experience with ECCSEL widened my horizons both scientifically and personally. The program granted me the opportunity to collaborate in a multicultural environment with experts in CCUS and access state-of-the-art methods and equipment.*

Eirini, Transnational Access Facility User, National Technical University of Athens

See also

What is CCUS? | Access ECCSEL | Join ECCSEL

www.eccsel.org
info@eccsel.org