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# Scottish Carbon Capture & Storage

Enabling CO<sub>2</sub> emissions reduction  
through CCS research and  
knowledge exchange

SCCS is a partnership of  
British Geological Survey, Heriot-Watt University,  
the University of Aberdeen, the University of  
Edinburgh, the University of Strathclyde and the  
University of Glasgow



# Achieving the Vision

Mission statements: we will realise our vision by...

Progressing fundamental CCUS research with beneficial impact

Forming appropriate worldwide partnerships

Providing independent analysis and policy advice

Connecting government, industry and research

Educating next generation professionals

Encouraging public awareness through outreach and education

Ensuring the resilience and adaptability of SCCS

CO<sub>2</sub>  
emissions  
reduction  
through  
research into  
CCUS and  
application  
of CCUS  
technologies

# Expertise across full CCUS chain

- Capture engineering
- Transport
- Injection and storage
- CO<sub>2</sub> utilisation and enhanced oil recovery
- CO<sub>2</sub> conversion to products
- Policy, economics and impact
- Public engagement
- Education and training
- Communications and knowledge exchange



# Expertise across the full CCUS chain

## CO<sub>2</sub> Utilisation - Enhanced Oil Recovery

- Unique laboratory facilities for core testing, high pressure flow visualisation and hydrates
- Characterisation of EOR strategies for WAG, SWAG and carbonated water injection

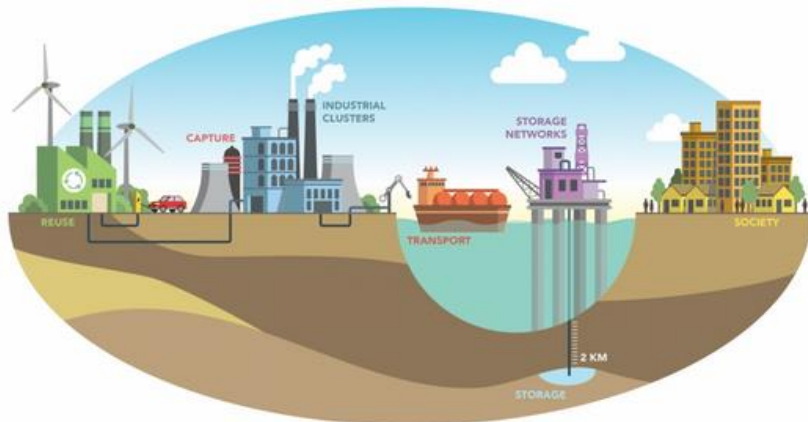


## CO<sub>2</sub> Conversion

- New catalytic and electro-reduction technologies to incorporate/convert CO<sub>2</sub> into value-added chemicals
- Mineral carbonation of industrial wastes and silicate rocks

# SCCS Projects (1)

- **EU CCUS Projects Network** represents and supports knowledge sharing amongst major industrial projects under way across Europe in the field of carbon capture and storage (CCS) and carbon capture and utilisation (CCU) [www.ccusnetwork.eu](http://www.ccusnetwork.eu)
- **ALIGN-CCUS** will provide blueprints to deliver CCUS in industrial regions in the UK, the Netherlands, Germany, Norway and Romania – [www.alignccus.eu](http://www.alignccus.eu)
- **STRATEGY-CCUS** brings together scientists from ten European countries and aims to support the development of low-carbon energy and industry in Southern and Eastern Europe in 8 regions [www.strategyccus.eu](http://www.strategyccus.eu)
- **ECCSELERATE (and ECCSEL)** provides access to the best carbon dioxide capture, transport and storage research facilities

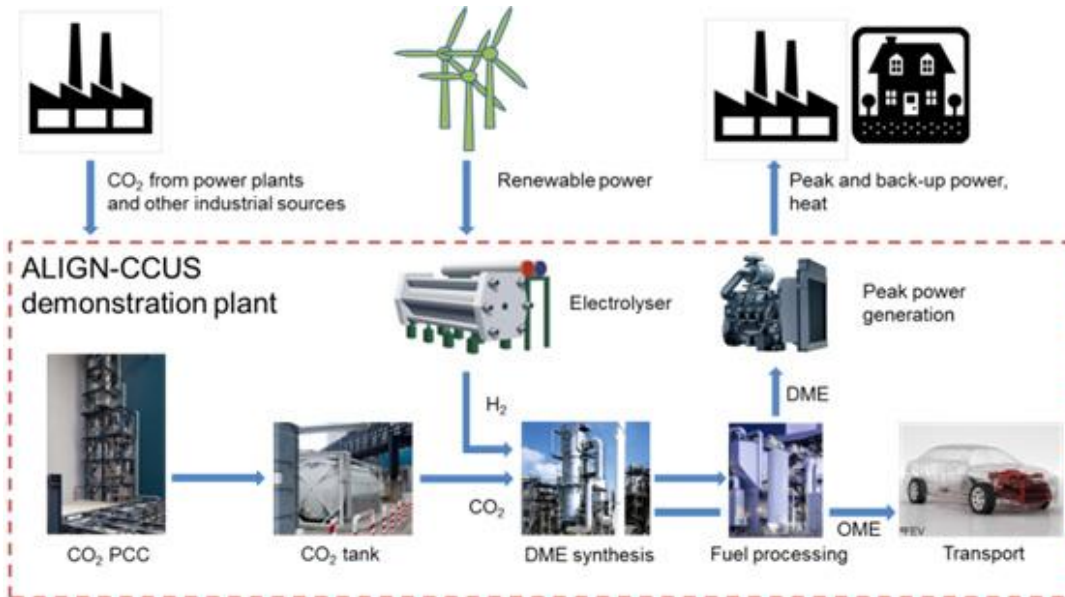


# SCCS Projects (2)

- **LAUNCH** aims to address a major hurdle to scaling up certain CO<sub>2</sub> capture technologies, namely, solvent degradation  
<https://launchccus.eu>
- **NEWEST-CCUS** focuses on the potential for creating negative carbon emissions in the waste to energy (WtE) sector through the use of carbon capture, utilisation and storage (CCUS) technologies  
<https://newestccus.eu>
- **HyStorPor** will focus on the large-scale geological storage of energy in the form of hydrogen <https://blogs.ed.ac.uk/hystorpor>
- **SECURE** (Subsurface Evaluation of CCS and Unconventional Risks) will gather scientific evidence relating to monitoring the environment and mitigating risk in order to guide subsurface geoenergy development [www.securegeoenergy.eu](http://www.securegeoenergy.eu)



## Large-scale energy storage and conversion



29  
NOV

Making fuels from CO<sub>2</sub>: RWE unveils new synthesis pilot plant in Germany



ALIGN-CCUS's unique carbon capture and utilisation testing facility powers up at RWE Niederaussem. Find out more about this exciting research development and watch RWE's timelapse video of the pilot plant being constructed.

[Read full article](#)





# Developing future CCU projects with European partners

- **H2020 – LC-SC3-RES-26-2020** Development of next generation renewable fuel technologies from CO<sub>2</sub> and renewable energy (Power and Energy to Renewable Fuels)
  - Budget: €8 million (**€3-5 million per project**).
  - Deadline: **21 April 2020**
  - Development and technology scale-up (**TRL 3-4 to 4-5**)



THE UNIVERSITY  
of EDINBURGH

**UoE working on innovative  
electrochemical CO<sub>2</sub> technology**



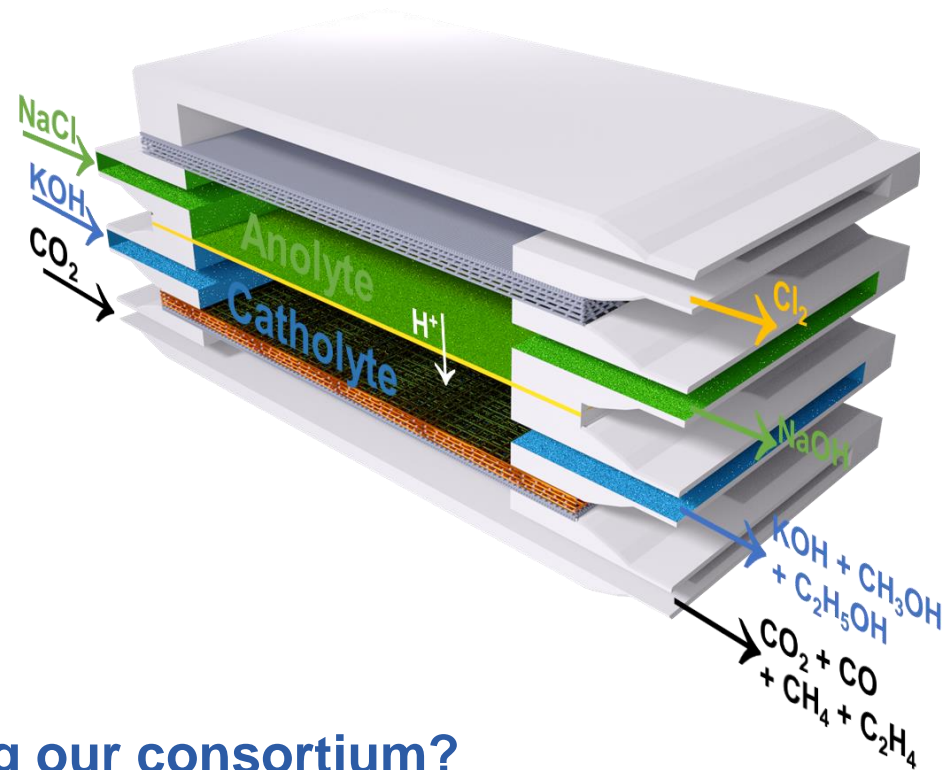
**Scalable approaches to tackle  
mass-transport limitations**



**Decarbonisation of the transport,  
energy and chemical sector**



**Value and wealth generation  
from CO<sub>2</sub> emissions**



**Interested in joining our consortium?**

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