



Wednesday, 6th December 2023, 14-15 CET

WEBINAR

Sustainable aviation fuels for aviation decarbonization

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Speakers

Mohamed Pourkashanian OBE – University of Sheffield, UK

“Sustainable Aviation Fuels 101: a solution to aviation decarbonisation”

Q&A session chaired by:

Sébastien Dupraz, researcher, BRGM, France

WHAT WILL YOU LEARN

Sustainable aviation fuels for aviation decarbonization

Aviation sector is currently responsible of about 2% of global CO₂ emissions and a deep decarbonization of this sector is one of the key issues on energy transition. In this field, sustainable aviation fuels (SAF) - produced from biomass by means of biological processes or from green hydrogen and captured CO₂ through synthesis processes - represent the main pathway towards carbon neutrality in commercial aviation.

This webinar provides an overview of SAF production technologies, highlighting the perspectives and the main challenges of their developments.

ECCSEL ERIC (European Research Infrastructure Consortium) was established in June 2017 as a permanent pan-European distributed research infrastructure, with the main objective of enhancing European science, technology development, innovation and education in the field of CCUS, in order to combat climate change.

ECCSELERATE project is aimed at increasing the accessibility to the excellent network of facilities already established in ECCSEL ERIC for a wider user group, part of the research and industrial community.

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KEYNOTE SPEAKERS

Mohamed Pourkashanian OBE is the Head of the Energy Institute at the University of Sheffield, the Managing Director of the Translational Energy Research Centre and the Sustainable Aviation Fuels Innovation Centre, and is also the General Secretary of the International Flame Research Foundation (IFRF). At the Sustainable Aviation Fuels Innovation Centre and the Translational Energy Research Centre, Professor Pourkashanian provides expert academic, strategic and operational leadership to the project and its team members. In 2022, Professor Pourkashanian received an Order of the British Empire (OBE) for services to Net Zero Research and Innovation.

WHAT IS CCUS?

Carbon capture, utilisation and storage, or CCUS, is an important emissions reduction approach that can be applied across the energy system, in both power generation and industrial sectors.

CCUS encompasses methods and technologies to remove CO₂ from the flue gas and from the atmosphere, followed by recycling the CO₂ for utilisation and determining safe and permanent storage options:

- **Capture** technologies allow the separation of CO₂ from gases produced in electricity generation and industrial processes.
- After capture, carbon dioxide must be **transported** to the storage or utilisation site. CO₂ is an inert gas and can be easily handled and transported in high-pressure pipelines. Alternatively, it can be transported in industrial tanks by ship, rail and truck.
- There are several possibilities for long-term CO₂ **storage** in safe conditions. Generally, CO₂ is stored in carefully selected geological rock formations that are typically located several kilometres below the earth's surface.
- **Utilisation** technologies allow the use of CO₂ to make valuable products, such as clean fuels, building materials or consumer goods. A clear example of a circular economy, where the CO₂ becomes a raw material rather than a waste by-product.