The Fundamentals of Carbon Capture and Storage (G902)

Tutor(s)

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Overview

The aim of this course is to provide an overview of what carbon capture and storage is, how it works and its role in decarbonization and the energy transition.

Duration and Logistics

Classroom version: A half-day course comprising a mix of lectures, case studies and exercises. The manual will be provided in digital format and participants will be required to bring a laptop or tablet computer to follow the lectures and exercises.

Virtual version: One 3-hour interactive online session. A digital manual and exercise materials will be distributed to participants before the course.

Level and Audience

Awareness. The course is aimed at non-technical staff and those who do not have a scientific background but want a basic introduction into the topic. The subject matter will be covered from very basic principles and be of interest to staff from a range of departments, including legal, graphics, administration and technical support.

Objectives

You will learn to:

1. Understand what carbon capture and storage is.
2. Appreciate why carbon capture and storage is needed to reduce emissions.
3. Outline how carbon capture and storage works.
4. Discuss carbon capture and storage project risks and uncertainties.

Course Content

Course Details

This short course covers the key aspects of carbon capture and storage and will give participants a fundamental understanding of the role of this technology in the energy transition, including how it is possible to store carbon dioxide in the subsurface and what has been done so far on the global scale. Topics to be covered include:

- What is carbon capture and storage?
- What is underground that allows carbon dioxide to be stored?
- How many carbon capture and storage projects are needed at the current rate of emission to cut greenhouse gas emissions?
- How much carbon dioxide can be stored underground?
- What happens to the carbon dioxide once it is placed underground?