Abstract

CCUS is recognized as a viable decarbonization strategy in our pathway to reach Net-Zero CO_2 emissions by 2050. To better understand the role of CCUS, it is key to understand how emissions are avoided, by using CO_2 as carbon feedstock for our industry or even store them underground, alongside other approaches that support climate neutrality. This presentation provides a clear overview of how CCUS fits within the broader portfolio of climate solutions. It explains the different pathways of carbon capture, utilization, and storage, and how they complement renewable energy, electrification, and hydrogen. By highlighting both the opportunities and the boundaries of CCUS, the presentation aims to clarify why CCUS is an important bridging solution that helps to reduce emissions today while it supports the transition towards a net-zero and more circular carbon economy.

Biography

Metin Bulut is program manager of the Electrochemical Excellence Centre at VITO, where the development of dedicated electrolysers for CCU applications is one of the cornerstones in their research program. In this position, he benefits from his experience as business developer and techno-economic assessor in the field of both CO_2 capture and conversion technologies.

Miet Van Dael is researcher techno-economic analysis at VITO and guest professor in sustainability assessment at the Hasselt University. The main focus for the techno-economic analysis is on carbon capture and utilization technologies, lignin valorisation and plastics recycling.