

## NTNU ENERGY TRANSITION

## Workshop: Negative emissions and Carbon Dioxide Removal (CDR)

Time: 28 April 2021, 14:00-18:30 CEST Chair: Asgeir Tomasgard, Professor - NTNU

Most scenarios and pathways that brings us to a net zero society rely on our ability to remove  $CO_2$  from the atmosphere from around 2040 and onwards. This workshop aims to involve key representatives from industry, government, academia, and NGOs in discussion of some of the central questions that needs to be solved. It is the first in a series of workshops and we will try to outline the main challenges related to:

- 1. How should businesses approach a situation where negative emissions becomes a necessity?
- 2. What is the role of governments in making this happen: for example, reducing risk, building markets, and providing regulation and what is the right timing?
- 3. What are the knowledge gaps that the academic society should address?

14:00-14:30	Welcome and introduction
	<b>Overview of net negative emission technologies and approaches</b> Jae Edmunds, Chief scientist - Pacific Northwest Laboratory (PNNL), USA
14:30-15:15	International policy environment Session Chair: Pål Rasmussen
	Policy framework for sustainable carbon cycles in a climate-neutral EU Fabien Ramos, Carbon removals policy officer - DG Climate, Belgium
	The proposed support scheme for Bio-CCS and DAC in Sweden Svante Søderholm, Senior Advisor - Swedish Energy Agency, Sweden
	Discussion
15:15-15:30	Break
15:30-16:45	Afforestation, BECCS and marine counterparts - technologies and societal/environmental impacts Session Chair: Jae Edmunds - PNNL
	Afforestation and BECCS from an SDG perspective. A holistic assessment of land-based CDR practices Florian Kraxner, International Institute for Applied Systems Analysis (IIASA), Austria
	Blue and green BECCS and afforestation Helene Muri, Climate researcher - NTNU, Norway
	Interventions by: Ole Jørgen Marvik, Special advisor life sciences - Innovation Norway, Norway Tiina Koljoen, Research team leader - VTT, Finland
	Discussion
16:45-17:00	Break



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17:00-18:30	<b>Business models for negative emissions</b> Session Chair: Marie Bysveen - Sintef
	Michelle Lancaster, Director of Sustainability Partnerships Microsoft, USA
	Jim Stian Olsen, Chief technology officer - Aker Carbon Capture, Norway
	Interventions by: Fabian Levihn, Head of R&D - Stockholm Exergi, Sweden Hans Petter Kildal, Chief executive officer, CEO - Becour, Norway Ståle Aakenes, Chief Economist and Board member - Gassnova, Norway Jim Watson, Professor of Energy Policy - UCL, UK Hilde Røed, Vice president sustainability - Equinor, Norway Steve Freeman, Head of Energy Transition, D&I – Schlumberger, UK
	Discussion
18:30	Conclude

## Note:

This workshop employs a modified Chatham House Rule. Participants are free to use the information received during the meeting, but specific positions taken by individuals should not be attributed without expressed permission. However, formal presentations, the meeting agenda, and the meeting participation list will become part of the public meeting record unless participants request anonymity.

We have designed the workshop agenda to encourage discussion among the participants. We have incorporated a number of different roles for participants, but first, and foremost we view all participants as equal contributors for each session. Each session will include introductory comments along with shorter comments from specific participants. A chair will help focus on what we can do to inform the process. Finally, we are asking one participant for each session to help synthesize the discussion.