

International Expert Workshop

Deep Decarbonization in Industry

Time: Wednesday October 9, 08.30 – Friday October 11, 13.00
Venue: TU Wien, Getreidemarkt 9, Building BA, Vienna, Austria
Room: TUtheSky on Floor 11

WEDNESDAY 9 OCTOBER 2019

8.30 Registration

9.00 Welcome and Introduction

Theresia Vogel, Managing Director, Climate and Energy Fund, Austria
Christian Bauer, Faculty Dean Prof., TU Wien, Austria

Background, Aims and Sessions

Thore Berntsson, Chair of the IETS TCP

Session 1: Roadmaps

Chair: Stefan Lechtenböhmer, Wuppertal Institute, Germany and Lund University, Sweden

Speakers:

- ***A review of technology and policy pathways to net-zero emissions industry***
Chris Bataille, IDDRI, Paris and Simon Fraser University, Canada
- ***Defossilization in the chemical industry – challenges and opportunities***
Florian Ausfelder, DECHEMA Gesellschaft für Chemische Technik und Biotechnology e.V., Germany

Coffee

- ***The Role of Innovation in Cement 2050 Roadmap***
Jim Rushworth, CEMBUREAU (EU Cement Association)
- ***Deep decarbonisation pathways in the European forest fibre and paper industry***
Nicola Rega, CEPI, the European forest fibre and paper industry
- ***Towards a net-zero emissions steel industry***
Åsa Ekdahl, World Steel Association
- ***Refinery 2050: opportunities and challenges for the refining industry***
Marta Yugo, CONCAWE

Lunch

13.30

Session 2: Technologies

Chair: Andrea Ramirez, Delft University of Technology, the Netherlands

Speakers:

- *Integration of CCUS and hydrogen technologies for industrial decarbonization*
Mercedes Maroto-Valer, Heriot-Watt University, UK
- *Potential of Digitalization and AI for Decarbonization in Industry*
Eemeli Hytönen, VTT Technical Research Centre of Finland, Finland
- *Renewable carbon circling – Biorefining*
Michael Mandl, IEA Bioenergy
- *Electrification as an essential part of the de- and recarbonisation of industrial regions*
Earl Goetheer, TNO/Delft University of Technology, the Netherlands

Group and plenary discussions, including coffee

Session 3: Industrial Systems (1)

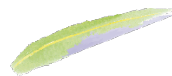
Chair: Rene Hofmann, Vienna University of Technology and AIT, Centre for Energy, Austria

Speakers:

- *Can we know what we don't know? Using ex-ante technology assessment for technology development and deployment*
Andrea Ramirez, Delft University of Technology, the Netherlands
- *Systems aspects of new technologies for decarbonisation of industrial processes*
Philippe Navarri, CanmetENERGY, Natural Resources Canada

17.30

End of Day



THURSDAY 10 OCTOBER 2019

09.00

Session 3: Industrial systems (2)

- *Negative Emission Technologies for Deep Decarbonization in Industry*
Tobias Pröll, University of Natural Resources and Life Sciences, Vienna, Austria
- *Towards Deep Emission Cuts through Industrial Symbiosis*
Filip Johnsson, Chalmers University of Technology, Sweden

Group and plenary discussions, including coffee

Session 4: Industry in a Circular Economy (1)

Chair: Philippe Navarri, CanmetENERGY, Natural Resources Canada

Speakers:

- *Material Efficiency in Clean Energy Transitions*
Tiffany Vass, International Energy Agency
- *Circular economy as a driver of deep decarbonization in industry*
Mika Sulkinoja, Sitra (the Finnish Innovation Fund), Finland
- *Scenarios for net-zero emission basic materials processing industries in the EU*
Stefan Lechtenböhmer, Wuppertal Institute, Germany and Lund University, Sweden

Lunch

13.35 **Session 4: Industry in a Circular Economy (2)**

Group and plenary discussions, including coffee

Session 5: Innovation, Business Models, Risk (1)

Chair: Chris Bataille, IDDRI, Paris and Simon Fraser University, Canada

Speakers:

- *Policy responses to carbon lock-in in the Dutch chemical industry*
Heleen de Coninck, Radboud University, the Netherlands
- *Industry as prosumer in the new energy system*
Horst Steinmüller, Energieinstitut an der Johannes Kepler Universität Linz, Austria
- *Financing the decarbonisation of industry*
Kristian Uppenberg, European Investment Bank
- *Policy packages for deep decarbonisation of energy intensive materials sectors*
Oliver Sartor, Institute for Sustainable Development and International Relations (IDDRI), France

Group and plenary discussions, including coffee

17.15 **End of day**



FRIDAY 11 OCTOBER 2019

09.00 **Session 5: Innovation, Business Models, Risk (2)**

Plenary discussion

Session 6: Policy, Strategy, International Cooperation

Chair: Elvira Lutter, Climate and Energy Fund, Austria

Speakers:

- *Industrial policy respecting the necessity of zero emissions*
Lars J. Nilsson, Lund University, Sweden
- *Policy challenges and opportunities in decarbonising industry*
Sabine Fuss, Chalmers University of Technology, Sweden
- *Deep decarbonisation for Indian Industries: reflections on policy, strategy and international cooperation*
Joyashree Roy, Asian Institute of Technology, Thailand

Group and plenary discussions, including coffee

General Discussion and Summary

Discussion leader: Thore Berntsson, chair of the IETS TCP

13.00 **End of workshop**

Lunch

About the TCP on Industrial Energy-Related Technologies and Systems (IETS TCP)

Founded in 2005, the IETS TCP is dealing with new industrial energy technologies and systems.

Our mission is to foster international cooperation among OECD and non-OECD countries for accelerated research and technology development of industrial energy-related technologies and systems. In doing so, we seek to enhance knowledge and facilitate deployment of cost-effective new industrial technologies and system layouts that enable increased productivity and better product quality while improving energy efficiency and sustainability.

Through our activities, we will increase awareness of technology and energy efficiency opportunities in industry, contribute to synergy between different systems and technologies, and enhance international cooperation related to sustainable development.

Disclaimer

The IETS TCP is part of a network of autonomous collaborative partnerships focused on a wide range of energy technologies known as Technology Collaboration Programmes or TCPs. The TCPs are organised under the auspices of the International Energy Agency (IEA), but the TCPs are functionally and legally autonomous. Views, findings and publications of the IET TCP do not necessarily represent the views or policies of the IEA Secretariat or its individual member countries.