

Deep decarbonisation of materials processing industries – Implications for policy, industry and research

10 November 2017, 10.00 to 17.30; Deutsche Post Tower, Bonn

Ambition

Deep decarbonisation of basic materials processing industries¹ while improving its competitiveness is an emerging and challenging topic that so far has received very little attention. The state of North Rhine-Westphalia – venue of this year's COP23 in Bonn and a major hub of German and European basic materials processing industries – the Wuppertal Institute for Climate, Environment and Energy and the Energy Agency of the state of North Rhine-Westphalia are organising a one-day conference to raise awareness for this important challenge.

The ambition is to convene relevant policymakers, industrial leaders, scientists and NGOs who do pioneering work on the topic. **The conference will explore the current state of knowledge and provide a comprehensive overview of existing activities in the EU, states and regions as well as industries and associations worldwide.** Participants will get access to the latest ideas and concepts, policies and networks. Furthermore, the event provides a good opportunity for networking within the fast-growing community. Due to its interconnectedness with other events, the conference will also send a strong signal to climate negotiators for the policy support needed to advance deep decarbonisation of processing industries.

Speakers

Top experts and representatives from leading institutions in this emerging field will meet at the conference. **Speakers will range from policymakers of pioneering states and regions to representatives from leading companies to heads of industry associations and NGOs working on the topic.** The contributors will give an overview of the challenges and provide cutting-edge information on technologies, policies and networks in the field.

Who should attend?

- Innovation and strategy professionals from basic materials processing industries as well as from technology providers and related associations
- Policymakers and representatives of NGOs working on industrial, research, innovation, trade, energy and climate policies, particularly from states and regions with clusters of processing industries
- Scientists and journalists who are working in the field or are interested in a condensed and comprehensive overview of this new and emerging field

For all participants, the conference provides the chance to meet a large number of relevant people from this evolving community. Moreover, participants receive the most recent news from the field. They can bring in their own ideas and thus provide input into the deliberations of the global climate conference.

¹ Deep decarbonisation in this context means to reduce GHG emissions from energy use as well as process emissions from processing industries to levels as close to zero as possible in order to contribute to the aim of the Paris Agreement (PA). Central target of the PA is to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century. Deep decarbonisation against that background stands for the target of GHG neutrality. It does not mean, however, that there will be no carbon left in materials such as plastics, wood or paper. Closing the loops of the carbon stored in these materials, however, can be a strategy to contribute to GHG neutrality.

Format

The conference will offer a full day's programme and will take place near the entrance to the COP23. It thus offers easy access to the COP for negotiators and observers. However, it is also freely accessible for interested parties who have not pre-registered to the COP.

The conference consists of four content-related blocks (see programme) that together provide a full and comprehensive overview of the different aspects of the topic. Nevertheless, all four blocks can be attended as stand-alone events, comparable to side events at the COP. Attending one block gives negotiators and participants of the COP an excellent opportunity to dive into the topic and meet the whole community in a condensed format of only 60 to 90 minutes, at a venue easily accessible from the COP's premises.

Background

Energy-intensive process industries provide basic materials like steel, aluminium, pulp, paper, cement, plastics, chemicals, etc. These are needed for building infrastructures worldwide as well as for producing consumer goods. Steel, insulation materials, silicon and other materials also essentially contribute to GHG emission mitigation and energy transition across sectors. Processes in these industries, however, are still highly carbon-intensive and responsible for a large share of global GHG emissions. Deep decarbonisation requires changes in industrial, research, innovation, trade, energy and climate policies – changes that are still relatively unexplored.

NRW, the venue of this conference, is home to over 50% of Germany's and over 10% of the EU's basic materials processing industries with most of them located in the Rhine-Ruhr region in the centre of the state. As these industries stand for a significant part of its economy, energy demand and GHG emissions, NRW has started teaming up with its industry champions, trade associations and trade unions, environmental NGOs and other societal groups to develop a vision for a modern decarbonised materials processing industry. In order to realise this vision, which is still being elaborated, wide-ranging and partly disruptive innovations in industrial process technologies as well as significant changes in energy systems are needed. NRW as an energy hub with a unique cluster of industries, engineering know how and dedicated research facilities is starting to position itself as a leading region for the transition of processing industries towards deep decarbonisation.

Organisers

Government of North Rhine-Westphalia, Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia (MWIDE)

Wuppertal Institute for Climate, Environment and Energy

Energy Agency NRW

Endorsers

European Climate Foundation

Under2 Coalition

Lund University

REINVENT project (EU COM; H2020)

Low Carbon Society Research Network



Endorsed by



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10.00-11.10: Introduction and setting the stage on near-zero carbon emission strategies for materials processing industries

Introduction:

- Welcome: Prof. Dr. Stefan Lechtenböhmer, Director Research Group Future Energy and Mobility Structures, Wuppertal Institute (WI)
- Opening: Prof. Dr. Andreas Pinkwart, State Minister for Economy, Innovation, Digitalisation and Energy of North Rhine-Westphalia
- Introduction to the conference: Prof. Dr. Manfred Fishedick, Vice President WI:
Reference to COP negotiations – What role does decarbonisation in industry play in the UNFCCC negotiation process?

Statements on and discussion of challenges and opportunities for materials processing industries in implementing the Paris Agreement:

(Chaired by Prof. Dr. Lars J. Nilsson, Lund University)

- Dr. Dolf Gielen, Director IRENA Innovation and Technology Centre
- Dr. Martin Porter, European Climate Foundation (ECF)
- Dr. Christoph Sievering, Covestro
- Nico van Dooren, Port of Rotterdam

11.30-13.00: On the road to near-zero carbon processing industries: technologies, infrastructures and pilots

Introduction:

- Welcome: Prof. Dr. Stefan Lechtenböhmer, WI
- Introduction to the topic: Tomas Wyns, Institute for European Studies

Presentations on specific aspects of the topic:

(Chaired by Dr. Bettina Wittneben, University of Oxford, and Dr. Chris Bataille, IDDRI)

- Eva Blixt, Swedish Steel Industry Organisation
- Dr. Henning Wilts, WI
- Prof. Dr. Görgen Deerberg, Fraunhofer UMSICHT
- Dr. Brigitta Huckestein, BASF

14.00-15.30: How to spur industrial progress: roadmaps, funding and cooperation

Introduction:

- Welcome: Prof. Dr. Stefan Lechtenböhmer, WI

Presentations on specific aspects of the topic:

(Chaired by Dr. Christoph Wolff, European Climate Foundation, and Timon Wehnert, WI)

- Dr. Artur Runge-Metzger, EU COM DG Climate Action
- Johannes Kerner, Federal Ministry for Economic Affairs and Energy (BMWi)
- Michael Theben, Ministry of Economic Affairs of the State of North Rhine-Westphalia
- Dr. Gerhard Dell, Govt. Upper Austria
- Shiro Kobayashi, Nippon Sheet Glass Co. Ltd

16.00-17.30: Make it happen: The role of (international) innovation, trade, industry, energy and climate policies

Introduction:

- Welcome and introduction to the topic: Prof. Dr. Stefan Lechtenböhmer, WI

Panel discussion with representatives from politics, industry, society and science:

(Chaired by Prof. Dr. Lars J. Nilsson, Lund University, and Dr. Martin Porter, ECF)

- Dr. Reinhold Achatz, thyssenkrupp AG
- Prof. Dr. Stefan Lechtenböhmer, WI
- Prof. Dr. Joyashree Roy, Jadavpur University and IPCC
- Eva Svedling, State Secretary to the Minister for International Development Cooperation and Climate Sweden