



## Workshop V

### What does it take to create a carbon neutral energy intensive industry in the UNECE region?

*This is the 5<sup>th</sup> Workshop on Attaining Carbon Neutrality*

14 April 2021, online, 12.00–14.00 and 15h00–17h00 CET (Geneva time)

Energy intensive industries are one of the key greenhouse gas emitters, accounting for about 25% of total CO<sub>2</sub> emissions globally. The decarbonisation of industries producing cement, iron and steel, and chemicals/petrochemicals is a top priority to attain carbon neutrality and Paris Agreement targets.

These industries are the backbone for modern economies, and they will play an important role in driving a low-carbon post-Covid recovery – among many other uses, steel and concrete structures are required for wind power; thermal insulation for energy efficiency; lightweight materials for electric cars.

Plenty of challenges remain to achieving a carbon-neutral industry. They include a wide range of unreplaceable energy-intensive carbon-emitting industrial processes, low-profit margins for commodity products in a global competitive environment and the expected rise of demand for carbon-intensive materials in sectors, such as buildings, transport, and health care.

You are invited to the fifth in a series of workshops on *Attaining Carbon Neutrality in the UNECE region*. Recommendations from this workshop will feed into a *Brief on decarbonization of Energy Intensive Industries*, which is designed to contribute to UN High Level Dialogue on Energy and COP26 and form the basis for UNECE future work on this topic.

In this online, yet dynamic setting, we will bring together policy makers and industry representatives to explore what is happening across the UNECE region, to discuss what can be done to address challenges, and to propose possible policy solutions.

#### **Objectives**

- Understand the situation of selected energy intensive industries in the UNECE region
- Exchange experience on technology options and carbon circularity to reduce carbon intensity
- Identify successful business models and collaborative activities across UNECE region
- Propose policy solutions for industries in the UNECE region

#### **Audience**

- Policy makers from UNECE countries and industry representatives from cement, steel, chemicals and sectors, academia representatives

## **Schedule**

### **Morning session 12h00 – 14h00**

#### **Roundtable I (60min) – Understanding the situation of selected energy intensive industries in the UNECE region**

##### **Moderator:**

Ms Claude Loréa – Executive Director, Global Cement and Concrete Association, United Kingdom

##### **Speakers:**

##### **Bird's view on decarbonisation trends in energy intensive industries**

Mr Stefan M. Buettner, UNECE Co-Chair Task Force on Industrial Energy Efficiency

##### **Case study cement sector: Lehigh Cement plant CCS Study**

Ms Beth Hardy, Vice President, Strategy & Stakeholder Relations, International CCS Knowledge Center, Canada

##### **Case study steel sector: Low Carbon Steel Production**

Mr Ilya Pavlov, Vice President Investments, Severstal, Russian Federation

##### **Case study chemical sector: Carbon Neutral Chemical Industry**

Mr Sam French, Business Development Director, Strategy & Programme Lead in Clean Hydrogen generation, Johnson Matthey, United Kingdom

- What is happening in targeted industries across UNECE region?
- What are these industries doing to attain carbon neutrality?
- What technology options those industries need to reduce carbon intensity?
- What works and where are identified barriers?
- Examples from targeted industries:

##### **Discussion (60min)**

- Can common elements be identified across industries?
- What economic incentives are identified? Gains in productivity? Savings from more efficient process?
- What technical evolution is expected?
- Which solutions can these industries propose to accelerate energy transition and deliver on climate agenda?

*Lunch break (1 hour)*

## **Afternoon session (15h00 – 17h00)**

### **Roundtable I (60min) – Identifying solutions and discussing successful business models and collaborative activities across UNECE**

#### **Moderator:**

Ms Louise Anderson – Electricity Industry Lead, World Economic Forum, Switzerland

#### **Speakers:**

##### **Humber Energy Intensive Industry Cluster in the United Kingdom**

Ms Oonagh O Grady, Head of Business Development SSE Thermal, Ireland

##### **Decarbonizing energy intensive industries through nuclear energy in Poland**

Mr Józef Sobolewski, Director at National Center of Nuclear Research and Adviser to the Minister of Climate and Environment in Poland

##### **Low-carbon industry clusters in Europe: ALIGN-CCUS and Strategy- CCUS**

Mr Dr Romain Viguiet, Business Development & Project Manager, United Kingdom

##### **Digitalization as a driver to decarbonize energy intensive industries**

Mr Tim Naylor, European Director, Envision Energy, United Kingdom

- What collaborative activities and industrial clusters in the UNECE region exists?
- What works and what does not work? Why?
- What are best practices and lessons learned?

#### **Discussion (50min)**

- What are characteristics of an ideal collaborative activity or industrial cluster?
- How can UNECE help to enhance regional cooperation across UNECE region and maximize collaboration and industry cluster potential?
- Which strategies or policy solutions are needed now to create favourable conditions?
- Can a roadmap be developed for the region?

#### **Wrap-up (10min)**

- Operationalising ideas and tasks for the Group of Experts on Cleaner Electricity Systems and other subsidiary bodies of the Committee on Sustainable Energy.
- Next steps