

## ZEP event

### Low Emission, High Ambition: a Just Transition to a Net-Zero Europe

On 26 September ZEP hosted an event in Brussels on the Commission's long-term strategy focused on the role of CCUS. The aim was to engage Commission officials and industry stakeholders to demonstrate the value and necessity of CCUS to a just transition to a net-zero economy, and to ensure this was reflected in the Long Term Strategy.

The event was attended by around 50 stakeholders, many of whom are outside ZEP's usual audience. Feedback received by the Secretariat has been positive, including on an interesting agenda. Several participants said that they made useful connections during the event which has led to further engagement.

Key points made by the speakers are outlined below.

#### CCUS opportunity in Europe

*Christian Holzleitner, Head of Unit, Land Use and Finance for Innovation, DG Climate Action*

- Much has changed since the EU's last Roadmap seven years ago; the Paris Agreement commits the EU to reaching net-zero emissions in the second half of this century; meanwhile the EU has demonstrated that it is possible to decouple CO<sub>2</sub> emissions and GDP. There have been rapid changes in technology, digitisation and energy demand.
- The vision for the long term strategy is one that protects the planet while ensuring no one is left behind in the transition, and that creates new business models, jobs, growth and investment.
- Electrification, hydrogen, bio-economy, CCUS and digitisation can all have a role to play
- The first call under the Innovation Fund will take place in 2020. The Fund is being designed to be much more flexible than its predecessor, NER 300, taking into account lessons learned.
- The Commission wants to work with CCUS projects over the next year to ensure a strong pipeline of projects exists when the fund launches.

*Bjørn Haugstad, General Director, the Ministry of Petroleum and Energy, Climate, Industry and Technology Department, Norway and Trude Sundset, CEO, Gassnova*

- Both Bjørn and Trude emphasised the necessity of CCS to meeting Paris Agreement targets at an acceptable cost.
- The Norwegian government is continuing to fund development of a full-chain CCS project including capture from two industrial applications; waste-to-energy and cement production. Trude Sundset said the projects represent valuable learning with large deployment potential; HeidelbergCement operate 60 cement plants in Europe, and there are 450 waste-to-energy facilities.

- Bjørn Haugstad stressed that for the Norwegian project to go ahead it must contribute significantly to development of CCUS in Europe.
- Bjørn Haugstad said that one challenge is that the project is two years ahead of the Innovation Fund which will not launch until 2020.

*Tim Bertels, Port of Rotterdam PORTHOS project director*

- The Dutch government has an ambition of 49% CO2 reduction (45 Mtpa) by 2030, The preliminary Climate Agreement suggests that this will include 7 Mtpa CCUS from industry
- The Rotterdam CCUS project Porthos aims to deliver at least 2-4 million tons CO2 reduction per annum amounting to around 40 million tons of CO2 stored in total.
- The project will develop a CO2 transport and storage “hub” for industries in the Port of Rotterdam, who wish to decarbonise through CCS, along with CO2 utilisation where possible. In the longer term it is envisioned the project could also provide a solution for storage of CO2 from Germany and Belgium.

### **CCUS in modeling: assumptions & limits**

*Karen Turner, Strathclyde University*

- Need to retain quality jobs and industries in Europe, instead of simply offshoring
- Highly industrialised regions such as North-Rhine Westphalia in Germany could reduce emissions by 95% in 2050 if connected to CO2 transport and storage resources, such as offshore Netherlands or Norway, and retain existing assets and jobs
- Demonstrated that moving emitting industries outside the EU would actually lead to increased global emissions due to the difference of regulation in those countries.

*Graham Bennett, DNV GL*

- Presented DNV’s Energy Transition Outlook 2018, which is a forecast based on current and projected activity as opposed to a set of scenarios. This predicts a 50/50 split of energy use between fossil and renewable sources in 2050, down from the 80/20 split today.
- While demand for oil globally will peak in 2023, demand for gas will continue to grow into the 2030s, accompanied by a 30% increase in investment.
- The forecast leads to 2.6 degrees of global warming by the end of the century.
- Graham shared a comparison of modelling from a range of different organisations. Those that met a below 2 degree target tended to assume a high global carbon price, and CCS.

*Joseph Yao, Imperial College*

- Addressed some of the key misconceptions regarding CCS in modelling. A “no CCS” scenario emails building 2.5x the energy generation capacity of 2015 by 2050. Leads to an overbuilt and underutilised system, which would not lead to full decarbonisation by 2050.
- Challenged the assumption in Commission modelling of a 90% capture rate for CCS technologies. While the CO2 concentration drives the cost of capture, rates of 98%+ can be achieved today

*Benedikt Unger, Poyry*

- Presented Poyry analysis of EU scenarios with and without CCS in 2050
- Security of power supply requires low-carbon generation to cover periods of low renewables output, with CCS gas a cheaper and more flexible option compared to nuclear
- CCS will be essential to industrial decarbonisation
- Biggest hurdle is political; four of the seven countries in the study oppose CCS

### **Negative emissions: Moral hazard or moral imperative?**

- Discussion with ETUC, Sandbag, Bellona, E3G and Children's Investment Fund
- Jonathan Gaventa, E3G thanked ZEP for addressing this issue which is an "awkward" topic. He said issues around land use for bioenergy, accounting of negative emissions, and business models need to be addressed. However nature-based solutions alone will not get the world to net-zero.
- Benjamin Denis, ETUC said need for net-zero technologies reflects 20 years of inadequate action on climate change. Need to increase ambition now across energy, climate and trade policy
- Frederic Hague, Bellona said need to focus use of biomass into steel, cement and other industry to get double benefit of industrial decarbonisation and negative emissions.
- Suzanna Carp, Sandbag said that negative emissions are both a moral hazard and an imperative. Talking about negative emissions can risk inaction now; however there is an imperative to develop the technology to reduce long-term risk
- Sonia Medina, Children's Investment Fund, said that global picture is complicated and can't assume that all states will take economically sensible decisions. New coal plants being built in developing countries are not always economic and can be driven by corruption.
- All speakers stressed that negative emissions are not an excuse to delay other climate action now