

## “Niederaussem becomes the setting for important technological progress”

- **One tonne of methanol produced daily at Innovation Centre**
- **Nine partners finalise EU-funded research project**

Cologne, 28 May 2019

The objective of the nine European partners joining forces in the “MefCO<sub>2</sub> – Methanol fuel from CO<sub>2</sub>” project was to not only talk about climate protection but to develop the necessary technologies so that they can be used on a commercial scale. In the next few days, the operational phase of the globally unique demonstration plant at RWE’s Innovation Centre will come to an end.

The MefCO<sub>2</sub> plant in Niederaussem produces up to one tonne of methanol daily. The ingredients include about one and a half tonnes of CO<sub>2</sub>, separated from the Niederaussem power plant’s flue gas in the CO<sub>2</sub> scrubbing unit, and some 200 kilogrammes of hydrogen produced from water by means of a 1-MW electrolyser. The power needed for the demonstration plant was generated by the power station. However, it intended that future commercial-scale plants increasingly use power from renewable sources.

“With the MefCO<sub>2</sub> plant, we have been able to demonstrate a process which can be an alternative to conventional methanol synthesis from natural gas,” said Prof. Dr. Reinhold Elsen, Head of Research and Development at RWE Power. “The process makes it possible to both reuse CO<sub>2</sub> captured from exhaust gases from power plants and industry, and to store power from renewable sources in the form of methanol. This methanol could be used to produce electricity in periods when generation from renewables is low.” Moreover, methanol is one of the most important base products in the chemicals industry and is already being used as a low-emission fuel in the transport sector.

The EU funded the international MefCO<sub>2</sub> project with €8.6 million. The partners included the Spanish company i-deals, the plant manufacturer Mitsubishi Hitachi Power Systems Europe, Carbon Recycling International from Iceland, the Genoa University, Hydrogenics from Belgium, the State Chemicals Institute from Slovenia, the Catalysis Institute from the Welsh capital of Cardiff, the Duisburg-Essen University and RWE Power AG.

During the final event at Niederaussem, the town mayor of Bergheim, Volker Mießeler, said: “We need technological alternatives like MefCO<sub>2</sub> which can help us shape the transition from lignite

to the “post-lignite” era in an intelligent and sustainable manner. And which helps Bergheim and the region stay well positioned for future developments.”

“With the completion of the MefCO<sub>2</sub> project, we have taken another step towards the big goal of a more climate-friendly, low-emission energy world in Europe. This is why the funds contributed by the European Union are well invested,” said Dr. Lars Kulik, member of the RWE Power Executive Board, during the project completion event in Niederaussem. He thanked the diverse team of European engineers and technicians for their work. “I am pleased to see that today’s specialists have left the turf wars between conventional and renewable far behind them. Today’s engineers are bringing both worlds together and want to make Europe’s energy transition a success for the benefit of climate protection. I am proud that our Niederaussem site is the scene for this technological progress.”

MefCO<sub>2</sub> is part of the EU’s “Horizon 2020” framework programme and a SPIRE project. SPIRE stands for Sustainable Process Industry through Resource and Energy Efficiency. SPIRE projects are designed to promote the development of enabling technologies and best practices along all the stages of large-scale value chain productions.

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