

## **The H2020 MefCO<sub>2</sub> project, coordinated by i-deals (everis group), comes to an end**

- **The 11M€ MefCO<sub>2</sub> project, funded by the European Commission within the H2020 program framework, finalizes in June 2019.**
- **The MefCO<sub>2</sub> pilot plant is one of the largest flue gas CO<sub>2</sub>-derived methanol synthesis plant in the European Union.**
- **The pilot plant produces around 1 ton of methanol per day, capturing more than 1.5 tons of CO<sub>2</sub> captured from a power plant in Germany.**

**Niederaussem (Germany), May 28, 2019.** The final event of the MefCO<sub>2</sub> project has taken place today in Germany at the RWE's Coal Innovation Center, where the project results have been presented and guided visits to the pilot plant have been organized.

During more than 4 years i-deals, the technology broker of the everis group, has led the MefCO<sub>2</sub> consortium to work in this innovation action aiming to demonstrate the economic feasibility of valorizing captured CO<sub>2</sub> by turning it into a versatile platform chemical and renewable fuel such as methanol. Essentially, methanol becomes an energy carrier for renewable energy from non-biological sources, such as wind and solar thanks to the use of hydrogen produced from renewable sources. The MefCO<sub>2</sub> pilot plant is currently one of the largest flue gas CO<sub>2</sub>-derived methanol synthesis plant in the European Union.

The pilot plant produces 1 ton of methanol per day, capturing more than 1.5 tons of CO<sub>2</sub>. In addition a PEM electrolyser with improved dynamic response produces the required hydrogen for the synthesis (120 Nm<sup>3</sup>/h). The plant is designed for flexible operation and different tests are being carried simulating real conditions. Until now stable operation has been achieved within 40%-90% range and preliminary estimates show an efficiency over 90% in steady-state. In addition, as a result of an exhaustive catalysts synthesis and characterization a patent has been filed regarding a promising catalyst for methanol production.

Behind such a project, there is cross European consortium of 9 partners: **RWE Power** (Germany) is the site owner and responsible of the CO<sub>2</sub> capture plant; **Carbon Recycling International** (Iceland) provides the methanol unit; **Mitsubishi Hitachi Power Systems Europe** (Germany) is the system integrator and provided the CO<sub>2</sub> conditioning unit; **Hydrogenics Europe** (Belgium) is the electrolyser technology developer; the **Cardiff Catalysis Institute** (UK) works in the research of catalysts synthesis; the **National Institute of Chemistry Slovenia** (Slovenia) works in the catalysts and reaction engineering; the **University of Genoa** (Italy) is in charge of the thermo-economic analysis and process optimization; the **University of Duisburg Essen** (Germany) leads the process simulations and **I-DEALS – everis Group** - (Spain) is the project coordinator and responsible of the dissemination and exploitation of the project results.

The work carried out by each partner has been presented today to a sound audience including several experts from different industries, representatives of the European Commission and local politicians. “The impact of MefCO2 goes far beyond the results we are presenting today, we are setting the base for a more efficient strategy to CO2 conversion in the power industry by integrating renewable energy sources”, says Angel Sánchez, founder of **i-deals** (project coordinator) from everis Group. “These type of technologies rely to a high extent in flexibility and MefCO2 has proven this operational scenario is feasible.”

The consortium partners are working on the technology roadmap that will allow the scaling up of project technologies and the potential deployment of full-operational plants.

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