PRESS RELEASE

CONCRETE CHEMICALS

INTERNATIONAL CONSORTIUM OF CEMEX, ENERTRAG AND SUNFIRE LAUNCHES GROUND BREAKING GREEN HYDROGEN PROJECT

"CONCRETE CHEMICALS" AIMS TO SET THE PATH TOWARDS CARBON NEUTRALITY IN CEMENT

15th July 2021, Berlin / Dauerthal / Dresden – Renewable energy company ENERTRAG, global cement producer CEMEX and electrolysis company Sunfire are launching "Concrete Chemicals", a lighthouse project aiming to decarbonize the cement industry. Together with industrial and academic partners, the international consortium has submitted a funding application under the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) funding call to receive financial support for the challenging startup-phase of the project.

In the current ramp-up of the green hydrogen economy, pioneering large-scale projects are essential to achieve the EU's ambitious climate targets. Concrete Chemicals marks an important milestone towards carbon neutrality. The consortium of industry leaders is setting the path for achieving a clean cement production process through converting emitted CO_2 into valuable and renewable products, e.g. for the chemicals and transport industry.

Once the funding has been approved, a large-scale demonstration plant will be constructed directly at the Rüdersdorf Cement Plant of CEMEX, which is considered as one of Germany's biggest cement production sites. After the planned commissioning in 2025, the facility will produce 5,000 tons of green hydrocarbons per year in the first project stage. The feedstocks of the plant will be CO_2 captured on-site from the cement plant and green hydrogen produced by a co-located Sunfire-electrolyzer. In a subsequent step, the produced green hydrocarbons can be converted into synthetic fuels and various renewable chemical products. Furthermore, the consortium is investigating a methanol synthesis route that produces green methanol from syngas. The final technological path will be defined in the course of the project development with the determined product focus forming the basis for the technical design of the plant.

"We support the urgency of action to address the climate challenge and have committed to a 55 % reduction in CO_2 from our 1990 baseline in our European operations by 2030. Together with our industry partners, we can collectively transform ourselves into a CO_2 neutral world. Concrete Chemicals is a promising project and a substantial part of the innovative Carbon Neutral Alliance initiative of CEMEX to develop industrial-scale demonstration projects utilizing ground-breaking technologies", says Sergio Menendez, Regional President for CEMEX EMEA.

In the scope of the project, German cleantech company Sunfire provides a 20 megawatt pressurized alkaline electrolyzer to produce green hydrogen and a high-temperature Co-SOEC (solid oxide fuel cell) electrolyzer to generate syngas – a mixture of hydrogen and carbon monoxide. It marks the world's first implementation of two different electrolysis technologies combined in one process. Sunfire's electrolysis technologies are the most reliable and efficient solutions currently available in the market.

"We strive to bring renewables everywhere – especially to industry sectors with a heavy CO_2 footprint. Our electrolysis solutions are helping our customers to develop a green hydrogen ecosystem and reduce their carbon emissions. We look forward to contributing our deep expertise and reliable technology to the Concrete Chemicals consortium. Together with strong industrial partners and political support, we will take a significant step towards carbon-neutrality", says Sunfire CEO Nils Aldag.

The Concrete Chemicals facility in Rüdersdorf will be powered solely by renewable electricity from ENERTRAG wind and solar power plants in the Brandenburg region. The deployment of the project will offer the opportunity to serve as a blueprint for the cement industry in Europe and worldwide – demonstrating the technological possibilities to turn CO_2 into utilizable products. Achieving a low-carbon cement production in the long term, the project will contribute to reaching the European Green Deal's targets.

"We've honed our knowledge in sector coupling and hydrogen production not only through our experience with the multiannual operation of our electrolysis plant but also through active participation in several research and innovation projects. Now we are bringing this knowledge to drive the energy transition into sectors that have historically been difficult to decarbonize and help to build a market for green hydrogen", states Jörg Müller, CEO of ENERTRAG.

For further information on the project please visit: www.concrete-chemicals.eu

About ENERTRAG

ENERTRAG provides all services related to renewable energies. We efficiently combine electricity, heat and mobility in all areas of life. As an energy producer with an annual production of 1.7 million MWh in its portfolio and a service network that manages over 1,125 wind turbines, we also know from our own experience what is important for our customers. With over two decades of experience in Europe, our 680 employees combine all the skills required for successful operation and efficient maintenance, but also for citizen-oriented planning and reliable construction of energy plants and grids up to complete interconnected power plants. We are always one energy ahead - be it in sector coupling, participation models or demand-oriented night labelling. For further information please visit www.enertrag.com

About CEMEX

CEMEX is a global construction materials company that is building a better future through sustainable products and solutions. CEMEX is committed to achieving carbon neutrality through relentless innovation and industry-leading research and development. CEMEX is at the forefront of the circular economy in the construction value chain and is pioneering ways to increase the use of waste and residues as alternative raw materials and fuels in its operations with the use of new technologies. CEMEX offers cement, ready-mix concrete, aggregates, and urbanization solutions in growing markets around the world, powered by a multinational workforce focused on providing a superior customer experience, enabled by digital technologies. For more information please visit www.cemex.com

About Sunfire

Founded in 2010, Sunfire GmbH is a global leader in the production of industrial electrolyzers based on alkaline and solid oxide (SOEC) technologies. With its electrolysis solutions, Sunfire is addressing a key challenge of today's energy system: Providing renewable hydrogen and e-Fuels from renewable electricity, water, and CO_2 as climate-neutral substitutes for fossil energy. Sunfire's innovative and proven electrolysis technology enables the transformation of carbon-intensive industries that are currently dependent on fossil-based oil, gas, or coal. The company employs more than 250 people located in Germany, Norway, and Switzerland. For further information please visit www.sunfire.de/en

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