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Tailwind for the first climate-neutral cement plant

Carbon2Business innovation project of Holcim Germany receives two awards at the UN Climate Change Conference

December 11, 2023 - From November 30 to December 12, 2023, the Conference of the Parties (COP) takes place, it is the 28th World Climate Conference in Dubai, where effective climate protection measures are debated. In this context, Holcim's Carbon2Business innovation project was awarded two prizes in recognition of its outstanding, innovative efforts to decarbonize industry. Carbon2Business, one of the world's first climate-

neutral cement plants, will go into operation at the Holcim plant in Lägerdorf, Schleswig-Holstein, in 2028. "The awards prove that we are on the right track with our roadmap to decarbonize the company. They will give us a tailwind in implementing our ambitious plans to drive forward the transition to building materials and build the first climate-neutral cement plant," says Thorsten Hahn, CEO of Holcim Germany.

On December 5, Cédric de Meeûs, Head of Public Affairs & Social Impact at Holcim, accepted the COP28 Energy Transition Changemakers Award. This is an initiative of the UAE's COP28 presidency that aims to support companies in implementing innovative and scalable decarbonization projects and to give them a stage. This recognizes Carbon2Business in the "High Emitting Sectors" category as a groundbreaking innovative approach in the fight against climate change, which is credited with the potential of a blueprint for the decarbonization of global heavy industry. "Carbon2Business Lägerdorf is a unique carbon capture project and an important milestone on the Holcim Group's path to decarbonization. We are honored and very proud that the project is being recognised as an 'Energy Transition Changemaker' at COP28," said de Meeûs.

Three days later, Holcim received another award for its project in Lägerdorf with the Net-Zero Industries Award 2023 in the category "Outstanding Projects". Pavan Chilukuri, Head of CCUS Strategy at Holcim, accepted the award on December 8, also in Dubai. The Net-Zero Industries Award is the first global competition for exceptional industrial decarbonization projects and is presented by the Net-Zero Industries Mission. This was launched in 2022 and is the first global innovation coalition with the aim of developing and demonstrating competitive solutions for a climate-neutral industry. Austria and Australia are leading the mission. China, Germany, the European Union, the United Kingdom, Canada, South Korea and Finland are on board as core members.

Pablo Hofelich and Frank Ruoss, CEO and CSO of thyssenkrupp Polysius GmbH: "We congratulate Holcim Germany on this great appreciation of the green transformation of its site in Lägerdorf. We are proud that Holcim has opted for our polysius® pure Oxyfuel technology. Together we will drive the sustainable reduction of CO2 emissions in cement production. Lägerdorf is a groundbreaking lighthouse project for thyssenkrupp Polysius and its oxyfuel technology."

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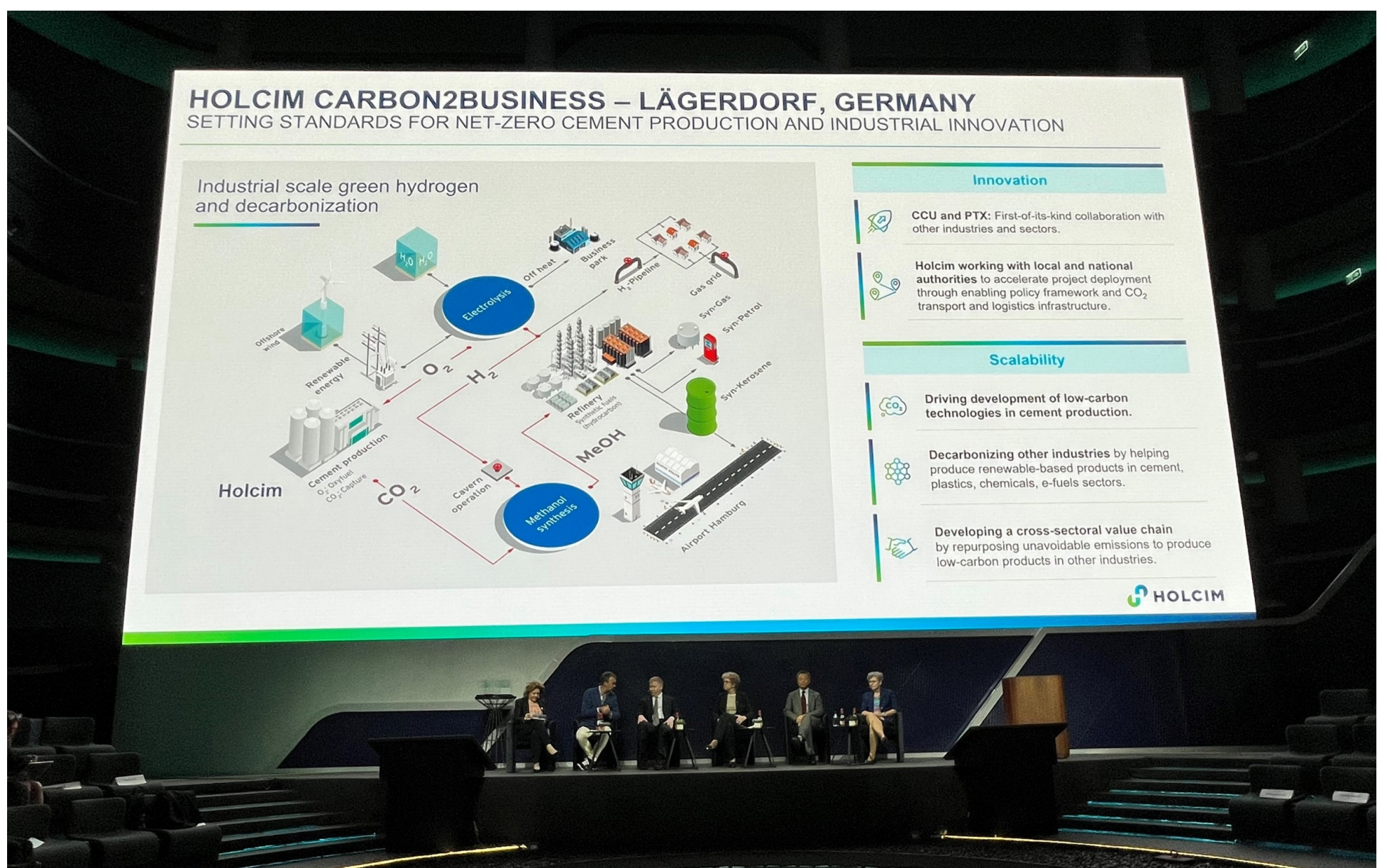
Pablo Hofelich and Frank Ruoss, CEO and CSO of thyssenkrupp Polysius GmbH

Juergen Nowicki, Executive Vice President Linde and CEO of Linde Engineering: "Our proprietary technology combines our core competencies in oxygen and CO2 production. By yielding a high CO2 content in the flue gas, we generate greater efficiency gains in the decarbonization process of cement

production. Since our technology's first pilot trials in 2008, we have continuously invested in its improvement. We are proud that the Carbon2Business innovation project is recognized as a significant contribution on Holcim's mission to become the global leader in innovative and sustainable building solutions - through the design and construction of a world-scale, commercial plant."

The core of Carbon2Business is the conversion of the cement plant and the construction of a new kiln line. As an industrial-scale prototype for the decarbonization of cement production, the new kiln uses second-generation oxyfuel technology as well as a downstream compression and purification unit for the CO₂.

In the oxyfuel process, pure oxygen is fed into the combustion process of the cement kiln instead of ambient air. As a result, the oxyfuel process produces high-purity CO₂ in the cement kiln, which is captured and can then be processed into methanol by methanol synthesis or processed as a raw material for the chemical industry, for example to produce plastics. Holcim is relying on thyssenkrupp Polysius GmbH as its technology partner. Holcim is working with Linde, a leading global industrial gases and engineering company, for the supply of oxygen and to process the captured CO₂.



The bottom line: The processes can avoid the emission of 1.2 million tons of CO₂ annually at the Lägerdorf site alone. The Carbon2Business project is funded by the European Union with almost 110 million euros from the Innovation Fund.

