Letter of Intent signed for direct air capture process

08/12/2023 Porsche, the state of Baden-Württemberg and the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) to jointly pursue direct air capture (DAC) technology.

The seventh annual meeting of the Baden-Württemberg Automotive Industry Strategic Dialogue (SDA) in Berlin marks a milestone in the collaboration between the Baden-Württemberg state government, Porsche AG and the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW). State Premier Winfried Kretschmann, Lutz Meschke, Deputy Chairman of the Executive Board and Member of the Executive Board for Finance and IT at Porsche AG, and Professor Frithjof Staß, Managing Director of ZSW, jointly signed a letter of intent to further develop and support direct air capture (DAC) technology. This technology has the potential to make a significant contribution to the fight against climate change.
Porsche relies on future technology with DAC process

Reducing CO₂ emissions alone is not enough to limit global warming. Rather, in the decades to come there must be a parallel effort to remove CO₂ from the atmosphere on a major scale. DAC is a method of removing CO₂ from the air. The CO₂ can then be used as a raw material for the likes of renewable synthetic fuels (eFuels), products – or applications such as beverages, plastics or graphite for battery production. It can also be stored in the ground on a long-term or permanent basis. With DAC, Porsche is focusing on an important future technology that is on the threshold of mass production – and is now bringing the subject to the SDA context.

The SDA was launched in 2017 and has since initiated a large number of projects to take advantage of the opportunities of the transformation process in the automotive industry. The aim is to strengthen Baden-Württemberg not only as a leading business location, but also as a pioneer in sustainable mobility and new technology. From their base at Porsche, Andreas Haffner and Lutz Meschke work in the SDA as co-leads on the Vehicle and Data topics alongside Porsche employees from a number of different departments.

At the seventh annual meeting of the Strategic Dialogue in Berlin on 7 December, 2023, Porsche Board Member for Finance Lutz Meschke highlighted the importance of DAC – in particular with regard to international efforts to limit global warming.

“Porsche stands for innovation and the development of future technology, including in the field of sustainability,” says Meschke. “We are therefore looking forward to driving the advancement of direct air capture technology together with the state of Baden-Württemberg and other partners. Direct air capture can become an important climate technology worldwide if we can jointly pave the way to industrial production and application."

Promoting key industries of the future

For Porsche, DAC technology is an engineering approach. It can help to establish a globally sustainable circular CO₂ economy, reduce CO₂ levels in the atmosphere and minimise the risk of raw material shortages. The joint initiative by the state government, Porsche and ZSW aims to bring DAC technology to market worldwide and to open up new business opportunities for companies from Baden-Württemberg.

The state government of Baden-Württemberg and ZSW emphasises the importance of forward-looking investments at a national and European level as a means of staying competitive internationally and promoting key future industries. The support of Porsche and other partners in advancing the development of DAC is a promising step in the right direction.

Premier Winfried Kretschmann: “All around the world, protecting the climate is one of the greatest
challenges of our time. Direct air capture can become an important technology for combating climate change if we succeed in laying the groundwork for global deployment on an industrial scale. This innovative technology can also open up new business opportunities for companies from Baden-Württemberg. Our letter of intent on DAC from Baden-Württemberg is an exemplary collaboration between business, the scientific community and the political sphere in the context of our Automotive Industry Strategic Dialogue BW. The SDA BW is a working format for those who have the courage to take action, with concrete projects to successfully shape the transformation of the automotive industry.”

“The targeted transfer of technology from applied research to industry will also be decisive for the market success of DAC from Baden-Württemberg”, says Prof Frithjof Staiß of ZSW. “At ZSW, we support this process with the product-oriented development of DAC technologies and dialogue formats through which companies from Baden-Württemberg are broadly activated to get involved with the technology.”

At IAA Mobility last September, Porsche presented the model of DAC equipment that could potentially be used at the Haru Oni eFuels pilot plant just outside Punta Arenas, Chile. Michael Steiner, Member of the Executive Board for Research and Development at Porsche AG: “We want to put industrial direct air capture technology into series production. Together with the experienced team at Volkswagen Group Innovation, our established eFuels partner HIF Global, and MAN Energy Solutions SE, we are examining the integration of a DAC pilot set-up at the e-fuels plant in Chile. We regard DAC as a viable future technology because it can be used to extract the carbon molecules required for the production of many products in a sustainable manner. So we are working on bringing the technology to a higher degree of maturity.”

Barbara Frenkel, Executive Board Member for Procurement at Porsche emphasises: “In our view, direct air capture is an important, forward-looking technology – for energy extraction, for the fight against climate change and for sustainability. We are therefore extremely pleased that the state of Baden-Württemberg and ZSW recognise the importance of this future technology and will support us in its development. We need strong partners and alliances for the development of innovations so that, together, we can provide the answers to the challenges of our time.”

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