

Siemens and CAPHENIA accelerate scale-up of Sustainable Aviation Fuel

- **Siemens becomes preferred automation and digitalization partner**
- **Agreement aims at jointly accelerating the energy transition and covers broad scope of Siemens Xcelerator portfolio**
- **Siemens supports CAPHENIA from pilot plant to commercial scale-up**

Siemens and the German cleantech company CAPHENIA are partnering to scale the production of Sustainable Aviation Fuel (SAF). SAF is a synthetic kerosene made from renewable feedstocks that can reduce CO₂ emissions by up to 80 percent compared to fossil kerosene. As preferred technology partner, Siemens will provide digitalization and automation solutions for CAPHENIA's plasma technology, which converts bio-methane into synthesis gas. The goal is a standardized concept that enables the global rollout of commercial production facilities.

CAPHENIA's technology uses a plasma process to split bio-methane into synthesis gas at temperatures of around 1,500 degrees Celsius. CAPHENIA's Plasma Boudouard Reactor is a globally unique 3-in-1 zone reactor that integrates three established chemical reactions in one system. The resulting synthesis gas can then be further processed into SAF, renewable diesel, or chemical products – without by-products and with minimal energy losses.

A key advantage: the heat released when cooling the synthesis gas is used to preheat the incoming bio-methane. This results in a process efficiency of more than 86 percent, representing significantly higher energy efficiency than is possible with conventional methods.

Under the agreement, Siemens becomes CAPHENIA's preferred supplier and technology partner, offering comprehensive solutions from its Siemens Xcelerator portfolio, including process control systems, drive technology, measurement technology, and process simulation software. Digital twins will make it possible to optimize operating parameters before physical commissioning and to manage processes consistently across different sites.

This press release is available at: <https://sie.ag/5QgXnd>

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