

## **Sustainable aviation fuel plant to start production in 2024 in Denmark**

**The plans to commence production of sustainable aviation fuel (SAF) is well underway in Denmark. Aalborg Airport, Kosan Gas (UGI) and European Energy are working together to establish a pilot plant that will start producing SAF from 2024.**

A new project to produce sustainable aviation fuel (SAF) from renewable sources has been launched in Aalborg. The project has participation from Aalborg Airport, Kosan Gas, Vertimass and European Energy and the expectation is that a pilot plant will be established with production commencing in 2024. The SAF will be produced from CO<sub>2</sub> and green hydrogen and pave the way to supply the first domestic flight route in Denmark running on SAF.

The project – which is called MeSAF, is part of the ambition from the partners to contribute towards a green transition in the aviation sector and prepare for the initiatives under ReFuel EU. The process has been simplified using new technology developed by the American company Vertimass.

Whereas processes today require several steps from converting methanol into aviation fuel, the new technology only involves one step.

In cooperation with the Danish company European Energy, a major producer of renewable energy from solar and wind and the company behind the first production of e-methanol in Denmark, the production of kerosene with the new technology will initially be tested in the US. Hereafter, a demonstration plant will be established in Aalborg by 2024. The experience from this plant will form the basis for the evaluation of a subsequent full-scale plant with production of at least 10,000 tonnes per year.

*“Making air traffic sustainable is of high priority, and e-SAF makes up a potential solution, but existing technologies require very large scale and are not ideally suited for the intermittent hydrogen production from wind and solar energy. With this new technology from Vertimass we expect to be able to make use of our existing experience in e-methanol and deliver a sustainable product that is cost competitive, and where the ingredients in the form of wind, solar and CO<sub>2</sub> in principle are unlimited”,* says Søren Knudsen Kær, Head of Technology, European Energy.

Aalborg Airport participates in the project as a partner

*“With both DAT, SAS and Norwegian there are approximately 18 daily departures between Aalborg and Copenhagen. This makes Aalborg-Copenhagen the busiest domestic route in Denmark. It therefore makes sense that the first Danish sustainable domestic route will be from Aalborg Airport. We are looking forward to the collaboration and not least the development of more sustainable aviation”,* says Niels Kjær Hemmingsen, Director at Aalborg Airport.

### **Kosan Gas to sell by-product as renewable gas**

Renewable Liquid Gas (RLG) is a by-product from the production of aviation fuel. Kosan Gas intends to sell this as a sustainable alternative to the fossil gases (LPG) distributed today.

*“The cooperation on the production of e-SAF is the result of a strategic focus on sustainable transition in our organization, where the partnership with our technical partner, Vertimass, has been the key to combine the appropriate technologies, which the project in Aalborg requires. Being*

*able to produce this renewable liquid gas means that we, among other things, will be able to help companies that wish to increase their security of supply with a sustainable and climate friendly energy solution. As the production of sustainable aviation fuel increases, we expect to be able to supply correspondingly larger amounts of renewable liquefied gas to our customers”,* says Jannik Brokær Lund, Commercial Manager, Kosan Gas Nordic.

The total budget for the MeSAF project is 2,6 million USD, of which the Danish technology development program EUDP has funded 1,37 million USD.

#### **The partners in the project are:**

**European Energy A/S** develops, finances, establishes and operates solar and wind farms as well as large-scale Power-to-x plants. European Energy is based in Denmark with activities in Europe, Brazil, the US and Australia. The company has integrated REIntegrate, which is behind the construction of Denmark's first e-methanol plant.

**Kosan Gas** is the market leading distributor of LPG (Liquefied Petroleum Gas) gas for the Danish and Nordic markets. The company is owned by UGI Corporation.

**Vertimass** specialises in the development of technology for the production of sustainable fuels for the transport sector. The US-owned company has developed a catalyst for the processing of ethanol and methanol into aviation fuel.

**Aalborg University's** Department of Energy Technology conducts research into the development of technologies and solutions for the energy supply and consumption of the future, focusing on the use of renewable sources and the establishment of synergy between sectors.

**Aalborg Airport** is Denmark's third largest airport and constitutes a busy traffic hub for both transport of passengers and cargo. The airport handles a significant part of the flight-based domestic traffic, which according to a political wish must be introduced to a green route no later than 2025.

**Port of Aalborg** is as one of Denmark's largest commercial ports, engaged in the development of supply facilities based on green fuels for the transport sector. Within a short period of time, the port will be home to Denmark's first e-methanol plant, which will be moved from Aalborg University to the port.

**Hydrogen Valley** is with its comprehensive technical and commercial knowledge within Power-to-X and Carbon Capture Utilization and Storage responsible for dissemination of the progress and results of the project.

#### **For more information, please contact**

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