



Sustainable aviation fuel technology leaders flying high with new processing facility

Moeve and Bio-Oils Energy, Spain

In the ongoing sustainability battles to find ways to fuel our global transport needs and feed our populations, discovering eco-friendly ways to fly is a fundamental challenge.

Currently, despite growing demand, the supplies of sustainable aviation fuel (SAF) are still just a drop in the ocean when it comes to getting the world's aircraft into the skies. Added to this, the production of the fuel can impact on food supplies as it uses feedstock that could be used in the food chain.

However, an exciting joint venture, Cepsa Bioenergia San Roque (CBSR), between Moeve (formerly Cepsa) and Bio-Oils Energy, part of the Apical Group, is about to see the SAF tap being turned up without impacting food supplies, thanks to a 1.2 billion euro project in Spain that is being supported by Alfa Laval technology.



Alfa Laval has won the contract to supply its innovative pre-treatment equipment that will be key to producing hundreds of thousands of tonnes of SAF every year at a new plant currently under construction in Huelva.

Executive Director of Apical, Pratheepan Karunagaran, says: “Our 2G biofuels plant with Moeve, which will be the largest aviation fuel processing facility in southern Europe, is an excellent example of how industry players can come together to unlock the potential of SAF and scale up adoption in an affordable manner.”

Maarten Wetselaar, Moeve CEO, highlighted: “Today we are breaking ground on our second-generation biofuels plant, the first major milestone of our Positive Motion strategy. This strategic project for Spain and Andalusia will make us a European benchmark in the field of green molecules and facilitate the immediate decarbonization of sectors that cannot run on electrons, like aviation.”

“This is the start of a new chapter for Moeve and this region that will generate quality employment and a new era of industrialization.”

Maarten Wetselaar, Moeve CEO

Alfa Laval is supplying two different pre-treatment units for the plant, which is an important step on the journey towards decarbonizing the global transport sector in a sustainable manner, while creating more than 2,000 direct and indirect jobs in the process.

“It means a lot to have this degree of trust placed in Alfa Laval, delivering key solutions that will be the foundations of a project that has seen huge investment,” says Bent Sarup, Vice president, Oils & Fats Systems BU Food Systems. “It’s a very significant order for us and reinforces our reputation as real leaders and experts in this vitally important area.”

The new plant in Palos de la Frontera, will produce 500,000 tonnes of SAF and renewable diesel annually from advanced feedstock – which comes from fats and oils waste. This is important in terms of sustainability as these are products that do not impact on the global



food supply, which means that the rising demand for biofuel can be met without hampering the efforts to feed our populations.

Alfa Laval’s pre-treatment units will operate on two separate lines with similar capacities at CBSR, one which processes multiple advanced feedstocks and one that focuses on used cooking oils and palm waste oils.

This allows for flexibility and future-proofing, as Andrew Logan, Regional Business Manager – Europe, Oils & Fats Systems, explains: “The two systems make for a flexible overall solution as it can deal with complex or simplified pre-treatment, depending on the feedstock involved. Looking into the future, no one knows what feedstock will be available, so building in flexibility like this is absolutely key.”

The new plant means that overall Moeve and Bio-Oils Energy will be doubling their total renewable fuels production capacity at the facility to one million tonnes a year. The global production of SAF is expected to reach 1.5 million tonnes in 2024 and according to the International Energy Agency (IEA), the use of advanced feedstock in producing this fuel must increase to 40% by 2030 – up from 9% in 2021 – to help meet this demand while minimizing impacts on the global food supply and land-use.

The IEA’s Net Zero Scenario also states that over 10% of fuel consumption in aviation needs to be SAF by 2030 to stay on course for net zero CO₂ emissions by 2050. In 2022, the International Air Transport Association estimated global SAF production to make up only around 0.1% to 0.15% of total jet fuel demand.

As well as supplying this crucial much-needed biofuel, the new facility will also emit 75% less CO₂ than a traditional biofuel plant and is designed to achieve net zero emissions in the medium term using 100% renewable electricity and various heat recovery and energy-efficiency systems. It will only use reclaimed water, and its water emissions will have a minimal impact on the ecosystem thanks to a powerful water treatment plant.

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Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

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