HEFA FOR AVIATION

Lessons learned

Tarja Mylläri, Head of Market Access, Neste
tarja.myllymaki@neste.com
OUR VISION:

We create responsible choices every day.
Renewable Products

**PRODUCTION CAPACITY:**

2.6 million tons per year

**OFFERING:**

Renewables (diesel, jet fuel, bio-propane) and raw materials for bioplastics

**MAIN MARKET AREAS:**

Europe and North America

**CUSTOMERS:**

Oil companies, retailers, wholesale customers, fleets, and municipalities, chemical industry producers, and major brands.

"We help our customers to reduce their carbon footprint by up to 90%.”

KAISA HIETALA, Executive Vice President RENEWABLE PRODUCTS
Cleaner fuels on the roads

Low-sulfur bunker fuel at seas

Renewable solutions for chemicals industry

Renewable jet fuel in the air
Initiative Towards sustAinable Kerosene for Aviation (ITAKA)

- Funded by EU 7th Framework Programme for Research and Technological Development.
- Target: Develop a full value-chain in Europe to produce sustainable drop-in HEFA at large scale to test its use in existing logistic systems and in normal flight operations in the EU.
- 16 partners.
- Total cost 16.0 MEUR. EU contribution 9.4 MEUR.

https://www.icao.int/environmental-protection/GFAAF/Pages/Project.aspx?ProjectID=19
https://cordis.europa.eu/result/rcn/199638_en.html
Feedstock

- The feedstock used was camelina oil.
- Sustainable (EU-RED certified).
- Can be produced in Europe without competing with other crops or land uses i.e. in dry land areas.
- ITAKA utilised four camelina plantations in Spain, which were complemented by smaller plantations in Romania.
- Lessons learned: Availability of sustainable European feedstock can be a bottleneck: new crops require a long time to expand and currently available feedstock (e.g. UCO) is demanded by other sectors or uses.
• HEFA was produced at Neste refinery in Porvoo, Finland in late 2015.
• The fuel was analysed and certified to ASTM D7566, and transferred by a ship to Gävle, Sweden.
• The fuel was blended with conventional jet fuel (50%) and transferred to Oslo by trucks.
• Lessons learned: Scaling up the production from batches to continuous production and developing logistics solutions require collaboration among multiple stakeholders.
For the first time, HEFA distribution was done via the airport’s existing distribution system (hydrant) at Oslo Gardermoen Airport (max. 3% blend).

Airlines KLM, Lufthansa, SAS used the fuel with excellent results.

60,000 flights and 6 million passengers.

Lessons learned: a lot of data to demonstrate that there are no concerns related to the logistics and commercial use of HEFA.
Responsible choices in aviation:
Geneva Airport is going green

We are pioneering to make flying more sustainable.

1% of the annual jet fuel consumption shall be renewable jet fuel starting late 2018.

“Airports have a crucial role in taking initiatives which aim at reducing environmental impact. We are pleased to work in this very ambitious project together with Neste, and all other stakeholders.”

André Schneider, CEO of Genève Aéroport
Neste Green Hub creates value through satisfying customers of different stakeholders

- Achieved sustainability goals
- Positive publicity
- Recognition as change maker
- Better air quality
- Engaged and happy community
- Contribution to fight against climate change
- Job creation

- Broader product portfolio
- Enhanced value prop to customers
- Legitimacy for growth

- Enhanced brand value through positive publicity
- More ancillary revenue
- Stronger passenger value prop
- Legitimacy for growth

- Feeling good with flying
- Loyalty program rewards
- Recognition

- Achieved sustainability goals
- Satisfied employees
- Marketing and PR value

- Positive publicity
- Recognition as change maker
- Jobs creation
- Contribution to fight against climate change
- Better air quality

- Engaged and happy community
- Job creation

- Positive publicity
- Recognition as change maker
Danke Schön - Thank You
www.decarbonizingaviation.com