



Consortium launches Zenid – Sustainable Aviation Fuel from Air

Press Release (DRAFT)

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Key Take Aways

- Rotterdam The Hague Airport (part of Royal Schiphol Group), Rotterdam The Hague Innovation Airport, SkyNRG and Climeworks take a next step in realizing Zenid – a demonstration plant producing fully circular sustainable aviation fuel directly from air
- Uniper signed an MoU to support Zenid with engineering and operating expertise
- Sustainable aviation fuel (SAF) made from air via direct air capture offers a carbon-neutral solution for aviation and contributes to the net zero targets in the aviation industry

Background

The aviation industry is responsible for 3% of global manmade CO₂ emissions and has the challenging objective to reduce these emissions in the next decade significantly. Unlike road transport, aviation cannot switch to electric or hydrogen propulsion yet and therefore depends on sustainable aviation fuels (SAF). SAF purely made from air via direct air capture technology and renewable electricity offers a carbon-neutral solution suitable to meet the industry's high demands for renewable fuels in the future.

Project details

Today's High-Level Conference on Synthetic SAF hosted by the Dutch Minister for Infrastructure and Water Management Cora van Nieuwenhuizen sets a new milestone in the development of Zenid. A consortium consisting of the Rotterdam The Hague Airport (part of Royal Schiphol Group), Rotterdam The Hague Innovation Airport, global leader for SAF SkyNRG and Swiss direct air capture pioneers Climeworks agreed to further investigate the construction of a demonstration plant producing fully circular SAF with 100% CO₂ derived from the air. Based on the positive outcome of a feasibility study for such a plant conducted earlier.

The demonstration plant will be powered by regionally sourced renewable energy and combines several innovative technologies: a direct air capture plant provides CO₂ to a highly efficient co-electrolysis unit, that turns the CO₂ and added water into syngas. The syngas is transformed into liquid hydrocarbons by a modular Fischer-Tropsch reactor and then refined into sustainable aviation fuel.

The Zenid consortium signed an MoU with global energy company Uniper to support the engineering and operation of the demonstration plant. For the future availability of fully circular SAF from air, it is crucial to kick-start the scale-up today. The goal of Zenid is to enable a net zero aviation industry in the long-term.

History of the project

In 2019, Royal Schiphol Group financed a study to investigate the feasibility of a demonstration plant able to produce SAF from air, water and renewable electricity. The European consortium conducting the study was led by the German service provider EDL and further consisted of Climeworks, Sunfire, Ineratec, SkyNRG and Urban Crossovers. Zenid is now taking a next step with the support of these technology partners.



Quotes

Quote by Christoph Gebald, Climeworks: *'The launch of Zenid shows the commitment of the industry towards fully circular fuels from air and their role to substantially reduce aviation's CO₂ emissions.'*

Quote by Maarten van Dijk, SkyNRG: *'Sustainable aviation fuel produced synthetically from CO₂ is one of the promising technological pathway necessary to transition towards a sustainable aviation industry, that's why SkyNRG is proud to support the Zenid project.'*

Quote by Ron Louwerse, Rotterdam the Hague Airport:
'Rotterdam the Hague Airport is very proud to be one of the Kick-Starters of this groundbreaking project, together with Schiphol Group and Rotterdam The Hague Innovation Airport (RHIA). It fits exceptionally well within our strategy to facilitate and accelerate sustainability and innovation in aviation, to be at the cradle of sustainable aviation fuel made of CO₂ from air. We support this project with our know how and local networks.'

Press images

See separate images;

- Zenid Logo
- Zenid Partners
- Zenid Process Diagram

When placing the images please add 'Image by Zenid'

Note to editor

This press Release, or parts thereof, cannot be published prior to February 8th 2021, 10 am CEST.

For more information about Zenid please check our website: www.zenidfuel.com

For questions regarding Zenid please contact Willem van Genugten at info@zenidfuel.com

We kindly ask you to send us a link to your online publication and/or a PDF of your print publication for archiving purposes. Thank you!



About

About Climeworks

Climeworks empowers people to reverse climate change by permanently removing carbon dioxide from the air.

One of two things happens to the Climeworks air-captured carbon dioxide: either it is returned to earth, stored safely and permanently away for millions of years, or it is upcycled into climate-friendly products such as carbon-neutral fuels and materials, fertilizer for greenhouses or bubbles in your fizzy drinks. The Climeworks direct air capture technology runs exclusively on clean energy, and the modular CO₂ collectors can be stacked to build machines of any size.

Founded by engineers Christoph Gebald and Jan Wurzbacher, Climeworks strives to inspire 1 billion people to act now and remove carbon dioxide from the air. Together we can build a climate-positive world. Join us!

Web: <https://www.climeworks.com>

Twitter: <https://twitter.com/Climeworks>

Facebook: <https://www.facebook.com/climeworks>

LinkedIn: <https://www.linkedin.com/company/climeworks>

About SkyNRG

Having supplied over 30 airlines on all continents, it is our mission to make SAF the new global standard.

SkyNRG sources, blends, and distributes SAF, guarantees sustainability throughout the supply chain, and develops programs -e.g., the Board Now program, to co-fund any price gap over conventional jet fuel. At the same time, SkyNRG focuses on developing regional SAF supply chains -e.g., our own dedicated SAF production plant, DSL-01, that offer a real sustainable and affordable alternative to fossil fuels.

To ensure we make the right decisions regarding the sustainability of our operations, projects and products, SkyNRG is structurally advised by an independent Sustainability Board, which includes representatives from WWF International, the European Climate Foundation, Solidaridad Network and the University of Groningen. Also, SkyNRG's operations are certified by the Roundtable on Sustainable Biomaterials (RSB), the highest possible certification standard for sustainable fuels.

Web: www.skynrg.com



About Uniper

Uniper is a leading international energy company with around 11,500 employees and activities in more than 40 countries.

With about 34 GW of installed generation capacity, Uniper is among the largest global power generators. Its main activities include power generation in Europe and Russia as well as global energy trading, including a diversified gas portfolio that makes Uniper one of Europe's leading gas companies. In 2019, Uniper had a gas turnover of 220 bcm.

The company is headquartered in Düsseldorf, being the third-largest listed German utility. Under its new strategy, Uniper aims to become carbon-neutral in Europe by 2035.

Web: www.uniper.energy

Twitter: https://twitter.com/uniper_energy

Linkedin: <https://www.linkedin.com/company/uniper-se/>

About Rotterdam The Hague Airport

Rotterdam The Hague Airport (RTHA), part of Royal Schiphol Group, is a European regional airport for commercial and charter flights, business aviation and local medical rescue flights. In 2019 RTHA processed two million passengers with its 50 European destinations.

Web: <https://www.rotterdamthehagueairport.nl/en/>

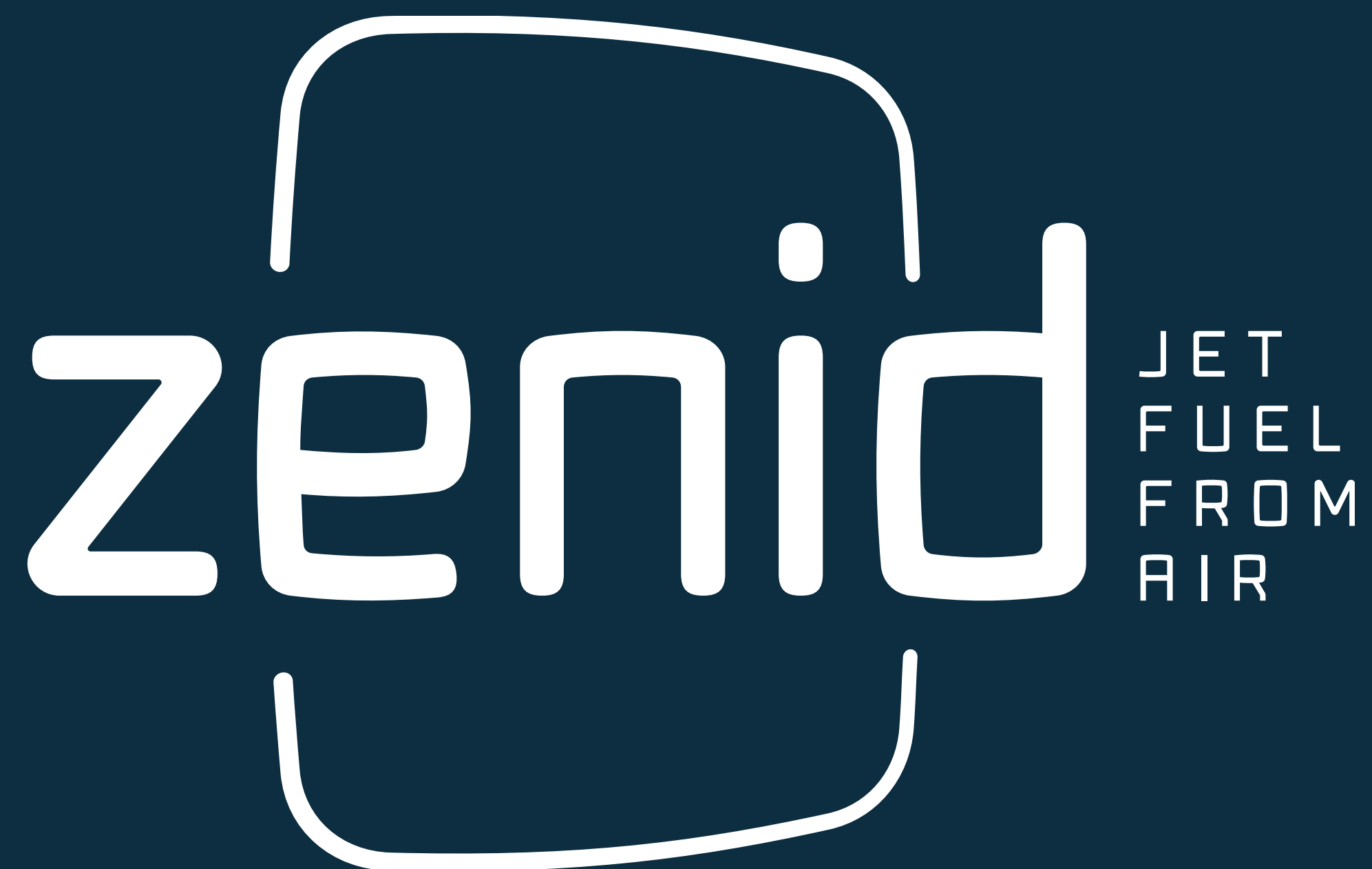
About Rotterdam The Hague Innovation Airport (RHIA)

As a community, RHIA focuses on the realization of an 'Aviation District', a socio-economic cluster integrated with its environment and a magnet for innovation and entrepreneurship. This Aviation District is an innovation ground for future aviation, enabling and accelerating the transition of the aviation sector. Together, we work on sustainable airplanes and airports, smart mobility, green energy, new business and next generation education.

Web: <https://stichtingrhia.nl/>

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