



Letter of Intent 'BioPort for jet fuels in the Netherlands'

Innovation goal

In this Letter of Intent (LoI) the key stakeholders from the public and private domain in the Dutch aviation and biofuels industry, KLM, SkyNRG, Schiphol Airport, Neste Oil, Port of Rotterdam, the State Secretary of Infrastructure and the Environment and the Minister of Economic Affairs, jointly underline the following innovation goal:

Working in close cooperation, the aforementioned key stakeholders in the Dutch bio jet chain are committed to promote a shift from single projects to the continuous production and supply of sustainable bio jet fuel for the Netherlands and Europe, as an international breakthrough initiative aimed at upscaling the deployment of sustainable biofuels in the aviation sector.

Our ambition is to position the Netherlands in the heart of the emerging European bio jet fuel market which envisions large volumes of sustainable and price competitive bio jet fuels available for commercial use in Europe as soon as possible. Our collaboration will therefore offer a growth path for, and contribute significantly to, the European Advanced Biofuels Flight Path¹ 2020 targets.

Our common motivation

Our common motivation is to address the **global challenge of climate change** and to jointly support the aviation sector to reduce its greenhouse gas emissions. The deployment of sustainable biofuels is essential to **reduce the environmental impact** of aviation activities. Applying sustainable biofuels in aviation will also contribute to achieving our ambitious emission reduction goals. Furthermore, reducing our dependency on fossil fuels could increase the **energy independence** for the Netherlands and Europe.

A world-leading renewable jet fuel industry in the Netherlands will have a significant impact on the Dutch economy by attracting investments and by creating jobs as well as by the smart use of feedstock and by providing a leading role for the Netherlands in the new biobased industries.

The **Netherlands is uniquely positioned to develop this industry**. Its excellent logistics infrastructure, its motivated and strategically well-positioned industry and expert institutes, and a pro-active, entrepreneurially minded government are key assets that enable the breakthrough necessary for commercial upscaling of the aviation biofuels market. Dutch stakeholders, public and private, have long been pioneers in improving the position of the aviation sector by working closely together. The key stakeholders are committed to take the next steps needed, within everyone's capabilities and responsibilities, to reinforce the Dutch position as a pioneer and to achieve the Dutch ambition towards becoming **a leading sustainable industry**.

Our challenges in the way forward

Public and private partners have shown that using biofuels in aviation can be done in a safe and environmentally sustainable way. The next step is to create a market for bio jet fuel in the Netherlands, which will comply with strict environmental criteria and, at the same time, will meet economic and social sustainability criteria. This should lead to a significant increase of available amounts of bio jet fuel in the years ahead. Securing sustainable and price competitive feedstock as well as commercialisation of existing technologies and innovation in new technologies are needed to reach continuous supply and to meet increasing market demand. Therefore, a chain approach with further cooperation between all partners is essential for investments and innovations in the different parts of the supply chain. This will be further elaborated in specific working groups that focus on the topics of feedstock, conversion and demand.

The sustainability, availability and price level of **bio feedstocks** are the most important challenges for increasing production volumes and offtake. Development efforts should be focused on expanding the mix of the feedstock base. Feedstock projects have to be developed in collaboration with relevant



feedstock industries, such as agriculture and the waste sector, to ensure the long term availability of sustainable and price competitive bio jet fuel.


For bio jet fuel, new **conversion** technologies and techniques are needed beside short term upscaling of already approved technologies. Only by developing a diverse mix of different feedstock and conversion techniques it will be possible to upscale the production of bio jet fuel in the Netherlands, which is price competitive with fossil fuel. Technology development projects need to be done in collaboration with all supply chain stakeholders, such as industry, government, financing institutions, research institutions and NGOs. The focus of these projects will be on commercial production and on adding value to the sectors that have no alternatives to mitigate their climate impact.


Stable, long-term market **demand** must be created in order to make investing in the development and production of aviation biofuels worthwhile. Long-term offtake agreements and governmental incentives, within their policy and regulatory framework, are needed to reduce the financial risk of investing in feedstock and conversion capacity. The aim is to meet price competitiveness with fossil fuels on a structural basis, which will be a crucial aspect for large scale structural offtake.

We believe that, by being first, the Netherlands can establish a leading position in the production, supply and deployment of sustainable bio jet fuels.

Close cooperation between stakeholders, open dialogue and transparency with respect to NGOs and scientific organisations are all prerequisites for achieving this goal.

Our public-private partnership – across the Dutch bio jet fuel chain and with support from industry and government


	<p>Over the past years, KLM has been intensively involved in the development of bio jet fuel to enhance the sustainability of its business by flying on biofuels and it is internationally recognised as the industry leader on this topic (Dow Jones Sustainability Index sector leader for 9 consecutive years). KLM and WWF-NL are partnering to replace fossil kerosene with sustainable biofuels and have agreed on KLM's aim to use 1% biofuels for its entire fleet in 2015 if available and affordable. KLM is co-founder and shareholder of SkyNRG and has already operated a large number of flights on sustainable biofuels. Also, KLM has implemented the first corporate biofuel programme with biofuel partners involving corporate customers (15 so far) and is involved in several research and development/demonstration programmes worldwide. KLM can be seen as an offtake party as well as upstream co-investor for biofuels if affordable and sustainable. KLM supports efforts that lead to continuous supply in order to decrease the premium and reach structural price competitiveness with fossil fuels. KLM bases the sustainability of these biofuels on the strict criteria set by the Roundtable on Sustainable Biomaterials (RSB) and the advice of the independent Sustainability Board with WWF-NL at SkyNRG.</p>
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	<p>Schiphol Airport, with regard to its mission to be Europe's preferred airport, wishes to increase its sustainable activities on the ground and towards all airlines that operate on Schiphol Airport. Schiphol Airport is investing in new technologies and products, through 'The Grounds', increasing the sustainable accessibility of Schiphol Airport. Schiphol Airport is already cooperating with KLM, DSM Innovation Center B.V., SkyNRG, Climate KIC, Universiteit Utrecht and Imperial College of Science, Technology and Medicine, in order to support the development and deployment of biofuel flights, amongst others through the financing of biofuel research, and experiments with biofuels in its operational ground vehicles on airside. Schiphol Airport offers to continue support for bio jet fuel efforts with its infrastructure, to purchase biodiesel for its ground vehicles, to support in publicity and public awareness through communication with its partners in the aforementioned collaboration, by investing in new technologies and products, and endorsing an increase of sustainable flying from Schiphol Airport.</p>
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	<p>SkyNRG is the leading global market maker in sustainable jet fuels, having produced and delivered to over 20 prominent aviation customers on 5 continents such as KLM, Boeing, Qantas, Air Canada etc. Its mission is to create a structural global supply of sustainable jet fuel that is affordable. In the short run the company is doing that by creating a critical mass via an active co-funding strategy with airports and airline partners. Together with KLM, the first corporate program has been launched (with Nike, Heineken, Accenture etc.) to bring down the premium and co-create the market. For the longer term SkyNRG is setting up next generation fuel supply chains – so called BioPorts – for its customers delivering jet fuel made out of local waste/feedstock which is sustainable and directly price competitive with traditional fuel. Amsterdam BioPort with the link to Rotterdam is the strongly preferred number 1 priority in this strategy.</p> <p>SkyNRG offers integrated 'BioPort' project development, sustainable feedstock for conversion to bio jet fuel, the advice of its independent sustainability board in assessing the feedstock, support in creating a stable market, other airlines' offtake if needed, search for business financing and delivering a true sustainable and safe end product to the airlines.</p>
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	<p>The Port of Rotterdam is Europe's largest seaport providing excellent infrastructure and a concentration of global industrial corporations. The Port of Rotterdam holds sustainability as one of its central values at the core of its business activities.</p> <p>Rotterdam is the leading biofuels hub for Europe. Building on the strength of the existing infrastructure and industrial cluster, the Port of Rotterdam aims at further accommodating biobased industries, such as the production of bio-energy, advanced biofuels and biochemicals, all combined in Rotterdam BioPort. The aim to develop and scale up production of biobased jet fuels fits in the ambitions of developing a Biobased Cluster at the recently constructed port expansion 'Maasvlakte 2'.</p> <p>Port of Rotterdam will facilitate the development of aviation biofuel production capacity in the Rotterdam area. Port of Rotterdam supports the production and storage of bio jet fuels, provides knowledge about integration possibilities and potential pipeline connectivity and shares their knowledge and network.</p>
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	<p>Neste Oil Corporation is a refining and marketing company concentrating on low-emission, high-quality traffic fuels. Neste Oil produces a comprehensive range of major petroleum products and is the world's leading supplier of renewable diesel.</p> <p>Neste Oil is a global pioneer in aviation biofuels, and its NExBTL renewable aviation fuel meets the very stringent quality standards demanded of aircraft fuel and can be produced in industrial quantities. Neste Oil ensures the sustainability of all the renewable raw materials that it uses, and audits its supply chain on a continuous basis. Neste Oil's supply chain complies with a number of sustainability certification schemes, such as ISCC and RSPO-RED, and is EPA-approved¹.</p> <p>Neste Oil's highly advanced renewable fuel refinery in Rotterdam would potentially be the first site for producing bio jet fuel in the Netherlands, with a commercial scale production capacity.</p>
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¹ ISCC: International Sustainability & Carbon Certification. RSPO-RED: Roundtable on Sustainable Palm Oil tailored to EU Renewable Energy Directive. EPA: the US Environmental Protection Agency.

	<p>The State Secretary of Infrastructure and the Environment has been a long time supporter of the uptake of sustainable biofuels in aviation, for instance through the 2011 Green Deal Biokerosene with KLM. The State Secretary will continue to push the development of sustainable biofuels for aviation in the Netherlands in the coming years as a facilitator and by shaping international aviation policy.</p> <p>The State Secretary of Infrastructure and the Environment offers dynamic and effective (inter)national biofuel policy, analysis of financing mechanisms, creation of social support, incentive mechanisms for aviation biofuels, support in defining the sustainability of bio jet fuel and stimulating (inter) national dialogues and cooperation.</p>
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	<p>The Minister of Economic Affairs stimulates the biobased economy in the Netherlands, as, for instance, reflected in the "Groene Groei brief" presented to Parliament in 2013.</p> <p>The Minister of Economic Affairs offers to support the use of sustainable biofuels in aviation by the use of smart incentives, dynamic regulations, innovation and its role as a networking partner to facilitate the development of sustainable biofuels for aviation in the Netherlands.</p>
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Workstreams

To achieve the innovation goal as mentioned in this Lol, KLM, SkyNRG, Schiphol Airport, Neste Oil and Port of Rotterdam have identified three goals/workstreams. The State Secretary of Infrastructure and the Environment and the Minister of Economic Affairs are committed to actively support these workstreams.

Participation of aforementioned parties in this process is expected to be dynamic and will not be limited to the list of key stakeholders as presented in this Letter of Intent. Other parties are strongly invited to join this initiative.

Goal/Workstream 1: Explore effective incentive mechanisms to stimulate market demand for sustainable bio jet fuel

- Timing: starting immediately
- Lead: KLM and Schiphol Airport

Goal/Workstream 2: Source a permanent stream of sustainable and price competitive feedstock

- Timing: no later than summer 2015
- Lead: SkyNRG

Goal/Workstream 3: Explore the production opportunities for bio jet fuel and gradual scale-up in time

- Timing: starting immediately
- Lead: Neste Oil

Contribution of the State Secretary of Infrastructure and the Environment and the Minister of Economic Affairs

The State Secretary of Infrastructure and the Environment and the Minister of Economic Affairs are committed to actively support the innovation goal by organizing in-depth sessions with relevant (inter) national experts to explore possible market mechanisms to stimulate production and market demand for sustainable bio jet fuel under the condition that this will not infringe on competition frameworks. Together with the key stakeholders they intend to explore the possibilities to further shape (inter)national bio jet fuel policy.

The State Secretary of Infrastructure and the Environment and the Minister of Economic Affairs will help with the identification of potential (European) support schemes and options as well. They will explore the possibilities for financing mechanisms where investments and innovations will be needed. Furthermore they will put effort in being a networking partner by stimulating (inter) national dialogues and cooperation in order to promote the innovation goal as defined in this Lol.

All the actions of the State Secretary of Infrastructure and the Environment and the Minister of Economic Affairs in this Lol will be carried out in the context of the applicable policy, regulatory and instrumental frameworks and in compliance with the state aid and competition frameworks.

Period of validity

This Lol enters into force on the day after signing and ends on December 31st, 2019 with the possibility for each party to prematurely end its participation by a 4 weeks written notice to all parties without any obligation to pay damages to one and/or any other party.

This Letter of Intent is not intended as legally binding commitment by any of the parties but provides guidelines for parties' potential actions with respect to the 'BioPort for jet fuels in the Netherlands'. Any of the parties' efforts with respect to the 'BioPort for jet fuels in the Netherlands' are decided independently by such party and any withdrawal from this project does not create any liabilities towards any of the parties or third parties.



Signatures

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