

# NX SAF™

Our solution  
for sustainable  
aviation fuels



## About NEXTCHEM

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NEXTCHEM is MAIRE's company dedicated to Sustainable Technology Solutions. Leveraging our profound expertise in nitrogen, hydrogen, carbon capture, fuels, chemicals, and polymers, we deliver groundbreaking solutions and processes that fully enable the energy transition.

Building on the rich legacy of our group for over 70 years, we are dedicated to developing and offering technology solutions, processes, basic engineering designs, as well as proprietary equipment and catalysts, to drive global decarbonization efforts forward.

## Pushing the decarbonization of aviation sector

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In the broad push for the decarbonization of aviation sector, SAF is the only short-term solution. HEFA-SAF is the most mature and cost competitive technology for SAF production.

## Our solution for sustainable aviation fuels

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Hydrogenation of fats, oils and greases to renewable diesel and further hydrocracking to SAF. This technology is offered in 4 sizes at relatively small scale: 30, 60, 90 and 120kton/y. This solution represents the best available technology for small production of SAF, unlocking the opportunity of a sustainable aviation industry.

This is a modular and flexible technology for the production of sustainable aviation fuels, the technology can be upgraded to SAF production thanks to an add-on module. The sustainability of the solution can be further increased by recycling the byproducts again to the process to produce ultra-low CO<sub>2</sub> SAF.



## NX SAF™

Unlocking the  
opportunity  
of a sustainable  
aviation industry

## Applications

SAF for Aviation sector as a  
specification of ASTM D7566

RD for cars, trucks, and maritime

Bionaphtha for biopolymers  
production

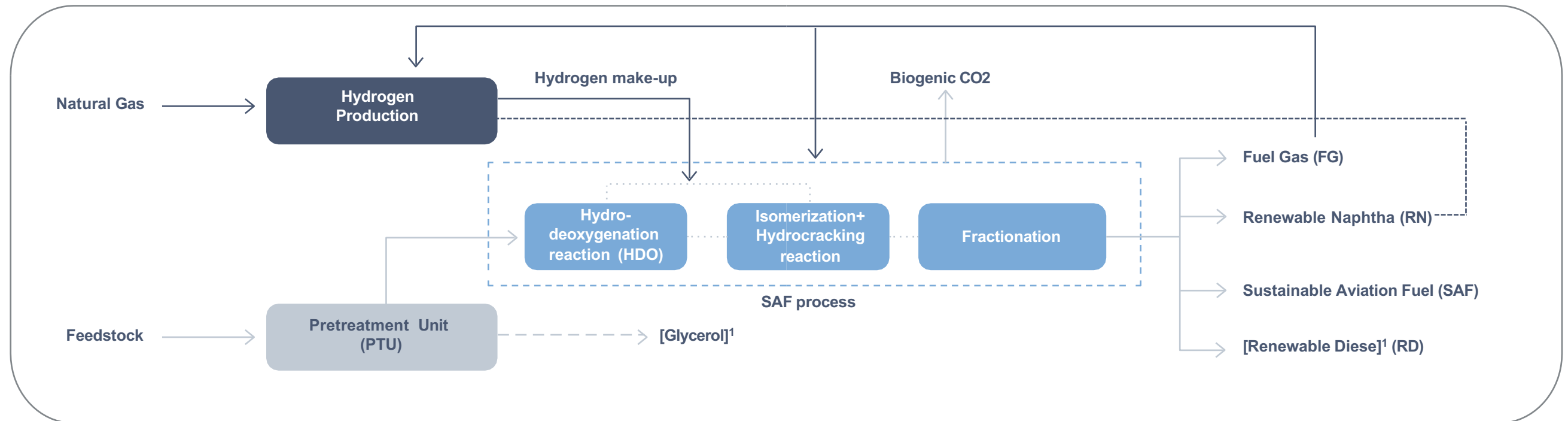
## Your benefits

- 1** Shorter Supply Chain (High use of domestic/regional feedstock Intercept of future, locally collected feedstocks)
- 2** Flexibility of the integrated pretreatment unit (PTU) (Ability to treat highly polluted and high FFAs feedstocks and Low average losses)
- 3** Flexibility of the process (Maximization of highest value fuels and possibility to valorize by-products like fuel gas and renewable naphtha)
- 4** Integrated H<sub>2</sub> Production Unit (Use of by-products to minimize the carbon intensity score (up to 95 % GHGs emission reduction))

# Technical overview

The process cleans and hydrogenates vegetable oils and animal fats; As a second step, hydrocracking is necessary to refine the oils into hydrocarbons that can

substitute for diesel, aviation fuels and naphtha. The technology leverages on the possibility to valorise byproduct to produce hydrogen.



<sup>1</sup> Depending on plant configuration