NX SAF™ BIO

Our solution for sustainable aviation fuels

NEXTCHEM
MAIRE Sustainable Technology Solutions

About NEXTCHEM

NEXTCHEM is MAIRE's company dedicated to Sustainable Technology Solutions. Leveraging our deep 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.

NEXTCHEM

Pushing the decarbonization of aviation sector

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

Our solution for Sustainable Aviation Fuels

Hydrogenating fats, oils and greases, NX SAF™ Bio maximizes the production of SAF.
This technology is offered in 4 sizes at relatively small scale: 30, 60, 90 and 120 kt/y of liquid products. This solution represents the best available technology for small production of SAF, unlocking the opportunity of a sustainable aviation industry.

This is a modular, fully standardized, flexible solution for the production of low or ultra-low CO_2 SAF.
NEXTCHEM offers a fully integrated package which includes Pretreatment Unit, Hydrogen Production Unit and HEFA process for a complete and smooth project deployment.
The technology is able to produce also Renewable Diesel (RD).

NX SAF™ BIO

Unlocking the opportunity of a sustainable aviation industry at regional level

Applications

SAF for Aviation sector according to ASTM D7566

RD for land and maritime mobility according to ASTM or EN standards

Renewable Naphtha for biopolymers production

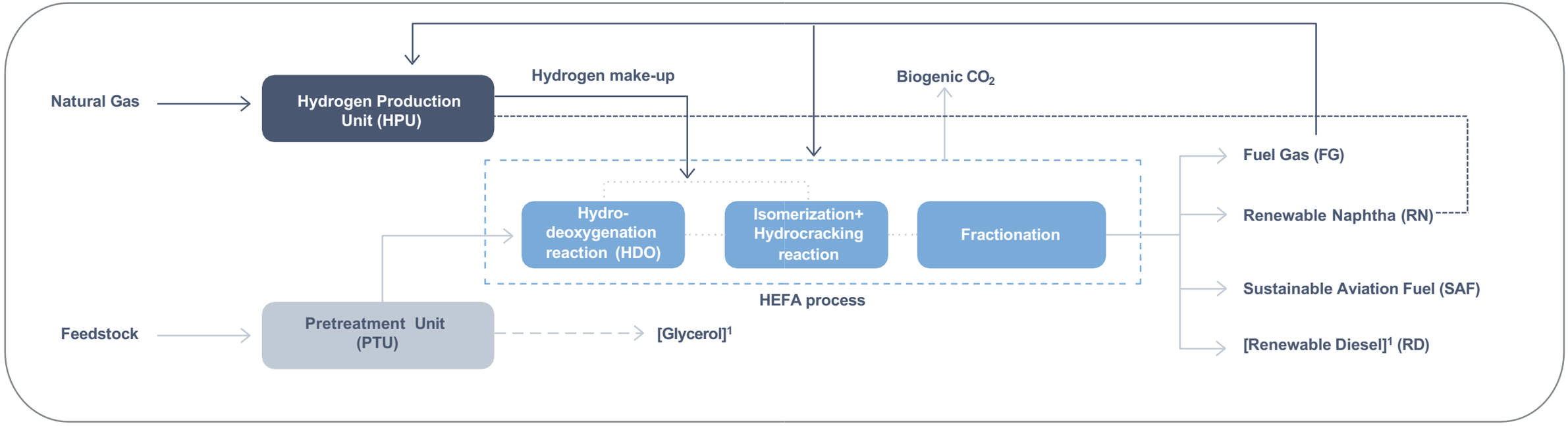
Your benefits

1. Shorter Supply Chain (Use of domestic/regional feedstock. Intercept of future locally collected feedstocks)
2. Pretreatment flexibility (Ability to treat highly polluted and high FFAs feedstocks with low losses and minimal water consumption)
3. Flexibility of the process (Maximization of highest value fuels, SAF or RD, and possibility to valorize by-products like fuel gas and renewable naphtha)
4. Ultra-low CO_2 SAF (Use of by-products to minimize the carbon intensity score, up to 95 % GHGs emission reduction - ultra-low CO_2 SAF)
5. Short time to market (The high standardization together with the modular solution allow a fast project execution)
6. Single point of accountability. (Gate-to-gate solution from feedstock to products)

Technical overview

The process converts, with high efficiency, fats, oils and greases into renewable liquid fuels. To do so, a hydrodeoxygenation step followed by an isomerization and cracking step are required.

By-products, such as fuel gas and renewable naphtha can be recycled to increase the energy efficiency and increase the GHGs reduction.



[1] Depending on plant configuration