

European Investment Bank

Financing SAF/SLF projects-the EIB experience

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Relevant EIB policies for SAF/SLF projects

- **Overarching framework:** Climate Bank Roadmap Phase 2

- EIB Low Carbon Framework Paris Alignment Framework – Low Carbon, version 2.0
- Alignment with the EIB Energy lending policy Energy Sector Orientation
- PATH Framework: The EIB Group PATH Framework: Version 1.2

Consistency with EU regulatory framework:

- Key pieces of legislation including the RED and sector specific policies (e.g., ReFuelEU Aviation, FuelEU maritime)
- RePower EU

Relevant EIB policies for SAF/SLF projects

Key points for SAF/SLF projects:

- The EIB does not support the use of food grade biomass for the production of biofuels.
- The biobased SAF/biofuels projects financed by the EIB focus strictly on the use of biomass waste and residues (advanced/2G biofuels).
- The EIB has a strict framework defining how/when it can finance counterparties involved in carbon intensive activities (e.g., O&G), for example: in the context of projects contributing to RePowerEU and/or highly innovative projects

EIB SAF/SLF projects:

Bulk of EIB SAF/SLF financing: Corporate Loans for HEFA/HVO facilities dedicated to advanced/2G biofuels (including SAF)

- **5 large scale Projects financed since 2022:**

- Cartagena (Spain) CARTAGENA ADVANCED BIOFUELS
- Sines (Portugal) SINES ADVANCED BIOFUELS + SINES GREEN HYDROGEN PRODUCTION
- Huelva (Spain) ANDALUCIA ADVANCED BIOFUELS
- Livorno (Italy) ENI BIOREFINERY
- Sannazzaro (Italy) TECH-EU ENI BIOREFINERY SANNAZZARO

- **Capacity: ~2.2 million tpa Feedstock, potential SAF: >1.2 million tpa**
- **Total Investment: ~EUR3.5bn EIB contribution: ~ EUR2bn**

EIB SAF/SLF projects:

Trends in the HEFA/HVO Sector:

- Several O&G majors are positioning in this sector by investing in dedicated facilities
- Large CAPEX investments in advanced HEFA/HVO facilities (i.e., capability to process a wide range of waste and residues)
- Integration into existing traditional refineries
- Target different market segments: flexible industrial facilities, able to produce both HVO and Biobased SAF by tuning process conditions.

Key Issues:

- Feedstock availability (and price volatility)
- For the EU reliance on substantial feedstock imports (UCO, AF, POME, etc;)
- Traceability/sustainability (i.e., robustness of the certification framework)

Other SLF Projects beyond HEFA/HVO:

Corporate loans:

- Poland PKN ORLEN BIOREFINERY & RDI (Signed in 2021)

Venture debt:

- Germany Power-to-X INERATEC POWER-TO-X (IEU GT2) - CATALYST -

Project Finance:

- Paraguay VILLETA GREEN H2 FERTILISER PLANT (Green ammonia)

Ongoing appraisals:

- Spain: integrated bioenergy/e-methanol plant
- France: Innovative advanced bioethanol integrated biorefinery

Confidential

EIB 2024 Advisory study:



List of recommendations from study Financing sustainable liquid fuel projects in Europe: Identifying barriers and overcoming them	
Recommendation 1	Introduce supply- and demand-side mechanisms to increase the cost competitiveness of sustainable liquid fuels
Recommendation 2	Improve the existing regulatory framework to increase investor confidence and attract financing to the SLF sector
Recommendation 3	Support the emergence of a liquid commodity market for SLFs
Recommendation 4	Improve project developers' knowledge of and access to EU financing instruments
Recommendation 5	Support the development of an SLF financing ecosystem
Recommendation 6	Adapt existing financing toolboxes of EU entities such as the European Innovation Council and the Innovation Fund
Recommendation 7	Continue supporting SLF projects with existing financial instruments that are fit-for-purpose
Recommendation 8	De-risk selected industrial-sized projects with credit enhancement mechanisms to unlock private capital

Financing sustainable liquid fuel projects in Europe: Identifying barriers and overcoming them

European Investment Bank ADVISORY

Conclusions:

- EIB has financed a number of SAF/SLF projects in the past few years, supporting the decarbonisation of the transport sector.
- Large corporate investments have been mostly towards HEFA/HVO facilities and driven by O&G majors.
- Projects towards more innovative SAF/SLF production pathways are being implemented but in the context of more complex financing structures (e.g., PFs, Venture debts).
- The Advisory study carried out by the bank in 2024 has confirmed that innovative SAF/SLF pathways (e.g., e-fuels and lignocellulosic biofuels) require support mechanisms and incentives to attract investments.



Use

THANK YOU

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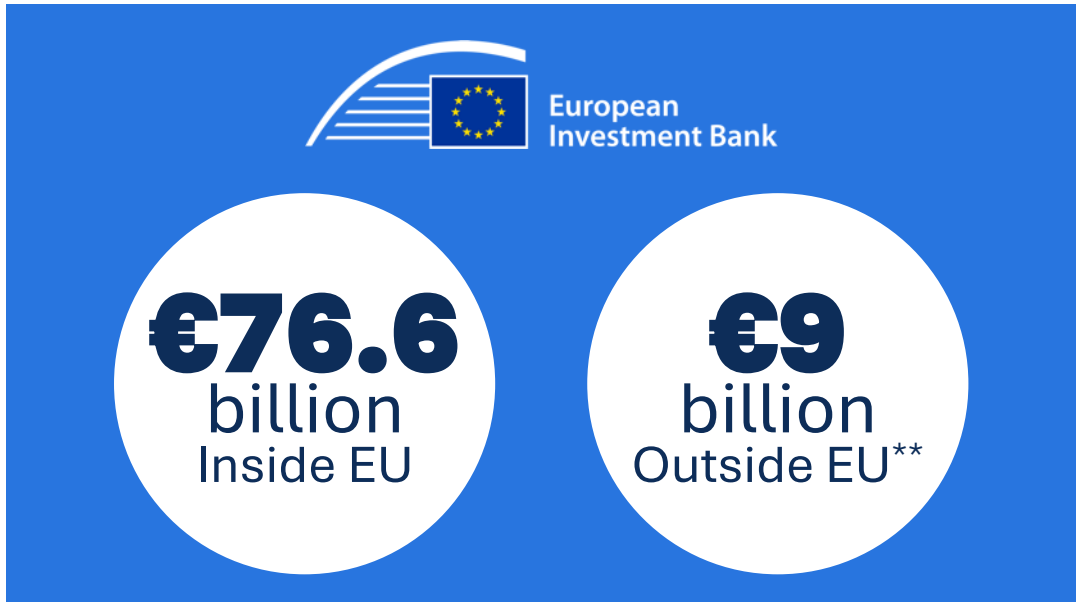
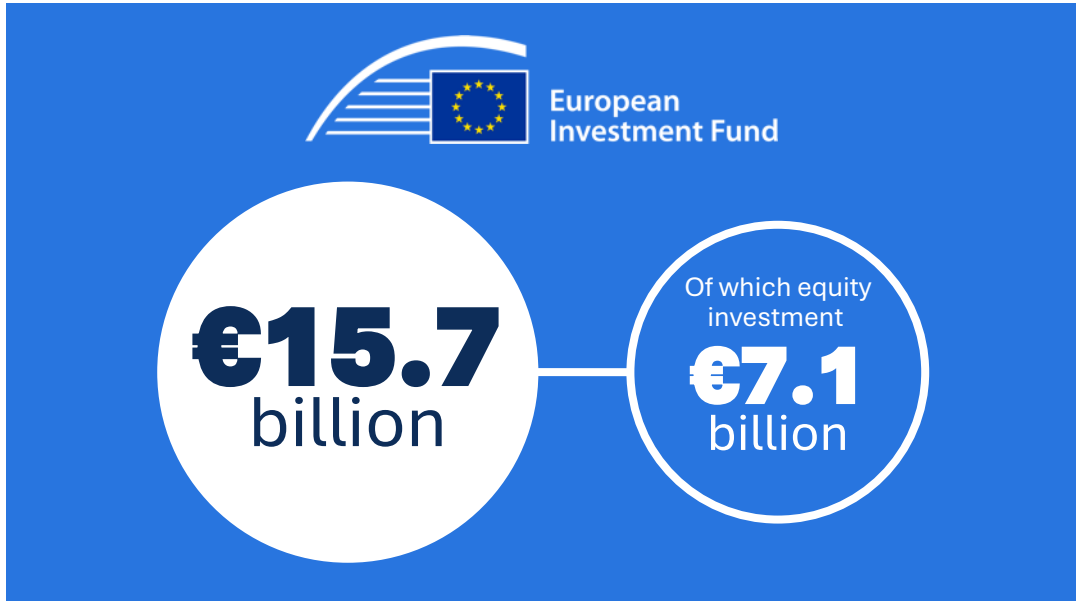
EIBG AT A GLANCE:

EIB GROUP FINANCING IN 2025*

€100 billion





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All figures are unaudited and provisional, refer to signatures and are for the EIB Group unless otherwise specified.
*The EIB Group total financing figure excludes an overlap due to joint engagements of the EIB and the EIF.
** This figure includes EIB Global's engagement in middle and low-income countries, as well as EFTA countries.

Corporate Use

Project examples: Corporate Loan

SINES Advanced Biofuels

Industrial facility to produce biofuels - namely renewable diesel, renewable jet (SAF), and bio-naphtha. These biofuels will be produced from raw materials of biological origin - such as used cooking oils and animal fats - and from the consumption of green hydrogen (H2) produced at the Galp H2 Park.



GHG emissions reduction (compared to fossil-based fuels)

of transport, including hard to decarbonize sectors, such as aviation

Supporting the competitiveness of the EU industry and TECHEU as the technology supplier is European

750 FTE in the plant construction and 80 FTE during operation (permanent)

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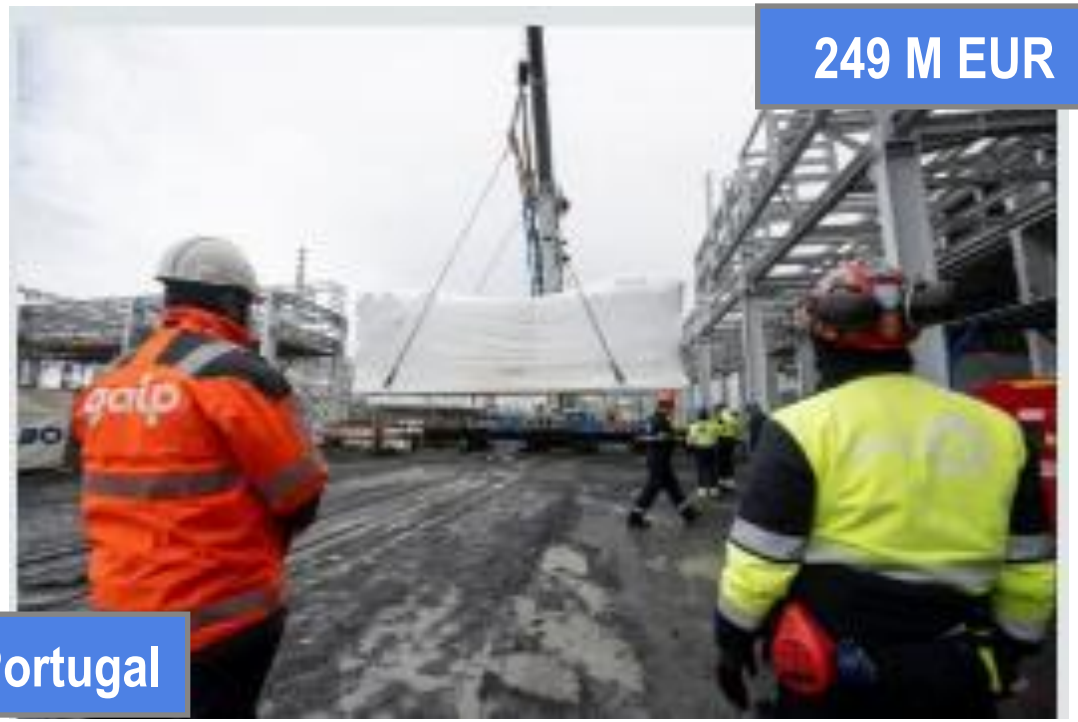
Project examples: Corporate Loan

SINES GREEN HYDROGEN PRODUCTION

Implementation and operation of a large-scale, grid-connected electrolyser (100 MW) for renewable hydrogen production. The green hydrogen produced can be supplied to the Sines refinery and/or to an Industrial facility to produce biofuels (EIB Project: SINES Advanced Biofuels).



GHG emissions reduction compared to the production of grey hydrogen

Production of renewable hydrogen at scale and its integration into industrial operations (refining, biofuels production).

Boosting use of green hydrogen in fuels and chemicals

800 FTE in the plant construction and 20 FTE during operation (permanent)

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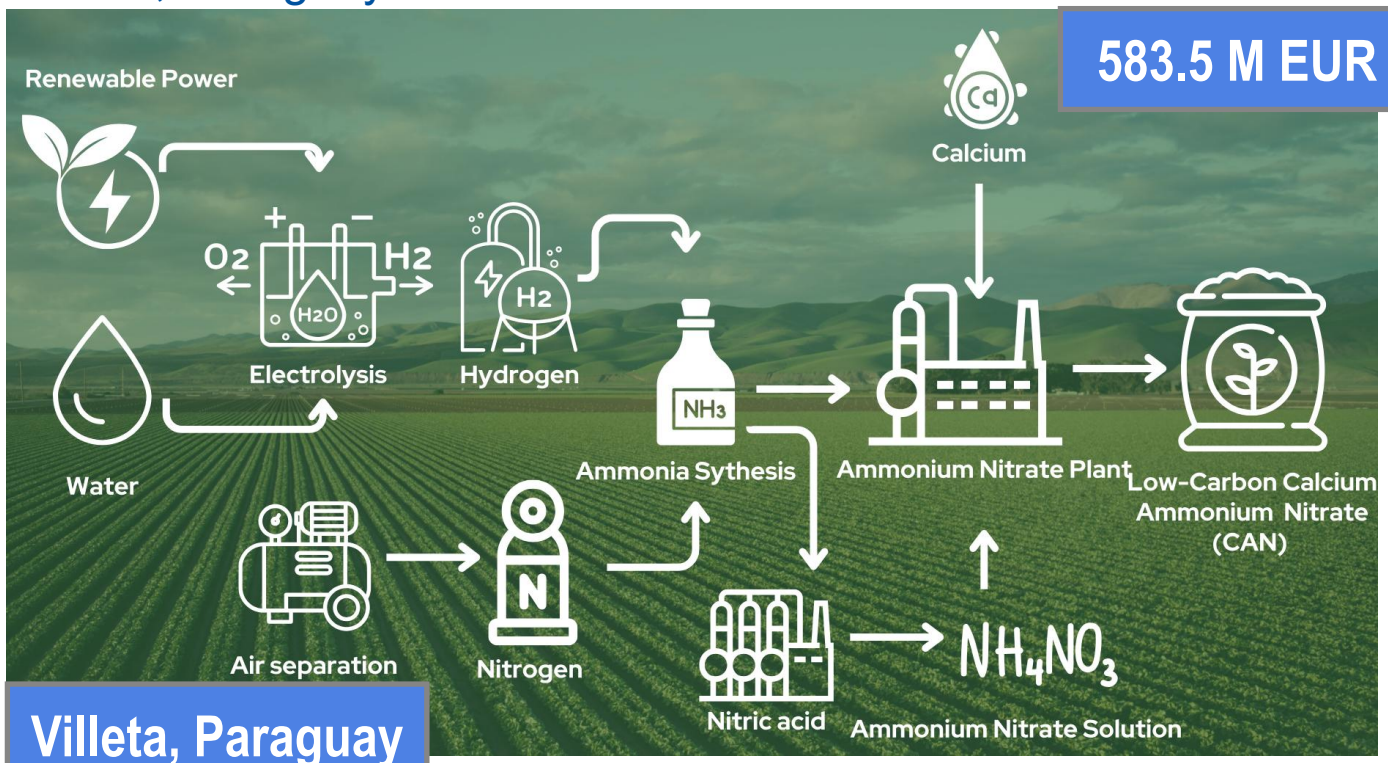
Corporate Use

Project examples: Project Finance

VILLETA GREEN H2 FERTILISER PLANT

The Project includes the construction and operation of a low carbon fertiliser plant for the production of 260,000 tonnes per annum (tpa) of Calcium Ammonium Nitrate (CAN), located in Villeta, Paraguay.



Project Website: https://www.atomeplc.com/projects/villeta/

- **GHG emissions reduction compared to the production of fossil-based nitrogen fertilizer**
- **Application of green hydrogen at scale in one of the most carbon intensive industry sector (i.e., nitrogen fertilizer production).**
- **Supporting sustainable industry and economic growth in Paraguay.**
- **1478 FTE in the plant construction and 116 FTE during operation (permanent)**

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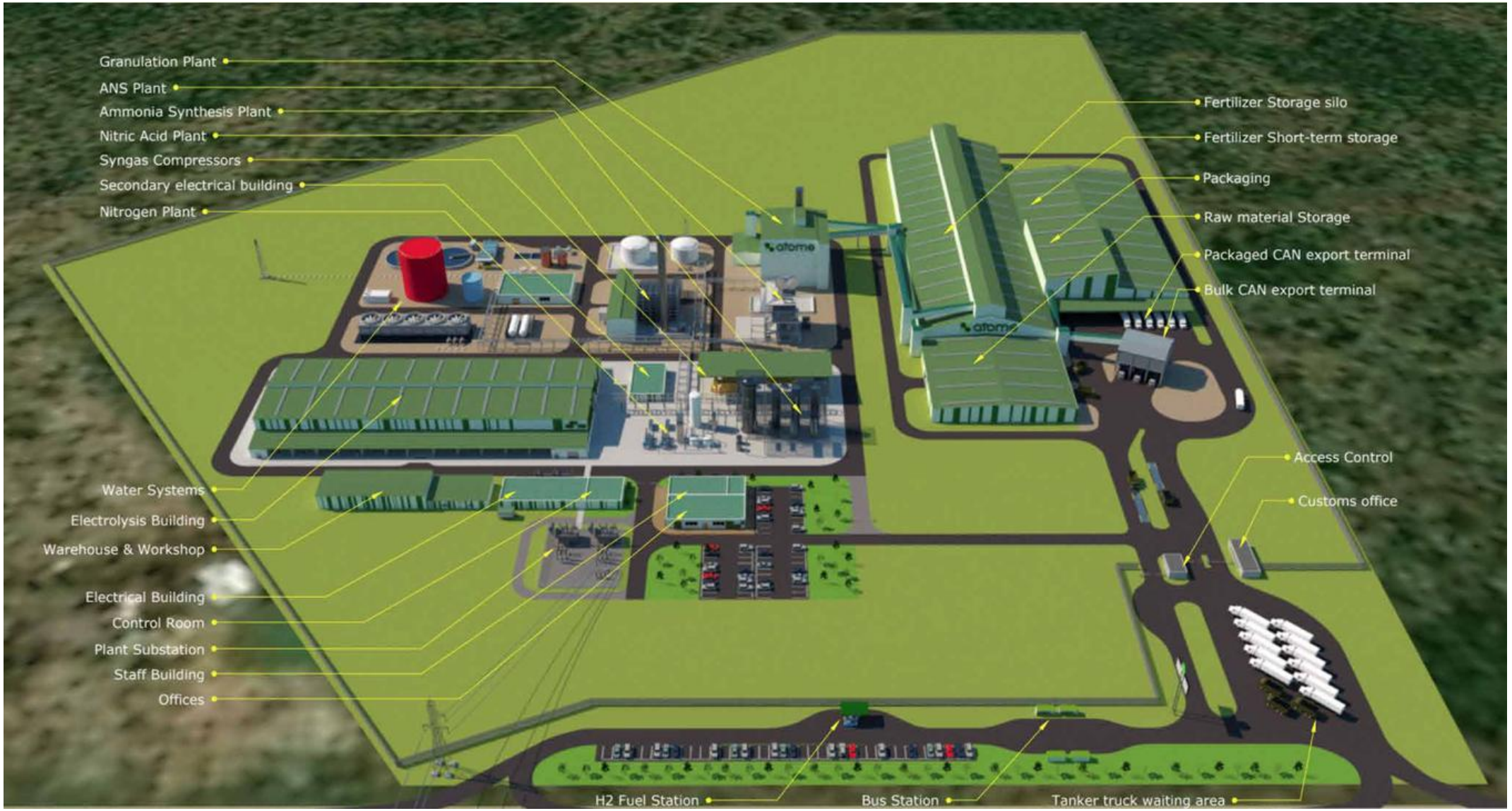


Source: [145MW Villeta - ATOME - The Commodities Of The Future, Today] (ESIA page 25)

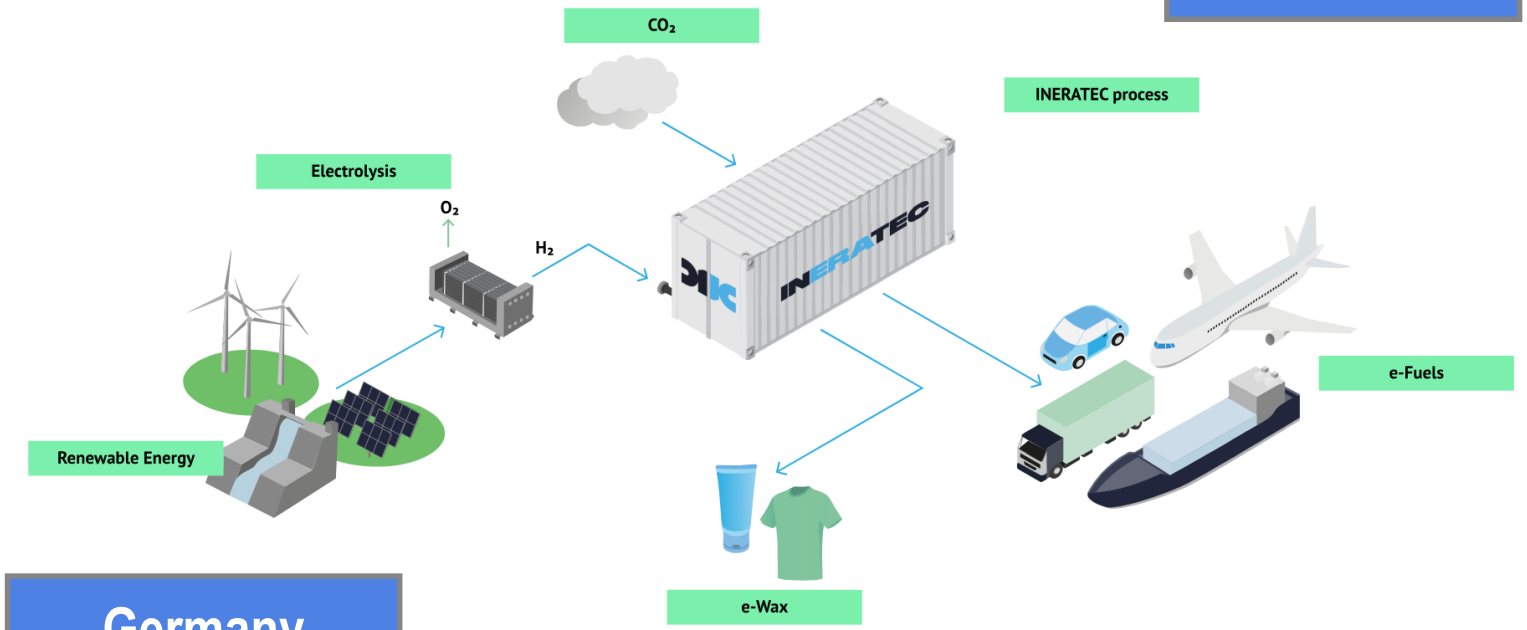
Corporate Use

Project examples: Venture Debt

INERATEC POWER-TO-X- CATALYST

Financing of a pilot carbon neutral e-fuel facility in Germany as well as the R&D related to the further development of the company's Power-to-X technology.

108.2M EUR



Germany

GHG emissions reduction (compared to fossil-based fuels)

Fist of a kind demonstrator for e-fuel production, supporting the decarbonisation of transport, including hard to decarbonize sectors such as aviation

Supporting the industrial competitiveness of the EU industry in low carbon technologies and TECHEU

60 FTE in the plant construction and 30 FTE during operation (permanent)

Website: ERA ONE – e-Fuels made in Germany | INERATEC

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