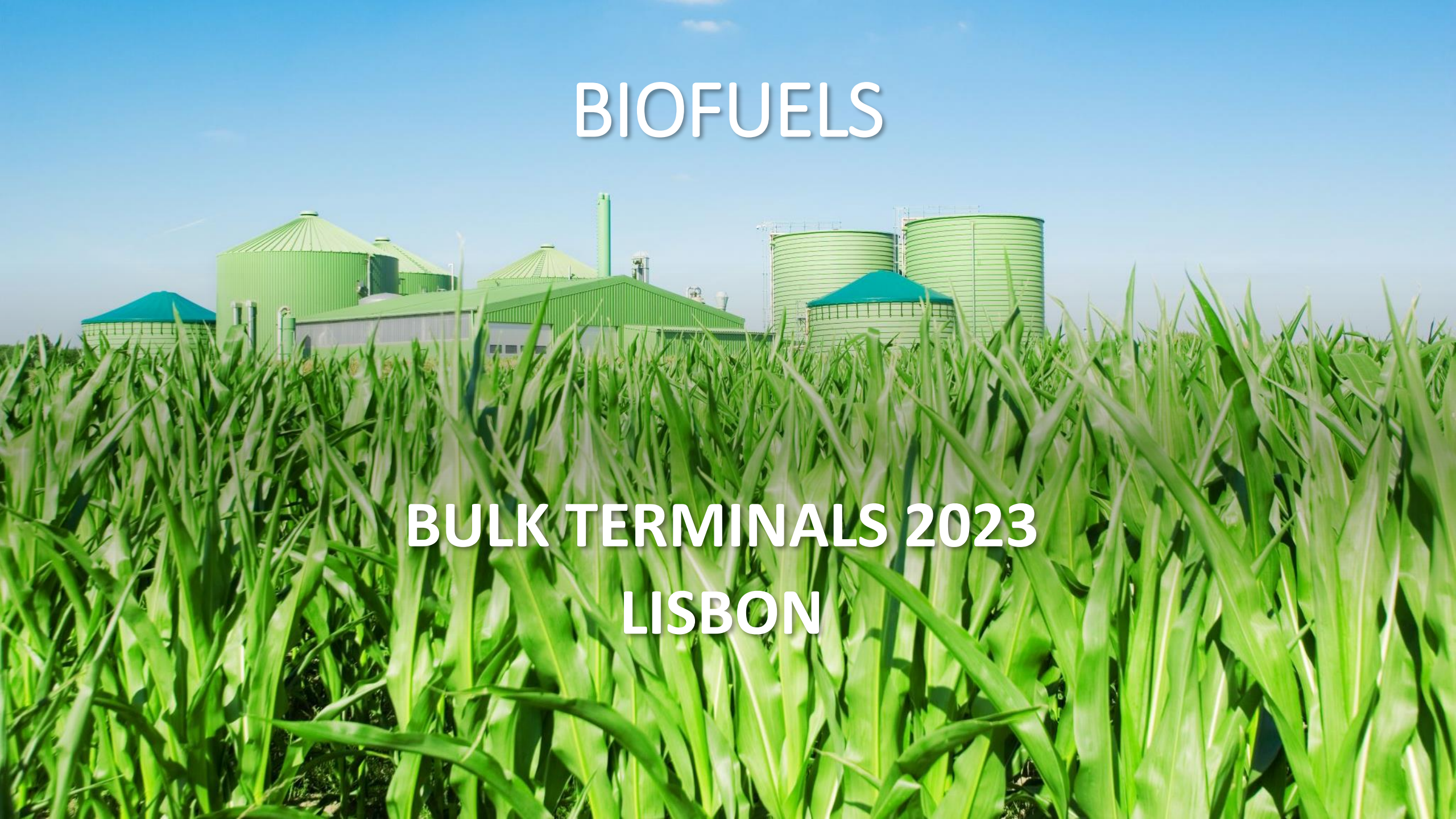
BIOFUELS



BULK TERMINALS 2023
LISBON

Biofuels were driven not only by decarbonization on road transport but also for the importance of achieving a balance between vegetable oils consumption and protein meals increasing demand

Sustainability

- Reduction of GHG emissions
- Promotion of alternative and renewable energy resources

- In 2003, Europe introduces a Biofuels Directive with 5,75% of biofuels in transport by 2010
- In 2009, Europe reinforces with the implementation of the Renewable Energy Directive (RED) aiming 10% of renewable energy by 2020 in transport sector

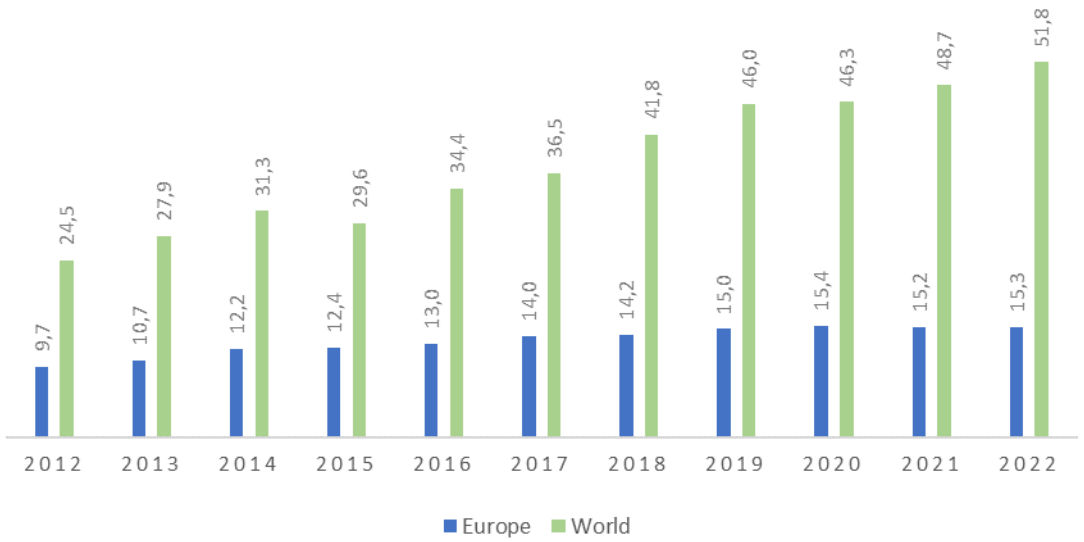
Fulfill feed & food needs

- Growing demand for protein meals
- Difficulty to dispose all the vegetable oil produced

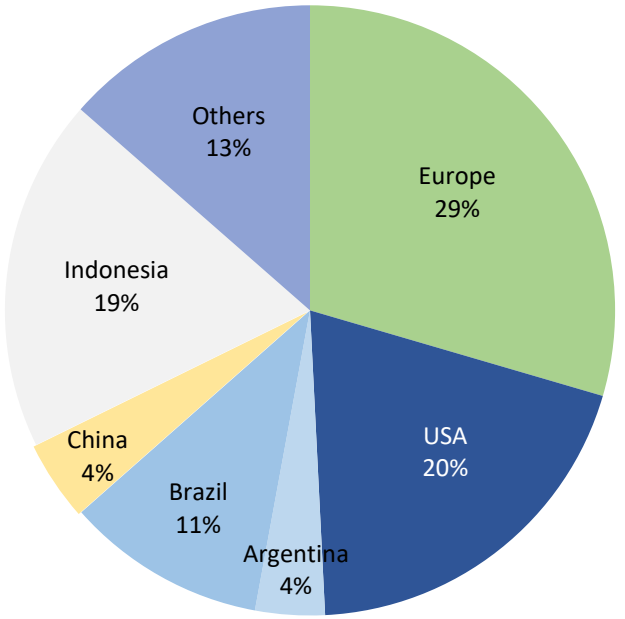
- Largest oilseed producers invest in biodiesel units
  - South America – Brazil & Argentina
  - North America – US
  - Asia – Indonesia & Thailand

The European Union together with oilseeds producing countries have been leading the sustainable biofuels

Biodiesel & HVO Production (Mn Tn)



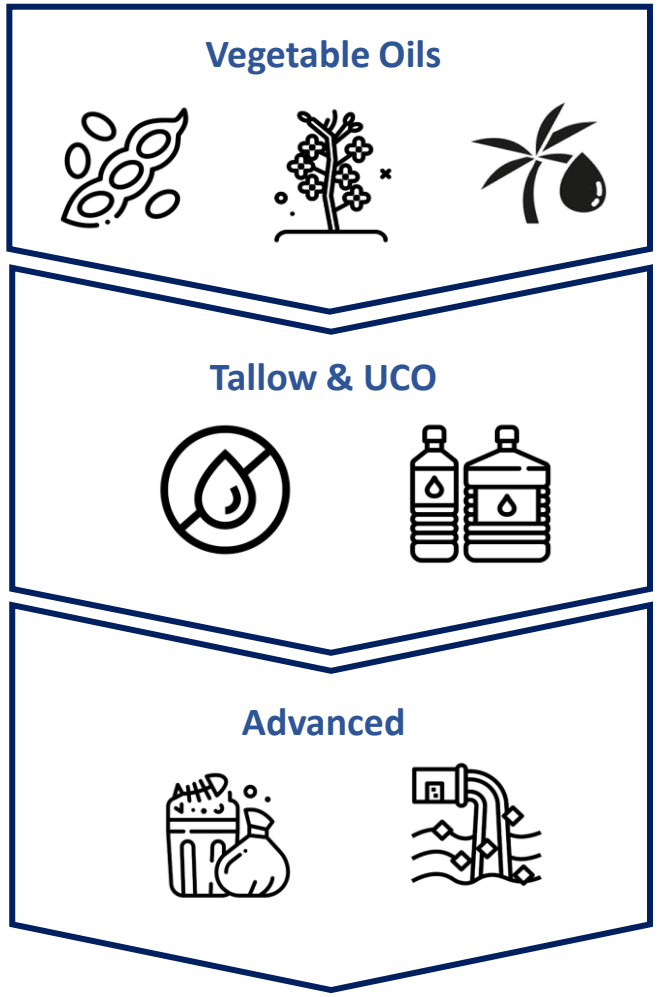
Biodiesel & HVO Worldwide Producers (2022)



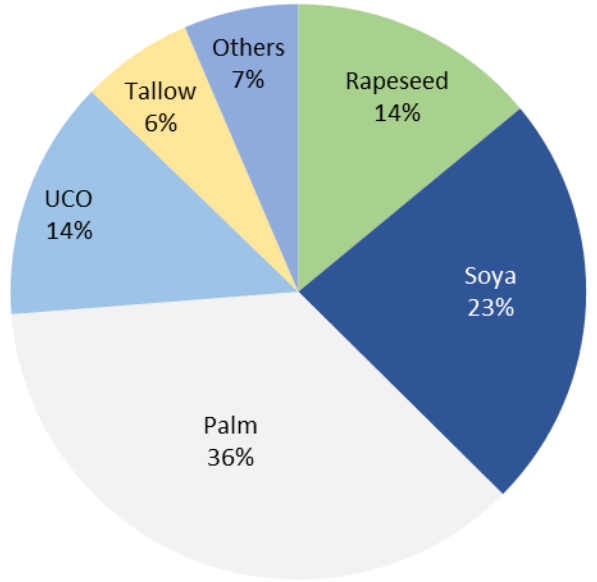
- Increasing renewable targets in Europe, but very timid production growth rate
- Double counting effect and importations

Source: Oil World

There are a variety of different feedstocks currently used to produce biofuels from crops to waste-based and advanced oils



Biodiesel & HVO by Type of Feedstock (2022)



Palm oil more than double in the last 12 years

UCO has the fastest growth rate in the last 5 years

Source: Oil World

Biofuels demand will be boosted by new strong policies and regulation worldwide

IN PLACE

RED II
(RED III to be implemented)

Refuel EU Aviation

Fuel EU Maritime

17% Biofuels (Road Transportation)

30% SAF (2030)

Renewable Fuel Standard (RFS2)

Annual Volume Obligations

Low Carbon Fuel Standards (LCFS)

20% Fuel Carbon Intensity 2030
(California & Oregon)

Clean Fuel Regulation

15% Fuel-Carbon Intensity 2030

BC LCFS

30% Fuel Carbon Intensity 2030

B35 (March 2023)

5% SAF (2025 for Domestic Airlines)

12% Road (April 2023)

PROPOSED

SAF Mandate

1% 2025 Domestic Airlines

SAF Mandate

10% 2030

SAF Mandate

7,5% 2030 & 50% 2050

Eco-Friendly Biofuel Measures

8% Biodiesel /HVO 2030

SAF from 2026

EU developed policies for all transport sectors aiming to reduce the EU's greenhouse gas emissions by at least 55% by 2030

ROAD & TRAIN

Road & Train account for 72,1% of EU transport emissions

Renewable Energy Directive (RED III)

14,5% GHG Reduction or

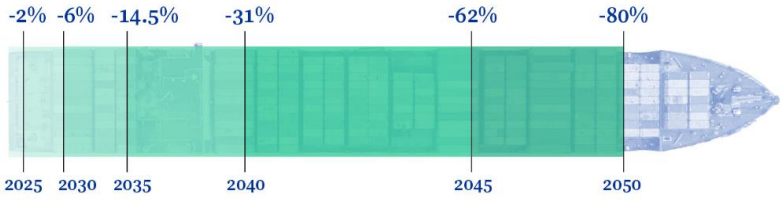
29% of Energy Consumed

MARITIME

Marine accounts for 13,5% of EU transport emissions

FuelEU Maritime Regulation

Annual Average Carbon Intensity Reduction compared to the average in 2020 (for vessels above 5k MTS)

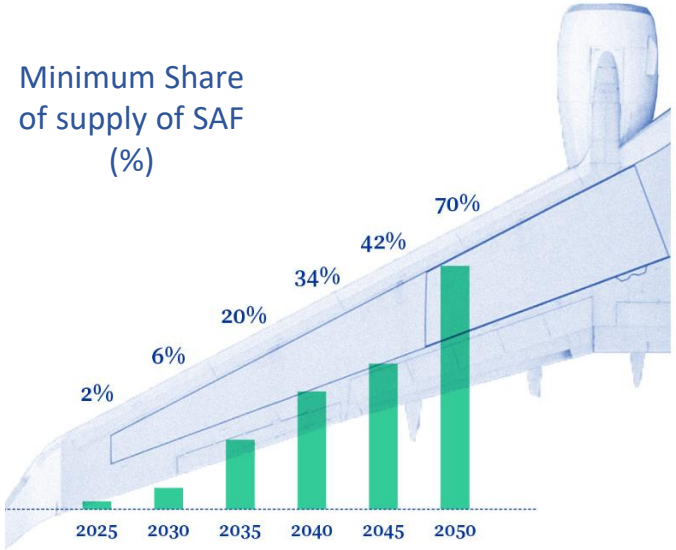


AVIATION

Aviation accounts for 14,4% of EU transport emissions

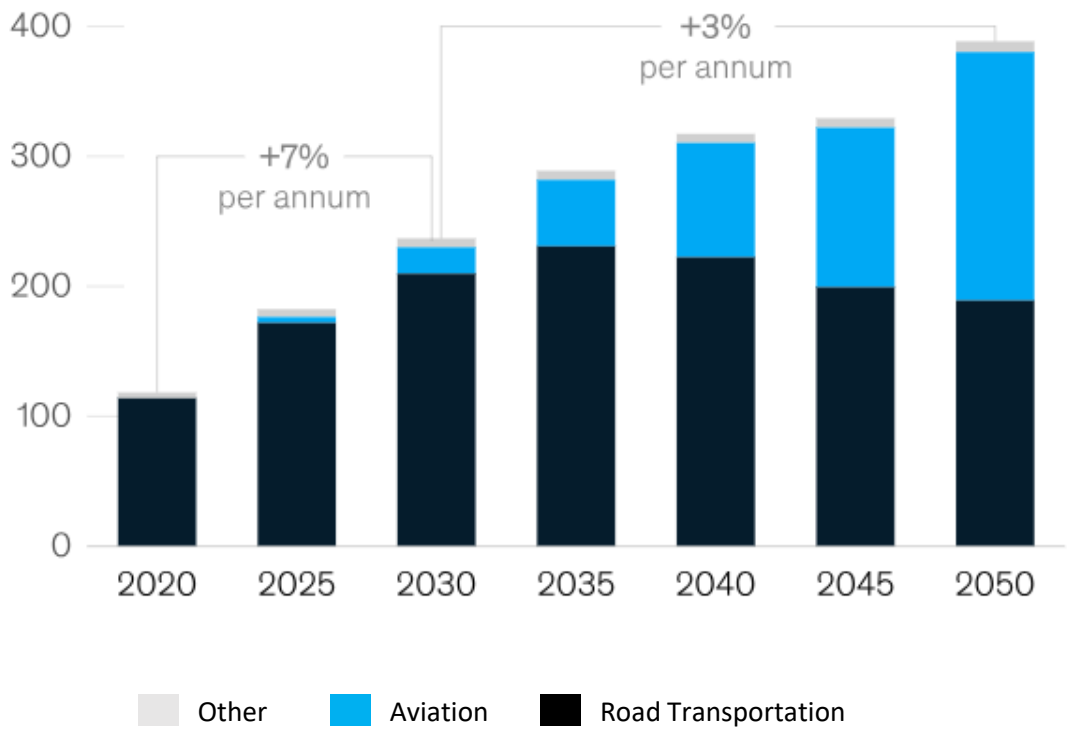
ReFuelEU Aviation Regulation

Minimum Share of supply of SAF (%)



Worldwide demand should reach an impressive volume of 400 million of metric tons by 2050

World Sustainable Fuel Demand by Sector (Mn Tn)



Source: McKinsey & Company

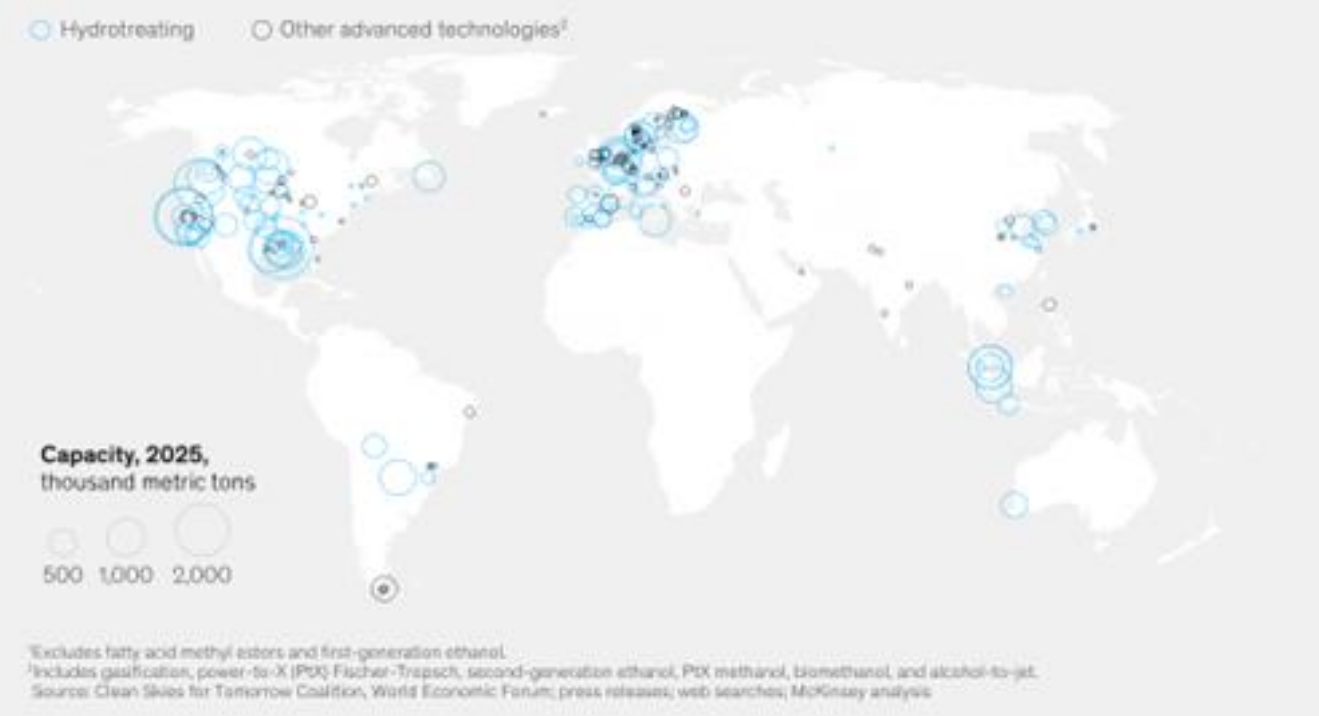
Increasing penetration of EV leads to a decline of liquid fuels in road but ambitious SAF targets will outweigh the decline of the previous

Renewables at trains should reach 100% through electrification

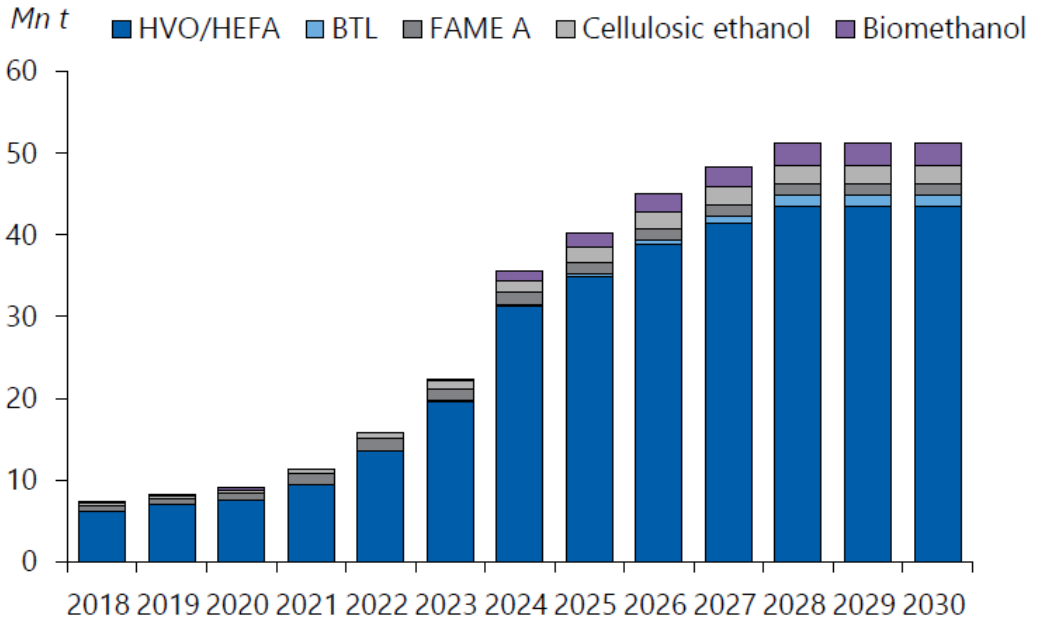
The main alternatives to oil-based products in marine use is provided by Hydrogen-based fuels

Market demand is leading to huge investments in sustainable fuels, namely HVO / HEFA projects

Announced Investments in Sustainable Fuel Production Facilities by



Production Capacity Outlook by Type of Technology



Note: Includes projects assessed as *firm* or *likely* only
— *Argus Consulting*

Up to $50 billion of investments in new plants

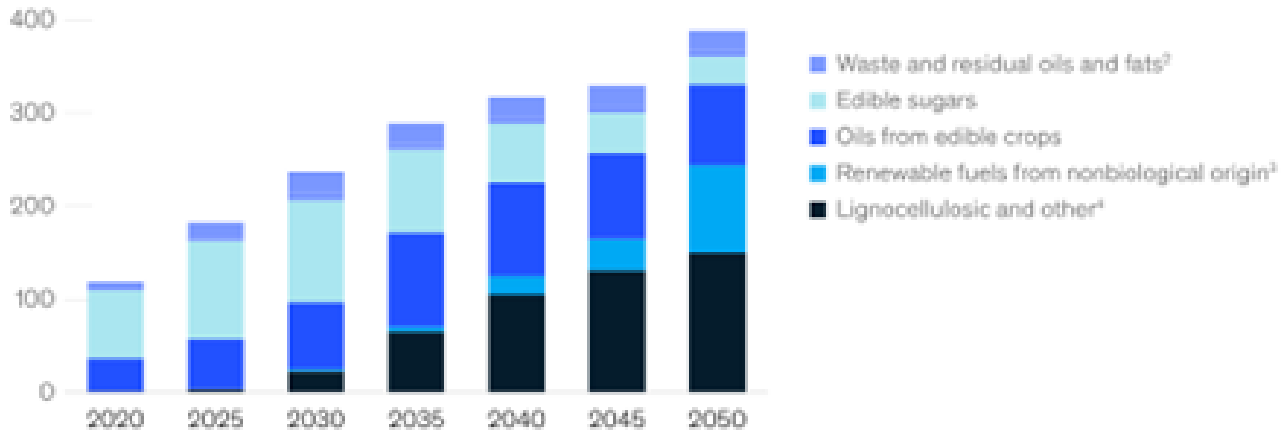
46 Mn Tn of sustainable fuel capacity projected until 2025

To meet decarbonization commitments by 2050, an additional estimated $1 trillion investment is required

Source: Mckinsey & Company and Argus Consulting

To achieve the growing volumes of sustainable fuels, other type of feedstocks are required …

Sustainable Fuel Demand by Feedstock Type (Mn Tns)



[1]Maritime, rail, buildings, chemicals, and industry.
[2]Availability could potentially be expanded with purposely grown volumes of low indirect land use change (ILUC)/cover crops.
[3]CO_2 and H_2 for synthetic.
[4]Includes all feedstocks for relatively unconstrained technologies, ie, power-to-X, gasification, alcohol-to-jet, bio/syn methane, green H_2 for refinery use, or more hydrotreated vegetable oil if more feedstock is unlocked.

Cover Crops and Non-Food Crops Degraded Land

Intermediate crops after production of food crops (Camelina and Carinata) and production in land with no organic content or abandoned (Castor)

Solid Biomass

Solid biomass as agriculture residues (straws) and forestry residues could bring an additional 125 Mn Tns

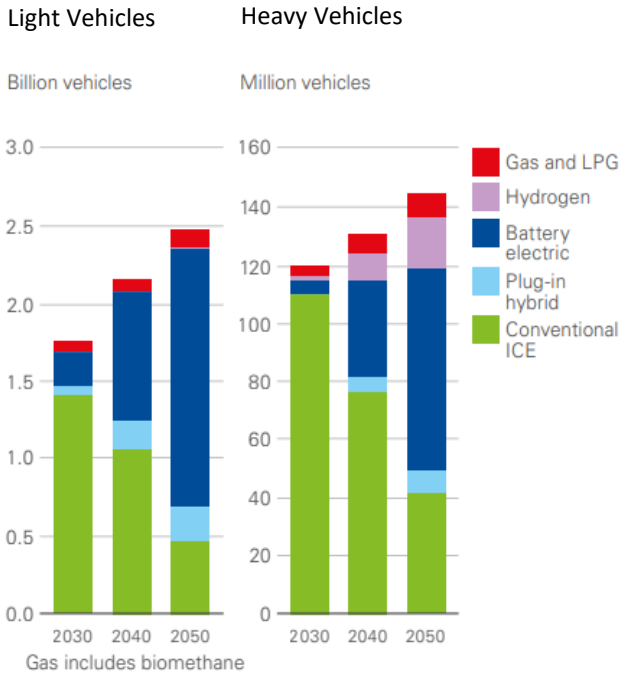
New Technologies

New technologies such as BTL (Biomass to Liquid Fuels) production to unlock new feedstocks

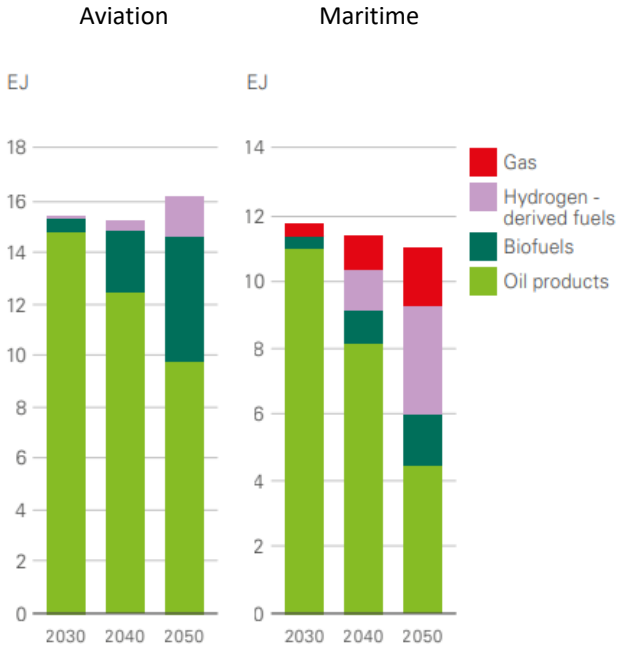
Source: Argus Consulting

… as well as the development of road electrification, implementation of new technologies and the increasing use of hydrogen-derived fuels in maritime

Global Vehicle Parc



Total Energy Usage by Fuel



Road Electrification

Oil in road transport sector will decline as car parking switches to electric passenger and light-duty trucks and hydrogen heavy-duty trucks and buses

RNFBOs

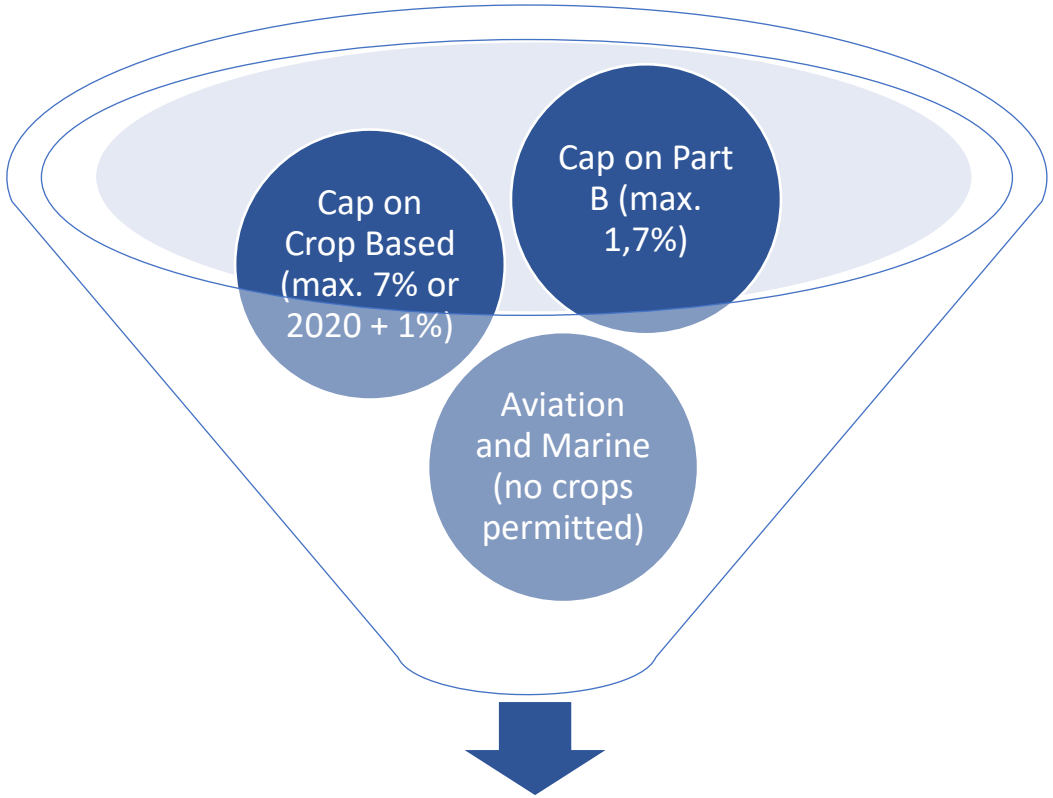
Renewable Fuels from Nonbiological Origin (RFNBO) (CO_2 and H_2 for synthetic fuels) and lignocellulosic materials

Hydrogen-derived maritime fuels

In maritime sector new fuels will emerge as Ammonia (Blue or Green), Synthetic Methanol, Bio-Methanol and Residual Fuel Oils

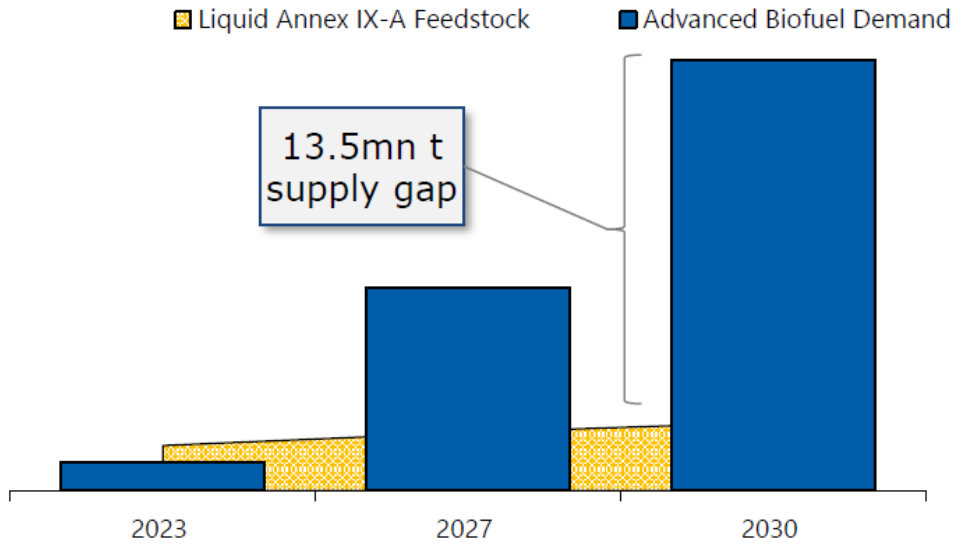
Source: BP Energy Outlook, 2023

In Europe, new packs of legislation and regulation are totally relying on waste biofuels to achieve the renewable targets



Europe puts emphasis on waste biofuels

European balance for Part A Feedstocks and Products

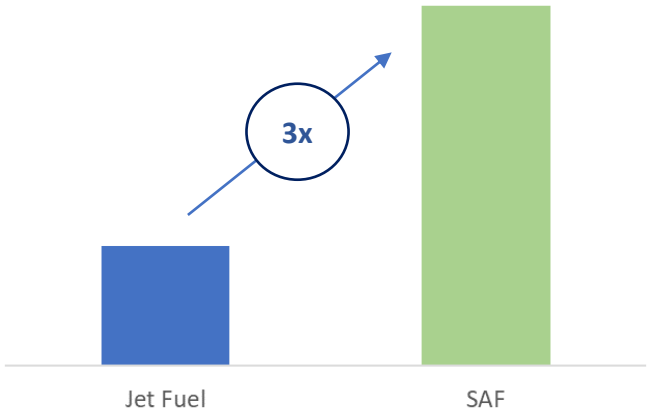


Advanced market is currently very limited and the expected growth in the short term is insufficient

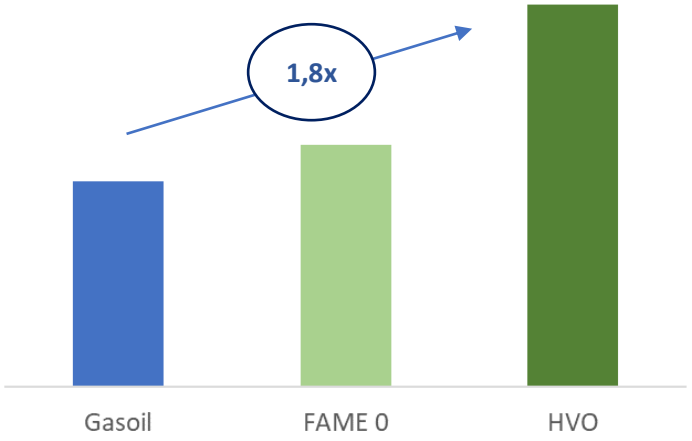
Source: Argus Consulting

Are western economies and citizens willing to support a significant cost in this transition?

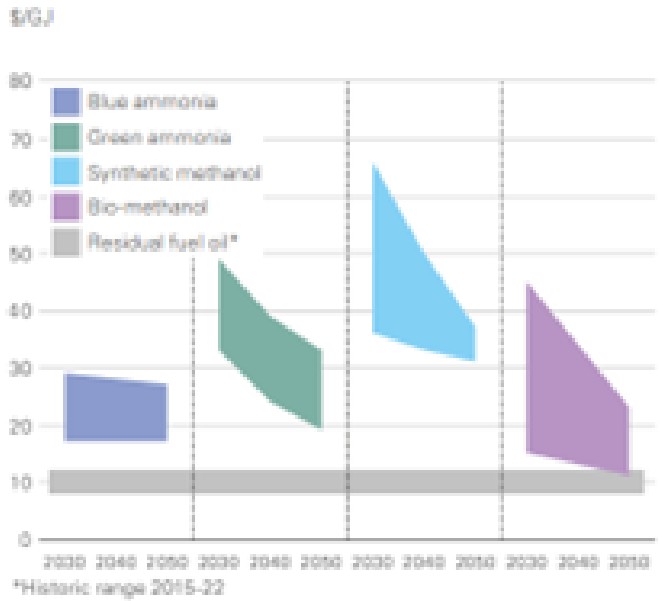
Cost of Sustainable Aviation Fuels



Cost of Sustainable Road Fuels



Cost of Future Marine Fuels



Increasing fuel consumer prices should be supported by European families

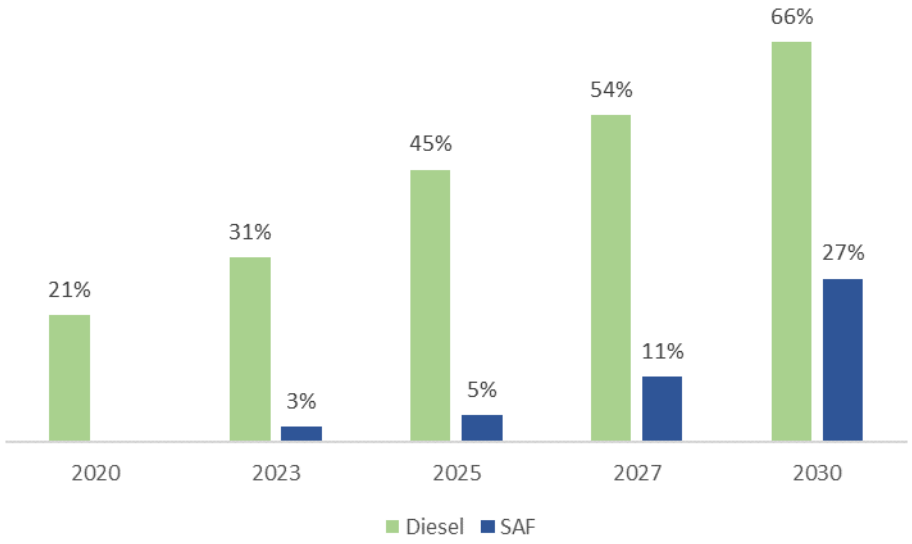
Increasing logistics costs (both marine and road) will put pressure on European economy competitiveness towards other geographies

Is EU taxonomy sufficient to balance this outcome

Source: BP Energy Outlook, 2023

The Swedish case demonstrates that sustainability in transportation is still rather dependent on government legislation

Once one of the leading countries in Renewables



Net Zero by 2045

Swedish Climate Act - 70% emissions reduction between 2010 and 2030

The biofuels are tax exempt until 2027

Government Proposal Amendment

Decrease of mandatory emission reduction for petrol and diesel by up to 6% between 2024 and 2026

Plans to eliminate the reduction obligations for the period of 2027 and 2030

Schedule to come into effect on January 1, 2024

This amendment aims to make living in Sweden more affordable while also benefiting the business and agriculture sectors

Despite ambitious targets, Portugal has a complex regulation, depending significantly on advanced biofuels and electrification

Renewable Targets

29% of energy consumption by 2030

Road – 16% incorporation rate in 2030

Marine & Aviation – min. 2,5% in 2025 and 9% in 2029

Feedstocks

Crop Oils – Max. 3,1% (from 2021 onwards)

Part B – currently undefined; 10% annual decrease in DC

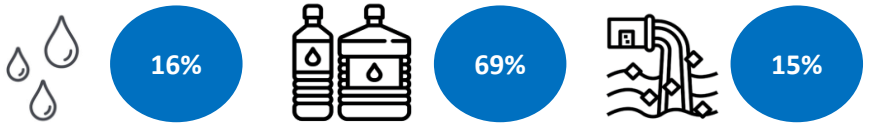
Part A – Min. 10% in 2030

Other conditions

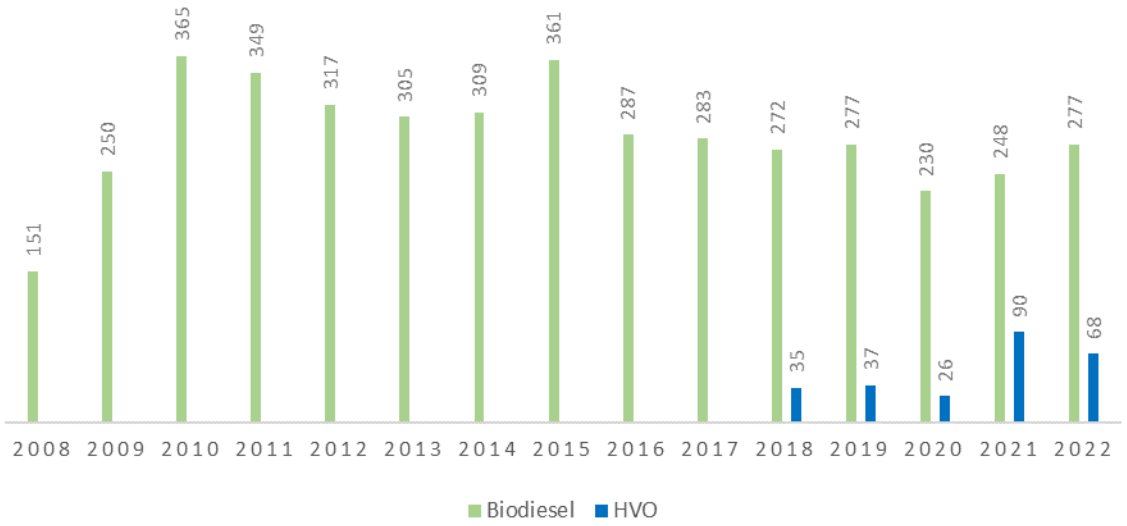
Tax exemption for advanced biofuels

Quota for Part B

Biodiesel & HVO by Feedstock (2022)



Biodiesel & HVO consumption in Portugal (Mn Tns)



Source: ENSE & LNEG

Although being a small operator, Iberol / Biovegetal Group will continue to be an integrated proactive player in the biofuels industry

BIOVEGETAL

IBEROL

Ensuring food security

Protein Meals — Animal Feed Production — ...

Oilseeds & Cover Crops

Oilseeds Farming — **Crushing** — **Oil Refining** — Human Consumption

Partnerships with Iberian farmers

Rapeseed, soya, sunflower, camelina & carinata

Vegetable Oils

Partnerships with UCO collectors and pre-treaters

UCO Collectors & Advanced Oil Pre-treaters — **Biodiesel Production** — Gasoil Blend


THANK YOU
BULK TERMINALS 2023
LISBON