

A decorative geometric pattern on the left side of the slide, composed of a grid of squares with rounded corners. The squares are colored in white, cyan, magenta, and dark purple, arranged in a complex, non-uniform pattern.

The importance of advanced biofuels in the decarbonisation of ports

Aveiro | 7th July 2021

agenda

- 1 GET TO KNOW PRIO
- 2 ADVANCED BIOFUELS
- 3 PORTS' DECARBONISATION

1 GET TO KNOW PRIO

OUR MISSION

In an integrated value chain, PRIO distributes and commercialises liquid fuels and LPG, supported by a tank terminal in Aveiro (independent storage and primary logistics) and a biodiesel plant.



2 ADVANCED BIOFUELS

WHAT ARE “ADVANCED” BIOFUELS?



biofuels feedstocks RED II

Advanced biofuels are produced from **feedstocks** listed in Annex IX of Renewable Energy Directive II (**RED II**), mostly **residues**.

ANNEX IX

Part A. Feedstocks for the production of biogas for transport and advanced biofuels, the contribution of which towards the minimum shares referred to in the first and fourth subparagraphs of Article 25(1) may be considered to be twice their energy content:

- (a) Algae if cultivated on land in ponds or photobioreactors;
- (b) Biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under point (a) of Article 11(2) of Directive 2008/98/EC;
- (c) Biowaste as defined in point (4) of Article 3 of Directive 2008/98/EC from private households subject to separate collection as defined in point (11) of Article 3 of that Directive;
- (d) Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry, and excluding feedstocks listed in part B of this Annex;
- (e) Straw;
- (f) Animal manure and sewage sludge;
- (g) Palm oil mill effluent and empty palm fruit bunches;
- (h) Tall oil pitch;
- (i) Crude glycerine;
- (j) Bagasse;
- (k) Grape marcs and wine lees;
- (l) Nut shells;
- (m) Husks;
- (n) Cobs cleaned of kernels of corn;
- (o) Biomass fraction of wastes and residues from forestry and forest-based industries, namely, bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil;
- (p) Other non-food cellulosic material;
- (q) Other ligno-cellulosic material except saw logs and veneer logs.



ECO Bunkers

Advanced fuel with a 15% blend of biodiesel from residual feedstocks with high quality marine gasoil, compatible with maritime and inland fleets

-18% CO₂ emissions



ZERO DIESEL

Advanced biofuel with 100% biodiesel from residual feedstocks for fleets with ambitious sustainability goals

-84% CO₂ emissions



ECO BUNKERS





ECO BUNKERS

No additional investment: It can be dropped-in without the need for additional investment, engine modifications or additional procedures

Cleaner air, cleaner planet: Environmentally friendly and clean alternative fuel that reduces pollutants and greenhouse gas emissions

ISO 8217: Compliant with the market standards

Greater efficiency in combustion: Fuel consumption reduction up to 10%, especially for higher engine load values.

ZERO DIESEL



ZERO DIESEL B100

100% ADVANCED BIOFUEL

PRODUCED FROM RESIDUAL RAW MATERIALS

- Up to **84% reduction of CO₂eq emissions**
- **High-quality** biofuel
- **Compatible with diesel combustion engine technology**
- **100% biodegradable**
- Waste-based, **circular economy** product
- Compliant with European **biodiesel standard** – EN 14214
- **Non-toxic and non-corrosive**
- **Safer than fossil fuels**



ZERO DIESEL

ADVANCED BIODIESEL RESULTING FROM RESIDUAL RAW MATERIALS' RECYCLING PROCESSES, COMPATIBLE WITH DIESEL ENGINES AND EXISTING REFUELING INFRASTRUCTURE

100% renewable and sustainable: Free of fossil energy, with up to 84% reduction of CO₂ emissions

Cleaner air, cleaner planet: Cleaner combustion and significant reduction of greenhouse gas emissions throughout all lifecycle

Better for the engine and for the environment: Increased lubricant and detergent power that eliminates accumulated engine contaminants

3 PORTS' DECARBONISATION

WHY ARE ADVANCED BIOFUELS IMPORTANT FOR DECARBONISING PORTS?



- **Compatible with the existing fleet and infrastructure**, without the need for additional investment in vessels, piping or technology, they are an **immediate solution**.
- A **solution for the shipping industry** to **meet the IMO's goal of reducing in 50%** the total annual of **GHG emissions by 2050**
- A **solution for reducing GHGs emitted locally** nearby the **ports**

THANK YOU



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