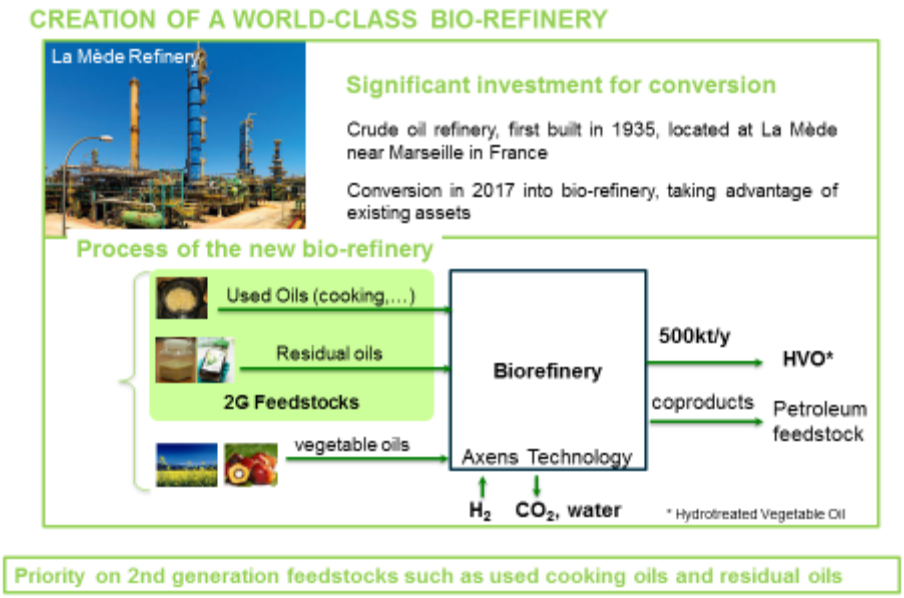
Success Stories of Advanced Biofuels for Transport

HVO REFINERY LA MÈDE

Year of plant start-up:	2018
Location:	La Mède, France
Technology:	Lipids hydrogenation process
Plant capacity:	500 kT/y (HVO biodiesel)
Operational experience achieved:	Not started-up yet
Total Capital Expenditure:	275 M Euros
Principle feedstocks:	Lipids: mix of vegetable oils and residual lipids
Feedstock Capacity:	650 kT/y based on a mix of vegetable oils and residual lipids, and for HVO biodiesel production
Products/markets:	Transport fuels
Technology Readiness Level (TRL):	between TRL 8 and 9 : new Axens process, first-ever to be used at industrial level TRL 8 – system complete and qualified TRL 9 – actual system proven in operational environment

DESCRIPTION

Retrofit of a former 150,000 bpd (barrels per day) crude oil refinery into a bio-refinery, aiming at supplying the regulated renewable transport fuel European market in drop-in HVO biodiesel and biojet, in a context where 1) FAME biodiesel faces incorporation rates limitations (ICE technology), 2) biojet must be drop-in and no first-generation biojet exists, the incorporation rates must increase to 10 % in energy content by 2020 (RED), 14 % by 2030 (RED II).



Overview of the process

Stakeholders involved:	Lipids producers (Ag and Waste industries)
Financing Support:	Primary support comes from the European Renewable Directive mandating incorporation of renewable energy in transport, mostly in the format of biofuels
Contribution to Sustainable Development Goals:	SDG 13: GHG emission reduction in transport SDG 7: reliable, sustainable, affordable energy for all SDG 8 and 15: local development
Contribution to GHG emission reduction in transports:	HVO biodiesel and HEFA bio jet will help attain RED II objectives of GHG emission reduction in transport
Employment:	250 local jobs have been maintained on the industrial site by the retrofit
Replicability and scale-up potential:	First of a kind for the Axens lipid hydrogenation process, allowing further sales of this mature technology process across the world
Success factors:	Renewable regulations mandating the use of biofuels to reduce the transport carbon footprint must be in place Axens process operability and viability

Constraints: Sustainable lipids availability

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More information: www.total.com

https://www.total.com/energy-expertise/projects/bioenergies/la-mede-total-first-biorefinery

The ART Fuels Forum brings together 100 experts and leaders representing the alternative transportation fuels Industry to facilitate discussions, elaborate common positions on policy issues and identify market penetration opportunities and barriers for these fuels. The Forum is established and financed by the European Commission under the project name "Support for alternative and renewable liquid and gaseous fuels forum (policy and market issues)".

www.artfuelsforum.eu

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