

Clean Fuels for All

*The Pathway for the European Refining Industry
to Climate Neutrality*

Call with Commissioner Simson

27 November 2020



MOL GROUP

INTERNATIONAL, INTEGRATED OIL & GAS AND PETCHEM COMPANY FROM CENTRAL EASTERN EU

DOWNSTREAM

3 refineries and 2 petrochemical plants in Central and Eastern Europe

PETROCHEMICAL PRODUCTION

1000 KTPA polymers (polypropylene, polyethylene - HDPE and LDPE, butadiene)

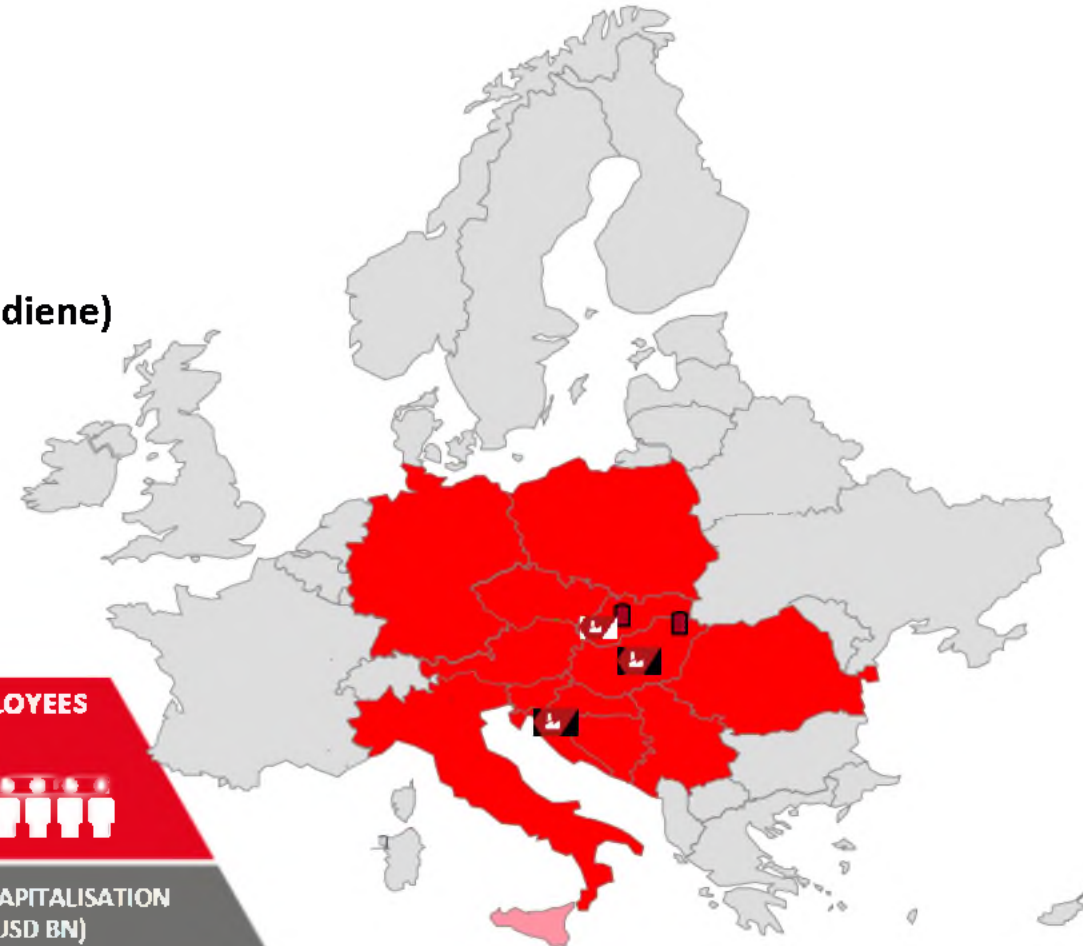
Polyol plant under construction

In top 10 European polymer producers and the biggest producer in CE

POLYMER SALES

45 countries, 4,5% market share in Europe (19% in CE)

10 segments from Packaging (~46%) to Automotive



MOL GROUP IN BRIEF

INTEGRATED CENTRAL EUROPEAN MID-CAP OIL & GAS COMPANY

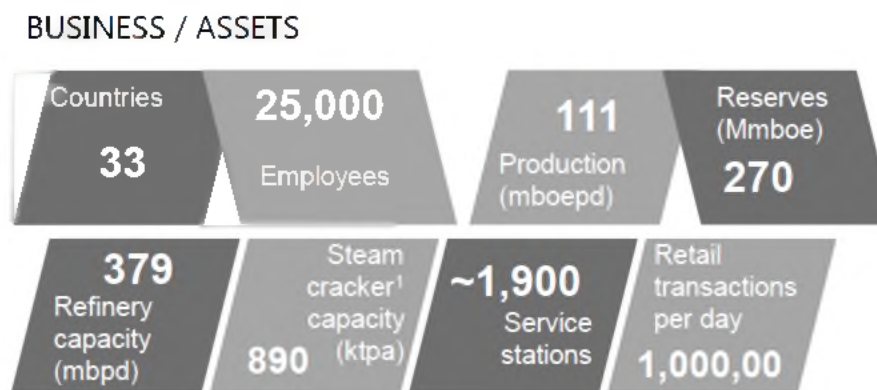
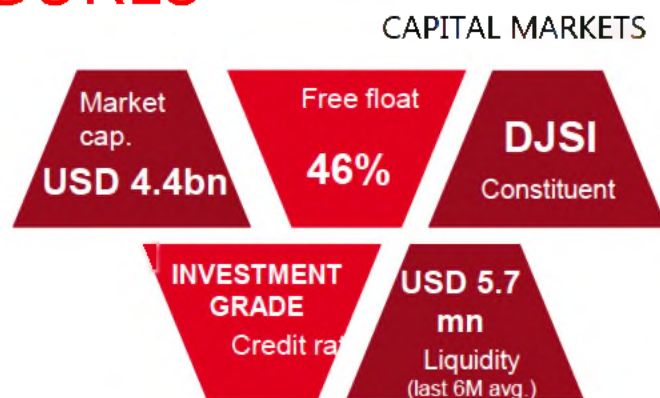
CORE ACTIVITIES



CLEAN CCS EBITDA BY SEGMENTS IN 2019 (USD MN)



KEY FIGURES



(1) Ethylene

FuelsEurope represents 40 Member Companies ≈ 100% of EU Refining



Subjects for Discussion

- Introducing our plan for transition of Liquid Fuels to Climate Neutrality by 2050
- The Investment Plan
- The Refinery as a Hub for Industrial low-carbon technologies
- The transition under way - Projects planned by our members
- Understanding costs and policy price signals
- Our specific proposals for the policy framework
- Why road transport decarbonisation supports aviation, maritime, and industrial strategy
- The Refining Forum
- Conclusions and Requests

The Clean Fuels for All Strategy

Our plan ...

- FuelsEurope has set out a potential pathway to meet climate neutrality by 2050 and to develop low-carbon liquid fuels for all remaining road, maritime, and air transport needs.
- Up to 160 Million Tonnes of Climate Neutral Liquid Fuels by 2050
- Investments estimate: between €400 to €650 billion.
- Our pathway shows how a 100 Mt CO₂/y reduction could be delivered in transport by 2035, equivalent to the CO₂ savings of 50 million additional Battery Electric Vehicles (BEVs) on the road.

...and a request

- The enabling regulatory framework to create the market conditions for the investments is within reach, but needs support and co-ordination.
- For 2050 climate-neutrality, low-carbon liquid fuels, electrification and hydrogen in road transport play complementary roles, but we need more equal levels of support for all renewables in transport.

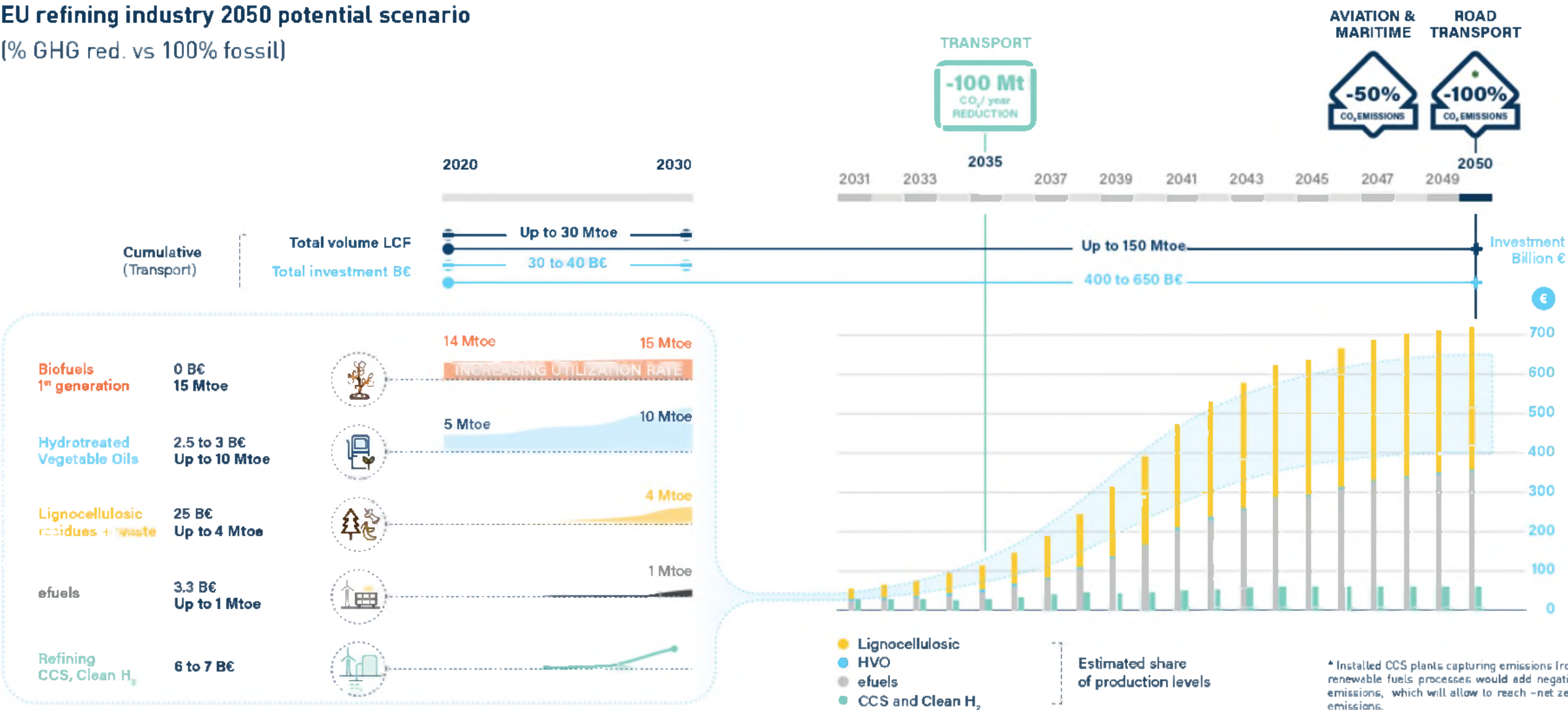


By 2050, at the latest, every litre of liquid fuel for transport could be net climate neutral, enabling the decarbonisation of aviation, maritime and road transport

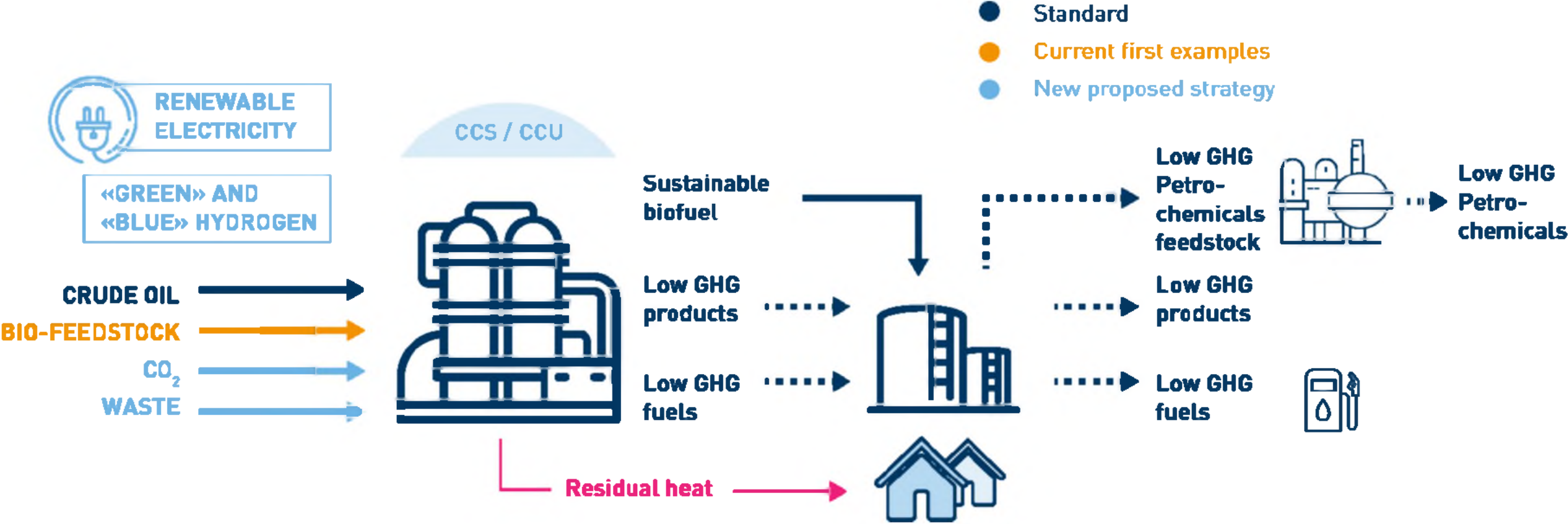
Clean Fuels for All in numbers

EU refining industry 2050 potential scenario

(% GHG red. vs 100% fossil)



The Refinery as an ENERGY HUB within an INDUSTRIAL CLUSTER



European Fuel Refining Industry - The Transition to Low-Carbon Liquid Fuels has started

Refining industry projects planned, contributing to the Green Deal & Climate Neutrality:

- Well over 20 projects for low-carbon liquids have already been started or are planned until 2030 (in the public domain).
- Projects facilitate industrial clustering through links with Chemicals, Recycling, Steel and Cement Industries, ...
- Scaling up and increasing the overall number of projects will be possible with the right enabling framework in place.

Provisional examples*:

- 8 Advanced biofuel projects, with capacities between 100.000 and 750.000 tonnes of output.
- 6 CCUS projects, up to 6 mt. of capacity for CO2 sequestration.
- 10 Green Hydrogen Projects, some of which lower the GHG intensity of manufacturing processes, others combine the green H2 with captured carbon to produce synthetic fuels with a capacity of up to 3.4 million tonnes of output per year.
- 3 Waste-to-fuel projects, with a capacity of up to 100.000 tonnes per year in output (derived from urban waste).

9.9 MT

Potential quantity of low-carbon liquid fuels produced per year in 2030

24

New sites in Europe

See more:

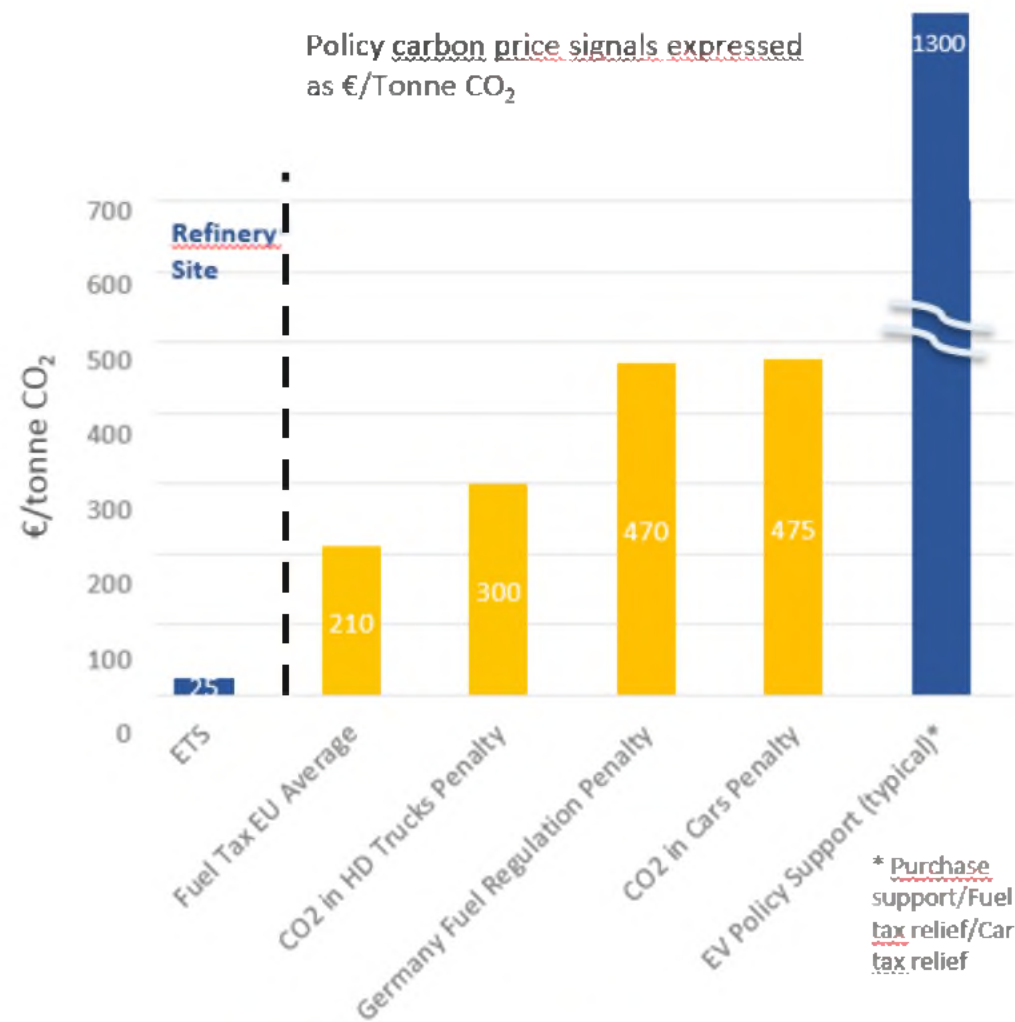
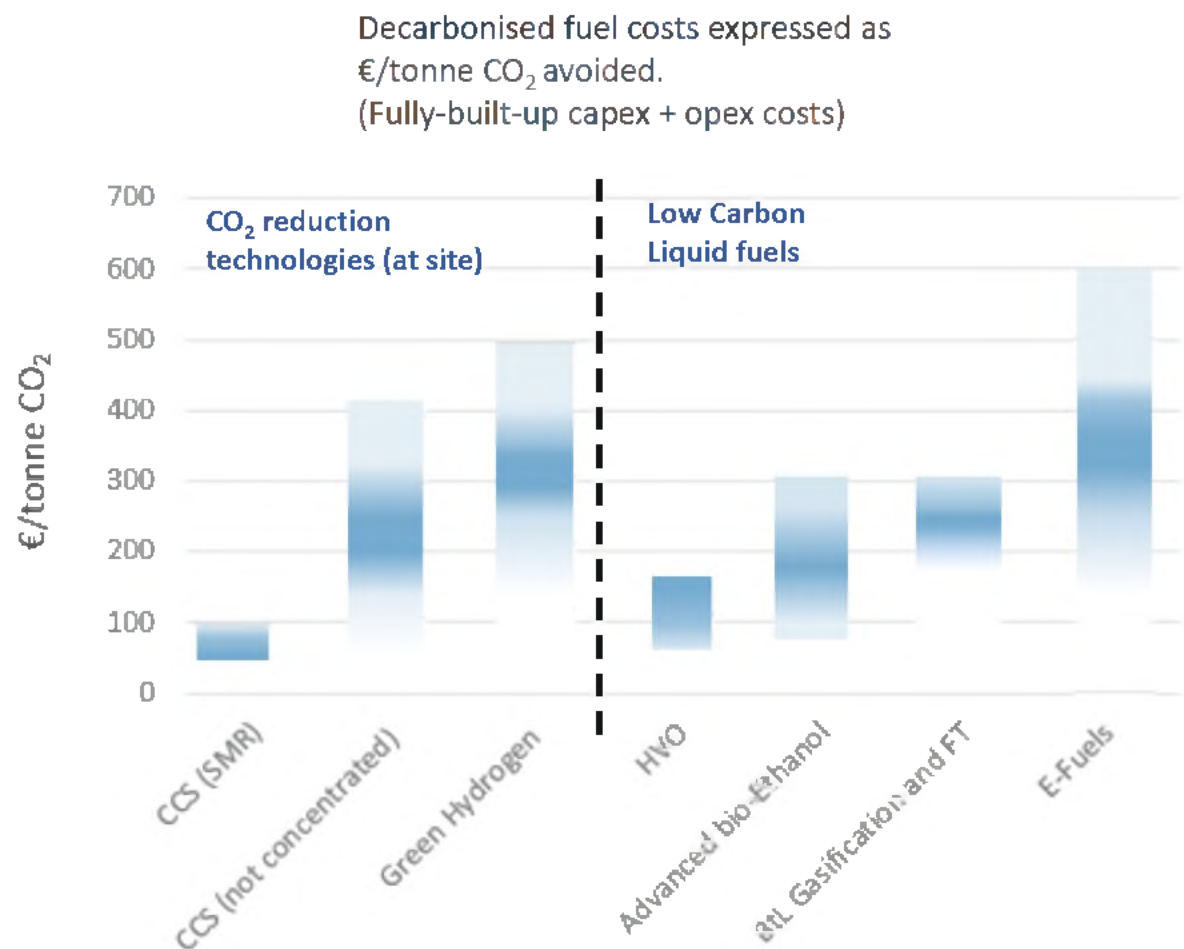
<https://www.cleanfuelsforall.eu/towards-climate-neutrality/>

<https://www.concawe.eu/low-carbon-pathways/>



*While the final list of projects may differ from the map or the list shown here, these projects are being considered by FuelsEurope's members to be put forth for support under the EU Recovery Fund.

Low Carbon Fuels: Technology Costs and Policy Price Signals



What is the Enabling Framework we ask of Policy Makers?

- To reform and simplify overlapping fuel policies, namely the Fuel Quality Directive and the Renewable Energy Directive.
- A reform of CO2 standards in vehicles, to enable the contribution of Low-Carbon Liquid Fuels to the improved CO2 performance of vehicles, including visibility at customer level.
- To shift from fuels energy taxation to carbon-based taxation to incentivize investments in all advanced renewable fuels technologies.
- Together, all of the above measures will create a predictable and stable regulatory framework to attract investors, and help make products affordable for customers, citizens and businesses.

What is the link between Road transport, Aviation, Maritime and Industrial Strategy?

Aviation and Maritime:

- Policy instruments are still in early stages to support renewable fuels at scale.
- Aviation operators have been financially hit hard by Covid crisis.
- Globally competitive markets, carbon leakage/ tankering risk.
- Extremely cost-sensitive industries may be impacted by higher fuel costs.

Industrial Strategy for Energy Intensive Industries:

- Main carbon pricing mechanism is ETS, in future with Carbon Border Adjustment Mechanism, but still may not achieve sufficiently high C prices.
- CCS, CCU, Clean H2 projects (essential for most EIs) will have costs initially far exceeding ETS price signal.
- Only a few projects can be funded by IPCEI or recovery funding.
- Clustering with fuels production gives access to high C price policies.

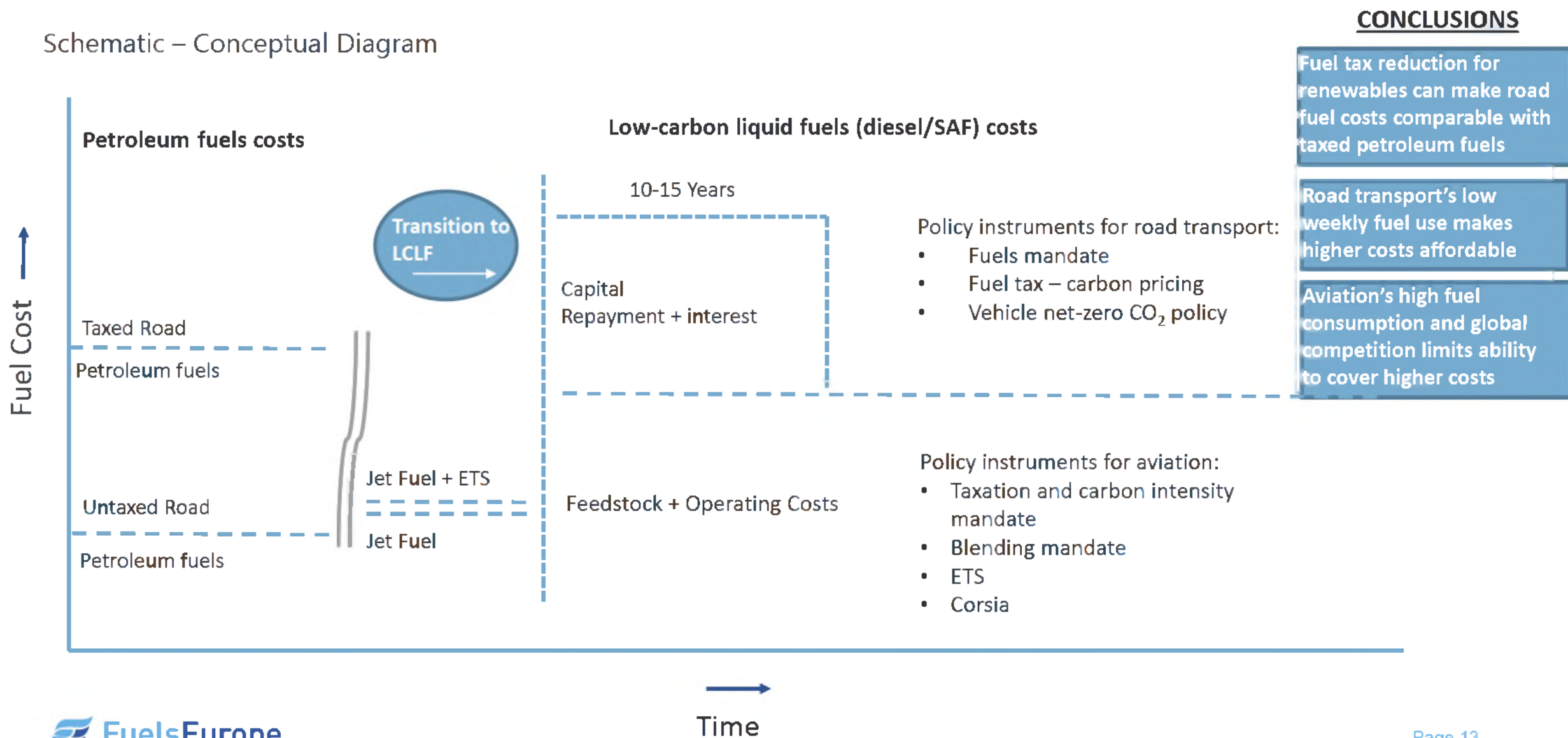
The logic for Road transport as Critical Lead Market:

- Has large scale, strong (high C price) signals, lower energy intensity, low carbon fuels with higher costs are more affordable.
- Is a no-regret policy for developing liquid fuels, they be diverted to aviation and maritime if/when electrification dominates in road sector.
- CCS/CCU and Clean H2 technologies at refining hubs can also serve industrial clusters.

“We can accelerate the technologies’ experience curve, and build scale using the high C price signals of the Road Transport CO2 and Renewables policy framework”.

Why is Road Transport a Critical Lead Market for Low-Carbon Liquid Fuels (LCLF)?

Schematic – Conceptual Diagram



The EU Refining Forum

- The European Commission set up the EU Refining Forum in 2012 on the initiative of the Commissioner for Energy (Günther Oettinger), following several EU plant closures and many job losses.
- Its aim is to provide an opportunity for the oil industry, EU Member States, Members of the European Parliament, the European Commission and other stakeholders to come together and **discuss planned and future regulatory proposals with potentially significant impacts on the EU oil refining industry and on the EU's security of supply of petroleum products.**
- Since then there were 13 editions. Future recommended themes:
 - The refinery as a low carbon technology hub, within an industrial cluster.
 - Integration with other Energy Intensive Industries, especially for deployment of CCS, CCU, and clean H2 technologies.
 - The transition of liquid fuel manufacturing to incorporate increasing levels of biogenic, waste, residue and captured carbon feedstocks, eventually, fully replacing the use of petroleum.
 - Co-ordination of supporting policies across EU Commission and Member States.



Energy4Europe   @Energy4Europe · Apr 25

"Climate neutrality is not a choice, but is indispensable in order to maintain [#SustainableDevelopment](#) and to mitigate the impact of [#climatechange](#). The [#refiningindustry](#) should reflect on its way forward to reach our common goals" - @MAC_europa at EU [#RefiningForum](#)



Dominique Ristori and 3 others

FuelsEurope believes that the Refinery Forum is a high value venue for addressing the combination of the challenges related to the transition towards a climate-neutral refining industry in the context of the 2050 climate neutrality objective of the EU.

Conclusions and Requests

We request that you consider support the following:

- Continuation of the Refinery Forum as per proposals here.
- Support for DG Energy to work with DG Clima, Revision of RED-T, links to Vehicle regulations.
- Support for Revision of ETD to create strong C price signal.
- Support for recognition of the value of our strategy for EU Industrial Strategy, and Sustainable Finance.



www.cleanfuelsforall.eu

Thank you

