

# Motoring Council Inc. QUEENSLAND HISTORIC MOTORING COUNCIL INC.

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## **NEWSLETTER No 18**

## September 2023

#### What are E-fuels?

eFuels are synthetic fuels that are a renewable electricity based and carbon neutral alternatives to conventional liquid fuels and are therefore ideally suited to reduce climate impacts in a decisive and affordable way in the transport sector. eFuels also enable passenger cars including classic, historic and vintage cars with combustion engines to continue to be operated but in a climate-neutral manner.

eFuel production is based on the extraction of hydrogen by means of an electrolysis process that breaks down water using renewable energy to generate the hydrogen. The hydrogen is then combined with carbon dioxide (CO<sub>2</sub>) extracted from the atmosphere and converted into eFuel that is easy to store, simple to transport, and can be engineered to be a successful drop in fuel for all conventional fossil fuels.

E-fuels group HIF Global, (backed by Porsche), has chosen NW Tasmania as the site for a \$1 billion production plant for synthetic green fuels, to be located south set to produce up to 100 million litres a year of carbon-neutral with construction targeted to begin in 2024. QLD currently has a draft Sustainable Fuels Strategy under development that encompasses e-fuels and will be released for consultation in 2024.

There are multiple technologies to achieve these fuels and they contain fewer contaminants than in fossil fuels, so it is better for engines and the environment with Porsche claiming it reduces emissions by around 85 per cent compared to that emitted by todays unleaded fuels.

#### What are Biofuels?

Typically thought of as exclusively ethanol-based products, biofuels can now use biological feedstocks, preferably wastes, to generate hydrocarbon based "drop-in" fuels that can also serve as petroleum substitutes in existing vehicles, and smaller engines.

Hydrocarbon-based biofuels are created with the use of extreme heat and pressure to break down solid vegetablederived materials (biomass) into intermediate liquids or gases at high temperatures (500°C–700°C) to break down biomass into vapor, gas, and char. Once the char is removed, the vapours are cooled and condensed into a liquid "bio-crude" oil, that can be further refined into different 'drop-in' grades of fuel. Obviously, this process is not carbon neutral, but is more climate-friendly than fossil fuels.

AMPOL and Japanese based Eneos Corporation signed a memorandum of understanding (MOU) to explore the production of advanced biofuels at the Lytton refinery in Brisbane, with the capacity to generate up to 500 million litres of sustainable aviation fuel (SAF) and renewable diesel annually with initial work investing the use of agricultural, animal, and other waste feedstocks prevalent in Queensland.

#### Hydrogen

Hydrogen is a clean, renewable fuel that can be used in transport, power supply and a range of industrial processes. It's already key for a range of industries that provide vital inputs into a range of manufacturing processes and our mining and agricultural sectors. Hydrogen can be produced from a variety of sources including renewables such as solar, wind and biomass.

QLD has committed to developing 4 hydrogen industry clusters focussed in and around Brisbane, Townsville, Gladstone and Toowoomba.

#### **Current QLD Sustainable Vehicles and Fuels Policies**

The QLD Government currently has a range of transport related strategies in place or in development as follows:

- 1. A Sustainable Zero Emissions Vehicle Strategy 2022-2032, mostly about Electric Vehicles & Infrastructure;
- 2. A Hydrogen Industry Strategy 2019-2024: To established Hydrogen Clusters and Industries; and
- 3. A Sustainable Fuels Strategy: A draft Sustainable Fuels Strategy is under development that will be released for consultation in 2024. The policy encompasses the development of e-fuels and biofuels stating 'it is expected that users of existing petroleum fuels will, over time, transition to a mix of sustainable liquid fuels, renewable electricity and hydrogen'.

There is currently an 'Options and Opportunities' discussion paper available with specific questions being promoted for stakeholder feedback should you be interested in commenting.

Above Information supplied by D. Baggs.

#### **Current Future of Petrol and Diesel**

The President and Vice-President of QHMC approached Joan Pease, Member for Lytton in September 2022 regarding the future of fossil fuels for the historic vehicle fleet.

Below is a copy of an email answer we received in from Mick De Brenni Minister of energy via Joan Pease.



JJ/22

12 October 2022

Mr Carle Gregory President Queensland Historic Motoring Council 12 Arakurta St LOTA QLD 4179 Email: president@qhmc.net.au

Dear Mr Gregory,

#### **RE: PETROL & DIESEL FUELS FOR HISTORIC VEHICLES**

Thank you for contacting my office in relation to your concerns regarding fuel supply for historical vehicles.

I have received correspondence from the office of Hon Mick de Brenni MP, Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement who have advised me that there are no Queensland Government or Australian Government policies to ban the use of petroleum fuels (such as petrol and diesel) in the future, nor are there any polices to prohibit or restrict the use of existing petroleum fuelled internal combustion engine (ICE) vehicles on our roads.

Joan Pease MP

Further, the Queensland Zero Emission Vehicle (ZEV) Strategy 2022–2032 sets out the Government's vision to create a cleaner, greener, integrated transport and energy network that encourages zero emission transport solutions and contributes to Queensland's net zero emissions future. Its stated priorities are to encourage cleaner, greener transport modes, build ZEV manufacturing and supply chain capability facilitate supportive ZEV infrastructure, drive towards renewables and smart charging and partnerships, innovation and advocacy.

I have also been advised that the vision includes targets for 50% of new passenger vehicles to be ZEVs by 2030, and 100% of new passenger vehicles to be ZEVs by 2036. Passenger vehicles include light passenger vehicles and SUVs.



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The strategy anticipates new ICE powered passenger vehicles may continue to be sold to 2036. The ZEV strategy does not include any requirement to restrict the sale of liquid fuels. It is likely demand for liquid fuels will continue to support used passenger vehicles and other vehicles.

Also, on 28 September 2022, the Queensland Premier and the Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement launched the Queensland Energy and Jobs Plan.

This plan recognises that liquid fuels will continue to have an important role well into the future, and includes an action to develop a future fuels strategy in consultation with stakeholders.

The supply of liquid fuels is of national importance. The Australian Government is publicly committed to ensuring Australia has access to the fuel we need to keep the country moving while managing the transition to net zero emissions. This includes investing up to \$250 million to support Australia's two domestic refineries – Ampol's Lytton Refinery and Viva Energy's Geelong Refinery – to undertake the capital works to improve the quality of fuels produced from 2024.

I hope this information is helpful to you.

Kindest regards,

Joan Pease MP Member for Lytton