

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith /
Climate Change, Environment and Infrastructure Committee
Cymru Sero Net / Net Zero Wales
NZ16
Ymateb gan Valero / Evidence from Valero



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**Valero Energy Ltd submission to the Welsh Parliament Climate Change, Environment and Infrastructure Committee:
Consultation on the Welsh Government's Net Zero Wales Plan**

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The refining sector has an important role to play in Wales' low-carbon transition and Net Zero GHG emissions reductions commitments by 2050. As such, Valero is committed to improving the environmental impact of our operations and products, and over recent years a range of investments have been carried out at Pembroke Refinery to reduce energy consumption and improve the efficiency of our operations for many years to come. Valero is a company that deeply values the communities in which we live and work, and which fully supports efforts to improve our environment whilst at the same time ensuring national economic wellbeing is not jeopardised or job-supporting businesses vital to the Welsh economy are not disadvantaged.

We therefore welcome the opportunity to share our views with the Committee on the Welsh Government's Net Zero Wales Plan, in particular the following areas:

Uptake of zero emission vehicles

- As the transport system transitions to meet Net Zero, we will see significant changes in vehicle powertrain technology, including the introduction of greater numbers of electric vehicles (EVs). Valero disagrees, however, with the Welsh Government's policy of supporting and accelerating the introduction of zero tailpipe emissions vehicles at the expense of other vehicle powertrains that can contribute to transport decarbonisation on a lifecycle basis.
- By not pursuing a technology neutral approach that accounts for Well-to-Wheels (WTW) emissions, the Welsh Government simply narrows the opportunities available to decarbonise, puts pressure on consumers to invest in new, potentially expensive vehicles and burdens the public finances through investment in supporting charging and refuelling infrastructure.
- This approach could be avoided by embracing the potential for high-blend biofuels and low-carbon liquid fuels (LCLFs), such as renewable diesel (also known as Hydrotreated Vegetable Oil, HVO). Studies have shown that a vehicle running on renewable diesel emits over 40% fewer emissions than an EV.¹
- **Valero recommends the adoption of a low-carbon liquid fuel strategy that can contribute to Wales' transport decarbonisation goals and wider Net Zero ambitions, resulting in immediate reductions in emissions across the light and heavy vehicle fleets, Non-Road Mobile Machinery (NRMM), shipping and aviation.**

Fuel-switching and low-carbon hydrogen

- Industry should be encouraged to decarbonise sustainably. This must include supporting immediate energy efficiency and waste heat recovery efforts before focusing on fuel-switching or carbon capture due to a lack of immediately available technology. This will ensure that emissions reduction occur before 2030.
- Nonetheless, Valero supports the ambition to encourage industrial decarbonisation, with many potential opportunities to do so through fuel-switching, including the introduction of new low-carbon pathways such as hydrogen. The Net Zero Wales Plan is right, however, to acknowledge that fuel-switching will be dependent upon the long-term availability of affordable fuel supplies, and will be a challenge both technically and in relation to infrastructure and operations.

¹ Source: Argonne National Laboratory (DOE) and Southwest Research Institute. See Slide 10 of the Valero Investor Presentation, *Advancing the Future of Energy*, September 2021: https://s23.q4cdn.com/587626645/files/doc_presentations/2021/09/09/Investor-Presentation-September-2021.pdf

- As highlighted by the UK Petroleum Industry Association (UKPIA), the UK refining sector is “the main producer and user of hydrogen, having done so at scale for more than 60 years, and is experienced in dealing with the associated hazards.”² There is significant potential for Pembroke Refinery not only to utilise low-carbon hydrogen in our processes, but all to play a leading role in developing Wales’ nascent hydrogen economy in the near term as an anchor for a range of hydrogen related activities. To be able to embrace these opportunities, however, industries such as oil refining need to be properly incentivised
- **Valero encourages Welsh Government to engage with UK Government counterparts as they develop the business models for low-carbon hydrogen, in particular ensuring that industries are incentivised to switch to low-carbon hydrogen in places where it will succeed earliest and become established enough to then develop more widely across the whole of the UK. This means embedding successful low-carbon hydrogen projects as soon as possible around localised systems where industries are already co-located in ‘clusters’ with a single producer supplying a small number of potential offtakers, and possibly only one offtaker.**
- For this to be the case, however, the BEIS business models need to be adapted. This needs to include moving away from an achieved sales price (ASP) approach for the reference price, which will make it incredibly difficult if not impossible for facilities, such as refineries, that both produce and consume hydrogen in the same facility, as well as inhibit potential joint ventures in order to share the investment risk.
- Also, assurances will be needed around potential proposals to limit price support under the business model for uses of hydrogen as a feedstock, particularly if such a proposal were to be adopted wholesale across all uses of feedstocks. There cannot be a one-size-fits-all approach, particularly considering the wide range of facilities that utilise hydrogen as a feedstock or chemical reagent.
- In addition, there is a significant risk that a blind adherence to the principle of subsidy control will inhibit the development of early low-carbon hydrogen projects that can also support the wider introduction of hydrogen into the transport sector. Low-carbon hydrogen is a feedstock that can aid certain renewable fuels production, especially as refinery feedstocks change over time and include more biofuel elements. The use of hydrogen that is subject to business model support in the production of a renewable fuel should not preclude that renewable fuel (which is in the vast majority not hydrogen) being eligible for appropriate renewable fuel certificate awards.

UK ETS

- Valero supports the policy ambition behind the UK Emissions Trading Scheme (UK ETS) to put incentives on investments in emissions reduction over time. We support efforts in the Net Zero Wales Plan for Welsh Government to use its influence within the UK ETS Authority to improve the transparency of UK ETS funding revenues to enable industry to move beyond simply paying the carbon price.
- More urgently, however, the Welsh Government and UK ETS Authority need to recognise the rapid and erratic increases in UK ETS prices throughout the course of 2021, and the impact this is having on the ability of participating industrial sites to budget effectively.
- When the UK left EU ETS, carbon was being traded at ~£28/tCO₂e. UK ETS costs have risen to over £53/CO₂e.³ As a result, a premium has now developed between UK ETS and EU ETS of over €24/tCO₂e in the final week of September. This makes UK refining significantly less competitive versus EU refineries.
- Without immediate action from government these cost pressures not only create barriers to investment in decarbonisation projects, they undermine the future potential for ongoing business investment in the UK. Valero has ambitious project-led GHG emissions targets and is eager to invest in its operations. It is vital that UK policies incentivise and not disincentivise such investment in Valero’s UK assets, including Pembroke Refinery.
- **Valero supports an urgent call from the UK Petroleum Industry Association (UKPIA) to move immediately to a fixed carbon price – either by setting a price cap with UK ETS or implementing a temporary carbon emissions tax – and urges Welsh Ministers to use their influence within the UK ETS Authority to engage with industry to implement such a measure.**

CCUS

- Valero agrees with the Net Zero Plan’s description of carbon capture, utilisation and storage (CCUS) technology as a necessity to achieving industrial decarbonisation and Net Zero emissions by 2050. We also agree that without the right policy and financial commitments from the UK Government it will be impossible to achieve industrial decarbonisation in Wales.
- Unlike four of the six industrial clusters identified by BEIS, however, South Wales has no acknowledged local carbon sequestration stores, i.e. natural aquifers or depleted oil/gas wells. Without an ability to locally store captured carbon, industry in South Wales is entirely reliant on non-pipeline transport (NPT), most prominently shipping, to transport CO₂ to stores in other regions.
- Progress on developing the business model support necessary to incentivise CO₂ shipping, however, trails the measures put in place to encourage industrial carbon capture. As such, South Wales risks permanently falling behind other UK regions in its

² UK Petroleum Industry Association (UKPIA), *Transition, Transformation, and Innovation: Our role in the Net-Zero Challenge*, <https://online.flippingbook.com/view/111037/>, October 2020, pp.40-41

³ UK ETS Futures Prices for 3 November 2021, <https://ember-climate.org/data/carbon-price-viewer/>

ability to decarbonise, putting the Welsh economy at a structural disadvantage. The risk is that Wales' Net Zero ambitions are met by deindustrialisation not decarbonisation of industries critical to Wales' wellbeing.

- **Valero urgently recommends Welsh Government adopt the recommendations of the recent DNV report on developing a CCUS network in Wales that Ministers should “engage with BEIS as soon as possible, to stress the importance of a shipping export option being included in the business model framework.”⁴ This step should be taken, however, only once efforts have been taken to ascertain with complete certainty that there is appropriate offshore local sequestration in South Wales in the Celtic Sea or Irish Sea. A lower cost local sequestration option is a more desirable option for Wales than the potential high cost of transporting CO₂ elsewhere.**

⁴ DNV, *A carbon capture, utilisation, and storage network for Wales: report*, <https://gov.wales/sites/default/files/publications/2021-10/a-carbon-capture-utilisation-and-storage-network-for-wales-report.pdf>, p.9