

Proper Officer
Department of Infrastructure, Transport, Regional Development, Communication and the Arts
Australian Government
lcfconsultation@infrastructure.gov.au

18th July 2024

Dear Proper Officer,

Subject: Low Carbon Liquid Fuels – Amp Feedback

Amp Energy (**Amp**) welcomes the opportunity to make this submission to the Department of Infrastructure, Transport, Regional Development, Communication and the Arts (**the Department**) in response to the Department’s Low Carbon Liquid Fuels (**LCLF**) Consultation Paper (**LCLF Paper**).

About Amp and the Cape Hardy Advanced Fuels Precinct

Amp is a global energy transition infrastructure developer, owner and operator with over 4.5GW of assets fully developed. Most relevantly, Amp is developing a world-class green hydrogen project at Cape Hardy in South Australia. Known as the **Cape Hardy Advanced Fuels Precinct**, the project will initially comprise a 1GW electrolyser capacity able to deliver a selection of advanced fuels, subsequently expanding to 5GW electrolyser capacity.

While supporting the domestic market at first, the initial export product is expected to be green ammonia through an industrial port precinct with multi-commodity capability. At 1GW electrolyser capacity, the precinct is expected to produce the equivalent of 604,000tpa of green ammonia (expected to produce the equivalent of 3,020,000tpa of green ammonia at 5GW electrolyser capacity).

In addition to significant progress on pre-FEED with two major engineering companies, on 20 May 2024, in a significant milestone for the project, Amp announced the execution of commercial agreements with Iron Road Limited, that includes the option to purchase over 600 hectares of land at Cape Hardy, in addition to agreements relating to the development of common user infrastructure and a finalised royalty structure.¹ Amp also continues to progress negotiations with Northern Water over the co-located Northern Water Supply desalination facility at Cape Hardy.

Feedback on LCLF Paper

We provide the above context to underline the significant opportunity at Cape Hardy for the development of LCLF and the importance of government support in ensuring LCLF projects can compete with traditional fuels as we transition to a low-carbon future. Indeed, the scale of our project is a key part of our attempts to bridge the pricing gap with traditional fuels.

As a general comment, we note the CSIRO’s Sustainable Aviation Fuel Roadmap (2023), which explains how e-fuels are produced by bringing together hydrogen and carbon dioxide to produce clean fuels. This report notes that carbon dioxide can be sourced from either Direct Air Capture (**DAC**) or point source capture from industrial processes. Amp shares the CSIRO’s concern that guaranteeing supply of carbon dioxide may pose challenges as traditional carbon dioxide point sources become unavailable (i.e. through plant shutdowns, depletion of natural resources, etc.). However, the ability to access international carbon

¹ For more information see media release here: [Amp Finalises Commercial Agreements for Cape Hardy Advanced Fuels Precinct \(newswire.ca\)](#)

dioxide markets (through some sort of emission trading scheme) may help to alleviate concerns of lack of carbon dioxide supply.

Accordingly, our central message in response to the LCLF Paper is **that any incentive scheme should recognise the potential to develop the e-fuels industry using carbon dioxide captured from point sources.** This will enable the industry to overcome initial investment barriers, with the view that the source of carbon dioxide could be switched out with DAC sources as the technology evolves.

Response to sample questions

In addition to the above general feedback, Amp offers the following summary responses to select questions posed in the LCLF Paper:

Are there other mechanisms Government could consider to deliver production support, other than a production tax incentive or competitive grant-based payment?

An emissions trading scheme whereby industrial sources of carbon dioxide could derive revenue through carbon capture could provide an alternative mechanism to deliver support to e-fuel production.

What policy approaches are technology agnostic, applying efficiently to new technologies as they emerge?

Recognising industrial carbon dioxide capture as a potential carbon dioxide source would be technology agnostic, with it readily allowing e-fuel facilities to apply new technologies (such as DAC) as it emerges.

Do you support an emissions reduction threshold being included as part of eligibility criteria for fuels to receive support under a production incentive program? What threshold would you seek to be included in eligibility criteria (for example 50 per cent emissions reduction relative to conventional fuels, or another emissions reduction ratio)?

In a global context, the use of industrial carbon dioxide sources for e-fuels would reduce emissions by approximately 50% (when compared to traditional industrial carbon dioxide venting). Any such threshold should consider the potential reduction that can be achieved through such a process, noting that the emissions reduction could arguably be attributed to either the industrial process or the e-fuel itself.

What are the community benefits associated with LCLF production in Australia?

Amp notes through its initial community consultations, that there are significant benefits and synergies to be had with LCLF production in Australia. There has been significant interest from rural, agricultural communities, for urea and e-diesel, thus creating an immediate demand for local offtake (scale subject to further investigation). Additionally, we note potential ancillary benefits of co-locating production in these rural communities by way of job creation and flow-on economic benefits.

What do you think are Australia's comparative advantages as an LCLF producer? Where does Australia face international competition?

Abundance of natural resources, government support, stable political climate, advanced economy, good level of existing infrastructure (though more is needed), financial institutions willing to support the industry and access to offtake markets in Asia. We note however Australia faces stiff international competition from the Middle East.

What demand-signals would best drive confidence and certainty for a domestic LCLF production industry?

Amp believes that strong interest and initial offtake agreements from large and accessible Asian market such as in Korea and Japan, continues to drive certainty. Local demand should not be overlooked either.

Final note

On behalf of Amp, I would like to thank you for the opportunity to contribute to this process and to the development of the green hydrogen and renewable energy industries in Australia more broadly.

Should you have any questions or wish to follow up this submission, please feel free to contact me.

Yours Sincerely

A handwritten signature in blue ink, appearing to read 'Thyl Kint', with a stylized flourish underneath.

Thyl Kint
Cape Hardy Project Director