

12 July 2024



Director
Production Tax Incentives Unit
Corporate and International Tax Division
The Treasury
Langton Crescent
PARKES ACT 2600

(via email to: HydrogenProductionTaxIncentive@treasury.gov.au)

**RE: HYDROGEN PRODUCTION TAX INCENTIVE CONSULTATION PAPER, JUNE 2024:
COMMENTS FROM LOW EMISSION TECHNOLOGY AUSTRALIA**

Low Emission Technology Australia (LETA) is a A\$700 million fund established in 2006 by the Australian black coal industry to invest in a range of technologies that significantly reduce greenhouse gas emissions and support the transition to a low emission global economy, in line with the Paris Agreement and Australia's emissions reduction targets.

LETA partners with government, research institutions, universities and industry locally and internationally to develop projects that can, over time, reduce and remove greenhouse gas emissions from large-scale industrial processes such as power generation, steel and cement manufacturing, mining, and future energy sources such as cleaner (low-carbon) hydrogen. Further information about LETA can be found on our website, at www.letaaustralia.com.au.

LETA welcomes the opportunity to provide a submission to the Treasury's *Hydrogen Production Tax Incentive Consultation Paper*, June 2024 (the Consultation Paper).

LETA's submission addresses specific aspects of the Consultation Paper, focussing on those areas that are particularly important in examining the role of low emission technology, the contribution it can make to reducing greenhouse gas emissions in Australia and across the Asia-Pacific region and the policies that can support the development of these technologies to see Australia efficiently and effectively meet our emission reduction targets.

With that in mind, LETA recommends the Hydrogen Production Tax Incentive (HPTI) be expanded to incorporate a technology neutral approach to HPTI eligibility, including clean hydrogen using coal, gas or biomass with CCS. The focus should be on emissions intensity, with different levels of support provided for different emissions intensity levels (measured, as the Consultation Paper suggests, in terms of kilograms carbon dioxide equivalent from well to the production gate). This would be consistent with the established approach taken in a range of countries.

LETA is also a member of the Australian Hydrogen Council (AHC) and has participated in the development of the AHC response to the Consultation Paper.

LETA would welcome the opportunity to discuss our submission and our ongoing contribution to the development of the HPTI. If you have any queries, please feel free to contact Damian Dwyer, Director of External Affairs on 0422 800 201 or at damian.dwyer@letaaustralia.com.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Mark McCallum', is written over a light blue horizontal line.

Mark McCallum
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Low Emission Technology Australia

Submission to the Treasury *Hydrogen Production Tax Incentive Consultation Paper*, June 2024 (the Consultation Paper)

1. Introduction

Low Emission Technology Australia (LETA) is a A\$700 million fund established in 2006 by the Australian black coal industry to invest in a range of technologies that significantly reduce greenhouse gas emissions and support the transition to a low emission global economy, in line with the Paris Agreement and Australia's emissions reduction targets.

LETA partners with government, research institutions, universities and industry locally and internationally to develop projects that can, over time, reduce and remove greenhouse gas emissions from large scale industrial processes such as power generation, steel and cement manufacturing, mining, and future energy sources such as cleaner (low-carbon) hydrogen.

LETA's submission addresses specific aspects of the Consultation Paper, focussing on those areas that are particularly important in examining the role a tax instrument such as the Hydrogen Production Tax Incentive (HPTI) can play in recognising low emission technology, and the contribution it can make to reducing greenhouse gas emissions in Australia and across the Asia-Pacific region, to support Australia efficiently and effectively achieving our emission reduction targets, particularly a new 2035 target and out to 2050.

In addition, LETA's submission complements our engagement in the development of the Guarantee of Origin Scheme¹ and a range of other hydrogen-related consultation processes² during 2023 and 2024.

2. An overview of LETA's low emissions technology portfolio

LETA's technology portfolio comprises four key areas that help focus our investments:

1. Cleaner (low-carbon) hydrogen and/or ammonia – hydrogen (H₂) or ammonia (NH₃) produced from coal or natural gas with associated carbon capture, utilisation and storage (CCUS)³ technologies – is a growing focus for LETA. For example, right now, coal is being converted to hydrogen and ammonia throughout Asia, but without CCS. When CCS technologies are deployed, a reliable and cost-effective source of clean hydrogen can be the result. When combined with small levels of biomass, this could be “net-negative” in terms of emissions.
2. A key area of investment focus is CCS. LETA was involved in the very first capture of carbon dioxide (CO₂) from a power station in the world, through the Callide Oxyfuel project. LETA's investment into capture technologies has continued ever since, with multiple pilot and demonstration projects funded, including a project with KC8 Capture Technologies (KC8)⁴ on a cement facility, the Carbon Transport and Storage Corporation (CTSCo) project in Queensland and discussions with technology providers in Asia and the USA on future projects.
3. LETA is also investing in carbon storage and stewardship. With most of Australia's coal (more than 90 per cent in 2022-23, with total coal exports valued at over \$127 billion) and natural gas (more than 70 per cent in 2022-23, with LNG exports valued at \$92 billion) exported to our key trading and investment partners, this means that while our exploration here in Australia for local low emission technology solutions is vital, we also need to work on solutions with our customers. Clean hydrogen can play an important role in that cleaner energy future for some of Australia's major export industries and trading partners.

¹ For example, see [cer.gov.au/news-and-media/public-consultations/guarantee-origin-hydrogen-consultation](https://www.cer.gov.au/news-and-media/public-consultations/guarantee-origin-hydrogen-consultation).

² For example, LETA's submission to the National Hydrogen Strategy Review (available at letaaustralia.com.au/wp-content/uploads/leta-submission-hydrogen-strategy-review-consultation-paper.pdf), submission to the Hydrogen Headstart Program Consultation (available at letaaustralia.com.au/wp-content/uploads/leta-submission-hydrogen-headstart-draft-program-guidelines.pdf).

³ In this submission CCUS and CCS are used interchangeably but represent the relevant suite of technology options.

⁴ See letaaustralia.com.au/media-releases/leta-kc8-and-cement-australia-collaborate-on-revolutionary-carbon-capture-technology-for-global-cement-production and [kc8capture.com](https://www.kc8capture.com) for more information.

- LETA has been partnering with industry for the past decade to develop technology which can safely mitigate fugitive emissions from underground coal mines. LETA has recently expanded our focus to explore opportunities to reduce emissions at open cut mines. Much has been achieved and with the Safeguard Mechanism, following the reforms in 2023, requiring annual baseline reductions of 4.9 per cent, this focus will continue.

Figure 1 sets out LETA’s technology portfolio and key areas of focus across each of these four areas.

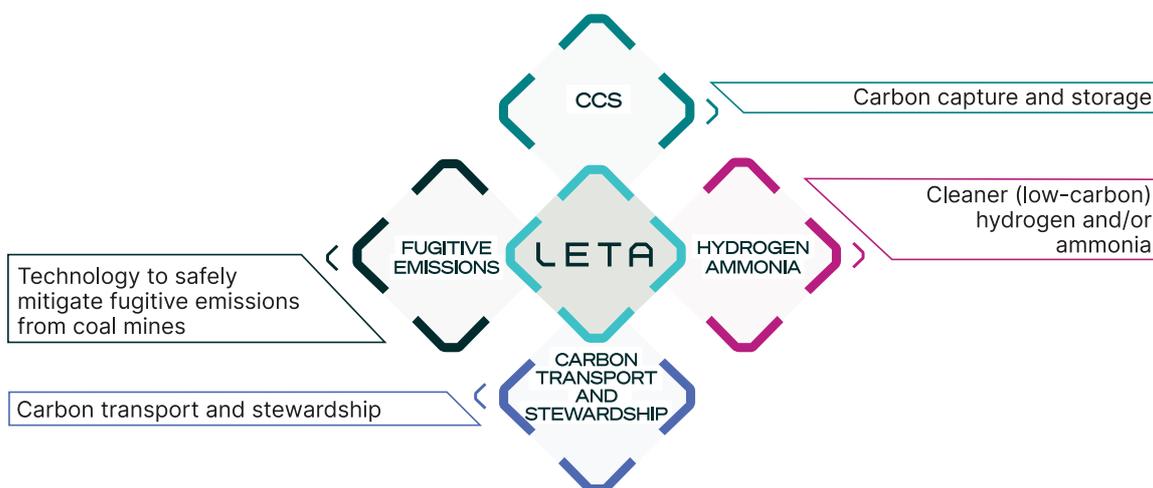
The technologies are particularly relevant to Australia’s mining, broader resources and energy, and parts of Australian heavy industry. These industries represent those parts of the Australian economy where Australia has a demonstrated competitive advantage and has, particularly in the case of our energy exports, spent generations building successful commercial, trade and investment relationships.

These are relationships that, with the right policy approach, can be sustained and built as both Australia and our key trading partners work together reduce emissions towards 2030 and 2035 emissions reduction targets and towards a target of net zero emissions by 2050 or earlier.

LETA’s focus is on the significant reduction of emissions in a manner that allows these existing industries, where Australia’s competitive advantage has been built and demonstrated over decades, to continue to contribute to Australia’s prosperity, while providing for the growth in new industries.

Very importantly, this approach emphasises an “and/and” approach (existing industries can continue to grow and prosper and reduce emissions while new clean industries develop) rather than a limited and unambitious “either/or” approach (which appears to imply that many existing industries will decline, and new industries are required to “replace” them). In doing so, this approach has an overwhelming focus on emissions reduction through technology rather than a focus on policies that favour particular energy or fuel sources.

Figure1. LETA’s Technology Portfolio Overview



Source: *Low Emission Technology Australia (2024)*.

3. LETA comments on specific areas of the Consultation Paper

The following sections highlight LETA’s comments on specific areas of the Consultation Paper. As noted above, LETA is a member of the AHC and so would refer Treasury to the AHC submission for responses on some of the broader and more general aspects of and questions in the Consultation Paper.

HPTI eligibility – the importance of a technology neutral approach

LETA acknowledges that the focus of the Government's announcement of plans for a HPTI focussed exclusively on a renewable energy hydrogen production pathway and that the Consultation Paper is focussed on the implementation of Government policy as announced. However, LETA's view – and one that has been held consistently through the hydrogen policy consultation processes in 2023 and 2024 – is that the focus of the HPTI should be on "clean hydrogen", consistent with the approach used by the International Energy Agency (IEA)⁵.

The IEA defines clean hydrogen as hydrogen that is produced from renewables, nuclear (noting nuclear-based hydrogen is not an option in Australia at present) or coal and natural gas with CCUS.

Australia is also well placed to play a significant role in the global clean hydrogen industry. Amongst other things, this opportunity reflects Australia's significant resource base, of both traditional and renewable and energy sources, and the reputation Australia's energy and commodity exporters, particularly coal and natural gas in the case of energy resources, have spent decades building as reliable and competitive trading partners.

It also reflects the reality that Australia's major trading partners, those with who LETA's members have spent decades building those relationships have, in contrast to the assertion on page 2 of the Consultation Paper, expressed a significant appetite for clean hydrogen and other low emission technologies, such as CCS, and have not limited themselves to only renewable hydrogen. With Australia standing as the notable exception, each of these countries has focussed on cost competitive, low emission and technology neutral hydrogen production pathways.

Limiting the HPTI to a renewable only focus risks limiting opportunities for Australia to benefit from these decades of experience and relationship building. It also risks limiting Australia's ability to compete in importing markets, like Japan and Korea, which are open to hydrogen from various production pathways and have chosen to more appropriately focus on emissions intensity rather than inefficiently favouring particular production pathways.

While the technology neutral approach taken in the United States through its *Inflation Reduction Act 2022* (IRA) is well known, providing different levels of support to different emissions intensity, but not limiting the hydrogen production pathway, a more recent example comes from one of Australia's major trading partners, the Republic of Korea.

The Korean Ministry of Trade, Industry and Energy (MOTIE) announced on 24 May that Korea is launching the world's first clean hydrogen power bidding market⁶. The bidding market is expected to contribute to reducing greenhouse gases through the development of clean hydrogen, while also supplying clean hydrogen at affordable prices through competition.

Importantly, the clean hydrogen power bidding market is a market for supplying and buying electricity produced by harnessing clean hydrogen. Participants are allowed to harness power generators using hydrogen that fulfills the domestic clean hydrogen certification standards, which allow for greenhouse gas emissions of up to 4 kilograms of greenhouse gas emissions per kilogram of hydrogen produced and do not limit the hydrogen production pathway to only renewable energy.

CCS can facilitate the production of clean hydrogen from natural gas or coal and provide a secure and competitive source of hydrogen. This provides an opportunity to bring low-carbon hydrogen into existing and new markets (both domestic and export) in the relatively near-term at competitive prices. This is particularly relevant considering coal and natural gas (without CCS) were together the source of more than 94 Mt of the 95 Mt of global hydrogen production in 2022.

⁵ See www.iea.org/energy-system/low-emission-fuels/hydrogen. The terms clean(er) hydrogen, low-carbon hydrogen and low-emission hydrogen are used interchangeably throughout this submission.

⁶ See english.motie.go.kr/eng/article/EATCLdfa319ada/1859/view?pageIndex=11&bbsCdN=2.

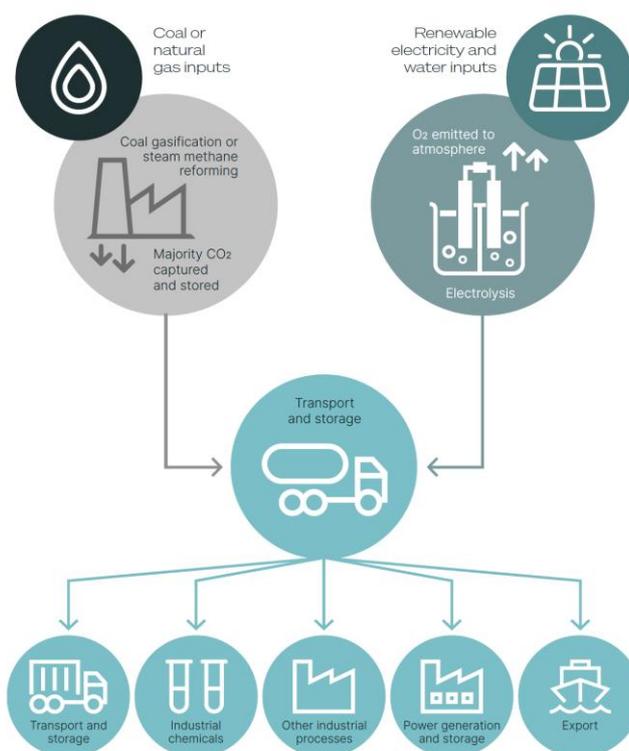
As the IEA has found⁷, cleaner hydrogen production from coal and natural gas with CCUS can be a:

... lower cost option to hydrogen produced by electrolysis in regions with abundant low-cost gas and/or coal resources and CO₂ storage capacity ...

Australia's large energy resource base; our established and long-standing commercial relationships with both domestic customers and trading partners; significant onshore and offshore CO₂ storage potential; and technical expertise and experience mean that Australia is well placed to see its comparative advantage in energy and resource production and export utilised to develop a competitive cleaner hydrogen industry.

Figure 3 highlights the various pathways to cleaner hydrogen production that can underpin the development of a leading clean hydrogen industry in Australia.

Figure 3. Cleaner (low-carbon) hydrogen production pathways



Source: Glencore (2022).

While there have been a range of developments in the global and domestic hydrogen industry in recent years, a technology neutral approach, which focusses on all possible pathways to hydrogen development (both domestically and for exports), remains vitally important to Australia achieving the best outcomes from this technology.

An approach that focusses exclusively on particular hydrogen production pathways, and does not pursue a technology neutral approach that would focus on emission reduction outcomes rather than favouring particular technologies, would represent a very significant missed opportunity to invest in technologies that will play a critical role in meeting Australian and global emissions reduction targets.

Such an approach risks failing to provide economically efficient and environmentally effective support for industry development in Australia. The HPTI should focus on all the hydrogen production pathways outlined in Figure 3 above, including clean hydrogen using coal, gas or biomass with CCS.

⁷ IEA (2022), *Global Hydrogen Review 2022* (available at www.iea.org/reports/global-hydrogen-review-2022).

As noted above, a technology neutral approach, one that focusses on emissions outcomes and not on particular production pathways, would also be consistent with the approach taken internationally, by both key trading partners and key sources of the future international investment that will be required to develop what will be a capital intensive industry. International approaches to clean hydrogen development almost all take a technology neutral approach.

In addition, a technology neutral approach allows domestic and, importantly, international customers, freedom to make their own choices about most rapid and cost effective pathways to net zero, rather than having their choices limited and being forced through regulation down particular pathways.

This means that Australia's approach, focussing only on renewable hydrogen, highlighted in the Future Made in Australia elements of the 2024-25 Federal Budget and in this Consultation Paper, is misaligned with those international approaches.

LETA recommends the HPTI be expanded to incorporate a technology neutral approach to HPTI eligibility, including clean hydrogen using coal, gas or biomass with CCS. The focus should be on emissions intensity, with different levels of support provided for different emissions intensity levels (measured, as the Consultation Paper suggests, in terms of kilograms carbon dioxide equivalent from well to the production gate). This would be consistent with the established approach taken in a range of countries.
