



Australian Government

**Department of Climate Change, Energy,
the Environment and Water**

Future Made in Australia (Production Tax Credits and Other Measures) Bill 2024 – Hydrogen Production Tax Incentive

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Contents

Purpose of this submission	3
The 2024 National Hydrogen Strategy	3
The role for hydrogen in Australia’s net zero transformation	4
Government action is needed to realise Australia’s competitive advantage	4
The Hydrogen Production Tax Incentive	5

Purpose of this submission

The Department of Climate Change, Energy, the Environment and Water (the department) welcomes the opportunity to provide this submission to the Senate Standing Committee on Economics on the *Future Made in Australia (Production Tax Credits and Other Measures Bill) 2024*.

This submission speaks exclusively to the measure to enact the Hydrogen Production Tax Incentive (HPTI). This measure was developed by the Commonwealth Treasury with support from the department, given the department's responsibility for renewable hydrogen and clean energy policy.

This submission aims to contextualise the HPTI within the Government's policy agenda and speaks to the important role hydrogen is expected to play in the decarbonisation and diversification of Australia's economy. It also outlines why the HPTI is an appropriate policy response in this context.

The department would be pleased to engage further with the Committee to assist in its consideration of the HPTI.

The 2024 National Hydrogen Strategy

The development of Australia's updated 2024 National Hydrogen Strategy was led by the Australian Government through the Energy and Climate Change Ministerial Council and has been endorsed by all state and territory governments.

The Strategy sets a vision for a clean, innovative, safe and competitive hydrogen industry that benefits Australia's communities and economy, enables our net zero transition, and positions us as a global hydrogen leader. The Strategy sets four objectives, which are to ensure:

- Australia's hydrogen industry is globally cost-competitive,
- The most prospective hydrogen demand sectors are identified and supported,
- Communities are aware of and realise the benefits of hydrogen, and
- International trade is established at scale and purposeful partnerships are leveraged.

Central aspects of the 2024 Strategy are hydrogen production and export targets which aim to provide certainty for investors, signal intention, drive coordinated action, and set the basis for measuring success. The Strategy sets a target for Australia to produce at least 15 million tonnes of renewable hydrogen per year by 2050, with a stretch potential of 30 million tonnes by 2050, supported by 5-yearly milestones. The target and milestones will help guide infrastructure planning and provide a long-term signal to investors about the role hydrogen will play in the Australian economy.

These targets are ambitious. Achieving them will require significant private investment supported and incentivised by public initiatives. The Strategy identified long-term production support as a key mechanism to support initial projects to reach operation and unlock the next wave of investment.

The role for hydrogen in Australia's net zero transformation

The department expects hydrogen to play an essential role in reducing emissions in Australia and achieving the Australia's net zero by 2050 target. This reflects broad international consensus that hydrogen is expected to enable long-term opportunities for deep decarbonisation where electrification is not economically or technically feasible.

Hydrogen provides a viable pathway to reduce emissions in areas of industry and transport which have very few options to decarbonise, so-called 'hard-to-abate' sectors. In particular, hydrogen can help decarbonise iron and steel production, provide a source of high temperature heat for processes such as alumina refining, replace natural gas as a feedstock for ammonia manufacturing, and reduce emissions from long-haul and heavy transport. Hydrogen may also play a role in supporting the transition of the electricity system through peaking power generation and providing a means for long-term energy storage. These have been identified as among the most prospective use cases for hydrogen through Australia's 2024 National Hydrogen Strategy.

The global economic and strategic landscape facing Australia is also changing rapidly, in part due to the global net zero transformation. Several of Australia's key trading partners have identified hydrogen as playing a key role in their future energy mix. Growing a domestic renewable hydrogen sector presents significant economic and employment opportunities for Australia. Renewable hydrogen can help Australia capitalise on our natural resources and existing strengths, attract and enable long-term private sector investment, increase productivity and competition in the economy, and make Australia a renewable energy superpower.

Government action is needed to realise Australia's competitive advantage

The Future Made in Australia agenda aims to foster significant private sector investment into sectors which present opportunities for the decarbonisation and diversification of Australia's economy. The Future Made in Australia National Interest Framework identified renewable hydrogen as a priority industry due to its alignment with the Framework's principles, which include:

- Australia's grounds for lasting competitive advantage in the sector,
- The role the sector could play in Australia's net zero transformation and in building Australia's economic resilience,
- Whether the sector will build key capabilities, and
- Whether the barriers to private investment in the sector can be resolved through public investment in a way that delivers value for money for the Australian public.

Australia is expected to have a strong competitive advantage in large-scale hydrogen production in large part due to our world leading renewable energy resources. Given energy costs comprise more than half of the total cost to produce renewable hydrogen, having access to low-cost renewable energy is critically important to producing hydrogen at internationally competitive prices. Australia is also well positioned to help meet international demand for hydrogen from key demand centres in Europe and Asia, including Japan, the Republic of

Korea and Germany, which have identified hydrogen as playing an important role in their future energy mixes.

The Hydrogen Production Tax Incentive

Accelerating the growth of a domestic hydrogen industry in Australia is essential to meeting Australia's legislated climate targets and agenda for a Future Made in Australia. Hydrogen production incentives represent the centrepiece of Australia's revitalised strategy. The HPTI will help to bridge the commercial gap currently facing renewable hydrogen projects and enable the sector to achieve scale by supporting early movers and building familiarity within the hydrogen and finance sectors with large scale projects.

The hydrogen industry is currently at an early stage of development. While Australia does produce emissions intensive hydrogen primarily with natural gas, and has done so for many years, producing renewable hydrogen is currently more expensive.

The department expects production costs to reduce over time if the industry scales up as expected, however, developers that move first will face higher costs over the life of their projects and could be undercut by projects that come online once cost reductions are achieved in the sector. This first mover disadvantage is a barrier to initial investments, which is inhibiting the deployment of large-scale renewable hydrogen projects and the growth of the sector.

This dilemma presents a strong justification for the Government to intervene in the sector and help bridge the difference in cost between renewable hydrogen and higher emissions alternatives. Supporting renewable hydrogen project developers to bridge this cost gap is the key function of the HPTI. By providing long-term revenue support based on production, the Government can help developers overcome the risks facing first-mover projects.

The HPTI will also ensure Australian projects remain competitive in a rapidly evolving international policy environment and fill a significant gap in Australia's policy mix. Global momentum in the hydrogen sector continues to build, and several countries are working to capture opportunities from hydrogen and downstream sectors like green metals. Australia's natural endowments position Australia well to succeed, but these advantages alone are not enough. Without further action to grow a domestic industry, Australia risks ceding this opportunity to our competitors.