



Investment for
Australia's Renewable
Energy Transition

22 December 2024

Submission from Climate Capital Forum to the Senate Economics Legislation Committee

Inquiry into The Future Made in Australia (Production Tax Credits and Other Measures) Bill 2024 [Provisions]

The Climate Capital Forum (CCF*) appreciates the opportunity to provide a submission to the Senate Economics Legislation Committee regarding the Future Made in Australia (Production Tax Credits and Other Measures) Bill 2024.

This submission synthesises key points to advocate for the introduction and refinement of Production Tax Incentives (PTIs) as a cornerstone for Australia's clean energy transition. It also highlights how these measures can foster industrial innovation, secure Australia's position as a global decarbonisation leader, and deliver economic and social benefits.

A case study of the "AP Green and HyNQ, North Queensland" initiative is included as an appendix to illustrate these opportunities.

Key Recommendations: Optimising Production Tax Credits

1.1 Phased and Time-Limited Implementation

- Implement a 10-year phased taper for PTCs, starting at 100% for the first seven years, reducing to 75% in year eight, 50% in year nine, and 25% in year ten.
- This approach ensures certainty for early-stage investors while maintaining fiscal responsibility.

1.2 Stackable Bonus Credits for High-Impact Outcomes

- Additional credits should be provided for projects meeting specific criteria, such as:
 - Locating in Net Zero Authority-designated regions.
 - Compliance with robust ESG benchmarks, including low-carbon production and biodiversity-positive practices.
 - Achieving workforce diversity targets, including apprenticeships for underrepresented groups like First Nations people and women.

1.3 Alignment with Global Trade Standards



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- Ensure Australian PTC-supported products align with international frameworks, including:
 - Carbon Border Adjustment Mechanisms (CBAMs), and support for an Asia-Pacific CBAM.
 - Battery Passport systems to maintain competitiveness in ESG-conscious markets.
- Drive carbon inputs down in critical minerals, leveraging alternative low- and no-carbon processing technologies.

1.4 Incentivising Circular Economy Practices

- Expand PTC eligibility to facilities that incorporate closed-loop processes, recycling, and waste minimisation to enhance sustainability and reduce reliance on virgin materials. [Renewable Metals](#) is an excellent exponent of advanced Australian recycling and critical minerals recovery technology.

2. Community and Regional Benefits

2.1 Free, Prior, and Informed Consent (FPIC)

- Mandate FPIC for all projects, ensuring Traditional Owners are central to decision-making and benefit-sharing agreements.

2.2 Workforce Training and Regional Employment

- Invest in training programs targeting regional employment and underrepresented groups to strengthen workforce diversity and local economies.
- PTIs must uphold community benefit principles and include enforceable commitments to equity and transparency.

2.3 Social Infrastructure Development

- Support large-scale clean energy industrial precincts like AP Green in North Queensland to unlock investments in:
 - Housing, hospitals, and roads.
 - Water infrastructure, such as the Burdekin to Bowen water pipeline.
 - Transitioning North Queensland Bulk Ports into multi-export and clean energy hubs.

2.4 Equity Participation



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- Include stackable bonus credits or mandatory eligibility criteria for projects delivering direct financial benefits to Traditional Owners and local communities.
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3. Addressing Capex Challenges and Building Infrastructure

3.1 Capex Support

- Leverage national programs like the National Reconstruction Fund and Export Finance Australia to address capital expenditure gaps.
- Governments should provide approximately 30% of capex support, streamlined permitting, and preferential land access.
- Consider equity or convertible equity arrangements to ensure government benefit-sharing in the upside.

3.2 Shared Infrastructure Investments

- Prioritise investments in renewable energy hubs, transport networks, and recycling centres to reduce costs and accelerate scaling across the critical minerals value chain.
- Enable infrastructure like rail and port upgrades to transition facilities from fossil fuel dependency to clean energy exports.

3.3 Streamlined Approvals

- Reform approval processes to reduce delays and lower the levelized cost of energy .
 - Ensure renewable energy is matched with clean hydrogen production, aligning with global additionality and time-matching standards.
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4. Supporting Innovation and Startups

4.1 Broadening Scope of Critical Minerals PTCs

- Expand the scope of CM-PTCs to support downstream activities, including:
 - Battery-grade refining, cathode production, and battery manufacturing.
 - Recycling and value-added processing.

4.2 Stockpiling

- The [US DOE's Lithium Bridge](#) report encouraged critical minerals stockpiling by the government to address local market deficits; Australia should take advantage of cyclical commodity lows to do likewise here, both as an investment and to ensure less disruption to upstream production, and to downstream processing. As Australia's participation in



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value chains increases, such stockpiling should be considered between each node of the chain.

- Should greater than domestically possible investments be required, partnership across trading and partner nations should be encouraged.

4.3 Startup Accessibility

- Remove matched funding requirements for government grants to ensure greater accessibility for early-stage innovators, following the [CalSeed](#) model.
- Provide subsidised access to testing facilities, modelled on programs like California's [CalTestBed](#).

4.3 Transformative Technologies

We need to support Australian innovative processing technologies and applications to further address the currently challenged economics of critical minerals value chains.

- Invest in innovative solutions to reduce carbon inputs and costs in processing, such as closed-loop, fluorine-based chemical processing systems, eg from [Fluoromet](#).
- Support mass EV retrofitting to aggregate battery demand and accelerate industrial scaling as explored within the recent [2nd Supercharge Australia Innovation Challenge](#). Over \$180B of Australian-made batteries could be consumed.
- With greater downstream activity, local battery innovators driving performance improvements such as [Sicona](#) (silicon anodes), [Project Midas](#) (graphene aerogel anodes) and [Gelion](#) (lithium sulphur batteries) could bring their innovations to production here.

5. Hydrogen and Green Metals: Unlocking Value-Added Opportunities

5.1 Green Iron and Metals

- Extend PTIs to include green iron production to leverage Australia's \$138 billion annual iron ore exports.
- Complement PTIs with demand-side measures like government-backed contracts for decarbonised commodities.

5.2 Large-Scale Hydrogen Production

- Introduce scalable production tax credits for integrated hydrogen projects, ensuring competitive positioning in global markets.



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- Set a minimum project capacity of 200 MW to drive scale efficiencies and industry competitiveness.

5.3 Enabling Industrial Ecosystems

- Support foundational projects like the HyNQ Project at AP Green to cluster new energy-intensive industries around clean infrastructure precincts.

6. Structuring Effective PTIs

6.1 Conditionality and Transparency

- Include clear, enforceable conditions for wage standards, environmental protections, and milestone-based incentives.
- Offer flexible structures for tax benefits, including refundable credits, advance funding, and carry-forwards.

6.2 Interface with Project Structures

- Ensure PTC eligibility criteria accommodate diverse corporate structures, including unincorporated joint ventures and state government partnerships.

6.3 Stable and Transparent Regime

- Establish realistic and transparent deadlines for project milestones like financial investment decisions (FID) to de-risk development cycles.
- Foster industry collaboration by aligning incentives across enabling infrastructure and shared challenges.

The Climate Capital Forum strongly supports the introduction of well-designed Production Tax Incentives and complementary measures. These initiatives are pivotal for fostering investment, creating economic growth, and building resilient low-carbon industries that align with Australia's net-zero commitments.

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***About the Climate Capital Forum:** <https://www.climatecapitalforum.org>.



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Appendix: Case Study - AP Green and HyNQ, North Queensland

CCF supports the introduction of Hydrogen and Critical Minerals PTIs to help early adopters in decarbonised production. These measures address market failures and support reindustrialisation, leveraging Australia's renewable energy resources. Without intervention, Australia risks falling behind in capturing opportunities from the global energy transition.

Case Study: AP Green and HyNQ, North Queensland

Background

Energy Estate is the developer of AP Green – a proposed integrated clean infrastructure and industrial estate under development at Abbot Point, North Queensland. Energy Estate is an Australian company, which develops large scale clean energy projects and ecosystems.

AP Green will be located within the Abbot Point State Development Area declared under s3 of the State Development and Public Works (State Development Areas) Regulation 2019 (Qld). In 2023 the Queensland Government launched the Abbot Point Activation Initiative with an initial investment of \$8.5 million Government towards turning Abbot Point into a green energy export super hub. This forms part of the broader plan for North Queensland to become a green export superpower with Townsville a critical minerals and hydrogen manufacturing powerhouse.

AP Green is being designed as an integrated clean energy precinct within the wider hub at Abbot Point. The components of AP Green are proposed to include a large-scale green ammonia project (**HyNQ Project**), a green methanol facility, a biorefinery (utilising sugarcane as the primary feedstock supply) with downstream sustainable aviation fuel and renewable diesel production and an industrial precinct attracting new energy intensive industrial such as green data centers and food production and processing. AP Green will be powered by new renewable energy projects in the region around Abbot Point.

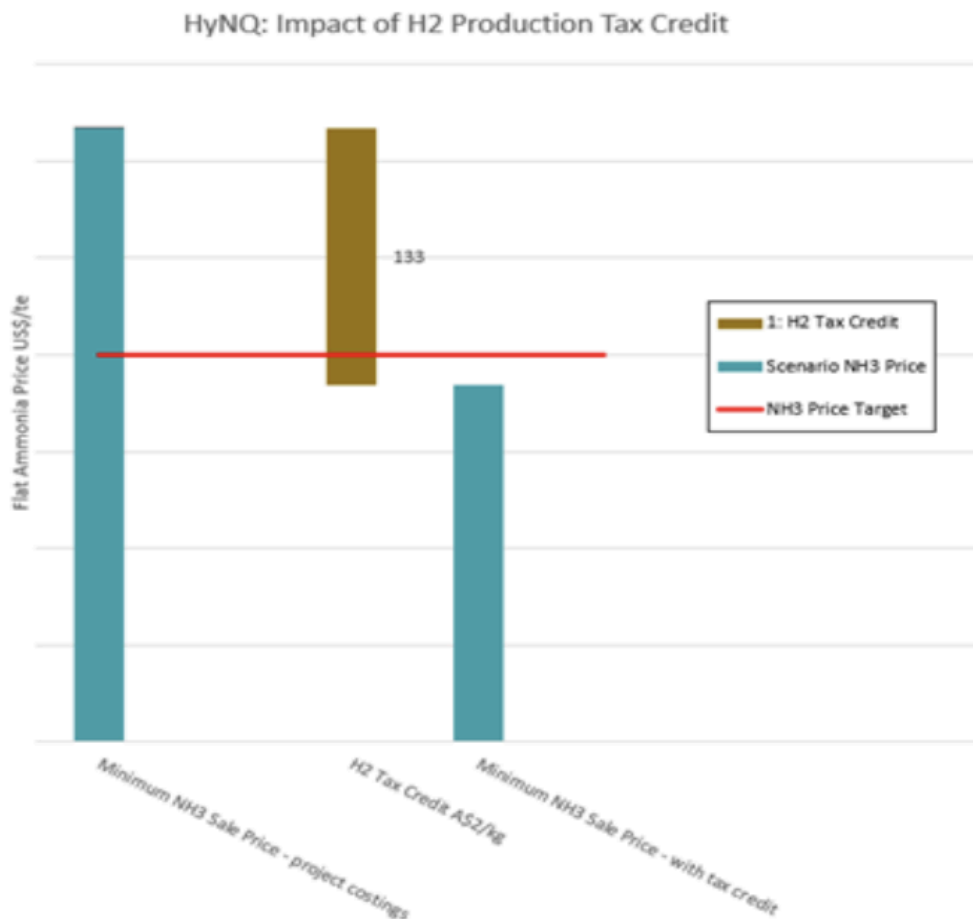
Energy Estate HyNQ Pty Ltd, a subsidiary of Energy Estate, is the operator of the HyNQ Project (**HyNQ Project**), a ~\$7 billion integrated renewable energy and hydrogen/green ammonia production project being developed together with our joint venture partners Idemitsu Renewable Developments Australia and IHI Engineering Australia and in collaboration with Queensland Government owned energy company, CS Energy.

Located at the Port of Abbot Point in Queensland, the HyNQ Project is looking to produce circa 285 tonnes per day (tpd) of green hydrogen to support ammonia production of 500,000 tonnes per annum(tpa), with a goal of commencing operation prior to 2030.



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The HyNQ Project submitted a response to the Hydrogen Production Tax Incentive Consultation Paper in July 2024 and the image below highlights the benefit of the production credit. The HyNQ Project joint venture partners welcomed the introduction of an Australian Federal Hydrogen Production Tax incentive and Future Made in Australia (Production Tax Credits and Other Measures) Bill 2024. Further to the consultation response we would like to highlight key insights and potential opportunities offered by the Hydrogen Production Tax Credits for projects like HyNQ Project and the other projects to be located within AP Green and the broader precinct supported under the Abbot Point Activation Initiative.



Key Insights and Opportunities

1. **International and Domestic Partnerships** – The introduction of production tax credits provides a strong signal to international market that the Australian Federal Government is committed to the development of a large-scale and globally competitive hydrogen industry in Australia and drives potential reciprocal support from our trading partners



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For example, our Japanese partners - Idemitsu Renewable Developments Australia and IHI Engineering Australia – have confirmed that availability of Production Tax Credits will be a factor in the competitiveness of projects which participate in the Japanese contract for difference subsidy scheme administered by the Japanese Ministry of Economy, Trade and Industry (METI).

Domestically, the introduction of production tax credits will make supply of hydrogen and derivatives more competitive in local markets for products such as ammonia, methanol and liquid hydrogen for industries such as marine and road transportation. One of the projects proposed being developed within AP Green is BioNQ, a biorefinery and refining project which will produce ~180,000tpa per annum of sustainable aviation fuel and ~20,000tpa of renewable diesel, BioNQ will require hydrogen supply as part of the production process and the availability of production tax credits for the required hydrogen production will help to make the renewable fuels to be produced by the facility more competitive against imported fossil fuel alternatives.

2. **Opportunity to Stimulate Broader Industry and Economic Development –**

Production tax credits can play a key role in accelerating the development of a foundation project like the HyNQ Project which can unlock new renewable energy resources and enables the clustering of new energy intensive industries around a clean infrastructure and industrial precinct in North Queensland.

For Abbot Point and the wider North Queensland region development of a major new clean energy industrial precinct can underwrite the development of new social and enabling social infrastructure as outlined below:

- major new water infrastructure (the Burdekin to Bowen water pipeline);
- the water pipeline then unlocks additional high quality agricultural land in the Burdekin/Bowen to produce sugar and other products for domestic and export markets and stimulate a bioenergy future for the region;
- production of green liquid fuels (SAF and renewable diesel) and the associated port and rail infrastructure enhances sovereign fuel security for the community and industry including the Australian Defence Force (who have a rapidly growing hub in North Queensland);
- investment in housing, roads, hospitals and other social infrastructure will make the Whitsunday region more resilient and support existing industries such as tourism and resources.

3. **Align Interests between Developers and Government – Set Realistic Target Dates**

to Accelerate Product Delivery – The traditional approach of awarding grants and loans after a competitive process (such as the Hydrogen Headstart program administered by ARENA) has not yet resulted in the accelerated development of any



large-scale hydrogen production projects in Australia. The time taken to make any awards under the Hydrogen Headstart program has had the opposite effect – disincentivizing the short-listed developers to continue to invest during the assessment phase and not providing other bidders with sufficient details as to why they did not make the shortlist

A stable and transparent production tax credit regime which aligns the interests of developers, and the Government can help to fill this gap. The ongoing success of the PTC and ITC regimes in the US at driving investment into the clean energy sector are good examples of the advantage of such regimes. Developers need to be incentivised to move quickly through the development cycle and stimulate market demand.

A particular issue to be addressed in Australia is the high development costs for all clean energy projects compared to many of the countries we are competing with in clean energy globally. In many cases there is a lack of an incentive on developers (and project counterparties and their respective advisers and consultants) to move through the development cycle expeditiously and efficiently. This is often exacerbated by the traditional approach taken by the Federal and State Government to supporting such projects (which is administratively burdensome and heavily reliant on input from external consultants to the relevant agencies). The fear of awarding a grant or loan to a project or approving a milestone becomes a key motivator of behaviour – and almost always leads to extended development timelines and increases to development costs.

A well structured production tax credit regime can address some of these issues by encouraging projects to be ready within “windows.”

If a project meets the eligibility criteria and is ready within the identified window then it can qualify for a PTC. We stress it is important to set realistic deadlines for key milestones such as FID of a qualifying project. For example an integrated project such as the HyNQ Project which combines new renewable energy generation with hydrogen and green production may require longer to reach FID compared with a project in another location which will rely on supplies of renewable energy over existing transmission.

Similarly, if a project will be reliant on transmission upgrades or new infrastructure the FID deadline under the PTC for such projects needs to reflect this in the FID and NTP deadlines to ensure risk is not borne by the developer and is assumed by the host/supporting government in view of the general lack of control that developers can assert over transmission companies (whether Government-owned or privatised). This applies to other enabling infrastructure to be provided by Government agencies and is consistent with the risk profile accepted for PPP projects in Australia.



It is critical that the windows set for the PTC are regular and transparent. The Capacity Investment Scheme mechanism is a step in the right direction with the frequency of the auctions although the transparency of the awards and the information made available publicly (such as pricing) is still below global best practice norms.

- 4. Interface between Project Structures and PTC** – Any eligibility criteria for production credits needs to contemplate the variety of corporate structures used for major energy and infrastructure projects in Australia (such as unincorporated joint ventures and unit trust structures). This has been a material issue with the structure of ARENA grants historically. If the preferred corporate structure does not efficiently interface with the PTC this will create a disincentive for local and global partners. Similarly, the eligibility criteria and structure of the incentive needs to ensure that projects with state government owned entities as participants can benefit from a PTC structure.

Consideration should also be given to the form of receipt of the tax benefit, including;

- (a) cash refund;
- (b) an advance refundable tax credit system based on projected eligible expenditures; and
- (c) carry-forward of tax credits to future years when the project starts generating taxable income.

Given the timing of investment decisions can occur at multiple phases of the project (securing funding of the project, regulatory approvals, commitment to EPC construction, etc.), consideration should be given to milestone-based interim tax incentives to support large-scale projects with long development timelines.

We are pleased to see that multiple project owners and unincorporated joint venture structures have been identified as an implementation risk needing careful management to ensure that eligible entities have a fair entitlement to the credit in the Future Made in Australia (Production Tax Credits and Other Measures) Bill 2024 Explanatory Memorandum.

- 5. Scale needed for projects to be competitive** - Australia needs to quickly move beyond funding scale-up or pilot projects (as ARENA and the States have done to date) and focus resources on hubs which can produce a competitive product at scale.

Australia has to date taken a different approach to many other markets – choosing to fund one project within a “hydrogen hub” but not funding enabling infrastructure or the hub. This contrasts with the approach taken in markets like the UK and US with hydrogen hub funding being used for enabling infrastructure and being distributed through the hub to project proponents. This approach has stifled development and resulted in projects which are “captain’s picks” receiving funding but, in most cases,



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contributing materially to the development of the hub or accelerating the development of other projects within the hub.

We would be strongly supportive of a much higher minimum capacity requirement than the level under Hydrogen Headstart (50MW) given this incentive should drive the development of large-scale hydrogen production in Australia. Other schemes, such as Hydrogen Hubs, have already focused on smaller projects. Low level of minimum capacity does not encourage the scale of investment required to deliver a globally or even locally competitive price or drive the production volumes needed to support decarbonisation of Australian industry and meet global decarbonisation targets.

We would suggest a minimum of 200MW as a sensible level although this is still low by global standards. One approach could be to allow 100MW to 200MW projects for the initial two windows and then step the minimum up over time to drive scale efficiencies and grow a globally competitive industry.

- 6. Local Additionality** – The Hydrogen Production Tax Credits should support projects where electricity used for hydrogen production is generated by the same electricity grid, preferably within the same State/node. If hydrogen production is not matched with electricity generated by the same electricity grid this can lead to unrepresentative 'offsetting' of fossil-fuels with certificates created on another grid. Other potential side effects could include grid congestion (curtailing the clean generation resource) and increase of local fossil-based generation to meet the electrolyser demand. To ignore additionality may put Australian projects at a disadvantage to the global trend and is out of step with the approach taken by our trading partners.

We are also supportive of time matching being introduced as soon as possible in order to drive investment in new renewable energy generation and ensure that Australia supplies a premium product to local and global markets.

- 7. Community Benefit and First Nations** – New clean energy projects, particularly those in regional Australia like the HyNQ Project, must actively support and partner with local communities and Traditional Owners to drive social value and deliver enduring economic benefits. We are therefore pleased to see the requirement for eligibility include compliance with the community benefit principles applicable to the project. Such principles must be definitively included in binding contracts to ensure compliance. Minimum obligations should include transparency in reporting and local community investment.

It is critical for the success of community and traditional owner partnerships that the developer is incentivised to deliver on commitments.



We would recommend that eligibility is linked to achieving the outcomes – with one approach to have a clawback mechanism for projects which fail to deliver on their commitments.

To date equity participation or similar direct financial benefits for Traditional Owners and communities have been limited. In the US this has been sought to be addressed by including additional production credits when such outcomes have been delivered or making equity for such groups a mandatory eligibility criteria (which we would support).

8. **Broader Market Participation and Access to Additional Incentives** - Government incentives should support as many projects as possible to drive a large and thriving hydrogen industry in Australia. Support should be shared to impact the greatest number of projects and drive the Australian hydrogen industry forward at scale.

Where projects, such as the HyNQ Project, have broader scope, enabling new water and export infrastructure along with additional energy production, these additional elements beyond hydrogen production should be supported by programs such as Rewiring the Nations, other elements of Future Made in Australia and Regional Infrastructure grant funding. The nature of the production credit should not impact on the ability of a project to access these additional support programs.

A mechanism like the PTC can also help projects like the HyNQ Project and the wider AP Green hub foster common user and social infrastructure such as;

- i. Water infrastructure - bringing existing unused bulk freshwater from the Burdekin to Abbot Point. Clean energy projects at Abbot Point provide the foundation demand for water infrastructure, benefiting agricultural and urban water users in the region;
- ii. Road upgrades - include safe entry and exit from the Bruce Hwy to the Abbot Point State Development area and upgrades to the Bruce Highway;
- iii. New rail infrastructure between Ayr and Bowen to support the accelerated development of the Abbot Point SDA;
- iv. Transitioning North Queensland Bulk Ports export terminal at Abbot Point from a coal export terminal to a multi export and clean energy export terminal; and
- v. Housing – construction of temporary workers' accommodation converted into legacy housing for the region post construction.

Government incentives should also be aligned to encouraging the whole of industry collaboration, especially when faced with shared challenges around common and social infrastructure. For example, we have a high-level cooperation agreement with the Gladstone H2U Project and reached out to other proponents at Abbot Point to look to accelerate the precinct development.