



The Hydrogen Production Tax Incentive

Australian Hydrogen Council
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Introduction

The Australian Hydrogen Council (AHC) welcomes the opportunity to respond to the Australian Government's consultation paper on the hydrogen production tax incentive (HPTI).

The AHC is the peak body for the hydrogen industry and our membership includes companies from across the hydrogen value chain. Our members are at the forefront of Australia's hydrogen industry, developing the technology, skills and partnerships necessary to ensure that hydrogen and its derivatives play a meaningful role in decarbonising Australian industry.

The proposed *Future Made in Australia Act* (FMIA) is a vital Australian Government response to changes in global supply chains and energy security, as well as a necessary step to reinvigorate Australian capabilities and grow economic complexity. The energy transition is hugely challenging but it also presents an important opportunity for Australia to develop competitive advantage in renewable energy production, technology and use within the global marketplace, as well as ensuring ongoing prosperity in our region.

In the 2024–25 Budget, five industries were announced as aligned with the National Interest Framework under the FMIA:

- Renewable hydrogen
- Critical minerals processing
- Green metals
- Low carbon liquid fuels
- Clean energy manufacturing, including battery and solar panel supply chains.

These industries are clearly vital for Australia's decarbonisation and sovereign capabilities. Hydrogen also plays a role in most of them. Beyond renewable hydrogen itself (to decarbonise the hard to electrify parts of our economy, and as a potential export), producing green metals includes hydrogen to make iron from our iron ore and alumina from our bauxite. And low carbon liquid fuels, such as sustainable aviation fuel (SAF), need hydrogen as a feedstock to support scale when there is insufficient biofuel. There will be other manufacturing opportunities as well, such as components and assembly for electrolyzers.

Within the overall FMIA approach, the HPTI is a most welcome initiative that signals to Australian investors and the rest of the world that Australia is back in the game for attracting project investment, and the technology, capability and workforce opportunities that come with it. The announcement and funding of the HPTI signals the confidence of the Australian Government in the hydrogen and derivatives industries and provides a recognition that clean molecules and fuels will be needed if Australia is to achieve whole-of-economy decarbonisation.

We are pleased to note that the Australian Government is considering support models for particular end uses, such as for green metals and low carbon liquid fuels. We support these demand side initiatives and see them as being matched with the HPTI to simultaneously support demand and supply for priority industries. It is vital that the different initiatives are able to work together for those projects that are eligible.

There is a diversity of views within the AHC membership on some of the details of the HPTI as currently set out in the consultation paper, but overall we think that the design strikes the right balance to drive sustainable industry growth.

We note that the consultation period is extremely truncated and would have preferred more time to respond, particularly because we ourselves represent 100 members. Despite the short time frames, AHC convened a series of consultations with members, and, alongside the Australia Japan Business Cooperation Council, we spoke to Japanese investors exploring opportunities in Australia.

But time is of the essence. The sooner that the HPTI can be designed and legislated the better – the HPTI has piqued investor interest, but it will not provide the requisite investor certainty on policy unless and until it is formally in place. We are grateful for the opportunity to provide input and are grateful also for speed in completing this process. The AHC and our members would also welcome the opportunity to continue discussions with Treasury as the subordinate legislation is developed.

Responses to the consultation questions

1. Please provide any feedback on the impact this incentive may have on your community, facility or industry.

With its Inflation Reduction Act (IRA), the US government started a global race for clean technology investment, and the wins that Australian industry and policymakers may have assumed would come to us naturally became far from assured when we did not respond in kind.

It has now been almost two years since the IRA, and in that time we have seen major incentive schemes for clean energy, technology and hydrogen proliferate across the world.

We have also seen major challenges emerge, including those linked to supply chain gaps and inflationary pressures, making an already different energy transition more difficult.

Australia did not escape these challenges, with the negative effects amplified because of our distance from key markets, our lack of economic complexity, and our reduced appeal to investors because we had not demonstrated a clear government policy and financial commitment to the transition.

The FMIA changes this situation, and the HPTI announcement in particular shows the world that Australia is back in the game for hydrogen developments. This initiative is vital if Australia is to meet its emissions objectives, support national and regional energy security and create the required volumes of hydrogen for future uses in strategically important areas.

We note that at \$2/kg the HPTI is less than other schemes; particularly the IRA, against which it will be most compared. Ideally the HPTI would be twice as much at least to close the commercial gap. However, we note that this was an unlikely outcome for this policy at this time. We also note that the Australian Government has recognised that more is required, and that Hydrogen Headstart is intended to support a small number of first movers in the years prior to the HPTI taking effect. The announcement of the second round of Hydrogen Headstart in the May budget is very welcome.

We also note that the IRA is becoming encumbered with additional criteria for eligibility that are commonly considered to stifle the growth of the hydrogen industry, including the renewable energy and renewable technologies required. With the HPTI the Australian Government can reclaim some of the attention and investment dollars that shifted from here to the US.

We note that the proposed incentive may not be indexed for inflation, and strongly recommend that the Australian Government reconsiders this decision. It is the industry standard for electricity power purchase agreements (PPAs) to be indexed to inflation or CPI; not indexing the HPTI would be inconsistent with industry standards and expectations. A lack of inflation adjustment for the HPTI means the real value of the tax offset will have declined more than 10 per cent by the time the HPTI comes into effect, and by around a third by the time it expires (based on Commonwealth Budget 2024-25 CPI inflation forecasts).

2. Please provide any feedback on the proposed eligibility criteria.

The HPTI is an uncapped incentive, meaning that any and all projects that meet the eligibility criteria will receive the \$2/kg of hydrogen over the specified timeframes, and any one project can receive as much or as little as the hydrogen it produces. This design feature has been welcomed by both industry and the AHC.

Regarding the eligibility criteria, we understand the Australian Government's desire to focus on large scale projects, and to tighten project delivery as much as possible. We suggest that lessons already learned in hydrogen have shown that greater flexibility is required at this stage, such as for:

- **Timing:** We note that the proposed subsidy is proposed for only ten years, rather than for fifteen, which would be in line with the support provided by other nations as well as the expectations of industry and lenders.

As discussed in our response to question 4, the AHC strongly urges an extension of the end date for the HPTI to 30 June 2045, in order to enable the long lead times required by projects and in recognition of the difficulties in securing workforce for project delivery.

Further, the FID requirement may not be strictly necessary. The HPTI could be silent on this requirement and simply note that support is limited to ten years for production after 1 July 2027 and no later than 30 June 2045 (noting we have used our proposed end date), meaning that it would be up to individual proponents to expedite decision making processes and proceed to construction as soon as possible.

- **Size:** As discussed below in our response to question 9, we believe that the HPTI should in principle be available to all projects – that is, not limited to use or size. There will be a need to demonstrate capacity and seriousness of intent of course, so as to maintain legitimacy of the initiative and not reflect an unnecessary administrative burden for the government. This may mean a minimum size is required; we have suggested 1 MW rather than the 10MW proposed.

A 1 MW size limit may, in fact, be necessary to incentivise investment in domestic decarbonisation opportunities. If these smaller projects are excluded, it is likely they will be considered less attractive as investment propositions and will find it increasingly difficult to attract private capital, with the flow on impact on regional and domestic decarbonisation efforts.

- **Commercial structures:** The eligibility criteria related to eligible entities requires clarification. The commercial structures for project delivery are quite varied, with a range of domestic and international investors often included in joint venture or SPV arrangements. In some instances, government-owned or backed entities are also equity holders (domestic Australian government as well as international). We would suggest that this definition be entity-agnostic, thereby extending eligibility to companies, trusts, and partnerships. Such an inclusive approach will significantly enhance the effectiveness of the incentive by ensuring that the type of holding vehicle does not impede the achievement of the HPTI's objectives.

The complexity of structuring should be reflected in the eligibility criteria, with members also seeking clarification around the transferability of the tax incentive benefits within and between the commercial partners. This is important to clarify as it will have implications for investors into Australian backed projects.

- **Carbon emissions maximum:** As discussed below in our response to question 7, there may be benefit in starting with a slightly higher carbon emissions level than 0.6kg of CO₂e per kg of hydrogen to get grid-connected projects up in the medium term, particularly if the minimum size eligibility is reduced to 1MW.

3. What key factors would need to be accounted for in a definition of an eligible facility for the purposes of the HPTI?

We suggest that there will be a need to address multiple sites within a specified region, and the AHC supports the definition utilised in the Hydrogen Headstart process to date. This will provide for facilities that have had to spread beyond one specific site due to land use constraints but are demonstrably within the same industrial or operational zone.

4. What key factors would need to be accounted for in a definition of Final Investment Decision (FID) for the purposes of the HPTI?

5. How long do you expect it will take for projects to reach first production following FID?

We have combined our responses on these matters because the timing of the HPTI as a whole needs to be addressed.

We have received feedback from numerous members that, at a minimum, detailed procurement, construction and commissioning cannot occur in less than 48 months:

- The delivery time for long lead items such as electrolyzers is currently 12 to 14 months, with other balance of plant equipment sometimes experiencing similar time delays.
- Local labour to deliver the project is often a rate limiting factor for projects in regional and remote locations.
- Construction timelines are varied, depending on the size of the facility and very often on the ability to secure workforce.
- Projects are often dependent on the timelines of other projects (for example, power generation projects or upgrades to infrastructure such as ports) which impact their ability to proceed to production.

These problems will only be exacerbated with the scale to come, including the broader build out of renewables for the energy transition.

As a result, the AHC strongly urges an extension of the end date for the HPTI to 30 June 2045, to enable the long lead times required by projects and in recognition of the difficulties in securing workforce for project delivery. This would be a sensible amendment that will maximise the number of projects built and producing hydrogen.

On the matter of FID, it will be challenging to come to an objective definition of FID that will be of value to the HPTI process. It may be possible to agree upon a checklist of minimum requirements aligned with the requirements by bodies such as ARENA via the Hydrogen Headstart criteria for final investment, the CEFC, NAIF, or EFA. However, the execution or implementation of processes associated with FID vary across companies, boards and investors. If an FID approach is chosen, we recommend that it is tested and agreed with public and private lenders as being a sensible minimum standard.

In our view, there is merit in reconsidering the eligibility criterion on FID. For example, rather than specifying a deadline for FID (which is an intention to proceed) the criterion could instead note that any facility which begins production no later than 30 June 2034 is eligible to receive the incentive until 30 June 2040 (or 2045 if our recommended end date is accepted). The incentives for early mover projects should remain, with the current proposed dates on 1 July 2027 providing significant incentive to projects currently under development to proceed at pace. This change in the eligibility criteria is aligned with the intent and objectives of the HPTI, which is to bring forward project development, make renewable hydrogen available sooner, and build scale to reduce production costs over time.

In fact, there is an argument to be made for not having this criterion at all; the HPTI could be silent on this requirement and simply note that support is limited to ten years for production after 1 July 2027 and no later than 30 June 2040 (or 2045 if our recommended end date is accepted). This would mean it is up to individual proponents to expedite decision making processes and proceed to construction as soon as possible.

6. For foreign investors, do you currently encounter any impediments to investment in projects that would be eligible?

The AHC consultations undertaken with international investors has not seen investors raise specific issues beyond those already listed regarding the eligibility criteria.

7. Please provide any feedback on the proposed emissions intensity threshold of 0.6kg of carbon dioxide equivalent up to the production gate.

As shown in Table 1, the \$2/kg of hydrogen under the HPTI equates (approximately) to the US\$1/kg subsidy proposed under the IRA for emissions between 0.45 and 1.45kg of CO₂e. Given currency exchange, the Australian figure is slightly more generous than the US for projects above 0.45kg CO₂e (to the 0.6kg CO₂e threshold). The Australian figure is then less competitive for very low emissions hydrogen and obviously there is no support at all where emissions are higher than 0.6kg CO₂e.

Lifecycle GHG emissions rate per kg of produced hydrogen	Tax credit amount	Full credit amount (assuming labor requirements are met)
2.5 - 4kg of CO ₂ e	\$0.12	\$0.60
1.5 - 2.5 kg of CO ₂ e	\$0.15	\$0.75
0.45 - 1.5kg of CO ₂ e	\$0.20	\$1.00
0 - 0.45kg of CO ₂ e	\$0.60	\$3.00

Table 1: US IRA carbon emissions maxima

We recognise that this is a renewable hydrogen initiative and a higher emissions intensity to account for non-renewable hydrogen is not contemplated in the policy. We note that this may limit Australia's competitive value in importing markets which are currently open to higher emissions hydrogen.

Even for hydrogen projects using electrolysis, there may be benefit in starting with a slightly higher carbon emissions level so that grid-connected projects can get up in the medium term and progress the industry to scale.

It should be noted that not all members were aligned with this view, with some developers of green hydrogen projects confident that they could meet the 0.6kg threshold.

One of the AHC members has provided feedback from a feasibility study, suggesting that the extra LGC/REGO procurement costs that may be required to comply with the proposed carbon intensity threshold could be up to \$0.75/kg-H₂ (subject to the future LGC/REGO price and grid emissions intensity at the time the project comes online), with a proportion of the \$2/kg tax incentive used in achieving the carbon intensity threshold.

8. Other than electrolysis, what production processes would meet this emissions intensity threshold now or before 2030?

This question is somewhat unclear in its intent, given that the GO scheme and the HPTI as proposed allow green hydrogen projects to purchase offsets to meet the threshold. As a principle, the projects that comply with the GO scheme and meet the intensity threshold should also be eligible for the HPTI. If there is any internal inconsistency between the two schemes (for example, to prohibit certain methods of production) they should be resolved and clearly stated in the legislation.

In terms of emerging technologies that may be competitive, pyrolytic technologies (e.g. Hazer) compliant with the GO scheme could theoretically comply with the requirement, as might technologies utilising supercritical water (e.g. Licella) or emerging technologies utilising microwave plasma torch gasification (e.g. Green Science) or ENEOS's proprietary solar to MCH technology which does not require electrolysis, alongside many other processes currently under investigation or development.

We note that natural hydrogen may also meet the threshold and should be allowed for within the HPTI.

9. Please provide feedback on the proposed minimum capacity requirement (equivalent to 10 MW electrolyser)?

As discussed above, we believe that the HPTI should in principle be available to all projects – that is, not limited to use or size. There will be a need to demonstrate capacity and seriousness of intent of course, so as to maintain legitimacy of the initiative and not reflect an unnecessary administrative burden for the government. This may mean a minimum size is required; we suggest 1 MW rather than the 10MW proposed.

Small, distributed production of hydrogen for local or single facility use (including for heavy vehicle refuelling) is a model of development that the industry has been trying to get off the ground for several years, largely in the absence of any demand stimulus measures or tax incentives. The eligibility criteria for the HPTI largely locks these smaller (less than 10MW) projects out, even though they reflect important decarbonisation opportunities. Decentralised projects such as diesel replacements for electricity generation for remote communities, or refuelling for heavy freight transport, will provide opportunity to develop experience and capability and may even support future scalability. In other cases, smaller projects can support key mid-sized industries, such as farm operations and food processing.

A 1 MW size limit may, in fact, be necessary to incentivise investment in domestic decarbonisation opportunities. If these smaller projects be excluded, it is likely they will be considered less attractive as investment propositions and will find it increasingly difficult to attract private capital, with the flow on impact on regional and domestic decarbonisation efforts.

Consideration could also be given to expanding the eligibility criteria that requires eligible facilities to be on a single site, for example if several refuelling stations were part of one consortium delivering projects across multiple sites, this would enable a broader range of projects and users to build scale and demand for hydrogen and derivatives.

If the Australian Government is not open to expanding the eligibility criteria to include these projects, greater clarity will be needed around the funding support available to regional communities, small industrial clusters and refuelling networks to continue to invest in hydrogen and derivatives.

10. For renewable production processes other than electrolysis, is using the minimum capacity requirement of “equivalent to a 10MW electrolyser” appropriate? Is another definition of capacity required to deal with other production pathways?

Setting minimum capacity requirements using electrolyser output as a de facto measure has raised queries from some AHC members, largely due to concerns that factors such as daily or annual utilisation rates and differing efficiencies may lead to the definition then being unclear as an eligibility criterion. Consideration could be given to adopting a minimum expected hydrogen production volume as a capacity criterion, to enable flexibility in the HPTI design to capture other emerging technologies.

We also note that, in line with our recommendations throughout this paper, we would advocate for a decreased minimum capacity in line with the 1MW minimum capacity presented in questions 2 and 9.

11. Should grid connected electrolyser projects be required to match their hydrogen production with electricity generated by the same electricity grid? Please provide feedback on this proposal.

This requirement seems fair in principle, but we note that demonstrating compliance may add unnecessary administrative burden. It would need to be built into the GO Scheme – which we note permits the surrender of Renewable Energy Guarantees of Origin (REGOs) generated from any grid within Australia – and would already be covered via other compliance mechanisms, such as through developmental and environmental approvals.

12. Please provide feedback on the proposal to not include additional requirements on renewable energy generation for access to the incentive, such as additionality and hourly time-matching with hydrogen production.

We agree with the proposal to not include additional requirements on renewable energy generation for access to the incentive, such as additionality and hourly time-matching with hydrogen production. These will only further stifle industry development, which is counter to the intent of the HPTI.

We have seen other jurisdictions grappling with how to incentivise the hydrogen industry without placing broader energy system decarbonisation in jeopardy. For example, in the EU the requirement for additionality was increasing costs and halting hydrogen progress. This has instead been staged so that facilities constructed prior to 2028 are exempt from additionality until 2038.¹

The Australian Government could also consider a requirement for additionality to be phased in post the ten years covered by the HPTI, when significant additional generation and storage will have already been added to the grid.

13. Please provide any feedback on the proposed administrative approach.

It is proposed that the HPTI be co-administered by the ATO and DCCEEW, with verification of hydrogen production volumes, associated emissions intensity, production pathway and energy source occurring through the GO scheme. Producers will be required to register their facility with the Clean Energy Regulator (CER) using a production profile. This profile will capture information relating to the facility including general information (including the site capacity) and information to calculate the emissions intensity of hydrogen from the facility.

In effect, the model proposed operates in a similar manner to the R&D tax incentive: verification of a process via an independent expert, with the ATO then able to administer payment. The approach seems sensible and has the potential to minimise administrative double handling (that is, if the CER

¹ Hydrogen Europe (2024) 'A changing political landscape', *The Hydrogen Europe Quarterly*, Issue Q1 2024, https://hydrogeneurope.eu/wp-content/uploads/2024/03/The-Hydrogen-Europe-Quarterly_6_24DIGITAL_FINAL.pdf.

is administering RE GO and the GO scheme, as well as this process). We note the R&D tax incentive provides for external audits to confirm ongoing eligibility for the scheme and suggest that this may be a useful approach for the HPTI.

14. The proposed GO scheme will be used to support the registration and verification of hydrogen production. Are there any additional factors that would need to be accounted for in the proposed design of that scheme?

It is important that Treasury and the Clean Energy Regulator ensure that the timing and sequencing for the GO Scheme aligns with the legislation of the HPTI, so project developers are able to factor in the rules and requirements for the GO Scheme into project decision making, including FID.

Specifically, members raised the following issues about the GO Scheme design:

- Addition of new production pathways is required, as they approach commercial readiness (that is, progress up the TRL to commercial readiness). This will ensure that there is a pathway for investment and incorporation of new technology into project design, if it meets the desired emission intensity.
- Considering different commercial structures that may be used for large-scale projects, if a GO Producer Profile registration is necessary for entities to be eligible to claim the tax offset then multiple GO Producer Profiles may be necessary for a single facility.
- The potential for a timing discrepancy between tax declarations and the surrender of Renewable Energy Guarantees of Origin (REGOs). To address this, the scheme should offer adequate flexibility to allow for the retrospective surrender of REGOs to meet carbon intensity requirements.

15. The Government may legislate the administrative arrangements in subordinate legislation. Please provide any feedback on this proposed approach.

If the intention of this approach is to expedite the establishment of the scheme and provide greater flexibility in making any technical amendments that arise as the scheme roles out, then this is a good proposal.

16. What obligations should be imposed on potential recipients of the HPTI to ensure the community benefit principles are met?

17. What obligations are potential recipients of the HPTI currently subject to that might support the community benefit objectives (noting these will be finalised under the Future Made in Australia Act)?

18. Are there any additional objectives that you consider important? What obligations might support these?

19. Recipients of the HPTI may be subject to additional transparency and disclosure requirements in order to be eligible. What kind of requirements are appropriate? What are the key practical considerations to take into account when setting the requirements?

The community benefit principles are set out in the *Future Made in Australia Bill 2024*, are:

- (a) that Future Made in Australia support should provide community benefits, in particular by:*
- (i) promoting safe and secure jobs that are well paid and have good conditions; and*
 - (ii) developing more skilled and inclusive workforces, including by investing in training and skills development and broadening opportunities for workforce participation; and*
 - (iii) engaging collaboratively with and achieving positive outcomes for local communities, such as First Nations communities and communities directly affected by the transition to net zero; and*
 - (iv) strengthening domestic industrial capabilities, including through stronger local supply chains; and*
 - (v) demonstrating transparency and compliance in relation to the management of tax affairs, including benefits received under Future Made in Australia supports; and*
- (b) any other principles specified in the rules for the purposes of this paragraph.*

Noting that these principles are still under development, we recognise that they are reflective of the Australian Government's vision for transforming the Australian economy. The HPTI and other funding legislation that arises from the FMIA Act will look to hold recipients of significant funding accountable to the community by aligning corporate activity with an expected set of benefits and principles.

We are supportive of the principles and look forward to further consultations. Regarding additional obligations that could be imposed upon recipients, we would urge consolidation – and potentially a reworking or expanded focus – of existing obligations to ensure they align with the FMIA, rather than the imposition of a requirement for a new set of plans to be developed. For example, the Industry Participation Plans required when participants receive Australian Government funding, alongside the Environmental Management Plans, the Stakeholder Management Plans and the Cultural Heritage Management Plans, could and should be reviewed in light of the development of the Community Benefit Principles.

Specifically, the proposed principles could be amended or extended as follows:

- **Promoting safe and secure jobs:** in the Australian context, this would require compliance with wages, conditions and obligations under existing legislation.
- **Developing skilled and inclusive workforces:** Industry Participation Plans are an appropriate avenue to progress these targets.
- **Collaborative engagement with local communities:** The focus of Stakeholder Management Plans could be extended to ensure communities are able to influence project scope.
- **Engagement with Indigenous communities:** This is an area requiring significant reform, however there are moves underway by the Australian Government to strengthen the capacity of Indigenous communities to influence the trajectories of projects on country.

- **Strengthened domestic industrial capabilities:** Industry Participation Plans, the Industry Capability Network, and initiatives such as domestic reservation policies for hydrogen and derivatives (that would flow down to increased domestic utilisation) could all be considered under this principle.

20. How should entities proposing to claim the HPTI be required to demonstrate compliance with tax obligations?

The AHC acknowledges that, in line with other transparency reforms undertaken by the Australian Government, only good corporate tax citizens should be able to access the HPTI, and we support the implementation of processes that demonstrate compliance with tax obligations and transparency/disclosure reporting requirements.

21. What information do you consider important for the community that should be reported publicly on the recipients of the HPTI such as the amount of credit received?

22. Who should the reporting requirements be imposed on? For example, on the recipient entity, or central reporting through a regulator?

If the Australian Government intention is for the HPTI regime to operate in a similar manner to the R&D Tax Incentive, the ATO is now required to publish information each year about R&D entities and the R&D expenditure they have claimed. We welcome the public disclosure of the recipients of the HPTI and amount of credit each has received, as part of Treasury's annual corporate tax transparency reports, and call for consistency in the application of this requirement to other tax incentives and grants and grant-giving bodies report aggregated data, for example fuel tax credits.

23. Please provide feedback on the proposed treatment of the interactions between the HPTI and other forms of Commonwealth, State or foreign government support.

24. How can the HPTI best leverage other types of support? Please provide examples relevant to your project if possible.

It is appropriate that projects be able to claim multiple forms of support, across all relevant end uses, and across all regional, state, territory and national boundaries. We are pleased to note that the Australian Government is considering support models for particular end uses, such as for green metals and low carbon liquid fuels. We support these demand side initiatives and see them as being matched with the HPTI to simultaneously support demand and supply for priority industries. It is imperative that the different initiatives can work together for those projects that are eligible.

25. What are the key practical considerations with receiving support through the HPTI and the Hydrogen Headstart program simultaneously?

26. Are there specific interactions with other support programs that should be considered?

As above, it is vital that the different initiatives can work together for those projects that are eligible.