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4 July 2025

Ministry of Business, Innovation and Employment (MBIE)

via e-mail: resourcepolicy@mbie.govt.nz

Submission on Regulatory proposals for natural and orange hydrogen development

Introduction

1. Energy Resources Aotearoa is New Zealand's peak energy sector advocacy organisation. We represent participants from across the energy system, providing a strategic sector perspective on energy issues and their adjacent portfolios. We enable constructive collaboration to bring coherence across the energy sector through and beyond New Zealand's journey to net-zero carbon emissions by 2050.

2. This document constitutes our submission on the MBIE discussion document entitled 'Regulatory proposals for natural and orange hydrogen development', dated May 2025. We provide our views on hydrogen and how it might contribute to the energy system, and our preferences in terms of the options for legislative regulatory vehicles, being the Crown Minerals Act 1991 (the 'CMA') combined with clarifying the Crown ownership of natural hydrogen.

3. The submission as drafted addresses most of the questions posed in the discussion document, but we have also completed the 'Consultation questions' (see **Appendix One**) by cutting and pasting relevant parts of our submission.

Key messages

4. Energy Resources Aotearoa's key messages for officials are:

   a we agree that an enabling regulatory environment is needed for the uptake of new low-emission fuels such as hydrogen. The appropriate legislative framework and regulatory tools will best support the growth of a competitive domestic (and even possibly an export) hydrogen market;

b hydrogen is best regulated under the CMA, the primary legislative mechanism used to regulate all Crown-owned minerals, being treated in a similar way to petroleum under the CMA, with the Crown owning all of it wherever it occurs (with variations to the regulatory settings to account for its unique features and emerging market);

c as a nascent resource with potential, it should be regulated now, with the establishment of its appropriate framework in its entirety and with urgency; and

d other options for regulating hydrogen do not meet the objectives for the new regime:

i. using current resource management legislation risks the regime becoming bogged down and endlessly delayed in the reform process at worst and, at best, the resource being managed regionally by councils without strategic oversight from central government; or

ii. a bespoke regime could provide national management and allocation of the resource but is likely to take a long time to just replicate key parts of the CMA.

Submission

Our views on hydrogen and its role in the energy system

5. Our view is that a diverse, well-functioning energy sector is essential for New Zealand's wealth and well-being.

6. We support developing and bringing to market new energy vectors such as hydrogen.[1] A resilient energy system must provide energy vectors and choices to suit different needs, and hydrogen should be one of those, along with natural gas. It is even better if we can deliver that variety by making efficient use of the abundant natural resources that we have, including natural and orange hydrogen.

7. The development of hydrogen is commercially challenging[2], but it seems to have some potential in supporting parts of the economy to move to lower emissions, particularly the heavy vehicle fleet. It also has industrial applications and could replace or supplement coal in some processes in hard to abate industries, such as steel making, though the technology is still developing in many areas.

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[1] While hydrogen is often referred to as a clean energy source, it is more accurately described as an energy vector, or carrier. It's not a primary energy source like solar or wind, but rather a substance that can store and transport energy.

[2] As evidenced by Liebreich's 'Hydrogen Ladder' – see https://www.liebreich.com/hydrogen-ladder-version-5-0/.

8. The discussion document seems to acknowledge the limited role that natural and orange hydrogen will likely have in the future energy system. It reports modelling that indicates demand for these forms of hydrogen is only expected to slightly more than double or, at most, increase fourfold from current levels (from 0.25 megatons (Mt) now to between 0.64 and 1.20 Mt) over the next 25 years to 2050, but this may change if the price becomes competitive, technology advances and supply is reliable and abundant.

9. In our view, an enabling regulatory environment is needed for the uptake of new technologies and low-emission fuels such as hydrogen. We therefore strongly support the development of an effective regulatory regime to support the growth of a domestic hydrogen sector. It should not, however, be given favourable or preferential treatment, as regulatory settings should be neutral and agnostic in terms of energy sources. If they are not, this disrupts the optimal functioning of the market leading to distortions and inefficient resource allocations that can hinder competition.

10. The question then arises as to what is the best way is to achieve this effective regulatory regime, and this is the focus of this consultation. In preparing our submission and formulating our views on the options, we have borne in mind the Government's objective of wanting to get a regime up and running and hydrogen to market as quickly as possible.

11. It should be noted that under any of the regulatory options discussed all exploration, prospecting and mining related activities for hydrogen will still require consents, possible land access arrangements and approvals under other regimes that regulate the sector such as health, safety and environment.

Policy objectives

12. Two objectives have been identified as being important in the development of this regime – 'investment certainty' and 'efficient market outcomes'. We support these objectives but suggest that they be adjusted slightly.

13. Firstly, it is impossible for government to create investment 'certainty', and it should not strive to do this. Businesses are set up to mitigate risks and manage investment uncertainty to their benefit, but it cannot be eliminated. What businesses need from government is predictability - clear and durable market settings to operate within, which will give them the confidence to invest and within which they will mitigate the risks faced. The objective should therefore be reframed as 'investment predictability'.

14. In light of the above commentary on fuel agnosticism, we would also suggest that the second objective on market efficiency is supplemented by explicitly stating that the settings should 'not be preferential and ensure equality of treatment'. Adding this to the assessment of the options should ensure that hydrogen, and

its role in the energy system, are considered equally alongside other forms of energy such as natural gas.

Option one: Include hydrogen in the definition of a mineral to regulate it as a mineral under the CMA

15. In our view, there are two sub-options within this option:

    a Crown ownership of all hydrogen wherever it occurs, treating it in a similar way to petroleum;

    OR

    b determining the ownership of hydrogen on a case-by-case basis, largely depending on the ownership of the land under which it is found.

Why the CMA is most appropriate for regulating hydrogen

16. The CMA is the primary legislative mechanism used to regulate all Crown-owned minerals that can be used for energy, including petroleum and coal. It provides a framework for allocating rights to the resources,[3] collecting royalties and ensuring decommissioning is completed to industry standards. It is an effective and well understood and tested regime that has been used to regulate petroleum for decades.

17. The CMA would therefore seem to be the natural choice for regulating hydrogen as it has similar properties and uses to natural gas and is likely to be found in similar geology in a natural state. Some adjustments would be required to accommodate hydrogen, but much of this could be done through regulation.

18. As noted in the discussion document, other jurisdictions have taken the approach of regulating natural hydrogen in a similar way to petroleum. This would not mean that all the regulatory settings, such as royalty rates or applications fees, would have to be the same as for petroleum. In the early days of the petroleum industry here lower rates were offered to stimulate interest and investment with a view to increasing them over time as the industry matured, and this could be done for hydrogen as well.

The complicating issue of ownership

19. The CMA requires the ownership of a mineral to be determined. There are four minerals that have over time been deemed to be Crown owned irrespective of where they occur – gold, silver, uranium and petroleum. These are often called 'statutory Crown minerals' and have a legacy of historical and legal precedents,

[3] We see the CMA as a rights allocation regime, but not a 'permission to extract' regime, as that it rightfully done under other legislative regimes such as the Resource Management Act.

including the Royal Prerogative and subsequent legislation like the Petroleum Act 1937 and Land Act 1948. For other minerals, interests can vary depending on the ownership of the land it is found on or under, or if the Crown has other rights in the minerals under private land (e.g., coal).

20. As noted in the discussion document, there are problems with trying to determine the ownership of hydrogen if it is not a 'statutory Crown-mineral'. A reservoir of hydrogen can sit under many properties and be accessed by all of them separately. Unlike minerals that are in a solid state, hydrogen can migrate and move within the reservoir. It could therefore be accessed and depleted by any of the landowners. To address this issue, countries that have not nationalised hydrogen have developed a mechanism called the 'rule of capture', which allows any landowner to extract and claim equal ownership of a resource that flows from a common reservoir beneath their land. This does not encourage sustainable management of the resource and can lead to exploitation and overuse.

21. There is a clear statement in the discussion document that nationalisation of hydrogen is not being considered (see page 5). There is no rationale as to why and no justifications seem to be offered in either the *Hydrogen Action Plan* or *Minerals Strategy and Critical Minerals List*.

22. We can only speculate that this decision has arisen due to Treaty related or other wider ownership debates. In our view, this risk should not dictate the policy choice of the most appropriate regulatory regime and other concerns (much like the use of the Resource Management Act to regulate permission) should be addressed through the relevant legislative or other framework.[4]

23. Dealing with these ownership issues up front may (or may not) delay the development of the regime but it will prevent problems down the track that could be more disruptive to the commercialisation of hydrogen and will deliver a better and more effective regulatory regime.

Summary

24. We think hydrogen is best regulated under the CMA and favour clarifying ownership. In our view, this option best satisfies the objectives that have been set of providing investment predictability and ensuring hydrogen can be developed and brought to market efficiently and effectively.

Phasing

25. The discussion document suggests a possible phased approach to the development of a regime under the CMA. If government resources are limited,

[4] Indeed, there are already known ways of dealing with these issues and precedent for resource sharing arrangements. For example, via Treaty of Waitangi settlements and other Crown decisions such as the granting a share of commercial fishing quota and assets.

this could make sense, focussing on the early stages of the production life cycle of prospecting and exploration as suggested in the discussion document.

26. The risk of this approach is that it may take many years for the later phases of the project to be prioritised, including getting time in the House. This may ultimately delay the development of the hydrogen sector. On that basis, we support development of the regime as a whole, with phasing only considered as a last resort.

Option two: Exclude hydrogen in the definition of a mineral under the CMA and regulate it as a non-mineral natural resource

27. Under this option, hydrogen would be solely regulated under environmental and health and safety regimes. There also appear to be two potential sub-options:

    a primarily using the Resource Management Act 1991 (RMA);

    OR

    b developing a bespoke allocation regime for hydrogen.

28. In our view, regulating hydrogen under the RMA (or whatever replaces it) would be fraught with difficulties, particularly as that legislation and regime is being overhauled at the moment and this process will take years to unfold, as various interests test its operation through the Courts.

29. We believe that it could potentially become mired down in the implementation uncertainties related to the bedding in of a totally new resource management regime, with the regulation of hydrogen becoming collateral damage and being derailed and endlessly delayed. Even if that were not the case, we could end up with some of the same problems that have emerged with the regulation of geothermal energy under resource management legislation. The principal problem that we see is that the geothermal resource is being managed regionally by councils without strategic oversight from central government.

30. Creating an entirely new allocation regime outside of the RMA would also be a lengthy and complicated process. As we have seen with offshore energy, these supposedly bespoke regimes also invariably end up replicating key elements of the CMA. However, at least doing this would provide a basis for national management and allocation of the resource and getting a financial return to the Crown (e.g., through royalties).

Concluding comments

31. We consider that the CMA is the best legislative framework for regulating hydrogen and recommend that ownership be clarified by making it a statutory mineral. The settings for hydrogen could be tailored and work to bring hydrogen

under the CMA could be phased over time if it is absolutely necessary, though this may actually end up delaying the commercialisation of the resource.

32. This preferred approach does not prevent other interests from being determined and catered for. There will be an upfront investment of time and effort in doing this, but we think that it will deliver the best outcome in the long run.

33. The next best options in order of preference would be:

    a regulating under the CMA but not nationalising hydrogen; then

    b developing a bespoke regime for hydrogen; and finally

    c regulating it under the RMA.

34. We do not have any other suggestions of other ways of regulating hydrogen.

35. We look forward to discussing this submission with you.

Appendix One: Consultation Questions

Policy objectives
(please see pages 12-13 of the discussion document for further information about this)

1. Do you agree that the objectives outlined in the discussion document are the most important objectives for a hydrogen regulatory regime? Are there other objectives that we should explore?

☐ Yes, I agree ☒ No, I do not agree ☐ Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

The 'investment certainty' objective should be reframed as 'investment predictability'.

The second objective on market efficiency should be is supplemented by explicitly stating that the settings should 'not be preferential and ensure equality of treatment'.

(see paragraphs 12-14 of our submission for further details)

Hydrogen as a mineral under the Crown Minerals Act 1991 (CMA)
(please see pages 14-16 of the discussion document for further information about this)

2. Do you support regulating natural and orange hydrogen as a mineral?
☒ Yes, I support regulating natural and orange hydrogen as a mineral
☐ No, I do not support regulating natural and orange hydrogen as a mineral

☐ Not sure/no preference

Please explain.

We consider that the CMA is the best legislative framework for regulating hydrogen and recommend that ownership be clarified by making it a statutory mineral.

(see paragraphs 16-18 of our submission for further details)

3. What do you consider to be the advantages and disadvantages of this approach (regulating natural and orange hydrogen as mineral)?
Please explain.

The CMA provides a framework for allocating resources, collecting royalties and ensuring decommissioning is completed to industry standards. It is an effective and well understood and tested regime that has been used to regulate petroleum for decades.

(see paragraphs 16-18 of our submission for further details)

4. Do you see any unintended consequence or risks with the "rule of capture" and how it may work in practice? Please explain your answer and how these risks could be mitigated.
(please see page 15 of the discussion document for further information about the "rule of capture")
Please explain.

Yes. It does not encourage sustainable management of the resource and can lead to exploitation and overuse.

(see paragraph 20 of our submission for further details)

5. What CMA requirements should apply (e.g. non-petroleum mineral requirements, petroleum requirements, or something bespoke)?

Please explain.

Some adjustments would be required to accommodate hydrogen in the CMA regime, but much of this could be done through regulation. This would not mean that all the regulatory settings, such as royalty rates or applications fees, would have to be the same as for petroleum.

(see paragraph 18 of our submission for further details)

6. What are your views on phasing the regulatory requirements for hydrogen under the CMA (e.g. focusing on prospecting/exploration permitting first)?

Please explain

This could be done if government resources are limited. The risk of this approach is that it may take many years for the later phases of the project to be prioritised, including getting time in the House. On that basis, it would be preferable to develop the regime as a whole and phasing should only be considered as a last resort which may further delay commercialization of the resource.

(see paragraphs 25-26 of our submission for further details)

Hydrogen as a non-mineral natural resource
(please see pages 16-18 of the discussion document for further information about this)

7. Do you support regulating natural and orange hydrogen as a non-mineral natural resource outside of the CMA?
☐ Yes, I support regulating natural and orange hydrogen as a non-mineral natural resource outside of the CMA.
☒ No, I do support regulating natural and orange hydrogen as a non-mineral natural resource outside of the CMA.
☐ Not sure/no preference

Please explain.

We consider that the CMA is the best legislative framework for regulating hydrogen and recommend that ownership be clarified by making it a statutory mineral.

(see paragraphs 16-18 of our submission for further details)

8. What do you consider to be the advantages and disadvantages of this approach (regulating natural and orange hydrogen as a non-mineral natural resource outside of the CMA)?
Please explain.

We believe that hydrogen could potentially become mired down in the implementation uncertainties related to the bedding in of a totally new resource management regime, with the regulation of hydrogen becoming collateral damage and being derailed and endlessly delayed. Even if not, we consider it would be problematic managing the resource regionally by councils without strategic oversight from central government. Bespoke regimes take time to develop and generally replicate the CMA anyway.

(see paragraphs 28-30 of our submission for further details)

9. Do you consider the Resource Management Act 1991 (RMA) is an appropriate tool to allocate and manage natural and orange hydrogen resources? If not, why not?
Please explain.

No. Regulating hydrogen under the RMA (or whatever replaces it) would be fraught with difficulties, particularly as that legislation and regime is being overhauled at the moment and this process will take years to unfold. Even if that were not the case, we could end up with some of the same problems that have emerged with the regulation of geothermal energy under resource management legislation. The principal problem that we see is that the geothermal resource is being managed regionally by councils without strategic oversight from central government.

(see paragraphs 28-30 of our submission for further details)

10. Do you prefer a bespoke regime over the RMA to allocate and manage natural and orange hydrogen resources?
Please explain.

Outside of the CMA, yes. Creating an entirely new allocation regime outside of the RMA would also be a lengthy and complicated process that would probably replicate parts of the CMA anyway. However, at least doing this would provide a basis for national management of the resource and getting a financial return to the Crown (e.g., through royalties).

(see paragraph 30 of our submission for further details)

Other questions

11. Do you consider either approach a barrier to natural or orange hydrogen development in New Zealand?
Please explain.

Option 2 would be a barrier (see earlier commentary).

12. Are there any other alternative regulatory approaches to develop natural or orange hydrogen in New Zealand?
Please explain.

We do not have any other suggestions of other ways of regulating hydrogen.

13. Do you have views on how Māori rights and interests should be reflected in the regime?
Please explain.

Under our preferred approach of regulating a nationalised hydrogen under the CMA, Māori could be granted a portion of the resource, either through royalty sharing or setting aside some permitted areas for Māori interests. There will be an upfront investment of time and effort in doing this, but we think that it will deliver the best outcome in the long run.

(see paragraphs 22-23 of our submission for further details)