Submission on the Kapuni Green Hydrogen Fast-Track Application

Greenpeace Aotearoa, Inc
Environmental Defence Society, Inc
The Royal Forest & Bird Protection Society of New Zealand, Inc

Introduction

This is the joint submission of Greenpeace Aotearoa, the Environmental Defence Society and Forest & Bird (**the organisations**) on the application by Hiringa Energy Limited and Ballance Agri-Nutrients Limited for the Kapuni Green Hydrogen Project under the COVID-19 Recovery (Fast-track Consenting) Act 2020.

We welcome the opportunity to submit on this application, given the impact the proposed project would have on the climate and biodiversity. Addressing the existential crisis of climate change has never been more urgent. Climate change is already taking lives and damaging health, homes, food security, culture and livelihoods. It is already accelerating the extinction of the wildlife and wild places with which we share this Earth. Poor and marginalised communities are already suffering the most, despite being the least responsible for causing this crisis. Government action, or inaction, over the next decade will determine the future for billions of people and the wildlife we share this planet with.

The organisations submit that this consent should be rejected on the grounds that its primary purpose is the production of urea that will worsen outcomes nationally for the climate; environment; coastal and freshwater quality; air quality; indigenous biodiversity; and the wellbeing of current and future generations. It will also undermine New Zealand's efforts to mitigate climate change and transition more quickly to a low-emissions economy (in terms of reducing New Zealand's net emissions of greenhouse gases); and weaken environmental, economic, and social resilience, in terms of managing the risks from natural hazards and the effects of climate change. Overall the project will have significant adverse environmental effects, including greenhouse gas emissions.

About the Organisations

Greenpeace Aotearoa, Inc

Greenpeace is a global, independent campaigning organisation that acts to protect and conserve the environment and to promote peace. Greenpeace is one of the world‘s largest and oldest environmental organisations, operating for half a century, since 1971, and now works in

more than 55 countries. The New Zealand branch of Greenpeace (Greenpeace Aotearoa) was founded in 1974 and has grown to represent 35,000 financial donors and many tens of thousands of supporters.

Our vision is a world where people and nature are thriving - where our homes, schools, business and transport are powered by clean energy from the sun, wind and water; where our food is grown in ways that regenerate the land, store carbon in the soil, clean up rivers and bring back wildlife; where both the ocean and native forests are rebounding and teeming with life. Our vision is an Aotearoa where our children, grandchildren and generations to come can grow up safe from the threat of climate change and live in a fairer society that truly honours Te Tiriti O Waitangi.

Environmental Defence Society, Inc

The Environmental Defence Society (EDS) is a not-for-profit, non-governmental environmental organisation. It was established in 1971 with the objective of bringing together the disciplines of law, science, and planning to promote better environmental outcomes in resource management. EDS organises the annual Climate Change and Business Conference (CCBC). The CCBC provides a forum for progressive business leaders to share their ideas and innovative responses to the challenges resulting from climate change. EDS has had an extensive involvement in advocating for good environmental outcomes for freshwater and biodiversity matters. Its CEO is a member of the Government's Freshwater Implementation Group.

The Royal Forest & Bird Protection Society of New Zealand, Inc

Forest & Bird is New Zealand's longest running independent conservation organisation. Its constitutional purpose is to take all reasonable steps within its power for the preservation and protection of the indigenous flora and fauna and the natural features of New Zealand.

Over generations Forest & Bird has helped make New Zealand a better place to live by standing with community to protect forests, lakes, and rivers from destruction, campaigning to create marine reserves and eco-sanctuaries, and working to save threatened species. Forest & Bird has worked for nearly a century on protecting nature for its values and rights but also the benefit of all of us who depend on land and water for our enjoyment, cultural identity, and survival.

Summary of recommendations

The organisations oppose the Kapuni Green Hydrogen Project.

The organisations consider that green hydrogen[1] is a possible solution for reducing greenhouse gas emissions and air pollution if it displaces petroleum-based fuels in heavy vehicles. However, it is clear from the consent application that the applicants do not envisage using the hydrogen for anything other than urea production for at least the first five years of the project.

The organisations do not support the development of green hydrogen as feedstock for the production of urea or any other synthetic nitrogen fertiliser. As is detailed further below, the use of synthetic nitrogen fertiliser in Aotearoa is directly responsible for more greenhouse gas emissions than the entire pre-Covid domestic aviation sector. Indirectly, synthetic nitrogen fertiliser is a key enabler of intensive dairying, which is the single largest source of greenhouse gas emissions in Aotearoa. Synthetic nitrogen fertiliser is also a major direct and indirect cause of freshwater pollution and biodiversity loss in Aotearoa. The production and use of synthetic nitrogen fertiliser should be phased out, not expanded. There is no justification for consenting the ongoing production of this harmful pollutant.

Given that the applicants intend to use 100% of the hydrogen produced for manufacturing urea for at least the first five years of the project, there are no grounds for fast-tracking this project. The EPA should reject the application and invite the applicants to re-submit at a time when they can demonstrate that the hydrogen will only be used for purposes that genuinely reduce emissions (e.g. heavy transport fuel).

How the hydrogen is used makes a difference

The organisations consider that green hydrogen is a possible option for displacing petroleum-based fuels in heavy vehicles. This could demonstrably reduce emissions from the transport sector.

However, we are concerned that the applicants intend primarily to use hydrogen as a feedstock for urea production. Indeed, it appears that the applicants intend to use the hydrogen produced through this project exclusively for manufacturing urea, at least in the short-term. In their Resource Consent Application and Assessment of Environmental Effects, the applicants state:

> *"Green hydrogen production is planned to transition from 100% urea to the transport market over a 5 year period as the fuel cell electric vehicles market increases, with the intention to increase electrolysis capacity once green urea production falls below a minimum threshold."* (p.36)

[1] Green hydrogen is defined as hydrogen produced by electrolysis, using renewable energy like wind, solar or hydroelectricity. The organisations do not support the use of brown/grey hydrogen (made from fossil fuels) or so-called "blue hydrogen", which is proposed to be made from fossil fuels but paired with carbon capture and storage.

Consideration of the end use of urea

The applicant advises that there will be an additional 7000 tonnes of urea produced by the project and that this will replace current imports.[2] This implies that there will be no net change in urea consumption. However, this is not made clear in the application. There is insufficient information from the applicant to establish the net change in urea consumption were consent to be granted.

If allowing the activity will increase domestic consumption of urea in Aotearoa, there is a nexus between the increased production, and therefore consumption, and the consequential adverse effects on greenhouse gas emissions and nitrogen pollution (as discussed further below).

The adverse effects of urea consumption on the environment are also reasonably foreseeable, and it is submitted that they should not be considered "too remote" or otherwise beyond the scope of consideration in this application.

As is explained further below, the construction of the original Kapuni urea plant had a demonstrable impact on urea consumption in Aotearoa New Zealand and, can therefore, be directly linked to increased climate and freshwater pollution.

Whether there will be a net increase in the use of urea in Aotearoa is in any event not relevant. If the product is to be used in the way described, it will have adverse environmental and climate related effects that mean the application, when tested against the provisions of the relevant legislation, should be refused.

We note that other stakeholders have also raised concerns about the applicants' intention to produce urea through this project. In their Resource Consent Application and Assessment of Environmental Effects, the applicants note that Ngāti Haua Hapū raised *"questions in relation to the ... use of urea".* (p.61)

Kapuni urea plant

In the 1980's the Muldoon Government approved the synthetic fertiliser factory at Kapuni, Taranaki as a way to guarantee a market for newly-discovered natural gas. Prior to Kapuni's construction, farming in New Zealand was almost entirely built on the use of clover to fix nitrogen. The construction of the Kapuni plant had a direct and profound effect on the way farming is done in New Zealand - shifting from the use of nitrogen-fixing plants towards synthetic nitrogen fertiliser.

Since the construction of Kapuni, synthetic fertiliser use has grown rapidly. New Zealand has had the highest rate of increase in synthetic nitrogen fertiliser use in the OECD.[3] Since 1991,

[2] "*The additional 7000 tonnes per annum of urea produced by the project with a value of approximately NZ$3M, will displace some of New Zealand's current urea imports"*, p 46 of the AEE
[3] OECD 2008 Environment Performance of Agriculture in OECD countries . Page 54 (Link)

the annual application of synthetic nitrogen has increased 629%, from 62,000 to 452,000 tonnes in 2019.[4]

Kapuni is a clear example of where Government-led infrastructure development has directly subsidised the escalation of pollution to freshwater and the climate. Given that the intention of the FTA is clearly to improve environmental outcomes and ensure a safe and stable climate for future generations, the EPA should be wary of enabling history to repeat itself.

It is clear from the application that the future of urea production at Kapuni is dependent on this consent. The applicants state that *"With uncertainty around future gas supplies, the Project will provide ongoing energy supply for the Plant [and]* ***help secure its operational future****."* (p.8) Given the aforementioned impacts, we should be phasing out the use of urea in Aotearoa New Zealand, not giving a new lease of life to a urea plant that has been responsible for severe freshwater degradation and greenhouse gas pollution.

Fast-Track Consenting Act

The FTA clearly outlines a preference for projects that will have a positive impact on the climate and the environment, as noted in the following articles (in bold) from its Purpose statement:

> ***19 Whether project helps to achieve purpose of Act***
> *In considering, for the purpose of section 18(2), whether a project will help to achieve the purpose of this Act, the Minister may have regard to the following matters, assessed at whatever level of detail the Minister considers appropriate:*
> - *(a) the project's economic benefits and costs for people or industries affected by COVID-19:*
> - *(b) the project's effect on the social and cultural* ***well-being of current and future generations:***
> - *(c) whether the project would be likely to progress faster by using the processes provided by this Act than would otherwise be the case:*
> - *(d) whether the project may result in a public benefit by, for example,—*
>   *(i) generating employment:*
>   *(ii) increasing housing supply:*
>   *(iii) contributing to well-functioning urban environments:*
>   *(iv) providing infrastructure in order to improve economic, employment, and* ***environmental outcomes****, and increase productivity:*
>   *(v)* ***improving environmental outcomes for coastal or freshwater quality, air quality, or indigenous biodiversity****:*
>   *(vi) minimising waste:*

[4] Stats NZ. "Fertilisers – nitrogen and phosphorus" (2021) Accessed August 2021 https://www.stats.govt.nz/indicators/fertilisers-nitrogen-and-phosphorus

(vii) ***contributing to New Zealand's efforts to mitigate climate change and transition more quickly to a low-emissions economy (in terms of reducing New Zealand's net emissions of greenhouse gases):***
(viii) promoting the protection of historic heritage:
(ix) ***strengthening environmental, economic, and social resilience, in terms of managing the risks from natural hazards and the effects of climate change:***

(e) whether there is potential for the project to have significant adverse environmental effects, including greenhouse gas emissions:

(f) any other matter that the Minister considers relevant.

As is outlined further below, permitting the use of green hydrogen for urea production would contribute to greenhouse gas emissions, freshwater degradation and biodiversity loss, which is inconsistent with the provisions of the FTA.

Zero Carbon Act

The purpose of the Climate Change Response (Zero Carbon) Act 2002 (**the ZCA**) is to facilitate the development of policies that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels.

Given that synthetic nitrogen fertiliser is both directly and indirectly responsible for increasing emissions, the ongoing production of urea proposed by the applicants is inconsistent with the Zero Carbon Act and New Zealand's commitments under the Paris Agreement.

Climate impacts of synthetic nitrogen fertiliser

In their Resource Consent Application and Assessment of Environmental Effects, the applicants state that *"Green hydrogen generated will produce up to 7000 tonnes of urea per year"* (p.39).

Urea is a form of synthetic nitrogen fertiliser. These fertilisers are a climate pollutant because they emit nitrous oxide and carbon dioxide when applied to land (known as direct emissions). Synthetic fertiliser's direct emissions have increased 512% since 1990. They are now greater than those from the entire domestic aviation industry.[5]

Synthetic nitrogen fertiliser also creates indirect climate emissions by enabling the intensification of agriculture, particularly dairying. This has in turn increased the methane and nitrous oxide emissions from the dairy herd. According to the Parliamentary Commissioner for the Environment (PCE): *"The increased use of urea fertiliser has, along with irrigation and supplementary feed, enabled higher stocking rates."*[6] Since 1990, methane emissions from dairy

[5] Ministry for the Environment 2020, New Zealand Greenhouse Gas Inventory 1990-2018. Page 41. (Link)
[6] PCE 2013: Water quality in New Zealand: Land use and nutrient pollution. Page 16. (Link)

cattle have increased 129%.[7] The dairy herd is now New Zealand's largest emitter, responsible for 22.9% of all domestic emissions.[8]

The agriculture sector as a whole is now responsible for 48% of New Zealand's emissions. Its emissions have increased 17% since 1990.[9] According to the Ministry for the Environment (MfE), this increase: *"is primarily due to an 85.6 per cent increase in the national dairy herd since 1990 and* ***an increase in the application of synthetic nitrogen fertiliser of 670 per cent*** *since 1990."*[10]

The Greenhouse Gas Inventory further states:

> *"The greatest contributions to the increase since 1990 are a 46.9 per cent (2,478.3 kt CO_2-e) increase in N_2O emissions from Agricultural soils and a 5.9 per cent (1,624.2 kt CO_2-e) increase in CH_4 emissions from Enteric fermentation. The application of synthetic nitrogen fertiliser has increased by about 662.7 per cent since 1990, driving the increase in N_2O emissions from Agricultural soils."*
>
> *"Trends Emissions from Agricultural soils increased 46.9 per cent (2,478.3 kt CO_2-e) between 1990 and 2019. Increases in the use of synthetic nitrogen fertiliser and the dairy cattle population are the predominant drivers of increasing emissions from Agricultural soils."*[11]

In their Resource Consent Application and Assessment of Environmental Effects, the applicants argue that the project will contribute to a reduction in greenhouse gas emissions. While we agree that using hydrogen to displace fossil fuels in the transport sector can reduce emissions, we do not support the arguments related to urea production. These arguments include, for example:

> *"The manufacture of ammonia-urea from green hydrogen will offset up to 12,000 tonnes of greenhouse gas emissions and avoid the import (and associated emissions) of up to 7,000 tonnes of urea from the Middle East and Asia."* (p.52)
>
> *"The Project enables the Ballance Plant to manufacture agricultural fertilisers from urea that will have a low emissions profile as compared to that currently being manufactured with a reliance on fossil fuels."* (p.55)

These arguments should be rejected. They narrowly assess emissions from urea *production* but completely ignore emissions from urea *consumption.* The applicants have not provided any analysis of the direct and indirect emissions that will result from the ongoing use of synthetic

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[7] Ministry for the Environment 2020, New Zealand Greenhouse Gas Inventory 1990-2018. Page 179 (Link)
[8] Ministry for the Environment 2020, Infographic - New Zealand's Greenhouse Gas Inventory 1990–2018.
[9] Ministry for the Environment 2020, New Zealand Greenhouse Gas Inventory 1990-2018. Page 11 (Link)
[10] Ministry for the Environment 2020, Snapshot - New Zealand's Greenhouse Gas Inventory 1990–2018. Page 4
[11] Ibid p212.

nitrogen fertiliser enabled by extending the life of the Kapuni plant. The EPA should not accept a narrow analysis of greenhouse gas emissions resulting from the project. Rather, it should take into account the full and long-term impacts of ongoing synthetic nitrogen fertiliser use that would result from the project.

Freshwater impacts of synthetic nitrogen fertiliser

The applicants have provided no analysis of the direct and indirect impacts of urea on freshwater and biodiversity. These impacts are significant.

Synthetic nitrogen fertiliser is a water pollutant itself.[12] By enabling intensification of dairy farming, it is also indirectly responsible for an increase in freshwater pollution from dairying and particularly diffuse nitrogen pollution from urine patches.[13] Nitrogen pollution has a significant negative impact on water quality in New Zealand and this pollution is worsening, overall.[14] The nitrogen balance 1998 - 2009 has worsened more than in any other OECD country,[15] primarily due to expansion and intensification of dairy.

The largest sources of nitrogen pollution into New Zealand's rivers, in order of magnitude, are; urine from dairy cattle, urine from sheep followed by synthetic nitrogen fertiliser itself.[16] According to MfE, *"Between 1990 and 2012, the estimated amount of nitrogen that leached into soil from agriculture increased 29 percent. This increase was mainly due to increases in dairy cattle numbers (and therefore urine which contains nitrogen)* ***and nitrogen fertiliser use****."*[17]

Updated figures from MfE are not available however between 2012-2019 the sheep population has declined by 5 million animals (around 16%) and N use has increased by 89,000 tonnes or around 20%.[18] It is quite conceivable that synthetic nitrogen fertiliser as a direct source has overtaken sheep urine to become New Zealand's second largest cause of nitrogen leaching.

At elevated levels, nitrate in drinking water impacts human health. At levels higher than the World Health Organisation (WHO) limit nitrate contamination can be fatal. Many groundwater

[12] Ministry for the Environment & Stats NZ 2017: New Zealand's Environmental reporting series : Freshwater and nitrogen leaching. (Link)
[13] Parliamentary Commissioner for the Environment 2013: Water quality in New Zealand: Land use and nutrient pollution. Page 16 (Link)
[14] Ministry for the Environment & Stats NZ 2017: New Zealand's Environmental Reporting Series: Our fresh water 2017 Pages 9 and 10. (Link)
[15] OECD 2017, OECD Environmental Performance Reviews: New Zealand 2017, OECD Publishing. Page 36 (Link)
[16] Ministry for the Environment & Stats NZ 2017: New Zealand's Environmental reporting series : Freshwater and nitrogen leaching. (Link)
[17] Ministry for the Environment & Statistics New Zealand (2015). New Zealand's Environmental Reporting Series: Environment Aotearoa 2015. Page 54. (Link)
[18] StatsNZ April 2021: Nitrogen in fertiliser sold in New Zealand 1991-2019 (Link)

wells already exceed this limit.[19] Recent research indicates that nitrate levels much lower than the WHO limit, are associated with an increased risk of colorectal cancer and preterm birth.[20][21]

The Canterbury Medical Officer of Health has warned nitrate contamination is a looming public health risk in Canterbury[22], which is home to the highest stocking rates and highest synthetic fertiliser use in the country.[23]

Other environmental impacts of synthetic fertiliser

Scientists have identified a set of nine ecological and biophysical limits within which the Earth can continue to sustain human society. These are known as the 'safe planetary boundaries.' Scientists warn that *"Transgressing one or more planetary boundaries may be deleterious or even catastrophic due to the risk of crossing thresholds that will trigger non-linear, abrupt environmental change within continental- to planetary-scale systems."*[24]

There are three planetary boundaries that have already been breached. They are biodiversity loss, climate change and the nitrogen cycle. The impacts of the nitrogen cycle breach are many and are already being seen around the world. They include; the rapid growth in nitrous oxide emissions, freshwater pollution, ozone depletion, acid rain, oceanic dead zones, loss of potable drinking water and human illnesses.[25]

Moreover, nitrogen pollution impairs humanity's efforts to return to or remain within a number of the other planetary boundaries, including stratospheric ozone depletion and climate change.[26]

Synthetic nitrogen fertiliser is the single largest cause of this breach.

The case for phasing out urea

Studies show that getting rid of synthetic fertiliser is a win-win for farmers and the environment.

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[19] Ministry for the Environment & Stats NZ 2017: New Zealand's Environmental Reporting Series: Our fresh water 2017 Page 55. (Link)
[20] Espejo- Herrera, et al. 2016 "Colorectal Cancer Risk and Nitrate Exposure through Drinking Water and Diet." International Journal of Cancer, vol. 139, no. 2, 2016, pp. 334–346.
[21] Schullehner, J., Hansen, B., Thygesen, M., Pedersen, C.B. and Sigsgaard, T., 2018. Nitrate in drinking water and colorectal cancer risk: A nationwide population-based cohort study. International journal of cancer, 143(1), pp.73-79.
[22] https://www.rnz.co.nz/national/programmes/outspoken/audio/2018627863/outspoken-canterbury-water
[23] DairyNZ 2019, New Zealand Dairy Statistics 2018-19, Pg 16 (link) AND StatsNZ, Agricultural Production statistics, final results by farm type accessed via www.stats.govt.nz (Link)
[24] Rockstrom, J., W. et. al 2009. Planetary boundaries: exploring the safe operating space for humanity. Ecology and Society 14(2): 32. Page 1 (Link)
[25] Fields, S., 2004. Global nitrogen: cycling out of control. Environmental Health Perspectives, 112(10), Page 560 (Link)
[26] Kanter, D.R., Chodos, O., Nordland, O., Rutigliano, M. and Winiwarter, W., 2020. Gaps and opportunities in nitrogen pollution policies around the world. Nature Sustainability, Page 1. (Link)

A ten year in-field study by DairyNZ[27] compared a farm with no synthetic nitrogen application and a farm using 181/kg/ha/yr of urea. It found that in a system using no synthetic nitrogen at all, *"profitable milk production systems can be achieved without N fertiliser applications"* and, at lower milk price ($4.60 kg/MS) the farm using no synthetic N was more profitable than the one using 181 kgs.

A recent economic model done by the NZ Landcare Trust[28] compared farms with varying stocking rates, fertiliser use and imported feed. It found that the farm with the lowest synthetic fertiliser use and the second smallest herd had the largest increase in profitability (29%) and a 13% reduction in nitrate leaching and an 18% reduction in greenhouse gas emissions.

A decade-long study in the USA[29] found that a farm can reduce 100 kg/ha of nitrogen fertiliser by simply increasing the varieties of pasture crops used in the field from 1 to 16 species, and still produce the same yield as the farm using the 100 kgs/N/ha.

A global meta-analysis[30] used financial performance of organic and industrial agriculture from 40 years of studies covering 55 crops on five continents and found that organic agriculture was significantly more profitable than industrial agriculture.

A field study in the USA[31] on vegetable farms found soil health and fertility was higher on farms that were not using synthetic fertiliser than on farms that were. By the second year the vegetable farms using no synthetic fertiliser had higher yields.

A field study in the USA,[32] done over two decades, compared a mixed organic crop and livestock farm and a monoculture crop system that used synthetic fertiliser. It found that in four out of the five drought years the organic maize and soybean outyielded the synthetically fertilised monoculture by significant margins.

These studies are supported by recent internal analysis from the Climate Change Commission, which concluded that:

> *"There seems to be robust evidence to support the intuitive notion that eliminating synthetic nitrogen use would reduce agricultural emissions.*

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[27] Glassey, C.B., Roach, C.G., Lee, J.M. and Clark, D.A., 2013. The impact of farming without nitrogen fertiliser for ten years on pasture yield and composition, milksolids production and profitability; a research farmlet comparison. In Proceedings of the New Zealand Grasslands Association. Vol. 75. Page 71 (Link)

[28] A.J. Litherland (NZ Landcare Trust), B. Riddler (E2M modelling), M. Langford (Fonterra), M Shadwick (DairyNZ) 2019. CASE STUDY Finding a win-win for the farmer and the environment. Page 2 (Link)

[29] Tilman, D., Reich, P.B. and Isbell, F., 2012. Biodiversity impacts ecosystem productivity as much as resources, disturbance, or herbivory. Proceedings of the National Academy of Sciences, 109(26), pp.10394-10397. Page 1 (Link)

[30] Crowder, D.W. and Reganold, J.P., 2015. Financial competitiveness of organic agriculture on a global scale. Proceedings of the National Academy of Sciences, 112(24), Page 7611.

[31] Bulluck Iii, L.R., Brosius, M., Evanylo, G.K. and Ristaino, J.B., 2002. Organic and synthetic fertility amendments influence soil microbial, physical and chemical properties on organic and conventional farms. Applied Soil Ecology, 19(2), pp.147-160. (Link)

[32] Lotter, D.W., Seidel, R. and Liebhardt, W., 2003. The performance of organic and conventional cropping systems in an extreme climate year. American Journal of Alternative Agriculture, 18(3), pp.146-154.

> *Eliminating synthetic fertiliser could also have significant co-benefits, particularly for water quality through reduced nitrogen leaching."*[33]

The future of farming in Aotearoa is regenerative and organic - a system that builds soil health by mimicking nature instead of taming it with chemical inputs. It is appropriate to fast-track projects that enable farmers to transition to regenerative organic practices. It is not appropriate to fast-track projects that extend the life of industrial infrastructure that leaves farmers dependent on polluting chemicals.

Conclusion

While we do not object to the idea of green hydrogen production in Aotearoa (specifically for displacing fossil fuels in heavy transport), the organisations do not support the application to use green hydrogen for producing urea. Synthetic nitrogen fertilisers like urea are a major source of greenhouse gas emissions both directly through application onto the land and indirectly through enabling dairy intensification, which is the single largest source of greenhouse gas emissions and freshwater pollution in Aotearoa.

The organisations submit that the EPA should reject this application on the grounds that **its express purpose (at least in the short-term) is to produce an environmental pollutant.** The applicants should be invited to re-submit when they can clearly demonstrate that their project will be used to reduce emissions (e.g. by producing zero emissions transport fuel).

[33] He Pou a Rangi - Climate Change Commission (2021) "Eliminating synthetic nitrogen fertiliser on dairy farms" [Internal analysis prepared for input into *Ināia tonu nei: a low emissions future for Aotearoa* and released to Greenpeace Aotearoa by email.]