

14 April 2023

Attn: New Zealand Productivity Commission

Submitted via the Commission's website

SUBJECT: Submission on the “Improving Economic Resilience – Issues Paper”

Ballance Agri-Nutrients Limited (“Ballance”) would like to thank the New Zealand Productivity Commission for the opportunity to make this submission on the “Improving Economic Resilience – Issues Paper”.

Recognising the importance of climate change policy and specifically the NZ ETS Industrial Allocation policy to our business, our stakeholders and New Zealand more generally, our detailed submission on the relevant amendments in the Bill is attached.

We welcome any clarification questions New Zealand Productivity Commission may have on this submission.

Mark Wynne

Chief Executive Officer

Cc Matt Skilton (Chief Financial Officer)
Shane Dufaur (GM Operations & Supply Chain)



Executive Summary

1. NZ utilises approximately 3 million tonnes of fertiliser products every year to provide nutrients to NZ soils to deliver ~\$50 billion in export revenues. NZ currently manufactures approximately one third of these nutrients, importing the remaining two thirds.
2. All 3 million tonnes have been subjected to significant supply chain disruptions that impact the ability for NZ to source an affordable and reliable supply of nutrients. The risk profile is also increasing, meaning that traditional tactical measures to minimise supply risk will be less effective over time.
3. The intersection between food production, low emissions energy supply, and nutrients for food production is going through significant and rapid change.
4. Geopolitical risks have ramped up, with large influencers impacting food production, energy supply and fertiliser production over the last two to three years. NZ has an elevated risk profile in that its export markets for food and fibre products are common to significant supply markets of nutrients. This creates a ‘double jeopardy’ risk for NZ food production.
5. Most nations around the world are moving to a ‘local manufacture’ strategy for domestic food security reasons and it is our submission that NZ must adopt a similar local manufacture strategy to create resilience in the essential nutrients that generate a ~\$50billion export opportunity.
6. To be successful in this resilience strategy, the settings that govern renewable energy supply and fertiliser manufacturing require careful consideration.

Submission to New Zealand Productivity Commission on the

"Improving Economic Resilience – Issues Paper"

from

Ballance Agri-Nutrients Limited

| | |
|---|----------|
| <i>Executive Summary</i> | 2 |
| <i>Submission Points</i> | 4 |
| Introduction | 4 |
| Detailed responses to the questions | 4 |
| Question 1: What supply chain disruptions and trends are you worried about? | 4 |
| Question 2: What is your industry/community currently doing or planning to do to address supply chain concerns? | 6 |
| Question 3: How can the government help to enhance the resilience of your industry/community to supply chain disruptions? | 7 |
| Question 4: What should the Commission study to learn more about the economic resilience of industries and communities? | 8 |
| <i>Attachment 1: Recent Ballance Agri-Nutrients submission to the Environment Committee on the "Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill"</i> | 9 |

Commercial Sensitivity: Nothing in this submission is confidential.

Submission Points

Introduction

7. Ballance Agri-Nutrients (Ballance) is a farmer-owned co-operative with over 17,000 shareholders and approximately 800 staff throughout New Zealand. With turnover of \$1.2 billion and total assets of \$1 billion, Ballance is a top 40 New Zealand owned company that distributed over \$36m to its farmer shareholders in the 2022 Financial Year.
8. Ballance owns and operates super-phosphate manufacturing plants located in Mount Maunganui and Invercargill, and New Zealand’s only ammonia-urea manufacturing plant located at Kapuni, South Taranaki. Ballance also owns and operates SuperAir, an agricultural aviation company with high precision technology SpreadSmart, and SealesWinslow, a high-performance compound feed manufacturer. Ballance has a network of fertiliser storage and dispatch facilities across the country.
9. This submission focuses on the four questions in turn posed in the issues paper. We have also attached to this document, our recent submission to the Environment Committee on the “Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill” for information and to provide further background.

Detailed responses to the questions

Question 1: What supply chain disruptions and trends are you worried about?

10. Geopolitical tensions impacting the affordable and reliable supply of raw material phosphate rock for manufacture. Plants will not grow without phosphate. There is no substitute for phosphate rock to grow food. Morocco has 70% of the world’s phosphate reserves. Will NZ be able to secure affordable and reliable supply of phosphate rock to manufacture nutrients products here in NZ into the future?
11. Geopolitical tensions impacting the affordable and reliable supply of finished goods phosphate products (phosphate fertiliser products manufactured abroad). In recent times, the supply of phosphate products has been significantly impacted (China stopped exporting, and Russian product was not purchased in the open traded market), resulting in highly volatile price swings and a reduced capability to provide the affordable and reliable supply of phosphate products to NZ farmers and growers
12. Geopolitical tensions impacting the cost of energy for offshore manufacturers of nutrients. As energy prices rise (especially coal and gas), international prices of nutrients rise. Will NZ be able to source the affordable and reliable supply of imported nutrients into the future?
13. The global transition from carbon-dense energy to lower emissions energy. This will not be a smooth transition. This may result in global shortages in urea and AdBlue (urea is a core

ingredient of AdBlue). AdBlue is the diesel exhaust fluid used in trucks to meet New Zealand’s strict anti-pollution standards, and a shortage would bring the domestic transport industry to a standstill. As per the David Skilling resilience report, “there are exposures in categories such as fertiliser and fuel additives (AdBlue). And NZ has to face these supply chain risks in a more independent manner than many other small, advanced economies” . Is NZ resilient enough in urea manufacture to keep domestic transport moving?

14. Nitrogen nutrients deliver over half of the world’s food yield, and changes in technology to utilise hydrogen as feed stock (as opposed to coal and gas) mean more and more countries can access a level of self sufficiency and manufacture nutrients with a lower emissions profile domestically. If NZ cannot move at the same pace, or quicker in the decarbonisation of urea manufacture, will it be able to compete?
15. The gas transition plan for NZ: moving NZ out of economic at-scale gas supply before economic green energy supply can be accessed at scale. If economic feedstock (either gas or hydrogen) is not available, how will Ballance be able to compete with overseas suppliers to keep the Kapuni urea manufacturing operation viable and prevent NZ from relying on imports?
16. If NZ nutrients manufacture becomes uncompetitive, there are wide ranging impacts to NZ communities and to the competitiveness of the NZ Agri sector. We employ approximately 250 people in operations roles. These roles and operations, with supporting local contractors, distribute over \$250m into the broader community every year. Can NZ afford to lose these roles and these knowledge workers from our broader capability set?
17. Developments in sea freight. Will our port infrastructure be able to handle the bigger ships that will be a crucial part of the market in the future? Will the ships that will service NZ routes be fitted with the imminent emissions reductions technologies in shipping and shipping fuel? Or will there be a significant lag, creating a disadvantage for many years for the emissions profile of our imports and exports?
18. Existing infrastructure problems are likely to be exacerbated as the international shipping fleet deploys increasingly bigger vessels. The Transport Outlook report (Te Manatu Waka, Ministry of Transport - Transport Outlook: Future State report, 2017) visioned a world where international shipping companies seek to send larger freight vessels to fewer New Zealand ports driving increased competition between ports and a need for significant investment in port infrastructure. This will also put pressure on road and rail networks with on shore freight moved longer distances by land from port. This impacts on location of manufacturing, warehousing and logistics hub models.
19. At COP26 New Zealand committed to the Clydebank declaration <https://ukcop26.org/cop-26-clydebank-declaration-for-green-shipping-corridors/>. The declaration focusses on the establishment of green shipping corridors - with the intent of enabling partnership to invest in

accelerating the decarbonisation of the shipping sector and its fuel supply through green shipping corridor projects.

20. The creation of green corridors, shift to alternative low-carbon and zero-carbon fuels, and increased operational energy efficiency could have major impacts for New Zealand. The desire to reduce emissions will drive towards larger vessels, or reluctance in international shipping to serve remote ports. Will NZ be included in future shipping routes? And what incentives do we need to offer for them to do so?

Question 2: What is your industry/community currently doing or planning to do to address supply chain concerns?

21. Ballance has tabled Project Te Ata – a decarbonisation plan for the Kapuni urea operation with Government officials. As a hard to abate industry, we need a level playing field to remain competitive. NZ manufactured urea is exposed to a cost of carbon – imported urea is not.
22. This plan will deliver emissions reductions of up to 97% and will require over \$750million in capital investment from Ballance. Success in this decarbonisation effort is dependent on:
- a) ETS legislative predictability;
 - b) An affordable, reliable supply of green energy;
 - c) The development of new electricity transmission lines;
 - d) Improving decarbonisation technologies; and
 - e) Support with balance sheet constraints
23. Essential changes are required to the Industrial Allocation Reform Bill for this project to be viable, and a Government-supported decarbonisation plan is required.
24. Ballance is also working with the Southern Green Hydrogen initiative. This has the potential to deliver green energy and utilise it to manufacture some of the lowest emissions urea on the planet. With an additional source of supply of urea in the South Island, NZ urea manufacture will make up ~ 70% of the total urea utilised by NZ farmers and growers, increasing our resilience, and moving NZ manufacture of urea into a globally competitive position in terms of emissions profile.
25. NZ has young soils that require more sulphur and phosphate than other soils around the world. The single super phosphate product manufactured here in NZ is fit for purpose for NZ soils and has an emissions profile that is 25%-55% less than other forms of phosphate. NZ manufacture is the cheapest way to deliver this product and creates resilience in NZ. Innovating in phosphate manufacture will ensure local manufactured product is preferred and provides more benefits to farmers and growers than imported product. There is significant underutilised capacity in the NZ Single Super Phosphate manufacturing market. The effort

is to move from ~30% locally manufactured phosphate products to ~70% locally manufactured.

Question 3: How can the government help to enhance the resilience of your industry/community to supply chain disruptions?

26. Decarbonise without de-industrialisation.
27. Support local manufacture of nutrients and share an aspiration to move from ~30% locally manufactured to ~70% locally manufactured.
28. Recognise phosphate as a critical mineral in the NZ food production chain. Morocco sits on 70% of the world's phosphate reserves and NZ has poor / non-existent diplomatic relationship with Morocco.
29. Make specific changes to the Industrial Allocation Amendment Bill as per our submission (included as an Attachment below) to put urea manufacture in NZ on an equal footing with offshore suppliers.
30. Support the Te Ata decarbonisation plan for the Kapuni urea operation.
31. Support the Southern Green Hydrogen initiative.
32. Ensure our critical port infrastructure can develop at pace to be fit for the future.
33. Accelerate the supply of renewable energy, and ensure the settings mean this will be delivered as an affordable and reliable energy source (equivalent to gas would be preferred).
34. Accelerate the development of economic transmission capacity to enable renewable energy access. Key manufacturing infrastructure (eg our Kapuni site) has been built close to the legacy energy sources (in our case, the gas comes from across the road). Electricity will not be as adjacent.
35. The Productivity Commission could explore development of scenarios to test how robust planning and decision making can be made under the proposed regulatory settings in the Natural and Built Environment Bill. The Commission could test whether the Bill is adequately future proofed for confident, co-ordinated and generational investment in shipping and transport infrastructure.
36. The Commission could consider what conditions would need to be in place for New Zealand to attract low emissions vessels in the future. This could include opportunities for producing low emissions fuels, infrastructure needed to support larger, low emissions vessels and the potential implications in terms of manufacture, warehousing and the cities and communities that have developed around our major ports.

Question 4: What should the Commission study to learn more about the economic resilience of industries and communities?

- 37. The essentials of soil health and the role nutrients have to play.
- 38. Global supply of nutrients and the likely impact of geopolitical tensions (you can access this from a research business like CRU at www.crugroup.com).
- 39. Renewable energy trends and the relative pace of change in NZ compared to other competing exporting nations.
- 40. The relative cost of electricity in NZ versus competing exporting nations and the likely relative costs into the future.
- 41. Review the implementation of NZ's Emissions Reductions Plans and Energy initiatives (eg Gas Transition Plan and Hydrogen Strategy) for their impact (and potential unintended consequences) on Economic Resilience.

ENDS

Attachment 1: Recent Ballance Agri-Nutrients submission to the Environment Committee on the “Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill”



Ballance
Agri-Nutrients Submi:

6 April 2023

Attn: Committee Secretariat
Environment Committee
Parliament Buildings
Wellington

Sent by email: en@parliament.govt.nz

SUBJECT: Submission on the “Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill”

Ballance Agri-Nutrients Limited (“Ballance”) would like to thank the Environment Committee for the opportunity to make this submission on the Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill (the “Bill”).

Recognising the importance of climate change policy and specifically the NZ ETS Industrial Allocation policy to our business, our stakeholders and New Zealand more generally, our detailed submission on the relevant amendments in the Bill is attached.

We welcome any clarification questions the Environment Committee may have on this submission.

I would appreciate the opportunity to present our key messages to the Committee and answer any questions at an oral hearing.



Mark Wynne
Chief Executive Officer

Cc Matt Skilton (Chief Financial Officer)
Shane Dufaur (GM Operations & Supply Chain)

0 Executive Summary

Ballance’s Decarbonisation Can Accelerate the Emissions Reduction Plan

1. Ballance has shared a proposed decarbonisation plan with Government officials (Program Te Ata) that will deliver a 90-97% reduction in emissions prior to 2050 and which in turn will create the opportunity to underpin production for the green hydrogen market in the Taranaki region. However:
 - a. NZ manufactured urea is exposed to a cost of carbon, while imported urea is not.
 - b. The right legislative policy and regulatory settings are needed to create a level playing field which will support strategic resilience of manufacturing nutrients here in NZ for the \$52 billion agriculture / horticulture industry.

Predictability of NZ ETS Settings is Required for Decarbonisation Investment

2. Decarbonisation investments have an economic life that often extends into 15-20 years, and predictable treatment under the NZ ETS settings is required across these investment lifespans.

The Bill Risks Undermining the Necessary Investment Confidence to Implement “Step Change” Decarbonisation Projects

3. The bill includes proposed provisions that risk creating a dis-incentive to major investments:
 - a. Updating of the allocative baseline between every 5 and 10 years places significant financial risks on longer-term decarbonisation investments.
 - b. The over-allocation assessment does not include key costs incurred in decarbonisation, and without their inclusion it is highly likely that the over-allocation trigger will occur inside the return-on-investment period rendering them non-viable.

A Recommended Way Forward

4. We believe there are amendments to the Bill that better adhere to the principle of the NZ ETS being **predictably managed** with the transition being **well-paced, well-planned, well-signalled, and co-designed**.
5. **Specifically, we recommend the following amendments:**
 - a. Subsequent Allocative Baseline Updates (5 or 10-yearly): The over-allocation criteria proposed is too narrow. Capital costs of decarbonisation projects and ongoing operating costs through fuel and feedstock switching should be included in the criteria.
 - b. The provision for Ministerial discretion to sign off on bespoke decarbonisation Agreements: For high capex and complex projects, a bespoke decarbonisation agreement with Government is warranted. The Act should be amended to provide the Minister with powers to enter into such an agreement.

Submission to the Environment Committee on the
***Climate Change Response (Late Payment Penalties and Industrial
Allocation) Amendment Bill***

from

Ballance Agri-Nutrients Limited

| | | |
|----------|---|-----------|
| 0 | <i>Executive Summary</i> | 2 |
| 1 | <i>Summary of Submission</i> | 4 |
| 2 | <i>Introduction and Context of the Submission</i> | 6 |
| | Ballance's Focus on Climate Change | 6 |
| | Te Ata – The New Dawn | 7 |
| 2.1.1 | The importance of domestic urea manufacture | 7 |
| 2.1.2 | Te Ata Project Overview | 8 |
| 2.1.3 | Te Ata Project Dependencies | 9 |
| 2.1.4 | The Importance of Industrial Allocation Policy to the Te Ata Project | 9 |
| 3 | <i>Submission Points</i> | 10 |
| | Key Considerations | 10 |
| | Detailed Submission Points | 10 |
| 3.1.1 | Updating allocative baselines to address over-allocation | 10 |
| 3.1.1.1 | Aligned amendments required for Level of Assistance changes | 13 |
| 3.1.2 | Reassessing eligibility to ensure appropriate levels of support to at-risk industries | 14 |
| 3.1.3 | Changing approach to assessing eligibility for new activities | 15 |
| 3.1.3.1 | Approach should be extended for changed activities | 15 |
| 3.1.3.2 | New Products | 15 |
| 3.1.3.3 | New eligible emissions sources | 15 |
| 3.1.4 | Enabling easier updates to allocative baselines | 16 |
| 3.1.5 | Enabling easier access to data | 17 |
| 3.1.6 | Setting up new electricity allocation factor methodology | 17 |
| 3.1.7 | Ministerial Discretion. | 17 |
| | <i>Attachment 1: consolidated amendments sought</i> | 18 |
| | <i>Attachment 2 – Company Overview</i> | 19 |

Commercial Sensitivity: Nothing in this submission is confidential.

1 Summary of Submission

6. Ballance Agri-Nutrients proudly supports New Zealand's commitment to reduce emissions to net zero by 2050. We are playing a leading role in reducing emissions through our own decarbonisation programmes and through our business of helping farmers and growers produce more sustainably.
7. Our Te Ata project is Ballance's proposal to decarbonise New Zealand's 'hard to abate' ammonia-urea manufacturing in Kapuni, Taranaki – at a rate faster than that in the Emissions Reduction Plan. Our ambition is to reduce over 90% of the ammonia-urea manufacturing emissions equal to 194,000 tonnes of CO₂e p.a. – an abatement opportunity that materially reduces New Zealand's national carbon emissions.
8. Ballance is classified as an "emissions-intensive, trade exposed" ("**EITE**") business under the ETS. We compete against urea imports, with our main imported product competitors being located in Malaysia and Saudi Arabia, neither of which regulates greenhouse gas emissions or places a price on carbon.
9. In the absence of a global carbon price on urea manufacture, the industrial allocation mechanism under the New Zealand ETS remains a critical policy tool to address trade exposure and emissions leakage. Ongoing certainty as to the availability of this allocation is also necessary to support continued investment in emissions reduction programmes and technologies. For example, the long-term nature and the scale of investment for the Te Ata project (approx \$750+ million) requires certainty on core industrial allocation settings.
10. Ballance supports the Bill with amendments. These amendments are driven by the following considerations:
 - a. Improving the integrity and robustness of the industrial allocation policy.
 - b. Improving regulatory certainty and predictability of policy settings, to promote "step change" decarbonisation investment, and to ensure that the financial return required for such projects is not undermined.
 - c. Flexibility to recognise specific EITE activity circumstances and support future technology uptake.
11. A summary of our views, and recommendations for amendments is included overleaf. Without the above amendments, however, the Bill risks prioritising the issue of potential overallocation, at the expense of other policy imperatives. This framework would risk delaying or preventing the implementation of decarbonisation plans by Ballance (and others), which potentially have high capex costs and therefore require allocation policy certainty. Such an outcome, while unintended, could result in the benefits of continued economic resilience, combined with material gross emission reductions, being foregone. In the Ballance case, this outcome would also result in ~300kMT CO₂e of carbon leakage.

| Bill Focus Area | Ballance’s Position on the Bill |
|--|---|
| Allocative Baseline Re-Assessment (2023) | Supported to re-affirm the integrity of the industrial allocation policy. |
| Subsequent Allocative Baseline updates (5 yearly or 10 yearly) | <p>Amendments are required to enable investment in step-change decarbonisation projects such as Te Ata (see below), due to the over-allocation criteria proposed being too narrow.</p> <p>These amendments should be extended to the Act’s phase out of allocation provisions.</p> |
| Eligibility Re-Assessment | <p>Supported to re-affirm the integrity of the industrial allocation policy and the decarbonisation efforts it supports. However for investment certainty, eligibility reassessment should occur as soon as possible, and without delay.</p> <p>Adjustment to thresholds to recognize and build in the increase in ETS costs (i.e. NZU/Carbon price exposure) is warranted.</p> |
| New activities eligibility assessment approach | <p>Ballance supports the proposed amendments.</p> <p>Core elements should be extended to current activities (without eligibility reassessment), to avoid locking them in to existing manufacturing routes and products.</p> <p>For Ballance, recognition of GoClear solution as a new product and externally sourced CO₂ as an eligible emission source is required.</p> |
| Technical Amendments <ul style="list-style-type: none"> • Enabling easier access to allocative baselines and data • Setting up new electricity allocation factor methodology | <p>Ballance supports these amendments to improve the operation and integrity of the policy.</p> |
| The need for Ministerial Discretion | <p>Ballance recognises that the ETS legislation is complex and subject to change.</p> <p>For high capex projects such as Te Ata, it is important that Ministers have the ability to develop bespoke decarbonisation agreements with EITE firms and have regulation making powers that enable allocation changes that re consistent with such agreements.</p> <p>The Act should be amended to provide the Minister with powers to amend regulations in a manner that is consistent with such agreements. This will better support the investment certainty needed to make the capital investment associated with ‘step change’ decarbonisation programmes.</p> |

2 Introduction and Context of the Submission

12. Ballance Agri-Nutrients Limited (“Ballance”) would like to thank the Environment Committee for the opportunity to make this submission on the Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill (“the Bill”), which was introduced on the 2nd of December 2022.
13. Ballance is a mandatory participant with reporting obligations in the New Zealand Emissions Trading Scheme (the “ETS”) as a manufacturer of synthetic fertilisers. Ballance is also classified as an emissions-intensive, trade-exposed (“EITE”) participant under the ETS, and accordingly receives an allocation of New Zealand Units to cover a proportion of its ETS cost exposure from purchased natural gas and electricity.
14. In this section we highlight Ballance’s focus on climate change and more specifically the significant opportunity to reduce manufacturing emissions at our Kapuni ammonia urea plant, through a \$750+ million investment referred to as the “Te Ata – The New Dawn” project.
15. The brief description of the Te Ata project provides the important context to our submission on Part 2 of the Bill Amendments relating to industrial allocation.

Ballance’s Focus on Climate Change

16. Ballance proudly supports New Zealand’s commitment to reduce emissions to net zero by 2050. We are playing a leading role in reducing emissions through our own de-carbonisation programmes and through our efforts to help farmers and growers produce more sustainably.
17. Reducing greenhouse gas emissions in New Zealand’s primary production sector is fundamental to our climate change mitigation and emissions reduction commitments. Such commitments reflect the social, economic, and environmental aspirations of the Nation, and contribute directly to the vision of being internationally pre-eminent as a producer of high-quality, high-value, low-carbon food.
18. Delivery of this vision requires an end-to-end transformation in the way New Zealand’s industries, including primary production, function and operate. Decarbonisation is intrinsic to this transformation, which, in many cases, requires fundamental changes in the manufacturing, production and distribution processes of industry participants.

Te Ata – The New Dawn

Te Ata is Ballance Agri-Nutrient's proposal to decarbonise New Zealand's 'hard to abate' ammonia-urea manufacturing in Kapuni, Taranaki – at a rate faster than that in the Emissions Reduction Plan.

Our ambition is to reduce over 90% of ammonia-urea manufacturing emissions equal to 194,000 tonnes of CO₂e p.a. – an abatement opportunity that materially reduces New Zealand's national carbon emissions.

2.1.1 The importance of domestic urea manufacture

19. The Ballance ammonia-urea manufacturing facility based in Kapuni, Taranaki is dedicated to domestic production and is a major source of products to New Zealand's primary industry, transport and wood processing sectors, producing around 30% of New Zealand's nitrogen nutrient requirements, significant volumes of diesel exhaust treatment additive (AdBlue®) as well as a key input into the manufacture of industrial resin adhesives for fibreboard, particle board and plywood.
20. Ballance's Kapuni facility is a complex chemical manufacturing plant that currently relies on natural gas for feedstock and process heat. Operation of the plant results in significant emissions of CO₂e in the manufacturing process and as such it is one of New Zealand's 'hard-to-abate' manufacturing facilities. Despite this position, Ballance's comparatively efficient manufacturing processes mean we are able to manufacture urea with lower emissions output than our overseas competitors.
21. Domestically produced urea is critical to Aotearoa/New Zealand's contribution to a low-emission domestic and global food supply. New Zealand's comparatively low emission primary production needs to be supported (while still reducing its carbon output) both to minimise global emissions and to provide wider benefits for New Zealand in terms of security of supply. In particular:
 - a. Domestically produced urea has a notably lower emissions profile than other nitrogen fertilisers. Nitrogen fertilisers are vital to farmer and grower productivity (around half the world's population depends upon food grown with nitrogen fertiliser).
 - b. Recent geopolitical events underscore the strategic importance of domestic urea production in New Zealand for surety of supply. Ballance submits that substitution of locally produced urea for urea from higher-emitting producers offshore is counter-productive.

2.1.2 Te Ata Project Overview

22. Ballance's ambition is to remove up to 194,000 tonnes per annum (tpa) of carbon dioxide equivalent emissions (CO₂e) out of the New Zealand national greenhouse gas inventory. We have identified a two-phase decarbonisation pathway with the potential to abate over 90% of the CO₂e emissions arising from the day-to-day operating and manufacturing of the Kapuni facility (manufacturing emissions). These emissions reductions, and each phase of the programme, are based on extensive and detailed analysis of Kapuni's manufacturing footprint.

23. Our Te Ata ambition:

- a. has the potential to avoid emissions leakage overseas of more than 300,000 tpa of CO₂e per annum, based on imported Saudi urea substitution;
- b. would materially transition from using gas for manufacturing by 2040; and
- c. requires investment of around \$750m+ into Aotearoa's low carbon future.

Figure [1] below shows the manufacturing CO₂e emissions abatement opportunity over time in the Te Ata proposal.

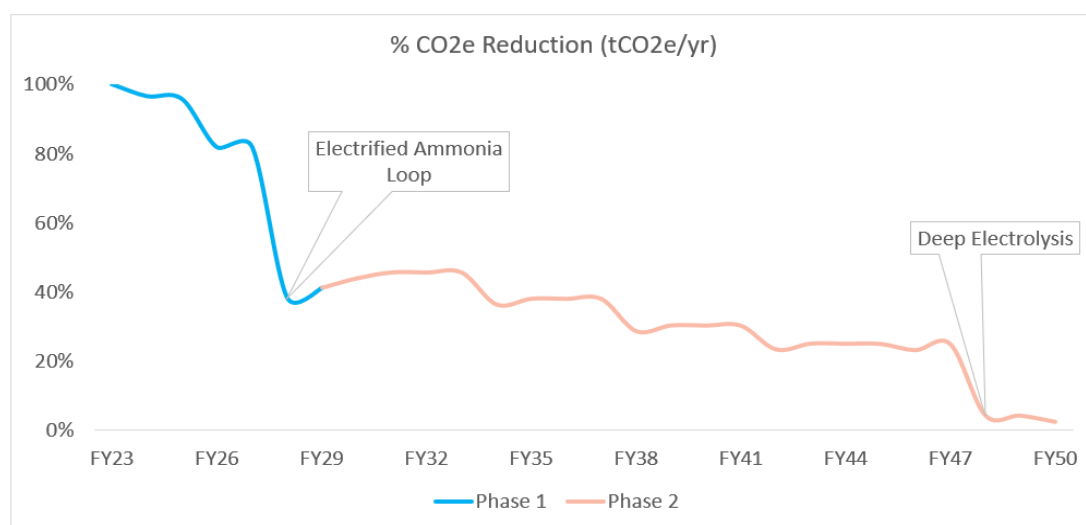


Figure 1 – Ballance's Te Ata carbon abatement trajectory

24. The opportunity to decarbonise the Kapuni manufacturing plant is significant with a current total natural gas consumption of about 7.5 petajoules (PJ) per annum. The natural gas, sourced from the local Taranaki gas fields, is fed through a steam methane reformer to form hydrogen and carbon dioxide. Hydrogen is then combined with atmospheric nitrogen to make ammonia, which in turn is combined with the carbon dioxide from the reforming process, to make urea.

25. The plant uses natural gas for both fuel and feedstock purposes, and around 50% of the total CO₂ emissions associated with the plant's natural gas intake come from using it as fuel for

manufacturing. These emissions, referred to as Manufacturing Emissions, are the primary target of our decarbonisation efforts. They are released on site as a by-product of manufacturing.

26. The remaining natural gas is used as feedstock for urea manufacturing, and the carbon from the natural gas is embedded in the urea molecule, resulting in what is called embedded CO₂. As part of our efforts to reduce emissions, we aim to decrease our reliance on natural gas for manufacturing urea and increase the use of hydrogen electrolyser technology. As we transition, embedded CO₂ from natural gas will be replaced with "imported CO₂" produced off-site by other entities e.g. Todd Energy.

2.1.3 Te Ata Project Dependencies

27. Te Ata is contingent on four key dependencies, which are:
- a. Policy and legislative settings under the Emissions Trading Scheme.
 - b. Green energy input cost pricing support.
 - c. Electricity lines supply infrastructure investment; and
 - d. Co-investment with Government.
28. Ballance has engaged, and continues to engage, with stakeholders on each these dependencies which form what we call the "The Ballance Conundrum".

2.1.4 The Importance of Industrial Allocation Policy to the Te Ata Project

29. As noted, Ballance is classified as an EITE participant, competing against urea imports. The main import volumes are from Malaysia and Saudi Arabia, neither of which currently place a price on carbon emissions.
30. In the absence of a global carbon price on urea manufacture, NZ ETS industrial allocation remains a critical policy to address trade exposure and emissions leakage. Ongoing certainty as to the availability of this allocation is also necessary to support continued investment in emissions reduction programmes and technologies. For example, the long-term nature and the scale of investment for Te Ata requires greater certainty on core industrial allocation settings.

3 Submission Points

Key Considerations

31. Ballance supports the Bill with amendments. Our proposed amendments to the industrial allocation policy changes set out in the Bill are driven by the following considerations:
- Improving the integrity and robustness of the industrial allocation policy.
 - Improving regulatory certainty and predictability of policy settings, to promote "step change" decarbonisation investment, and to ensure that the financial return required for such projects is not undermined.
 - Flexibility to recognise specific EITE activity circumstances and support future technology uptake.
32. Without these amendments as proposed, however, the Bill risks constraining EITE firms' decarbonisation plans to incremental emissions reduction and locking in current manufacturing methods. This in turn would lead to reduced resilience at firm and national levels and could forego gross emissions reduction opportunities.

Detailed Submission Points

33. Our detailed submission points follow the order and headings set out in the explanatory note to the Bill. Where specific amendments are sought, the body of the submission provides an explanation of the justification for change and where appropriate the proposed clause rewording. A full compilation of the proposed clause amendments is provided in Attachment 1. In addition to these specific amendments, Ballance also seeks such further or consequential changes to the Bill as may be necessary to address the points raised in this submission.

3.1.1 Updating allocative baselines to address over-allocation

34. Ballance supports the proposed one-off reassessment of industrial allocation eligibility and allocative baselines, with implementation from 2024 and no later than 2026. Ballance supports key aspects of this policy and specifically considers that:
- This reset of allocative baselines is important to reaffirm confidence in the industrial allocation policy and address over allocation that has resulted from structural industry changes.
 - Utilising data collected for the financial years between 2016/17 and 2020/21, with the options to nominate the exclusion of data from financial years 2019/20 or 2020/21 to smooth out any distortions from Covid-19 is also appropriate.

39. To provide an appropriate pay-back period for investment in significant decarbonisation projects, affected businesses will need greater certainty that no further allocative baseline adjustment will be completed for an appropriate period that reflects the scale of capital expenditure and operating cost increase.
40. For specific projects, this objective could be met through the Minister entering into specific "rapid decarbonisation agreements" with EITE firms and for those agreements to be recognised in allocation policy and regulations – including by given the Minister powers to make allocation policy consistent with such agreements. This approach appears to have been contemplated in the cabinet paper and minutes related to these reforms:

| |
|---|
| 12 noted that the Minister of Climate Change will seek advice from officials on engaging with industrial allocation recipients to enter arrangements to support rapid decarbonisation; |
|---|

Source: Cabinet Economic Development Committee DEV-22-MIN-0159, 29 June 2022²

Ballance therefore seeks amendments to the Bill to:

- a. Provide for regulations issued under s161A to recognise and be consistent with any "rapid decarbonisation agreements" entered into between the Minister and participants; and
 - b. Require the Minister to factor decarbonisation investments subject to any such rapid decarbonisation agreement to the Minister's consideration of any changes to allocative baselines following future reviews as provided for under the Bill.
41. Ballance submits that the above proposed amendments will provide a framework to continue incentivising investment in decarbonisation measures, as it will ensure that rapid decarbonisation is not prejudicial to participants' ongoing eligibility for the industrial allocation.
42. Alternatively or in combination with the above provisions, Ballance also seeks an amendment to include in the consideration of an activity's emission costs; "the consideration of decarbonisation project costs and/or increased energy costs due to fuel switching" is sought.

² <https://environment.govt.nz/what-government-is-doing/cabinet-papers-and-regulatory-impact-statements/cabinet-minute-reform-of-industrial-allocation-in-the-nz-ets/>

46. The industrial allocation level of assistance has default phase-out rates set in the Climate Change Response Act 2002 (The Act, s83). The applicable phasedown rates are:

- 0.01 per annum for each year after 2020 until and including 2030;
- 0.02 per annum for each year after 2030 until and including 2040; and
- 0.03 per annum for each year after 2040.

47. The phase-out rate may also be decreased by 0.01 per annum from 2031 or increased (i.e. accelerated down) on an unconstrained basis (s84B) of the Act), from 2026. In both cases the considerations for a decision are extensive and largely outside Ballance's control (s84C (3)).

48. Ballance proposes the Bill amends the Act to:

- a. enable regulations to decrease the phase-out rate on an individual activity basis; and
- b. place a requirement for the Climate Change Commission in its recommendations and the Minister in his decision, to consider potential impacts on decarbonisation investments, and on any rapid decarbonisation agreement, in changes to the phase-out rate.

49. Requested changes to the Bill are:

Insert new clause 20A as follows:

"20A Consideration of impact on decarbonisation investments"

In section 84C(3) insert after subclause (j):

"(ja) any potential impacts on existing and potential decarbonisation investments"

"(jb) any potential impact of capital costs and operating costs resulting from decarbonisation investments."

"(jc) any potential inconsistency with a rapid decarbonisation agreement recognised under section 161A(1)(f)."

3.1.2 Reassessing eligibility to ensure appropriate levels of support to at-risk industries

50. Ballance supports the one-off reassessment and updating of eligibility for industrial allocation. The choice of base years, consistent with that for the updating of allocative baselines, is appropriate.

51. For Ballance and other EITE firms, the true driver of emissions leakage risk over time are the emissions costs that need to be absorbed, not emissions per dollar revenue. For this reason,

and as clearly set out in the RIS, the adjustment of thresholds for the increase in emissions price is appropriate and supported.

3.1.3 Changing approach to assessing eligibility for new activities

52. Ballance supports the introduction of a new approach to assessing eligibility for new activities.
53. In particular Ballance supports the pragmatic approach to addressing the situation where there may not be sufficient data to determine the allocative baseline until operation has commenced.

3.1.3.1 Approach should be extended for changed activities

54. We recommend that consideration is given to appropriate regulation making powers to allow existing eligible activities to alter activity definitions and products where those alterations are necessary to enable decarbonisation projects or investments. This approach should be enabled without the need for recognition of a new activity and without the alterations to the existing activity to go through a revised eligibility assessment.
55. Without such a provision, firms may be dis-incentivised to explore and deploy new technologies, new products or manufacturing methods as part of wider decarbonisation plans.

3.1.3.2 New Products

56. Ballance has a specific request for the recognition of GoClear urea solution as an eligible product in the activity definition for urea defined in regulations:
- a. Although GoClear was being produced in 2010, at that time it did not then represent a material volume. Currently some 1215 million litres are produced per annum at our Kapuni plant representing roughly 40% - 50% of the market in New Zealand.
 - b. An extremely high purity urea solution is used to produce GoClear at the Kapuni plant. GoClear (sold as AdBlue®) is an exhaust system additive and scrubbing agent that reduces harmful nitrogen oxides (NOx) emissions from diesel engines, breaking the NOx down into harmless water vapour and nitrogen gas. This product has been supplied to the largest vehicle fleets in New Zealand for many years now, enabling them to run low-emission and efficient fleets.
 - c. Historical data for the 2016/17 – 2021/22 financial years will be made available for the determination of an allocative baseline for this product.

3.1.3.3 New eligible emissions sources

57. Although the Bill does not propose any changes to the eligible emission sources set out in s161E(2) of the Act, amendments are warranted.

58. Specifically, Ballance seeks the recognition of externally sourced carbon dioxide as an eligible emission source:

- a. In the current urea manufacturing process at Kapuni, natural gas is used for both fuel and feedstock, and around 50% of the total CO₂ emissions associated with the plant's natural gas intake comes from using it as fuel for the high process heat required for urea manufacture. These emissions, referred to as Manufacturing Emissions, are the primary target of our decarbonisation efforts.
- b. The remaining natural gas is used as feedstock for urea manufacturing, and the carbon from the natural gas is embedded in the urea molecule, resulting in what is called embedded CO₂. As part of our efforts to reduce emissions, we aim to decrease our reliance on natural gas for manufacturing and increase the use of electrolyser technology. As we transition, embedded CO₂ from natural gas will be replaced with "imported CO₂" produced off-site by other emitters. In this context it is termed Carbon Capture and Use (CCU).
- c. The inclusion of "direct use of carbon dioxide not produced as part of the activity" as an eligible emission source in the determination of industrial allocation is warranted regardless of whether the Te Ata project progresses, but its absence would significantly undermine the Te Ata project economics.

59. It is entirely foreseeable that additional emission sources that have associated emissions costs will emerge and the Act should future proof for that eventuality by allowing the Minister to recognise other emissions sources without amendment to the Act.

60. Requested changes to the Bill are:

Insert new clause 20B as follows:

In section 161E insert after subclause (a)(i)(E):

“(F) direct use of carbon dioxide not produced as part of the activity

(G) additional emission sources as prescribed by the Minister in regulations.”

3.1.4 Enabling easier updates to allocative baselines

61. Ballance supports simplifying the process to update allocative baselines, using previously submitted data to reflect changes to ETS emissions factors, the electricity allocation factor, or ETS exemption thresholds.

62. Such changes should however be clearly communicated to EITE firms in advance of implementation.

3.1.5 Enabling easier access to data

63. Ballance supports the changes to enable the EPA to share information, submitted in industrial allocation applications, with the Ministry for the Environment or the Climate Change Commission.
64. While these changes will enable better access to data and aid the monitoring of industrial allocation policy, in many cases the data will not provide the complete picture. For any assessment of over-allocation, with the upstream point of obligation design of the ETS, additional data will be required to establish ETS costs.

3.1.6 Setting up new electricity allocation factor methodology

65. Ballance supports the introduction of a new electricity allocation methodology, moving to a 3-year rolling average approach.

3.1.7 Ministerial Discretion.

66. Ballance recognises that the ETS legislation is complex and subject to change. The emissions profile of urea has specific characteristics and the requests to enable the Te Ata project may not be appropriate for other activities.
67. To enable a bespoke arrangement between Ballance and the Government, broad Ministerial discretionary powers may therefore be required.
68. Ballance proposes an amendment to the Act that enables the Minister to override industrial allocation settings and make bespoke arrangements with EITE firms as part of a decarbonisation agreement, conditional on:
- a. A firm's investment milestones being met (subject to conditions); and
 - b. That the bespoke arrangements should not be more stringent than the default arrangements.
69. This approach may also be extended to provide predictability of the quantum of support under alternative measures to industrial allocation that may be introduced (e.g. CBAM).

ENDS

Attachment 1: consolidated amendments sought

| Clause | Amendment sought |
|----------------|---|
| 14 | <p>Amend current clause 14 of the Bill to provide for an amendment to s161A(1) as follows:</p> <p><u>After Section 161A(1)(e), insert:</u></p> <p><u>(f) recognising a rapid decarbonisation agreement for the purposes of section 84C(3), section 161A(3A) and section 161D(3).</u></p> <p>Amend current clause 14 of the Bill to amend new s161A(3A)(c) and insert (d) as follows:</p> <p><u>(3A)...</u></p> <p><u>(c) the Minister is satisfied that the effect of the existing baseline is that the activity's allocations are equal to or greater than the activity's emissions costs including increased capital costs and operating costs related to any decarbonisation investments (and including decarbonisation investments subject to a rapid decarbonisation agreement recognised under section 161A(1)(f))</u></p> <p>Amend current clause 16 of the Bill to amend new s161D(3)(e) and insert (f) as follows:</p> <p><u>(3)...</u></p> <p><u>(e) the Minister is satisfied that the effect of the existing baseline is that the activity's allocations are equal to or greater than the activity's emissions costs including increased capital costs and operating costs related to any decarbonisation investments (and including decarbonisation investments subject to a rapid decarbonisation agreement recognised under section 161A(1)(f)).</u></p> |
| New clause 20A | <p>Insert new clause 20A as follows:</p> <p><u>"20A Consideration of impact on decarbonisation investments</u></p> <p><u>In section 84C(3) insert after subclause (j):</u></p> <p><u>"(ja) any potential impacts on existing and potential decarbonisation investments"</u></p> <p><u>"(jb) any potential impact of capital costs and operating costs resulting from decarbonisation investments."</u></p> <p><u>"(jc) any potential inconsistency with a rapid decarbonisation agreement recognised under section 161A(1)(f)."</u></p> |
| New clause 20B | <p>Insert new clause 20B as follows:</p> <p><u>In section 161E insert after subclause (a)(i)(E):</u></p> <p><u>"(F) direct use of carbon dioxide not produced as part of the activity</u></p> <p><u>(G) additional emission sources as prescribed by the Minister in regulations"</u></p> |

Attachment 2 – Company Overview

1. Ballance Agri-Nutrients (Ballance) is a farmer-owned co-operative with over 17,000 shareholders and approximately 800 staff throughout New Zealand. With turnover of \$1.2 billion and total assets of \$1 billion, Ballance is a top 40 New Zealand owned company that distributed over \$36m to its farmer shareholders in the 2022 Financial Year.
2. Ballance owns and operates super-phosphate manufacturing plants located in Mount Maunganui and Invercargill, and New Zealand's only ammonia-urea manufacturing plant located at Kapuni, South Taranaki. Ballance also owns and operates SuperAir, an agricultural aviation company with high precision technology SpreadSmart, and SealesWinslow, a high-performance compound feed manufacturer. Ballance has a network of fertiliser storage and dispatch facilities across the country.
3. Our Purpose is: Together, Creating The Best Soil and Food On Earth. To deliver on this, our Ballance With Nature program aims to support the farming sector to sustainably and profitably produce and supply food domestically and internationally, so the NZ farmer can leave our natural environment in better condition for generations to come. This Purpose is supported by seven principles: healthy soil; nutrient efficiency; cleaner air; healthy water; animal care; native biodiversity; and resource utilisation.
4. Ballance has a proud history of innovating to support these seven principles. We were the first in New Zealand to coat urea with our SustaiN product, reducing on-farm nitrogen losses by more than 10%. Our SurePhos product is a first in the world in single super phosphates (SSP), reducing phosphate losses by up to 75% compared to regular SSP. The Ballance joint venture project with Hiringa at Kapuni is a first in NZ that will produce green hydrogen directly from wind-generated electricity for delivery of green hydrogen and greener ammonia to the NZ economy.
5. We endeavour to create more innovation and our in-house industrial engineering and science expertise actively engages with others with global expertise in low emissions nutrient manufacturing to create opportunities for a co-development pathway on new technologies. The demand for low emissions nutrients solutions is growing significantly from our owners as well as from the NZ public.
6. Our approach to innovation is also well demonstrated by our Sustainable Food and Fibres Futures (SFFF) Program, which is focused on improving water quality, reducing GHG emissions and decreasing agricultural chemical use. Our SFFF Program has 12 discrete projects to deliver on these important objectives. We estimate that annual benefits in excess of \$1 billion could be achieved by Year 10 of the SFFF for the sheep and beef, dairy, forestry, horticulture, and arable sectors.
7. Complementing this, Ballance is a proud sponsor of the Ballance Farm Environment Awards (BFEA). These awards have been running for over 25 years and have created an alumnus of

farmers who are leaders in their fields and who are regularly requested to meet with Government to discuss the future of farming in NZ. In addition, positive stories of our world leading farmers are spreading far and wide across rural and urban audiences.

8. The learnings from the BFEA Awards and decades of scientific research are passed on to over 20,000 farmers and growers via our Science Extension Team. This team offers significant expertise and advice to farmers and helps them deliver on their productivity goals while achieving a lighter environmental footprint.
9. We also have a dedicated Farm Sustainability Services Team that helps farmers develop tailored sustainable nutrient management plans, ensuring efficient performance from the land, whilst leaving it in good condition for future generations. This team also help farmers meet their compliance requirements and respond to rapidly changing regulations. As well as supporting New Zealand farmers, Ballance also supplies products to a range of domestic applications:
 - Urea, is used in the production of formaldehyde based resins, a key ingredient in the wood processing sector for the manufacture of particleboard and MDF.
 - An extremely high purity urea solution is used to produce GoClear (sold as AdBlue) at the Kapuni plant. GoClear is an exhaust system additive and scrubbing agent that reduces harmful nitrogen oxide (NOx) emissions from diesel engines, breaking the NOx down into harmless water vapour and nitrogen gas. GoClear has been supplied to the largest vehicle fleets in New Zealand for many years.
 - Other products important to non-farming industries including: ammonia; sulphuric acid used in the dairy, pulp and paper, and power generation industries; and liquid alum and hydrofluorosilicic acid, both used in drinking water treatment processes.
10. Ballance places a strong emphasis on delivering value to its farmer shareholders and on the use of the best science to inform and deliver sustainable nutrient management, including supporting improvements in on-farm environmental performance.

Ballance's Engagement in Climate Change Policy Development

11. Ballance has taken an active role in the development of domestic climate change policy, dating from the original industry voluntary agreements of the late 1990's through to the current New Zealand Emissions Trading Scheme (NZ ETS).
12. This involvement has included submissions to the Productivity Commission on its *Low-emissions economy* study, to the Ministry for the Environment and subsequently to the Environment Committee on the Zero Carbon Bill, and to the Climate Change Commission on their draft advice to the Government on action required to reach net-zero long-lived greenhouse gas emissions by 2050 while achieving a just and equitable transition.
13. Subsequently, other submissions we have made include:

- a. the “Phasing out fossil fuels in process heat” consultation document, dated 20 May 2021.
- b. the “Reforming industrial allocation in the New Zealand Emissions Trading Scheme” consultation document dated 8 July 2021.
- c. the “Designing a governance framework for the New Zealand Emissions Trading Scheme” consultation document dated 8 July 2021.
- d. Te Hau Mārohi Ki Anamata - Transitioning to a Low-Emissions and Climate-Resilient Future Emissions Plan Discussion Document which was published 13 October 2021.
- e. The “Proposed changes to New Zealand Emissions Trading Scheme limit and price control settings for units 2022: Consultation Document”, which was published 9 September 2022.