



COVERSHEET

Minister	Hon Dr Megan Woods	Portfolio	Energy and Resources
Title of Cabinet Paper	<i>Engagement with very large emitters: investment package for second significant decarbonisation proposal and report back on New Zealand Steel</i>	Date to be published	28 August 2023

List of documents that have been proactively released

Date	Title	Author
July 2023	Engagement with very large emitters: investment package for second significant decarbonisation proposal and report back on New Zealand Steel	Office of the Minister of Energy and Resources
17 July 2023	Engagement with very large emitters: investment package for second significant decarbonisation proposal and report back on New Zealand Steel CAB-23-MIN-0309 Minute	Cabinet Office
July 2023	Climate Impact Policy Assessment Disclosure Form	MBIE
2 June 2023	Engagement with very large emitters: progress update on second large emitter partnership	MBIE

Information redacted

YES

Any information redacted in this document is redacted in accordance with MBIE's policy on Proactive Release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under the Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

Some information has been withheld for the reasons of commercial information; legally professional privilege; confidential advice to government; constitutional conventions; and free and frank opinion.



BRIEFING

Engagement with very large emitters: progress update on second large emitter partnership

Date:	2 June 2023	Priority:	High
Security classification:	Sensitive	Tracking number:	2223-3712

Action sought		
	Action sought	Deadline
Hon Dr Megan Woods Minister of Energy and Resources	Agree officials develop a Cabinet paper seeking approval of the GIDI funding partnership.	6 June 2023

Contact for telephone discussion (if required)			
Name	Position	Telephone	1st contact
Andrew Caseley	Chief Executive, Energy Efficiency and Conservation Authority	Privacy of natural persons	✓
Daniel Brown	Manager, Energy Use Policy, MBIE	Privacy of natural persons	

The following departments/agencies have been consulted

Minister's office to complete:

Approved

Declined

Noted

Needs change

Seen

Overtaken by Events

See Minister's Notes

Withdrawn

Comments

BRIEFING

Engagement with very large emitters: progress update on second large emitter partnership

Date:	2 June 2023	Priority:	High
Security classification:	Sensitive	Tracking number:	2223-3712

Purpose

This briefing provides an update on progress negotiating a second decarbonisation partnership with a large emitter and seeks your input for developing a draft Cabinet paper.

Recommended action

The Energy Efficiency and Conservation Authority and Ministry of Business, Innovation and Employment recommend you:

- a **Note** that EECA is progressing negotiations with Fonterra on a GIDI decarbonisation partnership under the very large emitters framework.

Noted
- b **Note** that the forecast cumulative emissions reductions achieved by the partnership is estimated at 1,135,000 tonnes by 31 December 2030, which would contribute 5.9% of the emissions reductions required from the Energy & Industry Sector in emission budget 2 (EB2) and 1.75% of the total emissions reductions required for EB2.

Noted
- c **Agree** that EECA and MBIE develop a Cabinet paper for you to take to Cabinet in July 2023, seeking agreement to GIDI co-funding for the partnership.

Agree
- d **Agree** that the Cabinet paper will also provide an update on the NZ Steel partnership, which DEV invited to be provided by 30 June 2023.

Agree
- e **Agree** that officials will circulate a draft Cabinet paper for departmental consultation after receiving your feedback.

Agree
- f **Note** that to announce the partnership before the period of restraint begins on 14 July, you would need to take a Cabinet paper to DEV on Wednesday 28 June and Cabinet on Monday 3 July 2023.

Noted
- g **Agree** to authorise the Chief Executive of EECA to sign a non-binding Terms Sheet with Fonterra pending Cabinet approval for any GIDI Funding Agreement.

Agree
- h **Agree** to forward a copy of this briefing to the Minister of Climate Change.

Agree



Andrew Caseley
Chief Executive
EECA

02 / 06 / 2023



Daniel Brown
Manager, Energy Use Policy
MBIE

02 / 06 / 2023

Hon Dr Megan Woods
Minister of Energy and Resources

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Background

1. A key part of the Government Investment in Decarbonising Industry (GIDI) fund is bespoke partnerships with very large emitters on significant decarbonisation projects.
2. GIDI co-funding can tip the balance of investment decisions to make significant decarbonisation projects viable (or viable earlier than otherwise) for very large emitters, which can achieve material emissions reductions for New Zealand, and also have wider flow-on benefits given the important role these firms play in the economy.
3. These partnerships may sometimes involve only GIDI funding, but when there is a need for a package of support drawing on multiple levers (e.g. policy settings under the New Zealand Emissions Trading Scheme), MBIE, MfE and EECA have agreed to work together.
4. The announcement of the first partnership with NZ Steel occurred on 21 May. The next partnership opportunity that will be ready for your consideration is a package of decarbonisation projects by Fonterra.

EECA and Fonterra have identified a series of projects that collectively would achieve meaningful emissions reductions

5. EECA and Fonterra are in well-advanced discussions regarding a GIDI funding partnership on a substantial decarbonisation programme that would provide a significant opportunity to accelerate their emission reductions and further reduce New Zealand's industrial emissions, particularly in emission budget 2 (EB2).
6. The projects that form this decarbonisation programme are likely to be commissioned between 2024–2030, with the larger projects occurring later in the decade given the lead times required. The projects would include decarbonisation activities such as converting or replacing coal boilers to use biomass fuel, installing heat pumps (including higher temperature heat pump technology not currently deployed in New Zealand) to provide steam and a range of energy efficiency improvements.
7. The programme targets Fonterra's remaining coal sites:
 - a. Clandeboye (Canterbury),
 - b. Edendale (Southland),
 - c. Studholme (Canterbury),
 - d. Darfield (Canterbury),
 - e. Tākaka (Golden Bay), and
 - f. Waitoa (Waikato).
8. In the funding agreement EECA and Fonterra will agree to an indicative list of projects that will be funded through the decarbonisation programme. This list will be subject to change as feasibility studies relating to each project are completed and the Fonterra Board is able to identify the most appropriate sequencing of these projects.
9. The agreement as currently proposed involves a total GIDI contribution of up to \$90 million (representing an indicative co-investment percentage of 18% of total project costs), split in two portions:
 - a. Up to \$45M for carbon reductions from the reduced use of coal in Fonterra's processing sites (Clandeboye, Edendale, Studholme, Darfield, Tākaka and Waitoa), particularly in

the South Island, with an annual reduction in emissions of 340,000 tonnes of CO₂e by 31 December 2030 and a cumulative reduction of over 1.1M tonnes of CO₂e from the supported projects by 31 December 2030.

- b. Up to a further \$45M if Fonterra achieves a 50% overall total reduction in carbon emissions in its New Zealand-wide operations by 31 July 2031 (from its baseline measurement year of 2018). This amounts to 855,000 tonnes of CO₂e. 240,000 tonnes of emission reductions have already been secured (or abatement projects approved) and the deal will achieve an additional 340,000 tonnes of CO₂e reductions with the balance of 275,000 tonnes yet to be identified through a range of different initiatives.

The funding agreement would require Fonterra to publicly commit to this new emissions reduction target, which is an increase from its current public commitment of a 30% reduction. The move from a 30% to 50% commitment equates to a reduction of a further ~340,000 tonnes of CO₂e emissions by 2030. Contracting for the overall 50% reduction as part of the funding agreement will incentivise Fonterra to achieve its current 30% commitment. A public commitment by Fonterra to further reduce its emissions to 50% (from 30%) by 2030 should not be underestimated as they will be held to account for meeting this target by their larger offshore customers who are already demanding substantial emission reduction across all their global suppliers e.g. Danone, Nestle and Mars.

10. The funding agreement will include a series of clawback provisions, should Fonterra fail to meet the above cumulative abatement and annual abatement targets. These clawback provisions would also apply should any default events occur, such as Fonterra amending or withdrawing its public commitment to reduce emissions by 50% prior to that date. Sums returned via the clawback conditions would also have interest applied.
11. The funding agreement will exclude Fonterra and its subsidiaries from receiving further GIDI funding for other projects. This is to ensure the Government can be confident this represents a finite package of support for Fonterra and so no further GIDI fund assistance will be provided without explicit Cabinet approval. Fonterra (including Fonterra Brands) has received \$2,925,000 of GIDI funding support to date.
12. This deal will be different from the partnership with NZ Steel in several ways:
 - a. Rather than funding a single large project, the partnership will fund a bundle of varying sized projects across a range of coal-using sites.
 - b. Fonterra is seeking only GIDI funding as part of the funding agreement without any interdependencies (such as technical matters relating to industrial allocation).
 - c. The final terms of the deal should be ready for you to take to Cabinet in late June / early July so we do not currently expect Cabinet to need to delegate authority to relevant Ministers to approve the final deal unless there are significant changes.

Fonterra currently receives a relatively small amount of industrial allocation

13. Fonterra currently receives a relatively small amount of industrial allocation (worth around \$3 million - \$3.5 million at current ETS prices) as an energy intensive and trade exposed business. In the 21/22 financial year Fonterra received:
 - a. 51,403 NZUs for lactose operations; and
 - b. 6,312 NZUs for whey powder operations.
14. We do not propose to consider Fonterra's industrial allocation as part of this funding agreement. Fonterra has agreed with this approach.

This co-funding support will allow Fonterra to accelerate the decarbonisation of its New Zealand operations

15. Fonterra has stated that co-funding from the GIDI fund will be crucial to increasing its emissions-reduction ambitions and bringing forward decarbonisation projects across its sites. It has highlighted capital constraints restricting its ability to undertake the portfolio of decarbonisation projects to be covered by the partnership and stated that without Government co-funding, these projects would not occur as quickly as the Crown funding will allow.
16. Fonterra is currently dealing with a lower milk pay out forecast for FY 2024 of \$8 per kilogram of milk fat which for many supplier farmers is below their total costs of production. They also face competing demands on their available capital expenditure in areas such as transport fleets, water supply and treatment plant upgrades as well as ongoing production innovations and plant routine replacement and upgrade programmes.
17. The overall capital investment required for the projects in this decarbonisation programme is approximately \$500 million. We also propose capping the Crown's contribution at 18% of eligible total project costs up to the maximum \$90m. This will ensure Crown funding does not exceed 18% of total eligible costs should the total capital cost of the decarbonisation programme be less than \$500m.
18. Due diligence is occurring on the proposal, including assessing the expected emissions abatement over and above Fonterra's existing decarbonisation pathway. This will provide us with certainty about the additional abatement that is secured by this partnership in addition to contractually committing Fonterra to meet their existing 30% emission reduction target.
19. Beyond achieving direct emissions reductions, the partnership agreement will help position Fonterra in its international markets as a low carbon dairy producer and will offer wider benefits such as:
 - a. support for local economic development and employment;
 - b. a further diversified future energy mix; and
 - c. accelerated wider adoption of innovative emission reduction technologies that could stimulate wider adoption and roll-out at scale elsewhere in New Zealand, in particular use of higher temperature heat pumps to dry milk to milk powder.

Further detail on specific projects is still being obtained

20. On Monday 29 May, you asked us to provide you with details around what 'in front of the gate' investments (e.g. biomass supply chain and electricity distribution and transmission upgrades) the partnership will enable, and what proportion of the projects will be biomass versus electrification.
21. Fonterra currently intends to invest in a mixture of decarbonisation projects involving energy efficiency projects, biomass boiler conversions and the deployment of heat pumps. The size and scale of biomass boiler conversions will require a major improvement in biomass supply chains as these are currently inadequate. Significant conversions to biomass could also lead to the development of pellet or torrefied pellet production facilities in the North Island. This could in turn create opportunities to decarbonise Fonterra's North Island plants that predominantly use gas.
22. The partnership involves a range of projects at multiple sites with investment decisions on options being made progressively over the next two to five or so years. It is therefore too early to exactly predict which sites will convert to biomass versus electricity. It is also difficult to foresee with any confidence yet what improvements to transmission and distribution upgrades could be required.

While the cost per tonne of abatement is higher than in the partnership with NZ Steel, the public value from the proposed co-funding remains good

23. As you know, the 'MAC' or marginal abatement cost (the cost to the Crown per tonne of CO₂e abated) for the partnership with NZ Steel is \$16.20 based on a 20-year asset life, which is unlikely to be rivalled by any other partnership with a large emitter.
24. Calculating the MAC for the Fonterra partnership is much more complex, given the agreement covers multiple projects, over multiple timeframes and with many projects still in their very early days of development. The MAC calculation will also tail out in the mid 2030's given the intended coal ban from 2037 which further increases the MAC.¹ Our initial estimates are that the overall MAC for this partnership will be in the range of \$35 - \$45 per tonne. This is a very rough estimate, which we will continue to refine. For context, the average MAC from GIDI round 5 contestable projects is approximately Constitutional conventions
25. Our assessment indicates that an approximate MAC of \$35 - \$45 per tonne represents good value for money, especially in the context of the recent estimates of the possible cost of purchasing offshore mitigation ranging from \$41 to \$227 per tonne.² 340,000 tonnes also represents a significant quantum of annual abatement. There will likely be few remaining opportunities to achieve reductions of this scale in the future.

Next steps

Subject to your approval we will draft a Cabinet paper for you to take to Cabinet in June

26. We propose the Cabinet paper:
 - a. Outlines the proposed partnership with Fonterra
 - b. Seeks agreement from Cabinet to the key terms of the partnership with Fonterra
 - c. Authorises the Chief Executive of EECA to sign a final funding agreement within the parameters agreed by Cabinet
 - d. Delegates authority to you to agree to any more significant amendments to the Agreement that might arise post Cabinet approval
 - e. Provides the report back on the New Zealand Steel decarbonisation partnership, which Cabinet invited you to provide by 30 June 2023.
27. We will continue to work with Fonterra to refine the specifics of the partnership and include as much detail as possible about the partnership's components for the draft Cabinet paper.

Meanwhile, EECA will continue negotiations with Fonterra

28. EECA has almost landed on a final terms sheet with Fonterra and will begin translating that into a full funding agreement.

¹ Abatement of coal emissions after 2037 is not considered additional for the purposes of calculating a MAC, as it would be banned anyway.

² *Ngā Kōrero Āhuarangi Me Te Ōhanga Climate Economic and Fiscal Assessment 2023*, The Treasury & The Ministry for the Environment (April 2023).

29. Given the likely high public and media interest, it is preferable to advance the deal for announcement as soon as practicable, although timing will also rely on Fonterra to some extent (e.g. whether they can obtain all necessary Board approvals to the partnership).
30. Depending on your timing preferences and the pace of negotiations over the coming weeks, we have prepared three scenario timelines for the Cabinet process. We will work with your office as negotiations progress to confirm the best approach.

	Scenario 1 – announce before 14 July	Scenario 2 – announce on 20 July	Scenario 3 – announce by end July
Provide you with draft Cabinet paper	Friday 9 June	Around 23 June or 30 June	
Minister approves Cabinet paper	Tues 13 – Wed 14 June	Last week in June or weekend bag of Friday 30 June	
Consultation	Wed 14 June – Wed 21 June (concurrent Ministerial and departmental consultation – 5 working days)	Monday 3 July – Wednesday 12 July (8 working days – Ministerial consultation only as departmental consultation could be done in June)	
Lodge paper	Thurs 22 June	Thurs 13 July	
DEV	Wed 28 June	Wed 19 July	Wed 19 July
Cabinet	Monday 3 July	17 July (gives DEV power to act)	24 July
Finalise funding agreement & announce	Before 14 July	20 July	After 24 July
Comment	Free and frank opinions	Free and frank opinions	Free and frank opinions