In Confidence

Office of the Minister of Finance

Office of the Minister of Revenue

Chair, Cabinet Economic Development Committee

EMISSIONS REDUCTION PLAN: ADDRESSING EMISSIONS LEAKAGE

Proposal

1. This paper seeks the Cabinet Economic Development Committee's agreement to a cross-agency body of work, led by Inland Revenue and the Treasury, to determine the risk of emissions leakage from the cement sector in New Zealand, and the best policy response to address this risk.

2. We propose focusing on the cement sector initially, to provide a case study of an emissions-intensive and trade exposed (EITE) sector. The analysis could be expanded to other EITE sectors at a later date. Alternatively, if Cabinet prefers, officials could consider the risk of emissions leakage and possible solutions across all EITE sectors.

3. The paper also seeks Cabinet's agreement for officials to note this work in the emissions reduction plan (ERP).

4. This work would proceed with a view to releasing an issues paper for consultation late 2022.

Relation to Government Priorities

5. The Government declared a climate change emergency on 2 December 2020. Cabinet agreed that climate change "demands a sufficiently ambitious, urgent, and coordinated response across government to meet the scale and complexity of the challenge" [CBC-20-MIN-0097 refers].

6. Enabling a just transition to a low-emissions, climate resilient future is a Government priority. Cabinet has declared its intention to "put the climate at the centre of government decision-making" [CBC-20-MIN-0097 refers].

Executive Summary

7. This Cabinet paper provides Ministers with background on the problem of emissions leakage and outlines potential options to address it including the option of a carbon border adjustment mechanism (CBAM). It responds to the 20 December 2021 Cabinet minute that notes the Minister of Revenue, in consultation with the Minister of Finance

and the Minister of Trade and Export Growth, is considering a CBAM for New Zealand, starting with the cement sector.

8. A CBAM is one of the tools available to address the problem of emissions leakage, which arises because of the uneven implementation of climate pricing between jurisdictions. This unevenness may incentivise firms facing an emissions price in one jurisdiction to shift their production to jurisdictions with no/weaker emissions prices. This problem, termed emissions leakage, results in economic harm to jurisdictions and undermines global greenhouse gas emissions (emissions) reduction.

9. If the risk of emissions leakage is not addressed in some way, New Zealand may lose key industries and the associated jobs, tax and economic activity. The movement of these industries offshore may also result in an increase in net global emissions if this offshore production is more emissions intensive or occurs outside of an emissions cap.

10. At present, New Zealand addresses the risk of emissions leakage through a policy of industrial allocation (IA) under the New Zealand emissions trading scheme (ETS) for EITE firms.

11. However, with a rising ETS unit price, recipients of IAs are still facing a sharply increased marginal cost on production, which imported goods from at least some of their international competitors do not. As the ETS unit price increases, the policy efficacy of the IA system diminishes.

12. Furthermore, current IA settings are inconsistent with the Government's climate change objectives as they dull the price signal faced by polluting industries and consumers. An assessment of alternative policies is therefore necessary.

13. This paper provides a high-level outline of the range of policies available to address emissions leakage. The options include a CBAM, consumption charges, other multi-lateral approaches such as an international carbon price floor or a 'climate club', regulatory options such as product standards, and direct subsidies to at risk sectors.

14. The possible solutions are complex and there are potentially significant trade, diplomatic and legal risks to navigate. This warrants a considered approach that is sensitive to New Zealand's overarching trade and climate change strategies.

15. Consequently, officials would start with a narrow exploration of the risk of emissions leakage as it relates to one sector – the cement sector – as a case study which can be used to inform further analysis of other EITE sectors if this is desirable at a later date.

16. The cement sector has been chosen due to its relatively high emissions intensity, its exposure to imported cement and its classification in recent analysis[1] as potentially at risk.

17. If Cabinet agrees, officials from Inland Revenue and Treasury (with involvement from the Ministry of Foreign Affairs and Trade (MFAT), the Ministry for the Environment,

[1] Resource Economics *Potential for emissions leakage from selected industries in the ETS* (January, 2021) prepared for the Ministry for the Environment.

and other relevant agencies) will undertake a more detailed analysis of the risk of emissions leakage in the cement sector.

18. s9(2)(f)(iv) [redacted]

Background

19. This paper is one of a set of papers containing proposals for inclusion in the ERP, which will be published in May 2022. The ERP sets out the policies and strategies necessary for achieving the emissions budgets towards the Government's 2050 domestic emissions reduction target. It responds to the advice provided to Government by the Climate Change Commission in May 2021, which must be considered in the development of the ERP.

20. In their advice, the Commission recommended that the ETS be amended and continually improved to deliver the incentives needed to achieve emissions budgets (recommendation 11). As part of this work, they recommended that the Government explore alternative policy instruments to IA that could be used to address the risk of emissions leakage over the long term (recommendation 11(4)(b)).

21. This paper outlines the problem of emissions leakage and options to address it beyond the current IA approach. Given the limited timeframe that was available, this current analysis is necessarily high-level.

22. We seek Cabinet's approval for officials to undertake more detailed analysis of the risk of emissions leakage in the cement sector and the alternative options available to address this risk. This case study may then inform future analysis of emissions leakage and appropriate solutions across other EITE sectors. If Cabinet prefers, officials could instead broaden their analysis to other EITE sectors straight away.

23. If Cabinet agrees to either of these options, this work will be noted in the ERP. Any associated emissions reductions will not be determined until final policy decisions are made and these may be counted towards a future emissions budget at that time.

The Problem of Emissions Leakage

The New Zealand emissions trading scheme does not price emissions released outside of New Zealand

24. The ETS is a key tool relied upon by the Government to meet its emissions reduction targets and budgets. Participants in the ETS must purchase and surrender emissions units for every tonne of emissions they release. This changes the cost of emissions intensive production and consumption relative to low emissions alternatives. The ETS ensures that consumers and producers face the costs associated with their contribution to climate change and incentivises producers and consumers to reduce their emissions profiles.

25. The ETS is a domestic pricing instrument; it does not price emissions that are released outside of New Zealand. This may place some New Zealand EITE firms at an economic disadvantage compared to some of their offshore competitors that are not subject to a domestic emissions trading scheme or equivalent pricing mechanism.[2] A failure to price the emissions contained in imported goods implicitly subsidises offshore emissions-intensive production. This can result in a problem termed emissions leakage.

Emissions leakage arises because of the uneven implementation of emissions pricing policies between jurisdictions

26. If jurisdiction A places a price on emissions and jurisdiction B does not, A's producers may shift production to B, and A's consumers may import more products from B. Emissions leakage thus arises because of the competitive advantage that firms located in jurisdictions with lower climate ambition have over equivalent industries in countries with emissions pricing.

27. Emissions leakage can therefore compromise the climate objectives of governments that implement emissions pricing. This is because the emissions reductions achieved by a domestic emissions price can result in an increase in emissions released in other jurisdictions if this offshore production is more emissions intensive or if it occurs outside of an established emissions cap.

28. Emissions leakage can also result in economic harm to domestic industries in jurisdictions that have imposed an emissions price, both in relation to supplying the domestic market and exports. If domestic EITE industry face the full price of their emissions and offshore substitutes do not, there is a risk that New Zealand may lose some of these industries and the associated jobs, economic activity, and tax. If a commercial decision is taken to cease operations in New Zealand, it is likely to be very difficult to encourage these industries to return.

We recommend that Cabinet agree to officials focusing their initial analysis on the risk of emissions leakage in the New Zealand cement sector

29. Whether emissions leakage is in fact a problem for all New Zealand EITE firms is not clear cut; competitiveness (and the associated leakage risk) is impacted by many factors including energy price, labour costs, transport costs, the cost of capital, and plant efficiency. It is also not a given that displacement will result in emissions leakage; this would depend on a range of factors, including the energy efficiency of the offshore producer and whether their emissions are being released under an emissions cap, as well as potential changes to domestic consumer preferences and the availability of domestic low emissions alternatives.

30. We seek Cabinet approval for officials to continue their analysis of the risk of emissions leakage in the cement sector, an industry with relatively high direct emissions that is exposed to offshore alternatives. This sector has been flagged as potentially at risk in some New Zealand specific analysis,[3] and has been identified as at risk in other

[2] Both in terms of their competitiveness on the domestic market (where they compete with imports) and on export markets.

[3] Resource Economics *Potential for emissions leakage from selected industries in the ETS* (January 2021) prepared for the Ministry for the Environment.

jurisdictions.[4] The cement sector has also expressed support for officials to investigate alternatives to address emissions leakage.[5]

31. We consider that a focus on one sector as a case study will allow officials to provide more timely analysis, and this analysis can be applied to the other EITE sectors at a late date.

New Zealand currently addresses the risk of emissions leakage through a policy of industrial allocation

32. Under IA policy, firms undertaking certain industrial activities classified as EITE receive allocations of emissions units. They can use these units to meet their obligations under the ETS or sell them to generate revenue and offset the increased cost of energy supplies such as coal or electricity.

33. IA offsets a substantial portion of the emissions price EITE industry face, so they are not disadvantaged when compared to any offshore unpriced competitors. This comes at a compromise to New Zealand's climate objectives, as the emissions price signal is muted, reducing the incentive on consumers to purchase low emissions products. IA therefore decreases the effectiveness of emissions pricing and makes it more difficult for New Zealand to meet its emissions reduction targets and budgets.

34. IA policy is also costly to the Government. Based on current ETS unit prices and 2020 allocations, IA is estimated to provide an implicit subsidy of around $550million to EITE firms annually.

35. To the extent that IAs do not fully cover emissions costs, the effectiveness of IA policy is weakened as ETS unit prices rise. In such circumstances, recipients of IAs face an increased marginal cost on production, while imported goods from at least some of their international competitors do not.

36. Current IA policy settings are also over-allocating emissions units to EITE industry. The Ministry for the Environment has consulted on proposed reforms to address this over-allocation. The reforms would remove the over-allocation of units to EITE firms and make IA more cost-effective in preventing emissions leakage.

37. IAs have been provided since 2010 when industrial activities first entered the ETS. They were initially intended to be a transitional support policy, however the provision for their phase out was delayed and subsequently removed.

38. In 2020, legislation initiated a gradual phase out of IAs which will continue at increasing rates over the next three decades.[6] Over time then, the need for alternative solutions to protect EITE sectors from the risk of emissions leakage will become more pressing.[7]

[4] The EU has identified their cement sector as at risk and their CBAM proposal (discussed further at paragraph 41 and 77) would include this sector.

[5] For example, in their submissions to MfE on the 'Reforming industrial allocation in the ETS' consultation document, and in submissions to the Climate Change Commission and on the draft ERP.

[6] The general phase out rate for IAs from 2021-2030 is one percentage point per year.

[7] There is however a process by which EITE firms can apply to have their phase out rate reduced if certain requirements, including increased risk of emissions leakage, are met.

39. The phase out also creates uncertainty for EITE sectors as to their long-term viability in the face of emissions unpriced substitutes. To encourage EITE sectors to invest in the infrastructure necessary for future emissions reductions, they need certainty that their efforts will be reflected in the cost of their product relative to emissions unpriced substitutes.

40. We consider that the insufficiencies of IA as an approach to addressing emissions leakage warrant an exploration of possible alternatives, as part of the ERP. This work will align with IA reform and the broader suite of emissions pricing measures contained in the ERP.

Other jurisdictions are beginning to look at alternatives to industrial allocation

41. In July 2021, the European Union released draft regulation that would establish a CBAM for imports of steel, iron, cement, aluminium, fertilisers and electricity where those products are not already facing an equivalent carbon price in their country of origin. Under the proposed regulation, the financial adjustment would be phased in over a 10-year period beginning in 2026, with corresponding adjustments to industrial allocations in the EU emissions trading scheme (further detail provided below).[8]

42. Democrat Senators in the United States have proposed a similar mechanism, and Canada has expressed plans to consult with key trading partners on the use of CBAMs.

s 9(2)(f)(iv)

[8] From paragraph 77.

s 9(2)(f)(iv)

45. If Cabinet agrees, officials will undertake a detailed assessment of the suitability of the options for the cement sector with reference to the proposed criteria.

Option one: carbon border adjustment mechanism

46. A CBAM adjusts the price of a product entering and/or exiting a country to account for the emissions embedded in the product. Broadly speaking, it can take the form of either:

    46.1 an import charge; or

    46.2 an obligation on importers to surrender emissions units (either through an extension of the ETS to imports, or a separate emissions trading scheme for imports and/or exports).

47. Both measures would reduce emissions leakage resulting from the increased importation of products that have not been subject to emissions pricing. They would both 'level the playing field' between domestic products that are subject to ETS obligations and those imports that are not subject to an emissions price in their country of origin.

48. An import charge would apply an emissions price to EITE imports equal to the emissions embedded in the imported good. In practice, it would operate very similarly to a customs duty or tariff applied on imports as they enter the country.

49. Similarly, requiring importers of EITE products to surrender a form of emissions unit to reflect the emissions embedded in their imports would introduce an emissions price comparable to domestic production.

50. Neither measure, taken alone, would be guaranteed to address emissions leakage resulting from New Zealand export manufacturing moving offshore to avoid emissions pricing. This is because New Zealand EITE firms that export to jurisdictions subject to weaker/no emissions pricing could still be incentivised to shift their production offshore.

We note that the cement sector does not fall into this category, as cement produced domestically is not exported.

51. To address this, one option would be to provide rebates to affected exports. This would remove the risk of emissions leakage, however it comes at a compromise to climate objectives, as it lessens the incentive on those firms to reduce their emissions.

52. Export rebates s9(2)(h) and come at a fiscal cost to the Government. These issues emphasise the need for a multi-lateral approach.

s 9(2)(h)

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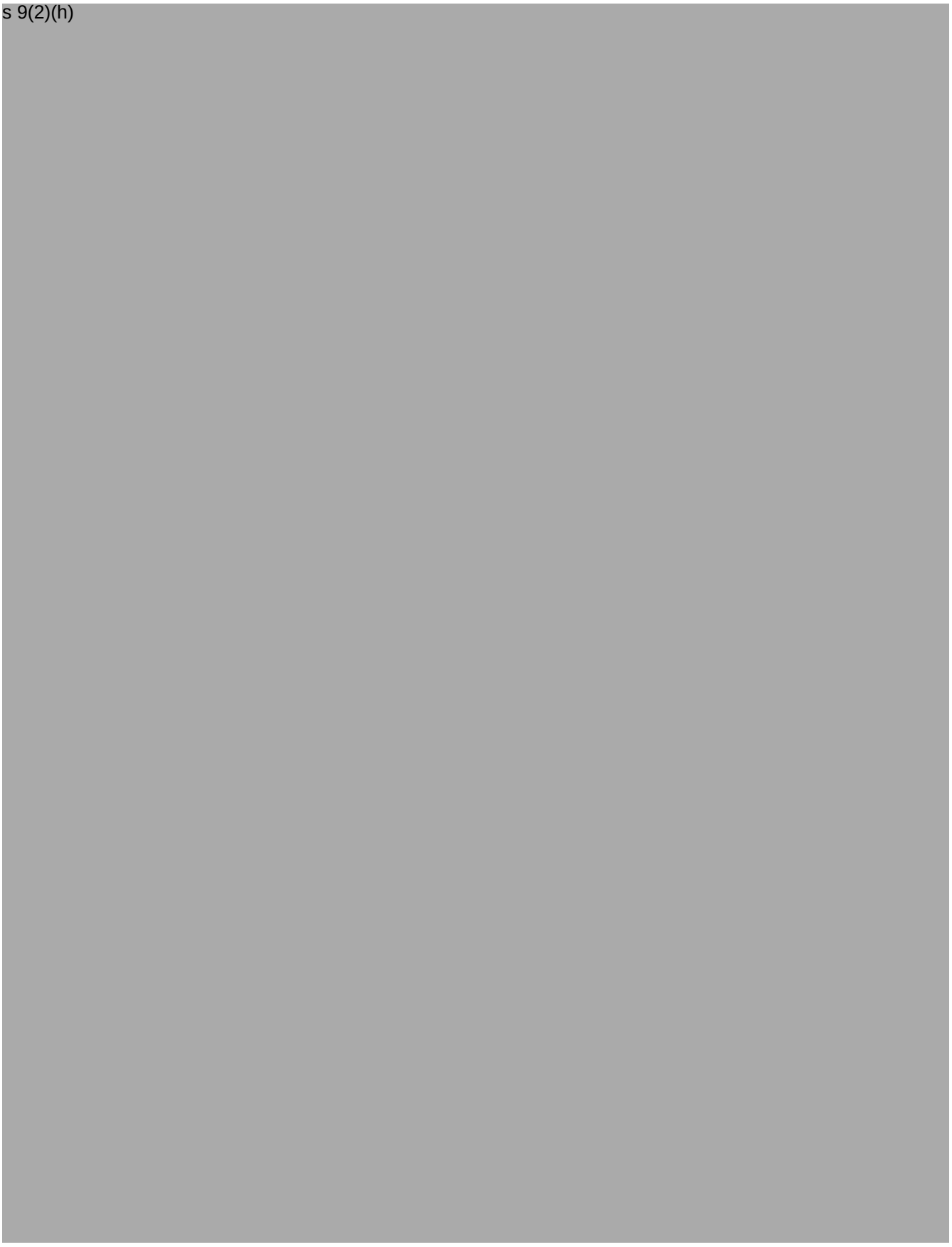

s 9(2)(h)

s 9(2)(h)

Design considerations

63. Different design choices will entail trade-offs between the criteria listed earlier.

Scope

64. To comprehensively address emissions leakage, all EITE products at risk of emissions leakage would need to be included in a CBAM. Further analysis is required to determine which industries this might include – it is not clear that all industries that are currently classified as EITE are at risk of emissions leakage, and proposed reforms will likely exclude some industries from their current EITE classification.

Emissions coverage

65. A CBAM could cover direct emissions released in the production process and indirect emissions resulting from energy related inputs. Focussing on direct emissions is desirable from an administration and compliance perspective as these emissions are more easily traced.

66. However, including indirect emissions would increase the accuracy of any emissions pricing and may be desirable for EITE sectors in which a large share of their emissions are indirect.

Determination of embedded emissions

67. To fully incentivise firms to reduce their emissions, the emissions price could be directly tied to the number of emissions contained in the import. To do this, importers could be required to submit verified emissions data. However, this would impose great compliance costs on importers and may be impractical in some cases.

68. Another option is to create default emissions intensity assumptions for different sectors. These defaults could be based on the embedded emissions seen in equivalent domestic products. To retain an incentive to reduce emissions, importers could claim a reduction from the default if they can prove a lower carbon intensity, as per the EU proposal (which is discussed in a later section). Defaults could also be used as a transitional measure as importers develop methods to report their carbon intensity.

[11] If the EU is able to implement a WTO consistent CBAM, this would provide reassurance to other countries (including New Zealand) who wish to follow suit and implement similarly structured measures.

Level of adjustment

69. Decisions would also have to be made about the cost imposed on imports at the border. It is essential that imports not be afforded less favourable treatment than domestic production. The level of adjustment would thus have to account for the following:

    69.1 Emissions embedded in the product

    69.2 Emissions pricing already applied to the product in its country of origin

    69.3 Free industrial allocation, rebates or exemptions offered to domestic industry.

70. These factors reflect that, in effect, a CBAM should only be applied to an import if it is necessary to address the risk of emissions leakage. This risk will only arise if there isn't equivalent emissions pricing between an EITE domestic product and an offshore alternative.

71. For this reason, the introduction of a CBAM will need to be tied to a decrease in IAs available to EITE industries in New Zealand and this transition will need to be managed.

72. For equity reasons, the level of adjustment could depend on a country's level of development. This would have to be achieved in a manner that is consistent with New Zealand's international trade obligations (which do permit differential treatment for developing and least developed countries in some circumstances).

Other considerations

73. Given a CBAM would be applied at the border, Customs is likely best placed to implement such a charge. Their capacity to do so (and timing) will need to be investigated by officials.

74. s9(2)(f)(iv) [redacted]

75. Officials would also need to do further work to determine the distributional impacts of a CBAM or any of the other tools available to address emissions leakage. The economic impacts will also need to be explored further. For example, academic literature suggests that the introduction of a CBAM could result in an offsetting adjustment in the exchange rate.

76. Any future policy would also have to be assessed against other Government priorities. For example, adding to the cost of cement may work against housing affordability objectives. Further analysis will be carried out on the range of options if Ministers agree.

EU carbon border adjustment mechanism

77. The EU has released draft regulation that would establish a CBAM for imports of steel, iron, cement, aluminium, fertilisers and electricity where those products are not already facing an equivalent carbon price in their country of origin. Key elements of the proposed CBAM include:

    77.1 Importers will surrender CBAM certificates corresponding to a default assumption of their embedded emissions. Importers can, however, claim a reduction in the default if they can prove a lower emissions intensity for their product, or that an emissions price has already been paid in the product's country of origin.

    77.2 The cost of CBAM certificates is linked to the price of units in the EU ETS market in the period directly preceding import.

    77.3 The emissions are limited to direct emissions arising from the production process.

    77.4 Importers will initially have reporting obligations only, with the adjustment becoming operational in 2026.

    77.5 The adjustment will increase proportionally with the gradual phase out of free allocations for affected domestic sectors in the ETS, so that relevant foreign producers and domestic producers pay an equivalent emissions price.

78. There is scope to include indirect emissions and a wider range of products at a later date. However, the exact form any future EU CBAM takes is dependent on the outcomes of negotiation between the European Council and the European Parliament. A recent report from the Parliament's Environment Committee recommended extending the scope of products covered by the CBAM, amongst other changes.

s 9(2)(f)(iv)

[redacted]

s 9(2)(h)

[redacted]

s 9(2)(h)

s 9(2)(f)(iv)

s 9(2)(h)

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s 9(2)(f)(iv)

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s 9(2)(f)(iv)

s 9(2)(f)(iv)

s 9(2)(f)(iv)

Next Steps

95. If Cabinet agrees to officials continuing their analysis of the risk of emissions leakage in the cement sector and potential solutions, officials will work towards the publication of an issues paper late 2022.

96. Officials will consult with New Zealand cement producers on opportunities for emissions reduction that will be available to them if the emissions leakage settings are in the right place. Officials will also engage with the EU on their proposal and potential alignment with officials' analysis.

Financial Implications

97. There are no financial implications associated with the recommendations proposed in this paper.

Legislative Implications

98. There are no legislative implications arising from this paper.

Impact Analysis

Regulatory Impact Assessment

99. There are no regulatory proposals in this paper, and therefore Cabinet's impact analysis requirements do not apply.

Climate Implications of Policy Assessment

100. The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirement does not apply to this proposal as there are no direct emissions impacts at this stage.

101. Future proposals on addressing emissions leakage will likely have significant emissions implications. The Treasury and Inland Revenue will work with the CIPA team to disclose emissions impacts to Cabinet as proposals are advanced, as appropriate.

Population Implications

102. The ERP will include information on the distributional impacts of policies and measures within the scope of the plan, including a response to the Commission's recommendation to develop a comprehensive Equitable Transition Strategy.

103. The Equitable Transitions Strategy will help ensure emissions reduction policies consider distributional impacts, including whether particular groups (including lower-income households and whanau/families) can be supported or empowered to realise the opportunities presented by the transition.

104. The impacts of the transition to a low-emissions and climate resilient economy will fall differently across groups and regions, and the specific impact that any of the options canvassed in this paper will have will be noted in final policy advice to Cabinet.

Te Tiriti o Waitangi

105. The Crown is working together with iwi and hapū to ensure our climate emergency response recognises Māori tino rangatiratanga, kaitiakitanga and the kāwanatanga of the Crown. More detailed analysis of Tiriti obligations in the context of the emissions reduction plan is outlined in the Cabinet paper 'Emissions reduction plan: Te Tiriti o Waitangi and the role of Māori in the transition' [CAB-98].

106. In its final advice, the Commission identified that Māori, iwi and hapū are likely to be disproportionately vulnerable to the impacts from the transition to a low-emissions and climate resilient economy.

107. The specific implications that the options outlined in this paper might have for iwi and Māori will be considered in further analysis and reported back to Cabinet when final policy decisions are sought. For example, some of the options may benefit the Māori economy if they change the relative price of alternatives to cement such as wood.

Human Rights

108. The options to address emissions leakage discussed in this paper are not inconsistent with the New Zealand Bill of Rights Act 1990 or the Human Rights Act 1993.

Consultation

109. The following agencies were consulted in the development of this paper: the Ministry of Foreign Affairs and Trade; the Ministry for the Environment; the Ministry for Primary Industries; the Ministry for Business Innovation and Employment; New Zealand Customs Service.

110. Public consultation on the emissions reduction plan discussion document, Te hau mārohi ki anamata - Transitioning to a low-emissions and climate-resilient future, ran between 13 October and 24 November 2021 [CAB-21-MIN-0335 refers].

111. Although the discussion document did not outline the options to address emissions leakage canvassed in this paper, a number of submissions were made on current IA policy and alternatives such as a CBAM. There was division amongst EITE industry submitters as to whether a CBAM would be preferable to IA, however some cement industry representatives expressed support for a New Zealand CBAM.

112. If Ministers agree to officials undertaking further analysis of the risk of emissions leakage in the cement sector and the range of options available to address it, officials will consult on this in late 2022 and return to Cabinet with relevant feedback.

Communications

113. The Ministry for the Environment will communicate all decisions on policies and measures to be included in the ERP when the final plan is published in May 2022.

Proactive Release

114. We propose to proactively release this Cabinet paper on the Ministry for the Environment's website after final decisions on the emissions reduction plan have been made and the plan has been published.

Recommendations

The Ministers of Finance and the Minister of Revenue recommend that the Committee:

1. **note** that on 20 December 2021 Cabinet noted that the Minister of Revenue, in consultation with the Minister of Finance and the Minister of Trade and Export Growth,

is considering the merits of a carbon border adjustment mechanism (CBAM) for New Zealand and how it might be implemented, starting with the cement sector, and outlined an expectation that a paper be submitted to Cabinet in February/March 2022, so that any decisions can be included in the emissions reduction plan [CAB-21-MIN-0547.02 refers];

2. **note** the Commission's recommendation that the Government explore alternative policy instruments to industrial allocation that, over the longer term, could be used to address the risk of emissions leakage;

3. **note** the importance of exploring the range of options available to address the risk of emissions leakage to ensure an effective and robust long-term solution;

4. **agree** that the problem to be explored is emissions leakage, as outlined in this paper;

5. s 9(2)(f)(iv)

6. **agree** to officials noting in the emissions reduction plan that the Government is exploring the risk of emissions leakage (to the extent agreed to in recommendation 5) and options to address any identified risk.

Authorised for lodgement

Hon David Parker
Minister of Revenue

Hon Grant Robertson
Minister of Finance