

Emissions Reduction Plan - Waste Chapter

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	Action sought:
To Hon David PARKER, Minister for the Environment Hon James SHAW, Minister of Climate Change	For noting only

Actions for Minister's Office Staff	Provide this paper to Minister Parker ahead of the bilateral meeting with Minister Shaw on 4 August and the Climate Response Ministerial Group meeting on 10 August. Return signed report to officials
Number of appendices and attachments: #1	[REDACTED]

Ministry for the Environment contacts

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Emissions Reduction Plan - Waste Chapter

Purpose

1. This aide memoire provides you with information to support your consideration of the draft Emissions Reduction Plan (ERP) Waste and F-gases chapter (attached as appendix 1), before bilateral discussion with the Minister of Climate Change on Wednesday 4 August and subsequent Climate Response Ministerial Group meetings.

Background and Content

2. The Climate Response Ministerial Group will next meet on August 10 to discuss the draft consultation document outlining the Government's response to the recommendations of the Climate Change Commission (the Commission).
3. We provided you with some initial analysis of the Commission's advice and implications for the waste sector.¹ Drawing on this analysis, officials are proposing an alternative yet ambition-aligned pathway to achieve the Commission's recommendations. The main difference is the sequencing of activities in the first two budget periods – we propose a focus on:
 - investing in a wide range of measures to reduce production of organic waste and increase recovery and diversion options, including the Government's commitment to standardise kerbside services
 - improving information on how waste emissions are currently being generated across different landfill types and how emissions should be best managed (eg, better understanding the emissions profile of sites both with and without landfill gas capture systems in place and, in particular, non-municipal landfills, which in some cases may not be producing methane)
4. We view this as a 'no regrets' approach – it will allow us to target actions higher up the waste hierarchy while we both improve our evidence base and infrastructure and systems to then implement potential controls more successfully on where/how organic materials can be disposed of and landfill gases managed.
5. The Commission recommended that the Government revise the waste strategy so it will deliver emissions reductions in the waste sector. We recently briefed you on progress on a new waste strategy and legislation (BRF-236 refers).
6. Specific progress indicators identified by the Commission (Recommendation 23) are considered below.

¹ BRF-233 (21 June 2021) – Advice on waste sector to support Climate Response Ministerial Group meeting (23/6/21); Environment Weekly Update for the week starting 12 July 2021 (Supplementary detail to support consultation on emissions reductions from F-gases); Environment Weekly Update for the week starting 19 July 2021 (work programme update for waste).

Reduce biogenic methane waste emissions to at least 40% below 2017 levels by 2035

7. As noted in previous advice, a 40% biogenic methane emission reduction for waste by 2035 is ambitious. Officials have put forward a broad range of potential policies in the draft ERP chapter that target the key organic waste materials that generate landfill biogenic methane. Based on current data and assumptions, implementing this full range of policies would get us very close to achieving the target 40% emission reduction level put forward by the Commission (ie, 94% of the recommended 40% target in 2035).
8. Modelling shows that in a 'do everything' scenario, the sum of the waste ERP policies for waste falls short in the first budget period (to 2025) and ramps up significantly to be very close to the Commission's level of ambition in subsequent budget periods (2030 and 2035). This is largely because we will already be halfway into the 2025 emissions budget by the time any additional Vote Environment budget lands in 2022/23 and the eight-year investment and regulatory pathway to 2030 is steep.
9. While we expect to fall short to 2025, the proposed development and implementation of a national licencing system enabled through the legislation review could provide a much-improved evidence base by 2024. Enabling informed decisions on additional emissions abatement options for the next ERP will ensure policies build on the existing and proposed first budget period policies, likely setting up to exceed the target by 2035.
10. While the Commission effectively proposed either an organic material to landfill ban or that landfill gas capture be required for Class 2-5 landfills by 2026, officials have made more conservative assumptions, given the substantial data uncertainties (+/- 140%) for these fill types at present.

Ensure, by 31 December 2026, that all landfills (except farm fills) that accept organic waste have effective gas capture systems.

11. The Commission's advice was to move relatively quickly to ensure organic waste is only disposed of at sites that have landfill gas capture systems in place. This could be achieved by requiring:
 - gas capture systems at a wider range of sites such as smaller municipal landfills and construction and demolition fills. This could be achieved through amendment of the National Environmental Standard for Air Quality – but we think significant further investigation is required first to test the need for, and economics of, the proposed approach to Class 2-5 landfills in particular. This is

because many sites are likely unsuitable for landfill gas capture, and/or may not generate enough gases to justify investment in a gas capture system²

- organic material to be disposed of at sites with landfill gas capture already in place. While this will be a component of our overall approach, we would prefer that organic material be reduced in the first instance, or diverted to composting, recycling, anaerobic digestion or possibly biofuels. Putting in place bans quickly without first providing for these alternatives risks unintended consequences (eg, increased disposal of organic material via trade-waste, placing additional pressure on – and emissions from – wastewater treatment systems; increases in inappropriate disposal eg, farm dumps and illegal dumping). Investment in minimisation and recovery is also preferred to prevent additional cost pressures for construction projects (disposal costs would be substantially higher if organic waste from construction and demolition activities has to go to municipal landfills with landfill gas capture).
12. We expect that closer to 2030 and through subsequent ERPs, we should have the increased knowledge, infrastructure, and services in place to consider implementing a ban on organic waste streams going to landfill (including landfills with landfill gas capture).
 13. Rapid growth and investment in diversion infrastructure for construction and demolition waste in particular would also enable recovery of inorganic resources, such as concrete, aggregates and metal and other materials with significant embodied emissions, supporting emission reductions across the wider economy.

Prioritise and fund ongoing data collection across the waste sector and publish annual waste statistics

14. A number of improvements to waste data have been implemented or are underway, but some gaps remain – notably, to increase understanding of emissions potential and landfill gas capture efficiency, further information on waste composition will be required. The ERP chapter proposes a national licensing system as a potential tool for gaining this data (as well as improving overall administration of the system, improved control of hazardous waste, and numerous other benefits as outlined in the draft discussion document on new waste legislation).

Develop a clear plan for how to move Aotearoa towards a more circular economy

15. In our last briefing (BRF-233) we also noted the Commission's cross-cutting advice on developing a plan for how to move towards a circular economy. The Ministry for Business, Innovation and Employment, Ministry for the Environment and the

² Investigation is planned on the emissions profile of key organic waste streams from construction and demolition fill sites, such as treated and untreated timber.

Ministry for Primary Industries have formed an informal interagency working group to advance the work.

16. The interagency group has developed the circular economy content in the ERP consultation document, including a proposal for a strategy for transitioning to a circular economy, including a thriving bio economy. The Ministry for Business, Innovation and Employment will be taking the lead for this work through the finalisation of the consultation document, with support from the Ministry for the Environment and Ministry for Primary Industries. An ongoing lead department for this work and a lead Minister (or Ministers) will need to be assigned.

Alternative approaches

17. Farm fills and waste-water treatment also generate waste emissions. Neither the Commission's advice or our ERP proposals focus on these reduction opportunities at present. These are proposed to be future focus areas.
18. Similarly, biostabilisation (shredding and composting) of municipal solid waste prior to disposal has not been proposed. This method does offer some level of abatement through aerobic decomposition of organic material prior to disposal, and provides for low level/quality resource recovery opportunities. However, this would still require infrastructure investment – and the type of large scale 'dirty MRFs' (material recovery facilities) have not been considered best practice for some time as much of the recoverable/divertible waste still ends up in landfill (or incinerated).
19. If we are investing in new infrastructure at this scale, we view investing in MRF infrastructure and enabling policies that prioritise separation and recovery (i.e. higher quality materials) and moving our resource recovery sector further up the value chain and waste hierarchy as the preferred option.
20. The ERP waste chapter structure is based on NZ Greenhouse Gas Inventory categories (itself mirroring international conventions), necessarily focussing on organic materials and their emissions. Waste minimisation and recycling of the inorganic material streams (metal, glass, plastic, etc.) can also achieve significant emissions reductions – albeit these savings occur offshore or are counted in other parts of the economy (and are therefore covered by other ERP chapters). Waste sector stakeholders may find the focus of the Waste ERP chapter solely on disposal of organic materials to be frustratingly narrow.
21. Consultation on the New Zealand Waste Strategy, which encompasses both inorganic and organic materials, will help to paint the fuller picture of how waste minimisation overall can contribute to a lower emissions future. Proposed consultation for the ERP is 24 August to 3 October and the Waste Strategy and legislation review consultation is currently proposed from September to November, so there is likely to be at least some overlap with the ERP. This overlap is important to ensure waste sector stakeholders have the opportunity to provide

feedback on both the ERP and the wider proposed approach to transformational system change that the proposed ERP polices fit within.

Measures to reduce F gases

22. The discussion document outlines suggested approaches to restrict import or sale of products containing HFC refrigerants, and to apply similar restrictions to servicing of equipment. This is supported by a table of possible dates by which high-global warming potential HFCs could be phased out. The ERP document isn't providing formal consultation on these proposals, rather provides initial suggestions to assist with data gathering to inform future consultation.
23. Because these products are used across sectors (vehicles, homes, cool stores etc.), there are implications for other Ministers, and overlap with other sector-specific policy proposals (energy efficient products and services reform, and vehicle emissions standards). Ministry of Transport officials have raised concerns with us that proposing restrictions on vehicle air conditioning could generate strong concern from industry, with risk of media engagement.
24. We have retained the detail in the discussion document as a way of gathering clear data on the earliest achievable dates to transition to lower-GWP refrigerant options, in contribution to emissions reductions goals.
25. MfE considers that a partnership approach is necessary to transition to lower-GWP technologies. We will work with agencies and industry to plan policy options for the final Emissions Reduction Plan, based on feedback received in consultation.


Next Steps

26. A draft Cabinet paper and consultation document are proposed to be circulated for Ministerial consultation on 5 August 2021. There will be an opportunity to discuss these papers with the Climate Response Ministerial Group on 10 August 2021. For your information, proposed bilateral talking points provided to Minister Shaw are outlined in appendix 2.
27. In order to 'catch up' on improved organic waste management across New Zealand, significant investment in the waste ERP work programme will be required, over and above what has already been committed in Vote Environment bids to date (even noting the availability of additional levy revenue in the future).
28. Officials propose a budget bid in 2022 to reflect the need for additional resourcing. The Ministers of Finance and Climate Change have requested officials to provide the Treasury with some preliminary high-level information to help quantify potential costs of implementing the ERP. [REDACTED]
[REDACTED]. At least half of the currently estimated quantum would be to support collection of

organic materials at kerbside. Further work needs to be done on how to fund the ERP waste policy options.

29. If resourcing is not allocated quickly, meeting such an ambitious target for waste is less likely, due to the scale of change needed over the next eight years to build up to organic materials disposal bans by 2030. There are strong linkages to work already underway including kerbside standardisation, the waste strategy and infrastructure investment plan. However, establishing the necessary enabling systems and diversion infrastructure and the regulatory frameworks/drivers will take time, even with early funding support.

Signature

Glenn Wigley Director - Policy and Regulatory Waste and Resource Efficiency	
Date:	3 August 2021

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