



108-2023

How congruent is Budget 2023 with New Zealand's climate commitments?

In this Insight, we assess the degree to which Budget 2023 is consistent with New Zealand's climate change commitments. This initial approach includes central government budget spending, tax expenditure and any major regulatory changes. We intend it to be an annual exercise, with our initial focus on congruence with commitments. In future, we want to address elements of quality of expenditure, consequences and impacts.

What's the big deal?

The fiscal and economic impacts of climate change are expected to be wide-ranging and unevenly distributed (New Zealand Treasury and Ministry for the Environment 2023).

Government expenditure, revenue-raising mechanisms and the Emissions Trading Scheme (ETS) will influence New Zealand's emissions profile and performance in meeting international climate commitments. In 2022, total Crown spending was equivalent to 42% of gross domestic product (New Zealand Treasury 2023). As a major player in the economy and regulator, the government also influences consumer and business decisions that determine the country's emissions profile and trajectory.

The New Zealand Government is a signatory to the Paris Agreement and is committed to net zero emissions by 2050 and a 50% reduction of gross emissions by 2030 (New Zealand Government 2021).

Budget programmes are intended to address market failures but may have the unintended consequence of creating their own externalities. Budget programmes should reduce adverse externality effects on people's lives, livelihoods and wellbeing without stoking the risk of increasing emissions and future fiscal challenges.

Therefore, budget transparency on climate policies is important for all New Zealanders.

Climate budgeting supports congruence with commitments

Climate budgeting is a subset of green budgeting in which countries identify, monitor and report on their government expenditures that are specifically related to climate change adaptation and mitigation. This approach ranks the environmental impacts of budgets based on the significance of the policy and weights the expenditure (Petrie 2021). Climate budgeting is used to create consistency in assessing the environmental effects of policy, incorporating environmental impacts into the budget-setting process and encouraging investment in standardised data monitoring and reporting (OECD 2020).

We aimed to assess the degree to which Budget 2023 is consistent with New Zealand's climate change commitments. This is an exploratory approach to establishing the impacts of Budget 2023 spending, including tax expenditure and any major regulatory changes.

The approach we used to assess Budget 2023 is based on the combination of international practices and guidelines for international bodies such as the Organisation for Economic Co-operation and Development (OECD) and United Nations (OECD 2021a; UNDP 2019).

How congruent was Budget 2023?

- The Ministry for the Environment's emissions forecast shows that emissions in New Zealand will decrease, but on the current trajectory, this would mean we never met the climate commitments (Ministry for the Environment 2022). Strong action will be needed in the future. The ability and institutional mechanisms to report on progress and communicate the trade-offs will become critically important.
- Budget 2023 has several new initiatives that are intended to be congruent with stated climate commitments, but many lack sufficient metrics to say what the climate effect will be.
- Using our adapted assessment framework, we found unfavourable climate effects for 80% of the new initiatives' expenditure, including the 5-year infrastructure package.
- In New Zealand's favour, the practice of assessing social, environmental and economic effects is well established in the machinery of government. The guidelines and tools already applied in policy analysis, such as social cost-benefit analysis,¹ provide the fundamental mechanism for quantitative climate reporting in Budget documents.
- Every cost-benefit analysis that underpins the Budget's many initiatives can categorise the costs and budgets in social, environmental and economic terms. This allows for the aggregation and reporting of impacts in units consistent with climate commitments (CO₂-e) and, secondly, comparison of any trade-offs using monetisation to create common

units of assessment across the social, environmental and economic categories.

What's needed is standardised reporting of these existing metrics in Budget documents. A legislative requirement for governments would need an amendment to the Public Finance Act 1989.

What we found in the literature

Climate budget reviews are fundamental tools underpinning the assessment of sustainable economic development. They are used to identify the environmental impact of the Budget initiatives.

Climate budget reviews help achieve several desirable outcomes (OECD 2020) by:

- **transcending** politics by using robust science with a focus on intergenerational welfare
- **consistently** assessing the environmental effects of policy
- **fully integrating** environmental impacts into the budget-setting process
- **encouraging** standardised data collection and reporting.

Why does it matter?

Firms and individuals are frequently encouraged to adjust their economic activity to cut emissions, consume in a more circular manner and lead the transition to an environmentally resilient economy. A vital aspect of this transition is the role that governments play.

The benefits of robust reporting and monitoring include greater transparency, low uncertainty and better information for decision making.

Due to the lack of robust monitoring and reporting of government climate expenditure,

¹ The CBAX tool is a spreadsheet model that contains a database of values to help agencies monetise impacts and do cost-benefit analysis.
[https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-](https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/plan-investment-choices/cost-benefit-analysis-including-public-sector-discount-rates/treasury-cbax-tool)

[management/plan-investment-choices/cost-benefit-analysis-including-public-sector-discount-rates/treasury-cbax-tool](https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/plan-investment-choices/cost-benefit-analysis-including-public-sector-discount-rates/treasury-cbax-tool)

the public has no assessable means of holding the government accountable for not reaching or potentially exceeding its commitments.

What international frameworks are there?

New Zealand is behind the curve internationally regarding environmental policy and the introduction of climate budget reviews.

International bodies such as the International Monetary Fund (IMF), the OECD and the European Commission have developed frameworks that measure environmental impact (European Commission 2022; OECD 2020; Aydin et al. 2022).

IMF

A report by the IMF demonstrates the principles that drive the robust application of green budgeting. The principles identified are to integrate a climate-sensitive perspective into all stages of the budget cycle, from fiscal strategy through budget preparation, budget execution, and control and audit. The IMF also stresses transparency through independent oversight of public spending, effective information technology management use and interdepartmental cooperation. This helps ensure that each of the building blocks identified by the OECD is appropriately utilised (Aydin et al. 2022).

OECD

The OECD's Green Budgeting Framework was developed based on existing national practices and consultation with the Paris Collaborative on Green Budgeting members. The framework comprises four mutually reinforcing building blocks that contribute to the success of its implementation. The implementation involves clearly defining the government's domestic and international commitments, utilising budgeting tools to generate evidence, accessible reporting on the evidence and effective governing systems surrounding the framework (OECD 2020).

The four interrelated building blocks are as follows:

- 1 A strong strategic framework that establishes the case for climate commitments and climate budget reporting.
- 2 Tools of evidence building and policy coherence.
- 3 Reporting to facilitate accountability and transparency.
- 4 An enabling budgetary governance framework.

Our focus is the third building block.

European Commission

As green budgeting practices are increasingly being introduced throughout the world, the European Commission has designed a Green Budgeting Reference Framework to support the initial stages of developing environmentally conscious budgetary practices for regions interested. The European Commission outlines five elements that should be considered when building a framework: (1) the breadth of coverage under the framework, (2) the means of assessing the framework's success, (3) what the tangible value added will be, (4) who is responsible for the governance of the framework and (5) how the results will be made available to the public (European Commission 2022).

There are many types of climate budgets

Climate or environmental budgets take several forms (OECD 2021b):

- Green budget tagging – classifying budget measures according to their environmental and/or climate impact.
- Environmental impact assessments – requiring environmental impact assessments to accompany new budget measures.
- Valuing ecosystem services, including carbon pricing – putting a price on environmental externalities such as

greenhouse gas emissions, often through taxes and ETs, to facilitate the achievement of national environmental and climate goals.

- Green perspective to spending reviews – incorporating consideration of the impact of measures on national environmental and climate goals alongside considerations of efficiency.
- Green perspective in a performance setting – integrating performance objectives related to national environmental and climate goals.

What's happening in New Zealand?

The Parliamentary Commissioner for the Environment (PCE) estimated environmental expenditure in 2022/23. This was born from the need to have accessible information regarding environmental expenditure, which is critical to enable Parliament to arrive at an informed view on the government's environmental spending decisions, including:

- relative prioritisation of environmental challenges and outcomes as revealed through the allocation of fiscal resources
- general adequacy of our response to environmental issues in terms of whether the government is spending too much or too little to achieve those outcomes
- effectiveness of that expenditure in terms of its impact on environmental outcomes.

The results showed that, for the 2022/23 fiscal year, agencies had budgeted about \$3.5 billion in environmental expenditure. Within the context of total government expenditure for the year, this was equivalent to about 2.2% of budgeted expenditure (Parliamentary Commissioner for the Environment 2023).

In another report, the PCE recommended the following ways to improve environmental

reporting (Parliamentary Commissioner for the Environment 2022):

- The Environmental Protection Authority should be given a specific mandate to provide oversight and leadership of environmental monitoring.
- The government should state climate aims and plans to meet those aims.
- Agencies should tag expenditure that relates to the government's aim and report on the progress.
- The government should report to the House on the expenditure it allocates to its environmental aims and the progress made.

What are other countries doing?

Countries in the OECD have begun mainstreaming green finance and green budgeting by having independent agencies audit policies and budgets for environmental expenditure.

We have examined the climate budgeting approaches of several countries (France, Ireland, Nepal, the United Kingdom and Sweden) and considered how these could benefit New Zealand.

France

In 2021, France reported on the environmental impact of the state budget.² Their model is the most robust approach to green budget reviews that NZIER assessed. The scope covers both positive and negative impacts across the entire budget, including fiscal revenues, investment expenses and operating expenses, assessing the relevance of each policy to the EU Taxonomy Regulations and ranking them on a scale from -1 to 3.³

The ambition of the French model can be impeded by underinvestment in the necessary reporting infrastructure to measure and

² This research was supported by a green budgeting guideline developed by the Auditing Department of public Treasury of France (IGF) and the French General Council on Environment and Sustainable Development (CGEDD).

³ The ranking scale is unfavourable, neutral, favourable or very favourable.

report environmental impacts consistently. This highlights how it is crucial to account for the unique skills and existing fiscal practices when incorporating green budget reviews into government releases (NATIXIS Corporate and Investment Banking 2020).

Ireland

Ireland has incorporated green budgeting into its budgetary process to assist the transition towards a low-carbon economy. A report covering the climate-related expenditures planned for 2019 was published alongside the 2019 Revised Estimates for Public Services Volume 2019. This research provides key definitions and methodologies that are applicable to a New Zealand setting. Crucially, it details how expenditure can be defined as 'climate-related'.

This is done by using the OECD Rio Markers system – a ranking structure built in 1998 following the Rio Conventions that labels how climate-related various expenditure is.

Financial activities are screened against their contribution to climate change mitigation or adaptation and are given a score of 0, 1 or 2. These reflect whether the climate change criteria are not targeted, significant to the financial activity or principal to the intentions of the activity (Ireland Department of Finance 2022).

Nepal

Nepal uses a climate change budget coding system developed by its National Planning Commission and the United Nations Development Programme in 2012. This defines the climate relevancy of expenditures across each Ministry, allowing for a monetary evaluation of climate-positive government policies, similar to the method employed by Ireland.

Since Nepal relies more heavily on foreign investment than the more developed economies of France and Ireland, these expenditures are grouped based on whether they are Government of Nepal expenditures,

international grants or loans (Government of Nepal Ministry of Finance 2017).

United Kingdom

The United Kingdom has often been a leader in integrating environmental factors into the policy-making process. Its most important innovation was the development of the Climate Change Act 2008 and the Climate Change Committee. Other countries have followed this approach.

This Act creates a framework that enables the government to set legally binding targets surrounding the environment. A key aspect of this is the establishment of the Office for Environmental Protection, whose role is to ensure the government complies with the environmental targets set.

The Climate Change Committee (CCC) is an independent, statutory body established under the Climate Change Act 2008. The purpose of the CCC is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change (Climate Change Committee, n.d.).

A review of the approach in the UK found that the UK has a relatively well-designed system to manage climate-relevant public investment but there is room to strengthen its institutional design and there are important gaps in its effectiveness (Renteria et al. 2022).

Sweden

Sweden has adopted a climate policy framework designed to align long-term market influences with its climate goals that can withstand political shifts. Through the 2017 Climate Act, Sweden now requires the government to release a climate report alongside its annual budget (Swedish Environmental Protection Agency n.d.).

A Climate Policy Council will independently analyse whether the government can appropriately balance its climate and

budgetary goals. This ensures that the climate policy is aligned with their Nationally Determined Contribution under the Paris Agreement.

Strength of these approaches

The systems of green budgeting in the countries reviewed have some strengths, but these strengths were not common features across all countries reviewed. The key strengths were:

- systematic guidance on how to assess the environmental impacts of budgets regardless of the theme or policy portfolio
- monitoring and reporting the environmental impacts of budgets are required and defined in legislation, increasing the process's political independence as in France and Sweden.

Weaknesses of these approaches

Our research highlights the lack of available data to quantify the impacts of budget policy decisions on environmental outcomes. The countries examined instead rely on qualitative judgements about whether individual policies are negative, neutral or positive for the environment.

This approach has several implications:

- It raises questions about value judgements and whose judgement is 'best'.
- It increases the scope for politicising the findings rather than focusing on how to address the issues at hand.
- The lack of ability to quantify means the ability to measure trade-offs between environmental, economic and social effects of a budget or policy is severely undermined.

What can we do in New Zealand?

We can take elements of several different approaches and apply them in New Zealand.

We have chosen to apply the French approach (NATIXIS Corporate and Investment Banking 2020). Figure 1 highlights the steps involved. This approach is employed due to the lack of readily available information. We also utilise definitions following the Rio Conventions utilised in the Irish model (Ireland Department of Finance 2022). Our focus lies in ranking the expenditure on new policy in terms of expected CO₂-e emissions.

We only focus on CO₂-e emissions for the first iteration of the environmental examination of Budget 2023.

We acknowledge the importance of other environmental metrics, and they may be considered more in future research.

Applying it to the New Zealand 2023 Budget

Table 1 captures all new government spending by key themes and rates the spending according to the impact on CO₂-e emissions (New Zealand Government 2023a). The ranking is based on the information available in the summary documents.

The new Budget expenditures are categorised by cost-of-living support, recovery, resilience, delivering services Kiwis rely on, climate and emergency funding, and Māori and Pacific (New Zealand Government 2023a).

Scope of assessment

Assessing Budget outcomes is difficult as policy can have a positive or negative impact depending on the metric.

For example, one policy highlighting this is 'Infrastructure investment in affected regions'. This policy aims to meet the immediate needs of afflicted regions because of Cyclone Gabrielle, including reinstating roads and rail networks and repairing and rebuilding whānau homes and damaged schools. Increased construction activity will increase emissions but is essential in increasing climate resilience. We have categorised this as a neutral expense.

Point of emissions measurement

We focus on emissions at the point of consumption rather than production. An example of this is the 'Cheaper energy bills' policy. This focuses on lowering household energy bills through an expanded Warmer Kiwi Homes Programme, which will reduce emissions from new heating and insulation installations, hot water heat pumps and LED light bulbs.

Nature of tax policy

The Budget at a Glance document (New Zealand Government 2023a) only provides information on new expenditures, but there are also reforms in the tax system. Budget 2023 also announces a change to the trustee tax rate, which increases from 33% to 39% to align with the top personal marginal tax rate. This is expected to apply from April 2024. The ETS can also influence activities and crucial emissions profiles.

We categorise this policy change as neutral because tax revenue is generally not reassigned to a specific purpose. (New Zealand Government 2023c).

Timeframe of analysis

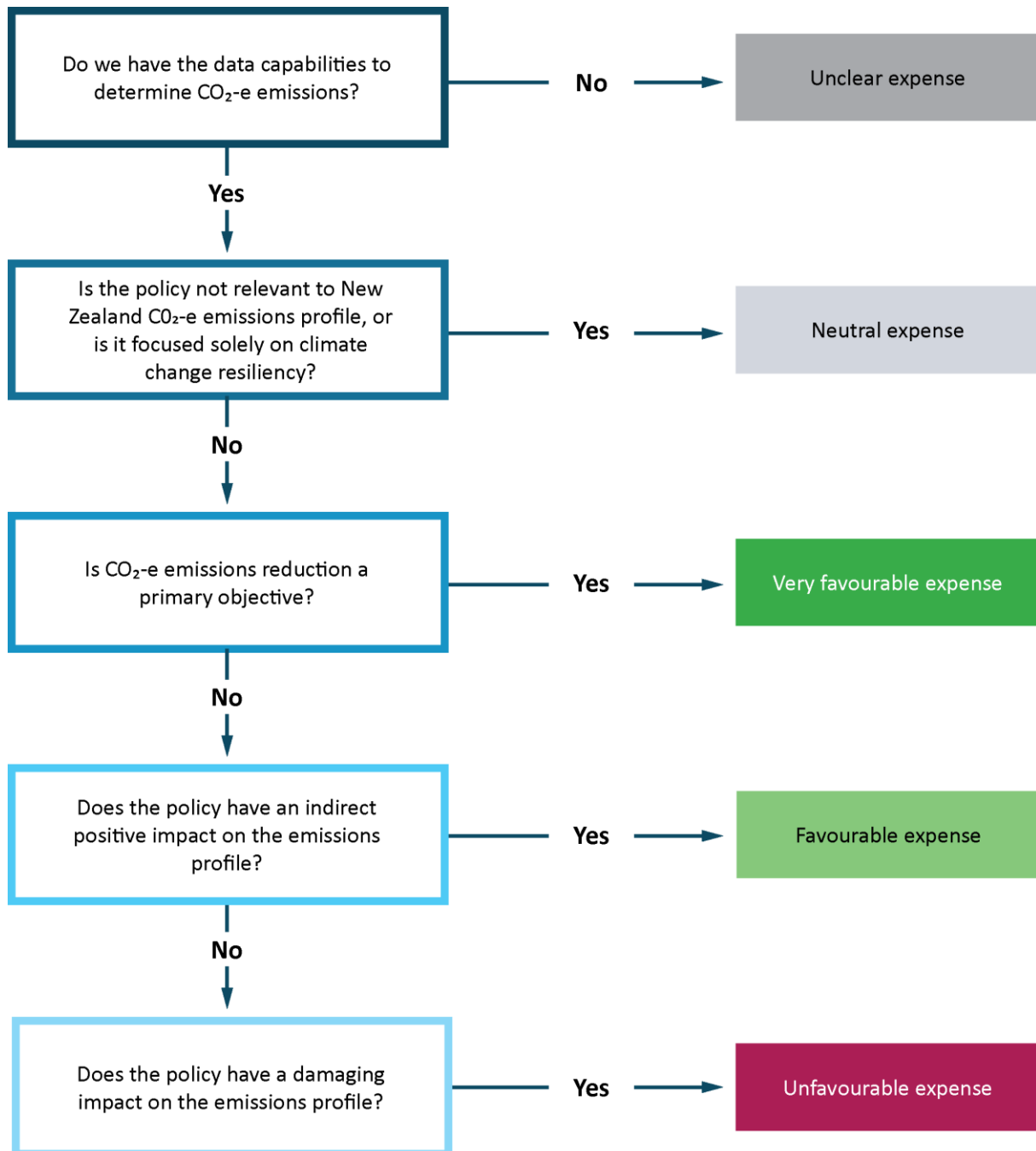
The Budget reflects expenditure at one point in time, which may misrepresent the overall nature of government spending.

Three days after the release of the Budget, the government announced a partnership with New Zealand Steel to deliver New Zealand's largest emissions reduction project to date, with half of the coal being used at Glenbrook Steel to be replaced with electricity to recycle scrap steel. This will be up to \$140 million invested in reducing CO₂-e emissions. While this is environmentally beneficial, it is not captured in the climate budget review as it is outside the time period for this assessment (New Zealand Government 2023b).

Efficiency of spend

The expenditure comparison also doesn't account for the efficiency of expenditure. The effectiveness of the spending is key to understanding when assessing the potential environmental impacts, as the marginal benefit of each dollar will vary.

Figure 1 Decision-making tree



Source: NZIER adapted from NATIXIS Corporate and Investment Banking 2020

Table 1 New Budget initiatives and congruence with climate commitments

Theme, type of spend and climate budget rating

Policy	Total cost	Rating	Assessment
Extending 20 hours of ECE to 2-year-olds	\$1.2b	Neutral	No effect on emissions.
Scrapping prescription co-payments	\$619m	Neutral	No effect on emissions.
Cheaper energy bills	\$403m	Favourable	Greater energy efficiency can reduce emissions.
Free public transport for children	\$327m	Favourable	Could promote emission reductions
KiwiSaver contributions for paid parental leave	\$20m	Neutral	No effect on emissions.
Infrastructure investment in affected regions	\$804m	Neutral	All expenditure on recovery from climate-related damage is rated neutral
Business and community support	\$130m	Neutral	All expenditure on recovery from climate-related damage is rated neutral
Protecting communities	\$120m	Neutral	All expenditure on recovery from climate-related damage is rated neutral
Infrastructure investment pipeline	\$71b	Unfavourable	More investment in the status quo will induce more emissions
National Resilience Plan	\$6b	Favourable	It will indirectly reduce emissions.
Investing in scientific research centres	\$451m	Very favourable	More scientific research capacity to meet the challenges of climate change.
Supporting the growth of our gaming sector	\$160m	Neutral	No effect on emissions.
Continuing support for industry transformation	\$75m	Favourable	It will indirectly reduce emissions.
Building international research partnerships	\$38m	Very favourable	More scientific research capacity to meet the challenges of climate change.
Education	\$4.9b	Neutral	No effect on emissions.
3,000 additional public housing places	\$3.57b	Unfavourable	More housing may increase emissions, but more efficient design could reduce the impact.
Health	\$1.5b	Neutral	No effect on emissions.
Supporting Kiwis in to work	\$238m	Neutral	No effect on emissions.
Law and order		Neutral	No effect on emissions.
Accelerating private investment in lower emissions	\$300m	Very favourable	It will directly reduce emissions.
Electric vehicle charging infrastructure	\$120m	Very favourable	It will directly encourage lower emissions.
Supporting community energy resilience	\$50m	Very favourable	Investment in local renewable energy will lower emissions.
Improving our data on the impacts of climate change	\$45m	Very favourable	Better information on adaptation and mitigation.
Decarbonising hard-to-abate sectors	\$32m	Very favourable	Investment in green hydrogen to help decarbonise energy in hard-to-abate sectors.
Whānau and tamariki	\$407m	Neutral	No effect on emissions.
Māori housing and infrastructure	\$223m	Unclear	Not enough info on the net effect on emissions.
Language, culture, and identity	\$143m	Neutral	No effect on emissions.
Natural environment and climate change	\$60m	Very favourable	Building Māori communities' resilience by improving their access to key climate data.
Pacific education, employment, wellbeing	\$28m	Neutral	No effect on emissions.

Source: NZIER analysis of Budget NZ

Fiscal incentives for climate budgeting

Climate change and meeting climate commitments are fiscal reasons to invest in climate budgeting. Examples of the fiscal risks include the following:

- NZIER estimated that climate change could cause an increase in the annual growth of the Crown liability for natural hazards from 5.3% to 5.5–5.7% through to 2050 (NZIER 2020).
- In a scenario where the price of New Zealand's offshore mitigation purchases aligns with the average of current prices for well-established international emissions markets, purchase cost estimates range from \$7.7 billion to \$9.9 billion, depending on how New Zealand's domestic emissions track in relation to emissions budgets (New Zealand Treasury and Ministry for the Environment 2023).

How to improve the Budget reporting

Three steps are required to improve the quantification of the Budget's climate effects and congruence with commitments.

1. **Identify** the effect of Budget initiatives on emissions output (or not).
2. **Quantify** the effects in a common unit of measure, such as units of CO₂-e.
3. **Monetise** the social cost of carbon emissions generated or avoided over the life of the initiative. This will allow comparison with total expenditure.

Some of this information should be readily available within the Regulatory Impact Statements, but this information is not necessarily easily available when the Budget initiatives are announced. It could be as part of climate budget reporting.

Next steps

NZIER will repeat this exercise next year and welcomes comments on improvements.

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