



Section 1: Addressing Information Failures

This section explains the issues relating to information failures and asymmetries and seeks your views on options to:

- Require large energy users to publish Corporate Energy Transition Plans (including reporting emissions annually), and conduct energy audits every four years
- Develop an electrification information package for businesses looking to electrify process heat, and offer co-funded low-emissions heating feasibility studies for EECA's business partners, and
- Provide benchmarking information for food processing industries.

What's the problem?

This section responds to the following recommendations from:

- the Productivity Commission's *Low Emissions Economy* report:
 - 14.2. MBIE and EECA should review targets relating to industrial emissions reductions to determine whether a reduction in excess of that already forecast would be more helpful in driving emissions reductions.
 - 14.3. MBIE and EECA should review existing initiatives related to information about fuel switching, co-firing, demand reduction and efficiency improvements for process heat, to minimise any information-related barriers to mitigation opportunities.
- the ICC's *Accelerated Electrification* report:
 - 3a. Deterring the development of new fossil fuels in process heat.
 - 3b. Setting a clearly defined timetable to phase out fossil fuels in existing process heat, with coal as the priority.
 - 3c. Reducing regulatory barriers to electrification.

There is a lack of accurate information available to the public, investors and the Government on the emissions performance of firms or products. This information asymmetry limits the ability to assess appropriate policy responses to meet our climate change and economic objectives in a fair and cost-effective manner.

Some entities have poor information about their energy use and emissions. There can be a lack of visibility of the costs and benefits of energy efficiency and emissions reduction projects by senior managers and directors. Energy is often managed at facility level where energy efficiency opportunities are measured in energy units rather than as sources of emission reductions, cost savings or productivity benefits.

These barriers compound so that investments that reduce energy emissions are undervalued relative to other investment options and are not prioritised.

An analysis of voluntary corporate reporting by the McGuinness Institute since 2017¹⁴, including reporting by Climate Change Leaders' Coalition businesses, has found that there is currently a low

¹⁴ See July 2018, Working Paper 2018/03, McGuinness Institute, Analysis of Climate Change Reporting in the Public and Private Sectors.

level of disclosure of climate-related information, and a lack of clarity of where and how information will be reported in the future, or what guidance or standards might be adopted.

What are the options?

To address these issues, we seek feedback on options to:

- Require large energy users to publish Corporate Energy Transition Plans (including reporting emissions annually) and conduct energy audits every four years;
- Develop an electrification information package for businesses looking to electrify process heat, and offer co-funded electrification feasibility studies for EECA’s business partners and;
- Provide benchmarking information for food processing industries.

Corporate energy transition plans

Option 1.1	Require large energy users to publish Corporate Energy Transition Plans (including reporting emissions) and conduct energy audits
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Description

This option would introduce a comprehensive procedural requirement for the largest¹⁵ energy using businesses to publicly report energy use and emissions, carry out periodic energy and emissions audits, and publish their plans and strategies to reduce emissions to 2030. The key elements of this option are outlined in Table 3 below.

This option builds on schemes that have been implemented in Australia, the United Kingdom and across Europe.¹⁶ An example of how this could look in New Zealand is outlined in the table below.

Table 3: Proposed requirements for Corporate Energy Transition Plans

Target group	Annual energy spend (purchased) of greater than \$2 million per annum
Public reporting	Annual corporate-level energy use and emissions, split out by a range of sources including coal, gas, electricity and transport Energy efficiency actions taken that year Plans to reduce emissions to 2030
Government reporting	Businesses annually report to the Government a defined intensity metric (e.g. specific energy consumption/product emissions intensity), by plant/process. This information will be treated in confidence for statistical and policy purposes
Energy auditing	Mandatory energy auditing every four years with Boards required to review the findings

¹⁵ We propose that largest is defined as businesses with an annual energy spend of greater than \$2 million per annum. We estimate around 200 businesses would fall within scope.

¹⁶ Australia’s Energy Efficiency Opportunities (EEO) programme, the UK’s Streamlined Carbon and Energy Reporting Scheme (SECR) and the Energy Savings Opportunity Scheme (ESOS), the EU’s Energy Efficiency Directive (energy audits) and energy management programmes.

Compliance

Public information to be included in annual reports or in separate “corporate energy transition plan” on website

Energy audits meet the government’s guidelines or the company is ISO 50001 certified

Boards required to review the energy audits findings and report compliance to a national scheme administrator

Analysis

Initial analysis of this proposal suggests Corporate Energy Transition Plans may accelerate the adoption of energy saving and emission reducing technologies in response to greater visibility, transparency and accountability on energy use and emissions impact.

We consider the benefits of this option (some of which would be difficult to quantify) include:

- **Businesses:** (large energy users covered by the proposal): Senior management and boards will have better information on the value of energy opportunities available to them. It should generate an increased focus on energy use and emissions. Senior management and boards are required to sign off the reporting.
- **Shareholders and investors:** Improved transparency will provide greater assurance that businesses are actively assessing, managing and disclosing climate-related risks, and taking steps to reduce their exposure to carbon costs where practicable.
- **Government:** It will enable more accurate statistical reporting, evidence-based policy-making, including informing the development of emissions budgets, and assessment of the effectiveness of existing policies.
- **Energy stakeholders:** The plans could outline businesses’ plans for electrification of their sites, which would help Transpower and distributors inform the development of transmission and distribution grids and in planning for new connections.
- **The public:** Improved transparency will enhance public confidence that the largest emitting businesses operating in New Zealand are actively taking responsibility for managing their emissions. This could also increase reputational drivers on the targeted entities as improved transparency will more accurately inform public perceptions of climate change action.

The compliance costs of this proposal will vary according to the extent to which individual businesses have already conducted, and have processes in place for, measurement, reporting and energy audit activities. The compliance costs are not expected to be significant for large energy users. Compliance costs would be composed of:

- **One-off costs:** time spent at the outset on understanding requirements of the scheme, time spent determining any structural issues with compliance e.g. legal structure, and any incremental metering and software costs.
- **Ongoing costs:**
 - incremental annual costs of gathering and collating energy consumption data, record keeping
 - reporting for senior officer sign off, boardroom director sign-off and any extra costs of preparing annual reports
 - energy audit cost every four years (internal or external)
 - undertaking internal quality assurance
 - annual notification of compliance
 - external verification or compliance auditing by the regulator.

There will also be costs to government in establishing the scheme, and in monitoring and compliance activities.

This option is currently our preferred means of encouraging emitters to plan a transition to a low emissions economy. While gathering information is compulsory, the proposal increases transparency and enables firms to plan and act according to their specific circumstance.

It is preferred over the following status quo activities:

- Many large energy users already publish, or have made commitment to publish their emissions and plans to transition. There is no intention to encourage business to reduce the level of information they supply. Rather it aims to create a common format and give others (such as the public, value chain businesses and the government) information they need to make more informed decisions.
- EECA co-funds and undertakes energy audits for its Large Energy User clients. However opportunities are likely to remain unidentified as coverage of the largest energy users is not complete, audits are not undertaken on a regular basis, and – depending on the type of audit undertaken – may only cover a small segment of energy use.

Other options we considered but do not favour was to introduce individual components of the CTPs as standalone requirements (annual public emissions reporting only, or four-yearly energy audits only, etc.). Individual elements on their own will help to address discrete information barriers, but are unlikely to be sufficient to unlock energy efficiency opportunities on their own. Individual components would not provide a strategic and corporate prioritisation of energy efficiency, which evidence shows, is best practice.¹⁷

Related information disclosure requirements

Two other complementary information disclosure requirements have been recently introduced or are underway.

The Government is making changes to make the NZ-ETS18 more transparent to participants and the public through publishing emissions and removals data at the level of individual participants. This will allow for greater understanding of the scheme by the public and allow all participants to have access to the same level of data on which to base their decisions. Some large energy users covered by a Corporate Energy Transition plan option will be NZ-ETS participants. However in the NZ-ETS, most industrial energy users report only their non-energy process emissions. Energy emissions are reported further upstream by producers or importers of fossil fuels rather than users. This does not provide granular information on energy use and emissions at the site, process, and product level.

MBIE and the Ministry for the Environment (MfE) released a discussion document on 31 October 2019 about climate-related financial disclosures.¹⁹ Submissions will close on 13 December.

It proposes the introduction of a mandatory (comply-or-explain) disclosure regime for NZX listed issuers, banks, general insurers, asset managers and asset owners. The objective is to move to a position where the effects of climate change on businesses become routinely considered in business and investment decisions.

¹⁷ IEA (2012). Policy Pathway – Energy Management Programmes for Industry, <https://webstore.iea.org/policy-pathway-energy-management-programmes-for-industry>

¹⁸ Further information available at <https://www.mfe.govt.nz/climate-change/proposed-improvements-nz-ets>

¹⁹ *Climate-related Financial Disclosures – Understanding your business risks and opportunities related to climate change*, October 2019, <https://www.mbie.govt.nz/have-your-say/climate-related-financial-disclosures/>

In the event that a business has emissions reporting requirements under both proposals, the means of compliance would be the same (i.e. annual reports). Under these proposals, entities would be required to disclose information in their annual reports about the risks and opportunities to their businesses that are presented by climate change. The disclosures would need to comply with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).²⁰ Non-disclosure would only be permissible on the basis of the entity's analysed and reported conclusion that they see themselves as not being materially affected by climate change, with an explanation as to why.

The requirements of each proposal are largely targeted at different types of business organisations. The only overlap would appear to be large energy users that are also NZX listed issuers. The only TCFD disclosures that would appear to overlap with the proposals contained in this discussion document relate to:

- Disclosures on Scope 1, Scope 2 and, if appropriate Scope 3 GHG emissions, and the related risks
- The targets used by the organisation to manage climate-related risks and opportunities, and performance against those targets.

Questions

Q1.1	Do you support the proposal in whole or in part to require large energy users to report their emissions and energy use annually publish Corporate Energy Transition Plans and conduct energy audits every four years? Why?
Q1.2	Which parts (set out in Table 3) do you support or not? What public reporting requirements (listed in Table 3) should be disclosed?
Q1.3	In your view, should the covered businesses include transport energy and emissions in these requirements?
Q1.4	For manufacturers: what will be the impact on your business to comply with the requirements? Please provide specific cost estimates if possible.
Q1.5	In your view, what would be an appropriate threshold to define 'large energy users'?
Q1.6	Is there any potential for unnecessary duplication under these proposals and the TCFD disclosures proposed in the MBIE-MfE discussion document on Climate-related Financial Disclosures?

Electrification information package and feasibility studies

Option 1.2	Develop an electrification information package for businesses looking to electrify process heat, and offer EECA's business partners co-funded low-emission heating feasibility studies
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²⁰ *Recommendations of the Task Force on Climate-related Financial Disclosures*, June 2017, p.14, <https://www.fsb-tcf.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>

Description

There were diverse, disparate and sometimes conflicting views from submitters on the Technical Paper *Process Heat in New Zealand: Opportunities and barriers to lower emissions* on the issues, costs and processes relating to electrification.

This option involves a package that could be jointly developed by the Electricity Authority, Transpower, MBIE and EECA to address information-related barriers to electrification. For example, on reliability, resilience, and the process and costs for deploying electrification technologies and on developing new electricity connections. This option addresses in part the ICCC's recommendation to reduce regulatory barriers to electrification (3.c) by providing clear and reliable information on the electrification process. Preliminary information on process heat electrification opportunities is shown in the map in Appendix 5.

This option complements options in section 10 on addressing regulatory barriers to electrification, and could be part of a wider guidance document. The various components of a package are each separable and scalable, and could be offered as a customised service for large sites. They include:

- regularly publishing information on electricity reliability for large sites
- providing information about ways to increase reliability and resilience of electrically-supplied plant and systems; and
- co-funding low-emission heating feasibility studies (including electrification, biomass and demand reduction as appropriate) for EECA's business partners.²¹

Analysis

The primary intended benefit of this option is to provide a reliable and cohesive set of information, and provide clarity and guidance on the electrification process. The information would help identify any hidden costs and reduce transaction costs for businesses exploring options to electrify their process heat, and could enable a wider range of energy users to consider their options for electrifying all or part of their process.

As a new initiative, the Government and Transpower would incur additional administrative costs to resource and develop the information package. The costs could be in the tens or hundreds of thousands of dollars. We have not identified any significant compliance costs associated with this option.

The costs for customised low-emission heating feasibility studies for large sites could be around \$50,000 per site. This estimate is based on the costs incurred by EECA for its existing offering feasibility studies which co-funds 40 per cent or up to \$50,000 for energy efficiency and renewable energy projects for larger businesses.

Questions

Q1.7

Do you support the proposal to develop an electrification information package? Do you support customised low-emission heating feasibility studies? Would this be of use to your business?

Q1.8

In your view, which of the components should be scaled and/or prioritised? Are there any components other than those identified that could be included in an information package?

²¹ EECA has long term collaboration agreements with many of New Zealand's largest energy-using businesses. The list of businesses is available at <https://www.eecabusiness.govt.nz/our-partners-and-suppliers/large-energy-user-partnerships/>

Benchmarking in food processing

Option 1.3 Provide benchmarking information for food processing industries

Description

Food processing industries²² usually have a large number of similar sites: for example, there are over 80 dairy processing facilities, over 85 meat processing sites, and over 40 other food processing sites in New Zealand. These groups of sites have similarities in their processes, but a high degree of variation exists between the best and worst performing sites in terms of energy and emissions performance.

Benchmarking would identify sites that are underperforming in energy efficiency and emissions intensity and would compare them to the top performing sites within the sector. This can inform businesses of feasible energy and emissions targets, and the best practice technologies and process designs within the sector.

This proposal involves facilitating and supporting specific food sectors to:

- Develop appropriate energy and emissions performance benchmarks for their processes and/or products. It would be closely aligned with any reporting requirements as part of the proposal to publish Corporate Energy Transition Plans outlined above. The Meat Industry Association²³ supports the option of benchmarking meat sites to support best practice sharing to raise overall energy and emissions performance.
- Convene learning networks to share best practices, identify clean energy projects and learn from energy experts.

Analysis

Benchmarking would identify sites where key opportunities to improve energy efficiency and reduce emissions exist. Analysis by the University of Waikato²⁴ shows that in the food processing sector, there is significant potential to improve energy management, implement waste heat recovery measures, deploy heat pump technologies, and co-fire coal with biomass to reduce the use of fossil fuels.

Direct costs for benchmarking include measurement and metering of energy and emissions by product or process by site. The cost will vary depending on the data management system requirements, the complexity of the site, and the extent to which a site already has information on their energy use and emissions at the level of detail required. However, the costs are discretionary as the benchmarking proposal is voluntary. If implemented alongside the Corporate Energy Transition Plans, the cost of delivering a benchmarking programme would be significantly reduced.

There are also costs associated with determining appropriate benchmarks, in analysing the performance of each participating site against the benchmark, and in identifying practices that can help to improve performance of the site. These costs would likely be shared between industry and government.

²² As opposed to the single plant highly emissions-intensive industries, such as steel.

²³ The meat industry has the potential to reduce emissions in a cost-effective manner due to its low-temperature heat requirements.

²⁴ University of Waikato (2019). *Options to reduce New Zealand's process heat emissions*. Commissioned by MBIE, MfE and EECA, <https://www.eeca.govt.nz/resources-and-tools/research-publications-and-resources/business-publications-and-resources/>

Questions

Q1.9	Do you support benchmarking in the food processing sector?
Q1.10	Would benchmarking be suited to, and useful for, other industries, such as wood processing?
Q1.11	Do you believe government should have a role in facilitating this or should it entirely be led by industry?

Summary assessment of options against criteria

	Corporate Transition Plans	Individual CTP components	Electrification information package	Electrification feasibility studies	Benchmarking
To what extent is the barrier addressed?	✓✓✓	✓	✓	✓	✓
Primary benefits – emissions reductions	✓✓✓	✓✓	✓	✓✓	✓
Primary benefits – EE & RE	✓✓✓	✓✓	✓	✓	✓
Wider economic effects	✓✓	✓	✓	✓	✓
Compliance costs	XX	X	-	-	X
Administration costs	X	X	X	XX	X

Key: Option under active consideration Option not preferred