Energy Markets Policy
Ministry of Business, Innovation and Employment
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Attention: energymarkets@mbie.govt.nz

Subject: Submission on Discussion Document - Accelerating renewable energy and energy efficiency

1 Name: Great South

2. Email: info@greatsouth.nz

3. This submission is on behalf of an organisation.

4. Which group do you most identify with, or are representing? Economic Development Agency

5. Business name or organisation: Great South

6. Position title: Strategic Projects

7 We intend to upload submissions to our website at www.mbie.govt.nz. Can we include your submission on the website? Yes

8. Can we include your name? No

9. Can we include your organisation? Yes

QUESTIONS

SECTION 1: SECTION 1: ADDRESSING INFORMATION FAILURES

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

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?

Yes – Economist such as Stern, have long warned off the dangers of climate change impacts on our economy and financial security. The impacts of climate change are already felt on New Zealand's economy, with the flooding in Southland showing to what extend business operation can be disrupted for an extended amount of time.

The development and annual reporting on the Corporate Energy Transition Plans and conducting of energy audits every four years would not only enhance the understanding of challenges and opportunities for the business moving forward, but also provide information on a pathway to shareholders, employees, dependent businesses as well as connected communities, services as well as Government departments on their impact in a changing environment moving forward. This is particular important as the interconnectivity of the energy system in NZ means that whether the load capacity/volume of a large energy user determines the pricing, availability of quite a large amount of businesses as well as

households. The likely changes in carbon pricing will determine impacts on energy users as well in future.

However Great South would like to emphasise that not only an energy transition plan but an analysis and disclosure of overall climate risk (both physical, flow on physical impact and transitional (markets, legal, consumers, policy) and the formation of a climate risk mitigation strategy will be beneficial not only to the corporations itself, but also the connected businesses, community as well as government departments. Drought, snowmelt, changes in rain-pattern as well as transitional impacts (markets, consumers, legal and policy) will largely determine the resources, pricing and availability of energy sources moving forward. Particularly so as the legal opinion paper prepared for the Aotearoa Circle, as well as the Ministry for the Environment TCFD report found that business directors that do not understand climate risks, minimising risk or have climate risk mitigation strategies in place may be found liable. They also found that directors need to ensure that companies with public reporting duty disclose of material climate risks. As this information is distributed throughout the financial landscape at present, financial institution providing lending or equity to those firms will require these to be provided to them in future in order to minimise their own exposure risk as well as comply within their own fiduciary responsibilities.

The energy audits and risk mitigation strategies (see question below) would also provide further information to government entities which could be used to inform on future policy and investment on required support to businesses and community.

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?

Great South would like to emphasise that not only an energy transition plan but an analysis and disclosure of overall climate risk (both physical, flow on physical impact and transitional (markets, legal, consumers, policy) and the formation of a climate risk mitigation strategy will be beneficial not only to the corporations itself, but also the connected businesses, community as well as government departments. Drought, snowmelt, changes in rain-pattern as well as transitional impacts (markets, consumers, legal and policy) will largely determine the resources, pricing and availability of energy sources moving forward. Particularly so as the legal opinion paper prepared for the Aotearoa Circle, as well as the MfE TFCD report found that business directors that do not understand climate risks, minimising risk or have risk mitigation strategies in place may be found liable. They also found that directors need to ensure that companies with public reporting duty disclose of material climate risks. As this information is distributed throughout the financial landscape at present, financial institution providing lending or equity to those firms will require these to be provided to them in future in order to minimise their own exposure risk as well as comply within their own fiduciary responsibilities.

Q1.3 In your view, should the covered businesses include transport energy and emissions in these requirements?

Yes. The inclusion of transport energy and emissions will make it easier to accurately determine whether New Zealand is on track to meet the Paris Agreement targets by 2030 and mitigate the worsening impacts from climate change on the economy and community. This will also provide further information about the change in transportation methods to

such as the support of active transport, public transport and other low emission transport modes.

Great South would also recommend for any building to have a renewable energy and heating plan for the building, as well as the utilisation of sustainable low carbon building material and build (passive/active, circular economy/cradle to cradle) as well as undertake a detailed climate risk assessment (i.e. further surface, river and coastal flooding impact.

Q1.4 For manufacturers: what will be the impact on your business to comply with the requirements? Please provide specific cost estimates if possible.

Great South is suggesting for MBIE (through the work EECA) to either provide information on available courses, resources or tools or hold courses, provide tools or other to assist this requirement. As EECA has been working with quite a large majority of these already this will add to businesses assistance.

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?

We recommend that the approach taken aligns with the TCFD disclosure requirements moving forward, as these are internationally developed frameworks that businesses will have to provide in order to secure lending/equity, which is a major part of most businesses operation contribution. We therefore recommend to have an overall climate risk mitigation strategy.

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

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?

Yes – Great South supports the development of an information package for businesses. However Great South sees there are already established non-renewable energy technologies, such as biomass, that has proven to provide the best lifecycle cost benefit to businesses and institutions in the Southland (with more than 33 converted boilers). This is particularly important as the majority of large energy users use process heat. Providing information on a range of options provides for the business to define their most suitable and cost-beneficial option.

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?

n/a – the range of options to reduce emission, with particular focus on all renewable energy sources, which will allow for a diversity within the energy system, which will not only provide resilience from an economic, fuel and impacts on fuel sources from climate change but also stimulate diversity within the economy.

Option 1.3 Provide benchmarking information for food processing industries.

Q1.9 Do you support benchmarking in the food processing sector?

Yes. To create a comparative performance measure energy metric benchmark for process improvement (ie. energy input to unit output).

Q1.10 Would benchmarking be suited to, and useful for, other industries, such as wood processing?

Yes, as above.

Q1.11 Do you believe government should have a role in facilitating this or should it entirely be led by industry?

Governemnt and state sector agencies should lead in facilitating the benchmarking as well as quadruple bottom line and climate risk reporting.

Section 2: Developing markets for bioenergy and direct geothermal use

Option 2.1 Developing users' guide on application of the National Environmental Standards for Air Quality to wood energy

Q2.1 Do you agree that councils have regional air quality rules that are barriers to wood energy? If so, can you point us to examples of those rules in particular councils' plans?

Yes in Southland. Air quality plays an important part in the health and associated cost of our citizen. The HAPINZ study in 2012 found that poor air quality contributes to the premature death of 27 adults each year and a social cost of 100.55 million from human induced sources).

As current rules do allow all users to discharge to air within and outside of air sheds there is no distinction between high and low emitting activity, which would support the adoption and switching from high emitting boilers and fuels (coal) to low emitting fuels (wood energy, electric, other low emitting boilers). Proposals consider the establishment of lowering emissions within air sheds, however that could lead to an adverse outcome where low emitting boilers are established outside of air sheds. We have had numerous cases where one of the lowest emitting process heat boilers (Froeling) were delayed to being installed, as the consenting officers did not understand the benefits of wood energy. We strongly suggest providing information to councils on these. Standards are set in the EU, we strongly suggest adopting their measurement framework to utilise.

Q2.2 Do you agree that a NESAQ users' guide on the development and operation of the wood energy facilities will help to reduce regulatory barriers to the use of wood energy for process heat?

A user guide would be helpful as above, however information on wood energy as an information source needs to be widely incorporated into information provision and decision making by both MBIE and EECA as well as regulatory barriers on air shed air quality improvements need to be overcome.

Q2.3 What do you consider a NESAQ users' guide should cover? Please provide an explanation if possible.

Overall information on benefits of wood energy, information on air particular discharge from each biomass boilers (or source to link), as well as processes and consenting inclusion.

Q2.4 Please describe any other options that you consider would be more effective at reducing regulatory barriers to the use of wood energy for process heat.

n/a

Q 2.5 In your opinion, what technical rules relating to wood energy would be better addressed through the NESAQ than through the proposed users' guide (option 2.1)?

n/a

Facilitating the development of bioenergy markets and industry clusters on a regional basis

Q2.6 In your view, could the Industry Transformation Plans stimulate sufficient supply and demand for bioenergy to achieve desired outcomes? What other options are worth considering?

I have insufficient information to comment on Industry Transformation Plans, but Great South supports the development of the renewable energy markets and industry clusters on a regional basis.

Q2.7 Is Government best placed to provide market facilitation in bioenergy markets?

Both national and regional entities such as Councils and Regional Development Agencies are ideally suited in working together to facilitate the bioenergy markets. The Wood Energy South project established a successful model through a partnership approach between EECA and Venture Southland (now Great South). Although officially finalised the project has lead the way in an on-going transformation in the region of the Wood Energy market (both of supply (fuel and boilers) and demand by businesses and institutions.

Q2.8 If so, how could Government best facilitate bioenergy markets? Please be as specific as possible, giving examples.

For all energy in a region the Government needs to provide a central support and funding for the regional facilitation

Because of the significance of energy source switching it is important that data for all energy demand and supply in a region be collected and made available to the energy market. This includes all uses of energy including transport and residential and industrial heating.

Regional biomass supply data must include biomass from forestry, manufacturing, agriculture and waste as all these sources can contribute to meeting demand. Within a region the biomass can be treated to produce gaseous, liquid and solid biofuels.

Q2.9 In your view, how can government best support direct use of geothermal heat? What other options are worth considering?

Pumped hydro-storage systems to act as a large battery (old established as well as new system such as being investigated in Germany to utilise old mine sites at present. Utilising of old mines sites may become attractive, particular with the phasing out of coal, but also old' decommissioned mine-sites may be of interest. Other technologies include hydrogen as a battery storage or heavy vehicle fuel solution, as well as investigation into alternative

battery technology for e-transport (public and domestic) with designing the battery to transformed into a new battery at the end of it's life.

Section 3: Innovating and building capability

Option 3.1 Expand EECA's grants for technology diffusion and capability-building

Q3.1 Do you agree that de-risking and diffusing commercially viable low-emission technology should be a focus of government support on process heat? Is EECA grant funding to support technology diffusion the best vehicle for this?

New Zealand is fortunate in that it has well proven and established technology (such as producing energy from wood and waste (ie. biogas and biomass). The priority for EECA should be on assisting get the proven technologies used to their maximum whilst supporting new technologies.

Whilst the uptake of biomass (wood energy) has been large the biogas sector has struggled to increase, due to a lack of knowledge of opportunity and a very small amount of turn-key established biogas system. This is particular important in the waste and agriculture environment where waste released methane emissions from landfill/organics/animals that can be turned into valuable fertiliser and energy.

Q3.2 For manufacturers and energy service experts: would peer learning and on-site technology demonstration visits lead to reducing perceived technology risks? Is there a role for the Government in facilitating this?

Yes

Option 3.2 Collaborate with EIHI industry to foster knowledge sharing, develop sectoral low-carbon roadmaps and build capability for the future using a Just Transitions approach

Question 3.3 For EIHI stakeholders: What are your views on our proposal to collaborate to develop low-carbon roadmaps? Would they assist in identifying feasible technological pathways for decarbonisation?

Yes – Great South is interested in supporting this proposal and sharing learnings from various case studies through the Carbon Neutral Advantage project, Wood Energy South project, process heat electrification as well as other projects. Dr Ella Lawton has designed a workshop for the Carbon Neutral Advantage project, which provides a roadmap approach and may be of interest as well.

Question 3.4 What are the most important issues that would benefit from a partnership and co-design approach?

Learning and sharing of a journey

Question 3.5 What, in your view, is the scale of resourcing required to make this initiative successful?

N/A

Section 4: Phasing out fossil fuels in process heat

Option 4.1 Introduce a ban on new coal-fired boilers for low and medium temperature requirements

Option 4.2 Require existing coal-fired process heat equipment supplying end-use temperature requirements below 100°C to be phased out by 2030

Q4.1 Do you agree with the proposal to ban new coal-fired boilers for low and medium temperature requirements?

> Yes. There is no reason why new coal boilers be installed when biomass energy can provide the same heat efficiently and effectively. With good regional biomass fuel supply planning and action there will be no shortage of biomass fuel available. Heat pumps, ground-source heat pump and potentially ammonia heat pumps may provide alternative solutions in addition.

Q4.2 Do you agree with the proposal to require existing coal-fired process heat equipment for end-use temperature requirements below 100 degrees Celsius to be phased out by 2030? Is this ambitious or is it not doing enough?

> Unless decisive policies such as is proposed are adopted and implemented the 2035 and 2050 emission reduction targets will not be met.

Q4.3 For manufacturers: referring to each specific proposal, what would be the likely impacts or compliance costs on your business?

> N/A

Q4.4 Could the Corporate Energy Transition Plans (Option 1.1) help to design a more informed phase out of fossil fuels in process heat? Would a timetabled phase out of fossil fuels in process heat be necessary alongside the Corporate Energy Transition Plans?

> Yes. With proactive action and availability of information on the demand side for energy will assist the supply side for renewable fuel supply to respond appropriately so that there is adequate supply to meet demand.

Q4.5 In your view, could national direction under the RMA be an effective tool to support clean and low GHG-emitting methods of industrial production? If so, how?

> The RMA sets out an appropriate mechanism for achieving desired regional environment effects. The RMA already provides a mechanism for discharges of emissions to air and in the case of water allocation sets a mechanism for catchment plans. Widening the scope of regional air plans to include greenhouse gas emissions to achieve net zero emissions by 2050 would be a very useful tool for achieving the 2035 and 2050 emission targets as well as ensuring a shared responsibility of climate mitigation between Councils and the Government. This at the moment is stalling progress in tackling climate change, as well as providing a not-unified direction of infrastructure provision and community support.

Q4.6 In your view, could adoption of best available technologies be introduced via a mechanism other than the RMA?

Yes. However the RMA already provides for regional management of emissions and regional Councils should either be provided with the information or be trained to acquire appropriate skills to assess best available technologies.

Section 5: Boosting investment in energy efficiency and renewable energy technologies

What could be considered to address these issues?

Q5.1 Do you agree that complementary measures to the NZ-ETS should be considered to accelerate the uptake of cost-effective clean energy projects?

Yes

Q5.2 If so, do you favour regulation, financial incentives or both? Why?

Financial incentive. These could come from the proceedings from the ETS, which will provide both stimulus and drive the market.

Thank you very much for the opportunity to submit on the renewable energy and energy efficiency consultation document. Due to other commitment were not able to provide input on other questions.