Accelerating renewable energy and energy efficiency - Have your say

Introduction

* 1. **Name (first and last name)**

Kirk Archibald

* 2. **Email**

Privacy of natural persons

* 3. **Is this an individual submission, or is it on behalf of a group or organisation?**

☐Individual
☒On behalf of a group or organisation

* 4. **Which group do you most identify with, or are representing?**

☐ Iwi or hapū
☐ General public
☐ Environmental
☒ Local government
☐ Research institute / academia
☐ Transmission or distribution sector
☐ Industry or industry advocates
☐ Central government agency
☐ Other (please specify)
☐ Electricity sector
☐ Community organisation
☐ Energy intensive and highly integrated industry
☒ Large energy user
☐ Oil and gas sector
☐ Biomass or geothermal sector
☐ Consultant, financial services etc
☐ Coal sector

*5. **Business name or organisation (if applicable)**

Auckland Council

*6. **Position title (if applicable)**

Energy Efficiency and Sustainability Manager, Community Facilities

* 7. **Important information about your submission (important to read)**

The information provided in submissions will be used to inform the Ministry of Business, Innovation and Employment's (MBIE's) work on *Accelerating renewable energy and energy efficiency*.

We will upload the submissions we receive and publish them on our website. If your submission contains any sensitive information that you do not want published, please indicate this in your submission.

The Privacy Act 1993 applies to submissions. Any personal information you supply to MBIE in the course of making a submission will only be known by the team working on the *Accelerating renewable energy and energy efficiency*.

Submissions may be requested under the Official Information Act 1982. Submissions provided in confidence can usually be withheld. MBIE will consult with submitters when responding to requests under the Official Information Act 1982.

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

☒ Yes
☐ No

* 8. **Can we include your name?**

☒Yes
☐No

* 9. **Can we include your organisation (if submitting on behalf of an organisation)?**

☒Yes
☐ No

10. All other personal information will not be proactively released, although it may need to be released if required under the Official Information Act.

Please indicate if there is any other information you would like withheld.

11. **[FOR INDIVIDUALS] Where are you located?**

☐ Northland / Te Tai Tokerau
☐ Auckland / Tamaki-makau-rau
☐ Waikato
☐ Bay of Plenty / Te Moana-a-Toi
☐ Gisborne / Te Tai Rāwhiti
☐ Hawke's Bay / Te Matau-a-Māui
☐ Taranaki
☐ Manawatū-Whanganui
☐ Wellington / Te Whanga-nui-a-Tara
☐ Tasman / Te Tai-o-Aorere
☐ Nelson / Whakatū
☐ Marlborough / Te Tauihu-o-te-waka
☐ West Coast / Te Tai Poutini
☐ Canterbury / Waitaha
☐ Otago / Ōtākou
☐ Southland / Murihuku
☐ Outlying Islands, including Chatham Islands

12. **[FOR ORGANISATIONS] In what region or regions does your organisation mostly operate?**

☐ Northland / Te Tai Tokerau
☒ Auckland / Tamaki-makau-rau
☐ Waikato
☐ Bay of Plenty / Te Moana-a-Toi
☐ Gisborne / Te Tai Rāwhiti
☐ Hawke's Bay / Te Matau-a-Māui
☐ Taranaki
☐ Manawatū-Whanganui
☐ Wellington / Te Whanga-nui-a-Tara
☐ Wellington / Te Whanga-nui-a-Tara
☐ Tasman / Te Tai-o-Aorere
☐ Nelson / Whakatū
☐ Marlborough / Te Tauihu-o-te-waka
☐ West Coast / Te Tai Poutini
☐ Canterbury / Waitaha
☐ Otago / Ōtākou
☐ Southland / Murihuku
☐ Outlying Islands, including Chatham Islands

Areas you wish to provide feedback on

The *Accelerating renewable energy and energy efficiency* discussion document examines a range of barriers and issues, and seeks feedback on a range of options. The document is divided in two parts:

- **Part A: Encouraging greater energy efficiency and the uptake of renewable fuels in industry (process heat)**
- **Part B: Accelerating renewable electricity generation and infrastructure (renewable electricity generation)**

Each part has multiple sections. You are invited to provide feedback and respond to questions in as many, or as few of the sections as you would like, depending on your interests.

13. **<u>Part A</u> relates to process heat.**

Please indicate which sections, if any, you would like to provide feedback on.

☒ Section 1: Addressing information failures

☒ Section 2: Developing markets for bioenergy and direct geothermal use

☒ Section 3: Innovating and building capability

☒ Section 4: Phasing out fossil fuels in process heat

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

☒ Section 6: Cost recovery mechanisms

14. **<u>Part B</u> relates to renewable electricity generation.**

Please indicate which sections, if any, you would like to provide feedback on.

☒ Section 7: Enabling renewables uptake under the Resource Management Act 1991

☒ Section 8: Supporting renewable electricity generation investment

☒ Section 9: Facilitating local and community engagement in renewable energy and energy efficiency

☐ Section 10: Connecting to the national grid

☐ Section 11: Local network connections and trading arrangements

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 Energy Efficiency and Conservation Authority's (EECA's) business partners, and • Provide benchmarking information for food processing industries.**

15. **Option 1.1 would require large energy users to report their emissions and energy use annually, publish Corporate Energy Transitions Plans and conduct energy audits every four years. Do you support this option?**

☒ Yes - I fully support this option

☐ I support this option in part

☐ No - I do not support this option

16. **Please explain your answer**

Most large energy users (including Auckland Council) have committed to produce transition plans as part of the Climate Leaders Coalition.

Auckland Council and CCOs have or are developing Greenhouse Gas (GHG) Emission Reduction plans and which will report GHG emissions annually.

We would like to clarify the requirement for energy audits, while Auckland Council is a large energy user, this is spread across thousands of properties. We suggest a threshold for energy audits for facilities with over 100 tCO_2e per year.

17. **Which parts (set out in Table 3 of Section 1 in the discussion document) do you support?**

☐ Target group - companies with an annual energy spend of greater than $2 million per annum

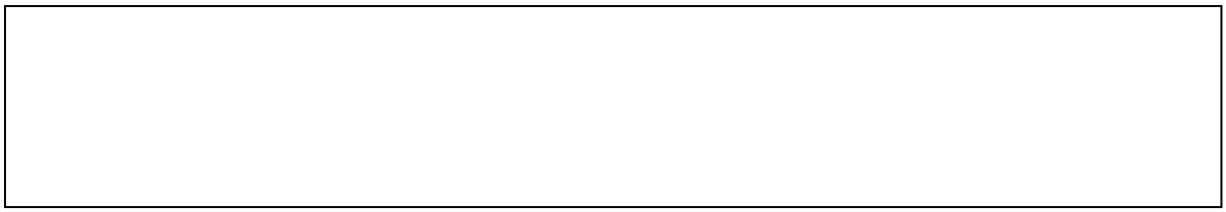
☐ Public reporting

☐ Government reporting

☐ Energy auditing

☐ Compliance

18. **Please explain your answer**



19. **What public reporting requirements (listed in Table 3) should be disclosed?**

☒ 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

☐ Other (please specify)

As previously discussed, Auckland Council and CCOs currently produce this information and most large energy users are required to through memberships like the climate leader's coalition.

20. **In your view, should businesses be expected to include transport energy and emissions in these reporting requirements?**

☒ Yes

☐ No

Please explain your answer

Yes as if they are material to the business they will need to be reported on anyway as part of GHG inventories

21. **For manufacturers: what will be the impact on your business to comply with the requirements?**

☒ No impact

☐ Some impact

☐ Significant impact

Please provide specific cost estimates if possible

22. **Option 1.1. Suggests that requirements to publish Corporate Energy Transition Plans should apply to large energy users, and proposes defining *large energy users* as those with an annual energy spend (purchased) of greater than $2 million per annum.**

Do you agree with this definition?

☐ Yes

☒ No

23. **If you selected no, please describe what in your view would be an appropriate threshold to define 'large energy users'.**

We suggest that a "Large Energy User" is classified by energy use or GHG emissions rather than spend.

24. **Is there any potential for unnecessary duplication under these proposals and the disclosures proposed in the MBIE-Ministry for the Environment discussion document** *Climate-related Financial Disclosures – Understanding your business risks and opportunities related to climate change, October 2019*?

☒ No

☐ Yes (please explain)

No, however ideally, public reporting requirements could be met through existing reporting rather than new stand-alone reporting.

Section 1 - Option 1.2: Electrification information package and feasibility studies

The questions on this page relate to Option 1.2

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

25. **Do you support the proposal to develop an electrification information package?**

☒ Yes

☐ No

26. **Would an electrification information package be of use to your business?**

☒ Yes

☐ No

27. **Do you support customised low-emission heating feasibility studies?**

☒ Yes

☐ No

28. **In your view, which of the components should be scaled up and/or prioritised?**

	Scaled up	Prioritised
regularly publishing information on electricity reliability for large sites	☐	☐
providing information about ways to increase reliability and resilience of electrically- supplied plant and systems	☐	☐
co-funding low-emission heating feasibility studies for EECA's business partners	☐	☐

29. **Would a customised low-emission heating feasibility study be of use to your business?**

☒ Yes

☐ No

30. **Please describe any components other than those identified that could be included in an**

information package.

Natural gas used in cremation is a significant GHG emission source for Auckland Council and local government in general. Customised low-emission heating feasibility studies will be essential to reduce emissions from these sources and will be applicable across the local government sector.

Section 1 - Option 1.3: Provide benchmarking information for food processing industries

31. **Do you support benchmarking in the food processing sector?**

☒ Yes

☐ No

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

☐ No

☒ Yes (please specify)

Benchmarking for the following areas would be relevant for Auckland Council

Aquatic Centres

Crematoriums

Water Treatment

Wastewater Treatment

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

☒ Government should have a role

☐ Should be led entirely by industry

34. **Please explain your answer**

While benchmarking is highly valuable, due to competition within industries benchmarking does not tend to be market led.

Section 2: Developing markets for bioenergy and direct geothermal use

This section examines barriers to the use of woody biomass and direct geothermal for process heat and seeks your feedbacks on our options to:

- **Develop a users' guide on application of the National Environmental Standards for Air Quality (NESAQ) to wood energy**
- **Facilitate development of bioenergy markets and industry clusters on a regional basis within Industry Transformation Plans, and**
- **Support recent initiatives underway to grow the bio-economy and support direct use of geothermal heat.**

Guidance on Resource Management Act consenting for wood energy plants

35. **Do you agree that some councils have regional air quality rules that are barriers to wood energy?**

☐ Strongly disagree

☐ Disagree

☒ Neither agree nor disagree

☐ Agree

☐ Strongly agree

36. **Please provide examples of regional air quality rules that you see as barriers to wood energy.**
Please also note which council's plan you are referring to.

Auckland Council took significant effort during the Auckland Unitary Plan drafting process to work with industry groups to rationalise air discharge rules relating to commercial and industrial scale wood combustion. The resulting rules (AUP(OP) Rules E14.4.1(A49 – A53) classify air discharges from new wood combustion activities as Permitted (up to 500 kW gross heat release, no specific controls), Controlled (up to 2 MW, with stack height, <25% wood moisture content, and emission control requirements in E14.6.2.1), Restricted Discretionary (up to 10 MW, with stack height, <25% wood moisture content and emission control requirements in E14.6.3.1), or Discretionary.

Therefore, Resource Consent (with accompanying assessment of effects) is required for any wood combustion activity above 500 kW gross heat release. These rules do present some barriers to the adoption of large-scale wood energy in Auckland, but appropriately balance the risks associated with discharges of Fine Particulate Matter (PM10 and PM2.5), which are more significant for wood combustion than natural gas (which is the main heat source in Auckland's industry).

Many wood combustion activities would classify as 'significant new PM_{10} sources' under the definition of Regulation 17 of the NES:AQ and therefore be prohibited from establishing in 'Polluted Airsheds' under the NES:AQ without 'offsetting' PM_{10}. This means that new wood energy plants may not be consented in some airsheds (Auckland was a Polluted Airshed from 2013-2018). However, conversions of coal energy plants to wood should not be impacted as the cessation of coal emissions would constitute the 'offset' under Regulation 17 of the NES:AQ.

37. **Do you agree that a National Environmental Standards for Air Quality (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?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☒ Agree

☐ Strongly agree

Please explain your answer

A Users' Guide, or Good Practice Guide, would assist both industry and councils to standardise assessments for Air Discharge Consent Applications for wood energy plants. This would increase certainty and efficiency.

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

Key items to include will be:

- Recommended $PM_{2.5}$ & PM_{10} discharge rates;
- A threshold of significance to trigger a dispersion modelling exercise or not;
- Best Practice guidance for emission control systems and monitoring (baghouse filter area; opacity meters);
- Information requirements to be included in an assessment (fuel characteristics, rates of use, location, stack parameters, emission control systems)
- Reference to Good Practice Guide for Assessing Discharges to Air from Industry (MfE, 2016).

39. **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.**

40. **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)?

NES:AQ Regulation 17 presents challenges for new wood energy installations (but not conversions of coal to wood). It is essentially Prohibited to install new wood energy in a Polluted Airshed, given the PM_{10} discharges and Regulation 17 restrictions.

Section 2 - continued: Developing markets for bioenergy and direct geothermal use

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

41. **In your view, could the *Industry Transformation Plans* stimulate sufficient supply and demand for bioenergy to achieve desired outcomes?**

☒ Yes

☐ No

42. **What other options are worth considering?**

Industry Transformation Plans focused on developing "clusters" around bioenergy should also be considered for other types of bioenergy, such as the biogas produced by anaerobic digestion. Anaerobic digestion is most effective on environmental outcomes when set up somewhere where a customer in reasonable proximity could use the biogas captured for heat and energy, as well as utilising other beneficial by products (digestate that can be used as a fertiliser)

43. **Is Government best placed to provide market facilitation in bioenergy markets?**

☒ Yes

☐ No

44. **How could Government best facilitate bioenergy markets?**

Please be as specific as possible, giving examples.

EECA's wood energy and Wood Energy South programme's have been very effective in stimulating bioenergy markets. We suggest re-establishing and expanding these programmes

45. **In your view, how can government best support direct use of geothermal heat?**

46. **What other options are worth considering?**

Algae and carbon capture & storage technology. For example – algae feeding on CO2 from cogeneration exhausts then used as fertilizer, plastics or as a liquid biofuel.

Section 3: Innovating and building capability

This section explains the issues around technology risk for process heat users, and the lack of viable low carbon solutions for emissions-intensive and highly integrated (EIHI) industries. It seeks your views on options to:

- **Expand Energy Efficiency and Conservation Authority's (EECA's) grants for technology diffusion and capability-building, and**
- **Collaborate with EIHI industries to foster knowledge sharing, develop sectoral low-carbon roadmaps and build capability for the future using a Just Transitions approach.**

Technology diffusion and capability-building

47. **Do you agree that de-risking commercially viable low-emission technology should be a focus of government support on process heat?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

Please explain your answer

The capital investments required for many low-emission technologies are high, and it is important that these technologies are suitable and low-risk to enable and accelerate uptake. Information sharing & benchmarking is also useful for business case development and de-risking projects.

48. **Do you agree that diffusing commercially viable low-emission technology should be a focus of government support on process heat?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

Please explain your answer

Local examples of technology are essential for building confidence and capability in the technology and reducing risks around investment. Auckland Council is investing in technologies with local examples co-funded through EECA's technology demonstration fund. Without local examples this investment could not have been approved.

49. **Is Energy Efficiency and Conservation Authority (EECA) grant funding to support technology diffusion the best vehicle for this?**

☒ Yes

☐ No

50. **For manufacturers and energy service experts: would peer learning and lead to reducing perceived technology risks?**

☒ Yes

☐ No

51. **For manufacturers and energy service experts: would on-site technology demonstration visits lead to reducing perceived technology risks?**

☒ Yes

☐ No

52. **Is there a role for the Government in facilitating this?**

☒ Yes

☐ No

Please expand on your answer

EECA's existing technology demonstration funding criteria is narrow, co-funding caps are too low and the total budget too small to make a major impact on investment in energy efficiency and renewable energy technology. We recommend allowing more demonstrations of the same technology to be funded, increasing the cap on funding for project and increasing the total budget.

Section 3 (continued): Innovating and building capability

On this page, we are seeking your feedback on industrial innovation and transitioning to a low-carbon future.

53. **For emissions-intensive and highly integrated (EIHI) stakeholders: What are your views on our proposal to collaborate to develop low-carbon roadmaps?**

54. **Would low-carbon roadmaps assist in identifying feasible technological pathways for decarbonisation?**

☒ Yes

☐ No

Please expand on your answer

55. **What are the most important issues that would benefit from a partnership and co-design approach?**

Focussing not only on just transitions for industry but on communities that may impacted from the transition to renewable energy. That is ensuring that new employment opportunities will exist in renewable energy for those impacted by the phase out of non-renewable energy. For Auckland, this is particularly relevant for mana whenua and mātāwaka working at the Glenbrook steel mill and industries that supply the steel mill.

56. **What, in your view, is the scale of resourcing required to make this initiative successful?**

Section 4: Phasing out fossil fuels in process heat

This section explains the issues around long-lived process heat investments and emissions lock-in, and seeks your views on options to:

- **Deter the development of any new coal-fired process heat, through a ban on new coal-fired process heat equipment for low and medium temperature requirements, and**
- **Require existing coal-fired process heat equipment supplying end-use temperature requirements below 100°C to be phased out by 2030.**

Deterring the development of any new fossil fuel process heat

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

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

58. **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?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☒ Agree

☐ Strongly agree

59. **Referring to Question 57 - is this ambitious or is it not doing enough?**

☐ Ambitious

☒ Not doing enough

Please explain your answer

We agree to ban new coal-fired boilers for this temperature range, as there is commercially available technology to transition. As stated in the discussion paper, the operating life of a coal boiler is around 25 years, and the decisions made now will impact our ability to transition to the target of net zero emissions by 2050 in the Climate Change Response (Zero Carbon) Amendment Bill.

We support the phase-out of coal-fired process heat for low temperature process heat, to ensure existing coal boilers are phased out over a long-time span. This provides industry with certainty on the future of coal use for low temperature process heat and could further incentivise the market to develop affordable and sustainable low carbon alternatives.

Industrial stationary energy emissions (scope 1) contribute to 9.4 per cent of Auckland's total emission profile[1]. Most of these emissions are produced from the use of natural gas. To enable Auckland's transition to a net zero future, it is important that emissions from process heat are adequately addressed. Auckland Council requests for Central Government to provide support and enable the low temperature process heat users to move to electrification. High temperature process heat users have limited ability to transition due to lack of available technologies, which increases the importance for low to medium users to transition in the interim period.

[1] https://knowledgeauckland.org.nz/media/1057/tr2019-002-aucklands-greenhouse-gas-inventory-to-2016.pdf

60. **For manufacturers: what would be the likely impacts or compliance costs on your business of a** *ban on new coal-fired process heat equipment?*

61. **For manufacturers: what would be the likely impacts or compliance costs on your business of** *requiring existing coal-fired process heat equipment supplying end-use temperature requirements below 100°C to be phased out by 2030.*

62. **Could the Corporate Energy Transition Plans (Option 1.1) help to design a more informed phase out of fossil fuels in process heat?**

☒ Yes

☐ No

Please explain your answer

Auckland Council supports the Corporate Energy Transition Plans to enable an informed phase out of fossil fuels. It is important to align the phase out of fossil fuels in process heat with a boiler's end of life. A long-term pathway, highlighting key points of required capital investment and available solutions, would enable Auckland's industry to slowly transition.

The Corporate Energy Transition Plans are only for large energy users and we would also like for small to medium process heat users to be fully supported through the transition.

63. **Would a timetabled phase out of fossil fuels in process heat be necessary alongside the Corporate Energy Transition Plans?**

☒ Yes

☐ No

Please explain your answer

Clear, time bound targets would be critical to achieving a transition. We support the inclusion of a timetabled phase out of fossil fuels in process heat, as outlined in our response to question 62 and to provide long-term certainty to industry.

64. **In your view, could national direction under the Resource Management Act (RMA) be an effective tool to support clean and low greenhouse gas-emitting methods of industrial production?**

☒ Yes

☐ No

65. **If yes, how?**

Clear, time bound targets would be critical to achieving a transition. Support as discussed above from EECA would help to ensure a just transition.

Auckland Council supports the RMA being used as a tool to address climate change mitigation.

Climate change mitigation should be prioritised as a matter of national importance, under Part 2 of the RMA. We recommend that national direction under the RMA should be provided to support climate change mitigation. This could include:

- A National Environment Standard with controls on emissions (linked to the carbon budgets being developed by the Climate Change Commission under the Climate Change Response (Zero Carbon) Amendment Act 2019)
- A National Policy Statement to support the transition to a low carbon, circular and regenerative economy.

Council supports the RMA playing a complementary role to the New Zealand Emissions Trading Scheme (NZ ETS) in addressing climate change mitigation. The current government focus is on the NZ ETS as the main policy tool to address climate change mitigation. Council's position is that the NZ ETS is only one of several important tools to address climate change mitigation. We are concerned that relying on the NZ ETS as the main tool will be insufficient to reach our climate commitments, particularly as some of the largest contributors to New Zealand's total GHG emissions have limited exposure to the market mechanism the NZ ETS uses to discourage emissions. From 2008, when the NZ ETS was introduced, to 2017, New Zealand's net GHG emissions increased by 16.5 per cent.

To achieve the objectives of the Climate Change Response Act 2002, including reducing all GHG (except biogenic methane) to net zero by 2050, other central government legislation will need to support its delivery and not impose policy barriers or conflicts that undermine the Act's intent. It is critical that other legislation, including the RMA and the Building Act, supports and aligns with the Climate Change Response Act 2002 as the framework for New Zealand's transition to a low emissions and climate resilient economy.

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

☒ Yes

☐ No

Please explain your answer

Energy Efficiency Revolving Funds could be used where companies are given part or whole of the seed funding and are required to reinvest their savings over a pre-determined time period, to implement and support non-BAU energy and carbon-decision initiatives. This would need to be supported by an audit function but could have a competitive/gamified nature to it.

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

This section explains the issues relating to underinvestment in energy efficiency and renewable energy technologies. It seeks your views on whether the Government should be considering these issues and how these issues could be addressed.

67. **Do you agree that complementary measures to the New Zealand Emissions Trading Scheme (NZ-ETS) should be considered to accelerate the uptake of cost-effective clean energy projects?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

68. **Would you favour regulation, financial incentives or both?**

☐ Regulation

☐ Financial incentives

☒ Both

☐ Neither

Please explain your answer

Regulation as discussed in the preceding questions.

Financial incentives as discussed in question 52 and additional financial incentives around scoping and feasibility studies for energy efficiency and renewable energy initiatives. In the same way that capital grants provide demonstration of new technology and de-risk investment, grants for scoping energy efficiency opportunities or establishing the feasibility of new technology de-risk the business case phase of what can be significant investment.

69. **In your view what is a bigger barrier to investment in clean energy technologies, internal competition for capital or access to capital?**

☒ Internal competition for capital

☐ Access to capital

70. **If you favour financial support, what sort of incentives could be considered?**

See Q52 & Q68

71. **What are the benefits of these incentives?**

See Q52 & 68

72. **What are the risks of these incentives?**

The risk that government co-investment, projects don't go ahead or fail.

73. **What are the costs of these incentives?**

Entirely dependent of project scale

74. **What measures other than those identified above could be effective at accelerating investment in clean energy technologies?**

Section 6: Cost recovery mechanisms

This section seeks your views on introducing a levy on consumers of coal to partially recover the cost of implementing any new policies in Part A that may be introduced.

75. **What is your view on whether cost recovery mechanisms should be adopted to fund policy proposals in Part A of the** *Accelerating renewable energy and energy efficiency* **discussion document?**

A levy on coal should be implemented. However, while the levy should be directed to improving efficiency and fuel switching, it should also be able to support renewable electricity projects that could indirectly reduce coal use or enable electrification.

76. **What are the advantages of introducing a levy on consumers of coal to fund process heat activities?**

Consistency with other energy sources

77. **What are the disadvantages of introducing a levy on consumers of coal to fund process heat activities?**

Industries that have little alternative to coal (e.g. steel) will pay a large share of the levy but may not have opportunity to make use of levy funds to significantly reduce or switch from coal. In this case levy funds should be able to be used for R&D opportunities to reduce coal in industrial processes.

Time delay between realising the benefits of electrifying process heat and paying increased cost of levy.

Section 7: Enabling development of renewable energy under the Resource Management Act 1991

This chapter considers policy options to enable renewable energy development under the Resource Management Act 1991 (RMA). We seek your views on the following key options:

- **Amending the National Policy Statement for Renewable Electricity Generation (NPSREG) to provide stronger direction on the national importance of renewables**
- **Scoping National Environmental Standards or National Planning Standards specific to renewable energy (note: we propose to prioritise amending the NPSREG while proceeding with this scoping work.)**
- **Other options including spatial planning, pre-approval of new renewable energy developments, and amending other RMA national direction instruments.**

This chapter also notes a wider range of options that could enable renewable development, including the comprehensive review of the resource management system.

Amending the National Policy Statement for Renewable Electricity Generation (NPSREG)

78. **Do you agree that the current NPSREG gives sufficient weight and direction to the importance of renewable energy?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☐ Strongly agree

79. **What changes to the NPSREG would facilitate future development of renewable energy?**

80. **What policies could be introduced or amended to provide sufficient direction to councils regarding the matters listed in points *a-i* mentioned on pages 60-61 of the discussion document?**

A site 'blacklist' as described in point b(iii) would be beneficial for investors & planners, as well as efforts to fast-track the upgrade of existing renewable generation sites in points d, e & f.

81. **How should the NPSREG address the balancing of local environmental effects and the national benefits of renewable energy development in RMA decisions?**

82. **What are your views on the interaction and relative priority of the NPSREG with other existing or pending national direction instruments?**

83. **Do you have any suggestions for how changes to the NPSREG could help achieve the right balance between renewable energy development and environmental outcomes?**

A national position statement on the appropriateness of waste-to-energy must be developed before we can include waste-to-energy in the NPSREG. Auckland Council's position is that mixed source waste-to-energy sits at the bottom of the waste hierarchy and is not a renewable energy but recognises that it may be an appropriate option for some hard to manage single-source waste streams. We therefore recommend that any amendment to the policy statement is undertaken in conversation with the Ministry for the Environment and local government to inform a best-practice response on the appropriateness of waste-to-energy in an Aotearoa context.

84. **What objectives or policies could be included in the NPSREG regarding councils' role in locating and planning strategically for renewable energy resources?**

85. **Can you identify any particular consenting barriers to development of other types of renewable energy than REG, such as green hydrogen, bioenergy and waste-to-energy facilities?**

The current resource consent requirements for waste-to-energy must be upheld to ensure appropriate usage of this technology in Aotearoa. As well as the potential air quality impacts, by-products of waste-to-energy may be toxic, and it is therefore important that we manage these in line with their potential impacts.

86. **Can any specific policies be included in a national policy statement to address these barriers?**

87. **What specific policies could be included in the NPSREG for small-scale renewable energy projects?**

88. **The NPSREG currently does not provide any definition or threshold for "small and community-scale renewable electricity generation activities". Do you have any view on the definition or threshold for these activities?**

Bands of user types could be developed such as "Large Energy User" if this is beneficial to the user – e.g. improved likelihood of a renewable generation project being approved or being eligible for financial incentives/support from government.

There are clear distinctions between users who generate primarily for self-consumption and those who primarily generate to export to the wholesale electricity market.

89. **What specific policies could be included to facilitate re-consenting consented but unbuilt wind farms, where consent variations are needed to allow the use of the latest technology?**

90. **Are there any downsides or risks to amending the NPSREG?**

Section 7 - continued

This page asks for your feedback on Proposal 7.2 - which consists of:

- **Option A: Scope National Environmental Standards for Renewable Energy Facilities and Activities**
- **Option B: Scope additional renewable-energy-related content for inclusion in the National Planning Standards**

91. **Do you agree that National Environmental Standards (NES) would be an effective and appropriate tool to accelerate the development of new renewables and streamline re-consenting?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

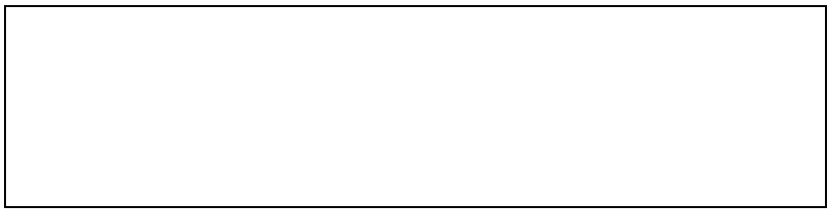
☒ Agree

☐ Strongly agree

92. **What are the pros of using National Environmental Standards as a tool to accelerate the development of new renewables and streamline re-consenting?**

93. **What are the cons of using National Environmental Standards as a tool to accelerate the development of new renewables and streamline re-consenting?**

94. **What do you see as the relative merits and priorities of changes to the NPSREG compared with work on NES?**



95. **What are the downsides and risks to developing NES?**

96. **What renewables activities (including both REG activities and other types of renewable energy) would best be suited to NES?**

97. **What technical issues could best be dealt with under a standardised national approach?**

98. **Would it be practical for NES to set different types of activity status for activities with certain effects, for consenting or re-consenting?**

☐ It would be practical

☐ It would be impractical

Please explain your answer

99. **Are there any aspects of renewable activities that would have low environmental effects and would be suitable for having the status of permitted or controlled activities under the RMA?**
Please provide details.

In Auckland residential solar is a permitted activity.

However, ensuring that businesses can install solar PV to meet their generation needs with minimal constraints is advantageous to encourage distributed generation solutions.

100. **Do you have any suggestions for what rules or standards could be included in NES or National Planning Standards to help achieve the right balance between renewable energy development and environmental outcomes?**

101. **Compared to the NPSREG or National Environment Standards, would National Planning Standards or any other RMA tools be more suitable for providing councils with national direction on renewables ?**

☐ NPSREG or NES are sufficient

☐ National Planning Standards would be more suitable

☐ A different RMA tool would be more suitable (please specify)

102. **Please explain your answer**

Section 7 - continued

On this page, we are seeking your feedback on options that we have considered, but at this stage we do not recommend be developed further. Including:

- **Spatial planning**
- **Pre-approval of new renewables developments**
- **Amending the National Policy Statement on Electricity Transmission and the National Environmental Standards for Electricity Transmission Activities**

Pre-approval of new renewables developments could include:

- **Planning approaches including relatively permissive consenting rules for renewables in defined areas**
- **Crown acquiring consents for transfer to developers**
- **New statutory allocation process**

We need more information on the merits of these options before deciding whether further work is warranted.

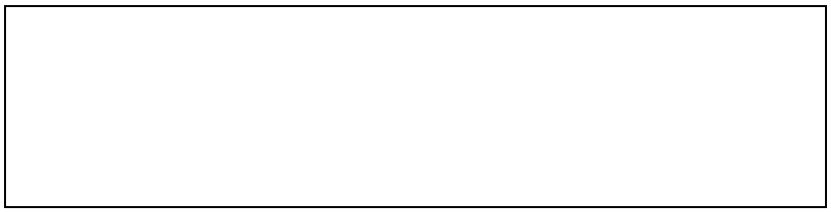
103. **Are there opportunities for non-statutory spatial planning techniques to help identify suitable areas for renewables development (or no go areas)?**

☒ Yes

☐ No

Please explain your answer

104. **Do you have any comments on potential options for pre-approval of renewable developments?**



105. **Are the current National Policy Statement on Electricity Transmission (NPSET) and National Environmental Standards for Electricity Transmission Activities (NESETA) fit-for-purpose to enable accelerated development of renewable energy?**

	Fit-for-purpose	**NOT** fit-for-purpose
NPSET	◯	◯
NESETA	◯	◯

Please explain your answer

106. **What changes (if any) would you suggest for the NPSET and NESETA to accelerate the development of renewable energy?**

107. **Can you suggest any other options (statutory or non-statutory) that would help accelerate the future development of renewable energy?**

Require retailers to offer a fair price for solar exports. Retailers should not be offering prices at wholesale rates whereas Auckland Council operations and CCO's have found retailers offering below wholesale rates or adding fees for accepting exports.

Section 8: Supporting renewable electricity generation investment

This chapter considers policy options to accelerate investment in supply- and demand-side renewable electricity generation and energy efficiency. We seek your views on the following:

- **Introduce a Power Purchase Agreement (PPA) Platform**
- **Encourage greater demand-side participation and develop the demand response market**
- **Deploy energy efficiency resources via retailer/distributor obligations**
- **Developing offshore wind assets**
- **Introduce renewable electricity certification and portfolio standards**
- **Phase down thermal baseload and place in strategic reserve**

This chapter also notes other options that could support investment in renewable electricity generation and includes them for your feedback, however we are not recommending further investigation of these options at this stage.

Power Purchase Agreement (PPA) Platform

108. **Do you agree there is a role for government to provide information, facilitate match-making and/or assume some financial risk for PPAs?**

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
Provide information	○	○	○	○	●
Facilitate match-making	○	○	●	○	○
Assume some financial risk	○	○	●	○	○

109. **Would support for PPAs effectively encourage electrification?**

☒ Yes – support for PPAs would effectively encourage electrification

☐ No

110. **Would support for PPAs effectively encourage new renewable generation investment?**

☒ Yes – support for PPAs would effectively encourage new renewable generation investment

☐ No

111. **How could any potential mismatch between generation and demand profiles be managed by the Platform and/or counterparties?**

Through purchasing baseload requirements only

112. **Please rank the following variations on PPA Platforms in order of preference.**

1 = most preferred, 4 = least preferred.

1	Contract matching service
2	State-sector led
3	Government guaranteed contracts
4	Clearing house

113. **What are your views on Contract Matching Services?**

Support

114. **What are your views on State sector-led PPAs?**

It would be useful to be able to have an all of government PPA for large and small scale renewable electricity as most state sector organisations don't have the scale for individual PPAs. However this would not be necessary if the proposals for contract matching or clearing houses went ahead.

115. **What are your views on Government guaranteed contracts?**

116. **What are your views on a Clearing house for PPAs?**

Support

117. **For manufacturers: what delivered electricity price do you require to electrify some or all of your process heat requirements?**

118. **For manufacturers: is a long-term electricity contract an attractive proposition if it delivers more affordable electricity?**

☐ Yes

☐ No

Please explain your answer

119. **For investors / developers: what contract length and price do you require to make a return on an investment in new renewable electricity generation capacity?**

120. **For investors / developers: is a long-term electricity contract an attractive proposition if it delivers a predictable stream of revenues and a reasonable return on investment?**

☐ Yes

☐ No

Please explain your answer

Section 8 - continued

On this page, we are asking for your feedback on demand-side participation and demand response.

121. **Do you consider the development of the demand response (DR) market to be a priority for the energy sector?**

☒ Yes

☐ No

Please explain your answer

Auckland Council agrees that there are several benefits to supporting the development of a robust demand response market, not least as a means of futureproofing the electricity market and supporting the development of distributed energy markets. A DR market with strong traction enables transmission and distribution networks to harness latent energy demand in order to sharpen consumption efficiency and smooth out peak loading.

It enhances the economic rationale for investments into residential energy storage and bi-directional EV chargers; it boosts the efficiency of electricity markets through increased transparency and optimal electricity allocation; and it provides an effective means of addressing the rebound effect among consumers, where reduced energy costs linked to efficiency gains have the perverse behavioural outcome of increased energy consumption.

The lack of an integrated demand response market increases the cost and GHG emissions of electricity for all consumers.

In this regard Auckland Council supports the development of a DR market as being a priority for the energy sector.

122. **Do you think that demand response (DR) could help to manage existing or potential electricity sector issues?**

☒ Yes

☐ No

Energy demand management will play an increasingly important role as more intermittent renewable energy comes online; and as demand for electricity trends upward with a cross-sector shift to electrification.

In this regard Auckland Council agrees that DR has potential to address existing issues relating to peak load management; and future issues that will unfold with burgeoning electricity demand,

market fragmentation, intermittent power generation and bidirectional energy storage, both residential and commercial.

Auckland Council further agrees that demand response markets have the role of futureproofing distributed energy by facilitating peer-to-peer trading and enabling power to be transferred to where it is most needed, at the optimal spot price. Greater transparency through data sharing will also facilitate electricity futures trading and PPA pricing, providing the price certainty needed to secure future renewable energy investment.

123. **What are the key features of demand response markets?**

Internet-of-things (IOT) enabling technologies, like Ripple Effect, are now a proven method of demand management. As more assets such as boilers and EV chargers become IOT-enabled, there will be greater scope for systems-wide energy demand management. Coupled with energy efficiency, DR has the potential to significantly reduce stationary energy emissions, while IOT - enabled assets will support multi-asset remote control at a scale that will ultimately smooth load peaking, enabling intermittent energy sources to be brought online in a managed and staged manner.

Heightened access to free, aggregated (from multiple appliances and sources, for example, solar, EV charger, white goods) real time consumption data through smart technology applications and devices empowers householders to better control, manage and ultimately reduce their own demand.

An integrated market that allows the value of demand response to retailers (managing wholesale price spikes), Transpower (managing grid investment and security) and networks (managing network investment and security) to be captured by consumers, is needed.

124. **Which features of a demand response market would enable load reduction** or **asset use optimisation across the energy system?**

See Q123

125. **Which features of a demand response market would enable the uptake of distributed energy resources**?

See Q123

126. **What types of demand response services should be enabled as a priority?**

Auckland Council agrees that Minimum Energy Performance Standards (delivered through product labelling) would be a fair, equitable and low-cost method of achieving improved energy efficiency, by ensuring that the worst performing products are removed from the market altogether.

Council also supports energy efficiency obligations on retailers and distributors which go beyond MEPS, as a means of supporting consumer behaviour change, with the direct effect of decarbonising the built environment.

In terms of deployment, Auckland Council would advise prioritising MEPS, followed by a staged roll-out of energy efficiency obligation

127. **Which services make sense for New Zealand?**

Both MEPS and energy efficiency obligations.

Section 8 - continued

On this page, we are seeking your feedback on energy efficiency obligations.

128. **Would energy efficiency obligations effectively deliver increased investment in energy efficient technologies across the economy?**

☒ Yes

☐ No

129. **Is there an alternative policy option that could deliver on this aim more effectively?**

☐ No

☐ Yes (please specify)

Auckland Council sees merit in the consideration of leveraging energy efficiency obligations as a means of improving energy efficiency in the built environment. However, if not managed carefully, this approach risks triggering negative outcomes.

Auckland Council has identified potential inherent issues regarding energy efficiency obligations on retailers/distributors. The price burden of prioritised financing of insulation in new building developments, for example, could disproportionately impact on low-income households in the following ways:

1. Singling out new developments for subsidised insulation could widen the energy wealth divide, lowering energy costs for those able to afford to buy new homes; while poorer communities in older housing developments would be 'left behind', paying relatively more to heat cold damp homes; and
2. The cost of deployment could drive up energy prices in the interim as the energy retailer passes the cost onto its consumer base. A marginal price increase could trigger an earlier tipping point into energy poverty for low-income households.

In summary, the result could see low-income households paying relatively more to heat cold, damp homes, while subsidising higher-income earners to enjoy lower energy costs in warm, dry homes.

Such risk could be mitigated if, for example, there was a requirement for the energy efficiency obligation to be applied evenly across geographic and income demographics, and building types. Existing agencies such as MSD & Housing NZ should be involved and have access to funding to ensure public housing assets are upgraded and avoid creating inequities in living conditions & ensuring access to technology benefits that reduce energy poverty.

130. **If progressed, what types of energy efficiency measures and technologies should be considered in order to meet retailer/distributor obligations?**

Auckland Council runs several programmes that spearhead energy efficiency interventions. For both existing buildings and new builds, interventions that yield material energy efficiency outcomes include:

- Insulation
- Water efficiency devices and solar hot water heating
- Hot water controller / timer
- Heat pumps for space heating and hot water heating
- Draught stopping
- Double-layered curtains and honeycomb blinds
- Thermostat heater controllers

As mentioned above, to ensure an equitable outcome, the programme should target high energy consumers in both existing and new buildings; and should aim to cover the demographic spectrum in terms of income and geographic location.

131. **Should these be targeted at certain consumer groups?**

132. **Do you support the proposal to require electricity retailers and/or distributors to meet energy efficiency targets?**

☒ I support the proposal

☐ I do not support the proposal

Please explain your answer

Auckland Council agrees that targets and reporting are useful for establishing a transparent energy management framework, against which progress can be measured. Mandating energy efficiency targets would serve to focus minds on the necessary investments into the built environment. As previously cautioned in responses 8.10-8.12, such mandates would need to be designed in a way that ensures a just transition and safeguards against negative outcomes for lower income households.

133. **Which entities would most effectively achieve energy savings?**

134. **What are the likely compliance costs of this policy?**

Compliance costs associated with mandated targets would be incurred by both the energy retailers and the regulator. Ideally the process would be as autonomous and automated as possible, to minimise the on-going costs for both parties.

The regulator would need to establish a clear reporting scope and framework; and would need to develop a 'data-in' energy efficiency model to ease the reporting burden for energy retailers.

Once the reporting framework and reporting model are established, retailers would be required to input their data and seek third-party verification.

Ideally the annual data, bearing the verifier's digital stamp, would be uploaded once, annually, into an online database. Data could then be aggregated and presented on a dashboard accessible at any given time by both the public and private sectors.

Reporting data would pass through a regulator gateway to facilitate regulatory due diligence.

Taking such an approach would present a significant upfront capital cost (to build the platform) to the regulator. Thereafter, administrative and operational costs associated with regulatory audits would be minimal.

For the energy retailer, the main cost of such a scheme would lie in establishing and administering the energy efficiency programme; and on the reporting side, the third-party report verification and in-house resource committed to monthly data input and annual data upload.

Section 8 - continued

On this page, we are seeking your feedback on developing offshore wind assets.

135. **Do you agree that the development of an offshore wind market should be a priority for the energy sector?**

☐ Strongly disagree

☐ Disagree

☒ Neither agree nor disagree

☐ Agree

☐ Strongly agree

136. **What do you perceive to be the major benefits to developing offshore wind assets in New Zealand?**

Access to more reliable wind resources that are in less contentious areas.

Potential to deliver lower levelized costs and reliable energy supply if deployed in multiple coastal areas around NZ.

137. **What do you perceive to be the major costs to developing offshore wind assets in New Zealand?**

Potentially having to overbuild initially given the scale required to make offshore wind cost effective.

138. **What do you perceive to be the major risks to developing offshore wind assets in New Zealand?**

Most of New Zealand's coastal areas are heavily used commercially and recreationally. Those that aren't are typically remote and at longer distances from population centres and transmission assets.

Section 8 - continued

On this page, we are seeking your feedback on renewable electricity certificates and portfolio standards.

At this stage we need further information on the merits of this option before determining whether any further work is warranted. Due to the nature of the option – i.e. the scale of investment by government and/or impacts on industry – it needs to be carefully considered alongside other government decisions on Emissions Trading Scheme settings, the role of complementary measures and the pace and pathways of domestic emissions to meet the country's emission reduction targets.

139. **This policy option involves a high level of intervention and risk.**

Would another policy option better achieve our goals to encourage renewable energy generation investment?

☐ No

☐ Yes (please specify)

140. **Could the proposed policy option be re-designed to better achieve our goals?**

☐ No

☐ Yes (please specify)

141. **Should the Government introduce Renewable Portfolio Standards (RPS) requirements?**

☒ Yes

☐ No

142. **At what level should a RPS quota be set to incentivise additional renewable electricity generation investment?**

Consistent with Governments ambition for renewable electricity (e.g. 90% by 2025)

143. **Should RPS requirements apply to all electricity retailers?**

☒ Yes

☐ No

Please explain your answer

144. **Should RPS requirements apply to all major electricity users?**

☒ Yes

☐ No

Please explain your answer

Based on definitions discussed in question 88

145. **What would be an appropriate threshold for the inclusion of major electricity users (i.e. annual consumption above a certain GWh threshold)?**

146. **Would a government backed certification scheme support your corporate strategy and export credentials?**

☒ Yes

☐ No

147. **What types of renewable projects should be eligible for renewable electricity certificates?**

Solar PV, biofuels/cogen biogas, small-scale hydro, wind

148. **If this policy option is progressed, should electricity retailers be permitted to invest in energy efficient technology investments to meet their renewable portfolio standards? (See option 8.3 on energy efficiency obligations).**

☐ Yes

☒ No

Please add a comment

149. **What are the likely administrative and compliance costs of this policy for your organisation?**

It may ultimately drive more investment in distributed generation where this is cost effective relative to grid connected generation.

Section 8 - continued

On this page, we are seeking your feedback on an option to phase down thermal baseload and place it in strategic reserve.

At this stage we need further information on the merits of this option before determining whether any further work is warranted. Due to the nature of the option – i.e. the scale of investment by government and/or impacts on industry – it needs to be carefully considered alongside other government decisions on Emissions Trading Scheme settings, the role of complementary measures and the pace and pathways of domestic emissions to meet the country's emission reduction targets.

151. **This policy option involves a high level of intervention and risk.**

Would another policy option better achieve our goals to encourage renewable energy generation investment?

☐ No

☐ Yes (please specify)

152. **Could this policy option be re-designed to better achieve our goals?**

☐ No

☐ Yes (please expand)

153. **Do you support the managed phase down of baseload thermal electricity generation?**

☐ Strongly against

☐ Against

☐ Neither

☒ Support

☐ Strongly support

154. **Would a strategic reserve mechanism adequately address supply security, and reduce emissions affordably, during a transition to higher levels of renewable electricity generation?**

☒ Definitely would

☐ Probably would

☐ Probably would not

☐ Definitely would not

155. **Under what market conditions should thermal baseload held in a strategic reserve be used?**

Unusual low flows into southern hydro lakes below an agreed threshold, much like that already identified by Transpower in the risk-curves.

156. **Would you support requiring thermal baseload assets to operate as peaking plants or during dry winters?**

☒ Yes

☐ No

157. **What is the best way to meet resource adequacy needs as we transition away from fossil-fuelled electricity generation and towards a system dominated by renewables?**

Rather than focussing solely on renewable generation, consideration must be given to the emissions profile of each respective energy source. Geothermal is renewable but can have emission rates higher than gas depending on the field. Also, electricity overall is seen as generating lower emissions than gas for example, but if you break down electricity generation by time of use (and peak) the emission profile changes significantly. By replacing the word “renewable” with “Low emission” puts the emphasis where it should be, in term s of how energy generation.

Section 8 - continued

We also considered a number of additional options.

They have been included to demonstrate our wide-ranging assessment of possible policy options and to respond to early feedback we have heard from stakeholders.

We are not recommending them for further investigation but we welcome any views you may have on them.

158. **Do you have any views regarding the options to encourage renewable electricity generation investment that we considered, but are not proposing to investigate further? (See pages 90 - 92 of the *Accelerating renewable energy and energy efficiency* discussion document).**

Section 9: Facilitating local and community engagement in renewable energy and energy efficiency

This section considers the barriers to greater uptake of small-scale community energy projects and potential options to facilitate community energy, including:

- **clear government position on community energy**
- **support for community energy pilot projects.**

159. **Should New Zealand be encouraging greater development of community energy projects?**

☒ Yes- Auckland Council agrees that New Zealand should be encouraging greater development of community renewable energy projects, given that they support improved energy resilience, energy independence, and reduced transmission loss and the associated fugitive emissions.

Communities that currently supply fossil fuel will likely be adversely affected by the transition away from fossil fuels. It is important that these communities are supported to develop renewable energy. This is particularly relevant to Māori given the high number of Māori employed at the Huntly Power Station and in related industries.

Smaller scale, distributed energy generation supports the development of peer-to-peer trading and addresses the rebound effect in that it fosters responsible energy consumption (consumers are less inclined to increase consumption, using up energy savings when there is earning potential from excess generation sold into the microgrid). A comprehensive network of microgrids could ultimately shift energy where it needed, when it is needed (i.e. excess daytime rooftop solar in suburbs can be transitioned to CBD during weekday peak energy generating hours).

Community renewable energy projects would also benefit remote communities that are susceptible to storm events. In recent years severe storm events have left parts of West Auckland without power for days and sometimes weeks. Distributed energy would serve to make such communities more climate change resilient and less dependent on centralized energy suppliers.

With regard to MBIE's definition of community renewable energy, Auckland Council broadly agrees but notes that the definition of community energy should encompass: Electricity and heat generation including heat networks; reducing energy use; community energy demand management; and collective purchasing and switching suppliers. Auckland Council further notes that the Communities of Interest identified by MBIE should also specifically include schools.

☐ No

160. **What types of community energy project are most relevant in the New Zealand context?**

In terms of community renewable energy business models, (using solar as the example), rural areas may be better suited to a community-shared ownership model, where the developer shares ownership of an offsite shared solar / ground-mounted solar project with the landowner and/or community members.

In peri-urban areas, community-driven financial models could work well, where community project investment attracts capital investment into larger-scale offsite shared solar models. In this type of cooperative model, membership is accessed via economic participation, and the renewable energy 'enterprise' is jointly owned and democratically managed (with one vote accruing to one member).

Urban and densely populated areas would be more suited to community group purchasing, both for free-standing (residential) buildings; and for onsite shared solar (for multi-unit dwellings).

The types of projects suited to New Zealand, in terms of technology, include ground mounted solar; onshore wind (fewer, larger i.e. 2-7MW turbines); tidal estuarine turbines; micro and medium scale hydro; rooftop solar PV and rooftop wind microgrids; district heating and cooling; and industrial waste heat capture for municipal pool heating/greenhouse/urban growing projects.

Spatial planning to achieve optimal siting of community renewable projects could enhance overall / citywide energy efficiency by, for example, harnessing waste heat sources; or achieving dual land use for ground mounted arrays and urban agriculture.

161. **What are the key benefits of a focus on community energy?**

Auckland Council agrees with the benefits set out by MBIE regarding improved social well-being, energy literacy, capacity building, energy efficiency, and enhanced EV and smart appliance uptake.

Other benefits identified by Auckland Council include greater climate resilience, for remote communities in particular; greater energy independence; reduced technology costs; reduced transmission losses; reduced fugitive emissions; and lower electricity prices, as more resource comes online.

162. **What are the key downsides or risks of a focus on community energy?**

Management can be an issue over long term with community infrastructure. Community infrastructure providers are interested and willing to develop these schemes which removes the operational and technological (for example battery lives) burden from the community.

With regard to downsides, in addition to community projects being less responsive and agile compared to their commercial counterparts (due to the democratic decision-making process), other downsides identified by Auckland Council include: high operations and maintenance (O&M) costs and potentially significant end-of-life waste streams in the future as end-of-design life technologies are retired.

To mitigate this risk, it is worth assessing the scope for supporting commercial-scale lease models that have a vested interest in optimised asset operation and maintenance; and that ensure resource / materials capture and recovery at the end of the asset's design life.

163. **Have we accurately identified the barriers to community energy proposals?**

☐ Yes

☒ No

Please explain your answer

Auckland Council considers the constraints identified by MBIE - namely shortage of suitable land parcels; lack of access to seed and capital finance; lack of access to legal, technical and financial expertise; and inconsistently applied resource consenting procedures - to be accurate.

Auckland Council identified a lack of access to professionals with a track record in largescale project management and delivery; the absence of a clear regulatory framework to support community renewable energy; and a lack of information and guidance to help communities understand the benefits to investing, or being able to conceptualise, plan and deliver energy generation projects, as key barriers to entry.

In addition, community energy, using public networks is challenged by the lack of an integrated demand response market (which would provide additional value to renewable electricity and storage projects), the practical requirement for all participants to be with the same retailer or for the community to effectively become a retailer and the difficulty accessing meter data.

164. **Which barriers do you consider most significant?**

You may select more than one answer.

☒ Electricity market arrangements

☐ Coordination of policy across government

☐ Small scale of community energy advocates, and lack of networking effects

☐ Resource Management Act barriers

☒ Other (please specify)

What's missing is certainty around the ETS and a vision for what our power generation, distribution and energy use will look like in the future. If we are aiming for a fully distributed network against a population of 6 million plus by 2100, what is that going to look like an how does community generation and use contribute to our goals for Zero Carbon by 2050 and our other goals (Auckland has the goal of being zero waste by 2040).

Limited access to technical and legal expertise; lack of regulatory framework; lack of guidance around best practice and hands-on 'how to' guidance for communities are the primary barriers to communities engaging in community energy projects.

165. **Are the barriers noted above in relation to electricity market arrangements adequately covered by the scope of existing work across the Electricity Authority and electricity distributors?**

☐ Yes – they're adequately covered by existing work

☒ No – they're not adequately covered by existing work

Please add a comment

Despite EA's work to improve access to electricity meter data, we can't access NHH data from smart meters in an automated way. Without access to this data it is difficult to assess site suitability for solar and correctly size systems.

Lack of transparency around how network charges are set continues to be an issue and is one that could be resolved through regulatory disclosure.

Information exchange between retailers is an area to be addressed. In assessing the potential for Peer-to-peer trading within Auckland Council's Project Gigawatt, it was identified that it was only possible to do so if the energy network sat with a single retailer; it was not practical to inter-trade between two retailers.

166. **What do you see as the pros of a clear government position on community energy?**

This will/should provide the goals and vision mentioned above in Q164. This will mean local government and community agencies are not left to interpret the benefits of community energy projects and provide ad-hoc or bespoke advice.

167. **What do you see as the cons of a clear government position on community energy?**

168. **What do you see as the pros of government support for pilot community energy projects?**

Setting direction along with showing action by supporting pilot community energy projects is essential. Government supported pilot project means broader sustainability outcomes can be met without direct financial measures being prioritised. The second of the three challenges identified for Auckland in our Auckland Plan 2050 is *Sharing prosperity with all Aucklanders*. Many Aucklanders are prosperous and have high living standards, yet there are significant levels of socioeconomic deprivation, often in distinct geographic areas. The pilots should aim to benefit the our most deprived communities as those are our communities who are least able to finance technological changes/leg-ups themselves.

As they are pilot community schemes there needs to be many pilots so that each community can see something local/in their context. Marae are a great distributed network of community infrastructure that would benefit from an initiative like this.

Government support for energy community pilots could take the form of a dedicated, resourced contestable fund that would sit with EECA. This would require a stock-take of other funding in this space (both CAPEX and OPEX funding sources).

Supporting community energy projects is one lever the government has to mitigate the impact of reduced demand for fossil fuels in areas that supply fossil fuels or non-renewable electricity.

169. **What do you see as the cons of government support for pilot community energy projects?**

Q168

170. **Are there any other options you can suggest that would support further development of community energy initiatives?**

We support the proposed government online information hub to facilitate learning through removing legal and technical knowledge barriers. A central platform would demonstrate government support for community energy, showcase good practice and connect community groups. In addition to this pilot projects that provide best practice for business models could be supported by RECs or PPAs to secure seed funding and runway capital.

Encouraging the agricultural sector and iwi to support and invest in distributed generation projects to help diversify their incomes and reduce grid transmission investment needs could be a major opportunity e.g. hosting wind farms & solar arrays while continuing to farm the land beneath.

Section 10: Connecting to the national grid

This section sets out our understanding of issues relating to transmission connections to support growth in renewable electricity and the transition to a low emissions economy.

It seeks your views on options to address:

- **the first mover disadvantage gaps in publicly**
- **available and independent information, and a lack of**
- **information sharing for coordinated investment.**

The first mover disadvantage

171. **Please select the option or combination of options, if any, that would be most likely to address the first mover disadvantage.**

☐ **Option 10.1**. – Encourage Transpower to include the economic benefits of climate change mitigation in applications for Commerce Commission approval of projects expected to cost over $20 million

☐ **Option 10.2** - Put in place additional mechanisms to support or encourage Transpower, first movers and subsequent customers to agree to alternative forms of cost sharing arrangements by contract

☐ **Option 10.3.1** - Optimise asset valuations under the Commerce Commission's regime in circumstances where demand is lower than originally anticipated because expected (subsequent) customers do not eventuate

☐ **Option 10.3.2** - Provide for Transpower to build larger capacity connection asset or a configuration that allows for growth, but only recover full costs once asset is fully utilised, with the Crown covering risk of revenue shortfall

☐ None of the options above

☐ Other (please specify)

172. **What do you see as the disadvantages or risks of Option 10.1?**

173. **What do you see as the disadvantages or risks of Option 10.2?**

174. **What do you see as the disadvantages or risks of Option 10.3.1?**

175. **What do you see as the disadvantages or risks of Option 10.3.2?**

176. **Would introducing a requirement, or new charge, for subsequent customers to contribute to costs already incurred by the first mover create any perverse incentives?**

☐ No

☐ Yes (please specify)

Section 10 (continued): Connecting to the national grid

On this page, we are asking for feedback on gaps in publicly available and independent information.

178. **Do you think that there is a role for government to provide more independent public data?**

☐ Yes

☐ No

Why or why not?

179. **Is there a role for Government to provide independent geospatial data (e.g. wind speeds for sites) to assist with information gaps?**

☐ Yes

☐ No

180. **Should MBIE's Electricity Demand and Generation Scenarios (EDGS) be updated more frequently?**

☒ Yes

☐ No

181. **If you said yes, how frequently should they be updated?**

☐ Quarterly

☐ Every six months

☐ Annually

☒ Every two years

182. **Should MBIE's EDGS provide more detail, for example, information at a regional level?**

☒ Yes

☐ No

Please provide information on what you would find useful

Regional price, compound annual growth rates and wholesale market price trends – key cost drivers, likely supply constraints, major local users and significant local changes e.g. plant closures, new generation to be added.

183. **Should the costs to the Crown of preparing EDGS be recovered from Transpower, and therefore all electricity consumers (rather than tax-payers)?**

☐ Yes – it should be recovered from Transpower (all electricity consumers)

☐ No – it should be recovered from taxpayers

184. **Would you find a users' guide (on current regulation and approval process for getting an upgraded or new connection) helpful?**

☐ Yes

☐ No

Please explain your answer

185. **What information would you like to see in such a guide?**

186. **Who would be best placed to produce a guide?**

Section 10 (continued): Connecting to the national grid

On this page, we are asking for feedback on the lack of information sharing for coordinated investment.

187. **Do you think that there is a role for government in improving information sharing between parties to enable more coordinated investment?**

☐ Yes

☐ No

Why or why not?

188. **Is there value in the provision of a database (and/or map) of potential renewable generation and new demand, including location and potential size?**

☐ Yes

☐ No

189. **If so, who would be best to develop and maintain this?**

190. **How should it be funded?**

191. **Should measures be introduced to enable coordination regarding the placement of new wind farms?**

☐ Yes

☐ No

Please expand on your answer

192. **Are there other information sharing options that could help address investment coordination issues? What are they?**

Section 11: Local network connections and trading arrangements

This section seeks your views on whether enough is being done to enable connections to, and trading on, the local network. It summarises regulatory arrangements and work underway to address:

- **barriers to connecting to the local network**
- **issues with the arrangements for trading on the local network, and**
- **issues with pricing and cost allocation for network connections and services.**

193. **Have you experienced, or are you aware of, significant barriers to connecting to the local networks?** Please describe them.

194. **Are there any barriers that will not be addressed by current work programmes outlined on pages 118 - 122 of the discussion document?**

195. **Should the option to produce a users' guide (see Option 10.6 on page 110) also include the process for getting an upgraded or new distribution line?**

☐ Yes

☐ No

Please add a comment

196. **Are there other Section 10 information options that could be extended to include information about local networks and distributed generation?**

☐ Yes

☐ No

Please specify which options would be useful and explain your answer

197. **Do the work programmes outlined on pages 118 - 122 cover all issues to ensure the settings for connecting to and trading on the local network are fit for purpose into the future?**

☐ Yes

☐ No

Please explain your answer

198. **Are there things that should be prioritised, or sped up?**

Additional comments

An opportunity for you to provide any additional feedback.

200. **Do you have any additional feedback?**

Auckland Council has recently made submissions on the Climate Change Response (Zero Carbon) Amendment Bill, Resource Management Act (RMA) and the NZ Emissions Trading Scheme (ETS) that support the discussion document. These are detailed

a. ***Climate Change Response (Zero Carbon) Amendment Bill***
   Agreement that measures complementary to the ETS are required to achieve our GHG emission reduction targets.
b. ***"Transforming the resource management system: opportunities for change - Issues and options paper"*** **MfE**
   Support for the RMA playing a role in addressing climate change mitigation and as a lever to improve energy efficiency and support low emissions technology
   Support for developing National Environmental Standards (NES) and National Policy Statements (NPS) linked to national carbon budgets
c. ***Climate Change Response (Emissions Trading Reform) Amendment Bill***
   Agreement to public disclosure of GHG emissions

Many of the policies proposed in the discussion document have the potential to adversely affect communities that are involved in EIHI Industries and supply fossil fuels and non-renewable electricity. In Auckland this is particularly relevant to mana whenua and mātāwaka employed at the Glenbrook Steel Mill and in coal and non-renewable electricity generation industries in Huntly. It is important that the transition away from fossil fuels is just and that impacted communities benefit from the transition to renewable energy.

201. **You may upload additional feedback as a file.**

File size limit is 16MB. We accept PDF or DOC/DOCX.