Accelerating renewable energy and energy efficiency - Have your say

Introduction

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

John Burnell

* 2. **Email**

j.burnell@gns.cri.nz

* 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)**

GNS Science

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

Energy Futures theme leader

* 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

Accelerating renewable energy and energy efficiency - Have your say

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. **Part A 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. **Part B 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**

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)

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

☐ Yes

☐ No

Please explain your answer

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'.**

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)

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.**

- Foster relationships between the research community and industry so that information is more readily shared and there is greater understanding of the imperatives of both researchers and industry. This will facilitate the development of solutions which meet the needs of each and are relevant to the New Zealand setting. (Work placements; personnel exchanges etc).

- The document could helpfully make it clearer in its discussion on electrification of process heat that it is referring to *renewable* electricity. It is crucial that the question of where the necessary additional electricity will come from is part of this discussion, as we are potentially talking about hundreds of extra renewably-sourced megawatts that will be required to displace fossil-fuelled process heat with “electrified” process heat.

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)

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**

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.

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

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

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)?**

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?**

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.

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

GNS sees considerable scope for expanding the role of geothermal resources in New Zealand's energy supply. We see a particular role for geothermal energy in the supply of process heat in industry. We are exploring a number of ideas for possible future research; from harnessing the geothermal potential of abandoned/disused petroleum wells to provide low-level process heat, to understanding the nature and characteristics of supercritical geothermal fluids as a precursor to their potential exploitation to increase Aotearoa NZ's renewable energy supply.

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

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

New technologies will require both research and proof-of-concept before acceptance by industry.

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

☐ Strongly disagree

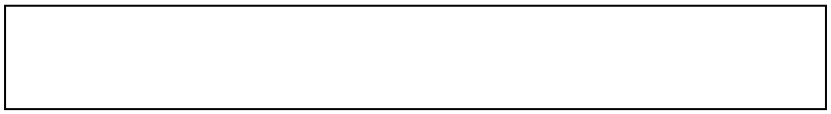
☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☐ Strongly agree

Please explain your answer



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?**

This has potential to foster a common capability that will be greater than the sum of the individual parts.

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

☒ Yes

☐ No

Please expand on your answer

Many smaller companies will not have the capacity to do this themselves

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

Pooling of resources, co-ordinating effort, avoiding duplication

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

This will require significant effort as a step-change in operations is required.

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

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

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

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?**

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

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

We need to use all the “levers”.

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?**

Low-interest loans for green energy projects; tax credits; subsidies for demonstration projects.

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

These will create a favourable environment for investment in green technologies.

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

It can be difficult to identify the likely successful projects; the perils of trying to "pick a winner".

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

Unclear

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

- GNS supports the development of a national Hydrogen Strategy – following on from the "Vision for Hydrogen in New Zealand" green paper. This would send a clear signal about the Government's intentions and ambitions for hydrogen to play a major role in the decarbonisation of this country's energy supply.

- A national Hydrogen Strategy also sends a strong signal to potential domestic and overseas partners and investors about New Zealand's seriousness in pursuing this technology and would thus lend weight to the research efforts starting to take shape on green hydrogen production, management and use in this country.

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?**

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

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

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?**

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

Renewable energy resources in New Zealand are plentiful. Comparatively speaking, we have a lot of wind and a lot of water, and are recognised as a geothermal energy leader. Conflicting societal values for these resources and/or access to these resources is however a potential barrier to their sustainable use as an energy source. Renewable electricity projects can be difficult to consent because they inevitably have an impact on the physical environment; eg diversions of waterways for hydro, or turbines on ridgelines for wind. This points to a need for a consenting regime which recognises these conflicting values, but in doing so, provides consistent and efficient ways to enable renewable energy developments.

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?**

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?**

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?**

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?**

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?**

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?**

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

1 = most preferred, 4 = least preferred.

- [ ] Contract matching service
- [ ] State-sector led
- [ ] Government guaranteed contracts
- [ ] Clearing house

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

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

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

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

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

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

☐ Yes

☐ No

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

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

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

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

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

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)

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

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

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

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

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?**

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

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

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?**

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

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?**

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?**

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?**

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?**

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

☐ No

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

Distributed generation; wind, solar to hydrogen/battery storage. Direct use of geothermal, heat-exchangers; ground-source heat pumps.

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

Improved resilience to natural hazard and climate change; potential income; diversity of fuels.

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

Less investment in national infrastructure; lower ability to ensure national coordination of energy availability.

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

☒ Yes

☐ No

Please explain your answer

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

Financial incentives to encourage investment by communities; processes to connect individuals into community energy groups.

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)

177. **Are there any additional options that should be considered?**

☐ 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

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?**

199. **What changes, if any, to the current arrangements would ensure distribution networks are fit for purpose into the future?**

Additional comments

An opportunity for you to provide any additional feedback.

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

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

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