

#76

COMPLETE

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Page 1: Introduction

Q1 Name (first and last name)

Brendan Winitana

Q2 Email

brendan@eqinox.co.nz

Q3 Is this an individual submission, or is it on behalf of a group or organisation?

On behalf of a group or organisation

Q4 Which group do you most identify with, or are representing?

Other (please specify):
Solar PV, Storage/Batteries, EMS/IoT hardware & software platforms

Q5 Business name or organisation (if applicable)

SEANZ - Sustainable Energy Association NZ

Q6 Position title (if applicable)

Chairperson

Q7 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

Q8 Can we include your name?

Yes

Q9 Can we include your organisation (if submitting on behalf of an organisation)?

Yes

Q10 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.

Respondent skipped this question

Page 2

Q11 Where are you located?

Respondent skipped this question

Q12 In what region or regions does your organisation mostly operate?

All of New Zealand

Page 3: Areas you wish to provide feedback on

Q13 Part A relates to process heat.Please indicate which sections, if any, you would like to provide feedback on.

Respondent skipped this question

Q14 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 11: Local network connections and trading arrangements

Page 4: Section 1: Addressing information failures

Q15 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?

Respondent skipped this question

Q16 Please explain your answer

Respondent skipped this question

Q17 Which parts (set out in Table 3) do you support?

Respondent skipped this question

Q18 Please explain your answer

Respondent skipped this question

Q19 What public reporting requirements (listed in Table 3) should be disclosed?

Respondent skipped this question

Q20 In your view, should businesses be expected to include transport energy and emissions in these reporting requirements?

Respondent skipped this question

Q21 For manufacturers: what will be the impact on your business to comply with the requirements?

Respondent skipped this question

Q22 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?

Respondent skipped this question

Q23 If you selected no, please describe what in your view would be an appropriate threshold to define 'large energy users'.

Respondent skipped this question

Q24 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?

Respondent skipped this question

Page 5: Section 1 - Option 1.2: Electrification information package and feasibility studies

Q25 Do you support the proposal to develop an electrification information package?

Respondent skipped this question

Q26 Would an electrification information package be of use to your business?

Respondent skipped this question

Q27 Do you support customised low-emission heating feasibility studies?

Respondent skipped this question

Q28 In your view, which of the components should be scaled up and/or prioritised?

Respondent skipped this question

Q29 Would a customised low-emission heating feasibility study be of use to your business?

Respondent skipped this question

Q30 Please describe any components other than those identified that could be included in an information package.

Respondent skipped this question

Page 6: Section 1 - Option 1.3: Provide benchmarking information for food processing industries

Q31 Do you support benchmarking in the food processing sector?

Respondent skipped this question

Q32 Would benchmarking be suited to, and useful for, other industries, such as wood processing?

Respondent skipped this question

Q33 Do you believe government should have a role in facilitating this or should it entirely be led by industry?

Respondent skipped this question

Q34 Please explain your answer

Respondent skipped this question

Page 7: Section 2: Developing markets for bioenergy and direct geothermal use

Q35 Do you agree that some councils have regional air quality rules that are barriers to wood energy?

Respondent skipped this question

Q36 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.

Respondent skipped this question

Q37 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?

Respondent skipped this question

Q38 What do you consider a NESAQ users' guide should cover? Please provide an explanation if possible.

Respondent skipped this question

Q39 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.

Respondent skipped this question

Q40 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)?

Respondent skipped this question

Page 8: Section 2 - continued: Developing markets for bioenergy and direct geothermal use

Q41 In your view, could the Industry Transformation Plans stimulate sufficient supply and demand for bioenergy to achieve desired outcomes?

Respondent skipped this question

Q42 What other options are worth considering?

Respondent skipped this question

Q43 Is Government best placed to provide market facilitation in bioenergy markets?

Respondent skipped this question

Q44 How could Government best facilitate bioenergy markets? Please be as specific as possible, giving examples.

Respondent skipped this question

Q45 In your view, how can government best support direct use of geothermal heat?

Respondent skipped this question

Q46 What other options are worth considering?

Respondent skipped this question

Page 9: Section 3: Innovating and building capability

Q47 Do you agree that de-risking commercially viable low-emission technology should be a focus of government support on process heat?

Respondent skipped this question

Q48 Do you agree that diffusing commercially viable low-emission technology should be a focus of government support on process heat?

Respondent skipped this question

Q49 Is Energy Efficiency and Conservation Authority (EECA) grant funding to support technology diffusion the best vehicle for this?

Respondent skipped this question

Q50 For manufacturers and energy service experts: would peer learning and lead to reducing perceived technology risks?

Respondent skipped this question

Q51 For manufacturers and energy service experts: would on-site technology demonstration visits lead to reducing perceived technology risks?

Respondent skipped this question

Q52 Is there a role for the Government in facilitating this?

Respondent skipped this question

Page 10: Section 3 (continued): Innovating and building capability

Q53 For emissions-intensive and highly integrated (EIH) stakeholders: What are your views on our proposal to collaborate to develop low-carbon roadmaps?

Respondent skipped this question

Q54 Would low-carbon roadmaps assist in identifying feasible technological pathways for decarbonisation?

Respondent skipped this question

Q55 What are the most important issues that would benefit from a partnership and co-design approach?

Respondent skipped this question

Q56 What, in your view, is the scale of resourcing required to make this initiative successful?

Respondent skipped this question

Page 11: Section 4: Phasing out fossil fuels in process heat

Q57 Do you agree with the proposal to ban new coal-fired boilers for low and medium temperature requirements?

Respondent skipped this question

Q58 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?

Respondent skipped this question

Q59 Referring to Question 56 - is this ambitious or is it not doing enough?

Respondent skipped this question

Q60 For manufacturers: what would be the likely impacts or compliance costs on your business of a ban on new coal-fired process heat equipment?

Respondent skipped this question

Q61 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.

Respondent skipped this question

Q62 Could the Corporate Energy Transition Plans (Option 1.1) help to design a more informed phase out of fossil fuels in process heat?

Respondent skipped this question

Q63 Would a timetabled phase out of fossil fuels in process heat be necessary alongside the Corporate Energy Transition Plans?

Respondent skipped this question

Q64 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?

Respondent skipped this question

Q65 If yes, how?

Respondent skipped this question

Q66 In your view, could adoption of best available technologies be introduced via a mechanism other than the RMA?

Respondent skipped this question

Page 12: Section 5: Boosting investment in energy efficiency and renewable energy technologies

Q67 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?

Respondent skipped this question

Q68 Would you favour regulation, financial incentives or both?

Respondent skipped this question

Q69 In your view what is a bigger barrier to investment in clean energy technologies, internal competition for capital or access to capital? **Respondent skipped this question**

Q70 If you favour financial support, what sort of incentives could be considered? **Respondent skipped this question**

Q71 What are the benefits of these incentives? **Respondent skipped this question**

Q72 What are the risks of these incentives? **Respondent skipped this question**

Q73 What are the costs of these incentives? **Respondent skipped this question**

Q74 What measures other than those identified above could be effective at accelerating investment in clean energy technologies? **Respondent skipped this question**

Page 13: Section 6: Cost recovery mechanisms

Q75 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? **Respondent skipped this question**

Q76 What are the advantages of introducing a levy on consumers of coal to fund process heat activities? **Respondent skipped this question**

Q77 What are the disadvantages of introducing a levy on consumers of coal to fund process heat activities? **Respondent skipped this question**

Page 14: Section 7: Enabling development of renewable energy under the Resource Management Act 1991

Q78 Do you agree that the current NPSREG gives sufficient weight and direction to the importance of renewable energy? **Disagree**

Q79 What changes to the NPSREG would facilitate future development of renewable energy? **Respondent skipped this question**

Q80 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? **Respondent skipped this question**

Q81 How should the NPSREG address the balancing of local environmental effects and the national benefits of renewable energy development in RMA decisions? **Respondent skipped this question**

Q82 What are your views on the interaction and relative priority of the NPSREG with other existing or pending national direction instruments? **Respondent skipped this question**

Q83 Do you have any suggestions for how changes to the NPSREG could help achieve the right balance between renewable energy development and environmental outcomes? **Respondent skipped this question**

Q84 What objectives or policies could be included in the NPSREG regarding councils' role in locating and planning strategically for renewable energy resources? **Respondent skipped this question**

Q85 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? **Respondent skipped this question**

Q86 Can any specific policies be included in a national policy statement to address these barriers? **Respondent skipped this question**

Q87 What specific policies could be included in the NPSREG for small-scale renewable energy projects? **Respondent skipped this question**

Q88 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? **Respondent skipped this question**

Q89 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? **Respondent skipped this question**

Q90 Are there any downsides or risks to amending the NPSREG? **Respondent skipped this question**

Page 15: Section 7 - continued

Q91 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? **Respondent skipped this question**

Q92 What are the pros of using National Environmental Standards as a tool to accelerate the development of new renewables and streamline re-consenting? **Respondent skipped this question**

Q93 What are the cons of using National Environmental Standards as a tool to accelerate the development of new renewables and streamline re-consenting? **Respondent skipped this question**

Q94 What do you see as the relative merits and priorities of changes to the NPSREG compared with work on NES? **Respondent skipped this question**

Q95 What are the downsides and risks to developing NES? **Respondent skipped this question**

Q96 What renewables activities (including both REG activities and other types of renewable energy) would best be suited to NES? **Respondent skipped this question**

Q97 What technical issues could best be dealt with under a standardised national approach? **Respondent skipped this question**

Q98 Would it be practical for NES to set different types of activity status for activities with certain effects, for consenting or re-consenting? **Respondent skipped this question**

Q99 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. **Respondent skipped this question**

Q100 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? **Respondent skipped this question**

Q101 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? **Respondent skipped this question**

Q102 Please explain your answer **Respondent skipped this question**

Q103 Are there opportunities for non-statutory spatial planning techniques to help identify suitable areas for renewables development (or no go areas)?

Respondent skipped this question

Q104 Do you have any comments on potential options for pre-approval of renewable developments?

Respondent skipped this question

Q105 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?

Respondent skipped this question

Q106 What changes (if any) would you suggest for the NPSET and NESETA to accelerate the development of renewable energy?

Respondent skipped this question

Q107 Can you suggest any other options (statutory or non-statutory) that would help accelerate the future development of renewable energy?

Respondent skipped this question

Page 17: Section 8: Supporting renewable electricity generation investment

Q108 Do you agree there is a role for government to provide information, facilitate match-making and/or assume some financial risk for PPAs?

Respondent skipped this question

Q109 Would support for PPAs effectively encourage electrification?

Respondent skipped this question

Q110 Would support for PPAs effectively encourage new renewable generation investment?

Respondent skipped this question

Q111 How could any potential mismatch between generation and demand profiles be managed by the Platform and/or counterparties?

Respondent skipped this question

Q112 Please rank the following variations on PPA Platforms in order of preference. 1 = most preferred, 4 = least preferred.

Respondent skipped this question

Q113 What are your views on Contract Matching Services?

Respondent skipped this question

Q114 What are your views on State sector-led PPAs?

Respondent skipped this question

Q115 What are your views on Government guaranteed contracts?	Respondent skipped this question
Q116 What are your views on a Clearing house for PPAs?	Respondent skipped this question
Q117 For manufacturers: what delivered electricity price do you require to electrify some or all of your process heat requirements?	Respondent skipped this question
Q118 For manufacturers: is a long-term electricity contract an attractive proposition if it delivers more affordable electricity?	Respondent skipped this question
Q119 For investors / developers: what contract length and price do you require to make a return on an investment in new renewable electricity generation capacity?	Respondent skipped this question
Q120 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?	Respondent skipped this question
Page 18: Section 8 - continued	
Q121 Do you consider the development of the demand response (DR) market to be a priority for the energy sector?	Respondent skipped this question
Q122 Do you think that demand response (DR) could help to manage existing or potential electricity sector issues?	Respondent skipped this question
Q123 What are the key features of demand response markets?	Respondent skipped this question
Q124 Which features of a demand response market would enable load reduction or asset use optimisation across the energy system?	Respondent skipped this question
Q125 Which features of a demand response market would enable the uptake of distributed energy resources?	Respondent skipped this question
Q126 What types of demand response services should be enabled as a priority?	Respondent skipped this question

Q127 Which services make sense for New Zealand? **Respondent skipped this question**

Page 19: Section 8 - continued

Q128 Would energy efficiency obligations effectively deliver increased investment in energy efficient technologies across the economy? **Respondent skipped this question**

Q129 Is there an alternative policy option that could deliver on this aim more effectively? **Respondent skipped this question**

Q130 If progressed, what types of energy efficiency measures and technologies should be considered in order to meet retailer/distributor obligations? **Respondent skipped this question**

Q131 Should these be targeted at certain consumer groups? **Respondent skipped this question**

Q132 Do you support the proposal to require electricity retailers and/or distributors to meet energy efficiency targets? **Respondent skipped this question**

Q133 Which entities would most effectively achieve energy savings? **Respondent skipped this question**

Q134 What are the likely compliance costs of this policy? **Respondent skipped this question**

Page 20: Section 8 - continued

Q135 Do you agree that the development of an offshore wind market should be a priority for the energy sector? **Respondent skipped this question**

Q136 What do you perceive to be the major benefits to developing offshore wind assets in New Zealand? **Respondent skipped this question**

Q137 What do you perceive to be the major costs to developing offshore wind assets in New Zealand? **Respondent skipped this question**

Q138 What do you perceive to be the major risks to developing offshore wind assets in New Zealand? **Respondent skipped this question**

Page 21: Section 8 - continued

Q139 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?

Respondent skipped this question

Q140 Could the proposed policy option be re-designed to better achieve our goals?

Respondent skipped this question

Q141 Should the Government introduce Renewable Portfolio Standards (RPS) requirements?

Respondent skipped this question

Q142 At what level should a RPS quota be set to incentivise additional renewable electricity generation investment?

Respondent skipped this question

Q143 Should RPS requirements apply to all electricity retailers?

Respondent skipped this question

Q144 Should RPS requirements apply to all major electricity users?

Respondent skipped this question

Q145 What would be an appropriate threshold for the inclusion of major electricity users (i.e. annual consumption above a certain GWh threshold)?

Respondent skipped this question

Q146 Would a government backed certification scheme support your corporate strategy and export credentials?

Respondent skipped this question

Q147 What types of renewable projects should be eligible for renewable electricity certificates?

Respondent skipped this question

Q148 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).

Respondent skipped this question

Q149 If this policy option is progressed, should major electricity users be permitted to invest in energy efficient technology investments to meet their renewable portfolio standards? (See option 8.3 on energy efficiency obligations).

Respondent skipped this question

Q150 What are the likely administrative and compliance costs of this policy for your organisation?

Respondent skipped this question

Q151 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?

Respondent skipped this question

Q152 Could this policy option be re-designed to better achieve our goals?

Respondent skipped this question

Q153 Do you support the managed phase down of baseload thermal electricity generation?

Respondent skipped this question

Q154 Would a strategic reserve mechanism adequately address supply security, and reduce emissions affordably, during a transition to higher levels of renewable electricity generation?

Respondent skipped this question

Q155 Under what market conditions should thermal baseload held in a strategic reserve be used?

Respondent skipped this question

Q156 Would you support requiring thermal baseload assets to operate as peaking plants or during dry winters?

Respondent skipped this question

Q157 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?

Respondent skipped this question

Page 23: Section 8 - continued

Q158 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).

Respondent skipped this question

Page 24: Section 9: Facilitating local and community engagement in renewable energy and energy efficiency

Q159 Should New Zealand be encouraging greater development of community energy projects?

Respondent skipped this question

Q160 What types of community energy project are most relevant in the New Zealand context?

Respondent skipped this question

Q161 What are the key benefits of a focus on community energy?

Respondent skipped this question

Q162 What are the key downsides or risks of a focus on community energy? **Respondent skipped this question**

Q163 Have we accurately identified the barriers to community energy proposals? **Respondent skipped this question**

Q164 Which barriers do you consider most significant? You may select more than one answer. **Respondent skipped this question**

Q165 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? **Respondent skipped this question**

Q166 What do you see as the pros of a clear government position on community energy? **Respondent skipped this question**

Q167 What do you see as the cons of a clear government position on community energy? **Respondent skipped this question**

Q168 What do you see as the pros of government support for pilot community energy projects? **Respondent skipped this question**

Q169 What do you see as the cons of government support for pilot community energy projects? **Respondent skipped this question**

Q170 Are there any other options you can suggest that would support further development of community energy initiatives? **Respondent skipped this question**

Page 25: Section 10: Connecting to the national grid

Q171 Please select the option or combination of options, if any, that would be most likely to address the first mover disadvantage. **Respondent skipped this question**

Q172 What do you see as the disadvantages or risks of Option 10.1? **Respondent skipped this question**

Q173 What do you see as the disadvantages or risks of Option 10.2? **Respondent skipped this question**

Q174 What do you see as the disadvantages or risks of Option 10.3.1? **Respondent skipped this question**

Q175 What do you see as the disadvantages or risks of Option 10.3.2? **Respondent skipped this question**

Q176 Would introducing a requirement, or new charge, for subsequent customers to contribute to costs already incurred by the first mover create any perverse incentives? **Respondent skipped this question**

Q177 Are there any additional options that should be considered? **Respondent skipped this question**

Page 26: Section 10 (continued): Connecting to the national grid

Q178 Do you think that there is a role for government to provide more independent public data? **Respondent skipped this question**

Q179 Is there a role for Government to provide independent geospatial data (e.g. wind speeds for sites) to assist with information gaps? **Respondent skipped this question**

Q180 Should MBIE's Electricity Demand and Generation Scenarios (EDGS) be updated more frequently? **Respondent skipped this question**

Q181 If you said yes, how frequently should they be updated? **Respondent skipped this question**

Q182 Should MBIE's EDGS provide more detail, for example, information at a regional level? **Respondent skipped this question**

Q183 Should the costs to the Crown of preparing EDGS be recovered from Transpower, and therefore all electricity consumers (rather than tax-payers)? **Respondent skipped this question**

Q184 Would you find a users' guide (on current regulation and approval process for getting an upgraded or new connection) helpful? **Respondent skipped this question**

Q185 What information would you like to see in such a guide? **Respondent skipped this question**

Q186 Who would be best placed to produce a guide? **Respondent skipped this question**

Page 27: Section 10 (continued): Connecting to the national grid

Q187 Do you think that there is a role for government in improving information sharing between parties to enable more coordinated investment? **Respondent skipped this question**

Q188 Is there value in the provision of a database (and/or map) of potential renewable generation and new demand, including location and potential size? **Respondent skipped this question**

Q189 If so, who would be best to develop and maintain this? **Respondent skipped this question**

Q190 How should it be funded? **Respondent skipped this question**

Q191 Should measures be introduced to enable coordination regarding the placement of new wind farms? **Respondent skipped this question**

Q192 Are there other information sharing options that could help address investment coordination issues? What are they? **Respondent skipped this question**

Page 28: Section 11: Local network connections and trading arrangements

Q193 Have you experienced, or are you aware of, significant barriers to connecting to the local networks? Please describe them. **Respondent skipped this question**

Q194 Are there any barriers that will not be addressed by current work programmes outlined on pages 118 - 122 of the discussion document? **Respondent skipped this question**

Q195 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? **Respondent skipped this question**

Q196 Are there other Section 10 information options that could be extended to include information about local networks and distributed generation? **Respondent skipped this question**

Q197 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? **Respondent skipped this question**

Q198 Are there things that should be prioritised, or sped up? **Respondent skipped this question**

Q199 What changes, if any, to the current arrangements would ensure distribution networks are fit for purpose into the future?

Respondent skipped this question

Page 29: Additional comments

Q200 Do you have any additional feedback?

Respondent skipped this question

Q201 You may upload additional feedback as a file. File size limit is 16MB. We accept PDF or DOC/DOCX.

MBIE Consultation Accelerating Renewables Uptake Feb 20 FINAL.pdf (285.7KB)

MBIE – Accelerating Renewable Energy

SEANZ

The Sustainable Energy Association of NZ Inc “SEANZ” is an incorporated society with a membership encapsulating all facets of the electrical energy value chain. SEANZ membership and their contact base has a diverse range of skills, experience and knowledge covering the solar PV, energy storage solutions, ITC / IOT integrated energy management system platforms and energy innovation, and includes consumers who utilize the technologies in New Zealand. As a result, these members and stakeholders have a wealth of experience across the DER, digital, hardware and commercial innovation space, including some forward-thinking electricity distribution businesses (EDB’s), retailers and communities.

An enabling strategy needs to be urgently developed to speed the energy transition New Zealand needs to provide a better model of competition and more options for the lowest cost electricity. It is needed if New Zealand is to achieve its renewable energy goals.

Distributed renewables (DER) is a key component of that strategy. It is an important component of an overall end game. Too often the message has been “use this and not that generation method”, where in fact the solution is a blend of technologies and approaches, and not a “this is the way it has always been done” approach based on historical experience. The energy landscape is changing fast, and NZ needs to take advantage of the rapid technology developments, whilst ensuring secure and reliable continuation of the current centralised generation processes and infrastructure. Intervention must be game changing to seriously address the impediments to change.

Summary

SEANZ supports the governments focus on intervention, especially with DER, given it is key to our energy future. Mitigation of emissions, lower cost for consumers, and enablement of the consumer are all key considerations.

The focus in this paper is on DER (includes all solar PV based models and terms – rooftop, ground mounted, mini and micro-grids, embedded networks, shared energy services solutions and their resulting business models) as they enable a significant groundswell of private consumer funded energy generation assets. And this has never been considered, utilized or valued in a manner that benefits other consumers. And that private investment as we all know is forecast to continue.

DER specifically means solar PV and batteries behind the meter and the value they present to the grid. Accelerated DER investment will deliver action helping address climate change, and provide those in energy hardship with lower cost energy, with the obvious flow on effects and the many associated benefits.



Community energy is a vital part of the overall picture, given the benefits that can be achieved. This is discussed in detail in the following section based on stake-holders experiences.

The energy transition is far more profound and fundamental than simply replacing generation capacities with more renewables. Accelerating the take up of renewables is only part of the challenge. It is time to take the bold (and measured) position of a step change to address a system that predominantly benefits incumbent self-interests.

[Approach](#)

The current model of the top-down approach to power system management may work for the centralised model but the move and transition to a more liberal approach to the electricity market (driven by hard and soft technology platforms, new business models, innovation and consumer demand) typically results in greater uptake of DER (attested by adoption in Germany, Denmark, Spain, Portugal, UK, US, Japan to name a few) which in turn requires significant change in the approach to both change management and management of the policy and regulatory environments. The current infrastructure and regulatory environment are not in favour of those that it should be totally supporting - the end consumer.

Consumer centricity is a concept that the incumbent model fails to address in a meaningful manner (self-interest abounds). It enables lower costs to consumers and faster consumer orientated DER take-up (and the resulting models, benefits and value like peer to peer) where significant and real growth can be achieved in the renewables take-up space. It maximises private investment, innovation (shared services models, virtual power plants with aggregation and peer to peer for community energy), and enables consumer and end user self-management.

There is still a focus on trying to use today's model to fix or limit energy outputs - an approach that *reduces* generation and *detracts* from NZ's energy generation potential. Whilst this can be seen as a short-term measure while other options are investigated, the danger is that it becomes the de-facto standard approach and no other more innovative measure is introduced that *increases* generation potential.

A key example was the move by some EDB's/distribution businesses to implement a standard with inverters for solar PV systems that allows curtailment of the output of generation from a PV system when in export mode to minimize PV injection into their network. With a host of reasons and excuses to put this in play, the solar PV systems capacity to deliver more output exists. That output is currently wasted because of this. Innovative ways of storing and using this energy exist and should be actively supported. "Every electron counts".

Constructing New Zealand's energy systems around those that matter – the end consumer

Albeit early days, uptake of solar PV and storage behind the meter, surrounded with clever digitisation/apps and demand management in the DER space is growing, especially in the commercial area – from embedded networks to shared services solutions. Educational facilities are taking up solar PV and, in some cases, also provide shared electricity services to low decile families using a peer to peer model. Other benefits are provided to the community or students (for example funding scholarships with the earnings from the PV system). This signals not only the value of the economics but also the obvious benefits of reducing the carbon footprint and in the education of tomorrow's leaders. The new energy model must encourage innovative application and allow diverse revenue streams to be implemented (allowing a simple streamlined peer to peer model – school into wider community is an excellent example)

The end consumer will benefit with DER as long as the process allows EDB's to operate in a manner that moves them away from their pipeline model – fixed charges and time of use to the platform, “we are here for hire” or “we can share this with you” model. Moving them away from their bread and butter is the challenge given their revenue dependency, legacy ownership issues and shareholder demands. SEANZ's concern is that unless EDB's allow and enable more DER on their networks without lines charge issues/penalties on the prosumer, innovators and developers will work on alternatives to develop their own models that do not require a connection agreement with an EDB. E.g. multiple buildings operating on DER with 1 single connection to the distributors network or a residential PV user operates for the most part independently of the grid, and uses the grid only to charge their battery if and when needed. The implications are obvious.

There are SEANZ stakeholder clients involved and innovating in this space – emhTrade, Cortexo, Revolve, Sonnen, solarcity, Vector, Trustpower, Sunergise to name a few. More development is in play and these participants leading the space must work within the constraints of the current and only marketplace, which limits what can be done. They need a market that is conducive to their offerings to be shaped to work within – potentially a secondary/separate market from the existing wholesale, retail market that exists today.

A secondary market needs to be developed that exists on a distributors network, independent of the existing market, with prosumers providing the generation. Platform-based distribution using digitisation to map and manage output with demand can be achieved – at a lower cost to the consumer given no transmission or retailers costs or margins. At this time Germany, UK, Spain, Denmark and the US have this model in play in specific territories. This can grow further, driving solar PV uptake, providing we understand the barriers these participants face and the interventions required to make it happen. There is one key reason to action this – lower costs for consumers.

Any decision on a secondary market, whether a formal market (as opposed to an informal arrangement between willing parties) or if operating on the current infrastructure must be based on what's in existence now, needs to be made using real world plays – use empirical evidence that



the leading participants in New Zealand are across and working with. There is scope in New Zealand now to pilot more test options, which SEANZ fully encourages and supports.

Using technology-based innovation as the enabler, consumer engagement and consumer centricity must be at the core of this energy transition in New Zealand. Today's model with a focus on supply side stuff and not on the consumer, needs to change faster, to accelerate DER uptake. Simple changes like implementing a net metering position, and changes to PV system 3 phase electricity billing policy would signal a more consumer centric focus.

DER will help sector issues, especially as New Zealand pushes towards the aspirational goal of the 100% target. We suggest some options:

1. Increase the use of DER solar PV output that will otherwise be curtailed by engaging with EDB's to change or limit the position they have taken. This can reduce the overall cost of power for some, increase the use of clean energy and provide some consumers with access to power when it is cheaper
2. Activate a review with EDB's on limiting connection levels of behind the meter solar PV to increase capacity to allow more behind the meter renewables to be installed. This then will maximise and take advantage for NZ Inc of consumer funded solar PV and storage systems where their excess is not curtailed but used and therefore can be valued. To not do so has and will result further in consumers continuing the purchase of other goods. There is additional value for the EDB's as they learn and adopt the concept of providing platform services where their network or part thereof can be rented and used by community energy-based initiatives using the embedded network, mini-grid and shared energy services model. There are examples of this already in play in New Zealand that SEANZ clients have implemented.
3. Address the electricity sector led myth which is a common mis-conception that investment in solar PV will disadvantage those in energy hardship and that solar PV is therefore only for the wealthier. This is incorrect.

Solar PV and battery storage can be acquired on a "pay as you go" scheme with no upfront capital required or a power purchase agreement over a contracted period. Today this constitutes over 20% of the solar PV and battery market in New Zealand and the lions share is implemented on lower decile residential properties. Some arrangements blend grid power with solar PV power output costs combined - arrangements between a tier 2 retailer and solar PV and battery suppliers.

Demand Response

SEANZ is in support of the development of demand response based on the needs and requirements of end consumers, their groups and communities and with fair compensation. It must not be driven primarily for the benefit of other vested interests.

We prefer a localised system and process over a centralised model of operation. There are many benefits like granular management of VPP/aggregated solar PV/battery output at peak times when needed from competing sources; to managing demand through hot water diverter technology; to managing EV charging through aggregated PV/battery output at specific times; to using an arbitrage process at a residential/ICP or community level.

Energy efficiency measures

SEANZ fully supports increasing investment in energy efficiency – at the right level. SEANZ stakeholders understand that their clients who generate their own energy do not want to waste it.

They take action to reduce demand and become more energy efficient. The overwhelming understanding is this – the consumer learns the value of the electricity generated (because it costs more from the grid). DER and self-generation provides the consumer with a clearer understanding of the value of their electricity, it's conservation and what it means to be energy efficient. The consumer optimizes their generation assets, and more effectively manages their energy consumption.

With an increase in DER and self-on-site generation where consumers are investing their own funds, energy efficiency will increase for the reasons defined above. The requirement then to drive energy efficiency based on the current centralised model becomes reduced and over time near redundant. Localised energy efficiency measures become the play as this is the right level to enact such.

Community renewable energy

Facilitating community engagement in renewable energy has positive social, environmental, economic, network and security of supply benefits. There is significant opportunity for New Zealand now to encourage and drive the positive narrative on the value of community energy projects.

Key benefits are;

1. Community renewable generation (and storage) delivers resilience for the local community especially when networks experience weather storms (greater climate change issues) or there are issues with transmission or centralised infrastructure.



2. Community energy projects enable and facilitate competition with innovators and service deliverers. If an innovator knows that community energy is a “go” in this country, it’s a target market and the competition is created immediately to innovate and deliver lower costs as a result.
3. Community projects build stronger communities. We are all aware of this and most of us have participated in some local project for the good of the community. The societal and social aspects benefits are obvious.
4. SEANZ supports the Government in providing a number of community energy pilot projects to help “get the heads around” the model, its benefits, barriers and the necessary regulatory environment to make it function. A secondary market concept as described earlier would be an option for this type of project.
5. SEANZ agrees that the coordination of policy across Government to drive DER is a barrier in the community energy sphere. The EA’s efforts regarding open networks and the MTR space may be helpful but the process is far too slow and appears encumbered with other issues as forthcoming results are slow.

The regulatory environment struggles to keep up with both technological and process change that delivers new models. A simple example is the lack of a universal DER/DG grid connection agreement that all EDBs can and will use for solar PV and whatever tech to be connected to their network. Another is EDB’s who push the boundaries and insist that specific inverter standards must be used when New Zealand legislation states otherwise and there is no regulatory input or clear policy around this to help the EDB.

In conclusion we fully support Government funding for private investment in renewable generation and new clean energy solutions.

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