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Energy Markets
Building, Resources and Markets
Ministry of Business, Innovation and Employment
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Dear Sir / Madam

RE: Draft New Zealand Energy Efficiency and Conservation Strategy 2017-2022

The Independent Electricity Generators Association (IEGA) welcomes the opportunity to make this submission on the draft replacement New Zealand Energy Efficiency and Conservation Strategy 2017-2022 (draft NZEECS).

This Strategy is one of several statements of the government's policy to unlock, or maximise, New Zealand's renewable energy potential for the benefit of all New Zealanders. The IEGA strongly supports this policy. Our members make a valuable contribution to New Zealand's renewable energy target with 95% of our electricity generated from renewable sources compared with ~83% for the entire sector¹. The NZ Energy Strategy, its companion NZEECS and the NPS for Renewable Electricity Generation provide important guidance and direction for existing and future investment (eg, support for distributed generation when seeking to re-consent existing, or consent new, distributed generation sites).

The remainder of this submission is our response to the specific questions asked.

Q1. Does the proposed goal capture what you see as the desirable future state from the promotion of energy efficiency, energy productivity and renewable energy in New Zealand?

The goal of the draft NZEECS is

"Support New Zealand to be an energy efficient, productive and low emissions economy"

A 'low emissions economy' might be an outcome of promoting renewable energy in New Zealand but we are concerned the goal is not directly linked to, or include a reference to, maximising New Zealand's renewable energy potential.

¹ Source: http://www.emi.ea.govt.nz/Datasets/Wholesale/Generation/Generation_fleet/Existing

Q2. Where do the challenges and opportunities lie for energy efficiency and renewable energy in New Zealand over the next five years?

IEGA suggests a significant challenge to unlocking our renewable energy potential is the government’s independent electricity regulator, the Electricity Authority (Authority). IEGA has significant concerns that the Authority is determining the future electricity supply mix for New Zealand. Further, the Authority is doing this with no regard to the government’s renewable energy target, government energy policies in total or New Zealand’s international climate change commitments and targets.

We note the Introduction section of the consultation paper includes analysis by the International Energy Agency (IEA) which identifies the multiple public and private benefits of increasing energy efficiency and renewable energy use – copied below². The IEA is a preeminent energy policy agency and it appears the government endorses the IEA’s conclusions (by including this information in the consultation paper).

Multiple benefits of increasing energy efficiency and renewable energy use¹	
Public benefits	Private benefits
Employment and market growth in energy efficiency and renewables	Cost reduction, energy affordability, low energy prices
GDP growth	Productivity, competitiveness, product quality, employee comfort and satisfaction
Productivity and competitiveness	
Reputational benefits from reduced environmental impacts	
Energy system resilience and security	Reputational benefits from reduced environmental impacts
Reduced reliance on imported fuels	
Emissions reductions	
Improved air quality	Health and wellbeing, comfort, reduced respiratory illness
Reduced public health costs	

The Authority does not consider these multiple public and private benefits in its analysis of proposed Code amendments. Private benefits result in wealth transfers which the Authority does not include in its analysis of Code change proposals. Public benefits are also not considered by the Authority. The Authority’s decisions are based only on its interpretation of economic efficiency.

Any Code change must have a positive NPV cost benefit result. The Authority completed a cost benefit analysis (CBA) of its decision to amend the Distributed Generation Pricing Principles (DGPP) in Part 6 of the Code. If any of the IEA’s public or private benefits had been included in the Authority’s CBA the maximum NPV benefit of implementing the initial proposal of \$20.7m over 15 years would likely be eliminated.

The future of New Zealand’s existing renewable distributed generation is under threat. The Authority has decided that it has the right to decide if an existing distributed generation plant contributes to Transpower achieving its Grid Reliability Standards and as a result is allowed to continue to receive payments from its network company. IEGA has the following concerns with the Authority’s decision

² Source: Page 5 <http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-strategies/consultation-draft-replacement-new-zealand-energy-efficiency-and-conservation-strategy/draft-replacement-nzeec-strategy.pdf>

on its review of the DGPPs which are relevant for the government achieving its renewable energy and NZEECS targets:

- the Grid Reliability Standards (GRS) were developed for a different purpose
- the Authority has not allowed Transpower the opportunity to consult on its proposed approach to applying the GRS for this new purpose
- the Authority has allowed less than three months for Transpower to determine the methodology to apply to all existing distributed generation, apply it to the Lower South Island region and complete a report to the Authority on its conclusions
- while the Electricity Governance (Connection of Distributed Generation) Regulations 2007 were being prepared MED (now MBIE) noted that payment of ACOT to distributed generation recognised distributed generation is avoiding transmission costs and charges – the Authority has ignored this policy decision
- the Authority ignores the Economic Sizing theory – whereby it is economically efficient to invest in lumps of transmission which may result in overcapacity for a while. This theory acknowledges that the distributed generation that existed before the transmission investment should continue to operate under prior arrangements (just as existing transmission continues to get paid for). That is, distributed generation did not contribute to the excess transmission capacity. Therefore distributed generation should be grandfathered
- the decision places distributed generation at a competitive disadvantage to grid connected generation
- while the Authority has just made decisions relating to distributed generation, the regulatory outlook remains very uncertain as the Authority has been clear it is going to review all the new arrangements within the next 3 years.

As well as contributing to New Zealand's renewable energy target, distributed generation also improves New Zealand's energy productivity. Energy productivity includes the cost of producing and delivering electricity. Distributed generation can be built at an LRMC equivalent to grid connected generation. Distributed generation is usually located closer to electricity users than grid connected generation and uses only the local network to deliver electricity to users. Grid connected generation (by definition) uses the transmission grid and the local network to deliver electricity. Transporting electricity results in lost energy (due to resistance). Most recent data shows 1,239GWhs (3.2% of total electricity injected) was lost while travelling over the transmission grid; 1,670GWh (6%) was lost while travelling over distribution networks. Top Energy took into account the economic value of lost energy (~6% in their case) when deciding to invest in distributed generation compared with investing in 110kV lines³.

The draft NZEECS recognises the positive contribution from distributed generation as it identifies the opportunity for individuals to make greater use of renewable energy. One of the actions listed is for communities to⁴ *“undertake ... renewable energy projects in schools, recreational facilities, marae and other community organisations”*. This is investment in distributed generation. IEGA queries whether these potential investors understand the regulatory hurdles now put in place by the Authority.

Our members are innovative, entrepreneurial and passionate about New Zealand's renewable advantage and potential. They have a portfolio of new economic renewable generation projects consented or under investigation. However, the current regulatory environment, uncertainty about the future regulatory environment and conflict between the Authority's agenda and wider government policy means these investments are being deferred indefinitely.

³ Top Energy application for an exemption <http://www.ea.govt.nz/dmsdocument/21586>

⁴ Ibid. Table on page 14

The IEGA reiterates its request for the government to initiate a review of the regulatory framework for all the technologies that achieve the same outcomes – both distributed generation and emerging technologies – be undertaken by a multi-agency team that could take into account the full spectrum of the government’s policy objectives.

Q3. Do the proposed objectives and priority areas capture the key contributions that are needed to achieve the goal?

The government has a responsibility to ensure the policy and regulatory settings are appropriate as new technologies and innovations occur. Under the priority area of “innovative and efficient use of electricity” IEGA suggests the government has a role to ensure a level playing field, from both an ownership and operational perspective, for existing and new technologies that provide the same services to electricity consumers. For example, existing and new technologies that compete with the monopoly network assets might be owned by the monopoly or by a competing third party. A network company or a competing third party might invest in new forms of distributed generation – such as batteries – and the regulatory settings must apply equally to existing distributed generation.

Q4. Does the focus on what each group can contribute resonate with you? Do you think anyone is missing?

The IEGA suggests the government consider the governance of the electricity sector to assess if the structure of the policy and delivery agencies (including the Electricity Authority) is aligned with government’s policies, targets and commitments. The NZEECS is an important statement of government policy but the Electricity Authority is listed in a support role for only one of the 23 supporting actions to achieve the goal. As stated above, the IEGA suggests the mandate of the Authority is being deployed in a way that is counter-productive to government policy.

Q5. Taken together, do you think the proposed goal, objectives and priority areas will set a clear direction for action to unlock our energy productivity and renewables potential?

This is a difficult question. It appears the replacement NZEECS is a component of overall government policy settings as the draft NZEECS states *“the government is developing energy targets to signal the longer-term direction for the sector, focusing on opportunities to increase the use of renewables and improve energy productivity.”*

Q6. What specific actions could help us to achieve the goal of the Strategy? What, if any, additional costs would you face if those actions were implemented? Please quantify if possible.

This Strategy forms part of the government’s suite of policies to achieve New Zealand’s target to reduce greenhouse gas emissions by 30% from 2005 levels by 2030. We note that many commentators claim that this target is insufficient to achieve New Zealand’s commitments signed in the Paris Agreement. The Business Growth Agenda also includes a commitment to improve energy efficiency and use of renewable energy to raise productivity, reduce carbon emissions and promote consumer choice.

IEGA submits that it would be a retrograde step to continue with regulatory changes that are likely to reduce the contribution of distributed generation to these commitments. We reiterate our call for a review of the regulatory framework for all the technologies that achieve the same outcomes of improving New Zealand's energy productivity and unlocking our renewable energy potential – both distributed generation and emerging technologies – be undertaken by a multi-agency team that could take into account the full spectrum of the government's policy objectives.

Q7. Do you agree that the preferred targets will be measurable and meaningful targets, and support the objectives and actions?

The draft NZEECS includes one new target. IEGA does not have the expertise to comment about whether it is measurable or the information to comment about whether it is meaningful.

Q8. How can we ensure that energy data and research generates knowledge and understanding that can help to unlock our energy productivity and renewables potential?

IEGA, or individual members, are willing to share their expertise and knowledge with officials as the government works on initiatives to unlock New Zealand's renewables potential.

Yours sincerely



Warren McNabb
Chairman