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Energy Markets Policy
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Industry and regulators must work together to ensure energy-related emissions reduced in a cost-effective manner

We're excited about being a positive contributor to the energy sector's role in the transition to a net-zero emissions economy. As a regulated monopoly provider of gas and electricity networks across a large expanse of rural and urban North Island locations, we are a key enabler of business, consumer, and industry energy use decisions.

A phrase that resonated with us in the paper was to "reduce energy-related emissions in a cost-effective manner". This extends beyond the direct use of fuels to infrastructure and systems that will support these decisions over an extended time frame and with uncertainty. In that context, the value for customers comes from industry and regulators working together to provide the least cost and proportionate processes to support those customer choices through time. We look forward to continued engagement with MBIE and regulators on progressing the policy and regulatory initiatives to support that.

There are three themes that underpin our responses to the submission questions:

1. **Preserve optionality** We agree with the comment in the paper that there is no one-size-fits-all policy solution for the energy sector. The best interests of consumer will be met if the policy decisions:
 - a. **Are technology-neutral**, to maximise the chance for a transition to a low emissions economy at the lowest cost and highest speed and to mitigate the impacts on energy prices in the context of other price pressures.¹
 - b. **Allow for incremental improvements** as industries transition to alternative technologies. For some industries, moving to a low-emissions alternatives provided significant greenhouse gas emission benefits.²
 - c. **Use a whole-of-system cost/impact approach** to assess efficiency/abatement options. This will support robust and consistent decision-making. For example, geothermal generation is

¹ Insurance and council rates are expected to increase <http://www.stuff.co.nz/environment/climate-news/98001955/How-climate-change-could-send-your-insurance-costs-soaring>, and Looming rates house of cards', Dominion Post, 19 July 2017, pages 14-15

² On average coal-to-gas switching reduces emissions by 50% when producing electricity and by 33% when providing heat. IEA (2019), "The Role of Gas in Today's Energy Transitions", IEA, Paris <https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions>.

expected to increase³ as part of supporting New Zealand's electrification ie it's a lower emissions solution to meet electricity supply needs, but not a 'no emissions' solution.

2. **Flexibility** Policy and regulation will need increased flexibility to ensure industry can meet consumer needs in a timely manner. This includes:
 - a. **Coordination between market and economic regulators** in the development of market designs and platforms to deliver them eg markets for demand response or enhanced system operation capability on distribution networks to deliver open-access networks
 - b. **Supporting pragmatic transition options** that reduce emissions while objectives like security of supply and cost are preserved eg gas networks could eventually be used to deliver decarbonised gases (such as biomethane, and hydrogen).⁴ For example, a hard deadline on boiler use may cause an equivalent surge in alternative fuel requirements compressed in to a short period of time. This could be challenging to respond to economically and/or technically.
 - c. **Individualised price paths** for electricity distributors to capture the regional realities of electrification at a low transaction cost which consumers ultimately bear. This could include things like different resilience needs, technology uptake possibilities, and the impacts of policy implementations which differ across location, time, and regional economies.
3. **Deliverability** Timely policy alignment is needed in advance of a transformation of the economy so that consumers and industry can deliver emission-reducing initiatives. This includes:
 - a. **Alignment of the policy intent** and prioritisation across policy mechanisms. For example, the national policy statements and environmental standards on electricity transmission and biodiversity aren't aligned with the need for electricity distributors to support increased demand for electricity efficiently and reliability. And the treatments of trees and customer service lines in the electricity sector needs an overhaul to ensure they are fit for purpose if the economy is going to become even more reliant on electricity.
 - b. **Pragmatic** approaches to market and economic regulation that enable infrastructure providers to quickly respond to technology uptake, fuel switching, resilience requirements, and new information about climate and resilience risk. For example, the Wellington Electricity proposal to manage heightened earthquake risk required Ministerial involvement because it wasn't catered for in regulations.
 - c. **Resourcing** of regulators and participants will be essential – financial and workforce. For example, the scale of investment needed to accelerate renewables and emissions reductions will mean more resource and focus on network transformation.

Attachment 1 contains our responses to specific questions raised in the discussion document that we feel are particularly relevant to the role of gas and electricity networks. We support the submission from the Electricity Networks Association.

If you have any questions on this submission, please contact Andrew Kerr (Andrew.kerr@powerco.co.nz).

Yours sincerely



Andrew Kerr
Head of Policy, Regulation, and Markets

³ See for example https://www.bec2060.org.nz/_data/assets/image/0008/182492/2-electricity-generation-by-fuel-type.png, which shows projections of geothermal generation increasing for both scenarios modelled.

⁴ We are investigating and readying our gas assets for alternative uses, including conveying decarbonised gases (biomethane, and hydrogen).

Attachment 1: Responses to selected questions

Question	Powerco response
<p>Section 1: Addressing information failures</p>	
<p>Q1.7 Do you support the proposal to develop an electrification information package? Do you support customised low-emission heating feasibility studies? Would this be of use to your business?</p>	<p>The information package will be more effective if expanded to include clear and reliable information about other technologies eg hydrogen and biogas. Broadening the scope will reflect the important role that different fuel types and technologies have in the decarbonisation of our manufacturing industries.</p> <p>It will be useful to include information on the process to obtain a new or upgraded electricity network connection. This may be of interest to businesses looking to electrify process heat.</p>
<p>Section 2: Developing markets for bioenergy and direct geothermal use</p>	
<p>Q.2.6 In your view, could the Industry Transformation Plans stimulate sufficient supply and demand for bioenergy to achieve desired outcomes? What other options are worth considering?</p>	<p>Policy should be neutral on how emissions reductions occur (for example, by what technology and/or fuel).</p>
<p>Q.2.7 Is Government best placed to provide market facilitation in bioenergy markets?</p> <p>and</p> <p>Q.2.9 In your view, how can Government best support direct use of geothermal heat? What other options are worth considering?</p>	<p>Government should ensure it has a range of technologies to reduce emissions rather than backing one or two preferred options.</p> <p>We believe Government's role in facilitating bioenergy markets should focus on:</p> <ul style="list-style-type: none"> • ensuring all bioenergy options (not just wood) are considered; and; • ensuring that certification and fuel obligations are put in place to stimulate markets and to provide credibility for this source of energy
<p>Section 7: Enabling development of renewable energy under the Resource Management Act 1991</p>	
<p>Q 7.2 Are the current NPSET and NESETA fit-for-purpose to enable accelerated development of renewable energy? Why?</p>	<p>If increased generation on transmission and distribution networks expected, then distributor-owned and Transpower-owned transmission assets ought to have the same status in national policy and standards (eg the NPSET). For example, the definition of the grid / lines can be updated to capture the function and amenity of the asset rather than focusing on the classification of an asset as "transmission" or having Transpower ownership.</p>

	<p>If meeting electricity demand by the lowest cost supply and delivery options is desired, then the draft National Policy Statement for Indigenous Biodiversity needs to reflect this. A solution involves adding a new policy and definitions to reflect the role of existing and new critical infrastructure.</p>
<p>Section 8: Supporting renewable electricity generation investment</p>	
<p>Q8.7 Do you consider the development of the demand response (DR) market to be a priority for the energy sector?</p>	<p>Yes, a demand response market is a priority. It aligns with the EA's developments of the spot market for electricity. Powerco has begun planning for the investments needed to prepare our network for a future with this sort of functionality⁵. This includes investments we intend to make in our transition to an open-access network, such as low voltage (LV) and higher voltage network monitoring, communications systems, back-office information systems, and power quality management.</p> <p>We believe that there is time for market participants to develop and test different technical and commercial arrangements for demand response, before the government or regulators intervene too strongly.</p>
<p>Q8.8 Do you think that DR could help to manage existing or potential electricity sector issues?</p>	<p>A demand response market could play a useful role in mitigating potential electricity sector issues. For example, it could mitigate network hosting capacity issues that arise with the uptake of new customer technologies such as electric vehicles and on-premise batteries. Natural gas currently plays a role in mitigating some of those issues (by meeting peak heating needs without stressing the electricity network). Lower-emission gas will ensure that this functionality is maintained while also meeting emissions needs.</p>
<p>Q8.13 Do you support the proposal to require electricity retailers and/or distributors to meet energy efficiency targets? Which entities would most effectively achieve energy savings</p>	<p>Option 8.3 of the discussion paper proposes an obligation on retailers / distributors to deploy energy efficient technologies across their customer and / or asset base. The example provided is the delivery of insulation. Powerco supports initiatives that can cost-effectively increase households and business use of energy efficiency resources. However, we are unsure whether distributors are the best delivery agents because:</p> <ul style="list-style-type: none"> • It would add a new function outside the core business of most distributors • Most distributors operate under an interposed model, where the retailer (and not the distributor) has the relationship with the consumer <p>We believe our time and energy would be best spent focusing on our core function – ensuring electricity is delivered to our customers safely, reliably and efficiently, and that we continue to invest in our network to meet the needs of customers in the long term. Doing our job well will enable our consumers, including generators, to create, use and save energy as efficiently as possible.</p>

⁵ Powerco Asset Management Plan 2019, p 160 <https://www.powerco.co.nz/media/2064/2019-electricity-amp-powerco-vf.pdf>

Section 9: Facilitating local and community engagement in renewable energy and energy efficiency	
Question 9.1 Should New Zealand be encouraging greater development of community energy projects?	<p>We support more community energy projects. These projects have the potential to deliver direct benefits such as reducing costs and secondary benefits such as strengthening community knowledge and community cohesion.</p> <p>Early engagement with these projects will improve their chance of success. It will mean distributors can manage network safety, reliability and quality risks through effective coordination with the project. Trials are a good idea for testing how this coordination can occur technically and commercially.</p>
Q9.2 What types of community energy project are most relevant in the New Zealand context?	<p>It is important that communities are provided with information and support to ensure they pursue the lowest cost option that meets their overall energy needs, including quality and safety. The types of projects will be driven by the community's unique circumstances and needs.</p>
Q9.7 What do you see as the pros and cons of a clear government position on community energy, and government support for pilot community energy projects?	<p>A clear position on community energy will make it easier for distributors and all parts of the supply chain (including councils and other amenity and service providers), to understand and respond to proposals.</p> <p>We welcome government support for pilot community energy projects. Involving a wide range of industry participants (such as retailers, distributors, and regulators) will increase the likelihood of a success and will also ensure that maximum value can be extracted for the pilot.</p> <p>Because reducing New Zealand's greenhouse gas emissions will require a range of policies and technologies to be applied at different times it is important that these pilot projects test a broad range of technologies, locations and energy needs.</p>
Section 11 - Local network connections and trading arrangements	
Question 11.1 Have you experienced, or are you aware of, significant barriers to connecting? Are there any that will not be addressed by current work programmes outlined above?	<p>The approach to setting regulated revenues must keep up</p> <p>To deliver increased electrification, regulated revenue allowances must reflect the scale, scope, and uncertainty of investment needed to prepare for future electrification needs. The approach taken to extended reserves is a useful reference point as it provides a link between market (EA) and economic (commerce Commission) regulations.</p> <p>The current regulatory framework has the potential to result in under investment in network transformation. This is because distributors Default Price-Quality Path (DPP) allowances are based largely off historical expenditure and therefore are unlikely to accommodate the significant increase in investment needed for network transformation.</p> <p>To address the risk of under investment, we consider that a re-think of the approach to setting regulated distributors' expenditure / revenue allowances is required.</p>

	<p>Data and data access</p> <p>A significant barrier to realising the value of greater service provider and customer use of new technologies is distributor access to smart metering data. Accurate smart meter data is necessary for the effective running of a reliable, stable open-access network.</p> <p>Despite much effort, there is still no cost-effective market solution for distributors to gain access to this necessary smart meter data. Further regulatory intervention may be needed to find an effective and long-term solution to data-access, including a minimum data specification.</p>
<p>Q11.4 What changes, if any, to the current arrangements would ensure distribution networks are fit for purpose into the future?</p>	<p>A more flexible approach to setting revenue allowances</p> <p>The current approach to setting distributors revenue allowances may not reflect the scale and scope of investment needed to prepare for future electrification needs eg establishing a DSO function in time with the need for it. Moving large distributors on to an individualised price-quality path regime like Transpower’s would help address this by allowing flexibility to be applied to distributor investments / allowances that reflect the state and pace of electrification in their regions. A more flexible framework would minimise the transaction costs and limitations of a Customised Price Path while maintaining transparency and scrutiny.</p> <p>Low-user Fixed Charge regulations must be repealed</p> <p>Cost reflective distribution pricing is needed to accurately signal to customers the cost of the distribution service and the value to the distributor of demand response and other network support services.</p> <p>However, the existing low-user fixed charge regulations are a barrier to setting more accurate prices. It is important that these regulations are repealed and not replaced by any similar regulations that inhibit the flexibility of distributors prices. This isn’t about more revenue (most distributors are on a revenue cap) – it is about supporting fair and efficient outcomes across the economy.</p> <p>We note that Megan Woods (Minister of Energy and Resources) has agreed with the Electricity Price Reviews recommendation to phase out the low-fixed charge regulations.</p> <p>Data access may require further regulatory intervention</p> <p>Regulatory intervention may be required to enable distributors to access cost-effective and accurate smart meter data. This could include a minimum specification for data collection</p> <p>Make extensive use of trials</p> <p>It is important distributors act now to understand new energy technologies to ensure that they can accommodate them efficiently on their networks.</p> <p>An effective way for the government to support distributors to prepare for a distributed energy future is by directly funding trials of new technologies. We expect that a few million dollars could stretch a long way and would support innovation and regional development objectives.</p>