

4 February 2016

Keston Ruxton
Manager, Input Methodologies
Commerce Commission
P O Box 2351
Wellington 6140

By email: regulation.branch@comcom.govt.nz

Dear Keston,

RE: Input Methodologies Review - Emerging technology pre-workshop paper

Pioneer Energy (Pioneer) appreciated the opportunity to attend the emerging technology workshop on 14 December 2015. We commend the Commerce Commission (Commission) for its open and collaborative discussion of the issues of emerging technologies without any preconceived position.

Pioneer owns and manages distributed generating plant with a total capacity of approximately 45MWe and generates around 350GWh per annum. Pioneer's generating assets are all embedded within local distribution networks and are predominately hydro with storage. Pioneer is also an electricity retailer and has a strong focus on providing energy efficiency services in both the residential and commercial sectors.

Distributed generation and energy efficiency initiatives are an alternative to electricity lines services provided by distribution companies (EDBs) – reducing the capacity needed in the distribution network during peak demand periods. Emerging technologies, such as batteries, may also be alternatives to lines services.

Pioneer's interest is to ensure a level playing field for existing and new technologies:

- at the time of an investment - EDBs may have more information about the customers on their network when investing in the competitive parts of the market than third parties,
- in the contracting terms and prices/charges paid by the EDBs to their own activities and third parties, and
- in the regulatory treatment of different activities undertaken by EDBs and third parties that achieve the same outcomes.

Comments arising from the workshop

At the workshop Pioneer's impression was that EDB's preference would be that investment in batteries (or more generally, emerging technologies) be included in their Regulatory Asset Base (RAB). Pioneer's preference is that emerging network technologies;

- be treated as regulated opex, and
- that the opportunity to provide the new 'lines service' would be open and contestable to all EDBs consumers – this would include distributed generation owners, third parties, electricity retailers and end users.

We hold this view primarily as we believe that specialist providers are more likely to invest in and utilise these new technologies more efficiently and in aggregate for multiple market services to NZEM, Customers, Transmission and Network providers.

Monopoly ownership of new technologies raises a number of complex market related questions:

- If a battery is included in the RAB, will the same price and terms of this lines service be offered to all parties offering an equivalent lines service on that network, such as distributed generation?
- Is a battery installed to store energy or to avoid the cost of transporting energy?
 - Will the Commission also consider the avoided network costs from using batteries?
 - Would the EDB be required to provide the Commission with their analysis of the avoided cost and avoided investment in network capacity from using batteries?
 - Would this opportunity to be a storage provider be tendered by the EDB, who would then take up any additional capacity on the same terms and prices?
- Is it appropriate that an investment that is made to avoid or defer investment in network assets can become a vehicle for speculative trading in energy by the EDB (buying and storing energy when the price is low and selling the energy at peak demand periods to avoid using transmission capacity and when the prices are most often higher)?

The workshop focused on the regulatory treatment of revenues and costs. The regulatory treatment of revenues and costs must provide for a level playing field for investment in new technologies otherwise:

- investment by competing interests will be suppressed,
- existing distributed generation will be competed away by regulated solutions undertaken by the EDBs, and
- millions of dollars of investment will be lost to the sector.

Pioneer considers the current regulatory treatment of revenues and costs to be too flexible – lines services need to be more clearly defined. Technology and innovation will otherwise result in monopoly services being merged with services that are not regulated. Regulations that support the recovery of operating costs that can be tendered to third party providers is more transparent than bundling these technologies into the RAB.

Asset valuations

The current valuation of the existing infrastructure of EDBs is under threat and regulators / the Government should be considering this issue now.

EDBs have already been experiencing consumption and peak demand levels lower than forecast. The current regime appears to allow EDBs to increase the average weighted price to recover the allowable return on assets (with a lag).

As distributed generation and emerging technologies become more widely installed consumers will use the network less at peak times – reducing load on the network. In a recent report the Grattan Institute¹ highlighted this issue for Australia – which is equally relevant to NZ.

“...the new world of distributed power will profoundly challenge the business models of generators, grid operators and retailers. ... In cities, consumers will draw down less power as they generate and store their own.

Policy reform is urgently needed to support these changes. The regulation of networks must be tightened so that consumers do not pay for more surplus infrastructure. ... falling power use is likely to make some existing infrastructure redundant. Governments must decide now who will pay for these expensive asset write-downs when they are needed.” (page 1)

Grattan Institute identified some potential solutions to address the issue of who pays for the parts of the grid that are not needed.²

It could also be argued that EDBs are incentivised to invest as they are guaranteed a return on these assets. Pioneer appreciates that the Commission does not ‘regulate’ capital investment by EDBs as it does for Transpower. However, Pioneer recommends the Commission consider a change to the regime to require EDBs to investigate non-network solutions when considering asset replacement and growth investment. This is particularly relevant at this time with the cost of non-network solutions (such as distributed generation and emerging technologies) is declining and given the mature age of New Zealand’s distribution network assets.

The Grattan Institute are recommending this change for regulation of Australian network companies.

The Institute also recommends annual adjustments to consumption and peak demand forecasts so that capital expenditure can be adjusted during the regulatory period to reflect network requirements, which then flows into revenue and network prices.³

In summary, Pioneer recommends the Commission consider the issue of asset valuations as part of its current Input Methodology Review and the impact of emerging technologies.

¹ Wood, T., Blowers, D., and Chisholm, C., 2015 *Sundown, sunrise: how Australia can finally get solar power right*, Grattan Institute <http://grattan.edu.au/report/sundown-sunrise-how-australia-can-finally-get-solar-power-right/>

² Ibid. Summarised on page 35 from their report Wood, T., Carter, L. and Harrison, C (2103) *Shock to the system: dealing with falling electricity demand*, Grattan Institute <http://grattan.edu.au/report/shock-to-the-system-dealing-with-falling-electricity-demand/>

³ Ibid. see page 41-42

Distributed generation is an emerging technology

Distributed generation is already established within local networks; it can be innovative; and it is also an emerging technology (for example solar). All distributed generation achieves the same outcomes as other emerging technologies. Energy efficiency and demand-side initiatives also achieve the same outcomes.

The Commission has already determined a methodology for treatment of energy efficiency and demand side initiatives under part 54Q of the Act. The Commission must ensure the treatment of all activities that are alternatives to lines services is consistent – this includes the regulatory treatment and the terms and prices of any services offered internally by the EDB or provided by third parties. The regulatory regime must ensure that the benefit for the EDB (in deferred or avoided investment) is passed on to the party that provided that benefit.

Commerce Commission should be responsible for all regulation of distribution and transmission

Pioneer reiterates our recommendation that the Commerce Commission take over responsibility for the whole of Part 6 of the Electricity Industry Participation Code (Code). The Commission is regulating lines services but only a subset of the alternatives to lines services – namely energy efficiency and demand-side initiatives (under 54Q) and now emerging technologies. Distributed generation is the same as all of these alternatives to lines services – it achieves the same outcomes and therefore the regulatory treatment should be consistent.

The Electricity Authority is encouraging more cost reflective distribution pricing which is likely to encourage less demand at peak periods and reduced need for the existing network assets when the Commission is responsible for the valuation and return on the EDBs asset base.

In addition, Pioneer considers there is a disconnect between the Electricity Authority's proposals to allocate transmission costs on the basis of the combined capacity of all residential meters on the EDB network and the incentives for EDBs to invest in emerging technologies to avoid or defer future investment in network assets.

The combined capacity of all meters on the EDB network bears no relation to the level of peak demand on the network. The proposed allocation of transmission costs provides no signals to an EDB to avoid or defer future investment in network assets. This issue is highlighted in the following extract from a submission from ASEC⁴ on the recent TPM options working paper by the Authority:

“The absence of demand-based charges in Application A significantly reduces the incentives for investing in the technology necessary for managing peaks. With no financial benefits available from managing peaks on the transmission system, the business case for investment in peak management technology is much weaker. This would be appropriate if the focus was solely on optimising the short-run utilisation of existing transmission assets. But the longer term consequence is that peak growth will be much greater than it otherwise would have been, there will be increased requirements for investment in distribution infrastructure, and

⁴ See <https://www.ea.govt.nz/dmsdocument/19775>

*increased requirements for investment in transmission infrastructure.”
(page 16)*

Pioneer is an innovative and diversified energy services business and is partnering with network businesses and customers to achieve scale in a market with high entry barriers. We are a strong advocate for simplifying current market management systems and regulations, so that consumers and entrepreneurial businesses can actually participate in the investment and deployment of new technologies. The current regulatory structure is not efficient for EDBs or any industry participant. It duplicates costs and has and will continue to result in inconsistent treatment and signals. Pioneer recommends the Commission be responsible for:

- all regulation relating to transmission, including the transmission pricing methodology, and
- all regulation relating to distribution activities, including
 - distribution pricing principles, and
 - distributed generation pricing principles and all of the rest of Part 6 of the Code.

Pioneer’s response to the Commission’s specific questions is in Appendix 1.

I would welcome the opportunity to discuss this submission with you.

Yours sincerely



Fraser Jonker
Chief Executive

Attachment:

Appendix 1: Pioneer’s response to the Commission’s specific questions

Appendix 1: Pioneer’s response to the Commission’s specific questions

Question	Response
<i>Opening question</i>	
134.	<p>Do you agree with the contents of this paper? If not, what aspects do you not agree with?</p> <p>The paper is fine as far as it goes about how emerging technologies might be treated under Part 4 in terms of how to treat revenue, costs and charges. However, the paper does not discuss:</p> <ul style="list-style-type: none"> • how treatment of emerging technologies could be applicable to other ways to achieve the same distribution and transmission network benefits (eg distributed generation) • overlap or interaction with the demand side management incentive introduced recently under 54Q (ie, emerging technologies can be expected to reduce the volumes of electricity transported on the network or imported from the transmission grid) • the long term impact of emerging technologies on EDB regulatory asset base values (eg stranded assets, depreciation rates)
<i>Questions on the current IMs and approach</i>	
135.	<p>Do you think the current approach of relying on EDBs to determine if what they are doing is part of the electricity lines services is appropriate? In practice this means determining whether:</p> <p>135.1 an asset is used to provide the service; or</p> <p>135.2 operating costs are attributable in whole or in part to provision of the service?</p> <p>Pioneer considers the current regulatory treatment of revenues and costs to be too flexible – lines services need to be more clearly defined. Technology and innovation will otherwise result in monopoly services being merged with services that are not regulated. Regulations that support the recovery of operating costs that can be tendered to third party providers is more transparent than bundling these technologies into the RAB.</p> <p>The Commission must retain the option to review the way an EDB is determining if an asset and operating costs should be included as part of the regulated service and must be able to require a change by the EDB to its treatment.</p>
136.	<p>Do you think that the flexibility provided by the availability of three different cost allocation methodologies is appropriate?</p> <p>Pioneer is very concerned that the Commission believes that its current approach (as outlined in the paper) does NOT achieve a level playing field – paragraph 132 is copied below</p> <p><i>“132. In summary, Part 4 does not directly promote the ‘level playing field’ submitters have referred to in relation to unregulated services.”</i></p>
137.	<p>Do you think that the materiality thresholds for determining which cost allocation methodology should be employed are appropriate?</p> <p>Pioneer does not have the technical knowledge to be able to answer this question.</p>
138.	<p>Do you think that the rules and processes for determining the circumstance in which OVABAA can be employed are appropriate?</p> <p>Pioneer does not have the technical knowledge to be able to answer this question.</p>
139.	<p>Do you think that the definition of capital contributions is appropriate?</p> <p>Pioneer does not have the technical knowledge to be able to answer this question.</p>

<i>Other questions</i>		
140.	Are you aware of any revenues/costs that are currently treated as regulated (unregulated) when they may not and/or should not be?	Payment of the avoided and avoidable cost of transmission and distribution is a requirement under Part 6 of the Electricity Industry Code. There are some EDBs that do not make these payments.
141.	Are you aware of any EDB prices that bundle charges for both regulated and unregulated services, or reasons why such bundled charges might be offered in future?	Pioneer is not aware of any EDB prices that bundle charges for regulated and unregulated services – this is because there is insufficient publicly available information about what charges relate to. The EDBs hold this information and are not motivated to share this information publicly. Services from non-network solutions should be treated as regulated opex and the provision of this service must be contestable.
142.	Are you aware of any arrangement where revenue from the supply of electricity lines services would be best treated as capital contributions?	Pioneer does not have the technical knowledge to be able to answer this question.
143.	Do you think that additional R&D or innovation incentives are needed? And if so, what?	Pioneer disagrees that any additional R&D or innovation incentive is needed. Our concerns are: <ul style="list-style-type: none"> • that the cost of an innovation incentive would be wholly or partly treated as a regulated and recoverable cost payable by electricity consumers • an innovation incentive would crowd out investment by the competitive part of the market • maybe once the innovation is proven it can become part of the RAB (while it is under development there are other incentives / tax breaks available to the EDB)