

5 February 2016

Carl Hansen
Chief Executive
Electricity Authority
2 Hunter Street
WELLINGTON

Sent via email: submissions@ea.govt.nz

Dear Carl

Implications of evolving technologies for pricing of distribution services

Thank you for the opportunity to provide comments on the Electricity Authority's consultation paper "Implications of evolving technologies for pricing of distribution services" dated 3 November 2015. This letter addresses the priority areas for local government, rather than providing comment on all matters via a formal submission.

As discussed at LGNZ's meeting with the Electricity Authority ("the Authority") on 21 January 2016, we welcome the Authority's investigation into distribution pricing. We consider that it is important that distribution pricing better reflects a "service-based price" and that the deployment of innovative technologies are encouraged, where appropriate and beneficial to communities.

We have reviewed the submission made by the Institute of Public Works Engineering Australasia (IPWEA) and support their recommendations to optimise the roll-out of innovative public lighting technologies.

Relevance to the local government sector

LGNZ is the national organisation of local authorities in New Zealand and all 78 councils are members. We represent the national interests of councils and lead best practice in the local government sector. LGNZ provides advocacy and policy services, business support, advice and training to our members to assist them to build successful communities throughout New Zealand. Our purpose is to deliver our sector's Vision: "Local democracy powering community and national success."

This submission has been prepared on behalf of the local government sector¹ and with input from Equip, LGNZ's Centre of Excellence.

The local government sector owns a large number of assets, property and infrastructure that rely on electricity to provide services to our communities across New Zealand. As a sector, we procure a large volume of electricity annually through relationships primarily with electricity retailers. In most cases, councils will not have a direct relationship with their local electricity distributor, but are a major consumer, impacting on the demand and capacity requirements of that local area. The cost of electricity distribution is one of many factors that contribute to the cost of services that councils provide to their customers, and therefore the approach to distribution pricing is of interest to the sector.

Councils across the country also play a role in facilitating and/or supporting the roll out of smart and evolving technologies throughout their communities. Councils may deploy technologies, such as those described in the consultation paper, to meet or manage their own electricity requirements, or may support their communities to adopt evolving technology for their own benefit.

¹ Building on the feedback we have received to date from member councils.

For example:

- Christchurch City Council is contributing funding towards new "sensing" technologies that can offer real-time information on issues like traffic congestion, water quality and air pollution, with the intention of helping Christchurch become a "smart city";² and
- Greater Wellington Regional Council has taken the first tentative steps towards getting a full network of "fast charging" stations for electric vehicles in place across Wellington, Porirua, Hutt Valley, Kapiti and Wairarapa.³

The introduction of evolving technologies, such as solar panels or distributed generation can also have resilience benefits for councils and their communities, reducing reliance on the national grid during natural disasters or emergencies.

Barrier to innovations in road lighting

An issue we would like to resolve with some urgency is the barrier councils are facing with many local electricity distributors, when considering the introduction of innovative street lighting technology. A number of councils across the country are currently investigating the deployment of more efficient LED lighting to their street lighting networks, but are facing resistance from many local electricity distributors, primarily due to incumbent pricing structures.

Territorial authorities (city and district councils) currently have a number of responsibilities relating to land transport, including the provision of street lighting. As technology has evolved, many councils are now considering the introduction of more efficient LED technology. LED technology has a number of benefits for councils and their communities, including:

- huge energy savings annually;
- excellent central operation and maintenance of street lights, leading to lower maintenance costs;
- centralised monitoring of all street lights;
- less labour costs;
- less capital expenditure on lamps and fittings;
- less contract charges and better contractors; monitoring;
- improved public image for councils, as a cost conscious and efficient public service provider; and
- once LED technology is in place, there is an opportunity to put in place other smart services.

Equip, LGNZ's Centre of Excellence, has been working with a number of councils on a LED offering to help deploy this technology across the country. The New Zealand Transport Agency (NZTA) is also fast-tracking co-investment with local authorities in LED street-lighting. A recent rule change means that councils can replace existing road lights with LED immediately, rather than wait until they reach the end of their useful life.⁴

² <http://www.scoop.co.nz/stories/AK1601/S00482/nod-for-new-smart-city-technology.htm>

³ <http://www.stuff.co.nz/motoring/news/74608742/More-electric-car-charging-stations-on-the-cards-for-Wellington-region>

⁴ <https://www.nzta.govt.nz/planning-and-investment/2015-18-national-land-transport-programme/case-studies/converting-street-lights-to-led/>

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A significant barrier to councils adopting LED technology for their street lighting network is resistance from electricity distributors, due to the current distribution pricing structures and the link to regulated revenue for the business. Street lighting is most often treated as unmetered load under distribution pricing schedules and the pricing approach varies across distributors. Typically there is a mix of fixed charges (ie \$/light/month) and and/or a variable charge (i.e. \$/kWh). For councils that face street lighting distribution charges predominantly based on a fixed charge, then this should not change when LED's are installed (other than normal annual increases). However if there is a variable component, it can reduce as the energy consumption can typically drop by up to 50 percent, therefore halving the variable based revenue that distribution earn.

As outlined in the Authority's consultation paper, this decrease in distributor revenue can negatively impact on a distributor's ability to maintain and upgrade the network (where necessary) going forward. Councils have raised concerns with policy framework for distribution pricing, in that it enables distribution companies to increase distribution rates for individual customers, in order to maintain the level of allowable revenue, and subsequently, the benefits possible from LED lighting will not be realised.

A number of councils have raised and continue to raise their concerns with their local electricity distributors. However, councils have been met with mixed responses – while a few distributors have been supportive, overall, distributors have been resistant or reluctant to facilitate the deployment of this beneficial technology. This resistance can create a significant barrier for pursuing the business case for council investment in LED lighting and needs to be addressed.

LGNZ would like the opportunity to discuss this issue further with the Authority and electricity distribution companies,⁶ so that the deployment of LED lighting can be fast-tracked, for the benefit of communities across New Zealand. The Authority's work on distribution pricing arrangements and the desire to move to a more service-based pricing is a positive step to help this deployment.

For further information, please contact LGNZ Principal Policy Advisor, Karen Collins, on 04 924 1202 or karen.collins@lgnz.co.nz.

Yours sincerely,



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⁵ <https://www.nzta.govt.nz/planning-and-investment/2015-18-national-land-transport-programme/case-studies/converting-street-lights-to-led/>

⁶ We will also be seeking a meeting with the Electricity Network Association in the coming month.