Friday, 31 January 2014

Submissions
Electricity Authority
P O Box 10041
Wellington

By email: submissions@ea.govt.nz

Dear Sir / Madam

Re: Working Paper – Transmission Pricing Methodology: Avoided Cost of Transmission Payments for Distributed Generation

Energy3 Limited ("Energy3") is pleased to make this submission on the "Working Paper – Transmission Pricing Methodology: Avoided Cost of Transmission Payments for Distributed Generation" (the "Working Paper") issued by the Electricity Authority. This submission is made on behalf of Energy3, Lulworth Wind Farm Limited and Weld Cone Wind Farm Partnership.

Energy3 was formed in 2005 to pursue distributed wind generation projects in New Zealand. In this time, Energy 3 has:

- Constructed the three turbine 750kW Weld Cone Wind Farm (commissioned in 2010) in Marlborough;
- Constructed the four turbine 1 MW Lulworth Wind Farm (commissioned in 2011) in Marlborough; and
- Received resource consent for the eight turbine 6.8 MW Flat Hill Wind Farm in Bluff. This project was transferred to Pioneer Generation in 2013.

Energy3 is a member of the Independent Electricity Generators Association ("IEGA") and has reviewed and fully supports the IEGA submission and the Andrew Shelly Economic Consulting ("ASEC") report. We do not propose to repeat the responses set out in the IEGA submission and ASEC report but would like to make the following specific responses to the Working Paper.

ACOT Payment Structure

The Working Paper makes the preliminary finding that amongst the Distributed Generation ("DG") projects:

- There does not appear to be strong evidence indicating that DG location has been determined by avoidance of a transmission investment rather than access to a suitable site or resource.
- ACOT payment rates are largely identical across distribution networks.
- There is not a strong link between the ACOT payment and location of DG to either relieve congestion and/or provide an alternative to transmission.

With respect these findings flow from the structure of the interconnection charge which is a uniform payment throughout New Zealand. Energy3, however, believes that the practice of paying avoided transmission charges and in effect providing an identical payment methodology (in most cases) creates an administratively simple and fair system that can be easily implemented. If individual generators had to enter into negotiations with distributors to try and identify the true costs avoided by DG there is a risk that these benefits would not be passed on to the generator. Distributors are natural monopolies and can potentially exert market power when it comes to determining the network benefit from DG. In any event, calculating the benefit would require a detailed optimised network analysis based upon a number of assumptions, many of which are within the control of the distributor. This optimised network analysis is outside of the capabilities of many distributed generators to verify and resolve. The Working Paper recognises this point in para 11.17 "...although a more targeted set of payments could potentially involve higher transaction costs".

Working Paper Analysis

The Working Paper reaches the preliminary findings that:

- ACOT Payments, and the existence of DG, appear to have no observed effect on transmission investment.
- Although there appear to be some exceptions, ACOT payments have little observed effect on distribution investments or costs, and ACOT payments appear to provide no other material benefits to distributors.
- A prevalence of DG on some distribution networks can cause net costs to the distributor.

We would note that these findings appear to have been formed from a superficial review of publicly available Asset Management Plans from Transpower and selected electricity distributors. In our previous submission on the TPM proposal, we referenced Maunsell Limited's report "Costs and Benefits of Connecting Distributed Generation to Local Networks", 2008 (see http://www.eeca.govt.nz/node/1533).

The aim of the Maunsell report was to quantify the potential future (until 2030) economic costs and benefits of connecting DG to New Zealand's local distribution networks. The analysis concluded that DG for a variety of distribution voltages, and distributed generation network penetrations resulted in a reduction in NPV costs for the distributor.

The methodology employed was to employ simultaneous use of optimised network and NPV cost evaluating modules. The cost and benefit analysis was carried out by quantification of the following network parameters:

- Network losses
- Voltage Issues
- Power Factor Correction
- Fault Level
- Reliability/Availability
- Network Upgrades
- Protection
- Harmonics
- Intermittency of DG dispatch

Energy3 believes that this study clearly rebuts the preliminary findings of the Working Paper which rely on a literature review of Asset Management Plans rather than on the basis of any informed analysis. The Working Paper is also relying upon distributors to form a view on the contribution of DG when some distributors' perceive DG as a significant risk and threat. The 13th PwC Annual Global Power & Utilities Survey highlighted that some utilities (including distributors) perceive DG as a threat rather than an opportunity to their business.

Furthermore, it has been our experience that where DG creates costs for a distributor these costs are passed on to the generator as a specific charge or developed into a connection charge for exporting load.

Benefits of Distributed Generation

The Working Paper reached the preliminary finding that ACOT payments do not appear to deliver any other material economic benefits. We strongly support the IEGA submission which lists "mitigating market failures now that the PPA market is defunct". Energy3's experience from renewing PPAs for its projects is that there is limited appetite for PPAs among the major gentailers and some prices have been presented at material discounts (greater than 15%) to locationally adjusted ASX prices. Energy3 is not able to use the ASX to hedge as its generation is variable volume and is below the minimum volume inherent in the ASX products. Energy3 has, however, entered into PPAs with an independent retailer, and as both Marlborough wind farms are on the other side of a transmission constraint, it supports the IEGA submission that retail markets are regional and that retailer access to local generation (on the high priced side of the constraint) reduces retailer risk and allows more competitive retail electricity prices.

Summary

The ACOT payment practice has been a key feature of the New Zealand electricity market pre dating the Electricity Governance (Connection of Distributed Generation) Regulations 2007. The ACOT payment has been relied upon by investors in making long term investment decisions. To alter or remove this payment significantly increases the regulatory and investment risk for generation projects in New Zealand. For this reason, Energy3 believes it is appropriate that should the Electricity Authority consider eliminating ACOT that this only applies for future DG projects and all existing DG projects are grandfathered under the existing ACOT arrangements.

Yours sincerely

Warren McNabb
Energy3 Limited