



July 26 2016

Electricity Authority Board Members
C/- Submissions
Electricity Authority
P O Box 10041
Wellington

By email: submissions@ea.govt.nz

Dear Board Members

Re: Consultation Paper - Review of Distributed Generation Pricing Principles Paper – Commercially Confidential

Energy3 Limited (“Energy3”) is pleased to make this submission on the Consultation Paper - “Review of Distributed Generation Pricing Principles” (“DGPP Paper”) issued by the Electricity Authority. This submission is made on behalf of Energy3, Lulworth Wind Farm Limited and Weld Cone Wind Farm Partnership. The contents of this submission includes commercially confidential information that Energy3 only wishes to share with the Electricity Authority. An amended submission suitable for public release has also been submitted to the Electricity Authority.

Energy3 was formed in 2008 to pursue distributed wind generation projects in New Zealand. Over the last eight years, Energy 3 has:

- Constructed the three turbine, 750kW Weld Cone Wind Farm (commissioned in 2010) in Marlborough owned by Weld Cone Wind Farm Partnership;
- Constructed the four turbine, 1 MW Lulworth Wind Farm (commissioned in 2011) in Marlborough owned by Lulworth Wind Farm Limited; and
- Received resource consent for the eight turbine 6.8 MW Flat Hill Wind Farm in Bluff which was transferred to Pioneer Energy Limited in 2013. This project was commissioned in 2015 under Pioneer Energy Limited ownership.

Energy3, Weld Cone Wind Farm Partnership and Lulworth Wind Farm Limited are all members of the Independent Electricity Generators Association (“IEGA”) and fully support the IEGA’s submission on the DGPP Paper.

Both of Energy3’s current operating projects, were developed and commissioned after 2007, and in making the final investment decision, Weld Cone Wind Farm Partnership and Lulworth Wind Farm Limited relied upon the pricing principles that were then set out in the Electricity Governance (Connection of Distributed Generation) Regulations 2007 that subsequently became Part 6 of the



Electricity Industry Code. Both wind farms used the default regulated connection contract, including the pricing principles, as the basis for the connection contract with the local distributor.

Submission Summary

Energy3 does not support the proposed changes in the DGPP Paper. We are of the opinion that the status quo best meets the EA's statutory objective. In particular, we believe that the proposed changes to the pricing principles set out in the DGPP Paper will result in:

- a minimum reduction in revenue of 15% per annum for each wind farm from the loss of ACOT; and
- a potential increase in operating costs of \$5/MWh to \$40/MWh plus for electricity generated as a result of changing the current distribution connection cost arrangements from incremental costs to paying a share of distribution network common costs. This potential cost increase represents 7% to 50% of the wind farms' revenue.

Both wind farms are successful generation businesses that do not require ACOT payments to be financially viable. However, assuming the full loss of ACOT, which is the logical conclusion from the discussion in the DGPP Paper, the wind farms in the current wholesale electricity price outlook (based on ASX futures prices) **cease to be financially viable if network costs increase by between [deleted as commercially sensitive]/MWh and could be forced to close**. This is because the cost of production (administration, operating costs and debt finance costs) is currently around **[deleted as commercially sensitive]/ MWh** and the wind farms currently receive on average **[deleted as commercially sensitive]/MWh** for generation output excluding ACOT. The wind farms do not have the option of increasing an offer into the wholesale market to try and recover an increase in costs (as other generators would) as it is not a market participant but a price taker.

Energy3 does not support the EA's proposal in the DGPP Paper because it jeopardises the financial viability of existing distributed generation schemes that were built in reliance of the DGPPs. It will create a potentially insurmountable barrier for the construction of new distributed generation which must be contrary to section 32(1) of the Electricity Industry Act in that it will not promote competition in the electricity industry, reliable supply of electricity to consumers or the efficient investment in the electricity industry.

Energy3 has six fundamental concerns (each outlined below) with the DGPP Paper and we respectfully request that the Board fully considers all of the following points in its considerations of the submissions before making a final decision on changes to the DGPP.

1. Lack of Acknowledgement of Historical Investment Signals for Distributed Generation

The EA's proposal in the DGPP Paper ignores the investment signals provided in Part 6 of the Code to distributed generation providers (especially projects commissioned post 2007) that

encouraged new investment because of the certainty provided by the DGPP. It is an unreasonable regulatory shock to these investors, over an aggressively short transition period, to change the pricing principles with the removal of ACOT and at the same time permitting higher network costs from allowing distributors to allocate a share of common costs to distributed generation connections. In our summary section, we have outlined the financial cost of the changes to our two wind farms which face potential financial ruin if the proposals are successful. The IECA commissioned PWC to analyse the financial cost over a number of distributed generation plants (representing 20% of the total ACOT payments from 2013-2015) and the results of this analysis support the same conclusion. In particular, the PWC analysis concluded:

- The loss of ACOT results in an average 16.5% decrease in total revenue for the 10 distributed generators included in the PWC analysis and an average 30.4% decrease in EBITDA excluding outliers and increases the net debt / EBITDA ratio from 3.6x to 6.4x;
- This loss in ACOT at a 7.6% WACC would cause a value impairment of \$106 million for the study participants and a total industry value input of \$540 million;
- The loss of ACOT and an increase in network costs from an allocation of network costs (which are indicatively estimated at \$20-\$40/ MWh) reduces average DG sector earnings by 85% to 139% and increases net debt/EBITDA ratios to more than 8x.
- The loss of ACOT and application of common costs of \$40/MWh would cause a value impairment for these distributed generation assets of \$374 million for the study participants and a total industry value input of up to \$1.5 billion.

The inevitable conclusion is that this loss of revenue and increase in costs leading to an increased level of net debt is not prudent or sustainable in the current industry environment and would result in the financial closure of many distributed generators. The DGPP proposals must therefore be contrary to Principle 4 of the EA's Consultation Charter as it is not small scale "trial and error" or reversible but a large wealth transfer away from distributed generators for minimal positive economic benefit. This level of wealth transfer is going to significantly disrupt the future investment in distributed generation.

As a related point, it is disappointing that the EA refuses to acknowledge the legitimacy of distributed generator's historic investment decisions when the EA's TPM proposal includes an expanded prudent discount policy to prevent existing plant closure and grid by-pass. This prudent discount policy recognises the legitimacy of others electricity market investment and protects against cost impacts from the TPM. From our perspective we see no reason why the EA should treat distributed generation investment differently from any other electricity market investment.

It is also disappointing that the EA in its expanded prudent discount policy is prepared to take into account other factors like employment and wider economic issues (that are outside the EA's Statutory Objective) when the DGPP paper specifically indicates that the wider benefits of



distributed generation are outside the EA's Statutory Objective. The wider benefits of distributed generation were part of the policy rationale that led to the 2007 regulations and as such should be acknowledged and given legitimacy by the EA in its review of DGPP.

2. Lack of Detail of Future Transpower ACOT Proposal

While we acknowledge that the DGPP paper has the proposal for Transpower to make decisions on the continuation of ACOT, we think it is disingenuous for the EA to seek consultation on the DGPP Paper when the proposed Transpower replacement scheme is unknown and Transpower is not able within the time period for consultation to provide any details as to how the scheme would apply. A more transparent approach would be to have the new ACOT scheme's principles developed such that submitters are able to assess and comment upon the new scheme as part of this consultation process. The EA is following an unduly aggressive time period to implement changes to Part 6 which means critical industry consultation with Transpower has not occurred and industry participants do not have clear information about the future financial implications of the DGPP Paper. This we submit is not good regulatory practice.

We have no alternative but to assume that the DGPP Paper proposal if successful will result in the complete elimination of ACOT for our wind farms. This is the only logical conclusion from the strong signalling in the Paper that only large scale "firm" distributed generation have the potential to permanently avoid transmission investment (and therefore receive ACOT) and therefore small scale "non-firm" generation like our wind farms will in all probability not be entitled to any future ACOT. The EA has in the DGPP engaged in predetermining how this new ACOT regime would operate when making comments at para 4.3.7 that:

"For these regions, it is unlikely that Transpower will contract with many distributed generators for transmission support. This is because distributed generation in these regions is less likely to deliver avoided transmission benefits."

If you follow this logic, non-renewable distributed generation like diesel is being favoured over continuing to utilise New Zealand's renewable energy sources. As a related point, Energy3 was surprised that the Electricity Authority's CBA modelling for the TPM assumes that any new distributed generation is diesel when there are numerous other potential options for renewable distributed generation. This diesel assumption means that the LRMC of distributed generation is much higher than the LRMC of new transmission so no new distributed generation is built creating a benefit in the TPM CBA from reducing the RCPD charge which is clearly unfounded. The assumption is also contrary to the spirit of Government policy to meet climate change obligations and to increase the country's renewable generation to 90%.

3. Increased Transaction Costs for Distributed Generation Owners

Energy3 is also concerned with the potential for increased transaction costs to negotiate any new ACOT arrangement with Transpower for distributed generation that qualifies for any future ACOT



scheme. The key advantage of the existing pricing principles and ACOT arrangement is that it avoided any material transaction costs by providing a simple and transparent methodology to quantify ACOT entitlements for distributed generation.

Any new regime could be expected to incur transaction costs for distributed generators and Transpower if there is a requirement to prove that a specific plant avoids transmission costs, quantify the potential ACOT, and then negotiate a specific ACOT contract with Transpower. This could expose distributed generation providers to large unsustainable transaction costs. The EA should not lose sight of the fact that Transpower is the monopoly supplier of transmission services in New Zealand and it is in competition with distributed generation providers that avoid transmission services.

The DGPP Paper comments that distributed generation could be entitled to Avoided Cost of Distribution payments from distributors. We believe that any entitlement to this benefit, in the absence of clear principles showing how projects could be entitled to this benefit, will similarly involve high transaction costs and a conflict of interest with the distributor that is a monopoly provider of distribution services in competition with distributed generation (often with its own distributed generation interests).

Interestingly, if these transaction costs are more than \$206,000 per annum across the distributed generation sector it would be sufficient to change the CBA's positive benefit to a negative value which means the code change is not consistent with the EA's Statutory Objective.

4. Impossible Implementation Timetable

Best practice regulatory guidelines would suggest that given the extent of these changes that any amendment should be done on the basis of appropriate transitional arrangements. The proposed 1 April 2017 and 1 April 2018 time-period to change the regime is aggressive and ignores any appropriate transition arrangements. For example, it would appear that Transpower has an allowable window of six months to agree on an alternative ACOT scheme for the lower South Island and lower North Island. Given the number of distributed generation plants in this region, this appears highly unrealistic.

This leaves aside the fact that any decision on the review of the DGPP will be made late 2016 – well after this winter when demand on the transmission and distribution systems is likely to be at its peak as well as, under normal circumstances, output from distributed generation. ACOT is paid in arrears. As with transmission charges, the RCPD periods are determined this year for payments from 1 April 2017. Should distributed generation owners be incurring costs in operating their plant during this winter under the current TPM arrangements when the basis and mechanism for ACOT payments may be different from 1 April 2017?

5. No Evidence that Distributed Generation only pays Incremental Cost for Connection



Energy 3 is also concerned with the introduction into the DGPP Paper of new changes impacting distributed generation that were not part of the EA's prior consultation process on changes to Part 6. The two most significant changes from our perspective are changes to the default connection contract related to network pricing principles and the removal of the dispute resolution process provided for in the deemed connection contract.

The EA would be well served by looking at the policy reasons that led to the decision to have a regulated connection contract for distributed generators and distributors. In particularly the paper "Facilitating Distributed Generation", Ministry of Economic Development, September 2006 noted:

"The proposed regulations do not provide any prescriptive definitions of required pricing methodology or costs as it is expected they will be part of normal commercial arrangements. However, the regulations will set out the pricing principles to be applied for the purposes of the regulations."

The paper goes on to confirm:

"The principles outlined in the regulations for pricing do not restrict the parties from developing alternative arrangements for connection pricing by mutual agreement, or for the allocation of sunk costs for major network upgrades. The principles are only intended as a set of guidelines and principles for when such agreement cannot be reached."

There is no evidence provided in the DGPP Paper that distributed generation are not contributing appropriately to the network costs and that the proposed pricing principle related to connection costs should be changed. The DGPP Paper assumes that distributed generators only ever pay incremental costs which we submit is wrong. As part of Energy3's wind farm network connection arrangements, we paid for all network capital expenditure required to connect both our wind farms to the distribution network. As part of the connection arrangements, the wind farms pay network costs as part of their connection based on classifications of the wind farms' connection into a customer group. This involves fixed monthly charges and variable charges based on electricity imported by the wind farms. Network costs currently comprise approximately 3% of our revenues.

We are extremely concerned with the EA's proposal that distributed generation be required to pay a share of the common costs. The first concern is the amount of the extra cost that could be allocated to distributed generation. At this stage, we have contacted the local distributor and asked how they would apply a share of common costs to our connection. No conclusive answer has been given or will be provided during the period of consultation, but there appears to be the potential for network costs to be increased to between \$5/MWh of electricity exported to above \$40/ MWh. Energy3's estimate of the extra cost has been developed based on two potential approaches from distributors:

- Firstly, the local distributor charges residential connections 0.500 c / kWh (or \$5/MWh) on units imported to the local network. This charge if applied to our generation would

- represent an additional 7% of our generation revenue (excluding ACOT) such that network costs would be 10% of our revenue; or
- Alternatively, as we are currently paying 8.457cents/ kWh for electricity imported at our sites it is entirely possible that the distributor could charge this same rate to electricity exported. This would represent 105% of our revenue and would result in our plants being shut down immediately with significant capital loss to the owners. If we assume that this charge is reduced by over 50% as a concession, the wind farms could be exposed to a new cost of approximately \$40/ MWh for electricity exported from its wind farms. Anecdotally, from network companies around New Zealand, we have heard of potential price increases of \$20/MWh to \$40/MWh to represent the magnitude being possible based on application of their respective distribution pricing methodologies allocation for a share of common costs

Both wind farms are successful generation businesses that do not require ACOT payments to be financially viable. However, assuming the full loss of ACOT, which is the logical conclusion from the discussion in the DGPP Paper, the wind farms in the current wholesale electricity price outlook based on ASX futures prices **cease to be financially viable if network costs increase by between [deleted as commercially sensitive]/MWh and could be forced to close**. This is because the cost of production (administration, operating costs and debt finance costs) is currently around [deleted as commercially sensitive]/ MWh and the wind farms currently receive on average [deleted as commercially sensitive]/MWh for generation output excluding ACOT. These wind farms do not have the option of increasing an offer into the wholesale market to try and recover an increase in costs (as other generators would) as it is not a market participant but a price taker.

This proposal would also distort competition in favour of grid connected generation that would not be required to pay a share of the common costs for the same services.

The uncertainty of being left exposed to individual distributors network pricing methodologies is also a huge risk to our business. In effect, the financial viability of our projects will rest with decisions distribution network businesses make in allocating common costs to distributed generation. It is highly likely that standard allocations would result in new charges potentially up to 50% of a project's revenue and the only possibility of avoiding financial ruin is the "goodwill" of the network company to provide a concession by not passing on the full potential allocation of common costs to distributed generation. Retaining the status quo DGPP is the only reasonable conclusion the EA can reach when faced with this potential cost disruption.

We note that there is a great deal of uncertainty about the current distribution pricing principles. The Electricity Authority has acknowledged the level of uncertainty about what distribution pricing could look like in the future in its decision to hold a conference¹ in August 2016 to "facilitate an

¹ See Market Brief 10 May 2016 "Next steps in distribution pricing review"



industry-led approach to developing and adopting efficient distribution pricing structures”. This conference is also going to discuss incentives – views on the strength of incentives on distributors to adopt efficient prices and the nature of any regulatory response”. It is impossible for Energy3 to consider the impact of the proposal to change connection charges when the likely approach by distribution companies is so fluid. The IEGA requested that the consultation period for the DGPP be delayed until after this conference. However, in a letter dated 23 June 2016 this request was denied and the comment made by the EA that “Information at the level of detail that your members would require to assess the impact of the DGPPs proposal on their businesses will not be available for some years”. This we submit is an unacceptable solution and it will create a potentially insurmountable barrier for the construction of new distributed generation which must be contrary to section 32(1) of the Electricity Industry Act in that it will not promote competition in the electricity industry, reliable supply of electricity to consumers or the efficient investment in the electricity industry.

From our perspective the level of uncertainty created undermines investor confidence in the New Zealand electricity market. Since 2013, Energy3 has stopped progress on any new projects as irrespective of the potential loss of ACOT, the fact that we do not have clarity (and are unlikely for several years) as to the future distribution network costs for any new project mean that it would be financially irresponsible to invest in this environment. This we submit is another example of poor regulatory practice from the EA.

6. Loss of Dispute Resolution Solutions for Distributed Generation

The EA’s proposal to remove access to the Rulings Panel means that distributed generation that have connected pursuant to the regulated contract will have no recourse to resolving genuine disputes. As a distributed generator that has had a material dispute with a distributor surrounding our connection terms and pricing, we feel that it would be premature to remove this right of appeal or dispute resolution from Part 6. We would draw the EA’s attention to the facts surrounding the still unresolved complaint by Weld Cone Wind Farm Partnership and Lulworth Wind Farm Limited against Marlborough Lines Limited. It was as a last resort after 3 years or trying to resolve the issue that we lodged a complaint with the EA.

We take comfort in the fact that we have this dispute resolution process and it forms part of the connection contract between the wind farms and Marlborough Lines. It is disappointing that the EA seeks to change a term of a contract we have implied in our connection arrangements. If the connection terms and charges are completely unregulated a distributed generation owner cannot claim a breach of the rules. We would submit that the right of access to the Rulings Panel for dispute resolution should remain for existing connection arrangements.

Summary

The Government policy in developing the Electricity Governance (Connection of Distributed Generation) Regulation 2007 was to remove the barriers to distributed generation development.



The DGPP Paper in our opinion reintroduces many of those barriers to the detriment of NZ electricity consumers.

Energy3's submission to the EA is to retain the status quo DGPP which best support the EA's Statutory Objectives.

Yours sincerely

A handwritten signature in black ink, appearing to read "Warren McNabb".

Warren McNabb
Energy3 Limited