



Electricity Authority
Delivered electronically: TaskForce@ea.govt.nz

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Dear Task Force

PPA Working Paper Consultation Response

We applaud the Electricity Authority and Commerce Commission for considering how better access to PPAs for entrant generators could facilitate more resilient, affordable and sustainable energy supply for New Zealanders.

We thank you for the opportunity to respond to your consultation paper on the subject. Our brief feedback is provided in two sections; firstly in relation to the problem statement covered by sections 1-4 of the consultation paper, and secondly in relation to potential solutions covered by section 5.

Problem Statement

The EA's consultation paper begins by acknowledging that New Zealand will need substantial volumes of new electricity generation. There is acute concern amongst energy users that the market tends to under-build relative to what would be economically efficient, meaning that prevailing prices are consistently above the levelised cost of energy. The consultation paper also highlights recent government policy statements emphasising the importance of expanding competition.

PPAs are a potentially powerful tool in achieving these objectives of sufficient investment and expanded competition. Specifically, we wish to highlight the importance of PPAs that are between new entrant generators and end-users, rather than PPAs in which an incumbent generator is the buyer or seller. PPAs between new entrant generators and end-users are important because:

- Incumbents may not deploy the efficient level of new generation because a collective under-build can be profit maximising for an incumbent's portfolio of existing assets.
- New entrant generators may have strengths that incumbents lack, including potentially agility, new technology, global relationships and supply chains, and a lower cost of capital.

The major challenge to PPAs between new entrant generators and end-users is that it is rare for the generation and consumption profiles to match, especially noting that most new generation relies on intermittent weather resources. Without a strong match of profiles, one or other party retains a substantial residual exposure to wholesale spot prices. Generators



and users alike typically find this so-called 'merchant risk' difficult to accept, not just in a New Zealand context but in all similar markets.

In theory a new entrant generator could match end-user consumption profiles by establishing a portfolio of uncorrelated generation resources (e.g. a mixture of wind, solar, geothermal, batteries, ideally some demand response, complemented by standard financial hedges). However, in practice it is likely to take years to assemble such a portfolio, making this an unattractive prospect (or an inefficient one in the sense that the new entrant would require a significant risk premium which implies an elevated levelised cost of energy to the detriment of New Zealand customers).

Therefore, it would be ideal if it were possible to facilitate PPAs between new entrant generators and end-users on a project-by-project basis, with the profile mismatch firmed by a third party. In this submission we refer to the challenge of achieving this as the firming problem.

In our view, this firming problem is the overriding barrier to PPAs in New Zealand. Relative to the number of PPAs that have been entered, there is an abundance of (i) credible generation developments whose economics are attractive relative to the long-term price outlook, (ii) competitively priced capital to fund construction of those developments if a PPA was available, and (iii) creditworthy end-users attracted by long-term electricity price certainty. The consultation paper notes only three PPAs between new entrant generators and end-users (Lodestone-Warehouse, Lodestone-Inghams, and Solar Bay-Ryman).

If the firming problem as defined above could be addressed, ideally without other harmful market distortion, our view is that this would have a transformative effect on generation investment and electricity sector competition in New Zealand.

Potential Solutions

We believe that only one of the actions contemplated in section five of the consultation paper would materially address the problem statement, and that is the mandated allocation of firming resources.

However, we also consider that mandated firming would be challenging to design in a way that avoids unintended harmful consequences.

To help alleviate some of the concerns noted by the EA, we feel the mandated firming should be thought of as compelling incumbent generators to do for new entrant projects what they could otherwise have done for their own projects, rather than asking incumbent generators to do something they couldn't have done for their own projects.

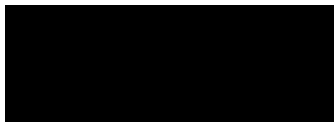
Framed that way, mandated firming allocation would represent an explicit acknowledgement that flexible or diverse resources held by a small number of companies should be used to support new entrants. This principle itself is worthy of debate and presumably the incumbents themselves would disagree. For this reason, we suspect that consideration of mandated firming allocation ends up being wrapped into task force initiatives 1C and 1D and the government review of electricity markets being led by Frontier Economics.

For completeness, the other actions proposed in the consultation paper are helpful, but we believe that alone they would have limited effect on the PPA market because they do not address the firming problem. To comment briefly on two of them:



- Templates for PPAs would be helpful, especially if accompanied by templates for the firming/sleeving and by guides for end-users about how to use these structures. We anticipate that most deals would deviate from the templates, but we don't feel a template would stifle innovation.
- Generic shaped flexibility products are noted in the consultation paper as having potential to address the firming problem. We agree these products are helpful, but do not expect them to be transformative. The key reason is that the generic shape of such a product is unlikely to fit the shape of the mismatch between a generation profile and an end-user profile, especially because of the variety of profiles at the individual generator and end-user level and because at the individual level there is considerable uncertainty of profile. Put another way, the shape required by an end-user with a flat consumption profile to firm a solar PPA is likely very different to the shape required by a daytime-biased end-user to firm a wind PPA. However, we note the EA's comments that a thriving European Union PPA market is enabled by liquid hedge market, and we would be glad to understand this better.

Regards



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