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nova energy

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Submissions
Electricity Authority

By email: TaskForce@ea.govt.nz

PPA Working paper

Nova Energy (Nova) thanks the Electricity Authority (the Authority) for the opportunity to provide feedback on this consultation paper regarding PPA headwinds.

Nova strongly supports approaches that result in new generation capacity being committed to and developed in a timely manner and at the same time providing for the opportunity for broadening the competitive depth of the market by increasing the number of participants with both dispatchable and renewable generation capacity. Expanding competition among suppliers would, in turn, foster more competition among retailers, leading to several benefits:

- Early or timely development of economically viable projects to constrain wholesale market prices.
- Encouragement for parties to enter into firming or PPA contracts with one another when more commercially advantageous than keeping capacity internally.
- Increased consumer choice and improving pricing outcomes.
- A long-term solution that avoids interference with property rights, disincentives for investment and other unintended consequences.

By broadening market participation, we can avoid potentially entrenching positions of large incumbents and create a more competitive, consumer-friendly energy market.

Nova is also aware of the challenges retailers face with fixed-price, variable-volume contracts and the unpredictability of intermittent generation. To address this, Nova suggests government underwriting of independent generator PPAs, providing firming support, and supporting dispatchable generation. These solutions would increase market participation and competition, leading to more sustainable long-term outcomes. Government support for PPA's through contestable processes is common in other jurisdictions and not novel.

Yours sincerely

[redacted]

Charles Teichert

GM Commercial & Strategy

Nova submission: PPA Working paper

Questions	Comments
Q1. Is there any other related work that you think is relevant to our consideration of PPA issues?	There are numerous examples globally where governments have incentivised renewable energy investment, but the associated costs have ultimately been passed on to consumers. Some examples to refer to are Electricity Bill Charges in the UK and What German Households Pay for Electricity. While these interventions can boost the adoption of / investment in higher cost renewables, they often lead to higher energy costs for both consumers and taxpayers. This is something that the Government must consider when developing energy policies and solutions. In the UK, for example, the government has been, for some years now underwriting investments in renewable generation through Power Purchase Agreements (PPAs) purchased through competitive auctions. This supports developers while protecting consumers from excessive high costs. The insights gained from the development and outcomes of these programs can offer valuable lessons for future policy and investment strategies in New Zealand. While Nova supports the case for Government underwritten PPA's as a means of increasing competition it is important that such processes do not attempt to pick favoured technologies at higher prices than other alternatives. For example, in the UK auctions for Government supported PPA's targeted expensive offshore wind projects specifically and ignored cheaper on shore projects.
Q2. Do you have any suggested additions or modifications for PPA terms and concepts?	Not at this stage.
Q3. Do you agree with our definition of PPAs?	Yes.
Q4. Have we correctly identified buyer and seller motivations for PPAs?	Yes.
Q5. Have we correctly identified how PPAs may fit with other contracts?	The firming of PPAs is (to some extent) achieved through the spot market. A buyer entering a PPA with an intermittent energy source, such as a wind or solar farm, can meet its remaining energy needs by purchasing electricity from the spot market. If spot price volatility was limited, manageable or mitigated through the consumers own ability to control its consumption then these conditions would better support a buyer to purchase a PPA without additional firming mechanisms.

Q6. Do you agree with our characterisation of how PPAs may impact system evolution?	Yes. However, Nova notes that hydro generators holding water in reservoirs to mitigate the risk of potential future shortfalls may be exposed to allegations of market manipulation to achieve higher prices, especially if that later results in hydro spill occurring. A paper[1] on Norwegian hydro reservoirs found that increased market power led to increases in electricity prices, suggesting that dominant hydropower companies may adjust water release to coincide with periods when demand is not as sensitive to price hikes, allowing them to maximise profits by restricting supply when demand is less flexible.
Q7. Have we correctly identified and understood PPA headwinds?	One factor not considered in the analysis is that retailers typically sell electricity to mass-market consumers (residential and small commercial) under fixed-price, variable-volume supply contract terms. As a result, retailers prefer to purchase energy at fixed prices. The volume variability of mass-market customers generally follows predictable usage patterns, and these can be managed by contracting for volumes in advance, particularly with suppliers offering firm volume commitments or through exchanges like the ASX futures market. However, this makes the unpredictability of volumes from intermittent generation PPAs difficult to manage without access to firming capacity. The implication is that retailers to mass market customers naturally shy away from intermittent PPA based hedges. PPA's have been offered from small hydro generators and independent geothermal generators for many years and generally they are successful in selling PPA's at market-based pricing – often closely linked to ASX futures prices. That success is almost certainly due to the lower degree of production variability from geothermal and hydro power schemes relative to wind and hydro.
Q8. Do you agree with the potential benefits we have identified?	Yes
Q9. Do you agree with the potential risks we have identified?	Yes
Q10. Do you agree with the potential options we have identified?	There are a few regulatory intervention options not considered in this paper: a) Government Underwriting Independent Generator PPAs: The government could act as the counterparty to generator PPAs through a competitive Request for Proposal (RFP) process. As a significant consumer of electricity (approximately 1,000-1,200 GWh annually), the government could feasibly meet its own energy needs by entering into PPAs with generators. This would create a level playing field for independent generators to compete with larger gentailers so long as Government did not favour the creditworthiness of gentailers over independent generators.

[1] https://grantmcdermott.com/papers/hydro.pdf

	Independent generators would then be able to secure finance on similar terms as gentailers. Including gentailers in the contestable process would ensure that least cost projects (regardless of owner) are eligible. Tenders could be held during periods of market stress and would not be required in other periods. b) Government Underwriting Dispatchable Firming Generation: The government could also support the development of dispatchable firming generation capacity by independent investors (non-gentailers) through contestable processes. As noted in the paper, much of the dispatchable generation capacity necessary to firm new renewables is owned and controlled by incumbent gentailers, who have a natural commercial incentive to preserve the economic benefits of that generation capacity to support their own renewable investments. Expanding the pool of market participants with dispatchable generation and increasing firming capacity would have a greater impact than reallocating existing capacity amongst them. The benefits of these options are: i. They are temporary in nature (the term of the PPA) rather than permanent which avoids the risk of long-term or permanent unintended consequences, as noted within the paper. ii. They potentially increase market participation and result in a broadening of the number of generation market participants, increasing competition in the spot market and providing non-incumbent gentailer entities with opportunities to build long-term, sustainable businesses. The options discussed in the paper seem to primarily focus on measures that require existing sellers of capacity to contract with buyers. In Nova's view, similar measures should also be introduced for consumers or purchasers (retailers), requiring them to procure PPAs or firming capacity. Without two-way requirements, there is a risk that no trades or price discovery will take place, leading purchasers to seek subsidised pricing arrangements for their own benefit through additional calls for regulatory intervention. Major electricity consumers and retailers
Q11. Do you agree with our comments on potential options?	Allocating firming capacity: Nova's view is that measures aimed at increasing the number of participants, as well as boosting the level of dispatchable generation capacity capable of providing renewables firming would be of benefit to the market.
Q12. Do you have a view on the most promising options?	In general, Nova prefers options that do more than reallocate scarce resource amongst different parties. Nova agrees with the analysis that reallocating capacity through forced divestment, investment, or contracting could discourage investment incentives or lead to unintended consequences. Nova favours approaches that broaden the competitive depth of the market by, for example, increasing the number of participants with both dispatchable and renewable generation capacity. This would enhance

	competition among suppliers and, in consequently among retailers. Increased competition means that parties are more likely to: a) Build economically viable projects early to maintain or increase their market share. b) Encourage parties to enter into firming or PPA contracts with others when it is more commercially advantageous than maintaining capacity within their own organisation. c) Provide more choice for consumers. d) Offer a long-term solution that does not interfere with participants' property rights and the often-times associated negative impact on investment incentives that could arise through forced divestment, investment, or contracting. Options that reallocate capacity among a limited number of parties are likely to be less impactful and are more likely to further entrench the positions of the large incumbent gentailers.