To

Electricity Authority

Energy Competition Task Force

March 26, 2025

Submission to the Electricity Authority on the Consultation Paper 2A: Requiring distributors to pay a rebate when consumers supply electricity at peak times

Thank you for the opportunity to provide feedback on the Electricity Authority's consultation paper 'Requiring distributors to pay a rebate when consumers supply electricity at peak times'.

LightForce Solar recognizes the importance of these objectives in the context of New Zealand's evolving electricity system, which faces rising electricity demand, growing peak loads, and increasing reliance on intermittent renewable generation. This consultation paper relates to initiative 2A to 'consider requiring distributors to pay a rebate when consumers export electricity at peak times', under the Task Force's intended outcome to 'provide more options for end-users of electricity'

Observations:

- LightForce Solar is happy to note that the Electricity Authority has referred to Rewiring Aotearoa's 'Symmetrical Export Tariffs' paper, and is receptive to the industry's advocacy in solar industry space.

Problem Definition

- In the clause 4.6, "When consumers inject electricity into the network during the middle of the day at a location where the network is already export constrained by lots of other solar DG, this may contribute to additional investment". The EDBs have curtailment management policies which will restrict the energy injection from the solar PVs systems during the peak time. This again hurts the bottom-line of the business of the PV setups.
- In the clause 4.10, "The potential benefits of fixing this missing price signal are considerable. Boston Consulting Group's 'The Future is Electric' report estimates more than $20 billion will need to be invested in distribution networks every decade until 2050. Even if more injection from mass-market consumers only reduced or deferred a small proportion of this investment, it would still result in substantial savings for distributors – and consumers – in the long run." Can the Authority conduct cost-benefit analysis of how solar uptake for different future scenarios can reduce the $20 billion needed to be invested every

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decade? This will be beneficial for formulating policies and schemes to incentivize uptake of solar PV in NZ thus effectively achieving the core objectives of the Energy competition task force

- LightForce Solar is not entirely convinced with the section “Why the Authority is addressing these issues now”. This suggestion/recommendation was raised by the Electricity Network Association in 2013 as a tool to upscale the solar PV penetration in NZ and auctioning on these recommendations could have provided more generation at the distribution level by now leading to more stable and secure electricity network

Proposed Solution

Q3. Do you agree that the principles should only apply to mass-market consumers, or should they apply to larger consumers and generators also? Why, why not?

Q4. Do you agree the principles should apply to all mass-market DG, including inflexible generation (noting that the amount of rebate provided will still be based on the benefit the DG provides)?

LightForce Solar appreciates the Authority's efforts in developing an approach to optimal pricing principles while minimizing unintended subsidies. However, we would like to highlight concerns regarding unintended outage scenarios.

Under the current principles-based approach, the Authority effectively requires EDBs to assess the hosting capacity across their entire network and identify ICPs with distributed generation (DG) in congested areas. This approach, however, does not account for situations where a normally uncongested network operates under steady-state conditions but experiences congestion during unintended outage events, such as an N-1 contingency.

In such scenarios, local DG plays a crucial role in providing both generation support and resilience. Yet, these DGs would not be able to benefit from the proposed pricing approach, despite their contribution to system stability during contingencies. We urge the Authority to consider these factors to ensure a fair and comprehensive framework.

Compliance, monitoring and regulation

Q7. Do you agree the principles should be incorporated within the Code, rather than being voluntary principles outside the Code? Why, why not?

Distributors should offer rebates at a rate that is sufficient to incentivize energy injection while ensuring that cost savings are maintained for the broader consumer base. However, the Authority’s lack of a clear, prescriptive definition of what constitutes a "high enough" rebate creates significant ambiguity for both Electricity Distribution Businesses (EDBs) and solar PV investors.

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Without a defined threshold or assessment criteria, it remains unclear how the Authority will evaluate the methodologies adopted by different EDBs. As highlighted in the paper, each EDB may develop its own methodology, leading to varying rebate prices across different regions. This inconsistency poses several challenges:

Uncertainty for Investors – Solar PV investors will struggle to assess the financial viability of their projects due to the lack of a standardized rebate benchmark, potentially deterring investment.

Regulatory Ambiguity for EDBs – Without clear guidance, EDBs may take divergent approaches, creating disparities that make it difficult for the Authority to determine best practices.

Equity Concerns for Consumers – Consumers in different EDB regions may receive vastly different rebates for similar levels of distributed generation, leading to perceptions of unfairness and a lack of transparency in pricing structures.

To ensure a fair and efficient system, the Authority should establish clear benchmarks or guiding principles for rebate determination. A standardized framework would provide much-needed clarity, fostering investment confidence while ensuring that consumers across all EDB regions receive equitable treatment.

Relationship with contracted flexibility and aggregators

Q9. Do you agree the proposal strikes the right balance between encouraging price-based flexibility and contracted flexibility? Why, why not?

How does this proposal incentivize EDBs to provide real-time price signals to aggregators, enabling them to respond dynamically and inject electricity when the network is congested and rebate rates are higher?

For investors in Battery Energy Storage Systems (BESS), access to live price signals is crucial. A well-structured pricing mechanism that reflects real-time grid conditions would encourage the strategic deployment of BESS assets, maximizing both network efficiency and financial returns. However, the current proposal does not outline how EDBs will be required or incentivized to implement such mechanisms. Without a framework for real-time price signaling, investors may lack the confidence to deploy BESS at scale, limiting the potential for demand-side flexibility and grid resilience.

To facilitate greater BESS adoption and ensure optimal use of distributed energy resources, the Authority should consider:

1. **Mandating Real-Time Pricing Mechanisms** – Establishing requirements for EDBs to provide live price signals that reflect network congestion and local grid conditions.

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2. **Ensuring Transparent Market Access** – Allowing aggregators and BESS owners to seamlessly access and act on these signals to optimize energy injection.
3. **Aligning Rebates with Grid Needs** – Structuring rebates to dynamically reward BESS owners for injecting electricity precisely when and where it is most valuable to the grid.

Without these considerations, the proposal may fail to unlock the full potential of BESS investment and its role in supporting network stability.

Unfair Wealth Transfer

Q10. Do you agree the proposal will lead to relatively minor wealth transfers in the short term, and will lead to cost savings for all consumers in the longer term?

Clause 5.24 states that *"how distributors recover this amount from their wider customer base depends on how they allocate this shortfall in revenue between consumer groups and how many customers they have on the network."*

While this addresses cost recovery, it does not account for the long-term benefits of distributed generation, particularly the role of solar PV in deferring major network asset investments. As previously highlighted, Lightforce Solar urges the Authority to assess the impact of solar PV adoption on deferring capital-intensive infrastructure upgrades, which are estimated to cost around $20 billion per decade.

By reducing peak demand and alleviating network congestion, solar PV can extend the lifespan of existing assets and delay the need for costly expansions. The savings from this reduced capital expenditure could be redirected to fund fair and sustainable rebate structures for distributed energy resources (DER), ensuring that the financial burden is not solely placed on consumers. To ensure a balanced and forward-thinking approach, we propose that the Authority:

1. **Conduct a Comprehensive Cost-Benefit Analysis** – Quantify the long-term savings from deferred asset investments due to increased solar PV penetration.
2. **Incorporate Deferred Capex Savings into Rebate Structures** – Develop a framework where a portion of these savings directly contributes to funding rebates for solar PV owners.
3. **Establish Transparent Guidelines for Cost Allocation** – Ensure that cost recovery mechanisms fairly distribute financial benefits and burdens across all consumer groups.

Kind regards

On behalf of Lightforce Solar,

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