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Submission on consultation paper proposing to require distributors to pay a rebate when consumers export electricity at peak times

Network Tasman appreciates the opportunity to submit on the Energy Competition Task force initiative 2A.

Executive Summary

Network Tasman supports the overarching objective of the Electricity Authority's proposal—to reward mass-market consumers for supplying electricity at peak times in a manner that delivers genuine network benefits and ultimately achieves cost savings for all consumers. However, drawing on lessons from the ACOT regime, we have significant concerns regarding the economic rigour and clarity of the proposed principles, and the outcomes that poorly defined regulation can create. The ACOT regime, although well-intentioned, resulted in over half a billion dollars of payments to distributed generation for little to no consumer benefit. Consequently, Network Tasman urges the Authority to undertake a more robust economic analysis to provide greater certainty about the net benefits of its proposed Code amendment.

The Authority acknowledges the inherent difficulties in quantifying the benefits of applying broadly specified, principles-based regulation that are open to interpretation. To address this, the proposal includes a commitment to publish a guidance note to clarify how the principles should be interpreted and applied—a critical element in determining the overall outcomes of the scheme. An assessment of the proposal's costs and benefits that omits consideration of the guidance note is, therefore, incomplete. Network Tasman submits that if the Authority intends to codify these principles, it must conduct a consultation that covers both the Code amendment and the accompanying guidance note.

Where the costs and benefits of a proposal are difficult to assess or there is significant uncertainty, Network Tasman argues that a more appropriate approach would be to introduce the proposed changes outside of the Code, supported by a credible threat of regulation. This would allow the Authority to observe real-world outcomes and refine its proposal accordingly.

Notwithstanding these concerns, the limited analysis that is provided in the Consultation Paper suggests that the proposed Code amendment offers minimal benefits. It is highly unlikely that an additional income stream of approximately estimated by the Authority as

being no more than an average of $8.60 per year would incentivise a significant number of consumers to invest between $10,000 and $20,000 in a domestic battery system that would allow them to inject into the distribution network during peak periods.

Economic Rigour and Transparency

Network Tasman has significant concerns regarding the economic foundation underpinning the Authority's proposal. The consultation paper provides only a limited analysis of the anticipated benefits of the proposed rebate. This analysis is primarily presented in qualitative terms that is peppered with terms such as "may", "expect" and "could" with scant analysis or evidence presented to justify these conclusions.
This limited scope contrasts sharply with previous analyses on similar mechanisms, such as the ACOT decision paper, which provided a detailed 28-page economic evaluation.[1] The current proposal includes only a few paragraphs of high-level assessment, which fail to robustly quantify the expected financial impacts or clearly outline the economic logic underpinning the rebate structure.

Specifically, the Authority's analysis appears to endorse but does not adequately address risks associated with introducing economic signals that lack a strong, demonstrable link to network efficiency benefits.[2] Historical experience with the ACOT regime illustrates vividly the consequences of poorly aligned incentives. ACOT payments resulted in substantial economic inefficiencies—estimated at around $33 million annually—by encouraging investment in distributed generation that provided minimal network value. Despite recognising inefficiencies in the ACOT regime 2013[3], it took a decade to rectify the regulatory framework, resulting in over half a billion dollars of unnecessary payments. Additionally, the Authority's economic assessment does not consider the potential inefficiencies of consumer investment decisions influenced by non-cost-reflective rebates. There is a real risk that distributors, aiming to provide stable and attractive signals to consumers, could inadvertently incentivise investments that yield limited or no genuine network benefits.

Furthermore, the Authority has not attempted to estimate:

- The total rebates likely to be paid out by distributors;
- The magnitude and timing of investment in domestic batteries that rebates might realistically stimulate;
- The avoided network costs that these investments would achieve;
- The potential for these rebates to crowd out investments in potentially lower-cost or more efficient alternatives, such as grid-scale storage solutions.

Without addressing these fundamental economic issues or understanding the likely effect of the proposal, the Authority risks embedding inefficiencies similar to those experienced

[1] Electricity Authority, *Review of distributed generation pricing principles: Decisions and reasons*, 6 December 2016.
[2] Electricity Authority, *Requiring distributors to pay a rebate when consumers supply electricity at peak times: Consultation paper*, Energy Competition Task Force initiative 2A, p.17, para 5.7(e)
[3] Electricity Authority, *Transmission Pricing Methodology: Avoided cost of transmission (ACOT) payments for distributed generation – Working Paper*, 19 November 2013.

under ACOT. Furthermore, the ACOT experience demonstrates that even in the face of clear evidence of significant costs, regulatory change cannot be relied upon to occur in a timely manner.
Network Tasman strongly urges the Authority to undertake a comprehensive and transparent economic analysis that clearly demonstrates the rebate scheme's potential costs and benefits.

Importance of Comprehensive Guidance

Due to their broad and flexible interpretation, the Authority acknowledges the inherent difficulties associated with quantifying and implementing principles-based regulation. As a result, the Authority intends to issue an additional guidance note to clarify how distributors should apply the proposed principles in practice.
Network Tasman believes that this guidance note is pivotal, as the actual operationalisation of the principles will significantly shape the outcomes and effectiveness of the proposed rebate scheme.

Without the detailed guidance note, neither stakeholders nor the Authority can assess the practical implications, feasibility, and likely efficacy of the proposed regulatory changes. The absence of such guidance during the consultation process prevents meaningful feedback and informed discussion on potential implementation challenges and unintended consequences. For example, this consultation paper was discussed at a recent ENA Regulatory Working Group meeting, and participants had a broad spectrum of views on how the proposed Code amendment would be implemented.
Similarly, the principles refer to the practicality of implementation. It is not clear what this means in practice. Practicality depends on a range of factors, including internal resourcing, internal system capability, retailers' ability to administer signals from each EDB, etc. What Network Tasman considers impractical may not be considered impractical by other EDBs or the Authority.
By way of example, Network Tasman's 2025-2035 AMP identifies 41 major network development HV projects primarily driven by system growth. Assuming each project could be avoided, reduced or deferred by a reduction in peak demand, it is not clear whether Network Tasman would be expected to develop a rebate signal for each of these projects. If not, it is not clear how these projects should be prioritised.
Answers to these questions will fundamentally influence the benefits of the proposed Code amendment, and without them, any assessment of the net benefits of the proposal will be incomplete.
Network Tasman considers it important that the consultation covers both the Code amendment and the guidance note concurrently to ensure stakeholders can fully understand, evaluate, and comment on the combined impact of these elements.

Without such guidance, distributors might interpret and apply the principles inconsistently, creating confusion, market distortions, and unintended inequities among consumers. A comprehensive guidance note will mitigate these risks by clearly outlining expectations, ensuring uniform application across distributors, and promoting transparency and predictability for consumers considering investments in distributed generation and battery storage.

Given these critical considerations, Network Tasman urges the Authority to expedite the development and consultation of a detailed guidance note in conjunction with the proposed principles-based regulation, ensuring robust stakeholder engagement and informed regulatory decision-making.

Addressing Regulatory Uncertainty

Network Tasman recognises significant uncertainty surrounding the proposed principles-based rebate framework's implementation, costs, and benefits. Introducing regulatory changes directly into the Code without comprehensive economic analysis, guidance, and consultation increases the risk of unintended consequences. Given the complexities involved, including diverse distributor network conditions and the varied nature of consumer investment behaviour, it is prudent to adopt a cautious and incremental approach.

Network Tasman recommends, therefore, initially implementing the principles-based rebate framework outside of the Code as voluntary industry guidelines. This voluntary approach should be supported by a clearly articulated, credible threat of formal regulation if satisfactory progress is not observed. Such an approach allows the Authority and distributors to observe actual market responses and consumer behaviours in practice, providing critical insights that can guide future regulatory adjustments.

Adopting a voluntary approach, initially outside of the Code, offers several key benefits:

- It reduces the risk of embedding inefficient or ineffective regulatory settings prematurely.
- It allows for flexibility and responsiveness to real-world outcomes, enabling iterative refinements based on observed data and experiences.
- It encourages distributor innovation and cooperation in developing solutions best suited to local network circumstances, potentially leading to more tailored and effective regulatory measures.

Additionally, a phased approach with voluntary implementation could provide valuable data that would substantially improve the accuracy of subsequent economic analyses and inform a more targeted and effective Code amendment if required in the future.

If the Taskforce elects to codify the principles, Network Tasman submits that incorporating a sunset clause or mandatory periodic reviews would ensure ongoing evaluation of the effectiveness of the regulations occurs. This would enable timely intervention and adjustment of the regulatory framework, avoiding prolonged inefficiencies and ensuring continued alignment with evolving market conditions and technological advancements.

Network Tasman submits that adopting an incremental and evidence-based approach outside the Code would allow the Taskforce to be more ambitious in its proposal. It would also ensure the proposal is supported by credible regulatory backstops and represents the most prudent and effective method to address existing regulatory uncertainty and achieve genuine long-term benefits for consumers and distributors alike.

Realistic Assessment of Incentives

Notwithstanding Network Tasman's earlier concerns about the lack of economic assessment of the proposed code amendment, the results of the quantitative assessment the Authority has undertaken demonstrate that the proposed code amendment is highly unlikely to materially alter consumer investment in distributed storage.
The Authority estimated the average monthly rebates that five distributors across the country will pay. The highest average monthly rebate estimated by the Authority was $0.72, or approximately $8.64 per year.
It is hugely optimistic to believe that an additional revenue stream of $8.64/year will change consumer investment in domestic battery storage systems, which generally cost between $10,000 and $20,000.[4]
The Authority acknowledges the incentives created by the rebates are small and notes that they form only part of the value a consumer would receive from a battery investment.
This is true, but it is also likely to be true that few if any, potential battery investments are being held back, but for an additional $8.64/year in revenue.
Such a modest financial incentive is highly unlikely to materially influence investment decisions, even at the margin.

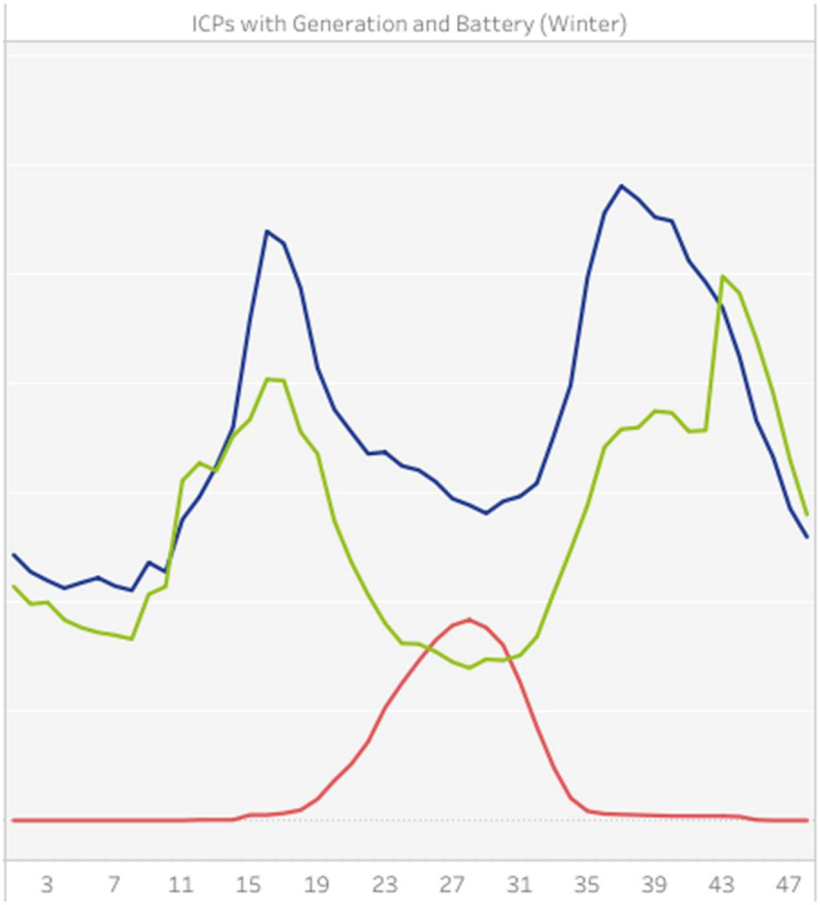
The limited potential for consumer behavioural change raises serious questions about the effectiveness of the proposed scheme in achieving its intended outcomes of reducing network peak demand and associated investment needs.
According to the Authority's Electricity Market Information (EMI) website, over the past six months there were an average of 220 solar and battery installations connected each month.
In the highly unlikely event the proposed rebate results in this figure doubling, EDBs will pay out annual rebates totalling just $12,355.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
New Solar and battery connections	220	440	660	880	1,100	1,320	1,540	1,760	1,980	2,200	2,420	2,640
Monthly rebate payment (national)	$158	$317	$475	$634	$792	$950	$1,109	$1,267	$1,426	$1,584	$1,742	$1,901
Cumulative rebate payments (national)	$158	$475	$950	$1,584	$2,376	$3,326	$4,435	$5,702	$7,128	$8,712	$10,454	$12,355

The actual efficiency benefits would be considerably smaller than the value of the rebate. The net benefit to consumers would be equal to the difference between the avoided network costs (due to the presence of the rebates) and the costs of the rebates themselves. This benefit would be dwarfed by the costs incurred by the Taskforce to develop this consultation paper and the costs of interested parties to compile submissions on the consultation paper alone.
Using a more realistic, but in Network Tasman's opinion still optimistic, assumption about the effect of the proposed rebate on solar and battery installations of a 5%, the total annual rebates paid falls from $12,355 to $618.
There would, of course, be rebates paid to consumers with existing solar and battery connections and consumers who would install solar and battery equipment in the future irrespective of whether a rebate is paid. There would be some efficiency benefit to consumers if the addition of rebates improved how these consumers used their DER.

[4] Lightforce Solar: https://lightforce.co.nz/articles/is-it-worth-getting-a-solar-battery/ Accessed: 26/03/25.

The figure below demonstrates that the price signals already sent to consumers on our network that have generation and batteries are sufficient to ensure they operate their DER efficiently.
The figure below illustrates the change in winter load for consumers who have invested in generation (PV) and batteries on our network.
The blue line represents their winter load profile in the year prior to installing generation and batteries. The green line represents their winter load profile in the year following installation. The red line represents the export to our network during the winter after installation.



This data clearly shows that once consumers have installed PV and batteries, the current price signals are sufficient for them to manage their loads in a way that significantly reduces peak demand.
It also demonstrates that on average, these consumers' peak loads are significantly larger than their battery capacity. This suggests that even for consumers already with a PV and battery installation, significant investment in battery infrastructure is needed before they can reliably export generation to the network during the winter morning and evening peaks.
If current peak load prices are not sufficient to incentivise consumers to eliminate their loads during peak periods, a peak rebate price that is more moderate than the existing peak load prices already in place will not change the investment incentives such that they will begin exporting during peak periods.
Moreover, the proposal does not adequately consider alternative investment opportunities available to consumers, such as load reduction measures or grid-scale storage solutions, which may deliver more substantial and immediate network benefits at lower costs. Without

a realistic assessment of these comparative incentives, the proposed rebate scheme risks diverting attention and resources away from more cost-effective, efficient solutions.

Network Tasman submits that the Authority should reassess the proposed rebate level through a more robust economic analysis that accurately reflects consumer decision-making processes and realistically appraises the likelihood of meaningful behavioural changes resulting from the rebate. Only through such a detailed and realistic assessment can stakeholders have confidence that the proposed incentives are sufficient and well-targeted to deliver tangible network benefits and consumer value.

Conclusion

While Network Tasman endorses incentivising beneficial peak-time electricity injection, we urge the Electricity Authority to address the identified shortcomings. Conducting a robust economic analysis and providing comprehensive interpretative guidance will substantially improve the prospects of delivering genuine network benefits and consumer cost savings. We appreciate the opportunity to provide feedback and look forward to further engagement as the Authority refines its proposal.