23 July 2026.

Submission on - Transmission Pricing Methodology amendments 2026

Chapter 4: BBC simple method treatment of battery storage

Thank for the opportunity to submit on the proposed amendment. This submission focuses on chapter 4.

Please note – This submission on an aspect of the consultation, and no comment on the other points in the paper, should not be taken as endorsement. While it is a positive the Authority and Transpower and endeavouring to address specific issues with the TPM, the Authority fails to recognise the wider regulatory framework is not fit-for-purspose for the current and future energy environmnet. The current TPM methodology is flawed and any tweaks will be ineffective in addressing the underlying issues.

I do not agree that offtake by battery storage should be exempt from the Demand Factor.

Batteries are an important and evolving addition to the New Zealand electricity system. The flexibility they provide for potential immediate injection into the 'system' at time of short-term stress help support the grid with the increasing amount of intermittent renewable generation coming onto the system. However, batteries have limitations as to how and when they can be used. Also, there is freedom for those who own and manage as to how and whether they are offered into the wholesale spot market, the reserves market, or potentially other evolving market-based auxiliary regimes.

Other storage technologies also bring advantages and limitations – some of them superior to batteries particularly relating to the extent of storage and therefore a much longer time-span of injection into the system. Yet the Authority pursues a focus on batteries[1] with hallmarks of technology-specific bias[2] driving the provisons of the Code.

The paper outlines the characteristics of batteries[3], and then jumps to the assertion the load component of operation should not be treated as load for the BBC[4] because it is not for end use, rather for later injection and use by end consumers. There is little if any justification for this approach as will be outlined below.

The alternatives canvased[5] are restricted to treating batteries different to load, not to justifying the differentiation.

The assertion is further made, "Inconsistent treatment of battery storage compared to competing technologies may discourage otherwise efficient investment in battery storage"[6]. Yet, no explanation, other than the not-for-end-use point, is given as to what those technologies are nor why batteries should not be treated as load from a technical perspective – ie the same as with any other storage device that imposes load on the grid to 'charge' (eg pumped hydro).

[1] Mutli programmes run in the past 2 years.
[2] Footnote 17 of the paper, para 4.27, 4.29
[3] Paras 4.3-4.5
[4] Paras 4.14-4.16.
[5] Para 4.23
[6] Para 4.17

The paper focuses on the injection benefits. It does not cover the potential negative impact of the charge stage. Invariably batteries will charge at off-peak times which usually corelate with lower spot prices. This can also be expected to be the time large customers run peak production. There may be 'over-load' impacts on local connection assets, which will impact connection charges. More relevant is some potential for capacity impact back into the grid, and also direct real time impact from upward pressure on spot prices. In these circumstances there is no justification for batteries to receive favoured treatment.

Important factors re batteries.

- They are part of the portfolio of traders whose job is maximising financial returns.
- To date batteries 100MW or greater are owned and operated by the gentailers[7] which provides the scope for financial optimisation of their own generation and retail books.
- There is no requirement batteries be kept charged and available for dispatch into the grid.
- Availability can be withheld and used to leverage higher prices in the market.
- They can be bid into the reserve market rather than the energy market, and again leverage the price.
- Technically batteries are a load[8] and a draw from the grid when charging. The fact the energy used in charging is not for end use does not change the fact there is load on the grid at various points of time. Any arguments to the contrary can be seen as 'picking-winners'.
- While batteries can assist manage through times of system peak, this does not contribute to the overall energy base which is critical at times of extended energy stress. In fact, they are a net drain because of losses[9] during the charge/injection stages.
- Charging of batteries will tend to be at off-peak and lower spot price periods with potential negative impacts on other large consumers maximising production at that time.

For batteries to be exempt from the Demand Factor, they would need be under instruction of the System Operator as to charging and injecting ie an auxiliary contract.

I will be pleased to provide any further explanations that may assist.

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[7] Para 4.9
[8] Unless charged from a specific through-the-fence energy source.
[9] Said to be circa 10%. https://sunlithenergy.com/energy-storage-losses-bess/