

TO/

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Australian Energy Regulator
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Via email: energyqueensland2025@aer.gov.au

30 May 2024

Dear Australian Energy Regulator,

Firm Power submission on the AER's draft decision for Energy Queensland (Ergon and Energex) 2025-2030 Regulatory Proposal (Draft Decision)

Firm Power is pleased to provide a submission to the Australian Energy Regulator's (AER's) draft decision on Energy Queensland Determination 2025 to 2030, specifically section 6.2 Tariff Structure Statement (**Draft Decision**).

Firm Power is an Australian-owned energy company dedicated to developing high quality energy projects that accelerate the energy transition. The company has been in operation since early 2019, launching as the first project development firm in Australia to be 100% focused on large-scale BESS before expanding into other energy transition solutions.

Scalable technologies, such as energy storage are increasingly offering cost-effective substitutes for grid infrastructure and conventional generation. Energy storage systems (ESS's) can help smooth variability locally rather than cause increasing spikes within the transmission system thereby flattening the "duck curve" which has become increasingly pronounced with the deployment of Distributed Energy Resources (**DERs**).

The global trend for network operators are re-imagining the grid as an interactive network that provides value to connected end-users, however, the challenge is to implement change in a fair and equitable manner that does not have the potential to create stranded assets or provide perverse incentives. The National Electricity Objective (NEO) as stated in the National Electricity Law (NEL) is to *"promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity ..."*. This objective is supported by incentivising investment in distribution level ESS, as they are able to dynamically respond to local conditions, as either a load or a generator, to provide the required level of support to keep the network operating as efficiently and reliably as possible. Tariffs which stifle the deployment of investment into ESS systems at the distribution level run counter to this Objective.

The proposed Tariff Structure Statement includes tariffs which burden ESS projects with Network Use Of System (NUOS) charges that penalise behaving in line with the Generator Performance Standards, and provide no flexibility to incentivise load/generation behaviour to alleviate network constraints and defer capital expenditure. This discourages the efficient investment that is needed to ensure that the energy transition delivers outcomes that are in the long-term interests of consumers.

In 2021, the Australian Energy Market Commission (AEMC) made its final determination on a rule change request from AEMO; "Integrating Energy Storage Systems into the NEM" (Ref: ERC0280). This rule created a pathway for grid scale storage and hybrids to enter into a *negotiated transmission service* agreement with Transmission Network Service Providers (TNSP) when they connect directly to a transmission network.

This allows agreements between Energy Storage System (ESS) providers and TNSPs to enter into arrangements that facilitate the uptake of transmission-connected ESS. By negotiating a service level that is suitable for the ESS charging,

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that may be inadequate for typical loads that connect under a prescribed transmission service, TNSPs (including Powerlink in QLD) have established a method that enables ESS providers to avoid NUOS charges without compromising efficient usage patterns.

These agreements are reflective of the unique nature of ESS and their ability to respond rapidly to market or network signals as either a generator, or a load. Therefore, ESS participants can operate without adding to the max demand on the network (which would trigger further capital expenditure by the network). Rather they can reduce peak demand on the network and smooth the “duck curve”, fundamentally increasing the utility of the network and saving consumer costs of network build-out.

A low-NUOS tariff structure would encourage distribution-based ESS investment and increase the utility of the network, which would provide a long-term benefit of the consumer. In addition to alleviating network congestion, ESS serves to firm variable renewable energy generation and is therefore an enabler for wind and solar, which the CSIRO has again validated as the lowest-cost form of electricity in its annual GenCosts report (Graham, P; Hayward, J; Foster, J. (2024). GenCost 2023-24. CSIRO, <https://www.csiro.au/en/research/technology-space/energy/GenCost>).

In the Energy Queensland distribution network, ESS can provide the same (or greater) benefit to the network as a transmission connected ESS, yet the transmission charges are still passed down from the TNSP as a significant portion of the tariff. In a fixed-revenue NSP environment any charges placed on the ESS are passed on as savings to the other connections on the network. By placing transmission charges on the ESS, other loads (that are not flexible in nature, and therefore should be paying for the capacity build-out) inherit the benefit. Through the lens of the National Electricity Objectives, Energy Queensland’s proposed Tariff Structure Statement does not apply the principles of good regulatory practice to provide the balance between regulatory considerations and flexibility and future-proofing of the network. Efficient investment in ESS projects is discouraged by the burden imposed by the NUOS. They are prevented from providing their intrinsic benefits to the network which would result in outcomes which are in the long-term interest of the consumer.

In light of the above, we provide the following responses to the Draft Decision:

Item	Issue	Comments and Recommendations
1	Tariff Structure Statement, section 3.3 Dynamic Network (Storage) Tariff	<p>Section 3.3 of the Tariff Structure Statement outlines Networks' proposed storage tariffs for SAC Tariffs, and CAC Tariff classes. Firm Power believes that the proposed storage tariffs have the potential to provide the right price signals to the owners and operators of grid scale storage assets, to enable to them to operate the storage assets in a way that provides the most benefit to the network. The Tariff structure provides two storage specific tariffs for SAC and CAC.</p> <ol style="list-style-type: none"> Dynamic Flex Storage Tariff: By adopting a Dynamic Operating Envelope (DOE) Ergon has the ability to put temporary limits on the maximum charge/discharge of the asset based on local network conditions. This tariff does not impose any critical peak charges, as the asset will be unable to contribute to any critical peak events except in the way that Ergon would prefer. Dynamic Price Storage Tariff: This tariff applies to storage assets not subject to a DOE, and relies on critical peak charges for both import and export to incentivize the storage asset to act in a way that benefits the network during local critical events. This Tariff is available solely at the network's discretion, and it is understood that this Tariff will only be available to storage assets in areas of the network that are not experiences regular critical events. <p>Firm Power sees these tariffs as a good first step for the integration of grid-scale storage into the distribution network. However, the exclusion of Individual Calculated Customers (ICC) from this tariff structure disincentivises private investment in Distribution connected assets and appears to overwhelmingly favour the Networks own grid scale storage projects. This will stymie market development in the battery space (particularly non-network service providers) and lead to a worse outcome for consumers. Tariff treatment for batteries should be consistent across distribution businesses and non-distribution businesses.</p> <p>Firm Power recommends that the Tariff structures outlined in section 3.3 be extended to include grid scale storage connections that classify as ICC.</p>
2	Tariff Structure Statement, section 3.4 ICC Network Tariff	<p>Section 3.4 of the Tariff Structure Statement outlines the proposed tariff structure for Individually Calculated Customer tariffs.</p> <p>Firm Power believes that the structure proposed for ICC network tariffs is overly rigid and does account for the dynamic behaviour of storage assets. There are three components to the ICC Network Tariff that Firm Power believes provide strong disincentives for investment in non-network ESS projects.</p> <ol style="list-style-type: none"> Capacity Charge (\$/kVA of AD): The load characteristics of Energy Storage Systems are not the same as traditional loads. Energy Storage Systems are dynamic loads which can alter their charging behaviour rapidly to provide support to the network as required. By being charged a capacity charge based on connection capacity, regardless of how it is used, removes the incentives for the Energy Storage Systems to act in harmony with the distribution network's needs around reducing the peaks, load shifting, and soaking up excess solar energy during the middle of the day. Further, the Generator Performance Standards (GPS) will require the plants to sink or source reactive power up to 0.395 times the rated active power of the plant. As this reactive power will be provided based on the network voltage at Point Of Connection, the actual operating power factor is not inside the Energy Storage System's

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		<p>control, as its power factor is dependent on the grid voltage, it will operate at lower power factor in order to provide support to the grid voltage as needed. Being charged a capacity charge, billed per kVA, penalises the plant for both complying with the GPS (NER S5.2.5.1.) and providing inherent voltage support to the network.</p> <ol style="list-style-type: none"> 2. Demand Charge (\$/kVA): This component of the tariff applies to the highest peak demand the load draws each month, regardless of when the peak occurs. Similar to the Capacity Charge, having this billed based on the kVA draw of the plant, unfairly penalises storage assets for complying with their GPS. Further the application of this tariff to peak demand at any time, not just during periods when the network is experiences high loads, removes incentives for the storage assets to behave in a way that benefits the network. 3. Locational Charge (\$/kW): The application of a locational demand charge should be in reaction to local network conditions. By imposing this charge on an anytime basis, it removes the incentives for the energy storage systems to behave in a way that can alleviates local network issues. ESS assets present a valuable opportunity to the network to take advantage of a highly flexible load, that can, with the right incentives, be moved around to provide the best network outcomes. <p>Firm Power sees these tariffs as completely unsuitable to enable the development of storage assets in way that benefits the distribution network. They do not promote the flexible and dynamic responses that ESS can perform to alleviate adverse network conditions, and reduce the need for extra capital expenditure by the networks. These tariffs provide no disincentives for ESS to avoid behaving in a way the exacerbates the strain on the network during times of peak load.</p> <p>Energy storage tariffs for the upcoming regulatory period should be tailored to promote the investment in energy storage that is required for the Energy Transition. Firm Power recommends that ICC class energy storage tariffs reflect the incentives offered in the CAC energy storage tariffs.</p>

We thank you for the opportunity to provide a submission to the Draft Decision. If you have any questions in relation to this submission, please don't hesitate to contact [REDACTED]

Your sincerely,

Nick Rose
CEO, Firm Power