FIRM POWER
Affordable. Reliable. Sustainable.

TO/

Clair Savage
Chair
Australian Energy Regulator
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Monday, December 21, 2020

Dear Australian Energy Regulator,

Firm Power submission on the Australian Energy Regulator's Issues Paper (November 2020).

Firm Power is pleased to provide a submission to the Australian Energy Regulator (AER's) issues paper titled '*Updating the Ring-fencing Guidelines for Stand-Alone Power Systems and Energy Storage Devices*', November 2020.

This follows on from Firm Power's submission to the AEMC (Updating the Regulatory Frameworks for Distributor-Led Stand-Alone Power Systems, Ref EMO0038) on 13th February 2020 and participation in the AEMC's Stakeholder Workshop (Updating the Regulatory Frameworks for Distributor Led SAPS – Draft Report) on the 29th January, 2020.

Firm Power is an intending participant in the National Electricity Market as a Generator, actively participates in Regulatory Investment Test processes and works with Network Service Providers (NSPs) to design efficient and cost-effective means to save customers money through non-network solutions. Firm Power achieves this by leveraging private investment to provide credible non-network energy services delivered through innovative Network Service Agreements (NSAs).

Firm Power was recently awarded a grant under the NSW Emerging Energy Program to develop two battery energy storage systems (BESS) in Western Sydney as a way of deferring network investment to meet peak summer loads (see here for further details: https://energy.nsw.gov.au/renewables/clean-energy-initiatives/emerging-energy-program).

Firm Power broadly supports the intent of the AER Issues Paper and existing Ring-fencing rules to encourage competition in the market. However, Firm Power is opposed to the relaxation of existing Ring-fencing rules for NSP's as we believe an efficient market is evolving where competitive tension will generate incremental consumer savings. We support clear delineation of Ring-fencing rules between stand-alone power systems (SAPS) and grid connected large scale energy storage systems. With reference to our previous submission to

the AER on SAPS, and the Public Interest Advocacy Centre's (PIAC) SAPS submission, we support creation of provider of last resort powers for NSPs where there is no viable competitive SAPS provider available. This will require a waiver structure specific to SAPS.

We believe that if NSPs are afforded the opportunity to invest in grid connected large scale energy storage, attract regulated revenue for this asset and actively participate in non-regulated transmission or distribution market activities, a conflict of interest may arise. In particular NSPs may become conflicted in objectively assessing external offers for energy storage projects in the Regulatory Investment Test (RIT) process, and in doing so affect the emergence of a new market to stimulate competition, innovation and challenge monopolistic pricing practices. Creation of this new market is key to stimulating incremental cost benefits which are in the long-term interests of consumers.

In light of the above and as a non-network service provider, we thank you for the opportunity to provide a submission to the Issues Paper Consultation.

If you have any questions in relation to this submission please don't hesitate to contact Marcus Keller at marcus@firmpower.com.au.

Your sincerely,

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1. Firm Power Response Summary

Key points:

1. The existing Ring-fencing regime should remain unchanged. It provides a clear set of rules which facilitates collaboration between NSPs and the private sector.
2. There is a market perception that waivers and exemptions could create asymmetric information risk, discriminatory and pre-emptive advantage for NSPs.
3. With reference to SAPS, NSPs could be positioned as the provider of last resort under a waiver arrangement.
4. With reference to grid connected large scale energy storage, NSPs should be encouraged to source network services from third parties as an alternative to investment in this asset class.
5. We would query the objectivity of NSPs to objectively host a RIT process if they are also competing in the provision of a non-network solution or battery-based network solution.
6. If NSPs can waive NUoS for their network solutions[1] they should be compelled to waive NUoS for third party projects. Otherwise this may create market distortion.
7. A market already exists for the provision of NSP non-network solutions by third parties, however, the market is in the early stages of development. Participation by NSPs in the non-network market via changes to the Ring-fencing provisions will be detrimental to market evolution.
8. The market is well positioned to solve for the lowest cost option to return the highest benefit to the consumer across both SAPS and grid-connected batteries.
9. The AER should consider amending the Efficiency Benefit Sharing Scheme (EBSS) to:
   a. Incentivize NSPs to increase their OPEX expenditure in support of Network Service Agreements with third parties, and
   b. Establish Network Service Agreements as a capitalized expense able to be incorporated into an NSP's Regulated Asset Base.
10. The AER should consider amending the DMIS to provide a pre-approval process for NSPs to secure funding for their projects and encourage an OPEX approach to provision of network services.

2. The value of retaining existing Ring-fencing rules

In the absence of Ring-fencing rules, we believe the market would not seek to compete against NSPs and monopolistic pricing practices could ensue. NSPs wield significant market power which, in the instance of a RIT process, can create information asymmetry in their knowledge of the *identified* need. This could create a conflict of interest and manifest itself in NSPs unfairly withholding network information from other proponents competing in the same RIT

[1] United Energy 'Tariff Structure Statement', 2021-2026, p 15, https://www.aer.gov.au/system/files/United%20Energy%20-%20APP06%20-%20Tariff%20structure%20statement%20technical%20-%2031%20January%202020.pdf

process. An outcome of this would include suppression of market development and high levels of investor uncertainty triggered by NSPs actively competing against them in the RIT process.

3. Full Transparency and Symmetry in Information Sharing

An emerging market able to support provision of NSP network services via third party Network Service Agreements has been established by three prominent projects:

PROJECT	THIRD PARTY PROVIDER	NSP
Molonglo	Provider not published	Evo Energy
Longwarry	E22	AusNet Services
Western Sydney Smart Battery	Firm Power	Endeavour Energy

Figure 1 below shows two potential Interface Arrangements between the market and NSPs:

- The first example demonstrates where a NSP invests in an energy storage system, uses part of it for provision of network services and the balance is contracted out to a retailer under a capacity availability arrangement. We believe this approach would need a Ring-fencing waiver or exemption.
- The second example demonstrates how an independent third party could occupy the space of asset owner and lessor. The third party would provide the same network services to the NSP and make capacity available to a market intermediary. Importantly this model is compliant with present Ring-fencing rule requirements, and is able to pass through cost savings generated by capital efficient third-party funding models.

We believe the second example is superior as it utilises an open market philosophy and would achieve the same outcomes with significantly reduced CAPEX investment, avoid regulatory risk of discriminatory & anti-competitive behaviour, and support development of a new market.

A competitive market creates greater liquidity..
There is room for everyone!

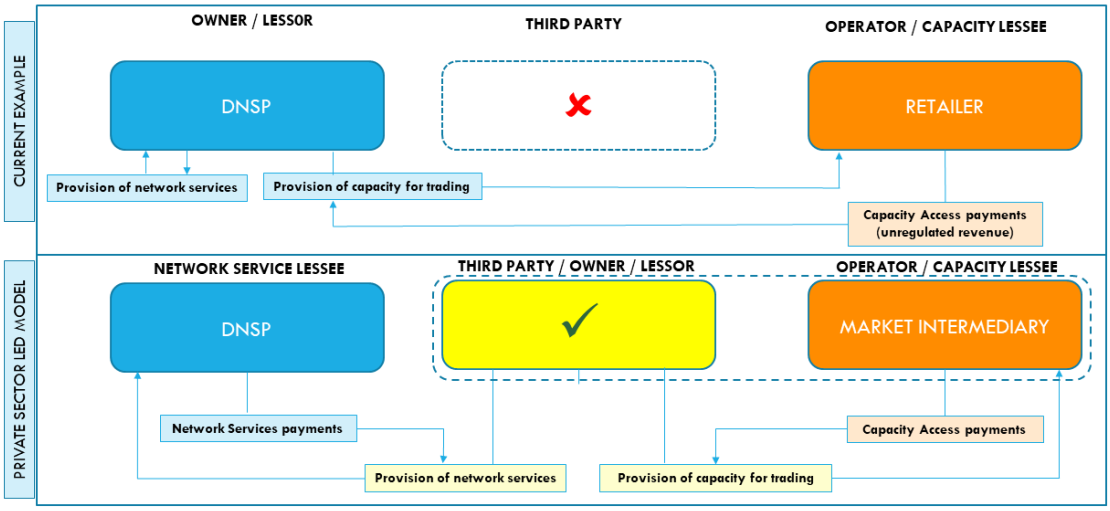

Figure 1: BESS Interface Arrangements with NSPs

4. Transition to Network Service Agreements

Firm Power believes NSPs should be encouraged by the AER to source Network Service Agreements to deliver non-network solutions in demand management. The main mechanism to achieve this outcome is currently the Demand Management Incentive Scheme (DMIS).

Research suggests the DMIS is not expanding the range of demand management solutions currently being utilised by NSPs. Whilst requests have been made for early consideration of DMIS within various NSP Revenue Determination periods, we note in the 2018/2019 period only two NSP DMIS submissions including:

- 0 Committed DMIS Projects,
- 2 Eligible DMIS Projects, and
- 5 Upcoming (potential) DMIS Projects.

This lack of DMIS committed projects may be a result of:

- Challenging DMIS project eligibility criteria,
- DMIS not offering an upfront 'ex-ante' approval process for a project concept. We understand NSPs are challenged by the level of investment required to bring a DMIS opportunity to maturity absent of any formal feedback signals from the AER, and
- The low quantum of costs able to be submitted to the AER for recovery (must not exceed 1% of total annual revenue).

4.1. Changes to the DMIS

We believe a rule change to amend the DMIS is necessary to:

- Provide 'ex-ante' approvals for eligible projects in the early stages of project formation and well in advance of significant investment outlay by NSPs,
- Remove the current cap on recoverable costs, or at the very least raise this to a meaningful level well above the current cap. This could encourage NSPs to consider DMIS projects which may include Network Service Agreements as eligible for DMIS,
- Increase the OPEX component within the Maximum Allowable Revenue (MAR) cap when this OPEX is based on the value delivered by deferring CAPEX by a non-traditional-build solution and/or,
- Consider creating a category of 'regulatory assets' that treats non-traditional-build solutions (Network Service Agreements) as CAPEX (similar to the Con-Ed approach below).

4.2. Market Development for Battery Based Non-Network Solutions

We believe a market for battery based non-network energy services will contribute to a decrease in the $/MWh average electricity residential charges paid by customers in each State. The majority of these savings will occur across 2-3 Regulatory Determination periods if a multi period approach is considered.

One concept to encourage market development, is to work with NSPs to restructure the Efficiency Benefit Sharing Scheme (EBSS). The EBSS incentivizes NSP underspend of OPEX whilst the transition to Network Service Agreements requires a fundamental change to incentivize NSPs to *increase* OPEX spend. There may be methodologies to separate out the treatment of expenses under the Maximum Allowable Revenue (MAR) cap, and the outcome sought would be treatment of a Network Services Agreement as a Regulated Asset with NSP OPEX payments able to be capitalized by the NSP.

There is established precedent that demonstrates the success of treating Network Service Agreements as a Regulated Asset. Con Edison (ConEd) in the USA utilized this approach, however it is also important to recognize the additional capabilities of Con Edison beyond those of NEM based regulated NSP's i.e. they own and operate a generation fleet in addition to traditional transmission assets. A discussion of Con Ed's approach has been included below with further background in Appendix 1.

4.3. Overview of ConEd Approach

In 2007 the Public Service Commission of New York established a mechanism for decoupling "actual" electricity delivery service revenues vs "fixed" (volumetric) delivery service revenues. Building on this in 2014 New York State initiated a new program called Reforming the Energy Vision (REV). The policy articulated multiple targets linked to the overarching goal of making "a clean, resilient, and more affordable energy system a reality, while actively spurring energy innovation, bringing new investments into the State, and improving consumer choice." A key outcome was helping utilities such as ConEd transition to become drivers of decarbonization

by animating more participation from third-party providers to optimize customer energy use. This was further supported by New York State's passage of legislation in 2019 requiring the State to create a plan to achieve net zero GHG emissions by 2050. A novel Performance Incentive Structure[2] was also created to support this goal.

In April 2019 ConEd initiated the 'Non-Wires Solutions Program' (NWSP) to manage deferral and replacement of traditional network solutions with distributed energy resources. The objective of the NWSP was to secure demand side management contracts from the private sector in support of sub-transmission and distribution system load relief. ConEd received approval to consolidate their payments for service from a battery provider (or demand aggregator) into a single capital asset which has a ten-year life (i.e. the life of the contract). This asset can be added to their Regulated Asset Base (RAB) and treated like any other traditional capital asset. This approach creates a RAB asset from an OPEX arrangement, which is attractive to Network owners while effectively capitalising expenditure which would normally be operating expenditure.

As Damian Sciano, Director of Distributed Resource Integration at ConEd commented[3],

"The old utility model was like the Navy. The Navy builds and manages aircraft carriers, trains the personnel, and controls the planes. This makes it possible to land a plane on a postage-stamp sized boat floating in the ocean. Now we want to move to the commercial airline model, where we don't control the runway and we don't control the planes, but we still have to enable them to land safely, reliably, and affordably. So, we've got to have a longer runway. That loss of control requires more margin for error, and is a real challenge for utility engineers."

[2] Gold R, Myers, A, O'Boyle M and Ralf G (Feb 2020) Performance Incentive Mechanisms for Strategic Demand Reduction (energyinnovation.org) American Council for an Energy-Efficient Economy, page 33.
[3] Chan A, Gangelhoff G and Klopfenstein A (January 2019) Innovating a New Business Model for Electric Utilities: Consolidated Edison's Brooklyn & Queens Demand Management Project, NYU Stern CSB, NYU Con Edison Case Study FINAL.pdf

5. AER Question Template

Please see below responses to specific Questions posed in the AER Issues Paper.

1. Do stakeholders agree that in some circumstances an exemption would be preferable to requiring NSPs to apply for a ring-fencing waiver?
YES. NSP's can apply for waivers in the instance they are the provider of last resort for SAPS. With regard to grid connected, large scale energy storage, **NO** waivers should not be applied. We believe that for SAPS, waivers should always be applied and considered on a case-by-case basis. This relates to whether the private sector can provide this service (and participate in the pilot project) and the conditions within the waiver including the nature of investment, ownership and operation of the asset, treatment of regulated revenue and the term of the waiver. Exemptions provide a firm minimum threshold for NSP investment in this technology/capability and **does not** support the need for NSPs to "procure" the service from the private sector and incentivize a competitive market. We would suggest NSPs be encouraged to demonstrate market testing and cost-benefit analysis has been undertaken, when assessing whether the given solution could be obtained as an energy service, rather than through capital expenditure by the network.
2. Are there other types of exemptions we should consider?
NO, we do not believe large scale grid connected batteries should be subject to exemptions.
3. In regard to the exemptions above, or any others, what is an appropriate threshold?
NO, we do not believe exemptions for large scale grid connected batteries should be granted.
4. Should exemptions for SAPS be defined in specific detail or are generic exemptions, which would apply more broadly, preferable?
NO. SAPS should not be subject to exemptions. The market should be invited to offer solutions to the needs of networks and customers. If non-network solutions are unavailable, we would support networks stepping in to act as providers of last resort under a waiver arrangement.

5. How can we be sure that NSPs using exemptions are complying with the Distribution Guideline?
It will be challenging to establish transparency measures to manage compliance and even more challenging to enforce non-compliance after exemptions have been granted. The risk remains that barriers to entry can be created, and discriminatory behaviour undertaken to limit commercial opportunities for non-network solution providers, effectively suppressing competition.
6. In the above criteria do the exemption thresholds satisfy the Distribution Guideline criteria of benefits outweighing costs?
We believe establishment of exemptions and their thresholds would not satisfy the Distribution Guideline as OPEX based non-network solutions will provide the most competitive attribution of value and benefit to any energy service delivery model.
7. What other benefits, harms or risks should we consider?
We do not believe there are any material benefits emanating from Ring-fencing waivers or exemptions supporting NSP ownership of grid-connected energy storage. Providing Ring-fencing remains in its current form, the objectives of the ESB and AEMO's Integrated System Plan can be met by the market. We would suggest a pre-approval process be considered for DMIS as without it, the DMIS presents a high investment hurdle for NSPs to consider with no confidence of a project meeting eligibility criteria and being approved. There are a range of harms and risks which could evolve from Ring-fencing waivers and exemptions including asymmetric competition and information access. • We would suggest if an unregulated business or affiliate submits a non-network solution to an NSP, that this exercise triggers the need for a waiver, for this waiver to be made public, and for an invitation to be extended to the market to also submit a non-network solution. • NSPs can obtain 'pre-emptive' advantage by securing knowledge and experience in the battery-based provision of network services before third parties can. This would create barriers to entry. It is reasonable to assume the market for battery energy network services will take time to mature and yield optimal outcomes for the consumer, as the number of participants increase and lessons learned are incorporated back into solution integrity and value. • NSP's can effect outcomes within the existing RIT process. We would suggest amendments to this process to include elements such as: ○ NSP's could be encouraged to award a contract at the end of the tender process or be clear on the necessary technical and pricing hurdles required to result in a contract being awarded. This affords certainty to third party respondents that the tender is not simply an exercise in price discovery.

- NSP's could be encouraged to declare when unregulated 'related parties' are invited to participate in tenders. Given a perceived conflict of related parties by the market, every tender that includes submissions from related parties could be audited by the AER.

- NSPs could waive Network Use of System charges for their own projects and impose them on third party contracts. This could create market distortion by offering a discount to the net present cost of an NSP's project, whilst inflating the net present cost of any third-party contract. NUoS remains a major inhibitor in the provision of energy storage-based Network Service Agreements.
- There is very limited protection of intellectual property for third parties seeking to offer energy storage Network Service Agreements to NSPs. This issue is compounded if NSP's are actively competing against third party solutions with their own energy storage 'network' solution.

8. If NSPs use storage devices to offer services in contestable markets, how can any potential harms be managed?

It will be challenging to manage the potential harms to the extent the market becomes commercially attractive to third parties and a level playing field is established.

9. How should we weigh these benefits and harms to determine if a waiver should be granted? What are the priorities?

We believe waivers are only applicable to the provision of SAPS. Waivers and exemptions should not be granted for grid-connected energy storage systems. Third parties will be able to meet the market; drive down cost and generate innovation to avoid use of these tools by the AER.

10. Should we distinguish between direct and indirect uses of storage devices?

We do not believe there needs to be any departure from the general prohibition in the Distribution Guideline on a NSP offering a non-distribution service. A NSP does not need to take ownership in energy storage and offer services either directly or in-directly; the market can provide these services in the most competitive manner.

With reference to Clause 3.1 (d) and the Shared Assets Rule, third party provided network services could be drafted with flexible use scenarios. Rather than NSP's securing a specific take-or-pay battery energy network service contract that remains static over time (and risks over-investment with excess capacity), the market is likely to offer consumption models. These models would focus on shaping the contract to the changing shape of demand. This approach optimizes asset use to the windows of actual *identified need* and maximises the return of benefits to distribution customers.

Clause 3.1 (d) of the Distribution Guideline should be amended to clarify that it only applies to the use of shared assets under the shared asset guideline.
11. Should we clarify the scope of clause 3.1(d)I of the Distribution Guideline?
Please refer to above. We would be mindful of any form of collusive behaviour which may result in breaches of anti-trust law.
12. Can improved staff sharing registers provide the transparency of staff sharing that is needed?
NO this will not achieve the required outcome for the energy services market to develop. A clear barrier needs to be erected, to discourage NSP procurement staff being seconded to an unregulated business or affiliate from the regulated business, especially after an energy storage tender or RIT process. The transfer of knowledge and intellectual property between regulated and un-regulated businesses would once again create pre-emptive advantage for an NSP over third party proponents.
13. Will changing the term 'confidential information' to 'ring-fenced information', make ring-fencing obligations in relation to information sharing clearer?
Firm Power has no comment on this.
14. Will reporting all breaches in relation to substantive Distribution Guideline clauses in 10 business days improve the overall timeliness of breach reporting and reduce the administrative burden on NSPs?
Firm Power has no comment on this.
15. Will calendar year compliance reporting minimise the administrative burden on NSPs?
Firm Power has no comment on this.
16. Are the current Distribution Guideline obligations, in relation to branding and cross promotion, proportional to the potential harms? If so, how might the branding and cross-promotion obligations in the Distribution Guideline be amended to make them more targeted?
Firm Power has no comment on this.