Mr Chris Pattas
General Manager, Networks
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

27 May 2016

Dear Mr Pattas,

This submission regards the AER's request for submissions on a national **Electricity Ring Fencing Guidline**, AER Reference 46484.

Regulating the operation of power system and network services, and regulating the assets which provide those services, is a form of the general economic problem of social cost. In this context, market regulation is intended to define the constraints on permissible market designs and mechanism, but is expressly not to design an outcome itself. That is: do not aim to provide a solution, only define the terms of engagement. This is particularly important with respect to industries undergoing rapid changes in technology, as proscriptive regulation can not be expected to move with the agility of a well-defined market. The AER has always been cognisant of this requirement, and in this case, the issues raised and solutions proposed are in general consistent with this principle.

Feedback on some specific topics raised in the preliminary positions paper follow.

Ring-Fencing Objectives

The four objectives of the guideline given in Section 2.1 of the proposal are well stated and necessary.

Furthermore, consideration of increased administration costs versus benefits as a basis for assessing waiver applications is a sound approach, particularly in thin market situations with few alternate service providers.

In addition to these objectives and considerations, the issue of perceptions is also very important. There may be an argument that considerations of transparency and perceived fairness should be explicitly included in the guideline. However, these goals will likely be achieved as a side-effect of an effective ring-fencing guideline that includes the other objectives, so including an objective that codifies perceptions of fairness and transparency is not particularly warranted.

Ring-Fencing Coverage

The working assumption that ring-fencing is beneficial to consumers is appropriate in the context of a large entity (an NSP) potentially put in competition with several, much smaller service providers. The larger entity almost surely has more capacity to appeal for a relaxation in the ring-fencing arrangements than a smaller entity has to demonstrate the harm of NSPs competing for contestable services.

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The approach to ring-fencing coverage proposed in Section 3.3, to periodically review the services offered by each NSP and determine which services will be subject to ring-fencing at that time as part of the Framework and Approach service classification process (option 3), is also supported. The potential for duplication of effort on AER's part, and for divergence between the outcomes of the service classification process and a ring-fencing service list, are to be avoided. By this measure, options 1 and 2 are inferior to option 3.

Developing contestable market for DERs

Constructing contestable markets for services is an effective way of implementing efficient outcomes in terms of operation costs and patterns of investment in DER. Within this context, full separation of assets providing ring-fenced services may lessen the overall value of NSPs, but this should not be confused with lessening the value provided by the energy delivery system as a whole. If the service is procured from a third party, then the value of the power system is still increased. It is only the distribution of power system's surplus value that is affected by the decision to implement complete separation. This is clearly understood by the AER.

Moreover, if this separation enables a transparent pathway to the provision of contestable services by third parties whose devices are able to provide several services, then economies of scope may come to dominate investment decisions. For example, battery storage technology is largely modular, having a close-to fixed marginal cost for increasing capacity and power. In this context, economies of scale are difficult to extract. Consider, for example, a third party that can capture a solely private benefit from one form of service provided by a battery (e.g. energy time shifting), but that can also supply other services from the same device (e.g. FCAS or network peak load reductions). It is to be assumed that this party has an expectation of better returns on investments in the device when all service-providing entities are operated in complete separation from the entities procuring the services.

Network congestion management is the obvious example of the type of service alluded to here, where the NSP is both procuring the service and potentially competing to provide it, e.g. through battery installations or diesel generators. The effect of NSP investment and operation of such devices may be to crowd-out private investors in battery storage – an outcome which may be based purely on a perception of bias. The flow-on effects of this could be to distort investment decisions for devices that would have provided other, unrelated services, thereby resulting in inefficient outcomes across several value streams.

Furthermore, in the context of DERs with economies of scope, NSPs that are subject to any form of ring-fencing separation relying on internal separation of processes or external monitoring would likely be at least as costly as those operating under complete separation.

Given the above considerations, the proposed approach to ring-fencing appears to adequately deal with the prospects for development of the contestable markets for DERs.

Asset sharing between regulated services and contestable service provision

Given the limited extent of the market for many services currently, it is unclear at this stage whether restricting asset sharing will improve the overall cost of providing these services. On the other hand, the benefits of restricting asset sharing in terms of robustness and enforceability of the ring-fencing regime, and the impression it gives to third-party investors, are quite clear.

However, looking beyond these competing considerations, as the number of alternate providers of network services increases with the expected roll-out of new technology, it will become more difficult for NSPs to justify capex on shared assets put into their RAB (i.e. through the RIT-D process). As such, any detrimental effects of restricting asset sharing should only arise over the short-to-medium term.

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Related note on contestable markets for DERs

It is commonly agreed that there is a major and direct role for DER in managing network congestion, particularly on distribution networks. There is less of a role for DER's direct interaction with wholesale energy markets.

There are two major requirements of a system that facilitates the participation of DERs in network management, namely: minimal transaction costs and restrictions on excessive market power. The development of a ring-fencing guideline addresses the second of these, but only touches on the first.

In more detail, alongside well-defined set of property rights and scope of action for each entity, for a a market mechanism to be efficient, transaction costs need to be small enough not to affect the decision-making of the market entities. In earlier times, this requirement represented an insurmountable barrier to market-based DER participation in distribution network management. Even ten years ago, the communication and control capabilities of advanced systems were unable to address the very large scale of network control using DER in an economical manner. However, technology has developed to a point where this is now possible. Indeed, Australia is a the forefront of such developments, with technology companies such as Reposit Power[1] and Building IQ providing platforms for market integration of DERs at the scale required to make demand-side participation in network management problems a viable alternative to central control or network-based solutions. In particular, platforms such as these have dramatically reduced the transaction costs associated with market-based solutions to network congestion and management problems.

However, the costs of deploying such solutions across several jurisdictions may be high in the absence of standardised market protocols and procedures. In a similar vein, the size of an appropriate return to an NSP for facilitating such market interactions also needs to be addressed. The point of raising this issue here is that there may be a role for AER in developing such standardised models of interaction and regulating rates of return, or even for AEMO in administering them. Standardisation of these protocols across jurisdictions would help reduce the costs of developing non-network solutions provided by third-parties.

If you have any queries about this submission or require further information, please contact me at archie.chapman@sydney.edu.au or on 02 8627 0386.

Yours sincerely,

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1 Disclaimer: I am currently participating in an ARENA-funded research project with Reposit Power – for more details see: http://arena.gov.au/project/consumer-energy-systems-providing-cost-effective-grid-support-consort/