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Battery tariffs - Network tariffs for the DER future

AGL Energy (AGL) welcomes the opportunity to comment on the 'Network tariffs for the distributed energy future' exploratory paper, dated 26 August 2022.

AGL is market leader in the development of innovative products and services that enable consumers to make informed decisions on how and when to use their consumer energy resource (CER) assets to optimise their energy load profile and better manage their energy costs. AGL's current CER product and service offerings include our leading-edge Virtual Power Plant, our retail offer for electric vehicle owners, and electric vehicle subscription service. AGL's feedback to the exploratory paper is based on our knowledge of energy consumers' engagement with CER, energy products and services, our ongoing involvement in CER policy and regulatory design and our experience participating in community battery initiatives, including the Victorian Neighbourhood Battery Feasibility Study.

AGL generally supports the premise of the exploratory paper that well-designed, cost-reflective network tariffs can have the potential to play a role in the integration of battery storage into the NEM's energy system and drive the uptake of CER assets, more broadly.

AGL believes that CER assets, both at the home and on local community land, can substitute expensive network build, deliver value to owners and other consumers, and provide alternative ways of meeting system security requirements.¹ We commend the AER for continuing to explore how a range of measures, including tariffs and pricing arrangements, can drive uptake of CER, reward customer participation, and support the broader energy system. AGL's starting position is that because the capital costs of procuring and installing CER assets are borne by individual consumers and not the network, the AER's policy direction should focus on driving the lowest cost solutions while promoting customer choice in how to participate in market services and appropriately rewarding customers for providing support to the grid.²

¹ AGL Energy, [response to the AER's Export tariff guidelines for distribution network export tariffs Consultation Paper](#), 4 November 2021.

² AGL Energy, [response to the NSW Distributed Energy Resources Strategy Scoping Paper](#), 6 May 2022, p3.



We understand that the exploratory paper focuses predominantly on the design of electricity distribution network tariffs and network regulation, however, we strongly advocate for any proposed policy or market solutions to holistically consider the impacts to customers as well as the delivery of services by the competitive market. This is to ensure that customers remain at the forefront of the decision-making. Principles of simplicity, engagement and accessibility should underpin a framework that empowers consumers to participate in competitive market services which address broader energy system needs in a manner that supports continued uptake of CER.

During the consultation process for the Australian Energy Market Commission's (AEMC) Pricing and access arrangements rule change request, AGL expressed its support for the proposed two-way network tariff reforms, emphasising that the regulatory framework around two-way tariffs should continue to support simplicity to facilitate consumer engagement.³ While the AER is responsible for the policy design of tariff arrangements and networks for their implementation, retailers are the party which is best positioned to share and manage value with customers. It is important that in future tariff reforms, retailers retain the flexibility to determine how to pass on the network costs associated with network tariff structure in a way that is appropriate for all subsets of customers in all circumstances. As retailers operate in competitive markets, they are incentivised to leverage customer data and insights to develop and present product offerings and structures that reflect consumer wants and preferences. AGL's experience shows that consumers (rather than retailers) tend to favour straightforward, transparent and easy-to-digest price structures. Creating simplicity in the choice of offerings will be pivotal for facilitating consumer trust and confidence that the energy markets are working create efficient and equitable outcomes while enabling participation, including with various community battery models, both in front and behind the meter.

Export pricing

AGL's view is cost reflective network tariffs for the consumption of electricity should be optimised and implemented ahead of charges for export pricing. The development of Time of Use (ToU) tariffs that provide an incentive for consumption at times of high solar PV production is an important precursor to a consumer's decision to use CER assets to better manage their energy consumption. We are just starting to see the emergence of networks orientating tariffs towards high solar production and we would encourage more of these types of tariff settings. The AER should progress this trend by prioritising ToU price signals and optimise customer accessibility as a solid foundation prior to moving onto two-way tariff design.

Control over customer assets

The paper explores the application of some form of control by networks over customers' CER assets in exchange for a reward such as tariff discount for having prevented the behaviour that would have given rise to an augmentation cost. We question whether this approach is the most fitting. Our preference, and one which we believe will drive more efficient outcomes, is where networks are required to procure network services to identified networks constraints from retailers and CER providers in a competitive energy market. Customers should retain the agency to elect to give control of their CER assets and be rewarded for providing system services to the network to promote greater participation and confidence in the energy markets. A requirement for customers to relinquish control of their CER assets could have an adverse impact on investment certainty, consumer uptake, and the value of CER assets

³ AGL Energy, response to the AEMC's [Access, pricing and incentive arrangements for distributed energy resources Draft rule determination](#), 27 May 2021, p2.



By exercising the level of control over customers' BTM assets or community batteries (for example, to avoid an augmentation cost) proposed in the paper, networks may be seen to be acquiring contestable electricity services. An alternative to requiring customers to surrender control of their CER assets and needing to solve for the social license aspect to do so (which we would argue is the role of the retailer or CER service provider to resolve), would be for networks to procure system services through bilateral or multi-party commercial arrangements with market participants. Commercial agreements are likely to deliver the most efficient method for establishing the proposed 'hierarchy of instructions' model to address conflicting drivers of battery behaviour. The priority of network requirements can be explicitly provided for in the agreement between the network and retailer or CER service provider based on locational parameters and forecast system requirements.

We observe the parallels drawn in the exploratory paper between networks charging/discharging batteries in a dynamic way or BTM asset control with the existing controlled load arrangements where networks determine the timing of the controlled load consumption in exchange for lower prices. However, networks currently switch customers' controlled load assets on and off at predetermined times without being able to realise the full potential of the controlled load assets in the electricity market or for consumers. We consider that by negotiating agreements for the provision of competitive controlled load services (and other services) to networks and then sharing the rewards with customers that choose to participate, retailers/aggregators are best placed to unlock and deliver the maximum value from the orchestration of CER.

The proposition that networks should have access to control customers' CER assets to change consumption or generation behaviour also has a real potential to create barriers and disincentivise the emergence of new market entrants and products that provide services competitively, further stalling the growth and development of innovative solutions. In a developed and mature services market with a full fleet of CER assets, networks will have access to a suite of competitive CER offerings and providers based on different needs and locations. We can already see services that are developed to reward customers for their investment in CER emerging in the market organically, including AGL and Ausgrid's arrangement to procure a form of network service through AGL's residential demand response program.

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Assumptions about distribution scale batteries

We appreciate that community-scale energy storage has a role to play in Australia's energy transition, however, the exploratory paper positions community batteries as the preferred model compared to aggregated BTM assets, which AGL does not necessarily support. While there may be economic and equity advantages in the deployment of community batteries, there are a range of financial, regulatory and



consumer matters, in addition to the question of appropriate network tariff and pricing structures, that need to be resolved.

We explored these and other questions as part of AGL's Neighbourhood Battery Feasibility Study. In 2021, AGL received a grant from the Victorian Government through its Neighbourhood Battery Initiative to undertake a study to investigate the feasibility of community batteries on the Morning Peninsula. AGL's research sought to test if and how the local neighbourhood could be serviced by a neighbourhood scale battery. AGL's feasibility study considered possible battery design options, elements of different ownership models, community engagement and economic and financial incentives and returns. The parameters of the feasibility study⁴ are detailed in AGL's submission to the NSW Government's Distributed Energy Resources Strategy Scoping Paper⁵.

First and foremost, our study found that a community battery on the Lower Mornington Peninsula was not commercially viable despite there being an identified network need for capacity with associated payments. The analysis also showed that network tariffs have the potential to distort the operation of a battery from what would be optimal from a commercial return perspective. Secondly, any network tariff is detrimental to the economics of a community battery. The study revealed that for a 1MW/2MWh battery, introducing United Energy's low voltage grid tariff discouraged desired 'solar soaking' behaviour, as the battery charged less during the day, and reduced gross profit from \$99K per year to -\$8K per year (based on FY21 price data).

Other insights and findings from AGL's study reveal that:

- Residential customers can share in the benefits distribution scale batteries without direct participation such as through lower wholesale prices and lower cost of network services whereas direct participation schemes can be costly to implement and tend to benefit a smaller group of customers.
- BTM batteries have a number of advantages over front-of-meter investments including that they do not incur network tariffs, excess solar generated at the site can be used at the site, and there are no incremental land costs.
- Compared to network ownership of batteries, competitive market participants can unlock additional value through access to energy markets and customers, and transparency of opportunities to provide network services. However, the regulatory framework would need to evolve to support a level playing field for all battery service providers for the competitive benefits to be realised.⁶

Local use of system charges

While the application of LUoS charges may be appropriate for some community battery models, they will need to be considered from the perspective of the value that customer can access through the energy system. There is a potential that the discount for using only the local network is marginal compared to the value that customers could access through ancillary services and wholesale markets.

⁴ AGL understands that DELWP intends to make the full report available to public later this month. We would welcome the opportunity to share the report and insights with the AER.

⁵ See further, AGL Energy, response to the NSW Distributed Energy Resources Strategy Scoping Paper, 6 May 2022, p 10-12.

⁶ Ibid, p11.



Enablers for the efficient integration of batteries

Flexible Trading Arrangements: While the exploratory paper discusses some of the challenges with the Australian Energy Market Operator's Flexible Trading Arrangements rule change request, it also identifies FTA as a potential enabler for the efficient integration of batteries, AGL does not necessarily share this view and considers that FTA, from the customer's perspective, will introduce various significant complexities and practical limitations, including issues with accurately metering for consumption between two providers. Further, the case for consumer desirability, comprehension and the benefits of the FTA has not been fully made. We consider that consumers overall may be worse under the FTA than the current arrangements towards installing and taking advantage of CER.

Smart meter roll out: We disagree with the paper's observation that the roll out of smart meters in NECF has been slow. We consider that the pace of the NECF smart meter roll out reflects the forces of a competitive market where the Power of Choice reforms were designed to avoid consumers having to pay the bill for a costly meter deployment program (such as the Victorian smart meter roll out program). It was intended that customer take up would occur organically through customer installation of CER assets (solar PV), retailer-led programs, and faulty meter replacements.

A number of retailers including AGL allow customers to request a smart meter, for any reason. We do not consider that the NECF smart meter roll out has had any significant impact on the pace of community battery integration, or installation of CER assets.

Role of Retailers: Retailers who operate in competitive markets are incentivised to continuously develop and innovate their services and products. The role of the retailer goes beyond simply billing customers for their energy consumption; retailers are responsible for managing risks for customers in participating in the energy markets. Accordingly, retailers are best place to continue to manage those risks on behalf of customers through the energy transition and future energy reforms.

Simplicity and accessibility of tariff design (and the energy markets more broadly) speak to the question of equity. An effective framework should enable all customers to participate and share in the benefits of a two-way market and CER future, and while this may not always reflect perfectly efficient outcomes, the AER will need to strike the right balance between achieving this efficiency and promoting equitable outcomes for all customer subsets, particularly vulnerable consumers, that will ensure that everyone has the opportunity to reap the benefits of the energy transition.

If you would like to discuss any aspect of AGL's submission, please contact Valeriya Kalpakidis at vkalpakidis@agl.com.au.

Yours sincerely,

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