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Open Energy Networks consultation paper

AEMO and Energy Networks Australia 2018

Input from the Greater Western Sydney Energy Alliance (GWSEA)

GWSEA appreciates the opportunity to be able to provide input into future policy and regulatory decisions that will impact the uptake of Distributed Energy Resources (DER) via this open consultation process.

About GWSEA

The Greater Western Sydney Energy Alliance (GWSEA) was formed in 2016 as a community-based group with common interests in furthering sustainability and energy efficiency in Western Sydney. GWSEA has actively sought the inclusion of small and large energy users, including industry and manufacturing, chambers of commerce, councils, tertiary education, civil society groups and businesses involved in the energy market under one collaborative framework. GWSEA's overall goal is to grow the use of renewables and energy efficiency to provide environmental, social and financial sustainability for everyone in the community (businesses, organisations and households).

GWSEA has set a foundation of being an impartial and trusted source of information for the community. The primary objectives of GWSEA are to increase the uptake of sustainable environmental practices, with a focus on energy, to educate the community about choices and technologies and to be a source of information, and to be the voice of the community by lobbying for changes that will facilitate best practices and outcomes.

Key drivers for GWSEA

In relation to the topics covered in the OEN paper, GWSEA view the following key drivers for GSWEA as imperatives for a more sustainable Western Sydney:

- Recognition by Governments and Utilities that Western Sydney is a growth corridor of Australia's population and business, with an unprecedented forecast of rapid growth in the next 20 years. The area covers two of the three cities envisaged by the Greater Sydney Commission; Central River City, centred on Parramatta, and Western Parkland City, emerging around the new aerotropolis. Much of these areas are still 'greenfields' sites, open spaces that will require astute planning of energy, water and waste infrastructure to integrate with urban and commercial districts, and transport. We cannot see how the ongoing development of the National Electricity Market infrastructure can be conducted in isolation of the development of such large communities; there is the opportunity to present a coordinated strategy, both in capability and timeframe.
- It is anticipated that DER will be a focus of local government planning, in much the same way that rainwater harvesting is managed under BASIX. However, implementation of DER by residents or businesses can only be universally beneficial if there is the capability to connect and export excess generation, and market mechanisms to value that export. Much of this obligation lies with the local network service provider - in the case of Western Sydney this is Endeavour Energy – and so we see that there must be correlation between community desire, urban

planning, DNSP objectives and NEM directives to facilitate the massive opportunity that DER can deliver.

Key Concerns

Our review of the OEN paper raises a few concerns about potential barriers to the integration of DER.

Need for Market-centric regulation of network obligations

Apart from the Rules of the NEM, each Distribution Network Service Provider (DNSP) currently publishes its own rules regarding connection to their network, demand management conditions, and new technology integration. There are elements of DNSP operations where national harmonisation of standards has been instigated, but there are still many aspects, particularly with connection, that vary widely across the 13 networks in the NEM.

It is noted in the OEN paper that networks have different levels of monitoring of circuits within their networks, leading to a situation of either ignorance or knowledge of electricity flows on the network, and consequently a passive or active approach to assessing connection of DER.

Without full knowledge of their network capacity at the local node level, each network can make a case for 'network constraints' and simply rule out any connection of DER.

The key concerns arising from this situation that are not understood are:

- what motivation there is for a network to change the status quo with network constraints ("we have a network constraint, it is not impacting the operation of the network within the limits it creates, and as network operator we derive no benefit from acting on it"),
- what motivation there is for a network to implement dynamic monitoring of their network to a depth of interrogation that allows management of a network zone /node, including real-time DER dispatch
- what mechanism is in place within the AER Network Determination process for funding of dynamic monitoring and related network upgrades, where the benefit appears to be linked to uptake of DER by non-market participants (the community, noting that an Aggregator can only aggregate what is built),
- how does integration of DER differ from the problems of demand-side integration within the current processes for Demand Management?

It is our view that continuing the current market process of "self-assessment" of network capacity and within-network technology rollout creates a situation where the DNSPs are dictating to all other market participants, including AEMO, the extent and timeframe for market evolution, including DER.

While Demand Management is outside the scope of the OEN paper, it needs to be recognised that there is currently an inherent bias against consumer-led implementation of energy generation and management solutions, due to the way the demand management process is structured and carried out in the market. Where a solution is proposed to partly or wholly provide benefit to the network, it must be shown that the solution is of greater benefit than the network undertaking its own network augmentation works.

The issue with the current process is twofold; 1) the fact that the network must *benefit* from a solution, and 2) the assessment of that benefit lies with the network's own determination.

It is acknowledged that the implementation of solar and storage by consumers is primarily for the consumers benefit, and the network is seen to provide a support role. From this viewpoint it is understandable that the network may not necessarily benefit, but it is reasonable to accept that they are not disadvantaged, which they are not if they receive adequate revenue (for example, under nodal pricing) for delivering the requisite services.

The future role of networks in a distributed energy environment will change; they will no longer have a monopoly on energy distribution. It is an opportune time to consider how demand management and other demand-side services are assessed; in the first instance a change from "benefit" to "not disadvantaged", and secondly an independent body to conduct the assessment.

It is apparent to GWSEA that a strategy as broad as Open Networks requires a more centric management of the implementation of necessary technologies and consistent application of rules and objectives by networks for the greater good of all participants and end consumers / DER providers.

Storage ownership and location

The evolution of DER includes a large rollout of storage capability. It is not clear if a determination has been reached as to whether DNSPs are entitled to be owners and/or facilitators of storage within the network, which certainly appears to have a broader market appeal for managing network demand at a local network level, versus securing access to storage from an Aggregator or Retailer managing a fleet of Distributed Energy Resources.

For a resident, small business, not-for-profit enterprise, or a co-operative in a community, it is important to understand the likelihood of there being a market for excess generation and storage as part of an investment decision. The impact of networks being a competitor in the market for storage capability is akin to the federal government being a competitor in generation through Snowy Hydro.

While not a direct output of the OEN paper, it is a market consideration that requires clarification.

Community-led versus network-led integration

As mentioned in the key drivers for GWSEA, it is envisaged that DER will be encouraged throughout the community by local government planning. However the benefit to anyone in a community may be stymied if there is not a co-ordinated strategy with the local DNSP to facilitate integration of DER export at the same volume and in the same timeframe expected by the community.

Response to OEN paper key question

"*What new capabilities, functions and roles will be required to coordinate and optimise the value of customers' DER investments whilst maintaining security and reliability across the NEM*?"

- As a customer group we do not have input into security and reliability mechanisms, but we do see "maintaining security and reliability" to mean maintain as integration of DER expands.
- As a customer group we do not have the background or insight into market operations to rightly claim the requisite knowledge to decide on one DSO mechanism over another. However, given that we are essentially talking about another mode of generation, it would seem that extension of the existing central platform would serve the purpose without significant disruption to existing processes.

Our key concerns are outlined above and the actions we see necessary to address these concerns are:

- Centralised authority to manage DNSPs coordinated and harmonised approach to integration of DER (and improve community involvement in Demand Management initiatives)
- Alter the decision-making process so that whole-of-market outcomes are considered, not just DNSP benefits
- Plan network improvement and DER integration in line with each local area's needs, based on local government planning initiatives
- Consider how AER will acknowledge requests for network expenditure to support DER integration
- Deliver a strategy paper on optimal storage ownership and location in the market to avoid duplication and inefficiency

Sincerely,

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