



Claire Richards

Project Leader

Australian Energy Market Commission

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Dear Ms Richards,

Distribution Market Model: Approach Paper

AGL welcomes the opportunity to comment on the Australian Energy Market Commission's *Distribution Market Model: Approach Paper (Approach Paper)*, December 2016.

AGL is one of Australia's largest integrated energy companies and the largest ASX listed owner, operator and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy, providing energy solutions to over 3.7 million customer accounts throughout eastern Australia. In 2015, AGL established a New Energy Services division, with a dedicated focus on distributed energy services and solutions.

The Commission's project to examine the manner in which the management of the distribution system may need to evolve to accommodate increasing uptake of Distributed Energy Resources (**DER**) is very timely. The increasing availability, declining costs and more advanced capabilities of DER are presenting a range of new opportunities for customers to manage their energy needs. However, the increasing uptake of DER will also present challenges to distribution networks, which were originally established to enable one way flows of electricity from centralised generators to customer connection points, and must now increasingly manage reverse power flows, voltage instability and other technical challenges associated with higher penetrations of DER.

Potential solutions and interaction with related reviews

AGL supports the Commission's intention to take a broad view of potential solutions to the opportunities and challenges presented by increasing penetrations of DER and not to prematurely zero in on a particular model – or even to assume wholesale changes are needed. We agree with the Commission's observation that the issues and potential solutions considered through the assessment of current rule change proposals from the COAG Energy Council and Australian Energy Council will offer some indication as to whether incremental changes to current frameworks can accommodate the evolution to a more distributed energy system, or whether some more fundamental changes are required.

The first (and subsequent) review(s) of the effectiveness of the economic regulatory framework in the context of increased uptake of DER is similarly highly relevant to the Distribution Market Model project. Amongst other things, it will examine the progress of the transition to more cost reflective pricing and whether distribution businesses have sufficient incentive and scope to innovate their pricing for grid access to reflect changes in how customers are seeking to use the grid. As the Commission notes, appropriately designed price signals can be used to manage the installation and use of DER and the technical impacts they present, while enabling consumers more choice and control over how they use their DER.

The Approach Paper refers to a number of other current rules changes (such as on replacement expenditure planning arrangements), the outcomes of which will have a bearing on the management of distribution networks in a future with increasing penetrations of DER. It is important that the Commission coordinates these complementary work-streams, and applies consistent principles to the assessment and implementation of each. This will promote a smooth and predictable transition to a distribution system which operates as an accommodative platform both facilitating greater uptake of DER and related products and services, and drawing on their capabilities to efficiently support the stable operation of the grid. This program vision and predictability will in turn offer businesses the confidence to invest and innovate their products and services.

We recognise that regulators and policy-makers in other jurisdictions (such as New York) are grappling with similar issues in the transformation and modernisation of their own energy grids. We agree with the Commission that, although these international experiences can offer valuable learnings, it is important that solutions are developed that are fit for the Australian context.

Guiding principles

The distribution network is the gateway to a multitude of current and emerging energy services markets. In addition to delivering energy in the 'traditional' way from central generators to end customers, it is also becoming the platform on which customers will be able to share energy with one-another, through which customers will be able to access wholesale and ancillary services markets, and increasingly to provide grid stability services back to the network. In light of this, it is essential that the neutrality of the grid be protected. It should as far as possible provide an open access platform to support transactive energy flows and facilitate (rather than inhibit) the emergence of new products and service markets that build on new technological capability in a way that responds to customer preferences.

As noted above, a number of current reviews and rule changes are considering issues directly relevant to the Distribution Market Model project. More fully exploring the issues raised through those processes will assist in resolving questions as to how the more active management of the distribution system should occur. Whether it is determined that wholesale or more incremental changes are required, upholding the neutrality of the grid and promoting customer choice, competition and technology neutrality should be key priorities. This requires that particular attention be paid to the role of monopoly network businesses (and monopsony purchasers of grid support services) in the future distribution market model.

We generally support the Commission's outline of principles that should guide any changes to energy market or regulatory design, and that will be used to provide an assessment framework for the Distribution Market Model project. These are set out on p18 and in Box 3.2 of the Approach Paper and can be combined and summarised as follows:

- consumer choice should be facilitated and drive the development of the sector;
- competition should be promoted to the extent possible;
- regulation should only be used where necessary to address market failure, including to safeguard the safe, secure and reliable supply of energy;
- risks should be allocated to parties that are best able to manage them;
- price signals should be utilised to encourage efficient investment and operational decisions; and
- particular technologies or business models should not be biased over others.

The Commission also proposes 'simplicity and transparency' as a guiding principle. However, the pursuit of simplicity may at times be at odds with the underlying needs and realities of a much more dynamic distribution system. In AGL's view, it may be appropriate to retain some complexity in market design and price signalling where there are likely to be sophisticated entities and intermediaries (or indeed technologies) managing this complexity on behalf of end-customers.

Project Scope

The Commission proposes limiting the scope of this review to distributed energy resources (or 'smart' energy equipment) that is co-located with consumer load – that is, 'behind-the-meter' installations. Distributed generation and other grid-connected DER would be excluded. AGL considers that it is premature to limit the project in this way. An efficient distribution system may draw on both behind-the-meter and grid-scale DER to support grid stability. Principles such as promoting competition where feasible and using price signals to encourage efficient investment will have relevance for DER in both installation scenarios. Grid-scale DER is just as likely (if not more so) to seek to participate in multiple markets (wholesale, network and ancillary markets) and the distribution system will need to be managed and operated in a way that can accommodate these mixed interactions.

The Commission proposes to further limit the scope of the review to any energy technology that is equipped with a smart controller. However it should be noted that there may be both 'smart' and 'passive' energy equipment installed behind a single connection point (for example, a house with connected AC, smart EV charging, but a passive solar inverter). Despite the passive elements, as a composite this integrated behind-the-meter system interacts with the grid in a smart way. The project should be broad enough to consider this system as a DER.

Finally, it is important to keep in mind throughout this project that the capabilities and applications of DER are many, varied and still evolving. Load control/peak shaving, voltage regulation and frequency response are just a few examples of DER services that support grid operation. The framework that emerges through this project should be robust enough to accommodate further technological evolution and ensure that the guiding principles (such as customer choice, competition, and technology neutrality) are upheld as new products, services and related markets emerge.

Should you have any questions in relation to this submission, please contact Eleanor McCracken-Hewson, Manager Policy and Research, on 03 8633 7252 or myself on 03 8633 6836.

Yours sincerely,



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