



12 December 2016

Essential Services Commission
Level 37, 2 Lonsdale Street
MELBOURNE VIC 3000

Via email: DGInquiry@esc.vic.gov.au

Re: The Network Value of Distributed Generation – Distributed Generation Inquiry Stage 2 Draft Report

APA Group welcomes the opportunity to make a submission to the Essential Services Commission (the Commission), regarding the above report, *The Network Value of distributed generation – Distributed Generation Inquiry Stage 2 Draft Report (the Report)*.

About APA Group

APA own and/or operate around \$19 billion of energy assets and deliver half the nation's natural gas usage. APA own 15,000 kilometres of natural gas pipelines that connect sources of supply and markets across mainland Australia. APA operates and maintains gas networks connecting 1.3 million Australian homes and businesses, and employs over 1600 people. APA also own or have interests in gas storage facilities, gas-fired power stations and wind farms. APA Group (ASX:APA) is listed on the ASX and is included in the S&P ASX 50 Index.

APA's Energy Assets include the 7,500-kilometre East Coast Grid of interconnected gas transmission pipelines. This grid provides the flexibility to customers to move gas around eastern Australia, anywhere from Otway and Longford in the south, to Moomba in the west and Mount Isa and Gladstone in the north. In Western Australia and the Northern Territory, APA's pipelines supply gas to power major cities, towns and remote mining operations. APA also own and operate the Mondarra Gas Storage Facility and the Emu Downs Wind Farm in Western Australia, Diamantina and Leichhardt Power Stations in Queensland, the Dandenong LNG Storage Facility in Victoria and the Central Ranges Gas Distribution Network, servicing Tamworth in New South Wales.

APA continues to support the Commission's ongoing investigation into the true network value of distributed generation. In particular, APA supports the Commission's definition of distributed generation as, "*distributed electricity generation from any source or fuel type.*"¹

APA thanks the Commission for the opportunity to comment on the paper. Please contact either Josh Hankey or myself () should you wish to discuss our submission further.

A handwritten signature in black ink, appearing to read 'Peter Gayen', written over a horizontal line.

Peter Gayen
Manager, Networks Commercial
APA Group

¹ Essential Services Commission, "*The Network Value of Distributed Generation: Distributed Generation Inquiry Stage 2 Discussion Paper*", June 2016, pg. 9.

APA Group comprises two registered investment schemes, Australian Pipeline Trust (ARSN 091 678 778) and API Investment Trust (ARSN 115 585 441), the securities in which are stapled together. Australian Pipeline Limited (ACN 091 344 704) is the responsible entity of those trusts. The registered office is HSBC building, Level 19, 580 George Street, Sydney NSW 2000.

APA's comments on the report

APA is supportive of the definition of technology-neutrality, adopted by the Commission, in regard to distributed generation. In particular, APA supports the Commission's impartiality in regard to renewable or low emission distributed generation.

APA also supports other aspects of the Commission's definition of distributed generation (DG), i.e.:

- below 5MW in capacity
- inclusive of battery storage, both standalone and integrated with another distributed generation technology, and
- from any source or fuel type(technology neutral)

APA considers the Report's findings to be generally reasonable and as such, APA is in broad agreement with the findings. Those findings can be found below and APA briefly discusses each.

The Report's Draft Findings:

1) Network value of distributed generation.

APA agrees that DG can and does create network value, most frequently by reducing the need for additional investment in the electricity network. Such a benefit can then result in either deferral or even avoidance of additionally required electricity network investment. This value, along with other forms of network benefit delivered by DGs, is collectively deemed by the Report to be a 'grid service', a benefit that will bring long term benefits to Victorian energy customers.

2) Network value is highly variable.

APA agrees that although grid services, such as deferral; demand management etc., bring undeniable benefits to customers, the amount of value delivered by DGs, will vary significantly due to variables such as: location, time, asset life cycle, DG capacity and optimisation (firm or variable dispatch), etc.

3) 'Firm' distributed generation has significantly more network value than 'intermittent' generation.

APA understands the superior commercial value that firm DG provides over intermittent DG, to a network business. In this sense, given the reliability of gas generation compared with renewable generation, gas fuelled DG has a distinct 'firm' advantage over intermittent renewable DG. Interestingly however, as battery technology becomes more and more a genuine commercial and technical reality, both gas generation and renewable generation will be advantaged by coupling, to batteries. Specifically, batteries will potentially allow gas DGs to generate and store electricity when gas prices are low, in exactly the same way that renewable DGs will be able to generate and store electricity when system demand is low.

This promotion of competition between DGs, on a technology neutral basis, is fully supported and encouraged by APA, as fundamentally competition of this nature can only benefit consumers.

4) Technology can transform intermittent generation into firm generation.

As already spoken about in our response to finding (3), APA agrees that not only can technology assist intermittent DG become firm, but it can also provide for greater opportunities for already firm technologies to generate at low cost, store and then sell into higher priced markets.

New co-ordination and synchronization technologies will potentially make both renewable and low emission technologies firmer in nature, e.g. a group of gas or renewable DGs, which through working together, will be able to deliver greater and firmer capacity to the market.

5) Social and environmental benefits of network effects.

APA agrees that although a number of other social and environmental benefits may be provided by DG, for the purposes of this Report APA agrees that a 'bush-fire' benefit may also exist, where the grid's electricity is replaced by a local DG's electricity output, in 'bushfire' situations.

6) Sources of grid services.

APA acknowledges that DG can and does provide a range of grid services, but importantly, DG is not the only provider of grid services, e.g. demand response is also a grid service.

The key for APA however, is that one service provider should not be favoured over any other, and indeed, customers will benefit most when grid service providers compete on a level playing field. Policy should encourage market participation of a number DG fuel types – both renewable and low emission.

7) A well-functioning market for grid services.

A key characteristic of a well-functioning market is strong competition that inherently provides a wide range of choice for consumers. APA believes that an active successful grid service market, should demonstrate the same.

By adopting a technology neutral approach to market design, the likelihood of the ultimate creation of a market that features healthy competition and broad customer choice, is substantially increased.

8) A broad-based feed-in tariff is unlikely to be an appropriate mechanism to remunerate network value.

APA agrees that a feed-in tariff (FIT), even a broad-based version, would not offer appropriate price signals to incentivize a potential DG proponent. Although APA acknowledges the Report's comments in regard to the recent AEMC review of the Local Generator Network Credit (LGNC) – particularly in regard to the proposed LGNC's complexity - a mechanism well beyond a broad a FIT, needs to be developed to appropriately remunerate a DG proponent.

Having noted the LGNC complexity, above, APA considers that avoiding a complex remuneration process will be difficult, given the inherent complexities of the market, including the broad diversity of potential DG proponents. In APA's view, this challenge will not be adequately addressed by the introduction of a new requirement for DNSPs to provide more information to DGs, such was the AEMC's more preferable rule response. Although the proposal may be helpful to an extent, regarding a DG's project assessment, it is not a DG remuneration mechanism.

In APA's view, it is clear that more work is required to address an appropriate DG incentivisation.

9) Opportunities for the grid services market in Victoria.

The opportunities for the development of a well-functioning grid services market are substantial. APA envisages that such a market should have the following characteristics:

- An appropriate reward mechanism in place for DG providers
- A market designed on a technology neutral approach which does not favour one technology over another
- Information for DG proponents is freely available and information asymmetry issues, regularly identified barriers to entry in recent years, have been addressed
- Network connection processes have been improved and the connection process is no longer seen as a barrier to entry, by any connecting parties, regardless of technology.
- The market is strongly competitive with a large number of active competitors, offering a broad range of products and services to customers, with a key outcome being extensive choice and downward pressure on electricity prices