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Australian Gas Networks

Australian Energy Market Commission
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Australian Gas Networks Limited (AGN) is one of Australia's largest natural gas distribution companies. AGN owns approximately 23,000 kilometres of natural gas distribution networks and 1,100 kilometres of transmission pipelines, serving over 1.2 million consumers in New South Wales, South Australia, Victoria, Queensland and the Northern Territory.

AGN welcomes the opportunity to make a submission to the Australian Energy Market Commission (AEMC, the Commission) with regard to its Consultation Paper (the paper) in relation to the proposed change to the National Electricity Rules (NER) "*National Electricity Amendment (Local Generation Network Credits) Rule 2015*". AGN understands that the AEMC will consider the responses to the paper and use the feedback to conduct stakeholder workshops and further consultation, with a final determination to be released 6 October 2016.

AGN notes that this paper discusses a proposed change to the National Electricity Rules and there is no proposed change to the National Gas Rules. Despite this, the introduction of network credits provided to embedded generation is relevant to the natural gas industry because of the use of distributed natural gas in embedded generation facilities such as co-generation or tri-generation facilities.

AGN is supportive of the provision of network credits to embedded generators, however notes the challenges with developing and administering such a scheme. AGN's submission focuses on the proposed Rule Change in relation to the structure of the Local Generation Network Credit and its impacts on small-scale local generation.

AGN thanks the Commission for the opportunity to comment on the paper. Please contact either Ashley Muldrew (08 8418 1115) or myself (08 8418 1129) should you wish to discuss our submission further.

Yours sincerely

Craig de Laine
General Manager – Regulation

Introduction

AGN supports in principle the Local Generation Network Credit (LGNC) Rule Change proposal from the City of Sydney, Total Environment Centre and the Property Council of Australia (the proponents) and fundamentally believes that the LGNC process, when applied, will be in the long term interests of energy consumers by, for example, assisting to:

- Reduce localised capacity constraints on electricity distribution networks;
- Reduce losses experienced on the network due to the location of embedded generators on the network; and
- Lower electricity prices for consumers over the long-term through the increased supply of electricity to the grid and the reduction of augmentation investment required to meet increasing peak demand.

If accepted, this proposal would see the introduction of a new payment to be paid by electricity distribution businesses to local generators (referred to as "embedded generators" in the remainder of this paper), reflecting the value that embedded generation brings to the electricity distribution network. Although issues related to the calculation of this payment are quite involved, AGN believes this approach to identifying and paying the calculated value provided by embedded generation will benefit energy consumers.

AGN will continue to participate in the consultation process, which is planned to conclude with the publication of the Commission's Final Determination on 6 October 2016.

Discussion

AGN supports the concept of the LGNC and the value of introducing a distribution network payment to embedded generators, to reflect the benefits embedded generators provide to electricity networks. The remainder of this submission details AGN's comments in relation to the proposed structure of the LGNC and the impacts of this Rule Change on small-scale embedded (or local) generation.

Small-Scale Embedded Generation

AGN agrees with the proposal that an LGNC payment should apply to *any* generation unit that is connected to the electricity distribution network. In particular, AGN agrees with the proponents that smaller embedded generators are typically less able to access existing credit mechanisms that are otherwise available to larger embedded generators in the market. That is,

> *"... the incentives for local generation in the current Rules either do not provide adequate recognition of the benefits that the local generation can provide, and/or may not be readily accessible to small-scale local generators."*[1]

Additionally, the proponents state that small-scale embedded generators are also subject to high transaction and administration costs (in comparison with larger embedded generators), as well as being hindered by their inability to agree to contracts with 'firm capacity' requirements.[2]

The Essential Services Commission of Victoria (ESCV), also supports the position that small-scale embedded generators are disadvantaged by current incentive arrangements in its current consultation "*Inquiry into the True Value of Distributed Generation*":

> *"There have been a number of changes to the NER to support distributed generation and there are mechanisms for recognising the economic benefit of distributed generation to the distribution networks; specifically: Network Support Payments, Avoided TUOS and the RIT-D mechanisms, however, these are unlikely to be accessible to the smaller distributed generators that are the focus of this inquiry. This is because smaller distributed generators are unlikely to have the knowledge or expertise to get access to these mechanisms, and the costs associated with calculating the necessary payments may outweigh the benefits."*[3]

As such, AGN considers the proposed Rule Change will encourage the uptake of small-scale embedded generators by reducing the resource burden placed on businesses to demonstrate eligibility for current incentive mechanisms.

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1 Oakley Greenwood, "*Local Generation Network Credit Rule Change Proposal*" (proposed by City of Sydney, Total Environment Centre and Property Council of Australia), July 2015, pg. 1.

2 Ibid., pg. 1.

3 Essential Services Commission of Victoria, "*Inquiry into the True Value of Distributed Generation – Key Issues for the Inquiry*", December 2015, pg. 51.

Consequently, although more attention has been given to small scale generation in recent years and some improvement has been seen as a result, AGN considers the implementation of the LGNC is still required in order to encourage more small scale generation to participate in the energy market.

Proposed Structure of the LGNC

AGN supports the proponents' general recommendations on how the LGNC should be structured.[4] That is, it is proposed that each LGNC is calculated to reflect values in at *"least two parts"*[5] as detailed in Box 1 below:

Box 1: Proposed Structure of the LGNC

- *"A credit (negative tariff) based on an estimate of long-run marginal cost avoided stemming from not having to augment the local electricity grid as a result of electricity exported to the grid during periods of network system (or local area) peak demand. It is expected that this credit would be based on:*
  - *the long-run avoided cost capacity and operational costs (analogous to the long-run marginal cost) in upstream parts of the network resulting from the collective operation of small-scale local generators connected to the distribution network; less*
  - *any reasonable increase in capital and operating costs stemming from having to cater for bi-directional/localised energy generation in system peak demand periods, instead of utilising centralised energy generation.*
- *A credit (positive tariff) based on the operating and maintenance costs that the network business would avoid (incur) as a result of electricity being exported by the embedded generator to the grid at other (non-peak) times. It is expected that this credit would be based on:*
  - *the avoided operational costs in upstream parts of network (for example, the high voltage (HV) and sub-transmission (ST) network, assuming the generator is connected to the low voltage (LV) network); less*
  - *any reasonable increase in capital and operating costs stemming from having to cater for bi-directional or localised energy generation in non-peak periods, instead of utilising centralised energy generation.*

The components of the LGNC described above should also capture avoided transmission use-of-system charges. The credit could potentially also include a capacity payment based on the availability of the local generator at particular times typically, through the peak period."[6]

AGN supports the use of an LGNC approach as, if the LGNC methodology is ultimately approved in its proposed form by the AEMC, AGN considers that the NEM will experience more investment in embedded generation projects, than what has been seen historically.

Summary and recommendations

AGN supports in principle the proposal from the proponents to introduce a new payment from distribution networks to encourage the construction and connection of embedded generation facilities to electricity networks. AGN believes this type of payment would be in the long term interests of consumers.

AGN accepts that challenges still exist in regard to calculation of the value of the LGNC, but also believe that through the AEMC consultations, an effective LGNC process can be established.

AGN believes that the current mechanisms in the NER to incentivise or pay embedded generators remain relevant, but in AGN's opinion, small generators in particular will be rewarded more equitably and effectively under the LGNC mechanism than current mechanisms.

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4 Oakley Greenwood, "*Local Generation Network Credit Rule Change Proposal*" (proposed by City of Sydney, Total Environment Centre and Property Council of Australia), July 2015, pg. 8.

5 Ibid.

6 Ibid., pg. 7.

AGN will continue to participate in the consultation process that is planned to conclude with the publication of the Commission's Final Determination on 6 October 2016.