



Local Generation Network Credits

Stakeholder submissions invited on new rule change request

The Australian Energy Market Commission (AEMC) has started consultation on a rule change request by the City of Sydney, Total Environment Centre and the Property Council of Australia. The request is to introduce a payment from distribution networks to embedded generators, which reflects any benefits embedded generators may provide to the network.

What is embedded generation?

Embedded generation is defined in the National Electricity Rules (NER) as **any** generation unit that is connected to the electricity distribution network, rather than to the high-voltage transmission network. This is why it is commonly known as distributed generation. Embedded generators vary by type (they can be gas-powered, solar, wind, etc), size (from small rooftop solar panels to commercial plants) and their usage and availability to export electricity. The rule proponents refer to 'local generation' as shorthand for smaller scale embedded generation.

Summary of the rule change request

The NER contain provisions designed to promote efficient investment in demand management approaches, including embedded generation, as an alternative to further investment in the network. The proponents state that these provisions may be effective for larger-scale embedded generation, but that they are less effective for small-scale embedded generation because:

- the transaction costs involved typically outweigh the benefits a single small-scale embedded generator can offer; and
- distribution network service providers (DNSPs) generally require a guarantee of being able to supply electricity at given times, which is difficult for an individual small-scale embedded generator to offer.

The proponents consider that, collectively rather than individually, small-scale embedded generators offer greater benefits, and that it would be less important for any individual generator to offer firm capacity. As a result, small-scale embedded generators may not be sufficiently rewarded for the benefits they provide. This, in turn, could result in insufficient investment in small-scale embedded generators, and inefficient use of their capacity to export electricity. Ultimately consumers could pay a higher price for the energy they consume.

The proponents' solution is to make a change in the NER that would require DNSPs to:

- calculate the long-term benefits that embedded generators provide in terms of deferring or down-sizing network investment or reducing operating costs; and
- pay all types of embedded generators a local generation network credit (LGNC) that reflects those estimated long-term benefits (netting off any additional costs).

LGNCs would be a separate **negative tariff** and would create a new payment relationship between DNSPs and embedded generators. The rule change request is that embedded generators would be eligible to receive LGNCs irrespective of their size, availability, or whether they are already in place or invested subsequent to the rule change. But the amount paid under these LGNCs could depend on the voltage level and/or location of each generator.

Our approach and issues for consultation

We identified the following key issues for assessing the rule change request against the National Electricity Obligation (NEO):

- Whether the current NER provisions (including rules that have been made but not yet come into effect) provide incentives to, individually or collectively, invest in and operate embedded generation assets (including small-scale embedded generation) in a way that will reduce total long-run system costs.
- The factors that influence what long-run network and/or operating costs are avoided through embedded generation – such as the type of embedded generator in question (new or existing, size and/or availability), voltage levels and/or geographic locations.
- How specific the calculation of avoided costs should be (ie whether separate calculations should be made for different voltage levels and/or locations, depending on the factors that influence those cost savings), and how often it is updated.
- The proportion of any avoided costs that should be paid to embedded generators as LGNCs – noting that the proposal is for 100 per cent of any estimated savings to be paid to embedded generators, resulting in no reduction in DNSPs' total costs that would have been passed on to consumers.
- The costs to DNSPs and other parties of enabling the design, implementation and administration of LGNCs; and how these compare with any potential benefits of the proposal.

The Consultation Paper discusses these issues and invites stakeholders to answer related questions. As the Commission continues its assessment of this rule change request, stakeholders will be given further opportunities to comment.

Current provisions in the NER relevant to this rule change request

The role of non-network approaches, such as demand-side management and embedded generation, has been the focus of several recent rule changes. The NER now contain a number of mechanisms to incentivise efficient use of non-network solutions. These include:

- Cost-reflective distribution network tariffs: DNSPs have to develop prices that better reflect the costs of providing services to individual consumers, so that they can make more informed decisions about their electricity use, including on-site consumption.
- Network support payments and avoided transmission use of system (TUoS) charges: embedded generators of more than 5MW are eligible for payments from network businesses in recognition of the economic benefits the embedded generator is providing by delaying or avoiding investment in the network.
- The regulatory investment tests for distribution/transmission (RIT-D/RIT-T): require network businesses to consider the costs and benefits of all credible network and non-network solutions where an investment need is \$5 million or more.
- The capital expenditure sharing scheme (CESS) and the efficiency benefit sharing scheme (EBSS), respectively, incentivise efficient investment and operation of the distribution and transmission networks.
- The demand management incentive scheme (DMIS) and demand management incentive allowance (DMIA) provide incentives and funding, respectively, to invest in non-network solutions.

The Commission has also sought to improve the process by which embedded generators – both large and small – connect to the grid through rule changes that facilitate a more transparent connection process and require DNSPs to publish relevant information.

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