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Ref.: ERC0128 - Inclusion of Embedded Generation Research into DMIS

21 July 2011

Zaeen Khan
Australian Energy Market Commission
PO Box A2449
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Dear Zaeen

Rule Change ERC0128 - Inclusion of Embedded Generation Research into the Demand Management Incentive Scheme

Ergon Energy Corporation Limited (Ergon Energy) welcomes the opportunity provided by the Australian Energy Market Commission (AEMC) to provide feedback on the Inclusion of Embedded Generation Research into the Demand Management Incentive Scheme (DMIS) Rule change proposal. This submission, which is available for publication, is made by Ergon Energy in its capacity as an electricity distribution network service provider (DNSP) in Queensland.

Ergon Energy supports the inclusion of embedded generation research into the DMIS. Ergon Energy's responses to the issues raised by the AEMC in the consultation paper are set out below.

ISSUE – PRESCRIPTION VERSUS FLEXIBILITY IN APPLYING THE DMIS

To what extent do DNSPs currently seek funding for innovation in connection of embedded generators or other forms of demand management projects as part of their opex and capex proposals?

Ergon Energy's long term demand management strategy is to invest in non-network and demand side management solutions, and to investigate, and invest strategically, in research and development in areas that will enhance demand management in the network. Ergon Energy is dedicated to its investigations into managing the relationship between peak demand and capital expenditure, stemming not only from greater environmental awareness, but because the price impacts of network investment on end use customers is resulting in increased sensitivity and concerns around affordability. The end goal of Ergon Energy's demand management strategy is to deliver customers the reliability and security of supply they expect at the lowest cost by enabling customers to participate in non-network alternative solutions. Ergon Energy's 2011-12 Demand Management Plan forecasts \$40.15 million of operating and capital expenditure necessary to implement the 2011-12 demand management program. Of this, \$1.5 million relates to embedded generation activities.

How effective is the existing DMIS framework for incentivising DNSPs to pursue innovation projects on embedded generators?

For Queensland DNSPs, the Australian Energy Regulator (AER) has determined that, for the 2010-15 regulatory control period, the DMIS shall operate by way of a Demand Management Innovation Allowance (DMIA).

Ergon Energy does not currently have any embedded generation projects funded through the DMIA. However, Ergon Energy does have funding allocated to embedded generation projects as part of Ergon Energy's overall Demand Management Plan. As discussed above, Ergon Energy's long term demand management strategy is to invest in non-network and demand side management solutions, and to investigate, and invest strategically, in research and development in areas that will enhance demand management in the network. The DMIA contributes to this overall objective, and does allow Ergon Energy to pursue innovative demand management projects. Having additional funds available through the DMIA would compliment Ergon Energy's existing work by allowing Ergon Energy to trial new methods of decreasing the connection costs for embedded generation, which would make it a more attractive option to use for managing peak demand on the network.

ISSUE – LEVEL OF DMIA AND DNSP INCENTIVES TO SUPPORT EMBEDDED GENERATION RESEARCH

To what extent will the proposed Rule incentivise DNSPs to undertake more projects or finding cheaper ways to connect embedded generators? Is it likely to materially change the DNSPs existing incentives to pursue riskier and innovative trial projects?

Ergon Energy is committed to using demand management initiatives to manage peak demand, improve network utilisation and reliability, and investigate opportunities for value-adding services for customers "beyond the meter". Additional funding would help identify new technology and should inspire innovative trials which in turn could result in the more cost effective use of embedded generation for network demand management. Currently there are a number of technical issues with parallel generation that need to be resolved in order to ensure network reliability and quality of supply. In addition, internal systems and processes within DNSPs to manage embedded generation to provide network benefits are not well developed.

What types of embedded generators are likely to benefit most from the proposed Rule change?

At present the most cost effective form of embedded generation for demand management is diesel. Ergon Energy needs to examine further how renewable energy technology such as hydro, wind, photovoltaics and energy storage systems can be incorporated into the embedded generation concept. Testing these technologies will require more funding. For example, Ergon Energy has experienced issues with voltage regulation associated with Inverter Energy Systems. Additional DMIA funding could be effectively used to research ways Ergon Energy can better manage generation from renewable and intermittent sources within the network.

Will the proposed Rule result in the need for increased funding for DMIS and hence require higher DMIA than the current level of allowances?

Given the high cost of renewable technologies, additional funds provided through the DMIA would be necessary to undertake significant innovative trial projects into embedded generator connections. Ergon Energy would not want to utilise the whole DMIA for one or two embedded generation projects.

Is there likely to be any material financial impact on electricity consumers to fund any increased DMIA resulting from the proposed Rule? How should this be weighed against the benefits of having embedded generators connected more cheaply?

Embedded generation is a proven method of managing peak demand and can be utilised to either remove or defer the need for capital expenditure on network infrastructure. As the current DMIA represents a very small portion of a DNSPs annual revenue requirement, any increase in customer prices as a result of increases to the allowance are likely to be minimal. Current connection costs

are reflective of the work necessary to connect embedded generators to the network whilst meeting the technical requirements for power quality, reliability and safety. Ergon Energy would welcome new innovation in this area which may reduce or resolve the number of technical issues associated with generation from renewable and intermittent sources within the network. Solving these issues may result in the increased use of embedded generation to manage peak demand, which in turn could contribute to the reduction in Ergon Energy's overall capital expenditure requirements. Over time this will then be reflected in reduced customer charges.

In summary, Ergon Energy supports the inclusion of embedded generation research into the DMIS, and agrees further research and innovative trials are required to maximise the potential benefits of embedded generation as part of the solution to managing peak demand.

Ergon Energy does however believe additional funding in the form of an increased DMIA is necessary for continued and increased innovation in this area.

If you have any questions or require any further information on the matters raised please do not hesitate to contact me on (07) 4121 9545.

Yours sincerely



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