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**ENERGY MARKETS and
PROGRAMS**

Level 8
11 Waymouth Street
Adelaide SA 5000

GPO Box 1264
Adelaide SA 5081

Telephone: 08 8226 5500
Facsimile: 08 8204 1730

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Thank you for the opportunity to comment on the Australian Energy Market Commission's (AEMC) *National Electricity Amendment (Connecting Embedded Generators) Rule 2012 – Consultation Paper*.

The Energy Markets and Programs Division (the Division) of the Department for Manufacturing, Innovation, Trade, Resources and Energy is a strong supporter of embedded generation recognising the benefits such generation can provide, for example innovation, improved energy efficiency and the potential for deferred network investment.

The connection of embedded generators is complex with systems varying in capacity, location and size (micro embedded generation <10kW and up to and over 30MW), and each embedded generator places different requirements on a network. Accordingly, the regulatory framework needs to provide for the broad range of connections.

As you are aware, Chapter 5 of the National Electricity Rules (NER) currently provides for larger embedded generators of 30MW or more. With the introduction of the new Chapter 5A of the NER, micro embedded generators will have adequate coverage with the basic connection service for embedded generation.

For those embedded generators ranging from 10kW – 30MW, Chapter 5A will provide a negotiation framework for connections which, subject to the different configurations of size and type of generator, electrical connection and configuration within the distribution network, would be supplemented by jurisdictional requirements. As an example, in South Australia, process and technical requirements are referenced in a customer guide (for connection of embedded generators) issued by the distribution network service provider, ETSA Utilities. As this guide is published online, embedded generation project proponents are able to consider these aspects as part of their design considerations.

The Division considers the above arrangements provide sufficient transparency in the informational provisions of the connection process, rather than developing an unduly complicated (and potentially difficult) framework of national connection standards.

The Division does not support the proponents proposal that the NER be amended so all embedded generators are exempt from paying shared network augmentation costs. If embedded generators do not pay for the costs of augmentation to the network, those costs will be borne by all other consumers. Accordingly, embedded generators should generally be treated in a similar manner to all other connection applicants.

The Division's comments to the AEMC Consultation Paper are attached. Should you have any questions in relation to this submission, please contact Rebecca Knights, Director, Energy Markets and Programs Division of the Resources and Energy Group, DMITRE.

Yours sincerely



VINCE DUFFY
EXECUTIVE DIRECTOR,
ENERGY MARKETS AND PROGRAMS DIVISION
RESOURCES AND ENERGY GROUP

15 / 8 / 2012

Attach: submission from the Department for Manufacturing, Innovation, Trade, Resources and Energy



Reference: ERC0147

The Energy Markets and Programs Division (the Division) of the Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) Submission to the Australian Energy Market Commission's (AEMC) Consultation Paper: National Electricity Amendment (Connecting Embedded Generators) Rule 2012.

Connection process and terms & conditions

As it is understood, the proponents of the Rule Change consider that there is a 'gap' in the regulations for provisions for connection for embedded generators between 10kW and 30MW.

In the development of the National Energy Customer Framework (NECF) and the national electricity distribution connections framework, the Ministerial Council on Energy's Standing Committee of Officials (SCO) in December 2008 considered that it was only necessary to define the technical requirements of micro embedded generators (<10kW) for the purposes of creating standard connection applications, services and contracts. SCO considered the remainder of market participants and connection applicants (i.e. large load, and small and medium embedded generators) were diverse enough to warrant negotiating terms and conditions and connection requirements individually with the Distribution Network Service Providers (DNSP) using a revised negotiating framework.

In November 2009 SCO's NECF Explanatory Memorandum stated that the negotiation procedure contained requirements for the exchange of information, negotiation in good faith, and overall timelines. At the conclusion of negotiations and within a specified timeframe, a distributor must take reasonable endeavours to make an offer which meets a customer's reasonable requirements.

With the introduction of the new Chapter 5A of the NER, there will be a simplified and stand-alone negotiated connections framework for retail customers and non-registered embedded generators which is distinct from the connection procedures contained in the existing Chapter 5 which applies to registered participants or intending participants. This new negotiation framework is separate from but complements the existing network connections regime currently contained in Chapter 5.

Therefore, micro-embedded generators (those less than 10kW) are adequately covered in Chapter 5A as all DNSPs must have a basic connection service for retail customers who are micro-embedded generators (Section 5A.B.1 (b)2)). Embedded generators between 10kW and 30MW can utilise the negotiation connection section of Chapter 5A (Part C). In doing so, embedded generators have access to the negotiation framework which sets out timeframes and terms and conditions for the connection.

In summary the Division considers that Chapter 5 and 5A of the NER provides adequate prescription for the regulation of connections in regards to the terms and

conditions and timeframes that DNSPs need to meet for connection applications for all categories of embedded generators.

Technical requirements

In the Consultation Paper, the AEMC states that the proponents are seeking to introduce an automatic access standard for embedded generators and are seeking to give embedded generators the expressed right to export electricity to the distribution network.

The Division notes that it may be difficult to develop an automatic access standard to cover all embedded generation connections as each connection can be subject to different requirements depending on factors such as the type and size of generator, the location within the network and the configuration of the connection point.

An automatic access standard is already provided for in Chapter 5 of the NER (Section 5.3.3) where the Reliability Panel can be requested to determine the adoption of access standards for technical requirements of connection (noting that these provisions do not apply to generating systems that are subject to, or eligible for, an exemption from registration). With the introduction of Chapter 5A, once all the connection requirements are fulfilled, including any arrangements under a revised South Australian Electricity Distribution Code (EDC), the technical requirement of access to the network for non-registered embedded generators will be provided through the provision of either a basic, standard or negotiated connection service.

In South Australia, ETSA Utilities provides customer guides to small and large embedded generation connection to the distribution network which aligns with the requirements of Chapter 2 of the EDC. The guides set out the technical issues required for consideration upon which the connection offer will be made. For example, the guides indicate that the installation of embedded generating units in the Adelaide CBD requires specific and appropriate protection and control equipment as required for the type of unit installed, due to the network's maximum short circuit fault current level.

In regards to the proposal for embedded generators to have an automatic right to export electricity to the distribution network, it remains appropriate that the necessary technical safeguards remain in place through the connection agreements with the DNSP, either through the Chapter 5 or 5A process. The ETSA Utilities' guide to large embedded generator connections states that all export embedded generating units must have a purchase agreement with a Retailer and communication links installed so as to provide the necessary network monitoring and control provisions for power quality and safety requirements.

The Division considers that Chapter 5, combined with Chapter 5A, when introduced, will provide adequate regulation in place to ensure all embedded generators meet the requirements for connection to the distribution network. However, the Division also considers that ETSA Utilities' guides to embedded generation complements the regulation in the NER and specific jurisdictional requirements (as contained in the EDC). Accordingly, if the AEMC considers that the NER does not adequately provide the informational requirements for applicants in this area, such a 'guide' should be considered for implementation in all jurisdictions as a means of providing the necessary information for process (including where appropriate technical) requirements for embedded generation connections.

Connection and augmentation costs

The Division does not support the proponents proposal that the NER be amended so all embedded generators are exempt from paying shared network augmentation costs.

As noted above, in December 2008 SCO proposed that the connecting user pay, in the same way it pays for its connection and extension assets, for any necessary augmentation to the shared network. The exceptions to this rule would be small customers as defined in the NECF and micro-embedded generator connections for which any cost will be recovered through the Distribution Use of System (DUOS) charges.

On 20 June 2012, the AER released its final decision on the connection charge guidelines, under Chapter 5A, to codify how electricity distributors should charge new electricity customers for connecting to their networks. In its decision, the AER, under the connection charging principles set out in Chapter 5A, considered that non-registered embedded generators, like all connection applicants, should be provided with user pays signals and should receive no cross-subsidy from existing customers and vice versa (Section 5A.E.3(b)(2) and (3)). If embedded generators do not pay for the costs of augmentation to the network, those costs will be borne by all other consumers. Accordingly, embedded generators should generally be treated in a similar manner to all other connection applicants.

The AER, however, has allowed DNSPs to not levy a charge for augmentation (insofar as it involves more than an extension) required to connect a non-registered embedded generator if there is a demonstrable net benefit to other network users. In these cases, DNSP's may perform the required augmentation as part of its normal network management regime.

In addition, the AER has stated that embedded generators should pay for user specific costs of removing output constraints, unless there is a demonstrable net benefit to other network users. Accordingly, embedded generators should fund the shared network augmentation to remove constraints on their outputs due to limits of the existing network.

Other Changes

The proponents believe DNSPs should be required to publish annual reports indentifying capacity constraints in their networks. In South Australia, ETSA Utilities provides an annual Electricity System Development Plan which sets out planning criteria, five years of historical and forecast load data and expected network constraints over the next three years.

In going forward, the Division supports the AEMC's current Rule Change process for the Electricity Distribution Network Planning and Expansion Framework, which would sufficiently meet the objectives of the proponent's request.