



## Department of Primary Industries

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Dr John Tamblyn  
Chairman  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Our Ref:

*John*

Dear Dr Tamblyn,

### **Review of National Framework for Electricity Distribution Network Planning and Expansion**

This submission is made in response to the Australian Energy Market Commission (AEMC)'s draft report in its Review of National Framework for Electricity Distribution Network Planning and Expansion.

The Department of Primary Industries (DPI) made a submission to the Scoping and Issues Paper released in the same Review in April 2009 and is pleased that the AEMC has included in the scope of its report some matters raised by DPI and other stakeholders at that time.

DPI does not intend to comment in detail on reporting requirements which are technical in nature and whose contents do not normally reflect particular government policies except to the extent that distribution planning generally is constrained by such policies.

However, DPI wishes to stress that governments are important stakeholders and consumers of such reports. Governments, particularly where distribution businesses are private sector entities, need to assure themselves that electricity networks continue to be planned and operated in a safe, reliable and cost efficient manner, and distribution planning reports are an important tool in making this assessment. In its final report, the AEMC should ensure that the requirements for planning reports are fit for this purpose.

A further issue which has come, repeatedly, to DPI's attention is the increasing number of customers pursuing embedded generation options in their premises, particularly building-integrated heat and power cogeneration in larger commercial and residential developments. DPI believes that this is mirrored in other jurisdictions and is fed by increasing interest in (and government policies encouraging) reducing building greenhouse gas emissions in anticipation of the introduction of the Carbon Pollution Reduction Scheme.

While the AEMC's approach to facilitating embedded generation through the distribution planning process will hopefully yield beneficial results, this will not capture the full range of embedded generation projects which are likely to come forward. Embedded generation may be put forward as a 'non-network' solution to distribution planning issues where it can alleviate network constraints, but many (probably the majority of) embedded generation projects are not driven by network issues at all but rather building owner/developers' incentives to improve value



and reduce greenhouse gas emissions. These projects may exacerbate, rather than alleviate network constraints (especially their fault current contribution) and pose an entirely separate set of issues.

Under the National Electricity Rules (the Rules), embedded generators are not treated as customers, and do not pay distribution use of system charges. This arrangement recognises the competitive neutrality issue vis-à-vis the treatment of generators connected to transmission networks. However, it must be acknowledged that with the likely increase in the popularity of building integrated renewable and co-generation, many 'customers' will occupy premises which have both consumption and generation profiles. For these customers, having integrated generation provides equivalent or enhanced benefits to the energy which they draw from the network.

It therefore seems logical that the ability for such customers to connect and operate such equipment be considered a benefit to the market as in either case, it is the energy needs of the customer which are being met by the connection of their premises to the network, even if it is not solely through *delivered energy* that these needs are met.

DPI has become aware of the difficulty of planning for the connection and operation of these kinds of embedded generators under the current Rules, where networks have traditionally planned for the serving of load while embedded generation has been at best a second order issue.

As distribution systems do not have a central dispatch mechanism to manage the constraints caused by generation within the system in real time, the level of service that is able to be offered to embedded generators is often lacking, involving either heavy restrictions on the operation of such generation or very expensive connection works to ensure that safe operation is possible.

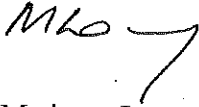
Increasingly, it may be possible for distributors to improve the service that can be offered using 'smart grid' technology to begin to manage energy flows and constraints more efficiently. The AEMC should consider how this may be facilitated and encouraged through the planning framework. However, where network augmentation may contribute to facilitating increased levels of embedded generation, either through reducing the average costs of connection (including required capital contributions) or improving the ability for embedded generators to input energy to the grid, this benefit should be able to be considered as part of potential market benefits under the Regulatory Investment Test for Distribution.

Correspondingly, distributors need to be required to look ahead to the challenges and opportunities presented by technological change, from embedded generation and smart grid technology, to ensure that appropriate measures are taken to reduce costs and maximise benefits from these developments in future. The Annual Planning Report should cover the distributors' expectations of embedded generation and planning efforts should extend to the means of accommodating this to deliver the most efficient outcome in the long term.



If you wish to discuss this submission further, please contact Raif Sarcich, Senior Policy Officer,  
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Yours sincerely



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Executive Director  
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