

9 November 2011

Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

***Draft Determination – Inclusion of Embedded Generation Research into the DMIS***

Dear Commissioners Pierce, Henderson, Spalding:

EnerNOC thanks the AEMC for the opportunity to contribute to a review of the Draft Determination for the Inclusion of Embedded Generation Research into the DMIS.

Through the acquisition of Energy Response, EnerNOC has been active in embedded generation in the NEM for the past six years and remains as possibly the only third party to have multiple sites of Distributed Generators (DGs) in the range of about 1MW to 5MW registered as Market Non-Scheduled plant in the NEM. These registered sites (five in NSW, one in Vic and two in SA) amount to almost 20MW of reliable customer owned emergency and standby generators which respond to NEM price signals.

The National Electricity Rules do not prescribe a means by which small generators are registered in the NEM. Indeed what is small? 30MW is a scheduled limit, but then 10MW is a nominal limit above which AEMO take a deep interest and below 5MW a plant is of lesser importance for registration. However DNSPs, who feature prominently in the registration process of DGs, traditionally take a dim view of embedded generation of almost any size, particularly if the generator is to be synchronised with the grid. EnerNOC will argue that below 10MW the embedded generator should be exempt from market registration and the DNSP processing of these facilities (ie for DGs up to 10MW in size) should be standardised in the form of a simple checklist as it is for Residential roof top Solar PV units.

DG related concerns of DNSPs are centred on the need to maintain reliability and security, and often the case is made that the network infrastructure was designed with higher fault levels than would otherwise accommodate grid connected DGs. Therefore the cost of making such connection requires fault limiting at the zone substation, which at times can double the cost of DG installation<sup>1</sup>. Hence this is a significant barrier to DGs in that +1 MW range.

Putting this concern another way, DNSPs are actively promoting that they are investing in Smart Grid and are actively encouraged to do so with funding provided by Federal Government under its Smart Grid, Smart City program. Smart Grid has three basic elements which differentiate it from the grid that operates today; Smart Grid will allow for the exchange of information and data, encourage power flows in all directions

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<sup>1</sup> In the AER draft decision for 2010-2015 released in June 2010 the AER revealed that Citipower proposed a one-off charge of \$625 per kW would apply to this service and that the charge would only apply to generators with a name plate rating in excess of 100kW

(from renewable, storage devices and other sources) and accommodate “active demand management”<sup>2</sup>. EnerNOC believes that Smart Grid is not just another fad but is necessary to better prepare our electricity supply systems for Climate Change and it will provide consumers far greater value than our grid does today. Clearly without embedded generation in the form of DGs of varying sizes as part of that second element in Smart Grid (of “power flows in all directions”), a Smart Grid can never be realised. Encouraging DNSPs to research embedded generation is therefore logical and indeed essential.

EnerNOC therefore applauds the AEMC for seeking to encourage research into embedded generation, however we are concerned:

1. That combining DG and Demand Management via the DMIS will encourage Networks to consider these to be the same thing, and therefore dilute their research efforts accordingly,
2. This will diminish the scarce funding available through the DMIS for Demand Management, which is what DMIS was primarily targeted to do,
3. That the amount for this research will itself be too little an amount for any meaningful research and outcomes in the area of embedded generation, and
4. The fees provided to the DNSPs via DMIS for DG connection innovation will fail to resolve the main issues associated with implementing and registering grid connected DGs.

EnerNOC considers that DMIS could be better targeted such that the existing DMIS allocation could remain and an addition sum of equivalent value be included for embedded generation research. That would provide the DNSPs with greater incentive to do both DM and embedded generation projects, and also helps to differentiate these functions. However diminishing the DMIS for DM projects in particular when almost no DM is undertaken by the DNSPs in the Southern States is highly counterproductive.

Furthermore, we would like to see the AER test the outcome from the DMIS allocations such that a DNSP cannot automatically expect to gain their DMIS allocation unless they can prove that the funds were spent appropriately in the previous price reset period. It has come to our attention that some DNSPs see special funding targeted at demand management as a way of increasing staff numbers and not necessarily achieving the most desirable/economic outcome. Clearly DNSPs need to be benchmarked to ensure efficient use of funding hence reporting on the MW under contract per equivalent full-time employee would be appropriate.

Also, we would like to see the AER encourage cooperation between DNSPs such that two or more DNSPs could combine their DMIS allocations to achieve synergies, achieving better economies of scale and more far reaching research programs than can be achieved by any one DNSP alone. This approach was successfully implemented when the Victorian DNSPs cooperated with their AMI research.

Thank you again for the opportunity to respond to this review. Please do not hesitate to contact me directly with any questions related to this submission.

Regards,



Michael Zammit  
Principal, Market Development

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<sup>2</sup> Active demand management means the ability to have the demand matched to supply availability such that when there is less renewable energy available we consume less and vice versa.