

8 December 2011

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Proposed Rule Changes - Consultation Papers – National Electricity Amendment (Distribution Network Planning and Expansion Framework) Rule 2011

Dear Commissioners Pierce, Henderson, Spalding:

EnerNOC appreciates the opportunity to contribute to the consultation process of the National Electricity Amendment (Economic regulation of network service providers) Rule 2011 Consultation Papers.

In this submission EnerNOC only responds to and is focussed on the issues related to the electricity networks. As requested, and where appropriate, we have included quantitative analysis and data based on our wide commercial experience in managing power system peaks to demonstrate the benefits of both the proposed Rule changes and our proposal for further change.

In the AER cover letter dated 29 September 2011 the Chairman Andrew Reeves states (inter alia) “... *the current restrictions on an objective assessment of the efficiency or the necessity of expenditure proposed by electricity [network] businesses is causing consumers to pay more than they should for a safe and reliable supply of electricity services*”. EnerNOC fully agrees with this widely acknowledged fact. It is now time that serious changes are made that will result in improved financial efficiency in the electricity networks in the NEM. Such efficiency improvements will result in significant reductions in the costs of network charges to all electricity users by engaging them via a well proven peak demand management process.

EnerNOC believes and can demonstrate that changes can be made to the rules which will result in better investment decisions by the network businesses (giving them better returns) and which will also result in benefits to all electricity users and provide a range of new benefits to those electricity users who are contracted to reduce their demand at times of extreme peak.

Figure 1 (below), based on 12 years of NEM data, shows that combined actions aimed at energy efficiency are working well (green line) but despite this energy reduction there are still no effective actions in place to curtail the rising peaks in electricity demand (red line). The extreme peaks in demand are the largest contributor to rising electricity prices in the NEM. A significant portion of the increasing electricity costs is caused by the inefficient investment in building and maintaining about 2,200MW of generation and network capacity to service less than 40 hours per year. Figure 1 shows that the 9 million electricity users in the NEM are improving their energy efficiency through action but obviously this is not enough to reduce the peaks so other more specific actions must be taken to reduce the peaks to improve the financial efficiency.

The overall retail electricity ‘Bill’ paid by these 9 million electricity users in the NEM is about AU\$24 Billion per year and rising rapidly. EnerNOC’s analysis shows that nominally AU\$[1] Billion per annum could be saved on retail electricity ‘Bills’ by appropriate changes to the NEM network rules and regulations that ensure financially sound business decisions are made by the electricity networks in serving these short but extreme peaks in demand. Clipping the top 40 hours of the peaks in the NEM means that there will be no need to build this inefficient network capacity (or the corresponding MW of generation).

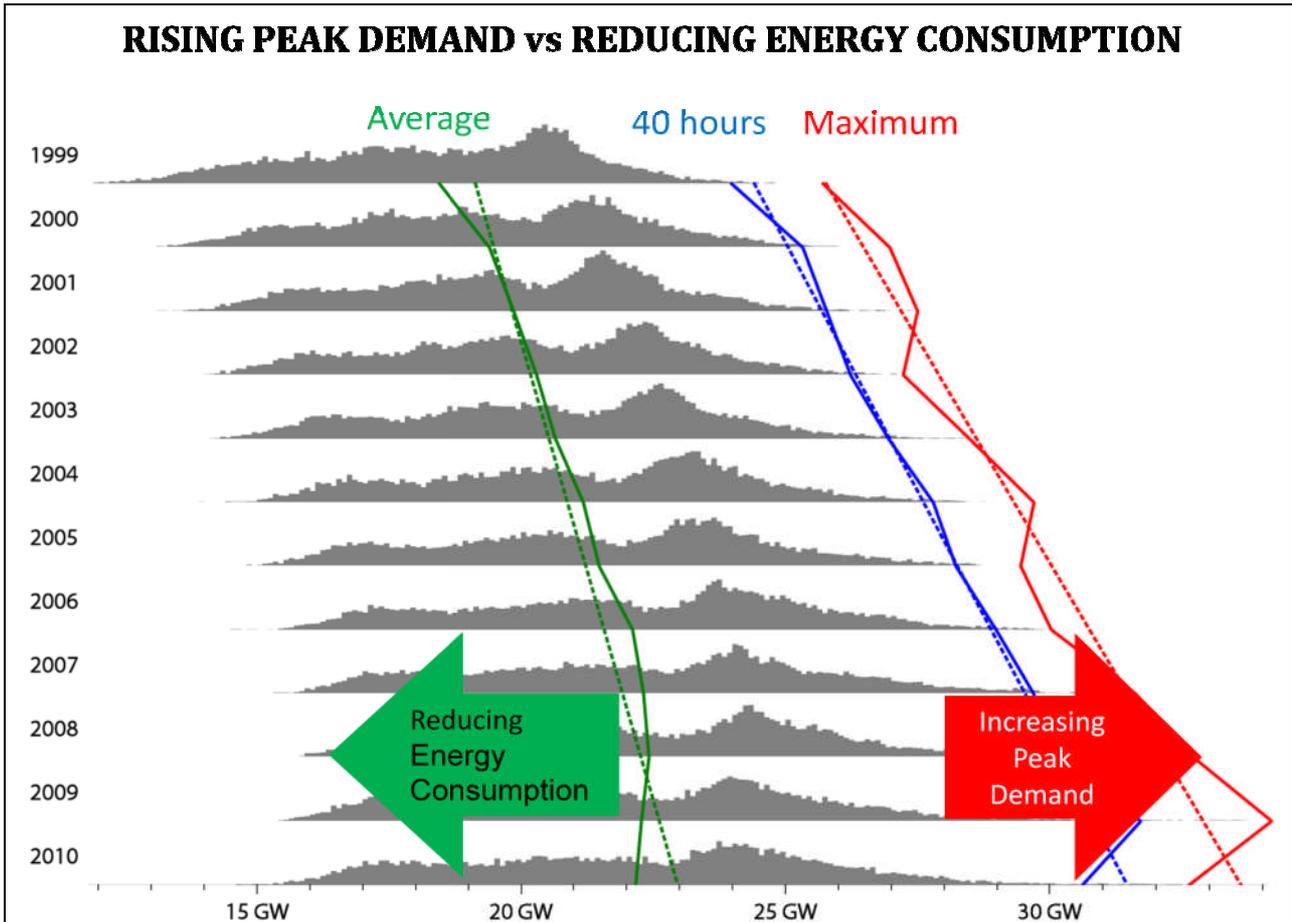


Figure 1: Rising peaks in demand compared with reducing consumption.

EnerNOC’s research estimates that there is a demand response capability in the NEM of about 3000MW from Commercial and Industrial electricity users alone that would be made available (under changed rules and regulations) to reduce these peaks instead of continuing to build network and generation assets for less than 40 hours per year.

This 3000MW is prevented from being available by the current regulatory arrangements which result in a ‘skewing’ of the network business decisions in favour of spending capex to support the building of inefficient investments in electricity networks. This is not a viable or sustainable outcome for Australia and only exists because it is supported by the current rules and regulations. It is essential that the estimated 3000MW of demand response capacity already built by the major electricity users is enabled to participate by appropriate changes to the rules and regulations to avoid further inefficient investment and hence a continuing unnecessary and growing cost burden on all electricity users.

In previous submissions to the AEMC, EnerNOC highlighted that with reducing energy consumption and peaks continuing to grow this will exacerbate the rise in network charge rates as most the network business revenue comes from energy (ie, lower energy sales = lower revenue but higher peaks = need for more revenue). This conundrum adds importance to the change of the rules and regulations to achieve a more efficient management of the peaks in demand.

The 9 million electricity users would not want these inefficient investments if they knew there was a more viable and sustainable alternative. The alternative proposed is proven to be as reliable as and more financially efficient than network businesses building capacity to meet just a few hours of peak demand (10% of the investment for less than 0.5% of the year when there is a proven alternative solution). Unabated,

these peaks will continue to rise at about 2.5% per annum¹ despite the fact that energy consumption has been reversed. It is now time to take serious and focussed actions to solve this issue.

Please also note our comments on the Rule Change Proposals attached.

Thank you again for the opportunity to participate in this consultation process. Please do not hesitate to contact me directly with any questions related to this submission.

Yours faithfully



Ross S. Fraser
Senior Advisor
EnerNOC, Inc.
Level 1 | 250 Queen Street | Melbourne, VIC 3000
o: +61 3 8643 5900 | m: +61 411 133 557 | f: +61 3 8643 5999
rfraser@enernoc.com | www.enernoc.com/australia

Attached (Comments on Consultation Papers)

¹ 2011 Electricity Statement of Opportunities; Maximum demand growth averaged across the NEM is expected to increase by 2.6% in summer and 2.4% in winter

Comments on Consultation Paper dated 20 October 2011

(EnerNOC's comments only pertain to electricity networks)

Section 2 Details of the Rule Change Request

EnerNOC generally supports the Rule changes proposed by the AER for electricity networks as it is a step in the right direction.

However, EnerNOC are convinced that these rule changes alone will still not resolve the major problem for electricity users or overcome the main issue that is driving electricity costs up. Evidence from the actions by most of the network businesses in the NEM show that the current rules and regulations continue to motivate decisions to build additional network assets to service the extreme peaks in demand.

It is no longer necessary to build network assets for these extreme peaks when technology and electricity user willingness to participate are proven to be available and reliable. Engaging electricity users existing assets (to provide "NegaWatts", ie, reductions in their electricity demand at times of extreme peak) can be established with additional rule changes that result in motivation of the network businesses to fairly consider the business case for a non-network solution against building additional capacity for extreme peaks.

If the network businesses are motivated (rather than inhibited) to consider the options fairly and the business case comparison shows an improved profit from a non-network solution (generally opex) compared with a build solution (capex) then the network businesses will choose that option. Under the current rules, in most cases the network businesses do not even consider a non-network option (unless they receive a 'handout' to do it).

From analysis undertaken by EnerNOC, the peaks in larger distribution substations and all grid substations with typical peak demand growth rates can generally be serviced by non-network solutions. This action can avoid or significantly defer the next capital upgrade cost for years. If the rules and regulations are changed to support the correct decisions the efficiency of the investments made will improve significantly.

The EnerNOC analysis shows that there is a clear positive financial benefit to a network business after purchasing firm demand response capacity (opex) from electricity users (or via an aggregator) and after allowing for lower network charges. This higher investment efficiency will result in a cost reduction to all electricity users. In addition, the market will not need as many MW of generation as the peaks in demand will be lower and this will further reduce costs to electricity users.

EnerNOC believes that the changes proposed by the AER and by EnerNOC would also be appropriate for adoption by the ERA for the Western Australia electricity networks as they have similar issues that are driving up electricity costs.

Section 5 Issues for Consultation

- The problem – While the AER's proposal is a step in the right direction and does address the cost problem, EnerNOC does not believe it will be specific enough to solve the major problem as described above. In addition to what the AER are proposing, the most important change from an electricity user's perspective is that the most efficient network investments and operations must be achieved. The issue between making an obviously inefficient investment (capex solution) compared with using existing and available electricity user assets (opex solution) must be resolved as well.

- Prescription and discretion – EnerNOC is in favour of discretion to enable the network businesses to make correct business decisions but the outcomes under the current rules and regulations are that the network businesses are motivated to invest in assets. If the rules are changed to motivate the network businesses to fairly consider other options such as non-network solutions (demand response, energy efficiency, distributed generation, etc) they will make the decisions that maximise their profit at a lower cost to electricity users. This needs to be considered at the same time as these other proposed rule changes.
- AER’s use of its discretion – EnerNOC is not able to comment on this except to say that there will need to be transparency in the decision made by the network businesses to enable the AER to assure themselves (and the public if required) that the most financially efficient decision being made.
- The solution – EnerNOC notes the statement by the AEMC that “it may not consider proposed changes that respond to other problems raised in submissions”. What EnerNOC is proposing is in line with meeting the National Electricity Objective (NEO), and is in addition to but addresses the same problem raised by the AER including providing further evidence that:
 - the problem is significant and of national concern, and
 - a solution as described is viable, reliable and deliverable.

EnerNOC understands that the changes in network regulation recently proposed by the UK Regulator (Ofgem) under their “Revenue using Incentives to deliver Innovation and Outputs” (RIIO) include changes which should produce what we are describing. We recommend that the Ofgem changes should be considered. They are complex as the changes are in many of the rules but they are based on the premise of “equalisation of the use of capex and opex”. At a high level they seem to address the sort of changes that we think are required in the NEM, viz:

1. Motivating the network businesses to consider all the options to meet the energy needs of the electricity users they serve in their planning timeframe
2. Setting regulations that will ensure the financial comparison of the options will be fair including in the revenue treatment of all solutions (outcomes based)
3. Ensuring that decisions made now do not limit a decision in the next determination period, and
4. Reporting (or transparency) to ensure that the efficient decisions are being made.

Comments on Consultation Paper dated 3 November 2011

After review of the changes proposed by the EUAA Committee, EnerNOC does not feel it can add any value to this discussion. It is well stated and, while there may be some conflict with the AER proposal, EnerNOC believes the key matter is to ensure that the network businesses are motivated to achieve the most efficient investment decisions. EnerNOC’s proposed additional changes do not appear to conflict with either of the two proposed changes and all three proposals are aimed at addressing the critical problem of rapidly rising network costs.