EnerNOC Pty Ltd
ABN 49 104 710 278
Level 1, 250 Queen Street
Melbourne VIC 3000

Tel: +61-3-8643-5900
www.enernoc.com.au
info@enernoc.com

Sebastian Roberts
General Manager
Australian Energy Regulator

email: incentives@aer.gov.au

10 May 2013

Dear Mr Roberts,

Submission on the expenditure incentives issues paper

EnerNOC welcomes the Better Regulation initiative and appreciates the opportunity to comment on the issues paper on expenditure incentives for electricity network service providers (NSPs).

EnerNOC is an independent aggregator of demand response (DR), currently managing over 24 GW of peak load at over 14,000 commercial and industrial sites across markets in North America, the UK, Australia, and New Zealand. Over 30% of this peak load provides demand response.

This response first highlights what EnerNOC sees as the key issue, then responds to those of the questions raised in the issues paper on which we have something to contribute.

1 Key issue: the balance between capex and opex incentives

We are particularly interested the balance that NSPs strike between:

(a) building new infrastructure to meet forecasted growth in peak demand, and

(b) employing DR to manage the peaks, reducing or delaying the need for infrastructure investment.

Option (a) consists mostly of capex, whereas option (b) consists mostly or entirely of opex.

In striking this balance, the interests of NSPs and consumers are not aligned. An NSP can often make a greater profit by choosing capex over opex, because it can earn a rate of return on capex. It may therefore prefer a capex-heavy solution even if an opex-based solution is more efficient. This is not a criticism of NSPs; rather this phenomenon is caused by the regulatory regime.

Expenditure incentive schemes have the potential to correct such distortions. However, if not correctly designed, they can exacerbate them.

Imbalances in the effective incentives applied to capex and opex will distort NSPs' decision making. The issues paper correctly identifies this issue in the summary:

> *"In particular, we need to ensure that the incentives are relatively balanced between opex and capex to avoid distorting decisions on whether to undertake capex or opex."*[1]

National Electricity Rules clauses 6.6.2(b)(3)(vii) and 6A.6.5(b)(4) also require the AER to have regard to this issue.

The most obvious way to achieve this balance is to avoid discriminating between capex and opex by having a single allowance and a single incentive framework. This approach was pioneered in the UK. We would advocate the adoption of a similar approach here.

To avoid NSPs being incentivised to discriminate against DR, if this unified approach cannot be adopted, it is essential that the effective incentive to reduce capex is at least as strong as the effective incentive to reduce DR-related opex. This should hold at all points in the regulatory cycle, and regardless of whether capex and/or opex to date has been above or below the allowance.

2 Responses to issues paper questions

Q1. Do stakeholders agree with the issues that we have identified about declining incentives for efficient capex? Are there any other issues that could arise from declining incentives for efficient capex? If so, what are these?

There is no inherent reason why an NSP's capex (or opex) should have a 5-year periodicity. Such periodicity is an artefact of the regulatory regime, indicating that NSPs are optimising for something other than the long-term interests of consumers.

We do not have sufficient data to draw any firm conclusions, but anecdotally, it does seem that the attitude of NSPs towards DR initiatives varies over the regulatory cycle. This is understandable, since they face a fairly strong incentive to reduce opex throughout the regulatory cycle, whereas the incentive to reduce capex declines sharply. Hence avoiding capex by using DR measures that are categorised as opex becomes distinctly unattractive towards the end of the cycle.

[1] Issues Paper, p.viii.

Q2. Do stakeholders support our initial view that any capex sharing scheme should provide continuous incentives in each year of a regulatory control period? Please give reasons to support your view.

EnerNOC supports changes to remove this periodicity by providing continuous incentives on both capex and opex, so long as they are appropriately balanced. This should encourage NSPs to take a consistent approach when deciding the appropriate balance between infrastructure investment and DR, rather than being willing to contemplate DR during some parts of the cycle but actively avoiding it during others.

The current time-sensitivity leads to needless uncertainty: it ought to be possible to design a DR project for a given network area, and determine whether it is likely to be attractive to the NSP, well in advance of any investment decision making. However, due to the time-varying incentives faced by the NSP, it is not possible to do this until it becomes clear into which part of the regulatory cycle the project will fall. Furthermore, projects that span regulatory cycles are particularly troublesome, which is, again, purely an artefact of the regulatory arrangements.

Q3. Do stakeholders support our initial view that any capex sharing scheme should provide a reward for underspending of between 20 and 30 per cent? Please give reasons to support your view.

We consider the balance between capex and opex rewards and penalties to be more important than the absolute level of the rewards.

The strength of the capex scheme should ideally be equal to that of the opex scheme under all circumstances, so as to avoid biasing choices between capex and opex. Failing that, the capex scheme should be at least as strong as the opex scheme.

If the reward for underspending capex is to be weaker than the penalty for overspending capex, then any scheme applied to opex should be no stronger than the reward for underspending capex.

It is the “net effective incentive” that matters when an NSP is choosing between capex-heavy and opex-heavy options. If the incentive to reduce opex is allowed to be stronger than the incentive to reduce capex, then the net effect is to tilt the scales in favour of capex-heavy solutions.

Q9. Do stakeholders agree with our initial position to apply a continuous asymmetric capex scheme with higher penalties for overspending than rewards for underspending? Please provide reasons.

As discussed above, having a time-varying incentive applied to either capex or opex causes the NSP’s attitude to DR to vary depending on the timing of a potential project relative to the regulatory cycle. This seems obviously wrong: the dates of the regulatory cycle have no bearing on the economic efficiency of a potential investment.

It also poses practical problems because a project can change from being attractive to an NSP (and hence potentially viable) to being unattractive (and hence have no potential) purely due to a change in schedule relative to the regulatory cycle.

We therefore favour a continuous scheme, which should allow consistent decision making.

The arguments for an asymmetric scheme make sense; however, the important point is that any opex scheme must be no stronger than the weaker arm of an asymmetric capex scheme.

Q13. If we continue to use a revealed cost approach to forecast opex, should the same EBSSs remain largely in place, or are more significant changes required?

The use of a revealed cost approach is not appropriate for DR-related opex, because it relies on the assumption that "opex is largely recurrent and past expenditure is a good indicator of future expenditure."[2] This assumption does not hold for most DR-related opex. This tends to consist mostly of relatively short-term projects, the number and scale of which depends on the number of constraints occurring or forecasted to occur on the NSP's network, which can vary significantly over time.

NSPs might transition to taking a longer-term, broad-based approach to DR, in which they use DR to manage their network's load profile actively, well ahead of constraints becoming binding. If this occurs, then, once such programmes have grown to a steady state, a revealed cost approach might be appropriate. Otherwise, it will be necessary to exclude DR-related opex from the revealed cost approach, and forecast it separately.

Q14. Does an incentive power of 30 per cent provide a sufficient incentive to achieve efficiency gains?

As discussed in our response to Question 3, we consider the balance between capex and opex incentives to be more important than the absolute level of the incentives. An incentive power of 30% may be appropriate for opex so long as the power of the incentive applied to capex is at least 30% – it is not clear from the "between 20 and 30 per cent" mentioned in Question 3 that the AER intends this.

2 Issues Paper, p.25.

Q16. Do stakeholders agree the EBSSs should provide a continuous incentive in each year of a regulatory control period?

Yes. If the capex incentive is continuous, the opex incentive should be too.

Q20. Are there any other reasons to exclude costs from the operation of the EBSSs?

One of the advantages of DR projects over traditional infrastructure spending is that they can be planned and implemented relatively quickly. (It is, of course, better to take a proper long-term view if possible.)

It is important that NSPs have the ability to initiate DR projects that were not anticipated when the opex allowance was set, without being unduly penalised for the increased opex. If this outcome cannot be achieved within the capex and opex incentive schemes, then DR-related opex should be excluded from the opex incentive scheme.

Q24. Do stakeholders agree with having a staged approach to the ex post review?

We do not agree with the staged approach as set out in the issues paper. A literal interpretation of the description in the issues paper suggests that there would be no possibility of an actual ex post review of an NSP's capex if it appeared that the NSP had appropriate tools and processes in place, and that even the presence of a capex incentive scheme might reduce the likelihood of a proper review.

The National Electricity Objective is concerned with efficient investment. It is the outcome that matters, not any tools, processes, or schemes. If an ex post review is triggered, it should investigate the efficiency of the investment outcomes.

We would be happy to provide further detail on our comments, if that would be helpful, and to continue to participate in the development of the guidelines and schemes.

Yours sincerely,

Dr Paul Troughton
Manager of Regulatory Affairs