

16 May 2008



Mr Mike Buckley  
General Manager  
Network Regulation North Branch  
Australian Energy Regulator  
GPO Box 3131  
**Canberra ACT 2601**

Dear Mr Buckley

## **Demand Management Incentive Scheme (DMIS)**

ENERGEX Limited (ENERGEX) welcomes the opportunity to submit comments in response to the Australian Energy Regulator's (AER) Potential Development of Demand Management Incentive Scheme for ENERGEX, Ergon Energy and ETSA Utilities for the 2010-2015 Regulatory Control Period – Issues Paper released on the 18 April 2008.

Given Queensland's expected growth in maximum demand over the next regulatory period, and the impact this will have on the overall expected capital expenditure, ENERGEX supports the continued development and implementation of Demand Management initiatives which should include some form of low-powered DMIS. In particular, ENERGEX supports the introduction of a Demand Management Innovation Allowance in addition to recognition of forecast capital and operating expenditure for specified demand management projects.

In relation to the DMIS Issues Paper ENERGEX would like to highlight the following key points of concern:

- The impact on our customers arising from the costs of any scheme, given that the DMIS would be in addition to the forecast increased capital and operating program combined with the costs of the other schemes and potential costs associated with climate change.
- The potential impact on the Service Target Performance Incentive Scheme if Demand Management Solutions provide a lower reliability than Network Solutions.
- As Demand Management is a developing area the scheme should be flexible enough to allow DNSPs to respond to changes within the Regulatory Control period.

Detailed responses to the issues raised by the AER are provided in the attachment.

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ENERGEX looks forward to participating in the further development of the Queensland and South Australian scheme as well as the development of a National DMIS. If you have any questions in relation to any of the matters raised in this submission, please contact either myself on (07) 3247 6409 or Sue Lee on (07) 3247 6495.

Yours sincerely



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# Demand Management Incentive Scheme

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## Executive Summary

The AER's Issues Paper identifies four Demand Management Incentive Scheme (DMIS) options for Queensland and/or South Australia:

- 1) introduction of a scheme aimed at generating incentives for innovative demand management projects, such as the Demand Management Innovation Allowance;
- 2) introduction of the D-Factor scheme as it currently applies in NSW or a variation on the D-Factor scheme;
- 3) provision for the recognition of demand management expenditure within a DNSP's forecast operating expenditure; or
- 4) not introducing a scheme.

Given Queensland's expected strong growth in maximum demand over the next regulatory control period, and the impact this will have on the overall expected capital expenditure, ENERGEX supports the implementation of some form of low-powered DMIS. In particular, ENERGEX supports the introduction of a Demand Management Innovation Allowance and the recognition through forecast operating expenditure of specified demand management projects. However, ENERGEX considers that the scheme should also recognise forecast capital expenditure associated with demand management projects.

ENERGEX expects that a significant capital and operating expenditure program will be necessary to accommodate the anticipated strong maximum demand growth over the next regulatory control period. In this regard, there is the potential to create strong upward distribution price pressures for customers. The implementation of the service target performance incentive and efficiency benefit sharing schemes under the National Electricity Rules distribution regulatory framework will create additional upward pressure on prices if ENERGEX out-performs in relation to these schemes. As a result, ENERGEX considers that a low powered DMIS has the additional benefit of minimising upward price pressure on distribution prices for the next regulatory control period.

## Background

ENERGEX's network is characterised by strong growth and high utilisation which has, over recent years, necessitated a high level of investment in the network to meet customer demand. Furthermore, over the last five years, maximum electricity demand in South East Queensland has increased at a far greater rate than electricity consumption. As a result, in 2006-07, around 12.5% of ENERGEX's network capacity was used for only one percent of the time during the year.<sup>1</sup> This growth in maximum demand is attributable to strong population growth and domestic and commercial appliance use, particularly air-conditioners.

While recent forecasts indicate there may be some stabilisation in maximum demand growth rates in the latter years of the 2010-2015 regulatory control period<sup>2</sup>, ENERGEX believes there is merit in exploring non-network alternatives over this period and beyond as they may assist in managing maximum demand growth.

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<sup>1</sup> ENERGEX (2007), *Energex Annual Network Management Plan 2007-08 to 2011-12* (August), p80.

<sup>2</sup> *Ibid*, pp 31-32.

## Issue Paper Responses

Responses to each of the questions raised in the Issues Paper are addressed below.

*Q1. What are the incentives and disincentives for QLD and SA DNSPs to undertake demand management?*

The Queensland Competition Authority's (QCA) current revenue determination is not unsupportive of demand management alternatives being pursued over the current regulatory control period, recognising forecasts of around \$10 million (\$June 2004) for capital expenditure in relation to replacement of load control relays and a limited interval meter roll-out, as well as around \$10 million for operating expenditure in relation to various demand management initiatives, including network deferral payments to embedded generators. Under the existing regulatory framework, some of the demand management alternatives ENERGEX has implemented include:

- embedded generation;
- load curtailment through the summer time use of ripple control of hot water load;
- agreements with large users to switch-off at times of network congestion;
- a trial of residential air conditioner direct load control ('Cool Change');
- investigation of the merits of demand tariffs based on kV.A (instead of kW) which provide cost incentives for customers with a poor power factor to improve it and/or reduce demand through a higher tariff; and
- customer education programs on energy efficiency through media and ENERGEX's website.

As previously noted explicit incentives/allowances for demand management were not seen to be warranted by the QCA under the current regulatory regime given the form of regulation applied (fixed revenue cap).



Given Queensland is currently experiencing significant growth in electricity demand, particularly peak demand, which far exceeds that in other NEM jurisdictions<sup>3</sup>, Queensland DNSPs have been/are required to undertake significant levels of capital expenditure to ensure customer demand is met. To ensure the costs of increasing network demand are minimised, ENERGEX has become increasingly incentivised to identify non-network solutions which are economically and technically feasible. Over recent years there has also been increased acknowledgement, through State Government reviews and recent policy initiatives, of the benefits to the electricity industry and consumers from demand management (including energy efficiency). For example:

- the *Electricity Distribution and Service Delivery for the 21<sup>st</sup> Century* (EDSD) Review recommended the Queensland Government and DNSPs work together to develop tariff structures, such as kV.A tariffs, which better assist in the management of peak demand; and
- the Queensland Government's *Climate Smart 2050*<sup>4</sup> strategy, which includes a *Smart Energy Savings Program* that will require medium to large energy consumers to undertake an energy audit and develop an energy savings plan which provides for measures to improve:
  - (i) efficiency of energy use;
  - (ii) energy conservation; and
  - (iii) management of energy use.

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<sup>3</sup> Speech by Geoff Swier at Queensland Power Conference – What does the Australian Energy Regulator envisage for Queensland, September 2007

<sup>4</sup> Queensland Government (2007), *Climate Smart 2050: Queensland climate change strategy 2007; a low carbon future*, June.



*Q2. Is it necessary to apply a DMIS in QLD and/or SA, given the likely effect on customer prices and customer willingness to pay for an incentive for a DNSP to conduct demand management?*

Although there are costs associated with the introduction of a DMIS, ENERGEX believes there is merit in introducing some form of low powered, administratively simple DMIS, which is appropriately scoped to deliver benefits to consumers with respect to price and service quality while not being unduly onerous on DNSPs.

In this regard, ENERGEX supports the introduction of a Demand Management Innovation Allowance and/or recognition through forecast capital and operating expenditure of demand management projects, to offset potential disincentives to implement demand management initiatives which deliver benefits across regulatory control periods. ENERGEX supports the development of a scheme which is simple with low administration costs.

Given the form of regulation proposed by ENERGEX for the next regulatory control period, ENERGEX does not believe a D-Factor scheme (e.g. as currently applied in NSW) is appropriate. ENERGEX considers that its proposed hybrid control mechanism, which applies a fixed revenue cap to its shared network services and a weighted average price cap to a tariff basket of its connection and customer services, will maintain a reasonably neutral incentive to pursue demand management initiatives. This will occur through the decoupling of electricity throughput from revenue earned in relation to shared network services, the largest component of ENERGEX's allowable revenue reflecting significant fixed network costs.<sup>5</sup>

More generally, ENERGEX considers that the introduction of any DMIS must have regard to prospective developments within the national energy policy framework. For example, the Australian Energy Market Commission's (AEMC) review of demand side participation in the national electricity market, the Ministerial Council on Energy's (MCE) work on network planning and connection arrangements, the Garnaut Climate Change Review and introduction of market-based tradeable energy efficiency schemes.

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<sup>5</sup> ENERGEX (2008) *Services Classification and Control Mechanisms for Distribution Services: Proposal to the Australian Energy Regulator under clause 11.16.6 of the National Electricity Rules* (March).

*Q3. Do particular control mechanisms, such as tariff basket, revenue yield or revenue cap arrangements create incentives or disincentives for DNSPs to undertake demand management?*

Under a fixed revenue cap, a DNSP's allowable revenue is independent of the volume of electricity distributed, so this form of regulation is relatively neutral in relation to the pursuit of demand management alternatives.

In contrast, the weighted average price cap control mechanism may provide a disincentive for DNSPs to pursue demand management alternatives because revenue is linked to the amount of electricity they distribute. As a result, DNSPs may choose to augment their network and increase throughput even though demand management strategies may be more appropriate.

In ENERGEX's view, efficient pricing is important because the signalling properties should create strong incentives for optimal use of and investment in both the distribution network and its demand side and distributed generation alternatives (also refer to ENERGEX's response to the next question).

Consequently, depending on the control mechanisms applied, additional incentives may be warranted for demand management. This will be dependent on a range of factors such as the risks surrounding the recovery of revenue, how allowable revenues are recovered and the structure of network tariffs.

Also, due to the wide range of current policies and regulatory obligations directed at incentivising or requiring DNSPs to investigate demand management alternatives, there is a need for the AER to ensure that any DMIS applying under the National Electricity Rules framework only operates for as long as it delivers benefits to DNSPs and their customers.



*Q4. Are DNSPs able to offer efficient pricing structures, and how does this affect the need for a DMIS?*

In ENERGEX's view, efficient pricing structures are one of a suite of tools capable of improving network utilisation and/or reducing network maximum demand. Through the use of more efficient pricing structures, such as time of use tariffs, consumers can be provided with a transparent and direct signal about their energy consumption choices. ENERGEX considers that there is scope within the current regulatory arrangements to pursue more efficient pricing structures. For example, there is scope to apply demand tariffs and/or time of use tariffs to certain categories of large customers.

ENERGEX has also investigated the merits of demand tariffs based on kV.A (instead of kW) to provide cost incentives for large customers with poor power factor to improve power factor and/or reduce demand. Consultation has been conducted with industry participants to inform them of the benefits of demand tariffs to their business and the network more generally. During 2008-09 ENERGEX will continue to consult with key stakeholders and will conduct a paper trial to ascertain the appropriateness of introducing kV.A-based network charges in the future.

ENERGEX's interpretation of the distribution pricing provisions of the new National Electricity Rules is that the existing scope to set efficient prices will not be reduced. However, whilst distribution pricing can be an effective tool for changing consumer behaviour, there are existing and prospective constraints on efficient pricing structures being introduced for all customer classes, in particular, smaller customers. For example, persistent distortions in retail prices mean that some customers will not face their real supply costs, even with the introduction of advanced metering technologies. As a result, there is likely to be a role for demand management programs to supplement pricing.

*Q5. Do lessons learned from the QLD or SA jurisdictions or other jurisdictions provide any insight into the potential development of DMIS to QLD and SA DNSPs?*

ENERGEX supports the idea of undertaking trial projects and 'learning by doing' as it is often unclear whether a demand management project will be effective or not prior to its implementation. More generally, demand management is a maturing area, with DNSPs still developing knowledge on the effectiveness of their demand management projects. As a result, ENERGEX believes a cautious approach to DMIS should be taken for the next regulatory control period.

*Q6. How do DMIS interact with other incentive schemes, such as efficiency benefit sharing schemes or service target performance incentive schemes?*

For the next regulatory control period Queensland and South Australian DNSPs are facing the possible inclusion of an efficiency benefit sharing scheme, service target performance incentive scheme and DMIS. If one or more of these incentive schemes are implemented, this will represent a significant change for Queensland DNSPs, as the QCA's current regulatory determination does not provide for any such incentive schemes.

Furthermore, in practice, the interaction between the incentives created by each of these incentive schemes is likely to be complicated. Consequently, ENERGEX favours a conservative approach to be taken in introducing the DMIS, such that the effects of its interaction with the other incentive schemes can be observed over time.

ENERGEX is particularly concerned about the interaction between the service target performance incentive scheme and a DMIS given the generally higher risks related to demand management alternatives and their associated impact on network reliability performance. ENERGEX also has licensing obligations in relation to its reliability performance.

Consequently, ENERGEX considers that there is the potential for DNSPs to be disproportionately penalised for adopting demand management projects to defer network expenditure due to a greater exposure to network reliability risks. ENERGEX acknowledges that potential solutions to this problem, such as exempting demand-management-related outages from the service target performance incentive scheme, are not without their problems. However, the future regulatory framework must have regard to these demand management-related risks.



*Q7. What is the optimal structure of a potential DMIS for DNSPs in QLD and/or SA, and what impact is this structure expected to have on the efficiency of DNSPs decisions?*

Based on our proposal for a fixed revenue cap to be applied to ENERGEX's shared network services, ENERGEX does not believe a D-Factor scheme should be included in the DMIS for Queensland. However ENERGEX supports introduction of a Demand Management Innovation Allowance and/or recognition through forecast capital and operating expenditure of demand management projects. In this regard, ENERGEX is currently considering a range of demand management projects for which it is likely to seek funding through regulatory mechanisms in the next regulatory control period.

A Demand Management Innovation Allowance will allow Queensland DNSPs to identify projects throughout the regulatory control period to address network challenges and/or consumers preferences that may not have been present at the time of the regulatory determination. It will also allow DNSPs to identify and test proposals throughout the regulatory control period and to respond to challenges/changes in a more timely and efficient manner.

ENERGEX notes that a number of its existing and prospective demand management projects, such as air conditioning direct load control, have a relatively large capital cost component. This is not unusual for demand management projects. As a result, ENERGEX considers that any DMIS should permit recovery of capital and operating costs rather than just operating costs.

*Q8. What are the likely costs and benefits of implementing and administering the DMIS proposed in this paper or any other potential DMIS?*

In ENERGEX's view, the likely costs and benefits of implementing and administering the DMIS are difficult to determine. Provided the DMIS is clearly defined and the eligibility process is administratively simple, there is unlikely to be adverse customer impact. The Demand Management Innovation Allowance and/or recognition of demand management initiatives in capital and operating expenditure forecasts appear to be reasonable low-powered schemes that could deliver net benefits.