RIN Supporting Information

Demand Management Innovation Allowance (DMIA)

Report for 2010-11

energex

positive energy

DMIA Report - 2010-11 - ENERGEX Limited

ENERGEX Limited response to Regulatory Information Notice issued under Division 4 of Part 3 of the National Electricity (Qld) Law.

1.5 In respect of the DMIA:

(a) provide an explanation of each demand management project or program for which approval is sought

NETWORK PRICING INITIATIVES

An external consulting firm has been contracted to undertake three key initiatives to enable ENERGEX to better understand network pricing drivers & how to utilise them in managing demand.

(b) explain, for each demand management project or program identified in the response to paragraph 1.5(a), how it complies with the DMIA criteria detailed in section 3.1.3 of the DMIS, with particular reference to:

(i) the nature and scope of each demand management project or program

This project is an innovative one to explore potentially efficient and effective demand management mechanisms for ENERGEX.

It will do this by improving ENERGEX's understanding of network cost drivers and how these might be reflected in network tariffs to encourage demand management:

While it may be desirable to send a price signal to specific customer classes to change consumption behaviour, it may not always be possible to do so. In this circumstance, a non-tariff mechanism (eg controlling load, consumer education) may be more effective in achieving the preferred network outcome, such as a reduction in peak demand. In practice, ENERGEX has a range of mechanisms (pricing and non-pricing) at its disposal, which can be directed to achieve particular network objectives.

Consequently, understanding why one mechanism is likely to be better than another in the specific circumstances will be a critical element of the long-term network pricing strategy.

(ii) the aims and expectations of each demand management project or program

The Network Pricing Initiatives project arose from ENERGEX's Network Pricing Strategy, and consists of the following key initiatives to enable the business to develop a better understanding of network cost drivers and how these might be reflected in network tariffs to encourage demand management:

- Literature review of electricity demand responsiveness to price signals.

  To assist ENERGEX enhance its existing demand side knowledge base, the consultant is required to undertake a literature review of international research on the sensitivity of customer demand to the price of electricity. As part of this review, the consultant will assess the international experience of the application of sophisticated tariff structures (eg time-of-use, critical peak pricing) having regard to its relevance in a Queensland/ENERGEX context. In other words, take into consideration the characteristics of the customers / load in countries where these trials have taken place.

  The focus of the literature research will be the United States and Europe, including International Energy Agency/OECD research, as well as Australian research. The consultant

will also review available evidence of pricing and demand management trials to ensure a broad cross-section of evidence is included in the review.

The results of the literature review and associated analysis will be presented in a short report, together with the key learnings for ENERGEX.

- Decision-making criteria to choose between tariff and non tariff alternative demand management mechanisms.

  Understanding why one mechanism is likely to be better than another in the specific circumstances will be a critical element of the long-term network pricing strategy. To this end the consultant will develop a decision-making framework to assist ENERGEX's policy makers in tis process.

  Key elements of the decision-making criteria are likely to be:

  - identification of all potential price and non-price mechanisms;
  - if there are a large number of potential mechanisms, determining the basis for short listing (such as the largest and most certain expected contribution to network objectives);
  - practicality;
  - implementation costs;
  - regulatory constraints, if any;
  - likely customer receptiveness;
  - expected confidence in, and timeliness of, network impact; and
  - assessment of whether one or more mechanisms may be appropriate to achieve the network objective.

  The decision-making framework may be best set out as a decision tree and subsequently incorporated into an internal procedural document. More generally, the governance arrangements regarding the generation and consideration of demand management and tariff reform options within ENERGEX should be reflected in the decision-making framework, as well as the link to ENERGEX's investment regulatory test process.

- Long Run Marginal Cost (LRMC) methodology to estimate cost of meeting incremental customer demand to enable more cost reflective and efficient price signals to be incorporated into network tariffs.

  ENERGEX's existing DCOS and pricing models do not explicitly reflect long run marginal costs (LRMC), which are most important for price signalling purposes to facilitate efficient use of the network. Estimation of LRMC would likely need to be based on the long run capital costs of meeting a specified $/MW (or $/MVA) increment of capacity at each voltage level. Such estimates of LRMC would enable ENERGEX to send a forward-looking capacity-related price signal as part of a peak pricing tariff component, which would provide a clear signal to affected customers about the cost of their network usage (subject to metering constraints).

  ENERGEX's long term price strategy has identified the need to develop a LRMC pricing model which would initially complement the existing DCOS model and pricing models. To this end, the consultant is required to develop an LRMC pricing methodology document, which is based on industry best practice (including a review of publicly available LRMC pricing information made available by other Australian DNSPs). The methodology developed would be based on:

  - The average incremental cost approach, which calculates the present value of expected capacity related expenditure required to meet expected demand over a long term planning horizon, divided by the discounted value of incremental output; and
  - A 10 year forecast for pricing purposes, but with the option of extending this to a 15 year outlook for scenario modelling.

  Key issues that the methodology will address include:

  - The development of LRMC estimates at voltage levels and tariff classes;
  - Identification of appropriate asset classes;
  - The required capital and operating expenditure inputs; and
  - The required demand outputs.

In addition, a simple model to illustrate the proposed LRMC pricing methodology will be developed. Recognising that the LRMC pricing model will need to interact with the existing DCOS and pricing models, the consultant will address this interface issue in the pricing methodology document.

(iii) the process by which each demand management project or program was selected, including the business case for the demand management project and consideration of any alternatives

This project was proposed by the Revenue Strategy Group within ENERGEX as a suitable candidate for the DMIA, due to its R&D nature, and the fact that it was not included in the AER determination for 2010-15.

Using the ENERGEX DMIA Process the proposal was formally reviewed against the DMIS Criteria and specific acknowledgement sought, and received, from the ENERGEX Demand & Risk Management Group that the costs were not in any way recoverable from another source.

As per normal practice a formal Business Case was developed, reviewed and presented to the ENERGEX Investment Review Committee, which approved the proposal as a DMIA project on June 1st, 2011.

(iv) how each demand management project or program was/is to be implemented

The project is a work-in-progress, and will be completed in the 2011-12 financial year.

The initiatives are being managed as a programme of linked activities. The programme is overseen and led by Revenue Strategy, however the core of the work is being undertaken by the independent consultant who will provide expert advice. Input from key staff within Revenue Strategy, Network Pricing and Demand Management is required to enable an effective roll out of the findings to the business.

(v) the implementation costs of the demand management project or program

The estimated cost of the completed project is just under $67,000 including external contractor costs and the ENERGEX general overhead. The costs associated with all existing ENERGEX staff who, from time to time, provide input into the project have their labour costs absorbed into business-as-usual.

The costs for 2010-11 amount to $50,320.

(vi) any identifiable benefits that have arisen from the each demand management project or program, including any off peak or peak demand reductions

The project is not yet complete, and the benefits can be realised only once the results have been analysed and some further pilot projects undertaken to test the more appealing approached.

(c) provide an overview of developments in relation to the demand management projects or programs completed in previous years, and any results to date

Nil

(d) state whether the costs associated with each demand management project or program identified in the response to paragraph 1.5(a) are:

(i) not recoverable under any other jurisdictional incentive scheme

The project's costs are not recoverable under any other jurisdictional incentive scheme.

(ii) not recoverable under any other Commonwealth or State Government scheme

The project's costs are not recoverable under any other Commonwealth or State Government scheme.

(iii) not included in the forecast capital or operating expenditure approved in the AER's distribution determination for the current regulatory control period under which the scheme applies or under any other incentive scheme in that determination (such as the D-factor scheme for NSW)

Any costs associated with the project which were included in the AER's current determination have been explicitly excluded from the project's costs.

(e) provide the total amount of DMIA spent in the previous regulatory year and how this amount was calculated.

Nil