

LOAD MANAGEMENT WORKSHOP

SMALL TO MEDIUM BUSINESS ENTERPRISES

Monday 28th November 2005
9.00am – 12.30pm

West Room
The Conference Centre
AUT Technology Park
AUCKLAND

Attendees:

There were over 60 attendees with an even mix of end users and electricity industry representatives.

1. Introduction

The workshop opened at 9:00am

The Chair, Stephen Drew of Demand Response, welcomed representatives to the meeting. He clarified that the goal of the meeting was to identify issues and barriers to load management for Small and Medium sized companies (SMEs).

Presentation – Introduction

Robert Reilly, Senior Advisor Retail, Electricity Commission

Robert introduced the Electricity Commission's work-plan on load management, covering the Commission's current focus of maintaining existing load management capability and identifying the value and pricing issues. The Commission's longer term goals include facilitating technology uptake and improving education and information about load management. A full copy of his presentation is available: [Load Management Workshop Introduction](#)

Presentation – Customer Participation through Load Management

Stephen Drew – Demand Response

Stephen set the scene for the meeting by giving a historical perspective of load management, and highlighting some of the mechanisms in place (with associated issues). He highlighted the possibility of demand-side participation and why consumer participation is so important. Going forward he discussed why both energy efficiency and demand response were needed, and why the workshop was important to identify barriers. A full copy of the presentation is available: [Customer Participation through Load Management](#)

Presentation – Demand Response a Retailers Perspective

Vince Hawksworth, GM Retail, Genesis Energy

Vince covered supply and demand issues in NZ and discussed new generation coming on stream for Genesis Energy. He then discussed the goals of demand side management, and issues around demand reduction, demand response timing, demand repurchase, demand exchange schemes and pricing options. He discussed the 'free-rider' issue, and spoke briefly about metering solutions. A full copy of the presentation is available: [Demand Response a Retailers Perspective](#)

Participant Comments/Questions

- *Question: What is Genesis Energy doing to provide time of use signals to customers?*

Answers:

- Time of use pricing
- Web based interface for market information
- Providing products which offer part exposure to spot market
- One to one discussions with customers on their risk appetite.

- *Question: Please comment on the opinion that half-hourly metering is not yet an economic option for everybody. In addition, does Genesis Energy agree that advance metering is not necessary for the mass market, and that a two rate meter with a signal to switch registers is an option?*

Answers:

- Genesis Energy is not in role of picking technology winners
- Genesis Energy prefers a top down approach; working with large customers and then letting the experience gained flow through to the smaller customers
- Genesis Energy has undertaken an experiment with pre-pay meters where consumers had access to prices and found that on average their consumption dropped. Overseas experience suggests this may be by as much as 15%.
- It is important to make the right technology decisions that work in the long term.

- *Question: Why are retailers not offering contracts that are partially exposed to the spot at a reasonable price?*

Answers:

- Genesis Energy does offer part exposure to spot prices
- The spot market is very volatile, and the benefit of the fixed rate component of a tariff is that the retailer is exposed to the high prices, not the consumer.

- *Question: Why is Genesis Energy not making offers of demand management products?*

Answer:

- Genesis Energy does offer various TOU products.
- There are many different customer expectations of where prices are heading, i.e. when there are low price periods customers consider that to be an indicator of low average prices. There is still immaturity in the market in dealing with supply/demand trade offs in periods of constraint.

- *Question: If I am a domestic customer and can contribute to load management, why can't I offer my load by putting metering technology in?*

Answers:

- There is no reason why not, however the sector still needs to have the connectivity to work with who-ever is trading on the meter. This needs to be transparent, meet any standards for the network.
- There is a need to ensure one technology does not prevent another from entering the market; i.e. a 'VHS – Betamax' scenario could be detrimental for the industry, and customers aren't necessarily in a position to know what the best technology is.

Presentation – Is Demand management of Interest to a Distributor?

John van Brink – Acting General Manager – Commercial, Vector

John gave a presentation which covered: projections for regional growth in energy demand; security into Auckland; options for ensuring security of supply to Auckland; uses of load control and the role of load management; load management market development; and keys to successful load management and barriers to implementation. His presentation also covered Vector's load management initiatives; new pricing arrangements; and a demand side exchange set up by Vector which enables consumers with discretionary load to offer it to the market. A full copy of the presentation is available: [Is Demand management of Interest to a Distributor?](#)

Participant Comments/Questions

- *Question: Why they hadn't been told about the demand-side exchange when negotiating their contract?*

Answers:

- The demand-side exchange was primarily set up to demonstrate how such a model could work, and point to ways it could benefit participants
- The demand-side exchange is not really functioning yet, and Vector has not been actively promoting it.

- The demand-side exchange is still on the web (www.demandexchange.co.nz)
- The main benefit that Vector can provide to encourage demand side response is related to deferred investment.

Presentation – The Warehouse

Wayne Inger, Energy Manager (The Warehouse)

Wayne gave a presentation which demonstrated the lack of pricing options in place to provide incentives for The Warehouse to manage load. He expressed frustration at how this sometimes makes it very hard to present both electricity efficiency and load management measures to the board of directors as you can't easily justify a financial return (you have to use 'for the good of the country' justifications). He then set out the initiatives being undertaken in Warehouse buildings including using natural light (whilst minimising solar gain), and freezing ice banks at night for cooling during the day. A copy of the presentation is available: [The Warehouse](#).

Participant Comments/Questions

Among the comments that were expressed at the workshop were:

- load management is not a 'laboratory problem'; it's a board-room problem.
- end users are being dragged into the electricity industry rather than the electricity industry ensuring it meets the needs of consumers by setting the right incentive.
- If a participant switched off for a long period of time due to a constraint, they would not be the only ones who would get the benefit (free-rider issue).
- it is problematic for NZ-wide companies to have to deal with multiple lines companies.
- the 150 cold stores throughout NZ offered a big potential for load management.

Presentation

Regu Shanmuganathan, Building Services Engineer, Westfield

Regu set out Westfield's current efficiency/load management initiatives. He pointed out that if they had the right signals from the electricity industry they could achieve much more.

A copy of the presentation is available: [Westfield NZ Ltd](#)

Open Forum

ISSUES

A number of issues were discussed in some detail. These were:

Commercial Buildings

There were representatives from major property developers at the meeting and their comments were as follows:

- If the correct pricing signals were there - the investments in load management would start to happen.
- A participant suggested statutory requirements were necessary to ensure building owners were incentivised to do the right thing by the country.
- A participant suggested there are people in every organisation who are very passionate about energy efficiency/load management (even if CEO's weren't always), and this is shown by the passion for the topic exhibited by the people who were attending the meeting today.

Christchurch/Dunedin Experience

There were representatives from Aurora and Orion at the meeting and their pricing approaches were discussed as follows:

- A Aurora representative said they have a stable congestion pricing plan and 400 customers on that plan. These customers may have existing generation (or will look at diesel generation when considering upgrades) to cover their needs during high price periods. Aurora believe that even though price/income is constrained through the Commerce Commission there are some very strong signals it can give.
- A participant said that when their company put in a new building in Christchurch the load management investment was easy to justify due to Orion pricing signals. Another participant said that their company had put in LPG boilers in Christchurch because the incentives were there to avoid the peak prices.
- Question: *What was stopping the Orion and Aurora pricing signals getting to smaller customers?*

Answer:

- An Orion representative answered that it was planning to modify its current pricing to improve the signals to smaller customers, however there was a need to work out how data was going to be managed and Orion was consulting with customers on this.

- *Question: Could the Orion and Aurora approach work across the whole country?*

Answer:

- An Orion representative answered that rural and urban areas respond differently to load management. The economics of each network can be very different and so can only be considered on a case by case basis.
- *Question: What percentage of Orion's income would come from the congestion tariff rather than other types of tariff?*

Answer:

- A representative of Orion said about 50% of their income was from the congestion tariff. They said it had got to the point where it was almost too successful. Next year they are considering cutting customers into two loads, as currently they all come back on at the same time at the end of the ripple signal and this causes possible load constraint issues at that point.

Skills Shortage

Concern was expressed about the shortage of skilled workers in New Zealand for demand response technologies and energy efficiency. In particular:

- It was suggested that this was because there had been a lack of investment over the decades in training for young graduates, and that there were not enough jobs in the sector to stimulate any new training programmes.
- It was suggested EECA could better focus programmes on training and technology transfer.

Vector Pricing

A participant asked for further information on Vector's new pricing regime.

- *Question: How will Vector roll out its new pricing regime?*

Answer:

- John replied they are looking at approaching their top 188 customers (excluding very big players) to roll out from April next year. He reminded participants that under the Commerce Commission threshold regime Vector cannot change its prices more than once a year. Vector's plan is to give the new regime a year and then establish how effective the pricing is by what the response had been.

General

Individual participants made the following comments:

- there is no 'silver bullet' - the issues are complex and require the support from all parties.
- price signals are available for generation and that there was a similar need for price signals to get passed on to consumers.
- it is not clear yet how high the electricity price needs to be in different sectors to encourage investment in load management equipment and controls.
- SOE's should reduce the return they provide to the Government.
- all the great things EECA talk about cannot occur until there are price signals that offer the confidence for investment.
- while there should be a focus on demand shifting and shedding loads, there is still the need to build for load growth, in particular the ability to take plant out for maintenance. Deferring investment could result in security of supply issues.
- that Commerce Commission rules may be restricting investment in the distribution networks.

Forum closed

Robert Reilly closed the meeting by thanking everyone for attending and taking part. He reiterated that the reason the Commission set up the workshop was to bring the real issues to the surface; and it was clear the need for coherent price signals was the most important issue for small to medium enterprises.

Robert thanked the speakers and the Chairman.

Meeting closed 12:30