

Advanced metering report presented

The Commission's report *Advanced Metering Infrastructure in New Zealand: Roll-out and Requirements*, was presented to the Minister of Energy and Resources in December. It is a

comprehensive review of the functionality and related requirements for ensuring new technology is rolled out in a cost-effective manner that benefits the New Zealand industry and consumers.

The advent of advanced metering technology makes it possible to correct a market asymmetry which was caused by the inability of electricity cost-related signals to be provided to consumers. Put simply, it gives consumers the choice to run appliances at times of the day when electricity prices are lower.

Advanced metering also:

- Allows more innovative pricing options to be developed;
- Provides increased information that can allow consumers to track expenditure and participants to manage their own portfolios more effectively;
- Has the potential to act as a platform for future products and services to be developed;
- Makes shared infrastructure possible, reducing the cost of automating other utility meter readings such as gas and water; and
- Enables peak electricity demand to be managed, delaying the need for investment in new generation, transmission and distribution assets.

All of these offer cost savings for consumers, and may reduce the environmental impact of electricity generation and distribution.

The roll-out of advanced metering in New Zealand is being led by retailers who have identified cost-effective business cases for doing so, and currently at no additional direct cost to consumers. Although it has been suggested that the roll-out should be regulated, as it is in many other countries, the Commission considers that this is not necessary. Among the reasons are:

- New Zealand's deregulated electricity market is unique. Whereas, metering is a monopoly service in most countries, New Zealand's metering market is competitive and competition is a key driver of the roll-out;
- Competition creates incentives for investors in advanced metering systems to ensure that the full potential of advanced metering is realised, along with the benefits to other parties, including consumers;
- New Zealand has a very small percentage of the world's meters which means we will tend to follow and take advantage of international developments, rather than lead them;
- Retail competition and the requirement to certify meters by 2015 are driving the roll-out within an acceptable timeframe;
- Advanced metering technology continues to develop;
- There is a high level of compliance with the voluntary advanced metering guidelines; and

- Any benefit from regulation must outweigh the increased cost to consumers that is likely to result from regulation.

The Commission's report should help to allay any industry and consumer concerns about the roll-out of advanced metering. In line with a key recommendation in the Ministerial Review, we are actively monitoring the development of the standards and technology. Advanced metering technology is evolving rapidly and it is important to have the capability and flexibility to add to what is in place, in order to minimise the risk of technology stranding to consumers and industry.

See www.electricitycommission.govt.nz/pdfs/opdev/retail/ami/Advanced-metering-policy.pdf

See www.electricitycommission.govt.nz/pdfs/opdev/retail/ami/Advanced-metering-guidelinesv2.pdf



Value of unserved energy to be reassessed

The Commission has initiated a research project aimed at assessing the appropriateness of the current value (\$20,000/MWh) of unserved energy (USE). The value of USE is an economic concept that is intended to measure

the cost to electricity consumers of a supply interruption or, conversely, the amount they would be prepared to accept in compensation.

The current value was set in 2004 based on a literature review and Australian research. For evaluation of future transmission investment proposals and distributor planning, it is now timely to update this value on the basis of New Zealand-validated research.

In order to estimate the value of USE for all types of consumers (residential, commercial, agricultural and large industrial), the Commission is using a large mail survey for all customers other than large industrial. Large industrial customers will be interviewed on a face-to-face basis. This method has been recommended by the Commission's advisers, Concept Economics and the Centre for Advanced Engineering, to ensure a robust result.

We expect to publish the results, indicating the value consumers place on the reliability of supply, at the end of August.

See www.electricitycommission.govt.nz/opdev/transmis/unserved-energy

The Government has made its decisions following its review of the electricity sector last year. Many of these decisions are reflected in the Electricity Industry Bill now before the Parliament's Finance and Expenditure Committee. Submissions on the bill closed on 26 February and hearings will now follow. The Committee is due to report back to Parliament no later than 15 June.

The key change will see the Electricity Commission replaced by a new, more independent Electricity Authority, as from 1 October. Almost all the Commission's efforts are now going into preparing for this change.

The Electricity Governance Rules which the Commission now administers will become an Industry Participation Code. At the request of the Ministry of Economic Development the Commission is preparing a first draft of this code with the aim of passing it to the MED in time for the Minister to publish it by 1 September.

It is a substantive task for the Commission to reshape the existing rules to incorporate changes arising from the Government's review within this timeframe. However, we are confident that we can achieve a seamless transfer of the ongoing workplan to the new authority and maintain a stable platform for industry operations and investment.

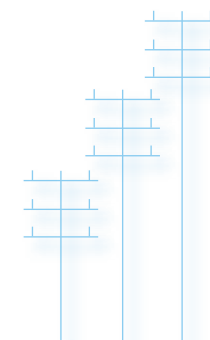
The review identified six priority areas the new authority will need to focus on in its first year. Four of these six are currently the subjects of the Commission's development programme (see the article which follows). Commission work is also contributing to the other two priority areas that the industry is focusing on – facilitating an active market for trading electricity hedge contracts and developing more standardised tariff structures for lines businesses.

So while the new authority will need to reach its own decisions, it will inherit a great deal of research, detailed drafting and staff expertise from its predecessor, the current Commission. Other functions will pass to the Energy Efficiency and Conservation Authority and to the System Operator (Transpower).

Although these changes are obviously significant for the Commission – in effect bringing its seven years as industry regulator to a close – these decisions also confirm the value of the work that the Commission has been undertaking. The greater independence of the new authority will meet a long-standing criticism of the current arrangements. And our work will continue, albeit under a different legal mandate and a new name.

Above all the review has underscored the importance of principled regulation of this vital sector.

David Caygill





The Market Development Programme progresses

Improving the performance of the electricity market, especially in the areas of competition and security of supply, is at the core of both the Government's proposed electricity reforms arising from the Ministerial Review, and the Commission's Market Development Programme.

The review drew extensively on the Commission's prior market design review and many of the recommendations in it are consistent with, or extend, the work currently being undertaken by the Commission. Four of the six areas identified for priority in the review are already being addressed as part of the Commission's programme:

Priority area identified in Ministerial Review	Commission work relating to priority area
Requiring retailers to make payments to consumers in the event of a public conservation campaign and enforced power cuts.	Default buy-back: These arrangements could address the undue incentive that retailers have to lobby for public conservation campaigns to mitigate their exposure to high prices during extended droughts.
Putting a floor on spot prices during any public conservation campaign, or during enforced power cuts.	Scarcity pricing: The aim of this project is to develop and implement scarcity pricing mechanisms to improve security of supply.
Introducing a transmission hedging mechanism to assist retailers to manage the risks created by transmission congestion.	Locational price risk management: The focus of this project is on developing and implementing a mechanism that will allow participants to better manage their locational price risk. This should lead to increased retail competition and improved hedge market liquidity.
Facilitating greater demand-side participation in the wholesale market.	Dispatchable demand and Demand-side bidding and forecasting: The objective of both of these projects is to make it easier for large electricity users to respond actively to wholesale market conditions.

Progress is being made in each of these areas. Stakeholders were consulted on high-level options for each project late last year. Submissions have been summarised and these are available on the Commission's website, see www.electricitycommission.govt.nz/opdev/mdp/consultation. We are now finalising which options to pursue and working towards the detailed design of those options.

The projects are closely inter-connected and accordingly need to be considered as a whole. For example:

- Scarcity pricing could introduce greater incentive for the exercise of market power in the wholesale market. However, this could be mitigated in part by increased market monitoring;
- Locational hedge products should assist wholesale market purchasers to better manage price risk if scarcity pricing is introduced; and
- The design of a locational hedging arrangement could affect short-term incentives to undertake demand-side response during periods of market stress, as well as longer-term incentives for investment in transmission and generation.

Between now and the transition to the new authority the Commission will be interacting with industry through technical groups, briefings, workshops and consultation on rule changes, as appropriate. The emphasis will be on communication and the quick turnaround of ideas in order to make as much progress as possible. Our aim is to ensure that each project is handed over as a well constructed component of a coherent package, providing a clear pathway for completion and decision making by the Electricity Authority.

See www.electricitycommission.govt.nz/opdev/mdp

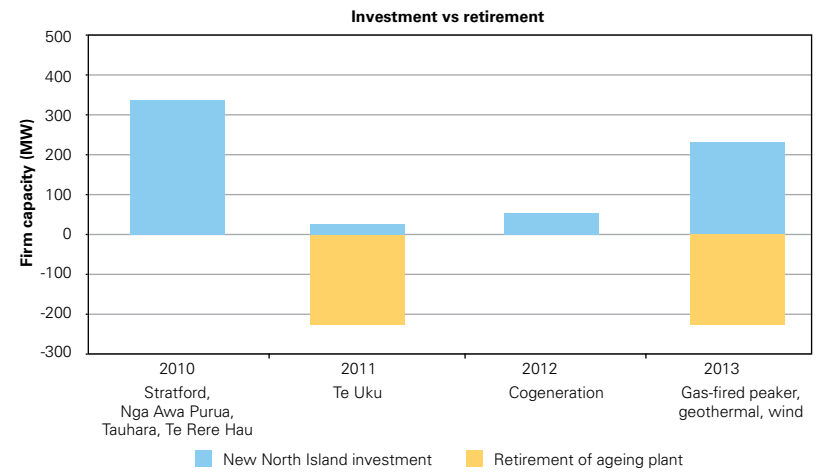


Security of supply assessment 2010-2019

Each year the Commission produces a medium - to long-term security of supply assessment to calculate the need for the procurement of additional reserve energy or capacity, and to help participants make their risk and investment decisions.

Following industry consultation the draft Annual Security Assessment 2010-2019 was presented to the Minister earlier this month. Key conclusions are that:

- There is no need at this point for the Commission to procure Reserve Energy (for dry-year security) or Reserve Capacity (for peak capacity) for 2010, 2011 or 2012;
- A significant amount of new generation investment will be needed to maintain security margins from 2012 onwards;
- Given the lead time for new generation, some investment will need to be committed within the next year; and
- Despite the need for new generation, investment has slowed in the past year. Over 600 MW of new generation that was rated as medium or higher probability for 2010 or 2011 in the 2008 assessment, has since been deferred until at least 2013, or cancelled.



This assessment adds weight to the view that New Zealand, formerly seen as having an energy-constrained system, is now potentially subject to both energy and capacity constraints. Capacity margins are more likely to be a constraint in the next few years than energy margins. This could mean:

- More difficulty in meeting winter peak demand;
- More difficulty in meeting peak demand at other times of the year owing to factors such as increasing summer demand, increasing reliance on wind generation, and generation and/or transmission outages;
- More occasions when instantaneous reserves cannot be maintained; and
- A generally 'tighter' power system.

Late last year, the System Operator and the Commission identified a thermal commitment issue. The Commission, with a technical sub-group, developed urgent rule changes to improve the dispatch and supply of instantaneous reserve and provide better pricing signals. In conjunction with this, the Whirinaki offer strategy was changed to strengthen pricing signals in times of scarcity.

See www.electricitycommission.govt.nz/pdfs/opdev/secsupply/pdfsconsultation/ASA-2009.pdf

See <http://supplyline.electricitycommission.govt.nz>



Motor systems efficiency scheme

Late last year the Commission and Telarc SAI Limited launched a Motor Rewind Workshop Quality Scheme that includes a Rewind Workshop Quality Code and incentives for rewinders to develop systems that

conform with the code.

The Commission is promoting the scheme because of the importance of high quality motor rewinding to electricity efficiency in New Zealand. Motors and motor systems represent more than 90 percent of the economic electricity potential in New Zealand industry.

The code covers people skills, equipment and process requirements, and management systems. Rewinders who are certified as meeting the code's requirements will have tangible evidence of their ability to provide high quality repairs and rewinds to their motor user clients, and thereby maintain the cost efficiency of their clients' systems.

Rewinding a modern three-phase electric motor after it fails is a sound investment, provided the rewind is done well. It can be a very expensive choice, if done poorly.

A poorly rewound motor simply wastes energy and over its lifetime could cost the user literally tens of thousands of dollars – not counting the associated risk of premature and unexpected motor failure. Because it's difficult for the user to detect the difference between good and bad when the motor comes back from the rewinder, confidence in the workmanship of the rewinder is vital.

CMG Electric Motors in Auckland is the first company in the country to receive certification, and a number of rewinders are signed up to become certified shortly. We encourage motor users throughout New Zealand to seek out certified motor rewind workshops as their preferred suppliers.

The Commission has a suite of programmes that support the electricity efficiency of motor systems in New Zealand industry, including the Motor Bounty Scheme, the Compressed Air Systems Efficiency Programme and the Motor Systems Optimisation Programme. In total, this package has a target of achieving 140 GWh pa electricity savings within 10 years, which is enough to power about 15,500 homes every year.

See <http://motorsystems.electricitycommission.govt.nz/index.htm>