ELECTRICITY AUTHORITY
TE MANA HIKO

Briefing to the Incoming Minister:

Hon Simon Bridges

January 2013

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Abbreviations used in this document

Act	Electricity Industry Act 2010
ASX	Australian Securities Exchange
Authority	Electricity Authority
Code	Electricity Industry Participation Code 2010
CRE	Competition, reliability and efficiency (components of the Authority's statutory objective)
DD	Dispatchable demand
DSBF	Demand side bidding and forecasting
EECA	Energy Efficiency and Conservation Authority
EIEP	Electronic Information Exchange Protocol
FTR	Financial transmission right
MBIE	Ministry of Business, Innovation and Employment
MEP	Metering equipment provider
Minister	Minister of Energy and Resources
MUoSA	Model use of system agreement
PCC	Public conservation campaign
RAG	Retail Advisory Group
SRC	Security and Reliability Council
TPAG	Transmission Pricing Advisory Group
UTS	Undesirable trading situation
WAG	Wholesale Advisory Group

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Key upcoming events for the Minister

Event	Timing	See page
.....Withheld - ....still under ....consideration.....	.....	....
Draft Statement of Intent (SOI) for 2013-2016 provided for comment	Mid-March	8 and 24

Key upcoming events for the Authority

Event	Timing
Annual Wellington stakeholder function	7 February 2013
Submissions on transmission pricing methodology review issues and proposal	1 March 2013
Publication of stakeholder perceptions about the performance of the electricity market	Early March 2013
Publication of Market Performance Review	Mid-March 2013

Organisation and Responsibility

The Authority

The Electricity Industry Act 2010 (Act) established the Authority as an independent Crown entity on 1 November 2010.

The Authority is governed by a Board, which is supported by the Chief Executive and 60 staff. See **appendix A** for Board and Chief Executive profiles.

The Authority is responsible for providing independent governance of the electricity industry and oversees the operation of the electricity system and market. The governance function is achieved primarily through developing and enforcing the Electricity Industry Participation Code 2010 (Code).

The Authority works closely with Advisory Groups, which include consumer and industry representatives, on areas for improvements to the electricity market. The Security and Reliability Council (SRC) advises the Authority on the performance of the electricity system and the system operator, and on reliability of supply matters. Details of the membership of these bodies are provided in **appendix B**.

The Authority oversees the operation of the electricity system and markets through contracts with service providers. Transpower manages the day-to-day operation of the electricity system as the system operator. NZX provides pricing, clearing and settlement, reconciliation, wholesale information and trading services and Jade operates the registry. Transpower, through its subsidiary Energy Market Services (EMS) Limited, will commence the new service provider role of FTR manager in May 2013.

As an independent Crown entity, the Authority is required to have regard to Government Policy Statements presented in Parliament by the Minister of Energy and Resources (Minister), but is not required to give effect to them. There are currently no such policy statements. The Authority provides 'no surprises' briefings to the Minister but does not seek the Minister's approval for any aspects of its work programme.

The Authority's statutory objective

Section 15 of the Act sets the Authority a clear objective:

> **to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.**

The Authority's functions

Section 16 of the Act sets out the Authority's functions. Broadly, these are to:

- register industry participants
- develop and administer the Code

- monitor and enforce compliance with the Code, Act and the Electricity Industry (Enforcement) Regulations 2010 (Regulations)
- facilitate market performance through information, best-practice guidelines, and related services
- undertake sector reviews
- act as Market Administrator and contract with market operation service providers
- promote consumer switching
- monitor sector performance against the Authority's statutory objective.

Authority responsible for the Code

The Code and the Regulations came into effect on 1 November 2010. The Code sets out industry participants' obligations across the electricity market, from generating through to transmission, distribution, retailing and the hedge market.

The Authority, in its own right, makes changes to and administers the Code and monitors and enforces compliance with the Act, Regulations, and the Code. There is no accountability to the Minister on these matters, other than to keep the Minister informed on a 'no surprises' basis.

Ministerial reviews

Section 18 of the Act requires the Authority to carry out reviews at the written request of the Minister on any matter relating to the electricity industry. To date, no reviews have been requested.

Funding

The Electricity Authority is funded from Vote: Energy.

The Crown is reimbursed for the cost of the funding for the Authority through a levy on industry participants. The levy also funds the Energy Efficiency and Conservation Authority's (EECA) electricity efficiency costs and Consumer Affairs' (part of the Ministry of Business, Innovation and Employment (MBIE)) consumer switching costs. The Levy is administered by the Authority in accordance with detailed formulae set out in Regulation.

Foundation documents

The Authority has consulted on and finalised the following foundation documents:

- an *Interpretation of the Authority's statutory objective*, which sets out the Authority's interpretation of section 15 of the Act[1]

[1] Not specifically required by the Act. See http://www.ea.govt.nz/about-us/documents-publications/foundation-documents/

- an *Advisory Group Charter*, specifying the Authority's policy on Advisory Groups and the Security and Reliability Council (SRC)[2]
- a *Consultation Charter*, setting out the Authority's policy and processes for consulting interested parties on proposals to amend the Code and other matters, and the Code amendment principles the Authority and its Advisory Groups will adhere to in considering proposals to amend the Code.[3]

These documents are important for promoting regulatory predictability and credibility. They provide consumers, investors and industry participants with a transparent view of how the Authority intends to conduct its work to bring about enhancements to the operation of the market for the long-term benefit of consumers.

Overview of the electricity sector published

The Authority has published *Electricity in New Zealand* as an overview of the electricity sector to provide interested members of the public with the context for its work. This document is included as **appendix C**.

Pending Decisions or Actions

Funding options

The Act currently requires the Authority's own activities and all market operation services to be fully funded by appropriations, which are subsequently fully offset by a broad-based levy charged to industry participants.

The Authority is considering a proposal to amend the Act to enable fees to be charged for services provided to participants. The Authority believes that this will allow us to achieve better targeting of charges to those who benefit, thereby assisting with constraining costs and improving efficiency. The proposal would alter the form by which participants pay for market services but it doesn't alter the overall costs on participants as fee revenue will be used to reduce the broad-based levy they currently pay.

The Authority has consulted with interested parties on the proposal, and liaised with the previous Minister and MBIE.

……withheld – still under consideration ……..
……..

[2] Required under section 19 of the Act. See http://www.ea.govt.nz/our-work/advisory-working-groups/

[3] Required under section 41 of the Act. See http://www.ea.govt.nz/act-code-regs/code-regs/code-changes/

2013/14 Budget

The Authority is required to consult annually with industry on the appropriation and work priorities for the coming financial year. For the 2013/14 year, this consultation has been completed and a report was approved by your predecessor in December 2012. A copy of the report is included as **appendix D.**[4]

The recommendations from the report feed into the Treasury-led Estimates of Appropriations and the Authority's Statement of Intent. MBIE coordinate the Authority's input for you to take to Cabinet in the Budget process.

Key Industry Developments

Delays in commissioning Pole 3

Electricity is transferred between the North and South Islands using the high voltage direct current (HVDC) link, owned and operated by Transpower New Zealand Limited. The HVDC link enables a national market for electricity, with power able to flow in either direction depending on electricity demand and prices. It is the only high voltage linkage between the Islands and so it also plays an important role in ensuring security of supply.

The Electricity Commission (the Authority's predecessor) approved the replacement of the existing Pole 1 with the new Pole 3 in September 2008 at a cost of up to $672 million.[5] The project increases the capacity of the HVDC link, and has enabled Pole 1 to be retired as it uses technology that is no longer supported.

Pole 3 was originally scheduled to be completed by February 2012 (in order to be available for last winter), but there have since been several delays in the project. The most recent of these was advised earlier this month, with commissioning now expected to be completed in late-April to early-May 2013.

The delays affected the reserves market in the first half of 2012 and the on-going delay may affect the start of the new financial transmission rights (FTR) market in May 2013. It is possible the commissioning of Pole 3 could be disrupted by trader behaviour in the wholesale market, so the Authority has prepared a solution to deal with that risk if it looks likely to eventuate.

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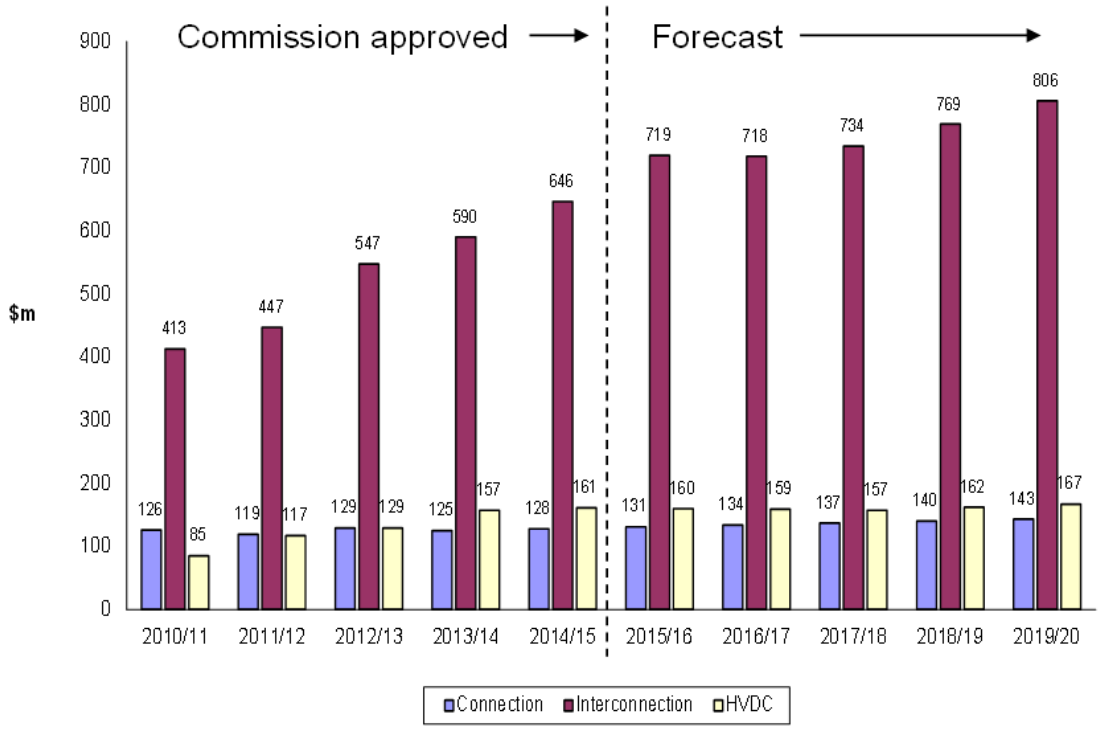
4 See http://www.ea.govt.nz/our-work/plans-and-reports/

5 The use of 'Pole' refers to a single path for electricity flow. A pole can consist of more than one cable. For example, Pole 3 will enable electricity to flow from north to south, or vice versa, through three cables (with the potential to connect a fourth cable to increase capacity in the future). The existing Pole 2 will remain in operation, but will have its control system upgraded to align with that of the new Pole 3. Having two poles improves system reliability by enabling one pole to be on stand-by in the event there is a fault on the operating pole.

Sharp rise in transmission costs

Transmission costs are ultimately charged to consumers of electricity. The chart below shows the cost of transmission is projected to almost double over the 10-year period in the chart, rising from $624 million in 2010/11 to $1.1 billion in 2019/20.

This increase in transmission charges is almost entirely a consequence of large transmission investments approved by the Electricity Commission (the Authority's predecessor).



The transmission investment program undertaken by Transpower has doubled the value of its asset base (from $2.2 billion in the 2008/09 financial year to $4.8 billion in 2014/15). This asset value forms the basis of the regulated revenue requirement that can be recovered by Transpower.

For a domestic consumer of electricity, the transmission component of their total electricity bill will increase from about seven to ten percent.

Large changes in distribution charges

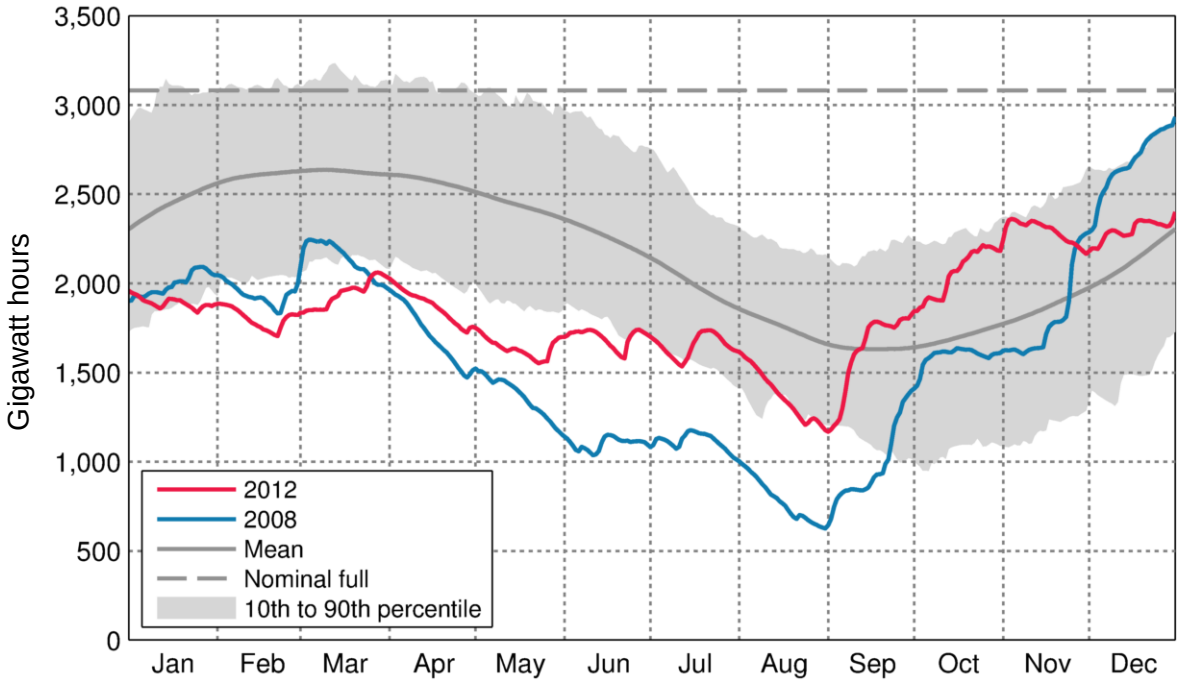
Lines/distribution charges make up about 35 to 40 percent of a consumer bill. These charges are regulated by the Commerce Commission, not the Authority.

The Commerce Commission made a determination on 30 November 2012 allowing some distribution companies to increase their lines charges, while two will be required to reduce their charges by up to ten percent.[6]

This decision will have an impact on the end prices faced by consumers, for example Mercury has already announced price reductions for its residential customers in Auckland.

Better management of hydro lakes in 2012

For the first six months of 2012, the South Island had the lowest hydro inflows on record. Despite this, lake levels were managed more prudently than the previous dry year, 2008. Storage didn't dip as low as it did in 2008 (see the chart below), and there was no need for a public conservation campaign.



There are several changes since 2008 that have contributed to improving the incentives for hydro management. Ownership of the Tekapo A and B power stations were transferred from Meridian to Genesis on 1 July 2011, increasing competition and the diversity of views of those operating South Island hydro stations. The Authority introduced a customer compensation scheme in April 2011, providing strong incentives for generator-retailers to conserve their hydro resources and not call for public conservation campaigns unless they're really needed. The development of a more robust and transparent hedge market may also have contributed to better hydro management in 2012 as it provided market signals about the cost and risk of supply shortages.

Meridian has recently secured access to an additional five meters of Lake Pukaki which should mean further improvements in hydro management in dry years.

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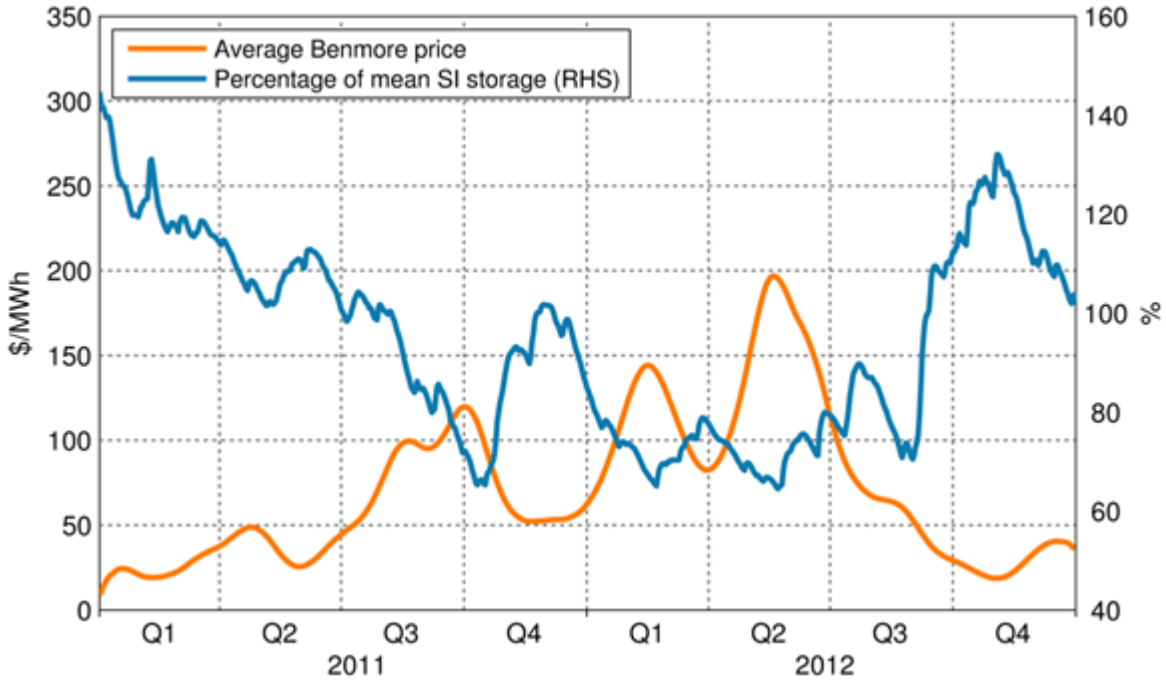
6 For further information see http://www.comcom.govt.nz/media-releases/detail/2012/new-pricing-limits-for-16-electricity-distribution-businesses and http://www.comcom.govt.nz/2010-2015-default-price-quality-path/

The hydro lakes are currently very full

In a typical year, 60 percent of New Zealand's electricity demand is supplied by hydro generation. Future inflows are always uncertain, and when hydro storage levels are low, wholesale electricity prices rise to reflect scarcity and bring other (more expensive) forms of generation into the market.

The figure below illustrates the correlation of wholesale prices and hydro lake levels. The orange line shows wholesale market prices at Benmore in the South Island during 2011 and 2012 and the blue line shows South Island storage expressed as a percentage of its long term historical average.



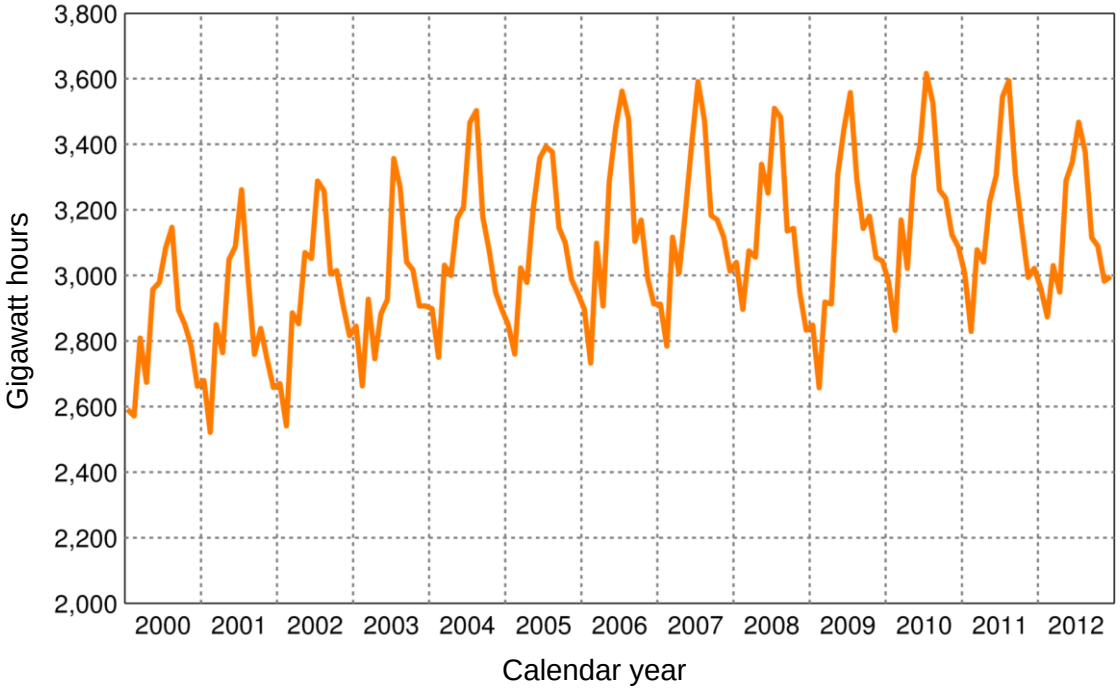
Currently national hydro storage levels are near their maximum levels as a result of heavy rainfall in early January.

Approximately 85 percent of New Zealand's controlled hydro storage is in the South Island whereas most of New Zealand's load (ie demand) is in the North Island.

The HVDC link is critical for transferring energy from southern hydro generators to meet demand in the north. This reliance means limitations on HVDC transfer directly affect the relative wholesale price in each island. It is not unusual to see higher prices in the North Island than in the South when water is plentiful. The commissioning of pole 3 this year to expand the HVDC capacity and improve reliability should reduce this constraint. However, there may be some shorter term impact as availability is reduced while testing of pole 3 is undertaken.

Subdued and uncertain demand for electricity

The chart below shows total national demand for energy since 2000. It shows increasing demand up until about 2007, then flat demand.

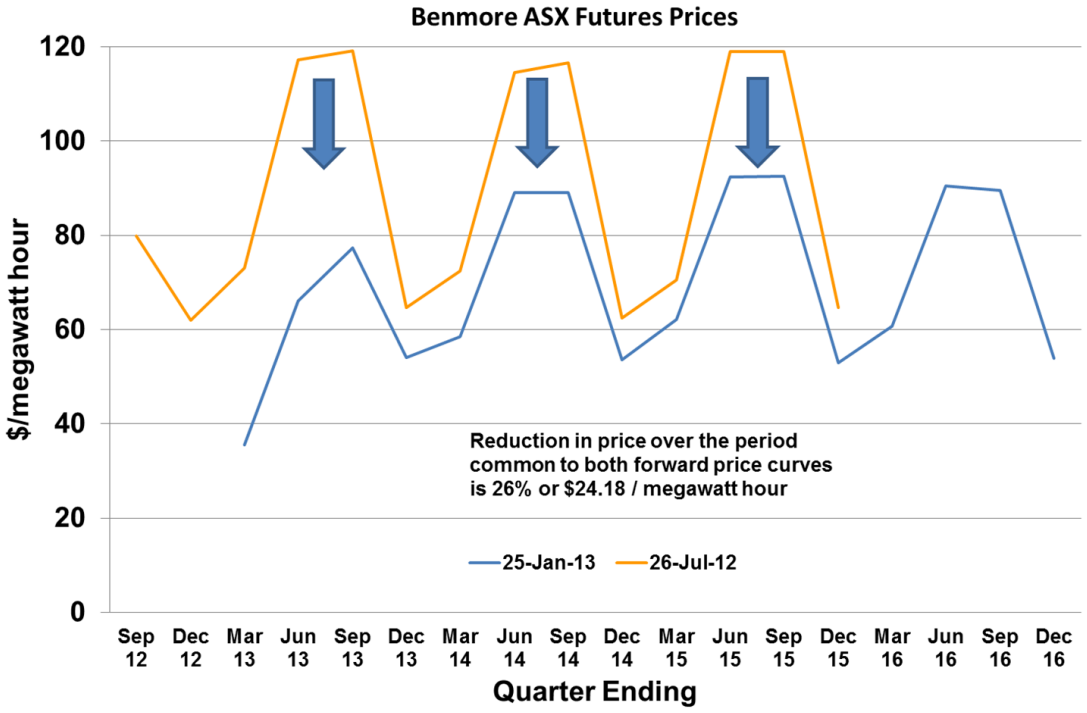


There were a number of underlying factors at play in these aggregate numbers. The number of households and GDP have continued to grow since 2007 and we would generally expect this to increase demand for energy. The 2008 dry year and a subsequent transformer failure reduced production at the Tiwai aluminium smelter in 2008/09 (now called Pacific Aluminium), and the smelter also reduced its consumption in the winter of 2012 partly in response to high electricity prices. This reduced demand significantly in those years because the smelter is about 14 percent of national demand. The Christchurch earthquakes and the global recession also reduced demand.

Large reductions in futures prices

The chart below shows the prices for quarterly futures contracts on the NZ electricity futures market (operated by ASX Limited). The cyclical pattern in futures prices reflects the high demand for electricity in winter months and the risk of dry weather leading into and during winter.

The blue line in the chart shows futures prices for the next three years, as recorded on 25 January 2013, and the orange line shows the prices of those contracts just six months ago (recorded on 26 July 2012). On average, futures prices have fallen by $24.18/megawatt hour (MWh), or by 26 percent.



This unprecented fall in futures prices reflects continuing concerns in the market about a softening in industrial demand for electricity, as Norske Skog has cut back demand, and Pacific Aluminium has raised issues over electricity pricing and its continued viability in New Zealand (the smelter uses about 14 percent of national electricity production).

Residential and commercial demand for electricity has also remained essentially constant since 2008, whereas new generation has continued to be commissioned because it makes commercial sense to complete projects that are already partly built.

There has been a predictable cancellation of several proposed new generation investments, and Genesis has mothballed one of its old 250 megawatt (MW) coal-fired units at Huntly. These decisions are a rational response to the softening in demand in a competitive market. It is worth noting that there is still 440MW of generation projects under construction, and another 4,385MW that have received planning consent.

Prospect of declining or flat retail prices

Given the sharp decline in futures prices and projections for weak demand growth, there is some prospect of flat or declining retail prices for 2013. TrustPower, for example, justified its price increases in 2012 by reference to forward contract prices. The complicating factor will be the higher transmission and distribution charges outside of Auckland.

The Authority will therefore be paying close attention to competitiveness in the retail sector, both in terms of pricing, and consistency of public statements about pricing, by retailers.

Rollout of smart meters likely to bring considerable innovation

The major electricity retailers – particularly Genesis Energy, Meridian Energy and Mercury (the retail arm of Mighty River Power) – have been installing smart meters around the country as part of their competitive positioning in the market.

The rollout of smart meters in most other countries has been mandated by government, implemented through monopoly lines companies, with the costs of the rollout either charged to consumers or subsidised by government. The rollout in New Zealand is voluntary, not subsidised by the Government, and there are no specific charges to consumers.

Approximately 835,000 smart meters were installed as at 31 December 2012, covering about half of the New Zealand customer base. The current projection is for about 1 million smart meters to be installed by the end of 2013 and about 1.6 million by April 2015.

The immediate benefits for consumers include:

- No estimated bills – each bill is based on an actual read, rather than an estimate, because accurate consumption information is always available. Up-to-date information also means billing or electricity use queries can be resolved easily and at low cost.
- Remote meter reading – smart meters can be read remotely, removing the need for regular visits to your property by a meter reader. Smart meters also allow remote disconnection and reconnection.
- Changing retailers will be easier – the final read required when leaving a property or changing retailers can occur almost immediately.
- More information for consumers – some retailers are providing consumers online access to their electricity use information. This allows consumers to better understand their electricity costs and to more efficiently control their electricity use.

Smart meters are likely to drive considerable innovation in retail products and pricing over the near future. In a programme called Tomorrow's Street, Genesis is publicly trialling new approaches for consumers to manage their consumption and to adopt pricing plans that incentivise them to minimise their consumption during peak pricing periods. Mercury already has an innovative pre-pay service in the market called GloBug. Meridian was an early developer of smart meters and services and Contact announced last year it will also rollout smart meters to its customers.

More generally, smart meters have the potential to transform the management of distribution networks and to facilitate micro-generation at the consumer level. Several lines companies, particularly Unison (based in Hastings) and WEL Networks (based in Hamilton), have either announced smart metering programmes or are giving detailed consideration to doing so.

Note that the smart meter programme is also often referred to as advanced metering infrastructure (AMI), as making full use of smart meters requires a substantial investment in communications and data management infrastructure.

Key Work Programme Priorities

Current work programme

The Authority's 2012/13 work programme is attached as **appendix E**.

A progress report to 31 December 2012 will be provided to you shortly along with the Second Quarter Report for 2012/13.

Key areas within the work programme are outlined in the sections that follow.

Section 42

Section 42 of the Act required the Authority to amend the Code or otherwise give effect to a set of seven major new matters within its first year of operation. These new matters included market enhancements that had been discussed for some years without resolution, and new initiatives identified through the Ministerial Review of Electricity Market Performance.

The Authority successfully completed these actions by 1 November 2011.[7] The Authority is now focused on the successful implementation of those new matters requiring changes to service provider and participant systems.

The table below summarises the Act requirements and the current status of the implementation activities.

Table 1: Summary of section 42 project status

Section 42(2) requirement	How the requirement is being met	Implementation status
(a) provision of compensation by retailers to consumers during Public Conservation Campaigns (PCCs).	Code amendments require retailers to pay customers $10.50 per week when a PCC is called, to compensate them for the actions they have taken to reduce the exposure of retailers to the high electricity prices that arise in dry years.	Implemented on 1 April 2011.
(b) imposing a floor or floors on spot prices for electricity in the wholesale market during supply emergencies (including PCCs).	Code amendments have been completed for: **1.** a price floor and price cap that will apply in certain emergency load shedding situations to ensure that electricity prices reflect that there is a scarcity of supply; **2.** a 'stress test' regime requires retailers and large consumers to test the potential impact of very high prices on their business, and ensure this risk is acknowledged by their directors.	**Scarcity pricing:** On track for go-live on 1 June 2013. **Stress test:** Implemented in May 2012.

[7] The Authority's report on the completion of these matters was accepted by the then Acting Minister of Energy and Resources, and is published at: http://www.ea.govt.nz/about-us/documents-publications/

Section 42(2) requirement	How the requirement is being met	Implementation status
(c) mechanisms to help wholesale market participants manage price risks caused by constraints on the national grid.	Code amendments have introduced inter-island financial transmission rights (FTRs), a special type of hedge product to assist parties to manage the differences in prices that can emerge between the North and South Islands as a result of transmission constraints. The introduction of FTRs is expected to enhance competition in the retail and hedge markets.	Currently on track for FTR trading to commence in May 2013 but may need to be delayed if Transpower is unable to commission Pole 3 of the HVDC link in April 2013.
(d) mechanisms to allow participants who buy electricity on the wholesale market to benefit from demand reductions.	Code amendments have been made for two projects: • demand-side bidding and forecasting (DSBF); and • dispatchable demand (DD). **DSBF** improves demand forecasting, and enables parties to see how sensitive prices are to changes in demand. **DD** allows certain demand-side participants to be dispatched in a similar fashion to generation, enabling them to compete with generators to set spot market prices.	**DSBF:** Implemented on 28 June 2012. **DD:** Implementation plan not yet finalised due to consideration of a revised design that is expected to cost less and provide larger net benefits. This revised design will require further Code amendments and will have a go-live date around mid 2014.
(e) requirements for distributors that do not send accounts to consumers directly, to use more standardised tariff structures; and (f) requirements for all distributors to use more standardised use-of-system agreements, and for those use-of-system agreements to include provisions indemnifying retailers in respect of liability under the Consumer Guarantees Act 1993 for breaches of acceptable quality of supply, where those breaches were caused by faults on a distributor's network.	Code amendments have been made to provide for more standardisation of certain components of use-of-system agreements – most notably distributor prudential requirements. The Authority has also updated the model use-of-system agreements (MUoSA) for distribution networks. The model agreement is expected to be used as the basis for negotiations between distributors and traders. The increased standardisation of these arrangements is intended to ensure all traders can compete on an equal footing on each network, and to reduce the cost for traders to start trading on networks, with resulting benefits for retail competition.	There is no requirement for changes to any Authority systems. Implementation involves distributors and traders negotiating the necessary changes to their use of system agreements, prudential requirements, etc.

Section 42(2) requirement	How the requirement is being met	Implementation status
(g) facilitating, or providing for, an active market for trading financial hedge contracts for electricity.	An active hedge market has been provided for, without amending the Code, by encouraging the large generators to adopt more efficient market-making arrangements. An active hedge market enables greater transparency of medium to long term electricity prices for all parties, and enables parties to manage price risk.	Implemented in October 2011. Trading volumes and liquidity have increased greatly and futures prices now providing clear signals about market developments and risks.

Promoting consumer switching

In November 2010, the Authority was provided with a $10.5 million appropriation over 3.5 years (called the consumer switching fund) to promote to consumers the benefits of comparing and switching electricity retailers.

In parallel, the Ministry of Consumer Affairs was provided with a $4.5 million appropriation over the same period to upgrade and promote Consumer NZ's Powerswitch website.

The fund's purpose is to increase retail competition by creating more informed and active electricity consumers and increasing their propensity to switch.

As the Authority's and Consumer Affair's functions in regard to promoting consumer switching are similar, both organisations have been working closely together to deliver on their respective funds objectives.

The Authority has developed a number of programmes to deliver on the funds purpose; the central programme of work being the *What's My Number* information campaign.

The campaign was launched on 29 May 2011 via a multimedia approach including television, radio and print advertising, online channels including social media and outdoor locations such as on the back of buses and billboards.

The marketing campaign has been very successful. The evidence to date indicates that it has had a positive effect on encouraging consumers to shop around for electricity, which in turn has helped increase retail competition. The Authority intends to continue the campaign through to 30 April 2014, when the appropriation ends.

In addition to the campaign the Authority has recently launched a new online pricing tool for business customers.

The Authority is currently working through its Retail Advisory Group to assess the impact of the *What's My Number* campaign, and to consider how the Authority should deliver on its function to promote to consumers the benefits of comparing and switching electricity suppliers after the fund ends on 30 April 2014.

Review of transmission pricing methodology

The Authority inherited from its predecessor, the Electricity Commission, a wide-ranging review of the pricing methodology for allocating the costs of Transpower's electricity transmission grid. The Authority has continued the review because there have been a number of changes affecting the electricity market and grid since the existing pricing methodology came into force.

This is a significant matter for the industry. Transmission pricing involves the allocation across industry participants and consumers of around $800 million for 2012/13. This amount is forecast to rise to over $1 billion per year from 2015/16 as significant new transmission investments are commissioned.

The allocation of transmission costs among parties, especially the costs associated with the HVDC link across the Cook Strait, has been a matter of long-standing contention, with the South Island generators required to pay for it under the current methodology. They have argued they are not the only beneficiaries of the link and so should not pay for all of it. Similarly, major consumers have expressed concern about being required to pay for other transmission investments from which they consider they derive no benefit.

The Authority established a Transmission Pricing Advisory Group (TPAG) composed of industry participants and consumer representatives in early 2011 to develop an agreed approach to allocating transmission costs consistent with the promotion of the Authority's statutory objective. However, the TPAG was unable to reach a consensus view on the allocation of HVDC costs in particular, and thus was not able to make a recommendation to the Authority on the matter.

The Authority decided in late 2011 to approach the matter from first principles, and developed, consulted on and finalised (in May 2012) a decision-making and economic framework for transmission pricing. The framework sets out how the Authority will make decisions about transmission pricing, and focuses on promotion of operational and investment efficiency. The framework provides a hierarchal approach for deciding among transmission pricing options. The hierarchy consists of:

- market-based approaches – charges are established through the interaction of willing buyers and sellers in a workably competitive market
- exacerbators pay – charges recover the costs of externalities from the parties responsible for the externality
- beneficiaries pay – charges are based on estimates of the private benefit from transmission services derived by a party
- alternative charging options – charges that recover costs without distorting use of, or investment in, the grid.

The Authority's decision-making and economic framework was not contentious. Virtually all submitters agreed with the approach proposed by the Authority.

In October 2012, the Authority released the consultation paper *Transmission Pricing Methodology: issues and proposal* for consultation. This proposal applies the decision-making and economic framework to transmission costs for

the purposes of allocating costs amongst electricity market participants. The key elements of the proposal are that:

- Surplus funds resulting from differences in spot prices between nodes (referred to as loss and constraint excess) would be used to offset transmission costs. This is a market approach that formalises current practice and is expected to recover about 5-20 per cent of transmission costs.
- An exacerbators-pay charge levied on the extent to which parties draw reactive power from the transmission grid. This charge is expected to raise about 0.2 percent of total revenue requirements but it improves efficiency.
- A beneficiaries-pay charge determined using actual wholesale market outcomes (referred to as the SPD method). This charge would apply to parties offering to or purchasing from the wholesale market and would be charged to them in proportion to each party's share of private benefits from transmission investments.
- A residual charge would recover the balance of costs, with 50 percent recovered from demand (distributors and direct-connect major users) and 50 percent from generators. This approach is expected to recover about 5-50 percent of transmission costs.

The costs of connecting to the grid would be recovered from connecting parties.

The transmission pricing methodology proposal is based quite substantially on the current methodology but adds some new approaches, especially for targeting who pays when there are clearly economic beneficiaries from the provision of specific assets.

Consultation on the proposal closes on 1 March 2013. Following consultation there will be a four-week period for cross submissions, closing on 28 March 2013. If the Authority decides to introduce a new transmission pricing approach the current target date for implementation is 1 April 2015.

The Authority has yet to receive the considered views of any major party made after they have fully considered all the evidence and attempted to propose and assess alternatives that are consistent with the Authority's decision-making and economic framework. The comments in the media by various parties have reflected their initial and incomplete analysis as many of these parties petitioned the Authority to extend the consultation timeframe to March (or longer) so that they could undertake a complete analysis.

Renegotiation of system operator agreement

The Authority has contestable contracts for all market operation services except for system operator services (the Act specifies that Transpower is the system operator).

The current contract, called the system operator service provider agreement or SOSPA, needs to be updated to bring normal commercial disciplines to key aspects of the services provided to the Authority and market participants. The Authority intends to initiate this process shortly with Transpower.

Other key projects

Electricity market performance reviews

The Authority is planning to publish its second review of electricity market performance in March 2013. The report will review market performance, in particular addressing the competition, reliability and efficiency elements of the Authority's statutory objective.

The first *Electricity market performance: 2010–2011 in review* report was published in December 2011.[8]

Public and stakeholder perception surveys

The Authority is about to conduct its second set of surveys of consumers and stakeholders to assess perceptions of progress against the Authority's statutory objective.

The initial surveys were completed in 2011 and have been used in the Authority's planning and reporting process.[9]

Review of the Code relating to metering

The Code provisions relating to metering have remained essentially unchanged since their introduction in 1994. The Code has now been substantially revised to clarify obligations, remove inconsistencies, and to provide a better basis for the uptake of advanced ('smart') meters. The new Code provisions come into force on 6 June this year.

Implementation of the new Code requires changes to the Authority's registry system and the business systems and processes of around 120 industry participants. The Authority is working closely with the industry to ensure the implementation is completed on time. While the changes are creating some costs for the industry, the new Code is expected to deliver $20 million of net benefit over the next ten years.

Multiple frequency keepers

The system operator seeks to maintain a balance between electricity demand and supply in real time. Fluctuations in either demand or supply can cause frequency disturbances, which the system operator manages by paying certain generators to adjust their output to maintain the frequency within the desired range. The cost of this frequency keeping service typically ranges from $2.5 million to $6 million per month.

The multiple frequency keepers project aims to achieve a more competitive procurement arrangement by enabling more than one generator to provide the

[8] The report is available at: http://www.ea.govt.nz/industry/monitoring/reports-publications/annual-reviews/

[9] The initial surveys and reports are available at: http://www.ea.govt.nz/our-work/plans-and-reports/2012-15/

service at any time.[10] The changes are also expected to enable a wider range of generators to participate in this market.

The system operator is in the process of implementing the necessary control system changes, with operation expected to commence in July 2013 in the North Island and August 2014 in the South Island.

It is expected that the capability of the new HVDC Pole 3 will ultimately enable the establishment of a single frequency keeping market for the country.

Under-frequency management

Unplanned outages of generating plant or parts of the power system can cause a sudden drop in system frequency that cannot be managed by the frequency keeping service.

Events of this type require the operation of instantaneous reserves to bring the frequency back under control. These reserves can be either generating plant that can quickly increase output, or load that can quickly be turned off without affecting the consumer's operations.

For very large events some domestic load can be automatically turned off once the frequency reaches a critical level (using a system known as automatic under-frequency load shedding, or AUFLS).

The Authority is working with the system operator on a comprehensive review of the under-frequency management arrangements. This review is expected to result in changes such as the development of new 'very fast' reserve products and changes to the amount of load connected via AUFLS and how this load is procured.

Settlement and prudential security review

The Code includes arrangements for managing the settlement and security of the sale and purchase of wholesale electricity, ancillary services and financial transmission rights. Participants in the wholesale market are required to provide prudential security to provide the market with confidence they are able to make timely payment for the electricity and services delivered to them.

The Wholesale Advisory Group (WAG) undertook a first principles review of the settlement and prudential security system with the aim of removing any unnecessary barriers to retail entry while maintaining a sufficient level of prudential security for generators.

The Authority is now progressing WAG's recommendations with a view to consulting on Code amendments in April 2013 and implementation during 2014.

Futures market

A key priority for the Authority when it was established was improving the electricity hedge (futures) market in New Zealand operated by the Australian Securities Exchange (ASX).

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10 Frequency keeping is currently procured separately in the North and South Islands, with one generator providing the full range of frequency support required in any one trading period.

The objective is to provide more transparent and robust forward price signals, improved mechanisms for managing spot price risk, and an electricity market that is readily accessible for new entrant generators and retailers.

The Authority has pursued market facilitation measures (as opposed to Code changes) to improve the hedge market. To date these measures have focussed on the introduction of ASX market-making agreements that incentivise the four largest generators to offer a significant volume of futures with a narrow bid/ask spread. The Authority has also produced education material to help consumers better understand the risks of purchasing electricity at spot prices and options for managing those risks.

The Authority has an on-going programme of work to further enhance the futures market.

Since the commencement of the Authority's work aimed at improving the hedge market, it has improved dramatically, to the extent that in recent months the volume of electricity traded in hedge products has reached nearly two thirds of the volume traded in the physical market.

Retailer default

A feature of efficient and durable markets is that suppliers can enter, expand and exit those markets without major disruption being imposed on other suppliers or consumers.

The Authority has undertaken to improve the arrangements governing the exit of retailers to improve their efficiency. The need for this work is heightened by the fact that there are now more than 20 electricity retailers (including subsidiaries and brands) in New Zealand, with four new retailers entering the market since 2010. The growth in the number of retailers increases competitive pressures but also raises the risk of a retailer exiting the market due to financial difficulties.

The Authority's Retail Advisory Group (RAG), comprising retailer, distributor and consumer representatives, has been working on arrangements to facilitate the efficient resolution of a situation where a retailer is not able to meet financial commitments (a retailer default situation). A key part of this process is the seamless transfer of customer's away from a defaulting retailer to other solvent retailers.

The Authority will shortly consult on draft Code amendments to establish a regulated process for ensuring that a defaulting retailer's customers are transferred to another retailer.

Pivotal pricing

In recent times, some generators have offered and set wholesale electricity prices at high levels when their generation must be dispatched to meet electricity demand (referred to as a 'pivotal supplier situation').

High prices are essential when they reflect genuine supply shortages, but are of questionable value if they reflect strategic pricing by generators in localised situations. The key issue with high prices during pivotal supplier situations is that they can undermine confidence in pricing outcomes – and cause efficiency

losses as parties take actions to reduce their exposure to pivotal supplier risk. This in turn can discourage electricity retailers entering certain areas and impede competition.

The WAG is considering possible mechanisms to improve confidence in the competitiveness of wholesale prices during pivotal supplier situations and a discussion paper for consultation will be released shortly.

Review of undesirable trading situation provisions

The Code includes provisions that allow an undesirable trading situation (UTS) in the wholesale market to be remedied. Only situations that cannot be remedied under other provisions in the Code and that may threaten the orderly trading and settlement of the wholesale electricity market can be considered to be a UTS.

The Authority is reviewing the UTS provisions because a number of mainly technical issues arose regarding the application of the Code during the Authority's investigation into whether very high prices in the spot market on 26 March 2011 constituted a UTS.

The UTS review includes:

- the test as to when a UTS has occurred
- whether the scope of the UTS provisions should extend to other markets governed by the Code (e.g. the ancillary services market, the hedge contract market and the retail electricity market), and not just the 'wholesale market for electricity'
- the process requirements in the Code regarding a UTS
- the remedies available to the Authority to correct a UTS.

The Authority anticipates consulting with interested parties regarding the UTS review in March 2013.

Distribution pricing

The Authority has a voluntary set of pricing principles in place that it inherited from the Electricity Commission, which provide guidance on the efficient pricing of distribution services for the purposes of recovering the costs of owning and operating distribution assets. In addition, the Authority has recently finalised a decision-making and economic framework for distribution pricing which sets out how the Authority will make decisions about distribution pricing and is centred on achieving operational and investment efficiency.

The Authority is set to undertake a review of the pricing methodologies of all 29 distributors during 2013, to assess the extent to which their practices align with the principles and are consistent with the framework.

In the last eighteen months or so, the Authority has received numerous requests from disgruntled consumers to investigate and amend the pricing approaches of the central North Island distribution company The Lines Company. More recently, the Authority has been requested to investigate

Vector's recent proposal to change its pricing approaches, especially for commercial and medium sized industrial customers.

The Authority will consider the outcomes of its review before making any changes to distributors approach to pricing.

Planning and Reporting

The Authority will provide you with the draft Statement of Intent, covering the period 1 July 2013 to 30 June 2016, for consideration in March 2013.[11]

The Authority also expects to publish a more detailed work programme in July.

The current Statement of Intent is included as **appendix F**.

The most recent Annual Report is included as **appendix G**.

The Authority provides quarterly reports to you against its published Statement of Intent and work programme (**appendix E**).

Board, Advisory Groups and Management

Authority members

The Authority Board comprises between five and seven members appointed by the Governor-General, on the recommendation of the Minister. Members hold office for a term of up to 5 years and may be reappointed.

The Board members are: Dr Brent Layton (Chair), Susan Paterson, Elena Trout, all appointed until 31 October 2015, and David Bull and Hon Roger Sowry, both appointed until 31 May 2017. Their profiles are provided in **appendix A**.

Rulings Panel, Security and Reliability Council and Advisory Groups

Rulings Panel

The 2010 Act continues the Rulings Panel (the industry dispute resolution and disciplinary body established under the Electricity Governance Regulations 2003) and sets out its membership, functions and funding arrangements.

The Governor-General appoints the members of the Rulings Panel.

The Rulings Panel members are: Peter Dengate Thrush (Chair), Geraldine Baumann (Deputy Chair), Susan Roberts, Nicola Wills, and John O'Sullivan.

[11] The requirement for the Authority to provide a draft SOI is included in section 145 of the Crown Entities Act 2004 (http://www.legislation.govt.nz/act/public/2004/0115/latest/DLM329631.html?search=ts_act_crown+entities_resel&p=1&sr=1)

Security and Reliability Council and Advisory Groups

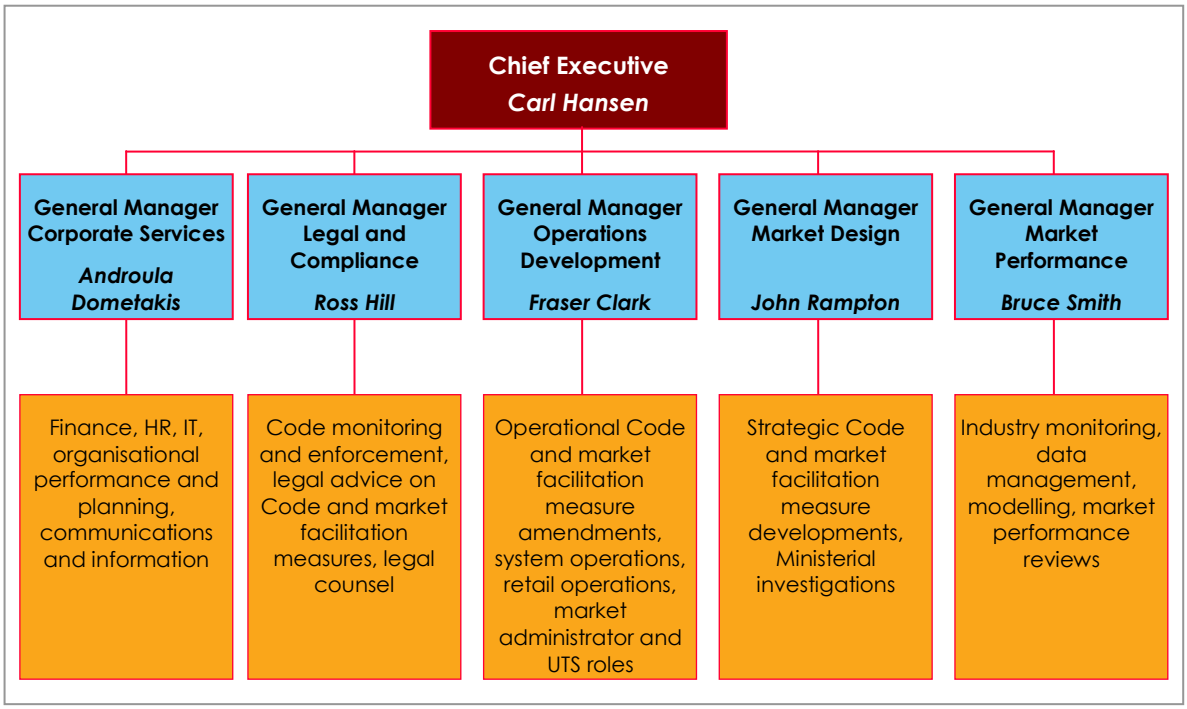
The Act requires the Authority to establish the Security and Reliability Council (SRC) and at least one other advisory group. It also requires the Authority publish a *charter on advisory groups,* which was done on 14 February 2011.

The SRC was established in March 2011. Its function is to provide independent advice to the Authority on the performance of the electricity system and the system operator, and on reliability of supply issues.

The members of the SRC are: Kevin Thompson (chair), Dennis Barnes, Albert Brantley, Terrence Currie, Vince Hawksworth, David Russell, Patrick Strange, Bruce Turner, and Erik Westergaard.[12]

The Authority has established two standing advisory groups, the Wholesale Advisory Group (WAG) and Retail Advisory Group (RAG). James Moulder is chair of WAG and Peter Allport is chair of RAG. Other members are listed in **appendix B**.

Organisational structure and management



12 The terms of Albert Brantley, Patrick Strange and Bruce Turner expire on 31 March 2013 and the Authority will be calling for nominations for these positions in early February.

Appendices

Appendix A: Board and Chief Executive Profiles

Appendix B: Advisory Group members

Appendix C: *Electricity in New Zealand* publication

Appendix D: 2013/14 appropriation consultation report

Appendix E: 2012/13 Work Programme

Appendix F: 2012–2015 Statement of Intent

Appendix G: 2011/12 Annual Report

Appendix A: Board and Chief Executive Profiles

Authority Board

Dr Brent Layton (Chairperson)

Dr Layton is a former senior fellow and chief executive of the New Zealand Institute of Economic Research (NZIER). He has been a director or chairman of organisations in sectors as diverse as banking and finance, health, scientific research, electricity, food processing, transport and information technology.

As a consultant, Dr Layton's work has spanned macro and microeconomics and corporate finance. Much of his work has involved regulatory economics and responses to regulatory change.

Dr Layton also chaired the Electricity Technical Advisory Group (ETAG) that, with the assistance of the Ministry of Economic Development, undertook the 2009 Ministerial Review of the electricity sector.

David Bull

Mr Bull's experience in the New Zealand electricity system includes 21 years as a power system engineer at the Electricity Corporation of New Zealand (ECNZ) and predecessor organisations, and more recently a term as a board member of the Electricity Commission.

He is experienced in central government processes and stakeholder and community relationships, with five years as General Manager responsible for Local Government and Community Services in the Department of Internal Affairs and 15 years as a Wellington City Councillor or Wellington Regional Councillor.

Mr Bull's governance and commercial experience included chairing numerous council committees, as a board member of the New Zealand Fire Service, Wellington Polytechnic Council, and Wellington International Airport Ltd.

Mr Bull and his wife own and operate a vineyard and winery in Martinborough.

Susan Paterson

Ms Paterson has been a professional director for the past 15 years, and has broad experience in business and management. Currently, she is Chair of the Airways Corporation and Chair of Theta Systems Ltd, Deputy Chair of Abano Healthcare Ltd with other current directorships including Housing NZ, Goodman Property Trust, and Les Mills NZ Ltd.

She has held directorships at Transpower, EECA, Ngawha Generation, Auckland Regional Holdings, and Ports of Auckland. Ms Paterson also worked as Project Director for the Wholesale Electricity Market Development Group (WEMDG), which led to the establishment of the wholesale electricity market in 1996.

Hon Roger Sowry ONZM

Mr Sowry has extensive experience in the public sector and across a wide range of issues, and served on the board of the Electricity Commission.

He was a Member of Parliament from 1990 to 2005. From 1996 to 1999 he was Minister of Social Welfare and Associate Minister of Health. When he retired from Parliament in 2005, he became Chief Executive of Arthritis New Zealand.

Mr Sowry is currently a private consultant with Saunders Unsworth, specialising in the management of public policy issues. He is also Chair of the WELTEC and Whitireia Polytechnic Councils, and is a director of TeamTalk.

Elena Trout

Elena Trout is a professional civil engineer and has extensive experience as a manager, project director, consultant, and company director. She has specialised in change management, asset management, contract procurement, and major project development and implementation.

Ms Trout's experience of the New Zealand electricity sector and its governance comes from almost six years as a director of Transpower. She is also currently an elected member of the Institution of Professional Engineers New Zealand (IPENZ) board and director of Northland Port Corporation (NZ) Ltd and has recently been appointed to the Energy Efficiency and Conservation Authority (EECA) Board.

Chief Executive

Carl Hansen

Before being appointed inaugural Chief Executive of the Authority, Mr Hansen was extensively involved in the evolution of the New Zealand electricity market, as a senior executive and director, independent advisor and economist. This background includes chairing several sector technical and advisory groups and acting as principal advisor to a number of industry bodies.

For most of the past decade, Mr Hansen has been part of the market services company M-co, originally as Chief Economist and most recently as Chief Executive. Mr Hansen also worked for the Law and Economics Consulting Group where he provided strategic and regulatory advice to utility and infrastructure clients.

A Masters graduate with first class honours in economics from the University of Michigan, Mr Hansen's prior roles span a wide range of policy development and operations at the New Zealand Treasury and Reserve Bank, and undertaking policy analysis at the Business Roundtable

Appendix B: Advisory Group Members

In accordance with the Electricity Industry Act 2010, the Authority has established the Wholesale Advisory Group (WAG) and Retail Advisory Group (RAG) to provide independent advice to the Authority on the development of the Code and on market facilitation.

Wholesale Advisory Group (WAG)

James Moulder (Chair)
Neal Barclay
John Carnegie
Graeme Everett
Scott Harnett
Stephen Peterson
Bruce Rogers
Richard Spearman
John Woods

Further information is available at: http://www.ea.govt.nz/our-work/advisory-working-groups/wag/

Retail Advisory Group (RAG)

Peter Allport (Chair)
Dene Biddlecombe
Sue Chetwin
Sarah Free
Anne Herrington
Bill Highet
Andrew McLeod
James Munro
Nathan Strong

Further information is available at: http://www.ea.govt.nz/our-work/advisory-working-groups/rag/

Call for nomination for advisory group chairpersons

The terms for the existing Wholesale Advisory Group and Retail Advisory Group chairpersons are due to expire on 31 March 2013. The Authority is calling for nominations for chairs for these groups, with their term commencing on 1 April 2013 for a two-year period. Nominations close on 1 February 2013.

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