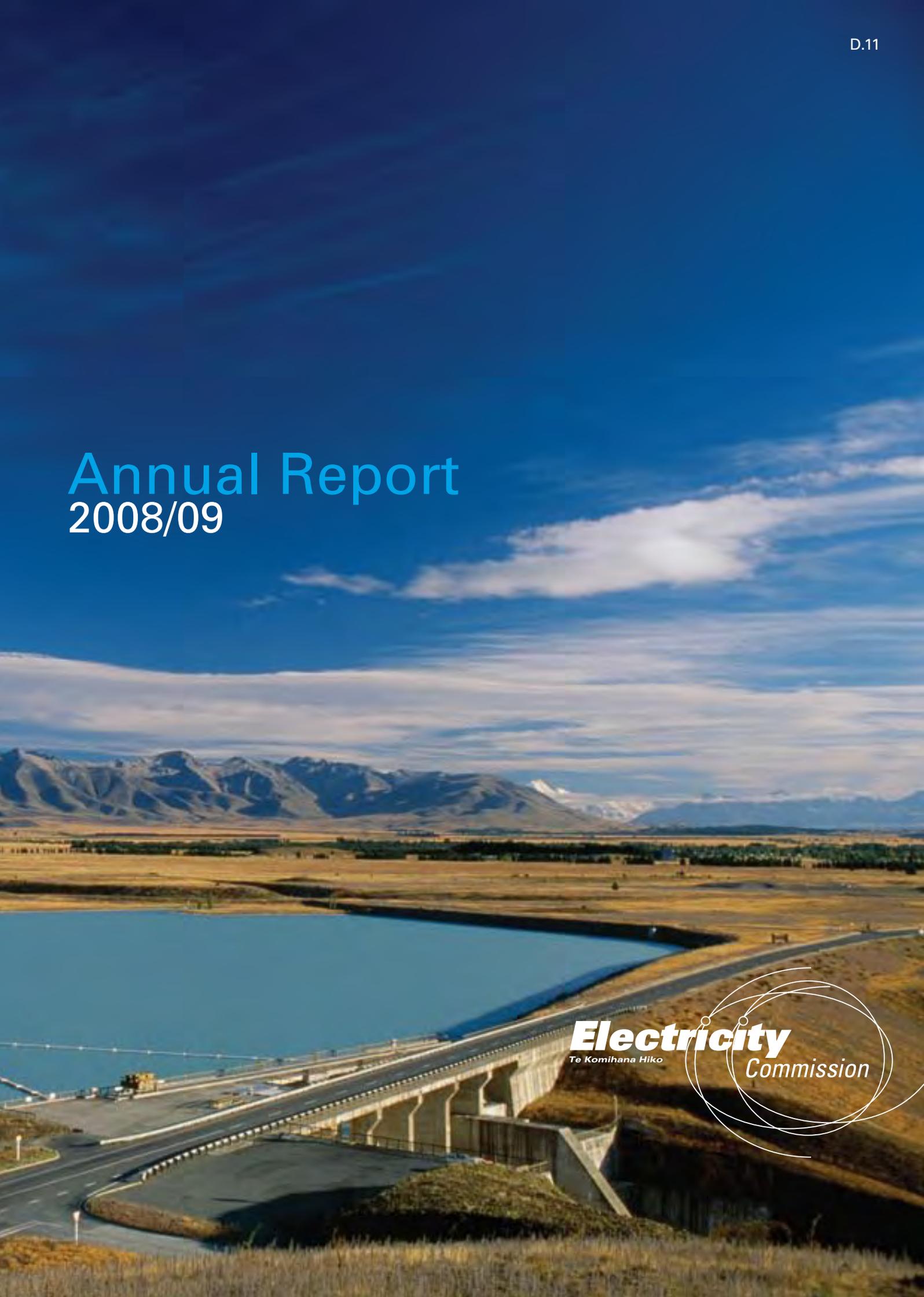


# Annual Report 2008/09



**Electricity**

Te Komihana Hiko

Commission



Cover photo: Lake Ruataniwha and Ben Ohau  
Range, with Mt Cook far right, Mackenzie Country.  
Part of Meridian Energy's Waitaki Hydro System.

Report of the  
**Electricity Commission**  
*Te Komihana Hiko*  
for the year ended 30 June 2009

Presented to the House of Representatives  
in accordance with section 150 of the Crown Entities Act 2004

**Purpose of this Annual Report**

This Annual Report is the Commission's formal report to Parliament on its results for the 1 July 2008 to 30 June 2009 financial year.

The report contains information required by sections 150–155 of the Crown Entities Act 2004 and section 172ZM of the Electricity Act 1992.

Further information about the Commission and its work is available from the website: [www.electricitycommission.govt.nz](http://www.electricitycommission.govt.nz)

# Annual Report outline

## Report Parts

### Chair's Foreword

### Part one—review of operations

Information about key issues and achievements during the year

### Part two—report against objectives

**Electricity Act 1992:** s172N principal objectives and specific outcomes

#### Commission objectives

Required by the **Crown Entities Act 2004**

### Part three—performance information

**Statement of service performance:** Output classes and main performance measures

**Financial statements:** key financial information and measures

Required by the **Crown Entities Act 2004**

### Part four—report against the *Government Policy Statement on Electricity Governance (GPS)*

Information about the Commission's achievements against GPS requirements

Required by the **Electricity Act 1992**

### Part five—other information

Required by the **Crown Entities Act 2004**

## Key Information

**Electricity indicators**—high-level information about the state of the electricity sector

**Impact indicators**—indicators relevant to the impact that the Commission's activities have on the results (outcomes) being sought. Other influences will also affect results

**Statement of service performance**—output results for which the Commission is accountable

**Financial statements**—financial results for which the Commission is accountable

**GPS performance standards**—covering all GPS expectations for which the Commission is accountable

**Operational performance measures**

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## Foreword

2008/09 was a year of solid achievement for the Commission.

It was particularly gratifying to be able to approve several important additions to the transmission grid. A number of these raised novel considerations for the grid investment rules.

For example, Transpower's proposal to replace Pole 1 of the HVDC link was the first occasion a significant upgrade replaced an existing 'line'. The question of the optimum timing therefore needed careful evaluation. In September 2008, following public hearings, the Commission approved this \$672 million investment.

The North of Auckland and Northland upgrade is almost as significant and proved even more controversial. This \$473 million project involves a new cable from Pakuranga to Penrose and underneath the Auckland central business district (using a tunnel owned by Vector) and across the Auckland Harbour bridge to Albany. On this occasion the Commission needed to consider the potential impact of new generation planned north of Auckland at Rodney. The Commission reached the initial view that the project did not meet the grid investment test, but reversed this decision following hearings in Auckland. In particular, it became clear that Genesis was unlikely to make a decision to proceed with the Rodney power station within a timeframe that could make its proposed new plant a realistic alternative to the transmission upgrade. Accordingly the Commission approved the proposal in April 2009.

In addition, the Commission approved the Wairakei Ring (a \$141 million upgrade to the line between Wairakei and Whakamaru), which will facilitate new geothermal investment in the Bay of Plenty. This was approved in record time, following Transpower's consultation with the local community, and in advance of the generation investment being committed. A new \$19 million line between Reefton and Dobson will meet growing demand in the West Coast of the South Island. A number of smaller upgrades were also approved.

These approvals brought the total grid investment approved by the Commission to in excess of \$2.6 billion dollars. This compares to the current book value of Transpower's grid assets of \$2.5 billion. In other words, the value of the transmission grid is set to double in the next few years (along with the portion of electricity charges that goes to meet transmission costs), highlighting the importance of the review process that the Commission undertakes, in effect on behalf of consumers.

If ensuring that the cost of electricity is reasonable is important to consumers, so too is guaranteeing security of supply. In September the Commission adopted a new security standard to address, for the first time, the issue of peak capacity. Previously the security standard against which the Commission each year formally evaluated the adequacy of future capacity, had addressed the adequacy of the energy margin only. The Commission will continue to use energy margins of 17 per cent across New Zealand as a whole and 30 per cent in the South Island to assess the system's security should either of the next two years prove dry. In addition it will look for a capacity margin of 780MW in the North Island above expected peak demand.

The Commission typically undertakes its formal evaluation of the need to procure reserve generation or demand capacity at the end of each calendar year. In addition, last year, the Commission reviewed the events of the 2008 winter. It used two independent advisors, David Hunt and John Isles. As they reported, the winter of 2008 was the first time the present security settings had been tested in earnest. From early November 2007 to mid-June 2008, hydro inflows were the lowest on record since 1931. Yet the reviewers found that the *"relatively young market withstood considerable stress and maintained uninterrupted supply of electricity to consumers."*

The Winter Review made a number of recommendations, notably that the market rules be changed to ensure decision-makers face the cost to consumers of any forced demand curtailment, and that the present reserve energy scheme be discontinued or modified. The Commission incorporated this advice into its own ongoing review of the design of the electricity market.

In May 2009, the Commerce Commission concluded the investigation it had begun in August 2005 under Part 2 of the Commerce Act 1986. This examined whether parties in the electricity industry had breached the Act by taking advantage of a substantial degree of market power for an anti-competitive purpose, or by entering into arrangements that had the purpose or effect of substantially lessening competition.

The Commerce Commission found no breach of section 36 of the Commerce Act, but warned one party that its behaviour was at risk of breaching section 27 of the Act. More significantly, the Commerce Commission found that a number of participants in the industry had, and had exercised, unilateral market power. The Commerce Commission's findings were based on advice from Professor Wolak of Stanford University. His work and the Commerce Commission's report have also been incorporated into the Electricity Commission's work programme.

By year end this work programme had coalesced around a group of inter-related projects—the Market Development Programme (MDP)—including:

- Transmission and distribution pricing reviews
- Locational hedges
- Scarcity pricing and compulsory contracting
- The future of the Whirinaki plant
- Market monitoring and information provision
- Demand-side participation (including property rights to load management, demand-side bidding and forecasting, and dispatchable demand)
- The instantaneous reserves and frequency keeping markets.

In each case the Commission was working towards, or had already embarked on, high-level consultation, to be followed by detailed design of potential rule changes, which in turn would require formal cost/benefit analysis of options and further consultation. In sum, this programme is likely to take the electricity market beyond its present structure and performance, which largely reflects the original design, dating back to the mid 1990s.

Coincidentally, the change of government at the end of 2008, led in April to a formal review of the performance of the electricity market. The review is considering market design, regulation and governance issues. The Minister of Energy and Resources (the Minister) announced that it would take the current market design as a starting point and focus on improvements to this model. The Commission welcomed the review and was pleased to have the opportunity to contribute to this process.

In April 2009 the Commission welcomed Hon. Roger Sowry to its Board. In August 2009 the Board farewelled Hon. Stan Rodger, and I would like to thank him for his considerable contribution.

The Board took the opportunity last year to review and ultimately reconstitute its advisory groups. In May 2009 the Minister published a new Government Policy Statement on Electricity Governance (GPS). Unlike its predecessor, the new GPS made no reference to advisory groups. However, with some changes to operating arrangements for greater effectiveness, the Commission is keen to continue to use them as a means of keeping well informed of industry perceptions and concerns. Accordingly, late in the financial year it resolved to establish four advisory groups in place of the previous five, and to use ad hoc project teams for specific detailed tasks.

The Commission's electricity efficiency work has continued to yield valuable reductions in energy demand at a cost greatly below the marginal cost of new generation, thus yielding net savings to electricity consumers. New programmes were initiated in the areas of industrial motors and efficient lighting, where the Commission's previous research had identified potential savings.

It has been a pleasure to work with such a dedicated staff, such competent management and such a professional board. At the time of writing the Commission awaits the outcome of the Ministerial review with confidence in the contribution that sound regulation will continue to make to the generation and delivery of secure and affordable electricity.



**David Caygill**  
Chair



**Part one**  
review of operations

## Review of operations

The review of operations outlines some of the major challenges and achievements during the 2008/09 year. Many of these events have influenced the Commission's 2009/10 focus on development of the wholesale and retail electricity markets.

## Security of supply

The 2008 winter-supply situation was the most significant event of the year for the sector. In autumn, complications occurred in the North Island due to low levels in Lake Taupo and water temperatures constraining generation on the Waikato River. In early winter, South Island lake levels also fell and relief only came with rain in late July.

Managing the supply situation—one of the tightest New Zealand has seen—required considerable, sector-wide effort. The security of supply policy had been developed through extensive consultation, but this was its first serious test, in practice.

The winter's events highlighted a number of issues, including tension between the non-mandatory security of supply policy and mandatory market rules, and commercial imperatives. Concern also arose about the use of Whirinaki to assist short-term security and its longer-term market influence. Major consumers faced the situation where many were hedged, but faced making levy payments so load could be purchased to assist in managing any shortages. Supply concerns and price rises were a significant issue for consumers at large.

Collectively this meant an assessment of events, taking into account a broad spectrum of views, was essential. In September 2008 the Commission initiated a review, with terms of reference focused on policy settings and incentives for market participants.

The *Review of 2008 Winter* (Winter Review) was an extensive exercise with input being obtained from more than 25 different parties spanning electricity users and consumer groups, suppliers and other interested stakeholders. The report was released to contributors for comment in November 2008 and publicly released in January 2009.

Prior to initiating the Winter Review, the Commission had commenced work on a Market Design Review that was geared to include any findings from the Commerce Commission investigation into possible anti-competitive behaviour in the electricity market. This market design work and the completed Winter Review meant all market-related work needed to be reprioritised. Three principles guided the reprioritisation:

- Reinforcing security of supply
- Constraining costs in the value chain, for example, increases in auxiliary services costs
- Strengthening and supporting competition.

This consolidation and re-emphasis produced the Commission's Market Development Programme (MDP), which by year-end had acquired substantial momentum as the Commission's major development focus. The broad reach of the initiative incorporates extensive involvement of industry, consumer and other stakeholder interests through a series of in-depth consultation processes running into 2009/10, and has been paced to take account of decisions arising from the Ministerial Review of Electricity Market Performance.

As well as the Winter Review, the year saw several other security-of-supply initiatives. A new *Security of Supply Policy*, based on an independent policy review and extensive consultation was released in October 2008. Two important changes involved setting:

- A national winter energy margin minimum target of 17 per cent across New Zealand (and 30 per cent for the South Island), representing the margin of generation above demand
- Introducing a winter capacity margin of 780 MW.

The policy will evolve with market developments relating to risk management.

Updating of the *Emergency Response Plan* resulted in creation of the Supplyline website, providing information to help medium-to-large businesses monitor the security of the power system, interpret risk level and plan mitigation activity. The website includes:

- Assessment of overall security status
- Explanation of key factors, such as hydro storage, risk curves, recent inflows, recent demand, HVDC transfers, system constraints and fuel supplies
- Background on the management of security of supply
- Links to key information about the electricity industry, weather and climate, and how to conserve electricity or use it more efficiently
- An email update service.

## Transmission investment

Substantial progress was made during the year on grid investment proposals put forward by Transpower. A record amount of new investment has been approved, and two significant judicial review challenges have been resolved.

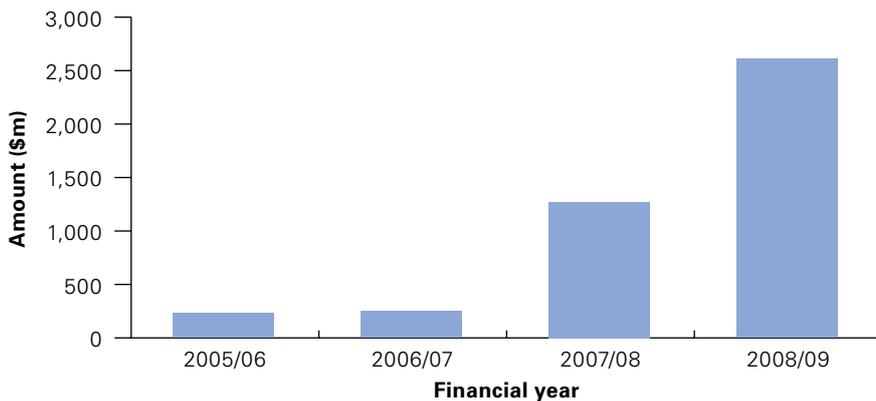
The judicial reviews were initiated in 2007/08 and concluded in 2008/09. They concerned challenges to the Commission's decisions to approve Otahuhu substation investment and the North Island Grid Upgrade. Both were decided in the Commission's favour and were useful in clarifying the law around relatively new rules for grid investment.

In 2007/08 the Commission approved nearly \$1 billion in investment. This was followed by over \$1.3 billion in approvals in 2008/09, as listed below:

| 2008/09 transmission approvals                                  | \$ million     |
|---|----------------|
| North Auckland and Northland                                    | 473.0          |
| HVDC  | 672.0          |
| West Coast Upgrade Project                                      | 19.0           |
| Wairakei Ring Investment Proposal                               | 141.0          |
| Maungatapere Bus Security Investment Proposal                   | 4.1            |
| Wellington 110kV Interconnection Investment Proposal            | 9.6            |
| Woodville-Mangamaire-Masterton Transmission Investment Proposal | 17.4           |
| Redclyffe Bus Security Investment Proposal.                     | 1.9            |
| <b>TOTAL</b>  | <b>1,338.0</b> |

Since the transmission framework was established the Commission has approved a total of over \$2.6 billion in new transmission investment. This is summarised in figure 1.

**Figure 1: cumulative grid investment decisions to 30 June 2009, by year of approval**



Source: Electricity Commission

## Electricity efficiency targets achieved

Despite a challenging economic situation, the Commission's electricity efficiency programmes have continued to produce strong results. Total electricity savings equivalent to 444 GWh per annum to 30 June 2009 means that the Commission has exceeded its 2008/09 target and is well on track to exceed the target of 450 GWh by the end of 2009/10. This result has been achieved at a much lower cost than projected, with the appropriation being substantially underspent.

This level of savings is almost equivalent to the amount of electricity consumed annually by a city the size of Rotorua.

Key results to 30 June 2009 were:

- 444 GWh per annum of electricity savings
- 195.8 MW savings in electricity use at peak times
- 88.9 kilotonnes of CO<sub>2</sub> saved from electricity efficiency programmes
- \$32 million savings to consumers for 2008/09
- \$287 million present value of total electricity savings over the term of the programmes
- Average cost to the Electricity Commission of programmes of less than 1 cent per kWh (compared with the long run cost of new generation of 8.5 cents per kWh).

## Rule development, market and market services

Rule-related activities are at the core of the Commission's functions. Work in 2008/09 included:

- 13 Rule changes
- 22 Briefings and workshops
- 37 Consultations.

During the year, the Advisory Group framework was refreshed to enable more focused application of appropriate knowledge and skills to particular situations. The issue had been encountered of

rules, in development, getting to a stage where specific technical knowledge would greatly assist their completion. However, as constituted, Advisory Groups did not necessarily contain the range of specialised expertise to cover multiple requirements, or relevant knowledge was confined to one or two members, with others excluded from participation. The refreshment process reduced the number of Advisory Groups to four and provided for access to skills and knowledge from outside the groups, through greater involvement of time-bound task groups in particular for rule-change activity.

In addition to Advisory Groups, a number of technical groups were utilised during the year. These included the Code of Practice Review Panel, Lighting Efficiency Group, Loss Factor Review Panel, and the Reconciliation Implementation Project Team.

Briefings and workshops continue to be a central part of the interaction with the sector and consumers, and are particularly useful in support of consultation in enabling cross-dialogue and clarification of both the available options and the respective parties' positions. Experience shows this makes a very valuable contribution to the strength of submissions received and other input to the rule and decision-making process.

The rule book, and parts A, C, D, E, G and H in particular, continued to get attention. Sweeping up minor changes for retail reconciliation, following last year's complete review of the reconciliation process was one important activity. It was testimony to the high level of cooperation across the sector that this high-risk project was completed smoothly.

Publication of risk management contract (hedge) information was a major step in creating greater transparency for all parties. Careful work was required to enable price and quantity details to be available without identifying parties to individual transactions.

Considerable background work completed in the system operations area will enable steps to be taken towards Automated Under-Frequency Load Shedding (AUFLS) and under-frequency load shedding rule changes in 2009/10. It is apparent that fewer built-in margins and increasing technical complexity is making rule development in the system operations area more complicated.

Technology development and complex interactions in the sector are having a major impact on other areas of work. Examples included:

- More than 115 attendees at the Commission's advanced metering conference
- Substantial engagement with stakeholders regarding property rights for load management
- Distributed generation regulation discussion and information dissemination
- Discussion between retailers and embedded network owners to clarify a range of issues
- Coordinating operational processes following a network company sale to avoid negative impact on consumers.

This type of work does not lead directly to rule changes, but is an important aspect of facilitating progress in the sector without resorting to regulation.

## Governance and enforcement

As part of its compliance responsibilities, the Commission investigates alleged breaches of regulations and rules. In very serious cases, or where resolution is unable to be found, matters are dealt with by the independent Rulings Panel. Managing rule breach notifications was a significant commitment in 2008/09, with more than five notifications received a week. Enforcement activity included:

- 285 rule-breach notifications
- 267 rule-breach notifications closed during the year
- 64 warning letters issued
- 14 investigations commenced

- 7 investigations concluded (settlement)
- 3 investigations concluded (no settlement)
- 16 exemptions issued.

In total, work has been completed on 1,089 rule-breach notifications between 2003 and 30 June 2009. The Commission is exceeding its timeliness performance standards, closing 72 per cent of notifications within three months and 93 per cent within six months of notification.

During 2008/09 the first stage of the Compliance Framework Review was completed. This work formally defined compliance philosophy, which had developed as a matter of practice and been informally communicated.

As a result of the Compliance Framework Review, the following directions for future development have been agreed with the sector:

- Continuing to build transparency of the compliance process and its outcomes
- Emphasising learning opportunities arising from the compliance process
- Adding clarity to the interpretation of the rules and regulations
- Streamlining the compliance process and tightening timelines.

The second compliance conference was held in August 2008 and, to further strengthen the interface with participants, the Commission started publishing market updates following each EGR Committee meeting, providing meeting information, compliance statistics and compliance case studies.

## System Operator Service Provider Agreement

The System Operator, a business unit of Transpower, provides services for the real-time operation of the Grid—a complex exercise in a long, narrow country such as New Zealand.

A *System Operator Service Provider Agreement* (SOSPA) was agreed between the newly-constituted Electricity Commission and Transpower in December 2003 and took effect in March 2004. In 2006, Transpower sought to renegotiate the SOSPA, including a fee increase of over \$10 million from 2009/10. A major driver of the proposal was the cost of Transpower's new Market Systems Project (MSP). The MSP was a significant upgrade of software and computer systems for operating the grid in real-time.

After substantial discussion and negotiations, the System Operator agreed to a fee increase for 2009/10 of \$5.080 million, taking the cost to \$26.431 million. The contract price rises to \$29.948 million in 2011/12 when the full cost of operating the new MSP system is met under the SOSPA. The proposed cost increases were included as part of the formal appropriation consultation with levy payers. The new MSP system went live on 21 July 2009, and the Commission and Transpower signed the new SOSPA on 12 August 2009.

Now that the MSP has been completed, the System Operator and the Commission can progress some important projects that should deliver net benefits to New Zealand worth tens of millions of dollars. These projects require System Operator resources that were not available while the MSP was being developed.

In all, this was a challenging year against the backdrop of possibly the most serious hydro conditions the country has experienced. I would like to thank market participants, consumers who contributed in many ways, the Commission Board, and especially Commission staff for many positive contributions in a difficult operating environment.



**Mervyn English**  
General Manager

**Part two**  
report against objectives

## Commission objectives

The Crown Entities Act 2004 requires the Commission to set out its objectives and information on the results it is seeking.

The Commission's objectives were set out in the Statement of Intent (SOI) for 2008–2011. The Commission objectives for 2008/09 were:

1. Security of supply
2. System stability
3. Fair and efficient markets
4. Environmental sustainability and efficient use.

Information in this part of the Annual Report is grouped under **Commission objectives**—the high-level outcomes (or results) that the Commission is seeking to influence.

The Commission has identified a number of **electricity indicators**. These provide information on the state of the high-level outcomes. They are not within the Commission's control but influence decisions on work priorities that the Commission may undertake in order to improve the overall results for New Zealand. It is not always possible to determine cause and effect on changes to these indicators as external factors are important, for example the changing balance of use of electricity and other energy sources.

The Commission has also identified **impact indicators** for each objective. While influenced by the external factors and the actions of others, the impact indicators provide information on the difference that the Commission is making for New Zealand. The impact indicators relate to the contribution to outcomes of the work that the Commission does. The Commission's work is detailed in parts three and four of this Annual Report.

Figure 2 illustrates how indicator information is used by the Commission.

The SOI includes long-term indicators. The Commission reviewed these indicators for its 2009–2012 SOI. The review drew on information on the Government's priorities, the indicator results to date, and a review of other strategic issues. A further review is being undertaken as part of the 2010/11 planning cycle.

**Figure 2: how indicator information is used**

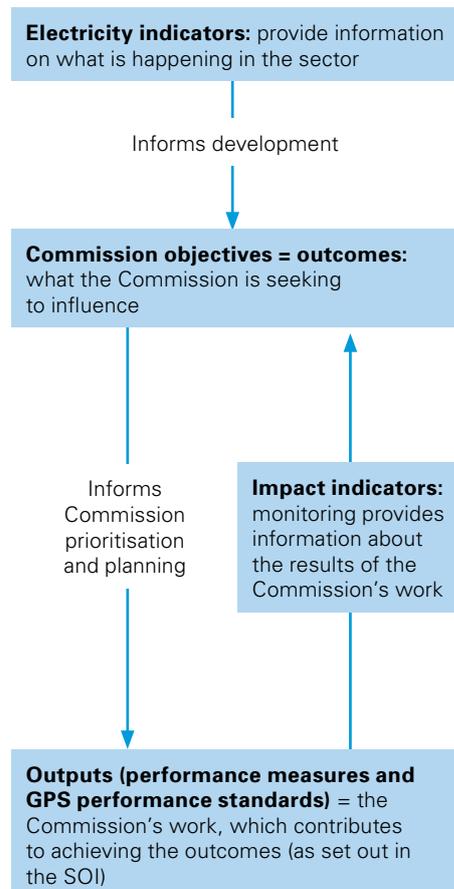


Figure 3 shows the links between the Commission objectives and the principal objectives and specific outcomes set out for the Commission in the Electricity Act 1992 (the Act).

**Figure 3: Commission objectives—links with the principal objectives and specific outcomes in the Electricity Act 1992**

| PRINCIPAL OBJECTIVES AND SPECIFIC OUTCOMES (Section 172N)  | COMMISSION OBJECTIVES |                     |                               |   |
|--|-----------------------|---------------------|-------------------------------|---|
|  | 1. SECURITY OF SUPPLY | 2. SYSTEM STABILITY | 3. FAIR AND EFFICIENT MARKETS | 4. ENVIRONMENTAL SUSTAINABILITY AND EFFICIENT USE |
| <b>Principal objectives</b>  |                       |                     |                               |   |
| 1. The principal objectives of the Commission in relation to electricity are:  |                       |                     |                               |   |
| a. to ensure that electricity is produced and delivered to all classes of consumers in an efficient, fair, reliable and environmentally sustainable manner   | ✓                     | ✓                   | ✓                             | ✓   |
| b. to promote and facilitate the efficient use of electricity  | ✓                     |                     | ✓                             | ✓   |
| <b>Specific outcomes</b>   |                       |                     |                               |   |
| 2. Consistent with those principal objectives, the Commission must seek to achieve, in relation to electricity, the following specific outcomes:   |                       |                     |                               |   |
| a. energy and other resources are used efficiently   | ✓                     |                     | ✓                             | ✓   |
| b. risks (including price risks) relating to security of supply are properly and efficiently managed   | ✓                     | ✓                   |                               |   |
| c. barriers to competition in the electricity industry are minimised for the long-term benefit of end users  | ✓                     | ✓                   | ✓                             |   |
| d. incentives for investment in generation, transmission, lines, energy efficiency and demand-side management are maintained or enhanced and do not discriminate between public and private investment   | ✓                     | ✓                   | ✓                             | ✓   |
| e. the full costs of producing and transporting each additional unit of electricity are signalled  |                       |                     | ✓                             |   |
| f. delivered electricity costs and prices are subject to sustained downward pressure   |                       |                     | ✓                             | ✓   |
| g. the electricity sector contributes to achieving the Government's climate change objectives by minimising hydro spill, efficiently managing transmission and distribution losses and constraints, promoting demand-side management and energy efficiency and removing barriers to investment in new generation technologies, renewables and distributed generation | ✓                     |                     | ✓                             | ✓   |

## Objective 1—security of supply

Security of supply is achieved when the electricity system (generation, transmission and distribution) can meet current demand and reasonably foreseeable demand. Ongoing investment in electricity infrastructure is needed to meet reliability requirements in the face of growing demand and changing generation and use patterns.

The Commission does not control generation, transmission or distribution investment. It contributes to security of supply by:

- Providing information about future demand and the needs of the electricity system
- Ensuring effective operation of markets, resulting in efficient use of resources
- Facilitating timely processes and appropriate decisions for economic grid investment
- Monitoring and facilitating the management of generation supply risks.

### Electricity indicators: *security of supply*

Security of supply electricity indicators cover both the amount of electricity able to be generated and the reliability of the transmission and distribution systems.

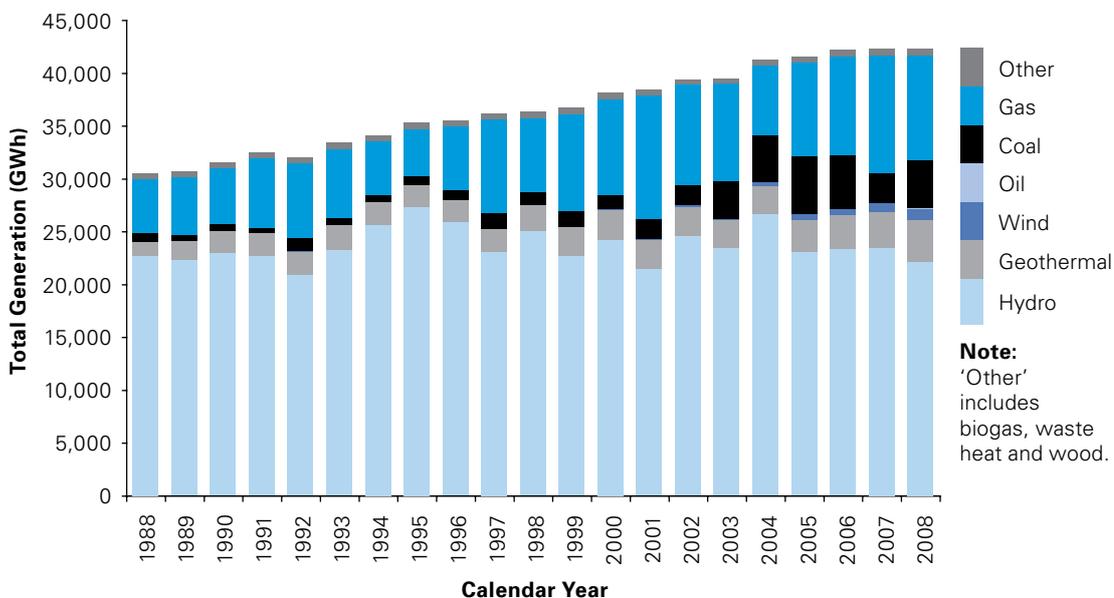
Some variation is expected in renewable generation due to the effect of seasonal variation on hydro inflows and storage particularly, and the high proportion of renewables coming from hydro sources. For example, the dry period leading into the 2008 winter resulted in higher use of non-renewable generation.

Figure 4 shows generation trends since 1988. Recent data shows three key trends:

- A six-year trend of substantially increased reliance on coal fired generation
- A five-year trend of increased wind generation, however this is still a relatively minor source of generation
- A three-year trend of relatively static total generation.

The end of the Government's original Maui gas contract has translated into increased cost of gas-fired generation.

**Figure 4: net electricity generation by fuel type**



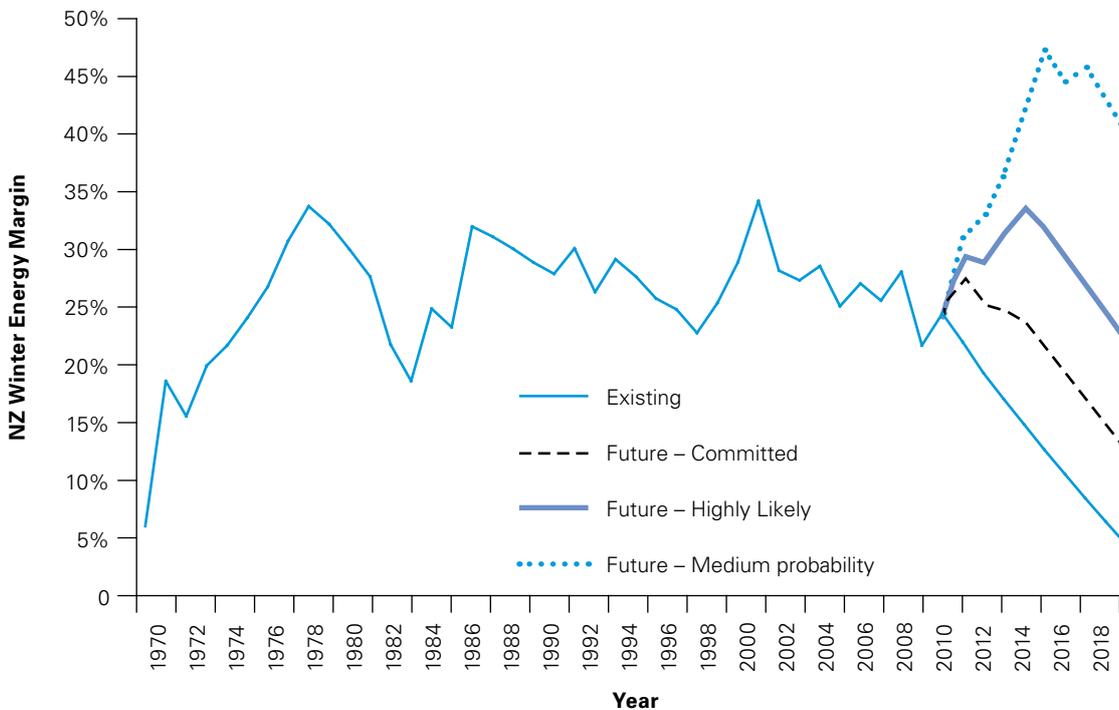
**Source:** Ministry of Economic Development, Energy Data File, July 2009

The Commission carries out annual assessments of security of supply of electricity generation in line with its security of supply policy. This information is used to determine whether, or to what extent, the Commission should intervene in the market to purchase reserve energy capacity to ensure adequate energy margins (see impact indicator 2, page 21).

Figure 5 shows the estimated New Zealand winter energy margin from the most recent assessment.

The pattern of security margins is 'lumpy' due to the large scale nature of most generation investment. The margin increases when a major generation plant comes on-line, then gradually declines leading up to the next major generation plant coming on-line.

**Figure 5: estimated NZ winter energy margin**



**Source:** Electricity Commission (historical data from Market Design Review Issues Paper 2007, projections from the 2008 Annual Security Assessment 2008)

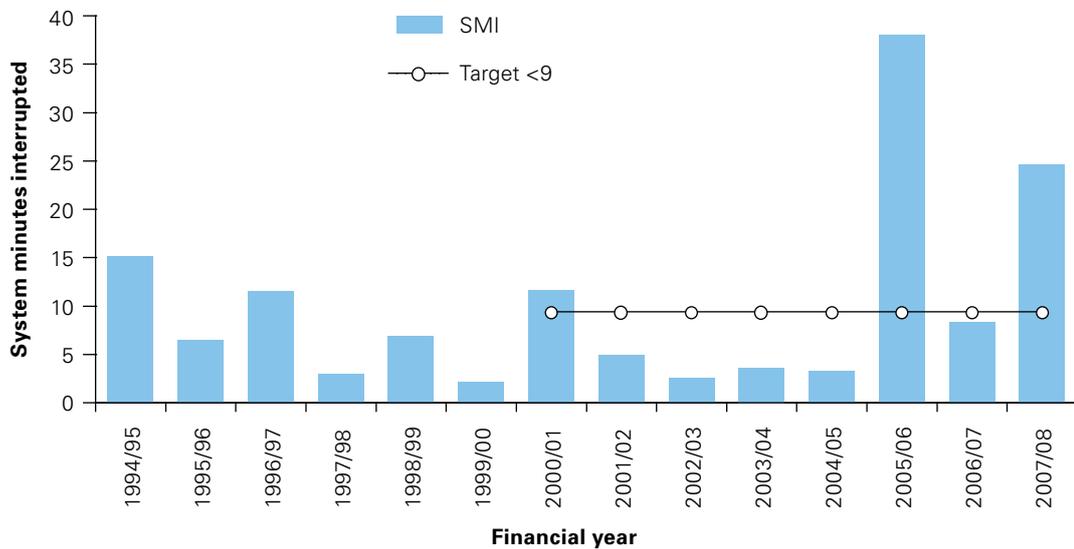
Grid reliability is influenced by both maintenance and investment. Transpower determines where and how much investment it considers appropriate.

Because Transpower is a monopoly, and the cost of investment is passed on, the Commission has the role of assessing and approving (or declining) investment proposals. The Commission does not plan for or initiate investment by Transpower.

System minutes interrupted (SMI), shown in figure 6, is an internationally used indicator of transmission system reliability. This information is reported by Transpower in its annual reports. Transpower has an SMI target of less than nine minutes. SMI is calculated by dividing the MW minutes actually interrupted by the total instantaneous demand in MW.

The breach of the target for 2005/06 was attributed to a single maintenance-related outage at Otahuhu, which disrupted power to parts of Auckland for five hours on 12 June 2006 (resulting in 29.8 SMI). For 2007/08 Transpower reported that the total SMI of 24.6 minutes includes 15.7 system minutes for two incidents where factors were outside Transpower's control<sup>1</sup>. The Commission has noted that these and other significant outages are related to maintenance issues, and are unrelated to the grid investments for which Transpower must currently apply to the Commission for approval.

The Commission's regulatory role allows it to recommend rules, if it considers it necessary, to provide better incentives to Transpower to provide the efficient level of maintenance to deliver security of supply. The Commission has yet not considered it necessary to pursue this option.

**Figure 6: transmission system minutes interrupted (SMI)**

Source: Transpower Ltd Annual Report 2007/08

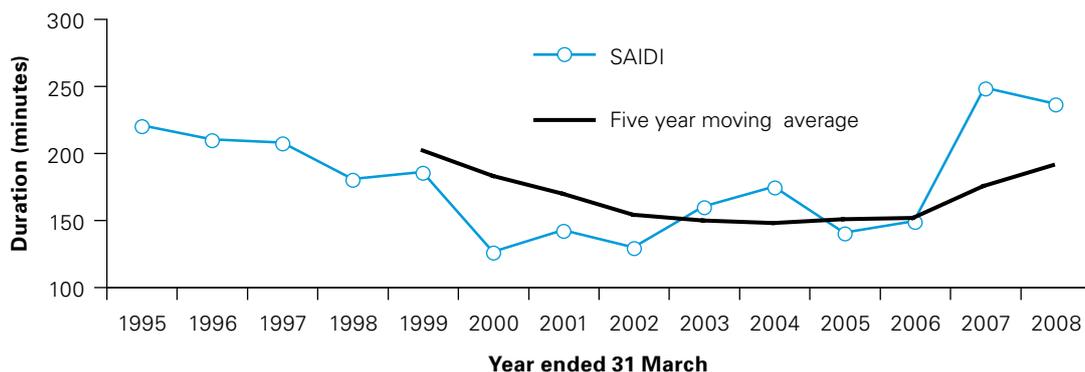
Distribution network outages are those most likely to directly impact consumers. Reliability in this area is therefore significant to consumers. However, these indicators are most likely to be impacted by the local distribution networks, which primarily come under the regulatory oversight of the Commerce Commission.

There are three commonly used indicators of distribution network reliability, referred to as SAIDI, SAIFI and CAIDI and shown in figure 7. The high 2007 results are largely the result of winter outages from heavy snowfalls and storms, particularly in South Canterbury. The 2008 result was influenced by storms that affected Northland and Auckland.

**Figure 7: consumer interruption indicators**

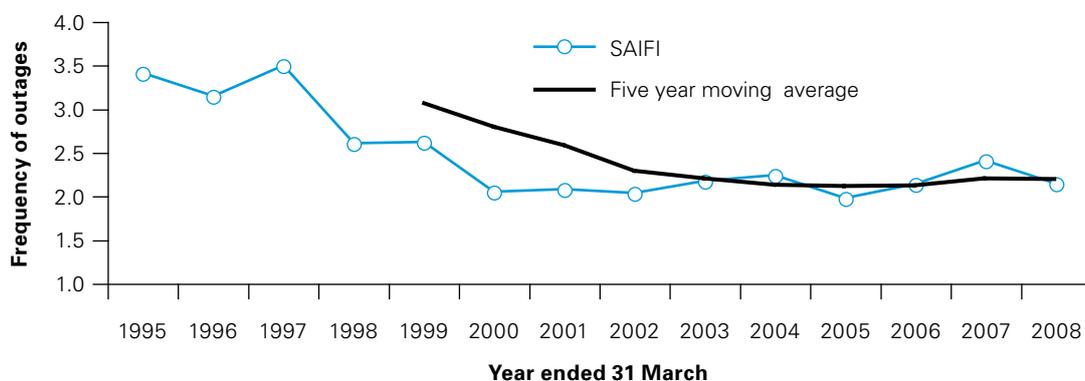
**System average interruption duration index (SAIDI) (national weighted average)**

SAIDI indicates the total amount of time (in minutes) the average customer is without supply over the course of a year.



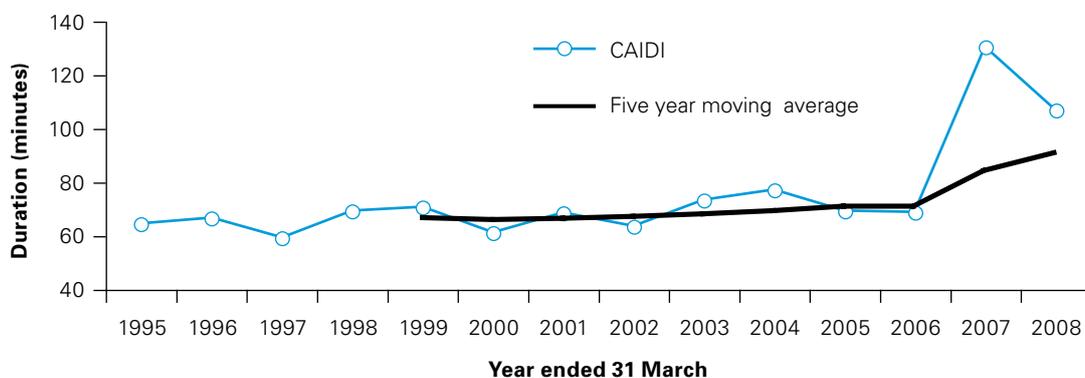
**System average interruption frequency index (SAIFI) (national weighted average)**

SAIFI indicates how often a customer, on average, experiences an outage during the course of a year.



**Customer average interruption duration index (CAIDI) (national weighted average)**

CAIDI indicates the average duration of a single outage (in minutes).



Source: Electricity Line Business and Gas Pipeline Business 2008 Information Disclosure Compendium—PricewaterhouseCoopers

## Commission contributions: *security of supply*

The following actions were included in the 2008–2011 SOI:

*“The Commission’s key contributions are to:*

- *carry out regulatory development functions to facilitate improving security of supply—output class one, page 27, including:*
  - *the transmission for renewables project; and*
  - *supporting the process for grid investment decision-making;*
- *provide information to assist with decision-making, including the SOO, centralised dataset, models, Minzone and Riskmeter—output class one, page 27;*
- *carry out transmission investment decision-making functions—output class one, page 27;*
- *carry out security of supply governance functions including monitoring, advice on security, and procurement of reserve energy, if necessary—output class one, page 27; and*
- *manage availability and use of Whirinaki reserve energy power station—output classes two and three, page 29.”*

Since the SOI was published, a major independent *Review of 2008 Winter* has been completed. The results of the review have been addressed in the development of the Market Development Programme (MDP) outlined in the 2009–2012 SOI.

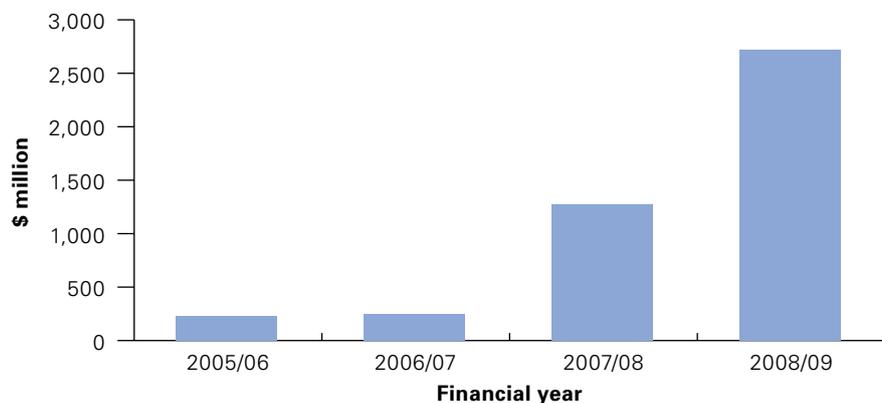
## Commission impact indicators: *security of supply*

| Impact indicators   | Results to 30 June 2009  |
|---|--|
| 1. Total value of grid investment approvals <sup>2</sup>            | Approved amount, by year of approval: 2005/06—\$225 million, 2006/07—\$89 million, 2007/08—\$954 million, 2008/09—\$1,338 million, total—\$2,605 million. Figure 8 shows the cumulative value of these approvals. The process of review and consideration by the Commission has given rise to revision of original applications in some cases, particularly for larger and more contentious proposals. The Commission considers that the process has improved over time as all involved have gained experience and the process has been refined. A number of recent smaller proposals have been dealt with very quickly. |
| 2. The security margin (peak and energy) is maintained or increased | The 2008 Annual Security Assessment concluded that security margins are likely to be maintained at an adequate level in the short to medium term. The Commission determined not to procure additional reserve generation for 2009, but to reserve the option to contract for demand-side options if the input assumptions (in particular the results of hydro inflows) change to the point that there is a risk that the security standard may not be able to be met. See figure 5 for the resulting estimate of security energy margins <sup>3</sup> .  |
| 3. The amount of contracted reserve energy required reduces         | No change. The 155 MW Whirinaki reserve energy plant is the only resource currently contracted. No need for additional contracted reserve was identified in the Annual Security Assessment 2008.<br>Consideration being given to the future delivery of reserve energy, including Whirinaki, as part of the Commission’s Market Development Programme (MDP).   |

<sup>2</sup> This is a preliminary indicator that provides information relating to the decision-making process. The Commission is working on development of impact indicators more closely related to the impacts of its work.

<sup>3</sup> The 2008 security assessment has been undertaken in line with the Commission’s revised Security of Supply Policy, available at [www.electricitycommission.govt.nz/pdfs/opdev/secsupply/policy/sos-policyOct08.pdf](http://www.electricitycommission.govt.nz/pdfs/opdev/secsupply/policy/sos-policyOct08.pdf) Information about the security margin and the 2008 assessment is available at [www.electricitycommission.govt.nz/opdev/secsupply/](http://www.electricitycommission.govt.nz/opdev/secsupply/)

**Figure 8: cumulative grid investment decisions to 30 June 2009, by year of approval**



Source: Electricity Commission

## Objective 2—system stability

System stability is achieved when the electricity system remains stable and appropriate planning and management is carried out to deal with a range of contingencies. Demand-side and load management initiatives are designed to help support system stability. The Commission seeks to contribute to system stability by:

- Contracting effectively for the day-to-day operation of the electricity system and markets
- Undertaking development projects to improve the efficiency and reliability of the electricity system, while ensuring that appropriate quality standards are met.

### Commission contributions: *system stability*

*The following actions were included in the 2008–2011 SOI<sup>4</sup>:*

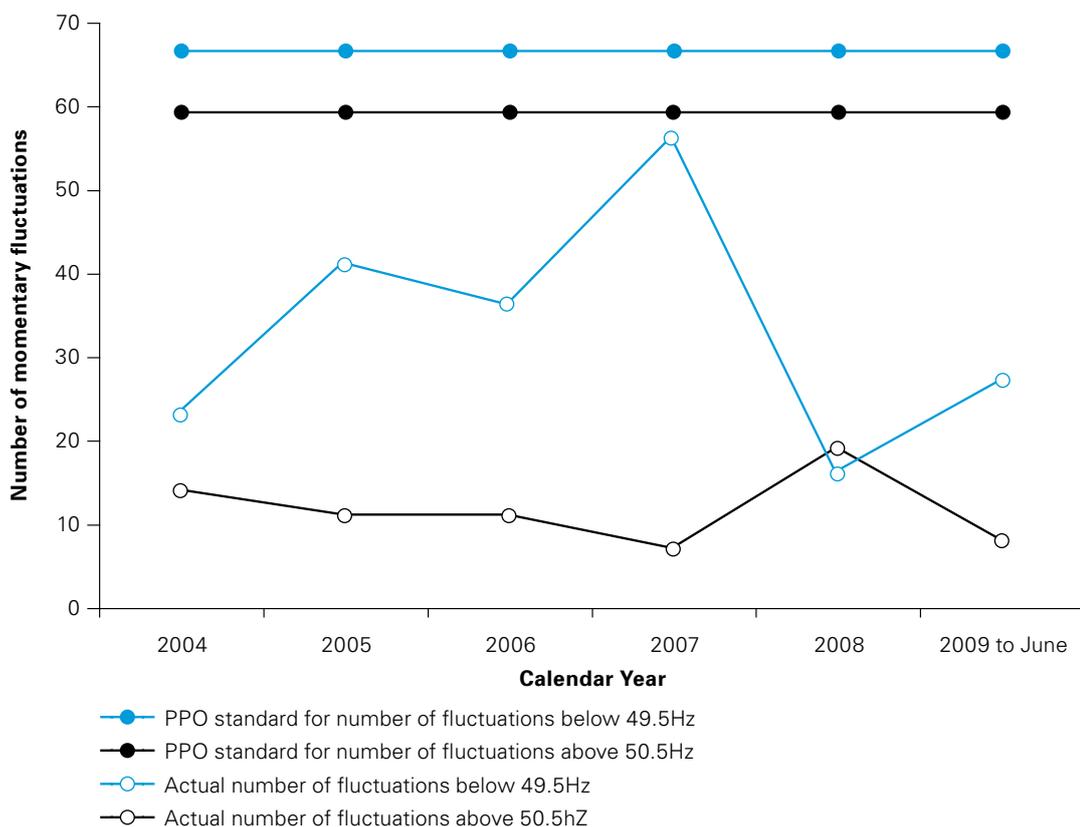
- i *“The Commission’s key contributions are to:*
- ii *Ensure an appropriate contract is in place with the System Operator to schedule and dispatch electricity in a manner that avoids fluctuations in frequency and disruptions in supply and to monitor and enforce the contract, if required—output class one, page 27*
- ii *Carry out projects to improve the operation of the electricity system—output class one, page 27, including:*
  - iii *Common quality development projects—developing rules, policies and processes to efficiently manage the frequency, voltage, and reliability of the New Zealand generation and transmission system—NZES, page 60; GPS paragraph 79*
  - iii *Market design review—includes detailed consideration of issues for the wholesale and retail markets, including market information, prices and switching—NZES, page 60; GPS paragraph 79*
  - iii *Demand-side bidding and forecasting—NZECS, page 62; GPS paragraph 46.”*

<sup>4</sup> GPS references are to the paragraph numbers in the 2008 GPS, which was in force at the time the SOI was published. The Minister issued a new GPS in May 2009.

## Commission impact indicators: *system stability*

| Impact indicators   | Results to 30 June 2009  |
|---|--|
| 4. The operation of the electricity system meets quality and reliability standards—as indicated by breaches of principal performance obligations (PPO). | <p>The System Operator is contracted by the Commission to meet the relevant requirements in the Rules. The Part C Rules include a series of high level obligations on the System Operator called Principal Performance Obligations (PPO's) which are a measure of the quality of the System Operator's performance. Examples of PPO's are to avoid cascade failure, maintain system frequency within a band, limit momentary frequency fluctuations and manage time error.</p> <p>In 2007 the System Operator did not meet its PPO's on two occasions with respect to its obligation to manage frequency time error to within 5 seconds of New Zealand standard time. There have been no recent PPO breaches, indicating that performance had met expectations since 2007.</p>   |
| 5. The operation of the electricity system meets frequency management standards—as indicated by the number of frequency excursions.                     | <p>The System Operator is required to act as a reasonable and prudent operator with the objective of ensuring the aggregated rate of occurrence of momentary frequency fluctuations does not exceed certain levels. Figure 9 provides a summary of results against the targets (Principle Performance Obligations (PPO)). The number of momentary frequency fluctuations outside the normal frequency band is a measure of the quality of the electricity being delivered. The chart indicates the yearly number of frequency deviations outside the defined levels and the target for each level. Both the upper and lower targets were met.</p> <p>A notable event in the past year was when the HVDC Pole 2 tripped on 27 April 2009 causing the frequency to momentarily fall to 48.6 Hertz in the North Island.</p> |

**Figure 9: System Operator performance: number of momentary fluctuations above/below normal frequency band and the PPO standard for the number of such fluctuations**



Source: data compiled from System Operator monthly reports

## Objective 3—fair and efficient markets

A key regulatory function is to ensure that the electricity system and markets operate fairly and efficiently, enabling investment in new generation to meet energy demand at the lowest cost. Fair and efficient markets also support the achievement of the other Commission objectives.

The Commission seeks to contribute to fair and efficient markets by promoting voluntary arrangements, and developing regulations to:

- Support fair and efficient operation of the wholesale and retail electricity markets
- Improve services to consumers
- Remove barriers to generation investment.

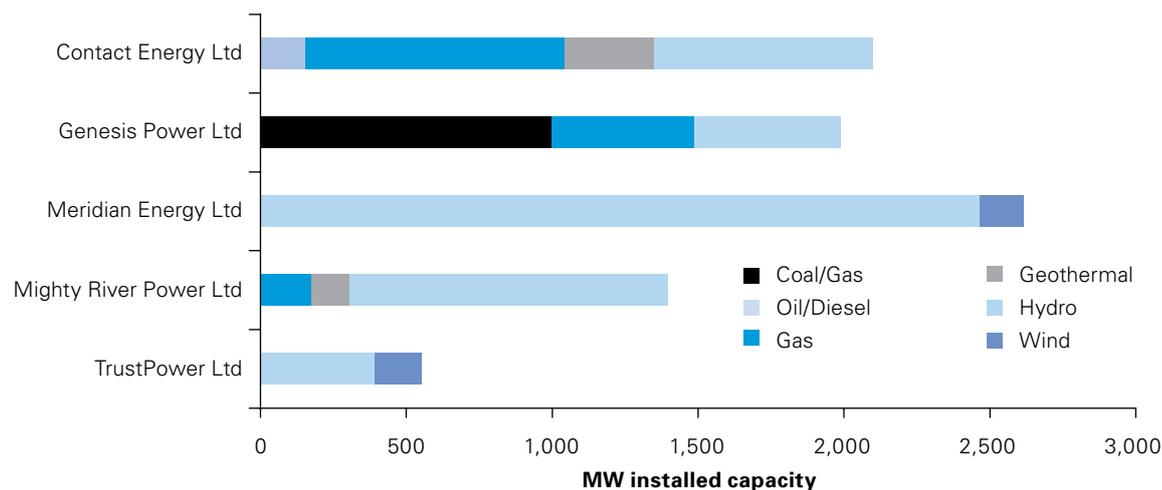
### Electricity indicators: *fair and efficient markets*

The proportion of each company's energy generated and purchased for supply is considered to be an indicator of the incentive for competition.

The diversity of generation types is also an indicator of security of supply, since diversity indicates reduced risk from reliance on individual energy sources. The graph below is based on 2008 installed capacity data, not actual generation.

Figure 10, showing the major generation plant, illustrates that New Zealand has several large generators and relatively diverse generation types. The large generating companies are all the product of dividing up the previous New Zealand Electricity Corporation. Smaller generators include industrial co-generation plant, micro-hydro, single wind turbines, and so on. Smaller generators take a proportion of load off the overall system and provide some additional flexibility in load management.

**Figure 10: top five generators—capacity and type**

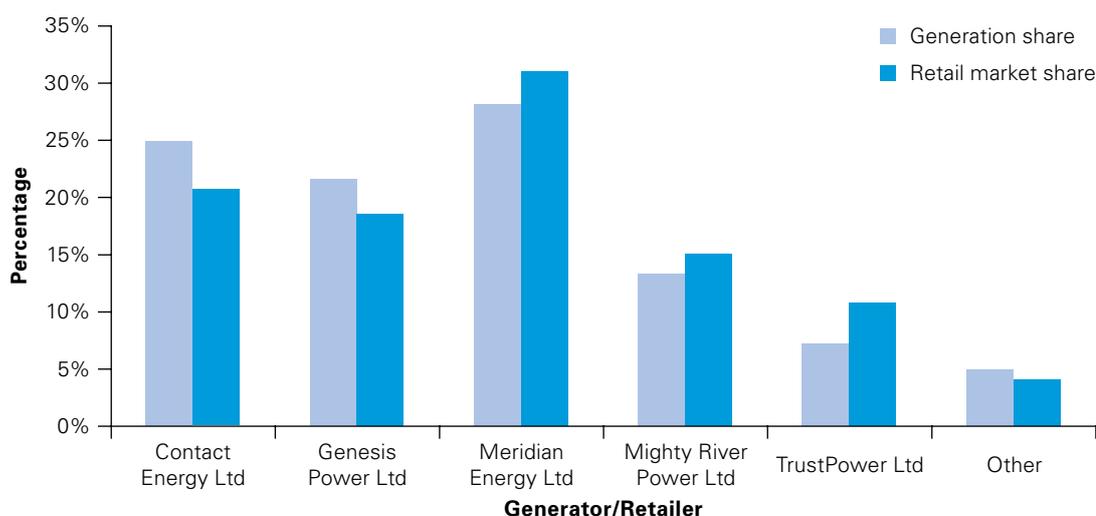


Source: Ministry of Economic Development, Energy Data File, December 2008

Figure 11 provides information on generation output and retail market share. These statistics tend to change very slowly as they depend on the amount of installed generation capacity and building generation takes some time.

The proportion of energy generated and purchased for supply is considered to be an indicator of the incentive for competition. First, competition is considered to be enhanced by multiple companies being active in these markets. Second, competition is considered to be enhanced if some separation remains between the generation and retail share owned by individual companies.

**Figure 11: percentages of market share (generation and retail—amount of electricity traded)**



**Source:** Clearing Manager data for the 12 months to June 2009

Figure 12 shows two statistics that provide insight into customer switching behaviour:

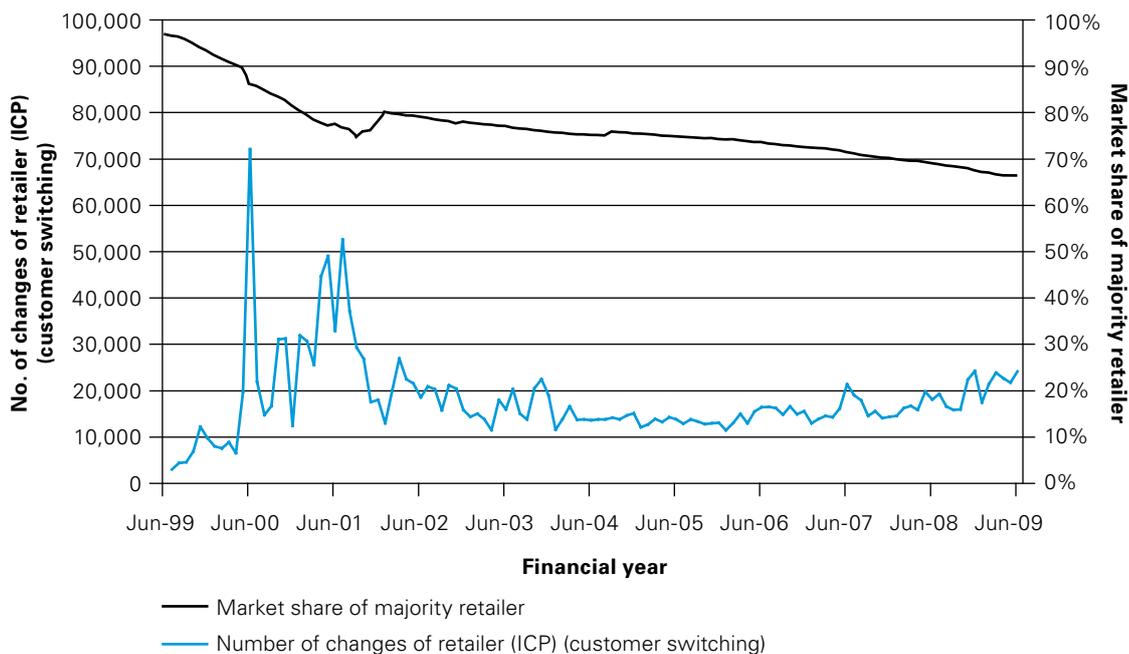
- **Majority retailer market share**—the percentage of the market that is held by the major retailer in an area. In most cases this is the same as the ‘incumbent’ retailer that was in place before deregulation.
- **ICP changes**—this statistic includes a customer changing retailer and a customer moving house and retailer.

The level of ‘incumbent’ market share is declining slowly, but is still considered high. ICP changes in 2000/01 included significant changes as a result of a retail company exiting the retail market. Since then the level of switching has remained relatively low and constant. This trend suggests that either the level of pricing and service for customers is relatively consistent between retailers or consumers are not interested in changing.

The increase in switching late in the 2008 year is largely attributed to consumers moving away from Contact Energy, coinciding with significant publicity around prices and directors’ fees. In the first six months of 2009, Mercury Energy (the retail arm of Mighty River Power) appears to have gained a substantial number of new customers.

However, there are some regional variations in this picture. There is at least one region where the market share of the two largest retailers in that region is about 50/50, and there are some where the larger retailer has around 90 per cent of the market share.

**Figure 12: consumer switching and market share of majority retailer**



Source: Registry

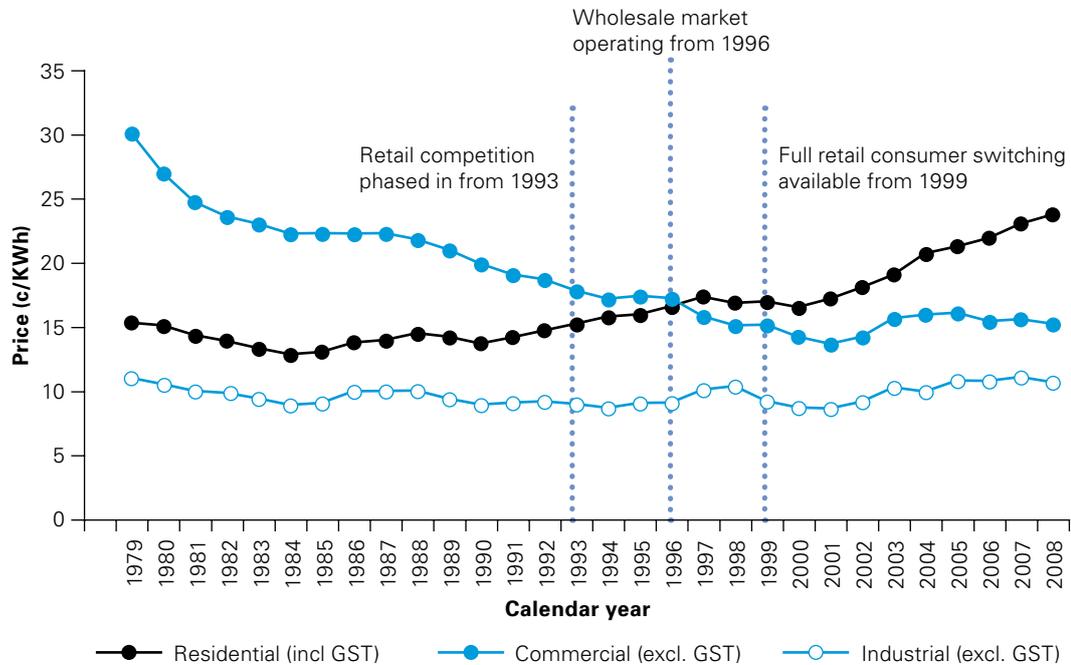
Real prices indicate the amount of price change over and above inflation<sup>5</sup>. Figure 13 shows that from the mid 1980s to 1990s a significant rebalancing in prices occurred between the residential and commercial sectors, at a time when commercial use was also growing at a greater rate than the growth in residential use. The real price of electricity for residential customers increased by 25 per cent in the five years between 2003 and 2008. The increases over the same period for industrial and commercial users were significantly lower.

The 2009 New Zealand Energy Data File shows that 2008 residential and industrial prices were around the lower end of the range for IEA members.

In relation to concerns about end user prices, the Commission's Market Development Programme seeks to sharpen up competitive pressures and make it easier for consumers to shop around. It also aims to widen the scope for electricity users to more actively manage their own demand, to provide a greater counterweight to suppliers' market power. Analysis has begun around retail margins as part of the Market Development Programme.

<sup>5</sup> The current Energy Data File method of adjustment for inflation uses the consumer price index (CPI) for residential prices, and uses the producers price index (PPI) for commercial and industrial prices. In presenting this data the Commission has followed the Energy Data File convention, which presents residential prices including GST and commercial and industrial prices excluding GST.

Figure 13: electricity consumer prices (real 2008 prices)



Source: Ministry of Economic Development, June 2009

## Commission contributions: fair and efficient markets

The following actions are included in the 2008–2011 SOI<sup>6</sup>:

*“The Commission’s key contributions are to:*

- *Ensure appropriate contracts are in place for the delivery of market systems and operations (System Operator, Clearing Manager, Pricing Manager, Wholesale Information and Trading System, Registry, and Reconciliation Manager) and to monitor and enforce contracts, if required—output class one, page 27*
- *Monitor and enforce compliance, including low-user regulations, consumer disconnections and monitoring of distributed generation regulations (to process connection applications on a more fair and consistent basis)—NZES, page 60; output class one, page 27*
- *Carry out regulatory development functions including voluntary arrangements or regulation, where appropriate—output class one, page 27, including:*
  - *A disconnections protocol*
  - *A consumer complaints scheme*
  - *The Market Design Review—includes detailed consideration of issues for the wholesale and retail markets, including market information, prices and switching—NZES, page 60; GPS paragraph 79*
  - *Advanced metering guidelines—NZECS, page 62; GPS paragraphs 46 and 125;*
  - *The wind project*
  -

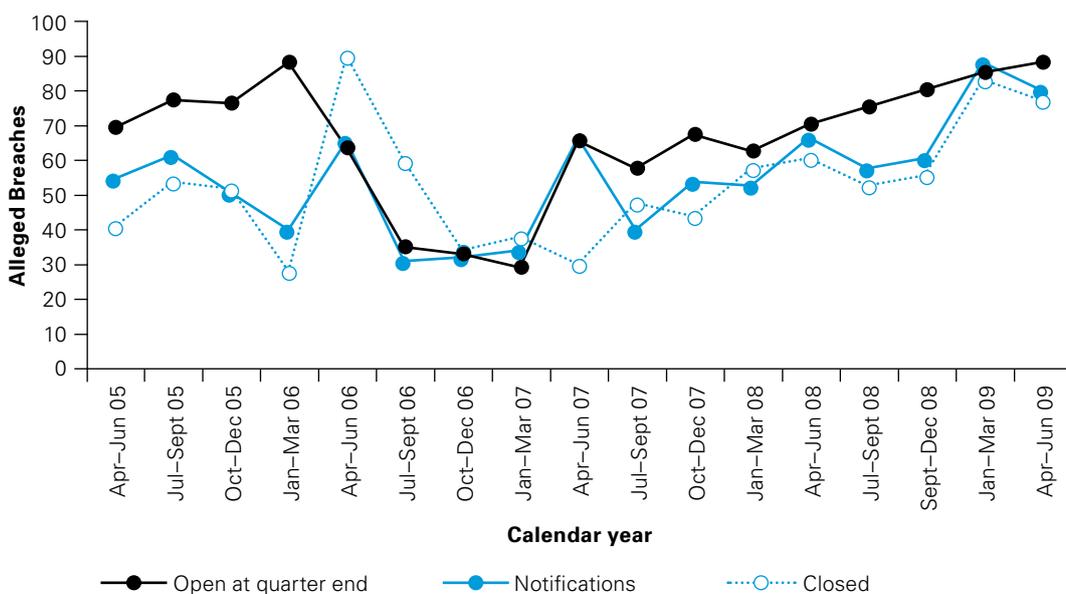
<sup>6</sup> GPS references are to the paragraph numbers in the 2008 GPS, which was in force at the time the SOI was published. The Minister issued a new GPS in May 2009.

- ī Demand side participation and pricing work
- ī Model agreements for small-scale (embedded) generation
- Provide information to assist with decision-making such as publishing retail statistics, supporting the Powerswitch website, improving hedge market disclosure, and providing market service provider reports—output class one, page 27.”

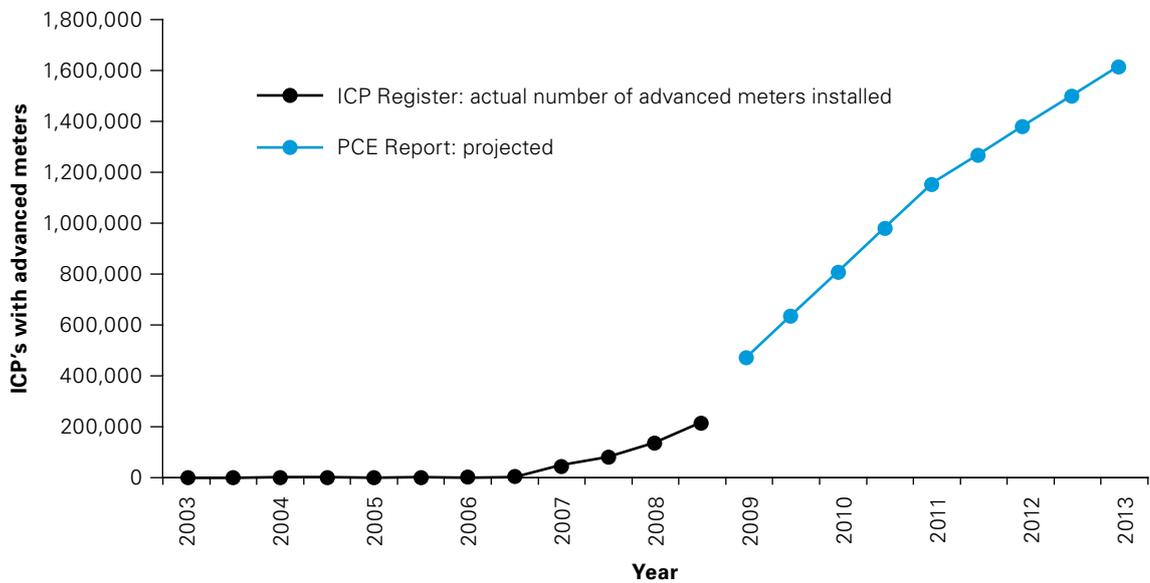
## Commission impact indicators: *fair and efficient markets*

| Impact indicators  | Results to 30 June 2009  |
|--|--|
| 6. The number of rule-breaches reduces.  | The number of rule-breach notifications dipped between September 2006 and May 2007 but has trended upwards over the past 18 months coinciding with the Commission’s increased focus on providing compliance information to stakeholders, see figure 14.  |
| 7. The number of advanced meters installed increases.  | The number of advanced meters installed continues to increase. As at 30 June 2009, 208,895 advanced meters were installed. See figure 15 for actual installations to date and projections prepared for the Parliamentary Commissioner for the Environment (PCE).   |
| 8. Satisfaction with the hedge market increases—as measured by the two-yearly hedge market survey. | No significant change between the 2005 and 2007 surveys. The next survey is planned for late 2009. The second hedge market survey indicated a high degree of polarisation of views. Purchasers are critical of the lack of liquidity in the hedge market, attributed to vertical integration of generator/retailers who enjoy a natural hedge for much of their generation through their retail arms, thus limiting the volume of hedges available. While greater disclosure of contract details is desired, the perception is that this assists transparency but not liquidity. Hedge markets are a key focus of the Market Development Programme, in particular locational hedges. |

**Figure 14: the number of rule breach notifications, closed and on hand**



Source: Electricity Commission

**Figure 15: advanced meters: installed and projected**

**Source:** Electricity Commission (numbers installed from the ICP Register, projections from Parliamentary Commissioner for the Environment report *Electricity Commission Annual Review 2006/07*)

**Note:** the apparent gap in the graph is as a result of displaying two separate data sets

## Objective 4—environmental sustainability and efficient use

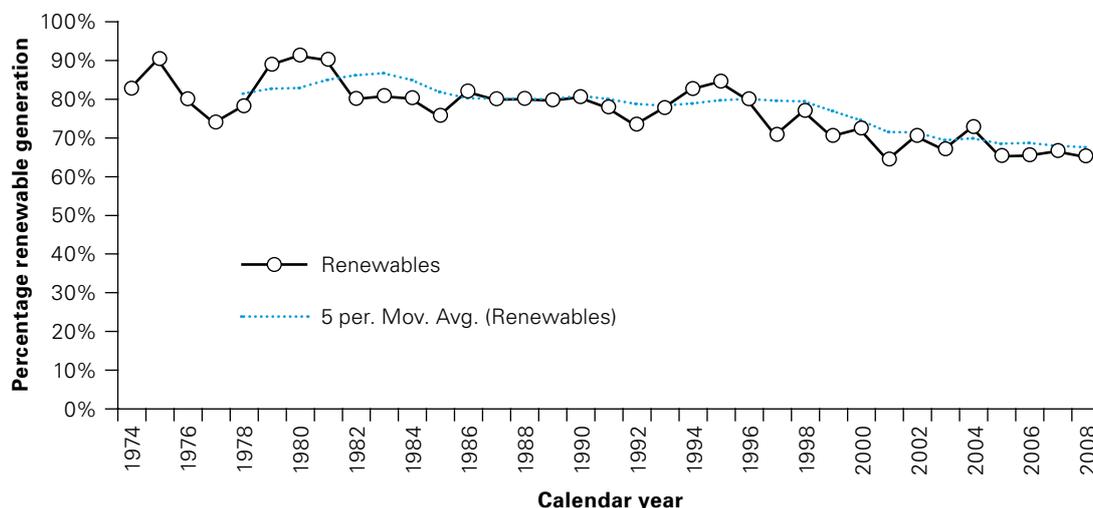
The Commission seeks to contribute to:

- Removal of barriers to renewable generation
- Improved environmental sustainability of the electricity sector by providing information, facilitation or voluntary arrangements, and development of regulation
- Improved efficiency of electricity use.

### Electricity indicators: *environmental sustainability and efficient use*

Some variation is expected in renewable generation due to factors such as rainfall, particularly with a high proportion of renewables coming from hydro sources. For example, the dry period leading into the 2008 winter has resulted in higher use of non-renewable generation, but this is not yet shown in figure 16.

**Figure 16: percentage of net electricity generation from renewable resources**

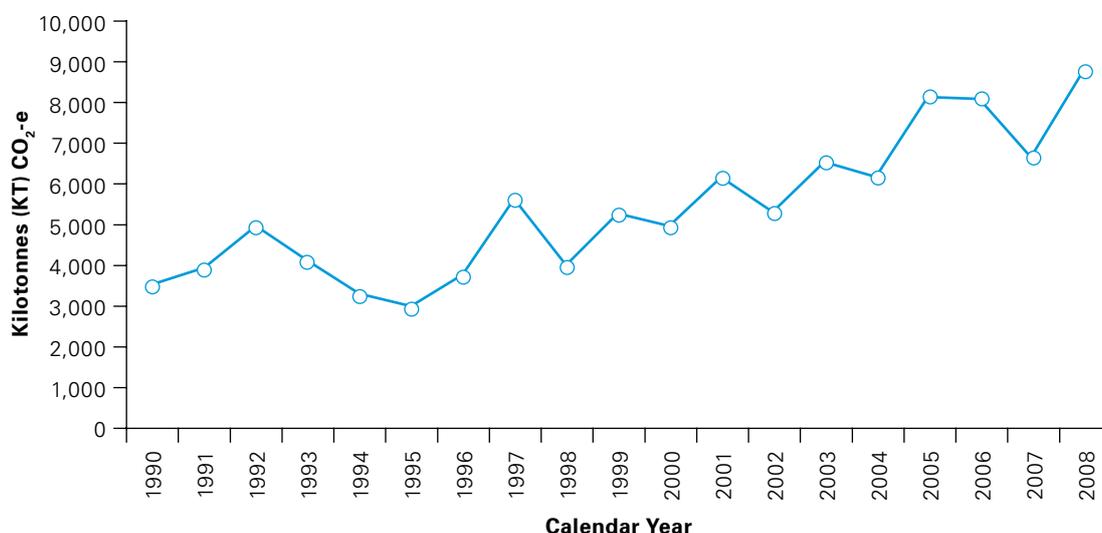


Source: Ministry of Economic Development, Energy Data File, June 2009

The majority of New Zealand's electricity production comes from hydro power stations, but there has been an increasing proportion of fossil-fuelled electricity generation, initially from Maui gas and more recently from increased use of coal. This means that electricity sector emissions have been growing. The CO<sub>2</sub> equivalent output from electricity generation in New Zealand has more than doubled since 1990. Thermal generation has moved from being primarily a 'backup' to renewables for peak demand and dry periods, to being essential to meet general demand.

Figure 17 provides information about the CO<sub>2</sub> equivalent output from thermal electricity generation. The increase for the 2008 calendar year is a result of the dry winter, leading to increased demand for thermal generation. More recent data indicates lower CO<sub>2</sub> equivalent output during 2009 due to increased hydro generation.

**Figure 17: thermal electricity generation gross CO<sub>2</sub> equivalent emissions**



Source: MED, NZ Energy Quarterly, March 2009

## Commission contributions: *environmental sustainability and efficient use*

The following actions are included in the 2008–2011 SOI<sup>7</sup>:

*“The Commission’s key contributions are to:*

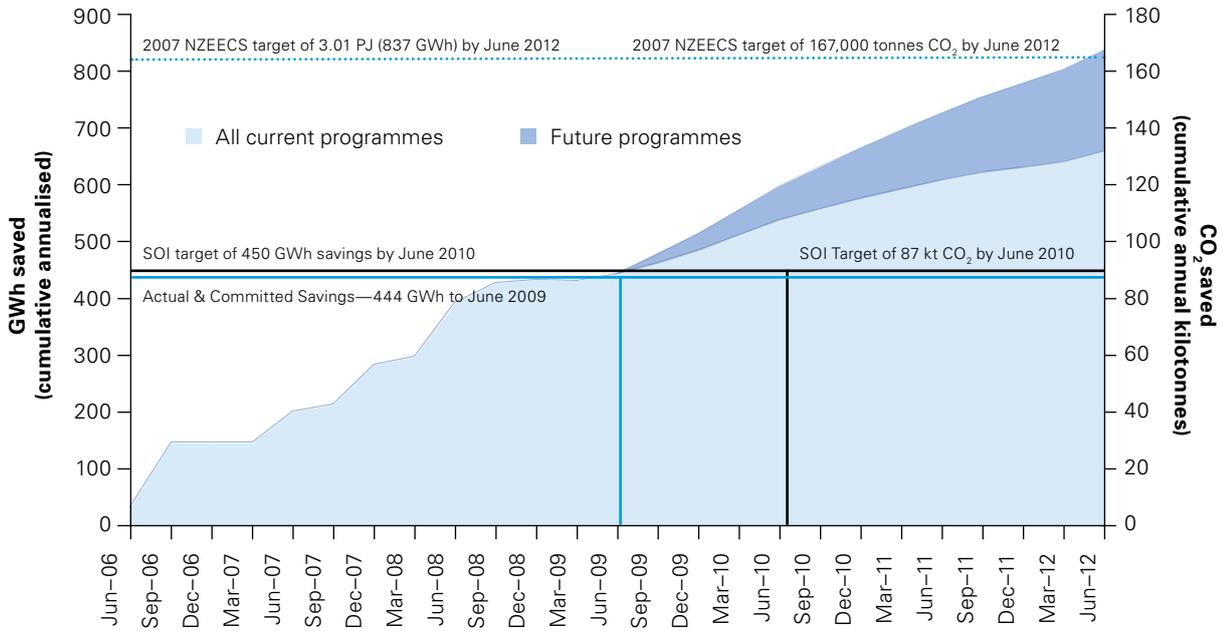
- ï Monitor and enforce compliance, including the Electricity Governance (Connection of Distributed Generation) Regulations 2007, page 60; output class one, page 27*
- ï Facilitate small-scale and renewable generation through regulatory development functions using voluntary arrangements, Rules or Regulations, where appropriate—output class one, page 27, including:*
  - ï Load management initiatives and advanced metering guidelines—NZECS, page 62; GPS paragraphs 46 and 125*
  - ï The transmission for renewables project—NZES, page 72; GPS paragraph 49*
  - ï Demand-side bidding and forecasting—NZECS, page 62; GPS paragraph 46*
  - ï The wind project—NZECS, page 62; GPS paragraphs 50 and 79*
  - ï Itemised billing for small-scale generation—NZECS, page 62; GPS paragraphs 120–123*
  - ï Technical guidelines for small-scale distributed generation programme—NZECS, page 63; GPS paragraphs 120–123*
- ï Deliver cost-effective electricity efficiency programmes—NZECS, chapters two and three; output class four, page 30.”*

## Commission impact indicators: *environmental sustainability and efficient use*

| Impact indicators   | Results to 30 June 2009  |
|---|--|
| 9. The number of GWh saved from electricity efficiency programmes increases.  | The result to 30 June 2009 is about 444 GWh per annum. This is in excess of forecasts. See figure 18.  |
| 10. The amount of CO <sub>2</sub> saved from electricity efficiency programmes increases.                                       | The result to 30 June 2009 result is about 88.9 kilotonnes per annum.  |
| 11. Savings in MW peak demand from electricity efficiency programmes increase.  | 195.8 MW peak savings to 30 June 2009.   |
| 12. Electricity efficiency programmes are cost-effective—delivered at below the cost of constructing equivalent new generation. | All programmes are being delivered at well below the long run marginal cost of new generation—to date cost to the Commission of 0.71 c/kWh of savings, compared with 8.5 c/kWh for the long run marginal cost of new generation. |

<sup>7</sup> GPS references are to the paragraph numbers in the 2008 GPS, which was in force at the time the SOI was published. A new GPS was published in May 2009.

**Figure 18: actual savings to date and projected savings from Commission electricity efficiency programmes**



Source: Electricity Commission

**Part three**  
performance information

## Statement of responsibility

Pursuant to the Crown Entities Act 2004, we acknowledge responsibility for the preparation of the statement of service performance and financial statements included in part three of this Annual Report, and for the judgments used in them.

We acknowledge the responsibility for establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of the Commission's financial and non-financial reporting.

In our opinion the statement of service performance and financial statements reflect fairly the operations and financial position of the Commission for the period 1 July 2008 to 30 June 2009.

Pursuant to the Electricity Act 1992, we acknowledge the responsibility for the preparation of the report against the GPS performance standards, included in part four of this Annual Report.

In our opinion the GPS report fairly reflects progress to 30 June 2009.



**David Caygill**

Chair

30 October 2009



**Richard Bentley**

Commissioner

30 October 2009

# Audit Report

## To the readers of The Electricity Commission's financial statements and performance information for the year ended 30 June 2009

The Auditor-General is the auditor of the Electricity Commission (the Commission). The Auditor-General has appointed me, Phil Kennerley, using the staff and resources of Audit New Zealand, to carry out the audit. The audit covers the financial statements and statement of service performance included in the annual report of the Commission for the year ended 30 June 2009, which also contains information on the performance of the Commission against the Government Policy Statement on Electricity Governance (GPS) objectives and outcomes and the performance standards in the Statement of Intent.

### Unqualified Opinion

In our opinion:

- The financial statements of the Commission on pages 44 to 66:
  - comply with generally accepted accounting practice in New Zealand; and
  - fairly reflect:
    - the Commission's financial position as at 30 June 2009; and
    - the results of its operations and cash flows for the year ended on that date.
- The statement of service performance of the Commission on pages 38 to 43:
  - complies with generally accepted accounting practice in New Zealand; and
  - fairly reflects for each class of outputs:
    - its standards of delivery performance achieved, as compared with the forecast standards outlined in the statement of forecast service performance adopted at the start of the financial year; and
    - its actual revenue earned and output expenses incurred, as compared with the forecast revenues and output expenses outlined in the statement of forecast service performance adopted at the start of the financial year.

### ***Information on performance against the GPS objectives and outcomes and the performance standards in the Statement of Intent.***

In our opinion, the information on the performance of the Commission against the GPS objectives and outcomes and the performance standards in the Statement of Intent that is included within the statement of service performance and the report against the GPS on pages 68 to 84:

- is appropriate, adequate and accurate, and enables an informed assessment to be made of those matters.

The audit was completed on 30 October 2009 and our opinion is expressed as at that date.

The basis of our opinion is explained below. In addition, we outline the responsibilities of the Commission's Board and the Auditor, and explain our independence.

## **Basis of Opinion**

We carried out the audit in accordance with the Auditor-General's Auditing Standards, which incorporate the New Zealand Auditing Standards.

We planned and performed the audit to obtain all the information and explanations we considered necessary in order to obtain reasonable assurance that the financial statements and statement of service performance did not have material misstatements, whether caused by fraud or error.

Material misstatements are differences or omissions of amounts and disclosures that would affect a reader's overall understanding of the financial statements and statement of service performance. If we had found material misstatements that were not corrected, we would have referred to them in our opinion.

The audit involved performing procedures to test the information presented in the financial statements and statement of service performance. We assessed the results of those procedures in forming our opinion.

Audit procedures generally include:

- determining whether significant financial and management controls are working and can be relied on to produce complete and accurate data;
- verifying samples of transactions and account balances;
- performing analyses to identify anomalies in the reported data;
- reviewing significant estimates and judgements made by the Board;
- confirming year-end balances;
- determining whether accounting policies are appropriate and consistently applied; and
- determining whether all financial statement and statement of service performance disclosures are adequate.

We did not examine every transaction, nor do we guarantee complete accuracy of the financial statements and statement of service performance.

We evaluated the overall adequacy of the presentation of information in the financial statements and statement of service performance. We obtained all the information and explanations we required to support our opinion above.

## **Responsibilities of the Commission's Board and the Auditor**

The Commission's Board is responsible for preparing the financial statements and statement of service performance in accordance with generally accepted accounting practice in New Zealand. The financial statements must fairly reflect the financial position of the Commission as at 30 June 2009 and the results of its operations and cash flows for the year ended on that date. The statement of service performance must fairly reflect, for each class of outputs, the Commission's standards of delivery performance achieved and revenue earned and expenses incurred, as compared with the forecast standards, revenue and expenses adopted at the start of the financial year. The responsibilities of the Commission's Board arise from the Crown Entities Act 2004 and the Electricity Act 1992.

The Commission's Board is also responsible for including in its Annual Report information to enable an informed assessment to be made of the performance of the Commission for the year ended 30 June 2009 against the GPS objectives and outcomes and the performance standards in the Statement of Intent. This responsibility arises from section 172ZM of the Electricity Act 1992.

We are responsible for expressing an independent opinion on the financial statements and statement of service performance and reporting that opinion to you. This responsibility arises from section 15 of the Public Audit Act 2001 and the Crown Entities Act 2004.

We are also responsible for providing assurance on the appropriateness, adequacy and accuracy of information and whether it enables an informed assessment to be made of the performance of the Commission against the GPS objectives and outcomes and the performance standards in the Statement of Intent. This responsibility arises from section 172ZO of the Electricity Act 1992.

**Independence**

When carrying out the audit we followed the independence requirements of the Auditor-General, which incorporate the independence requirements of the Institute of Chartered Accountants of New Zealand.

Other than the audit, we have no relationship with, or interests in, the Commission.



**Phil Kennerley**

Audit New Zealand

On behalf of the Auditor-General  
Wellington, New Zealand

## Statement of service performance

The statement of service performance reports on actual achievement against performance targets and measures in the Commission's 2008–2011 SOI. The statement of service performance report is provided in accordance with section 151 of the Crown Entities Act 2004.

## Appropriations summary

The Electricity Commission manages the following Vote Energy appropriations on behalf of the Ministry of Economic Development (MED) for which costs are summarised in table 1.

The **electricity governance and market operations** appropriation provides for governance and monitoring of New Zealand's electricity market under the Rules and regulations. The governance and market operations appropriation funds the general operations of the Electricity Commission, including the Board and advisory groups. The appropriation also covers core electricity system and market operation functions, carried out under service provider contracts (about \$30 million). This appropriation funds the electricity governance and market operations output class.

The **electricity efficiency** appropriation provides funding for electricity efficiency research, and the development and delivery of electricity efficiency programmes. This appropriation funds the electricity efficiency output class.

The **reserve energy and emergency measures—availability** appropriation is to ensure that reserve energy can be made available to meet emergency situations, should they arise. This is achieved by tendering for emergency options, and by covering the availability cost of the Whirinaki power station. This appropriation excludes reserve energy generation (primarily fuel for the Whirinaki power station).

The **reserve energy and emergency measures—variable** appropriation covers the cost of fuel for the Whirinaki power station (offset by revenue from the sale of electricity if the fuel is used). The appropriation can also be used to fund the implementation of emergency measures.

The **Electricity Commission litigation fund** appropriation provides funding to ensure that the Electricity Commission is able to participate in litigation effectively and without delay. This is a Crown expense appropriation. The appropriation was drawn on in 2008/09 for the judicial review applications in relation to transmission investment decisions.

**Table 1: appropriations summary**

|  | (\$ million)      |                   |                     |
|--|-------------------|-------------------|---------------------|
|  | 2007/08<br>actual | 2008/09<br>actual | 2008/09<br>budget   |
| Electricity governance and market operations—<br>revenue                   | 47.913            | 47.333            | 49.043              |
| <i>Electricity governance and market operations—<br/>expenditure</i>       | <i>46.339</i>     | <i>45.449</i>     | <i>49.043</i>       |
| Electricity efficiency—revenue   | 5.957             | 8.404             | 18.401 <sup>8</sup> |
| <i>Electricity efficiency—expenditure</i>                                  | <i>5.957</i>      | <i>8.404</i>      | <i>18.401</i>       |
| Reserve energy and emergency measures—<br>availability—revenue             | 26.219            | 29.636            | 29.981              |
| <i>Reserve energy and emergency measures—<br/>availability—expenditure</i> | <i>26.219</i>     | <i>29.636</i>     | <i>29.981</i>       |

<sup>8</sup> The Electricity efficiency appropriation for 2008/09 was originally \$18.401 million and included \$5 million for potential funding for EECA's Energywise programme. A decision was made in December 2008 not to proceed with this and the appropriation was subsequently reduced by \$5 million in the Supplementary Estimates, amending the annual appropriation to \$13.401 million.

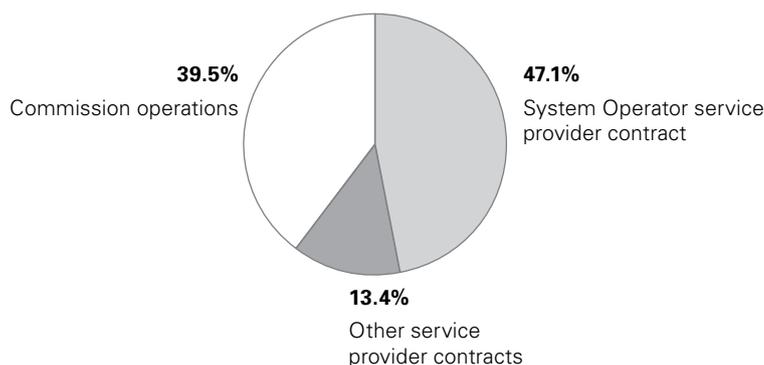
**Table 1: appropriations summary (continued)**

|  | (\$ million)      |                   |   |
|--|-------------------|-------------------|---|
|  | 2007/08<br>actual | 2008/09<br>actual | 2008/09<br>budget   |
| Reserve energy and emergency measures—<br>variable—revenue             | 33.842            | 2.504             | 6.000<br><small>(over 5 years<br/>2007/08 to 2011/12)<sup>9</sup></small> |
| <i>Reserve energy and emergency measures—<br/>variable—expenditure</i> | <i>30.269</i>     | <i>0.883</i>      | <i>6.000</i>  |
| Electricity Commission litigation fund—revenue                         | 0.301             | 0.326             | 0.444   |
| <i>Electricity Commission litigation fund—expenditure</i>              | <i>0.301</i>      | <i>0.326</i>      | <i>0.444</i>  |
| <b>Total Electricity Commission—revenue</b>                            | <b>114.232</b>    | <b>88.203</b>     | <b>103.869</b>  |
| <b>Total Electricity Commission—expenditure</b>                        | <b>109.085</b>    | <b>84.698</b>     | <b>103.869</b>  |

The electricity governance and market operations appropriation is a significant proportion of the Commission's costs. Table 2 below provides a breakdown of the major components of the budget and actual costs against this appropriation for 2008/09. Figure 19 shows the percentage breakdown of the actual costs in this appropriation for 2008/09.

**Table 2: breakdown of electricity governance and market operations appropriation**

|  | (\$ million)      |                   |                   |
|--|-------------------|-------------------|-------------------|
|  | 2007/08<br>actual | 2008/09<br>actual | 2008/09<br>budget |
| System Operator service provider costs   | 21.392            | 21.395            | 22.452            |
| Other service provider contracts: Clearing Manager,<br>Pricing Manager, Wholesale Information and<br>Trading System, Registry, Reconciliation Manager  | 7.815             | 6.083             | 5.952             |
| Commission operations: including market<br>development, regulatory monitoring and<br>compliance, security of supply policy and<br>monitoring, advisory group, Board and Rulings<br>Panel costs | 17.132            | 17.971            | 20.639            |
| <b>Total governance and market operations<br/>appropriation</b>  | <b>46.339</b>     | <b>45.449</b>     | <b>49.043</b>     |

**Figure 19: percentage breakdown of 2008/09 electricity governance and market operations appropriation actual spend**

<sup>9</sup> The reserve energy and emergency measures—variable appropriation was changed to \$86 million in the October 2008 Baseline Update as a result of a Cabinet decision in July 2008.

## Output class one—electricity governance and market operations

The **electricity governance and market operations** appropriation and output class provides for the operation, governance and monitoring of New Zealand's electricity market under the Rules and Regulations.

This output class includes the general operations of the Electricity Commission, including the Board, and operation of the electricity system and market operations. The major activities are:

- **Electricity system and market operations**—operation of the electricity system and wholesale and retail markets is delivered primarily through the management of contracts with service providers. This work addresses paragraph 67 of the 2009 GPS.
- **Monitoring and compliance**—the Commission monitors and enforces compliance with regulations and the Electricity Governance Rules, including operation of the wholesale markets (spot and hedge), operation of the retail market, consumer protection activities, and monitoring of the Electricity Governance (Connection of Distributed Generation) Regulations 2007 and Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. This work addresses paragraph 9 of the 2009 GPS.
- **Regulatory development**—the Commission develops voluntary arrangements and advises the Minister on statutory regulations and rules relating to the electricity sector. This work addresses requirements throughout the GPS and is detailed in part four of this SOI (2009 GPS paragraphs 38–50, 62–63, 65–66, 68–69, 97, 100–103, 110–116). The major focus during 2008/09 was development of the Market Development Programme, including addressing issues arising from the *Review of Winter 2008*.
- **Information services**—the Commission collects and publishes a wide range of information to inform the efficient operation of the electricity system and markets. This work addresses paragraphs 8 and 77 of the 2009 GPS. Publications include the *Statement of Opportunities (SOO)* and *Centralised Dataset (CDS)*.
- **Transmission investment decisions**—the Commission is responsible for decision-making on Transpower's grid investment proposals. The Commission is required to meet the process requirements of the Rules, including applying the Grid Investment Test (GIT). This work addresses paragraphs 70–96 of the 2009 GPS.
- **Security of supply governance**—the Commission is required to use reasonable endeavours to ensure security of supply, in accordance with government policy. Activities include an annual review of the need for reserve energy, information provision and monitoring, and contingency planning for emergency management. This work addresses 2009 GPS paragraphs 8, and 10–37. This work is supported by contracting for reserve energy and emergency measures, and delivery of reserve energy, as required, under output classes two and three.

The Commerce Commission also has some responsibilities in this area. The two commissions have a memorandum of understanding (MOU) to ensure that these areas of mutual or related interest are managed efficiently and effectively.

| Main performance measures   | Result   |
|---|--|
| <p>1. Contracts are in place, monitored and enforced (if necessary) for the operation of the electricity system, wholesale market and retail market (System Operator, Clearing Manager, Reconciliation Manager, Pricing Manager, Wholesale Information and Trading System, Registry).</p> | <p><b>Achieved.</b> Regular reports from service providers are published on the Commission's website.</p> <p>M-co completed the sale of its energy business and assets to NZX on 9 June 2009. As part of that sale the Clearing Manager, Pricing Manager and Reconciliation Manager Service Provider Agreements were assigned by M-co to NZX. The Wholesale Information and Trading System Agreements between M-co and the Commission were also assigned to NZX.</p> |
| <p>2. The annual performance review of the System Operator is completed within three months of receipt of the system operator's report.</p>   | <p><b>Achieved.</b> The System Operator Annual Performance Review report was received on 29 September 2008. The Commission's review was completed in December 2008.</p>  |
| <p>3. Progress is on track for the annual update of the System Operator Policy Statement in accordance with the Rules and the Electricity Act 1992, by 1 September 2009.</p>  | <p><b>Achieved.</b> On 31 March 2009, the System Operator submitted a <i>2009 Draft Policy Statement</i> to the Commission. The Commission published the <i>2009 Draft Policy Statement</i> for information purposes. The Commission published a formal statement of proposal in May for the purpose of consultation. The Commission recommended the rule change to the Minister on 9 July 2009 and it was gazetted on 16 July 2009.</p>                             |
| <p>4. The annual update of the System Operator procurement plan is completed in accordance with the Rules and the Electricity Act 1992, by 1 December 2008.</p>   | <p><b>Achieved.</b> The 2008 procurement plan (schedule C5) of the Electricity Governance Rules 2003, proposed by the Board was approved by the Minister, and came into force on 1 December 2008.</p>  |
| <p>5. The number of Rule-breach notifications closed (estimated range 170–230).</p>   | <p><b>Achieved.</b> 267 notifications were closed in the 1 July 2008 to 30 June 2009 financial year.</p>   |
| <p>6. Rule-breach investigations of alleged breaches are completed:</p> <ul style="list-style-type: none"> <li>– 50% within three months of notification.</li> <li>– 85% within six months of notification.</li> </ul>  | <p><b>Achieved.</b> Actual results for the 1 July 2008 to 30 June 2009 financial year were:</p> <ul style="list-style-type: none"> <li>– 72% within three months of notification</li> <li>– 93% within six months of notification.</li> </ul>  |
| <p>7. Consultation papers, reports to the Minister, investigation reports and published information reports listed in the work programme (part four of the SOI) meet the Commission's quality standard.</p>   | <p><b>Achieved.</b> Measured and documented through the Commission's quality review process for all Board papers.</p>  |
| <p>8. Consultation papers, reports to the Minister, investigation reports and published information reports listed in the work programme (part four of the SOI) meet the GPS performance standard for timeliness.</p>   | <p><b>Achieved.</b> Measured and documented through the Commission's quality review process for all Board papers.</p>  |
| <p>9. There are no successful legal challenges of the Commission's decisions or recommendations.</p>  | <p><b>Achieved.</b> Two judicial reviews initiated against the Commission in 2007/08 were concluded during the 2008/09 financial year in the Commission's favour. More detail is provided in part one of this report (page 9).</p>   |
| <p>10. Wholesale and retail market information reports are published monthly.</p>   | <p><b>Achieved.</b> System Operator monthly reports were published on the Commission's website within five days of the month end. Wholesale and retail market information reports were published on the website. Retail statistics were published monthly. Reconciliation manager and registry reports were published within one business day of receipt.</p>  |
| <p>11. Grid investment decisions are made in accordance with published timetables, which may be varied by agreement, or by Commission stipulation.</p>  | <p><b>Achieved.</b> More detail is provided in section four of this report (page 80).</p>  |
| <p>12. The annual review of need for reserve energy report is completed and meets the Commission's quality standard.</p>  | <p><b>Achieved.</b> Consultation took place in October 2008, and a decision was made by the Board in November. The final report was published in December 2008.</p>  |
| <p>13. Security of supply information is published on a timely basis and in accordance with risk status.</p>  | <p><b>Achieved.</b> Information was updated on a regular basis during winter 2008.</p>   |

## Output class two—reserve energy and emergency measures—availability

The purpose of the **reserve energy and emergency measures—availability** appropriation and output class is to ensure the availability of reserve energy and emergency options, if needed. The Commission is required to ensure that capacity and capability are available, whether or not they are used. The major activities are:

- **Contingency plans for emergency situations**—developing plans in case market mechanisms prove insufficient to address any supply shortage that may eventuate. This includes publishing an *Emergency Response Plan*, and updating the plan as necessary. The plan is to clearly indicate how the Commission would act in a potential or actual energy shortage and defines the triggers that would lead to emergency measures being taken.
- **Tendering for generation and emergency options as required**—includes completing tender design, preparing tender documents, administering the tender process, and finalising procurement contracts (if needed for procurement of reserve energy or emergency measures).
- **Whirinaki availability**—contracting for the availability of the 155 MW diesel-fired Whirinaki power station for the generation of reserve energy as required.

The reserve energy and emergency measures—availability output class addresses various 2009 GPS requirements under paragraphs 10–37.

| Main performance measures   | Result                               |
|---|--------------------------------------|
| 14. Whirinaki power station availability is delivered in accordance with the contract.                      | <b>Achieved.</b>                     |
| 15. Conduct tendering of reserve energy generation and emergency options for demand reduction, as required. | <b>NA.</b> Not required in the year. |

## Output class three—reserve energy and emergency measures—variable

The **reserve energy and emergency measures—variable** appropriation and output class covers the Commission's intervention to address reserve energy and emergency measures, if needed. The appropriation is available to implement emergency options including fuel for Whirinaki. This output class addresses various 2009 GPS requirements under paragraphs 10–37.

| Main performance measures  | Result           |
|--|------------------|
| 16. Whirinaki power station generation is delivered in accordance with the contract. | <b>Achieved.</b> |

## Output class four—electricity efficiency

The Commission's **electricity efficiency output class** is part of a multi-class output expense appropriation: **energy efficiency and conservation**. This Annual Report addresses only the electricity efficiency output class component of the appropriation.

The Commission's electricity efficiency output class includes:

- Maintaining the electricity efficiency potentials model
- Delivering programmes to promote and facilitate the efficient use and conservation of electricity.

The Commission manages programmes for electricity efficiency in the following areas:

- Efficient lighting
- Industrial—compressed air systems and electric motors
- Commercial.

The Commission has a memorandum of understanding (MOU) with EECA to ensure that areas of mutual or related interest are managed efficiently and effectively.

This output class addresses paragraphs 8, 54–60, and 64 of the 2009 GPS.

| Main performance measures  | Result   |
|--|--|
| <p><b>17.</b> Develop and implement a plan to make appropriate electricity efficiency potential information available to targeted stakeholder groups.</p>  | <p><b>Achieved.</b> The Commission continually reviews information needs as part of its electricity efficiency work, and develops information solutions where appropriate. Examples include:</p> <ul style="list-style-type: none"> <li>– The KEMA potentials study and data sets have been made available.</li> <li>– A detailed lighting survey has been carried out and published.</li> <li>– The RightLight website has been launched, including information on potential savings through efficient lighting options.</li> </ul> |
| <p><b>18.</b> Reports for Electricity efficiency programmes listed in the work programme (part four) meet the Commission's quality standard.</p>           | <p><b>Achieved.</b> Measured and documented through the Commission's quality review process for all Board papers.</p>  |
| <p><b>19.</b> Reports for Electricity efficiency programmes listed in the work programme (part four) meet the GPS performance standard for timeliness.</p> | <p><b>Achieved.</b> Measured and documented through the Commission's quality review process for all Board papers.</p>  |

# Financial statements

## Statement of financial performance for the year ended 30 June 2009

| <b>Actual<br/>2008<br/>\$000</b> |   | <b>Note</b> | <b>Actual<br/>2009<br/>\$000</b> | <b>Budget<br/>2009<br/>\$000</b> |
|----------------------------------|---|-------------|----------------------------------|----------------------------------|
| 78,816                           | Crown revenue   | 1           | 83,815                           | 94,345                           |
| 33,842                           | Whirinaki spot revenue                                    |             | 2,504                            | –                                |
| 1,550                            | Interest income   |             | 1,859                            | 1,230                            |
| 24                               | Other revenue   |             | 25                               | 16                               |
| <b>114,232</b>                   | <b>Total revenue</b>                                      |             | <b>88,203</b>                    | <b>95,591</b>                    |
| 6,488                            | Employee benefits   | 2           | 7,950                            | 7,171                            |
| 1,383                            | Depreciation and amortisation                             |             | 1,764                            | 1,828                            |
| 30,269                           | Whirinaki fuel  |             | 883                              | –                                |
| 70,945                           | Other expenses  | 3           | 74,101                           | 85,346                           |
| <b>109,085</b>                   | <b>Total expenses</b>                                     |             | <b>84,698</b>                    | <b>94,345</b>                    |
| (3,573)                          | Distribution of Whirinaki net spot revenue to levy payers | 4           | (1,621)                          | –                                |
| <b>1,574</b>                     | <b>Net surplus/(deficit) for the period</b>               | <b>5</b>    | <b>1,884</b>                     | <b>1,246</b>                     |

## Statement of movements in equity for the year ended 30 June 2009

| Actual<br>2008<br>\$000 |  | Note | Actual<br>2009<br>\$000 | Budget<br>2009<br>\$000 |
|-------------------------|--|------|-------------------------|-------------------------|
| 4,836                   | <b>Opening balance at 1 July</b>                     |      | 6,410                   | 6,343                   |
|                         | <b>Amounts recognised directly in equity</b>         |      |                         |                         |
|                         | <i>Property, plant and equipment</i>                 |      |                         |                         |
| –                       | – Revaluation gains / (losses) taken to equity       |      | –                       | –                       |
|                         | <i>Financial assets at fair value through equity</i> |      |                         |                         |
| –                       | – Revaluation gains / (losses) taken to equity       |      | –                       | –                       |
| 1,574                   | Surplus/(deficit) for the year                       | 5    | 1,884                   | 1,246                   |
| <b>6,410</b>            | <b>Closing balance at 30 June</b>                    |      | <b>8,294</b>            | <b>7,589</b>            |

## Statement of financial position as at 30 June 2009

| Actual<br>2008<br>\$000 |  | Note | Actual<br>2009<br>\$000 | Budget<br>2009<br>\$000 |
|-------------------------|--|------|-------------------------|-------------------------|
| <b>6,410</b>            | <b>Taxpayers' funds</b>                                  |      | <b>8,294</b>            | <b>7,589</b>            |
|                         | <b>Assets</b>  |      |                         |                         |
|                         | <i>Current assets</i>                                    |      |                         |                         |
| 15,346                  | Cash and cash equivalents                                | 6    | 12,807                  | 5,657                   |
| 28,222                  | Receivables and prepayments                              | 7    | 2,307                   | –                       |
| 389                     | GST receivable   |      | 857                     | –                       |
| <b>43,957</b>           |  |      | <b>15,971</b>           | <b>5,657</b>            |
|                         | <i>Non-current assets</i>                                |      |                         |                         |
| 1,339                   | Property, plant and equipment                            | 8    | 1,249                   | 1,281                   |
| 9,659                   | Intangible assets  | 9    | 8,809                   | 8,765                   |
| <b>10,998</b>           |  |      | <b>10,058</b>           | <b>10,046</b>           |
| <b>54,955</b>           | <b>Total assets</b>                                      |      | <b>26,029</b>           | <b>15,703</b>           |
|                         | <b>Liabilities</b>                                       |      |                         |                         |
|                         | <i>Current liabilities</i>                               |      |                         |                         |
| 36,369                  | Payables and accruals                                    | 10   | 11,082                  | 7,631                   |
| 436                     | Employee entitlements                                    | 11   | 594                     | 483                     |
| 3,573                   | Provision for distribution of Whirinaki net spot revenue | 4    | 1,621                   | –                       |
| 8,167                   | Provision for refund of appropriation to the Crown       | 12   | 4,438                   | –                       |
| <b>48,545</b>           |  |      | <b>17,735</b>           | <b>8,114</b>            |
| <b>48,545</b>           | <b>Total liabilities</b>                                 |      | <b>17,735</b>           | <b>8,114</b>            |
| <b>6,410</b>            | <b>Net assets employed</b>                               |      | <b>8,294</b>            | <b>7,589</b>            |

## Statement of cash flows for the year ended 30 June 2009

| Actual<br>2008<br>\$000                     |   | Note | Actual<br>2009<br>\$000 | Budget<br>2009<br>\$000 |
|---|---|------|-------------------------|-------------------------|
| <b>Cash flows from operating activities</b> |   |      |                         |                         |
| 86,983                                      | Receipts from the Crown                                   |      | 104,920                 | 94,345                  |
| 5,981                                       | Receipts from Whirinaki spot revenue                      |      | 27,788                  | –                       |
| 1,550                                       | Interest from investments                                 |      | 1,859                   | 1,230                   |
| 24  | Receipts from third parties                               |      | 25                      | 16                      |
| (4,381)                                     | Repayment of surplus appropriation to the Crown           |      | (24,834)                | (5,402)                 |
| (140)                                       | Distribution of Whirinaki net spot revenue to levy payers |      | (3,573)                 | –                       |
| (75,215)                                    | Payments to suppliers                                     |      | (99,641)                | (85,326)                |
| (6,307)                                     | Payments to employees                                     |      | (7,792)                 | (7,171)                 |
| (35)  | Goods and services tax (net)                              |      | (468)                   | –                       |
| <b>8,460</b>                                | <b>Net cash flows from operating activities</b>           | 13   | <b>(1,716)</b>          | <b>(2,308)</b>          |
| <b>Cash flows from investing activities</b> |   |      |                         |                         |
| (896)                                       | Purchase of property, plant and equipment                 |      | (265)                   | (1,118)                 |
| (10,704)                                    | Purchase of intangibles                                   |      | (558)                   | (421)                   |
| <b>(11,600)</b>                             | <b>Net cash flows from investing activities</b>           |      | <b>(823)</b>            | <b>(1,539)</b>          |
| (3,140)                                     | Net increase/(decrease) in cash and cash equivalents      |      | (2,539)                 | (3,847)                 |
| 18,486                                      | Cash and cash equivalents at beginning of year            |      | 15,346                  | 9,504                   |
| <b>15,346</b>                               | <b>Cash and cash equivalents at end of year</b>           |      | <b>12,807</b>           | <b>5,657</b>            |

## Statement of commitments as at 30 June 2009

The Commission has operating leases for two full floors and one partial floor in ASB Bank Tower until September 2013.

Service provider agreements exist for the Clearing Manager, Pricing Manager, Reconciliation Manager, Registry, and Wholesale and Information Trading System. These contracts all end during the 2012/13 financial year.

A new System Operator service provider agreement commenced in July 2009. The agreement has no fixed end date. The figures below represent a five year commitment, being an initial period of two years from the commencement of the contract during which notice cannot be given, followed by a three year notice period.

The Reserve Generation Capacity Agreement for the generation of reserve energy by the Whirinaki power station commenced on 1 April 2005 and ends on 14 June 2015. Whirinaki contract commitments are calculated using a combination of known costs to 30 September 2010, estimates of the Producers Price Index (PPI) used to revise the fixed availability and operating and maintenance costs annually, and projections of other costs based on historic information.

|  | <b>Actual<br/>2009<br/>\$000</b> | <b>Actual<br/>2008<br/>\$000</b> |
|--|----------------------------------|----------------------------------|
| <b>Operating commitments</b>                       |                                  |                                  |
| <i>Building lease commitments</i>                  |                                  |                                  |
| Not later than one year                            | 592                              | 485                              |
| Later than one year but not later than five years  | 1,925                            | 1,939                            |
| Later than five years but not later than ten years | 0                                | 121                              |
|  | <b>2,517</b>                     | <b>2,545</b>                     |
| <i>Service provider contract commitments</i>       |                                  |                                  |
| Not later than one year                            | 32,133                           | 27,022                           |
| Later than one year but not later than five years  | 137,542                          | 43,271                           |
| Later than five years but not later than ten years | 0                                | 0                                |
|  | <b>169,675</b>                   | <b>70,293</b>                    |
| <i>Whirinaki contract commitments</i>              |                                  |                                  |
| Not later than one year                            | 29,042                           | 26,456                           |
| Later than one year but not later than five years  | 119,666                          | 110,759                          |
| Later than five years but not later than ten years | 39,158                           | 65,891                           |
|  | <b>187,866</b>                   | <b>203,106</b>                   |
| <b>Total operating commitments</b>                 | <b>360,058</b>                   | <b>275,944</b>                   |
| <b>Capital commitments</b>                         |                                  |                                  |
| <i>Service provider contract commitments</i>       |                                  |                                  |
| Not later than one year                            | 0                                | 240                              |
| Later than one year but not later than five years  | 0                                | 0                                |
| <b>Total capital commitments</b>                   | <b>0</b>                         | <b>240</b>                       |

**Efficiency programme commitments**

The Commission promotes and facilitates electricity efficiency by developing and implementing programmes to provide incentives to deliver energy savings. The Commission entered into contractual arrangements with selected providers to run programmes in the areas of lighting, industrial (motors and compressed air) and commercial buildings. These contracts extend beyond the 2008/09 financial year and result in financial commitments totalling \$7.2 million. These include \$0.083 million for in-service motor bounty commitments which were separately disclosed last year (2007/08: \$0.086 million).

All commitments fall due within one year, with the exception of one commitment for \$2.5 million which expires in April 2011. All amounts committed under existing contracts have been provided for within future appropriations.

## Statement of contingencies as at 30 June 2009

The Electricity Commission has no known contingent liabilities or contingent assets and no known guarantees under the Crown Entities Act 2004.

In 2007/08 the Commission had a contingent liability in relation to two judicial reviews concerning the Commission's decisions to approve investment in the Otahuhu substation and the North Island Grid Upgrade. Both cases were subsequently decided in favour of the Commission.

# Notes to the financial statements

## 1. Crown revenue

The Commission manages appropriations from the Crown under Vote Energy (see page 38 for explanation of appropriations). Appropriations are recognised as revenue to the extent that they are spent.

|  | <b>2009</b>   | <b>2008</b>   |
|--|---------------|---------------|
|  | <b>\$000</b>  | <b>\$000</b>  |
| Electricity governance and market operations         | 45,449        | 46,339        |
| Reserve energy and emergency measures (availability) | 29,636        | 26,219        |
| Reserve energy and emergency measures (variable)     | –             | –             |
| Electricity efficiency                               | 8,404         | 5,957         |
| Electricity Commission litigation fund               | 326           | 301           |
|  | <b>83,815</b> | <b>78,816</b> |

## 2. Employee benefits

|   | <b>2009</b>  | <b>2008</b>  |
|---|--------------|--------------|
|   | <b>\$000</b> | <b>\$000</b> |
| Salaries and wages                            | 7,642        | 6,203        |
| Contributions to defined contribution plans   | 188          | 176          |
| Increase/(decrease) in annual leave provision | 120          | 109          |
|   | <b>7,950</b> | <b>6,488</b> |

Salaries and wages have increased in line with a growth in staff numbers from 44 to 59 over the two year period commencing 1 July 2007.

### 3. Other operating expenses

|                                 | <b>2009</b>   | <b>2008</b>   |
|---------------------------------|---------------|---------------|
|                                 | <b>\$000</b>  | <b>\$000</b>  |
| Service provider contracts      | 27,478        | 29,207        |
| Whirinaki contract              | 29,417        | 26,094        |
| External advice                 | 6,604         | 7,084         |
| Litigation fund                 | 326           | 301           |
| Efficiency programmes           | 6,665         | 4,659         |
| Audit fees                      | 37            | 43            |
| Audit fees for IFRS transition  | –             | 9             |
| Auditor fees for other services | –             | 8             |
| Advisory and working group fees | 38            | 91            |
| Commissioners' fees             | 784           | 784           |
| Rulings Panel fees              | 129           | 148           |
| Operating lease expenses        | 727           | 486           |
| Travel expenses                 | 273           | 250           |
| Other operating expenses        | 1,623         | 1,781         |
|                                 | <b>74,101</b> | <b>70,945</b> |

### 4. Refund to levy payers

#### Refund from the Crown

Levies collected during the financial year are deposited into a Crown bank account administered by the Ministry of Economic Development. After the end of the financial year, a reconciliation between levies collected and actual Commission expenditure is carried out. Based on this reconciliation the Crown either provides refunds or requests additional payments from levy payers.

In 2008/09 Commission expenditure was less than levies collected. The refund to levy payers is expected to be in the region of \$3.248 million. This is in addition to \$1.621 million of Whirinaki net spot revenue (see Refund from the Electricity Commission on the next page). The final refund to levy payers may vary from this amount, and some levy payers may be required to pay additional levies depending on whether they are generators, retailers or distributors, and based on variations from estimated volumes of dispatches, sales and customer connections.

|   | <b>2009</b>   | <b>2008</b>   |
|---|---------------|---------------|
|   | <b>\$000</b>  | <b>\$000</b>  |
| Total Commission expenditure                          | 84,698        | 109,085       |
| Exclude Whirinaki fuel                                | (883)         | (30,269)      |
| Add MACQS <sup>10</sup>                               | 2,897         | 2,897         |
| <b>Total costs to be recovered by levy</b>            | <b>86,712</b> | <b>81,713</b> |
| Actual levies collected                               | 89,960        | 86,841        |
| <b>Refund of over-collected levies to levy payers</b> | <b>3,248</b>  | <b>5,128</b>  |

<sup>10</sup> MACQS refers to costs incurred by Transpower in relation to the MACQS (Multilateral Agreement on Common Quality Standards) reform process. Under the Electricity (Levy of Industry Participants) Regulations 2005, regulation 7(2)(b), MACQS costs are to be recovered in equal instalments of \$2,897,216 per annum over 5 years beginning on 1 July 2005 and ending on 30 June 2010.

## Refund from the Electricity Commission

If the Whirinaki power station is required to operate, the GPS states that the cost to levy payers should be offset by spot revenue received from the sale of reserve energy less the cost of fuel used in generation. In 2008/09 the Commission earned \$1.621 million of net spot revenue and this is included in the refund to levy payers.

|  | <b>2009</b>  | <b>2008</b>  |
|--|--------------|--------------|
|  | <b>\$000</b> | <b>\$000</b> |
| Whirinaki spot revenue   | 2,504        | 33,842       |
| Less Whirinaki fuel  | (883)        | (30,269)     |
| <b>Distribution of Whirinaki net spot revenue to levy payers</b> | <b>1,621</b> | <b>3,573</b> |

## 5. Net operating surplus

The Commission may elect to retain interest income and other revenue (excluding spot revenue from Whirinaki) in order to maintain an appropriate level of working capital. The Commission has exercised this option in 2008/09 and the operating surplus of \$1.884 million has been used to increase equity. Net operating surplus is made up as follows:

|                              | <b>2009</b>  | <b>2008</b>  |
|------------------------------|--------------|--------------|
|                              | <b>\$000</b> | <b>\$000</b> |
| Interest income              | 1,859        | 1,550        |
| Other revenue                | 25           | 24           |
| <b>Net operating surplus</b> | <b>1,884</b> | <b>1,574</b> |

## 6. Cash and cash equivalents

|   | <b>2009</b>   | <b>2008</b>   |
|---|---------------|---------------|
|   | <b>\$000</b>  | <b>\$000</b>  |
| Cash in current account                               | 307           | 346           |
| Cash on call in interest-bearing money market account | 12,500        | 15,000        |
| <b>Total cash and cash equivalents</b>                | <b>12,807</b> | <b>15,346</b> |

The Commission holds cash with Westpac. Westpac is part of the Crown Retail Deposit Guarantee Scheme, therefore all deposits up to \$1 million held with Westpac are guaranteed by the Crown.

## 7. Receivables and prepayments

|  | <b>2009</b>  | <b>2008</b>   |
|--|--------------|---------------|
|  | <b>\$000</b> | <b>\$000</b>  |
| Spot revenue receivable from the Crown           | 2,243        | 27,527        |
| Reimbursement of litigation costs from the Crown | –            | 338           |
| Prepaid insurances                               | –            | 295           |
| Other receivables                                | 131          | 62            |
| Less provision for impairment                    | (67)         | –             |
| <b>Total receivables and prepayments</b>         | <b>2,307</b> | <b>28,222</b> |

The provision for impairment represents the full amount owed by one debtor in relation to costs awarded pursuant to a judicial review. The debtor is currently in liquidation. All other receivables are current and unimpaired.

## 8. Property, plant and equipment

|   | Computer<br>hardware<br>\$000 | Office<br>equipment<br>\$000 | Furniture<br>and fittings<br>\$000 | Leasehold<br>improvement<br>\$000 | Total<br>\$000 |
|---|-------------------------------|------------------------------|------------------------------------|-----------------------------------|----------------|
| <b>Cost or valuation</b>                              |                               |                              |                                    |                                   |                |
| Balance at 1 July 2007                                | 409                           | 115                          | 213                                | 569                               | 1,306          |
| Additions   | 876                           | 4                            | 6                                  | 10                                | 896            |
| Revaluation increase                                  | –                             | –                            | –                                  | –                                 | –              |
| Disposals   | –                             | –                            | –                                  | –                                 | –              |
| <b>Balance at 30 June 2008</b>                        | <b>1,285</b>                  | <b>119</b>                   | <b>219</b>                         | <b>579</b>                        | <b>2,202</b>   |
| Balance at 1 July 2008                                | 1,285                         | 119                          | 219                                | 579                               | 2,202          |
| Additions   | 107                           | 76                           | 30                                 | 53                                | 266            |
| Revaluation increase                                  | –                             | –                            | –                                  | –                                 | –              |
| Disposals   | –                             | –                            | –                                  | –                                 | –              |
| <b>Balance at 30 June 2009</b>                        | <b>1,392</b>                  | <b>195</b>                   | <b>249</b>                         | <b>632</b>                        | <b>2,468</b>   |
| <b>Accumulated depreciation and impairment losses</b> |                               |                              |                                    |                                   |                |
| Balance at 1 July 2007                                | 274                           | 48                           | 102                                | 190                               | 614            |
| Depreciation expense                                  | 130                           | 23                           | 43                                 | 53                                | 249            |
| Eliminate on revaluation                              | –                             | –                            | –                                  | –                                 | –              |
| Eliminate on disposal                                 | –                             | –                            | –                                  | –                                 | –              |
| Impairment losses                                     | –                             | –                            | –                                  | –                                 | –              |
| <b>Balance at 30 June 2008</b>                        | <b>404</b>                    | <b>71</b>                    | <b>145</b>                         | <b>243</b>                        | <b>863</b>     |
| Balance at 1 July 2008                                | 404                           | 71                           | 145                                | 243                               | 863            |
| Depreciation expense                                  | 228                           | 24                           | 39                                 | 65                                | 356            |
| Eliminate on revaluation                              | –                             | –                            | –                                  | –                                 | –              |
| Eliminate on disposal                                 | –                             | –                            | –                                  | –                                 | –              |
| Impairment losses                                     | –                             | –                            | –                                  | –                                 | –              |
| <b>Balance at 30 June 2009</b>                        | <b>632</b>                    | <b>95</b>                    | <b>184</b>                         | <b>308</b>                        | <b>1,219</b>   |
| <b>Carrying amounts</b>                               |                               |                              |                                    |                                   |                |
| At 1 July 2007  | 135                           | 67                           | 111                                | 379                               | 692            |
| At 30 June and 1 July 2008                            | 881                           | 48                           | 74                                 | 336                               | 1,339          |
| <b>At 30 June 2009</b>                                | <b>760</b>                    | <b>100</b>                   | <b>65</b>                          | <b>324</b>                        | <b>1,249</b>   |

## 9. Intangible assets

|   | Acquired<br>software<br>\$000 | Internally<br>generated<br>software<br>\$000 | Total<br>\$000 |
|---|-------------------------------|--|----------------|
| <b>Cost or valuation</b>                              |                               |  |                |
| Balance at 1 July 2007                                | 311                           | –  | 311            |
| Additions   | 10,704                        | –  | 10,704         |
| Disposals   | –                             | –  | –              |
| <b>Balance at 30 June 2008</b>                        | <b>11,015</b>                 | <b>–</b>                                     | <b>11,015</b>  |
| Balance at 1 July 2008                                | 11,015                        | –  | 11,015         |
| Additions   | 558                           | –  | 558            |
| Disposals   | –                             | –  | –              |
| <b>Balance at 30 June 2009</b>                        | <b>11,573</b>                 | <b>–</b>                                     | <b>11,573</b>  |
| <b>Accumulated amortisation and impairment losses</b> |                               |  |                |
| Balance at 1 July 2007                                | 222                           | –  | 222            |
| Amortisation expense                                  | 1,134                         | –  | 1,134          |
| Disposals   | –                             | –  | –              |
| Impairment losses                                     | –                             | –  | –              |
| <b>Balance at 30 June 2008</b>                        | <b>1,356</b>                  | <b>–</b>                                     | <b>1,356</b>   |
| Balance at 1 July 2008                                | 1,356                         | –  | 1,356          |
| Amortisation expense                                  | 1,408                         | –  | 1,408          |
| Disposals   | –                             | –  | –              |
| Impairment losses                                     | –                             | –  | –              |
| <b>Balance at 30 June 2009</b>                        | <b>2,764</b>                  | <b>–</b>                                     | <b>2,764</b>   |
| <b>Carrying amounts</b>                               |                               |  |                |
| At 1 July 2007  | 89                            | –  | 89             |
| At 30 June and 1 July 2008                            | 9,659                         | –  | 9,659          |
| <b>At 30 June 2009</b>                                | <b>8,809</b>                  | <b>–</b>                                     | <b>8,809</b>   |

## 10. Payables and accruals

|                              | <b>2009</b><br><b>\$000</b> | <b>2008</b><br><b>\$000</b> |
|------------------------------|-----------------------------|-----------------------------|
| Whirinaki diesel             | 325                         | 29,713                      |
| Whirinaki contract payments  | 4,374                       | 1,045                       |
| Service providers            | 2,662                       | 3,087                       |
| Electricity efficiency       | 1,780                       | 235                         |
| Other creditors and accruals | 1,941                       | 2,289                       |
|                              | <b>11,082</b>               | <b>36,369</b>               |

Payables and accruals are non-interest bearing and are normally settled on 30 day terms, therefore the carrying value of payables and accruals approximates their fair value.

## 11. Employee entitlements

|                                    | <b>2009</b><br><b>\$000</b> | <b>2008</b><br><b>\$000</b> |
|------------------------------------|-----------------------------|-----------------------------|
| Annual leave                       | 486                         | 365                         |
| Salary accrual                     | 108                         | 71                          |
| <b>Total employee entitlements</b> | <b>594</b>                  | <b>436</b>                  |

## 12. Provision for refund of appropriation to the Crown

The Electricity Commission receives funding by way of appropriations from the Crown. The Crown is reimbursed for this funding by levies collected from industry participants.

The Commission receives appropriations monthly according to a funding profile agreed at the start of the year. The provision for refund of appropriation to the Crown is the difference between funding received during the year and total Commission expenditure for the year. This amount is to be repaid to the Crown after the annual audit.

|   | <b>2009</b><br><b>\$000</b> | <b>2008</b><br><b>\$000</b> |
|---|-----------------------------|-----------------------------|
| Total Crown appropriations drawn down                     | 88,253                      | 86,983                      |
| Total Commission expenditure (excluding Whirinaki diesel) | (83,815)                    | (78,816)                    |
| <b>Provision for refund of appropriation to the Crown</b> | <b>4,438</b>                | <b>8,167</b>                |

### 13. Reconciliation of net operating surplus to net cash flows

|   | 2009<br>\$000  | 2008<br>\$000 |
|---|----------------|---------------|
| <b>Net operating surplus</b>  | <b>1,884</b>   | <b>1,574</b>  |
| <b>Add non-cash items</b>   |                |               |
| Depreciation and amortisation   | 1,764          | 1,383         |
| Disposal of leased assets   | –              | –             |
| <b>Total non-cash items</b>   | <b>1,764</b>   | <b>1,383</b>  |
| <b>Add movements in working capital items</b>                         |                |               |
| (Increase) decrease in debtors and prepayments                        | 25,915         | (28,116)      |
| Increase (decrease) in payables and accruals                          | (25,288)       | 26,291        |
| Increase (decrease) in GST on operations                              | (468)          | (35)          |
| Increase (decrease) in employee entitlements                          | 158            | 144           |
| Increase (decrease) in provision for refund of appropriation          | (3,729)        | 3,786         |
| Increase (decrease) in provision for distribution of net spot revenue | (1,952)        | 3,433         |
| <b>Net working capital movements</b>                                  | <b>(5,364)</b> | <b>5,503</b>  |
| <b>Net cash flow from operating activities</b>                        | <b>(1,716)</b> | <b>8,460</b>  |

## 14. Employee remuneration <sup>11</sup>

The General Manager's annual remuneration and benefits are in the \$250,000–259,999 band. In 2007/08 the General Manager's annual remuneration and benefits were also in the \$250,000–259,999 band.

During the year ended 30 June 2009, one employee (2008: 1) received compensation and other benefits in relation to cessation totalling \$46,000 (2008: \$24,000). No Board members received compensation or other benefits in relation to cessation (2008: 0).

| Salary band         | 2009      | 2008      |
|---------------------|-----------|-----------|
| \$100,000–\$109,999 | 2         | 3         |
| \$110,000–\$119,999 | 2         | 5         |
| \$120,000–\$129,999 | 3         | 4         |
| \$130,000–\$139,999 | 6         | 5         |
| \$140,000–\$149,999 | 5         | 1         |
| \$150,000–\$159,999 | 2         | 3         |
| \$160,000–\$169,999 | 3         | 2         |
| \$170,000–\$179,999 | 1         | 3         |
| \$180,000–\$189,999 | 3         | 1         |
| \$190,000–\$199,999 | 1         | –         |
| \$220,000–\$229,999 | 1         | –         |
| \$250,000–\$259,999 | 1         | 1         |
| \$260,000–\$269,999 | –         | 1         |
| \$280,000–\$289,999 | 1         | –         |
|                     | <b>31</b> | <b>29</b> |

## 15. Key management remuneration <sup>11</sup>

Key management personnel include Commissioners, the General Manager, and direct reports to the General Manager.

|   | 2009<br>\$000 | 2008<br>\$000 |
|---|---------------|---------------|
| Salaries and other short-term employee benefits | 2,725         | 2,591         |
| Post-employment benefits                        | 61            | 60            |
| Other long-term benefits                        | –             | –             |
| Termination benefits                            | –             | –             |
| <b>Total key management remuneration</b>        | <b>2,786</b>  | <b>2,651</b>  |

<sup>11</sup> Remuneration for 2008/09 includes superannuation subsidies provided by the Commission on behalf of employees. Prior year figures have been restated to be consistent with this new disclosure and in some cases this has altered the allocation of employees to remuneration bands and other prior year figures from those reported in the 2007/08 annual report.

## 16. Commissioners' remuneration

Commissioner Sowry was appointed to the Commission Board in April 2009. There were no other Commissioner changes during the 2008/09 financial year.

Commissioner Caygill is an associate member of the Commerce Commission, a role established to facilitate information sharing between the two Commissions. Commissioner Caygill was also appointed to the Board of the Energy Efficiency and Conservation Authority (EECA) in August 2008. The Chair receives no additional remuneration for this work. However, the Electricity Commission invoices the Commerce Commission and EECA for time spent by the Chair in these roles, and this is included as *Other revenue* in the Statement of Financial Performance. The remuneration shown below is not offset by the amount recovered from the Commerce Commission and EECA.

The following fees were paid to Commission members:

|             | <b>2009</b><br><b>\$000</b> | <b>2008</b><br><b>\$000</b> |
|-------------|-----------------------------|-----------------------------|
| D Caygill   | 340                         | 243                         |
| R Bentley   | 98                          | 74                          |
| D Bull      | 95                          | 78                          |
| D Close     | –                           | 34                          |
| L Constable | 81                          | 64                          |
| D Dell      | –                           | 36                          |
| P Harris    | 75                          | 135                         |
| G Pinnell   | –                           | 37                          |
| S Rodger    | 79                          | 83                          |
| R Sowry     | 16                          | –                           |
|             | <b>784</b>                  | <b>784</b>                  |

## 17. Rulings Panel remuneration

|                      | <b>2009</b><br><b>\$000</b> | <b>2008</b><br><b>\$000</b> |
|----------------------|-----------------------------|-----------------------------|
| Neville Young        | –                           | 32                          |
| Gael Webster         | 33                          | 27                          |
| John Isles           | 24                          | 26                          |
| John O'Sullivan      | 24                          | 26                          |
| Craig Taylor         | 24                          | 29                          |
| Peter Dengate-Thrush | 24                          | 8                           |
|                      | <b>129</b>                  | <b>148</b>                  |

## 18. Advisory group and working group fees

|   |                        | <b>2009</b>  | <b>2008</b>  |
|---|------------------------|--------------|--------------|
|   |                        | <b>\$000</b> | <b>\$000</b> |
| Retail Market Advisory Group            | Anne Herrington        | 1            | 5            |
|   | David Russell (Chair)  | 2            | 3            |
|   | John Scott             | 2            | 6            |
|   | Neil Barton            | 2            | 4            |
|   | Peter Rutledge         | 2            | 4            |
|   | Raewyn Fox             | 1            | 4            |
| Wholesale Market Advisory Group         | Rod Boyte              | 2            | 5            |
|   | Bill Heaps (Chair)     | 4            | 7            |
|   | Graham Stairmand       | –            | 6            |
|   | John Scott             | 2            | 5            |
| Hedge Market Development Steering Group | Russell Longuet        | –            | 1            |
|   | Tony Baldwin (Chair)   | –            | 2            |
| Common Quality Advisory Group           | Bryan Leyland          | 2            | 2            |
|   | Terrence Currie        | 2            | 6            |
|   | Toby Stevenson (Chair) | 3            | 8            |
| Wind Generation Investigation Project   | Bill Heaps (Chair)     | –            | 1            |
|   | Mark Pearce            | –            | 1            |
| Security Advisory Group                 | Barbara Elliston       | 1            | 3            |
| Transmission Advisory Group             | Bill Heaps (Chair)     | 9            | 13           |
|   | Ralph Matthes          | 1            | 2            |
|   | Russell Longuet        | 2            | 3            |
|   |                        | <b>38</b>    | <b>91</b>    |

Advisory groups and working groups comprise members paid by the Commission and members working in the industry paid by their own organisation. The members listed above are those paid by the Commission and do not represent the complete membership of each group.

## 19. Related party transactions

The Electricity Commission is a wholly-owned entity of the Crown. The Government sets the policy requirements to guide the Commission's roles as well as being its major source of revenue.

The Commission enters into transactions with government departments, Crown agencies, and state-owned enterprises. These transactions are not considered to be related party transactions.

## 20. Financial instrument risks

The Commission is party to financial instrument arrangements as part of its everyday operations. These financial instruments include bank accounts, accounts receivable, and accounts payable.

### Interest rate risk

Interest rate risk is the risk that the return on funds invested and the cost of borrowed funds fluctuate due to changes in market interest rates.

The Commission's exposure to interest rate risk on funds invested is limited to on-call bank deposits which are subject to variable interest rates.

Under the Crown Entities Act 2004, the Commission requires ministerial approval to enter into a borrowing arrangement. The Commission has no borrowings and accordingly there is no interest rate exposure on borrowed funds.

### Credit risk

Credit risk is the risk that a third party defaults on its obligations to the Commission causing the Commission to incur a loss.

The Commission does not have significant concentrations of credit risk as it only has a small number of debtors and only invests in financial institutions that have high credit ratings.

### Liquidity risk

Liquidity risk is the risk that the Commission encounters difficulties raising liquid funds to meet commitments as they fall due. The Commission has a low exposure to liquidity risk as it does not enter into credit arrangements, except those available from suppliers as part of normal operating agreements, and aims to maintain sufficient funds available on-call to meet its liquidity requirements.

### Currency risk

Currency risk is the risk that debtors and creditors due in foreign currency fluctuate because of changes in foreign exchange rates. The Commission has no significant exposure to currency risk on its financial instruments.

## 21. Capital management

The Commission's capital is its equity, which comprises accumulated funds and is represented by net assets.

The Commission is subject to the financial management and accountability provisions of the Crown Entities Act 2004, which impose restrictions in relation to borrowings, acquisition of securities, issuing guarantees and indemnities, and the use of derivatives.

The Commission manages its equity by prudently managing revenues, expenses, assets, liabilities and general financial dealings to ensure the Commission effectively achieves its objectives and purpose, whilst remaining a going concern.

## 22. Post balance date events

No significant events which would materially affect the financial statements have occurred between 30 June 2009 and the date of signing the financial statements, except for the release of a review by the Minister on 12 August 2009 titled Improving Electricity Market Performance. A recommendation within this review is for the Commission to be replaced by an Independent Crown Entity called the Electricity Market Authority. At the date of signing the financial statements there has been no timeframe announced for any decisions in relation to this review.

## 23. Explanation of major variances against budget

### Statement of financial performance

#### Crown revenue

Crown revenue was \$10.5 million below budget due to underspends in *Governance* and *market operations* (\$3.6 million) and *Electricity efficiency* (\$10.0 million), and an overspend in *Reserve energy and availability measures—availability* (\$3.2 million). Note that the latter appropriation was not exceeded as the budget was set below the full appropriation.

The *Electricity efficiency* appropriation was reduced by \$5.0 million in the Supplementary Estimates after a decision was made not to proceed with a funding contribution to the Energy Efficiency and Conservation Authority's (EECA's) Energywise programme.

#### Interest income

Cash balances were higher than anticipated during the first half of 2008/09 (see *Cash and cash equivalents* below) and consequently interest income was higher than budgeted.

#### Other expenses

Other expenses were \$11.2 million under budget. The major contributors to this underspend were efficiency programmes (\$10.1 million), external advice (\$2.7 million) and service provider contracts (\$0.9 million). These were offset by an overspend against the Whirinaki contract (\$3.6 million) due to a higher than budgeted annual adjustment based on the Producers Price Index. The decision not to proceed with a \$5.0 million funding contribution to the EECA Energywise programme is a major reason for the underspend in efficiency programmes.

### Statement of financial position

#### Cash and cash equivalents

Average cash balances were higher than budgeted during the first half of 2008/09. This was due to substantial spot revenue earnings during the period of low hydro inflows in the last quarter of 2007/08, a significant injection of additional funding in July 2008 to prepare for the possibility of emergency measures, and 2007/08 surplus appropriations and net spot revenue which were not repaid to the Crown until December 2008.

By year end cash holdings were \$7.2 million over budget. This is made up of surplus appropriation and net spot revenue for 2008/09 which will be returned to the Crown in December 2009 after the annual levy reconciliation. These items were both budgeted at zero.

#### Payables and accruals

Payables and accruals were higher than budget by \$3.5 million. The Commission owed \$4.7 million under the Whirinaki contract at year end. Electricity efficiency had a high level of payables and accruals due to increased activity in the final quarter of 2008/09, particularly in relation to the RightLight programme.

### **Provision for refund of appropriation to the Crown**

The budget is based on the assumption that the Commission will spend in full the appropriation received from the Crown. An underspend gives rise to a provision for appropriations received but not spent, which will be returned to the Crown after year end (refer to the policy on the accounting treatment of Crown appropriations below).

## **Statement of cash flows**

### **Receipts from the Crown**

The Commission received a cash injection of \$16.667 million from the Crown in July 2008 under the *Reserve energy and emergency measures – variable* appropriation. This was required to cover a period of potential supply risk resulting from low hydro inflows during winter 2008. This appropriation has historically been used solely for Whirinaki fuel costs. These costs are usually more than offset by spot revenue and for this reason the appropriation is budgeted at zero. This unanticipated Crown receipt explains the significant variance from budget.

### **Receipts from Whirinaki spot revenue**

Spot revenue is earned from the sale of electricity generated by the Whirinaki power station. It is usually higher than the cost of fuel required to generate the electricity and therefore both spot revenue and fuel are budgeted at zero. The period of low hydro inflows during winter 2008 (see above) resulted in the extended operation of the Whirinaki power station and consequently a significant amount of spot revenue was earned in the last quarter of 2007/08. This spot revenue was received in the first quarter of 2008/09 and accounts for the majority of spot revenue receipts shown.

### **Repayment of surplus appropriation to the Crown**

Repayment of surplus appropriation to the Crown usually occurs once a year after the end of the financial year. The budget figure represents the repayment of surplus appropriation for 2007/08. However, since the period of potential supply risk during winter 2008 (see *Receipts from the Crown* above) passed without recourse to the \$16.667 million drawn down under the *Reserve energy and emergency measures – variable* appropriation, the additional funds were considered too material to retain until after the end of the 2008/09 financial year and the full amount was repaid in December 2008, resulting in a significant variance against budget.

### **Payments to suppliers**

The Whirinaki power station operated for an extended period during winter 2008 and consequently incurred significant fuel costs in the last quarter of 2007/08. Payments for the fuel consumed during this period were made in the 2008/09 financial year. As explained above (see *Receipts from Whirinaki spot revenue*) both Whirinaki spot revenue and fuel are budgeted at zero, therefore a significant variance arises in relation to these payments.

# Statement of accounting policies for the year ended 30 June 2009

## Reporting entity

The reporting entity is the Electricity Commission, which is a Crown agent in terms of the Crown Entities Act 2004 and the Public Finance Act 1989. The Commission was established under the Electricity Act 1992.

The Commission has designated itself a public benefit entity, as defined in NZ IAS 1, since its primary objective is to provide goods and services for community or social benefit, rather than a financial return to equity holders.

The Commission is a reporting entity for the purposes of the Financial Reporting Act 1993, the Public Finance Act 1989, and the Crown Entities Act 2004.

The financial statements for the Electricity Commission are for the year ended 30 June 2009, and were signed by Commissioners Caygill and Bentley on behalf of the Board on 30 October 2009.

## Basis of preparation

### Statement of compliance

The financial statements of the Electricity Commission have been prepared in accordance with the requirements of the Crown Entities Act 2004, which includes the requirement to comply with New Zealand generally accepted accounting practice (NZ GAAP).

The financial statements comply with the New Zealand equivalents to International Financial Reporting Standards (NZ IFRS) and its interpretations approved by the Accounting Standards Review Board, as appropriate for public benefit entities.

### Measurement base

The financial statements have been prepared on an historical cost basis, except where modified by the revaluation of certain items of property, plant and equipment.

### Functional and presentation currency

The financial statements are presented in New Zealand dollars rounded to the nearest thousand dollars (\$000). The functional currency of the Electricity Commission is New Zealand dollars.

## Significant accounting policies

The following particular accounting policies, which materially affect the measurement of financial performance and financial position, have been applied consistently.

### Revenue

#### Crown revenue

The Commission receives appropriations from the Crown. These are restricted in their use to the purpose of meeting the Commission's objectives, as outlined in the Statement of Intent. Appropriations received but not spent are refunded to the Crown after year end.

Appropriations from the Crown are recognised as revenue to the extent that they are spent in any particular month. Appropriations received but not spent are treated as a Crown creditor and shown in the Statement of Financial Performance as a provision for refund of appropriation to the Crown.

## Levies

The Commission administers a levy on industry participants under the Electricity (Levy of Industry Participants) Regulations 2005. Levies are paid directly to the Crown for reimbursement of funding provided to the Commission. Levies are not recognised as revenue in the Commission's accounts.

## Spot revenue

Spot revenue is earned when the Whirinaki power station generates electricity under pre-defined conditions. Spot revenue is recognised when earned and is reported in the financial period to which it relates. Spot revenue less the cost of diesel is refunded to levy payers, and is shown in the Statement of Financial Position as a provision for distribution of Whirinaki net spot revenue.

## Interest

Interest is earned on bank deposits and is recognised in the period to which it relates.

## Leases

### Operating leases

Leases are classified as operating leases where the lessor retains all the risks and rewards incident to ownership. Lease payments under an operating lease are recognised as an operating expense on a straight line basis over the period of the lease.

## Cash and cash equivalents

Cash and cash equivalents include cash on hand and bank deposits held on call with original maturities of three months or less.

## Receivables and prepayments

Receivables and prepayments are initially measured at fair value, and subsequently measured at amortised cost using the effective interest method, less any provision for impairment.

## Property, plant and equipment

Property, plant and equipment classes consist of computer hardware, furniture and fittings, office equipment and leasehold improvements.

Property, plant and equipment are shown at cost or valuation, less any accumulated depreciation and impairment losses.

All fixed assets costing \$1,000 (excluding GST) or more are capitalised and recorded at historical cost. Capital work in progress is recognised as costs are incurred.

## Depreciation

Depreciation of fixed assets is on a straight-line basis at rates that writes off the depreciable amount of an asset over its useful life. The depreciable amount of an asset is the historical cost or revalued amount less the residual value. All assets are assumed to have no residual value. The estimated useful life of each asset class is listed below.

|                        |                               |
|------------------------|-------------------------------|
| Computer hardware      | 3–5 years                     |
| Furniture and fittings | 5 years                       |
| Office equipment       | 5 years                       |
| Leasehold improvements | Unexpired period of the lease |

Depreciation on capital work in progress commences when the asset is fully operational.

## Intangible assets

Software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software.

## Amortisation

Amortisation of intangible assets is on a straight-line basis over their useful life. The estimated useful life of each asset class is listed below.

|                   |           |
|-------------------|-----------|
| Computer software | 3–8 years |
|-------------------|-----------|

## Impairment of non-financial assets

Property, plant and equipment and intangible assets that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss would be recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and value in use.

## Payables and accruals

Payables and accruals are initially measured at fair value and subsequently measured at amortised cost using the effective interest method.

## Employee entitlements

Employee entitlements include salaries, wages and superannuation contributions accrued up to balance date, annual leave, sick leave and long-service leave entitlements.

### Annual leave

Annual leave earned but not yet taken is recognised as it accrues to employees at current rates of pay.

### Sick leave

Sick leave is recognised to the extent that compensated absences in the coming year are expected to be greater than the sick leave entitlements earned in the coming year. The amount is calculated based on the unused sick leave entitlement that can be carried forward at balance date, to the extent that the Commission anticipates it likely to be used by staff to cover those future absences.

## Long service leave

Long-service leave is calculated on an actuarial basis as the likely future entitlements accruing to staff taking into consideration years of service, years to entitlement, and the likelihood that staff would reach the point of entitlement.

## Superannuation

Obligations for contributions to KiwiSaver and the State Sector Retirement Savings Scheme are accounted for as a defined contribution superannuation scheme and are recognised as an expense in the statement of financial performance as incurred.

## Income tax

The Commission is a public authority in terms of the Income Tax Act 2004 and is therefore exempt from income tax.

## Goods and services tax (GST)

All items in the financial statements are presented exclusive of GST, except for payables and receivables, which are presented on a GST inclusive basis. Where GST is not recoverable as input tax then it is recognised as part of the related asset or expense.

The amount of GST owing to or from the Inland Revenue Department at balance date, being the difference between output GST and input GST, is included in payables or receivables in the Statement of Financial Position.

## Budget figures

The budget figures are derived from the Statement of Intent as approved by the Board at the beginning of the financial year. The budget figures have been prepared in accordance with NZ IFRS using accounting policies that are consistent with those adopted by the Commission for the preparation of the financial statements.

## Comparative figures

Comparative information has been reclassified, where necessary, to achieve consistency in disclosure with the current year.

## Accounting estimates and assumptions

In preparing these financial statements the Commission has made estimates and assumptions concerning the future. These estimates and assumptions may differ from actual results. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events.

**Part four**  
report against the GPS

## Report against the GPS

Section 172ZK of the Electricity Act 1992 provides that the Minister must set objectives and outcomes to which the Government wants the Commission to give effect, and against which the Commission must report. Section 172ZM of the Electricity Act 1992 requires the Commission to report on its performance against and the outcomes and objectives contained in this *Government Policy Statement on Electricity Governance (GPS)*.

The 2008–2011 SOI was prepared based on the GPS published in May 2008. The Minister provided the Commission with a replacement GPS in May 2009.

The table below provides a summary of the GPS requirements and reports on the Commission's progress against those requirements to 30 June 2009. Where relevant, the table provides paragraph references for both the 2008 and 2009 versions of the GPS.

A more detailed report, including links to major reports, is available on the Commission's website at: [www.electricitycommission.govt.nz/infopapers/publications](http://www.electricitycommission.govt.nz/infopapers/publications)

| 2009 GPS Para.                           | 2008 GPS Para. | Requirement  | Performance standard for 2008/09 <sup>12</sup> | Progress to 30 June 2009 <sup>13</sup>  |
|--|----------------|--|--|---|
| <b>1. Commission powers and approach</b> |                |  |  |   |
| 1–3                                      | 1–3            | General expectations on process, approach and consultation | Ongoing requirements                           | Requirements being met.   |
| Consultation                             |                |  |  |   |
| 4–5                                      | 4–5            | Consultation processes                                     | Ongoing requirements                           | The Commission has published a range of consultation documents during the year.   |
| 5  | 5              | Consultation protocol                                      | Maintain                                       | The protocol was last updated in September 2007. It has been published on the Commission's website and is being followed.                 |
| 6  | 6              | Consultation with the Ministry of Consumer Affairs         | Ongoing activity                               | The Commission consults the Ministry of Consumer Affairs on relevant rule-change proposals, and attends relevant meetings of officials.   |
| Advisory groups                          |                |  |  |   |
| Deleted                                  | 7              | Advisory group support and input                           | Ongoing activity                               | The Commission carried out a review of advisory groups in 2008/09. The new groups were established and membership announced in July 2009. |

<sup>12</sup> These statements address the requirements of section 172ZL of the Electricity Act 1992.

<sup>13</sup> These statements address the requirements of section 172ZM of the Electricity Act 1992.

| 2009<br>GPS<br>Para. | 2008<br>GPS<br>Para. | Requirement  | Performance<br>standard for<br>2008/09 | Progress to 30 June 2009  |
|----------------------|----------------------|--|--|---|
| Innovation           |                      |  |  |   |
| 7                    | 8                    | Encouraging innovation                             | Ongoing requirements                   | <p>Encouraging innovation is a key aspect of the Commission's work. For example:</p> <ul style="list-style-type: none"> <li>• The advanced metering work focuses on enabling and encouraging innovation in service improvements and tariff options for residential consumers</li> <li>• A trial project was undertaken with Orion Networks in the upper South Island to test reduction in maximum demand, including the impact on end-use customers</li> <li>• Provision of modelling information and models on-line, including the CDS web interface, available from December 2008.</li> </ul>   |
| Information          |                      |  |  |   |
| 8                    | 9                    | Information collection, analysis and dissemination | Regular publication of reports         | <p>The Commission has published a range of general information documents. These include:</p> <ul style="list-style-type: none"> <li>• Commission update—a weekly update on operational matters including notification of consultation processes and decisions</li> <li>• Notes from the Chair—quarterly newsletters providing an update on key issues and initiatives</li> <li>• On the lines/Workplan update—a newsletter providing updates on major projects</li> <li>• GPS reports—quarterly reports on progress against GPS requirements</li> <li>• Information papers—information papers covering a wide range of subjects.</li> </ul> <p>Regular statistical reports have been published for the wholesale and retail markets:</p> <ul style="list-style-type: none"> <li>• System Operation reports—monthly</li> <li>• Retail reports—monthly</li> <li>• Wholesale reports—weekly</li> <li>• Distributed generation— in May 2009 the Commission published distributors' annual statistics on connections of distributed (embedded) generation the statistics.</li> </ul> |

| 2009 GPS Para.                                 | 2008 GPS Para. | Requirement   | Performance standard for 2008/09  | Progress to 30 June 2009  |
|--|----------------|---|---|---|
| 8  | 9              | Information collection, analysis and dissemination (continued)                                      |   | <p>A number of targeted information reports have been published:</p> <ul style="list-style-type: none"> <li>• Lake level history—in March 2009 the Commission published a report and datasets on lake level history</li> <li>• Reconciliation of hydro inflow datasets—in July 2009 the Commission published a comparison of hydrological inflow data series</li> <li>• Wind data—a draft national windflow dataset has been received. When work on the dataset has been completed, the Commission expects to publish the dataset and an accompanying report</li> <li>• Workshop on wind integration and hydrology—the Commission hosted a technical workshop on 25 June 2009, at which the following presentations on hydrology and wind data were given: <ul style="list-style-type: none"> <li>• Synthetic wind data (Dr Richard Turner, NIWA)</li> <li>• Lake level histories (Dr Jack McConchie, OPUS)</li> <li>• Reconciliation of OPUS and Comit Hydro inflows (Dr Jack McConchie, OPUS).</li> </ul> </li> </ul> |
| 8  | 9              | Centralised dataset (CDS)   | Two CDS updates   | <p>Updated centralised dataset DVDs were published in December 2008 and May 2009.</p> <p>On 12 December 2008 the Commission implemented a web interface to the centralised dataset, which allows users to download selected information from the CDS using a simple query tool.</p>   |
| 8, 77  | 9, 89          | Statement of Opportunities (SOO)  |   | See 2008 GPS paragraph 89.  |
| 8  | 9              | Market modelling, including the generation capacity and expansion model (GEM) and market simulation | <p>Updated and improved GEM released into the public domain</p> <p>Market simulation and real-time dispatch models released</p> | <p>GEM updates were released every two months and ongoing development has taken place.</p> <p>The Commission has made the GEM available to the industry and a number of participants have purchased a runtime license enabling them to modify and operate GEM for themselves.</p>   |
| <b>Administration of regulations and rules</b> |                |   |   |   |
| 9  | 10             | Monitoring and compliance with Rules and Regulations  | <p>Ongoing monitoring and compliance</p> <p>Enforcement, if necessary</p>   | A total of 1,089 notified breaches have been closed to 30 June 2009, 267 of those being closed in the 2008/09 financial year.   |
| 9  | 10             | Compliance framework—review of the compliance regime  | Implement the results of the compliance framework review  | The compliance framework review has been completed and communicated at a compliance conference held on 25 August 2008. As part of the new framework the Commission has published its compliance philosophy, launched a Market Governance newsletter, and publishes relevant case studies.   |

| 2009 GPS Para. | 2008 GPS Para. | Requirement   | Performance standard for 2008/09                      | Progress to 30 June 2009  |
|----------------|----------------|---|---|---|
| 9              | 10             | Review of market monitoring and compliance approach | Complete development of a proactive monitoring method | The updated monitoring approach was completed as part of the compliance framework review. Continuous improvement work is ongoing. |

### 2. New Zealand Energy Strategy (NZES) and New Zealand Energy Efficiency and Conservation Strategy (NZECS)

|         |       |                                     |   |  |
|---------|-------|-------------------------------------|---|--|
| Deleted | 11–16 | NZES and NZECS general expectations | Ongoing requirements for delivery, reporting and monitoring | <p>The Government has announced a review of the NZES. The NZECS is also being reviewed but continues in the meantime and the Commission provides updates to the MED against its targets in the NZECS.</p> <p>NZECS delivery updates are included under the relevant GPS paragraphs in this report (cross-references are provided to the NZECS document).</p> |
|---------|-------|-------------------------------------|---|--|

### 3. Consumer protection

#### Domestic consumer contracts

|       |       |                             |  |   |
|-------|-------|-----------------------------|--|---|
| 38–41 | 17–20 | Domestic consumer contracts | <p>Alignment process with benchmark (transmission) agreement underway as business-as-usual</p> <p>Ongoing monitoring</p> | <p>The Commission is working on changes to the model retail contracts, including proposed changes to include transparency of energy and lines charges, and alignment with the benchmark (transmission) agreement (BA).</p> <p>Ongoing monitoring is taking place. (Also covers 2008 GPS paragraph 113.)</p> |
|-------|-------|-----------------------------|--|---|

#### Low fixed charges

|       |       |   |  |   |
|-------|-------|---|--|---|
| 42–43 | 21–22 | Monitoring the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 | <p>Ongoing monitoring</p> <p>Enforcement, if necessary</p> | <p>Ongoing monitoring is taking place and some breaches are being investigated.</p> <p>Six monthly reviews are taking place and the Commission is working on automated tools to streamline the process.</p> |
|-------|-------|---|--|---|

#### Arrangements for the benefit of low-income and vulnerable domestic consumers

|       |       |   |  |   |
|-------|-------|---|--|---|
| 44–45 | 23–24 | Guidelines on arrangements to assist low-income and vulnerable domestic consumers | <p>Ongoing monitoring</p> <p>Recommend regulations, if necessary</p> | <p>Paragraph 23 of the 2008 GPS required the Commission to monitor compliance with the guideline. The Commission keeps compliance with the guideline under review. Monitoring took place in December 2008 and a report was provided to the Minister on 19 May 2009.</p> <p>The Commission is working with electricity retailers, Ministry of Health, DHBs, and Work and Income officials to improve the guideline and on 27 February 2009 the Commission proposed revisions. Consultation on the proposal closed on 1 April 2009. Completion is expected in 2009/10.</p> <p>To support the guideline, the Commission also facilitated a <i>Protocol between electricity retailers and social agencies</i>. Statistics are being published on disconnections and bonds under the protocol.</p> |
|-------|-------|---|--|---|

| 2009 GPS Para.                                   | 2008 GPS Para. | Requirement   | Performance standard for 2008/09   | Progress to 30 June 2009   |
|--|----------------|---|--|--|
| Arrangements in the event of retailer insolvency |                |   |  |  |
| 46   | 25             | Arrangements in the event of retailer insolvency                  | Finalise recommendations   | Feedback from industry advisory groups on the draft issues and options paper has resulted in significant re-drafting. Further consideration is being given to the future of this project based on feedback received in response to the Commission's consultation on appropriations for the 2009/10 financial year. |
| Consumer complaints resolution system            |                |   |  |  |
| 47–53  | 26–32          | Development and approval of consumer complaints resolution scheme | Complete approval of scheme and commence business-as-usual monitoring        | The Commission and Gas Industry Company (GIC) have recommended approval of the Electricity and Gas Complaints Commission (EGCC) scheme subject to changes to its constitution. These were still outstanding at the end of the financial year.  |
| <b>4. Electricity efficiency</b>                 |                |   |  |  |
| 54–59  | 33–39          | General requirements, inter-agency coordination                   | Ongoing requirements   | The requirements are being met. The Commission has regular meetings and coordinates efficiency efforts with EECA and other relevant agencies.  |
| 55   | 35             | Electricity efficiency potentials study                           | Updates to data/information developed and made available                     | The potentials study model and information about the study have been published and the Commission is continuing to maintain the model. The Commission plans to undertake an annual update for relevant information.  |
| 60   | 40             | Memorandum of understanding (MOU) with EECA                       | MOU update to address new requirements in 2008 GPS                           | An updated MOU was signed in November 2008 and published on the Commission's website.  |
| Discount rate                                    |                |   |  |  |
| Deleted  | 42             | Cost-effectiveness assessment of programmes                       | Assessment carried out on all proposed programmes                            | The requirements are being met. The cost to the Commission of savings achieved to date is around 0.71 cents per kWh compared with the long run marginal cost (LRMC) of new generation of 8.5 cents per kWh.  |
| <b>Other arrangements and programmes</b>         |                |   |  |  |
| Generation                                       |                |   |  |  |
| 62   | 44             | Hydro spill information disclosure                                | Ongoing industry reporting of hydro spill data under a voluntary arrangement | Industry reports continue to be published on the Commission's website.   |

| 2009<br>GPS<br>Para. | 2008<br>GPS<br>Para. | Requirement   | Performance<br>standard for<br>2008/09  | Progress to 30 June 2009   |
|----------------------|----------------------|---|---|--|
| Conveyance           |                      |   |   |  |
| 63                   | 45                   | Load management   | Initiate priority load management development items and associated rule changes, if appropriate | On 3 April 2009 the Commission announced the initiation of a priority load management project. The Load Management Property Rights project is addressing property rights issues related to load management, and related equipment and information, which are perceived by many as an impediment to realising the value of load management to the New Zealand electricity system. A discussion paper was scheduled to be published in July 2009.  |
| End use              |                      |   |   |  |
| 64,<br>115           | 46,<br>125           | Metering technology (includes NZEECS action—page 62)  | Implementation  | <p>The advanced metering and load management guidelines completed in 2007/08 have been implemented.</p> <p>The Commission has been monitoring implementation and is preparing a report to the Minister, which is expected to be completed by December 2009. The report will address whether regulation, including mandatory minimum technical standards, is required to roll out advanced meters.</p> <p>Rule change work associated with advanced meters is included in the part D review, due for completion in late 2010.</p> <p><b>Prepayment meter survey results</b>—the Commission conducted prepayment meter surveys in October 2005 and April 2007. A further survey was carried out in May 2008 and the Commission has published the survey responses.</p> |
| 64                   | 46                   | Demand-side initiatives following from market design review (see paragraph 79) (includes NZEECS action—page 62) | Potential initiatives from Market Design Review to improve levels of demand response            | <p>The <i>Market Design Options Paper</i>, published in July 2008, covers this matter (see report under 2008 GPS paragraph 79).</p> <p><b>Demand-side bidding and forecasting</b>—the Commission has published an update paper on the demand-side bidding and forecasting proposal. This paper updates this proposal and outlines changes made as a result of previous consultation. This work has been constrained by the timing of the System Operator's market system upgrade.</p> <p><b>Dispatchable demand</b>—as part of the Market Development Programme (MDP), work has commenced on dispatchable demand: allowing demand to be dispatched in a similar manner to generation. This would potentially allow demand-reduction to set the spot price.</p>       |

| 2009 GPS Para. | 2008 GPS Para. | Requirement  | Performance standard for 2008/09   | Progress to 30 June 2009   |
|----------------|----------------|--|--|--|
| 64             | 46             | Efficient lighting   | Implement lighting efficiency programme based on 2007 request for proposal responses   | <p>The lighting programme consists of three streams that have delivered an estimated 405 GWh (81 kT CO<sub>2</sub>) annualised savings to 30 June 2009. These streams are:</p> <ul style="list-style-type: none"> <li>• <b>Information stream</b>—the Commission has launched the RightLight website—an informative web tool on efficient lighting for all sectors, a supporting communications campaign, and training programmes for retail staff on efficient lighting technologies.</li> <li>• <b>Cost subsidy stream</b>—a number of subsidy programmes for efficient lamps have been successfully implemented. Programmes have broadened in scope from residential CFLs and now include lighting for the industrial sector and home builders.</li> <li>• <b>Street lighting stream</b>—a <i>Street Lighting Resource Kit</i> and <i>Infrastructure Design Standard</i> have been developed during 2008/09.</li> </ul> |
| 64             | 46             | Compressed air   | <p>Continue to provide subsidised efficiency audits of major compressed air systems and facilities</p> <p>Case-by-case subsidies for capital improvement</p> <p>Best practice operation and maintenance guidelines completed</p> | <p>Programmes are underway and 96 assessments and audits were completed up to 30 June 2009.</p> <p>Case-by-case subsidies are ongoing. Proposals continue to be investigated with three companies for capital improvement subsidies.</p> <p>The best practice operation and maintenance guidelines have been completed.</p> <p>The Commission estimates that the compressed air programme has delivered 17.3 GWh (3.4 kT CO<sub>2</sub>) annualised savings to 30 June 2009.</p>   |
| 64             | 46             | Electric motors—'bounty scheme' for accelerated replacement to efficient MEPS compliant motors | <p>Continue 'bounty scheme' for motors</p> <p>Motor rewinder workshop quality scheme</p>   | <p>The electric motors bounty scheme has been operating nationally since November 2008. The Commission estimates that the motors programme has delivered 3.84 GWh (0.76 kT CO<sub>2</sub>) annualised savings to 30 June 2009.</p> <p>Development of the rewinder quality scheme is on track, with Telarc SAI contracted to develop and establish the scheme. A draft quality code has been developed with a Motor Rewind Consultation Group and is being consulted on. A trial of the scheme with two workshops is scheduled for July 2009.</p>   |
| 64             | 46             | Motor replacement policy development tools for industry  | Roll-out of motor replacement policies for industry uptake   | A draft motor replacement policy document and calculator has been distributed to larger industrial users for trial and review. On-site trial of the policy has been completed.   |
| 64             | 46             | Other motor systems programmes   |  | Contracts have been signed with three service providers to undertake programmes that target identification and implementation of motor system efficiencies over a broad range of industrial processes.   |

| 2009 GPS Para. | 2008 GPS Para. | Requirement                   | Performance standard for 2008/09                     | Progress to 30 June 2009   |
|----------------|----------------|-------------------------------|--|--|
| 64             | 46             | Commercial buildings          | Continue to implement commercial buildings programme | All 2008/09 programmes have been contracted and are underway. Eighty projects were committed with expected savings of 17.7 GWh (3.5 kT CO <sub>2</sub> ) annualised savings to 30 June 2009.   |
| 64             | 46             | Energywise home loans project | Potential programme implementation                   | In December 2008 the Commission decided not to fund the EECA proposal for Energywise homes as a sustainable business case had not been achieved. The \$5 million provisionally allocated to the Energywise programme, subject to the business case, was removed from the Commission's electricity efficiency appropriation in the Supplementary Estimates. |

### 5. Renewable energy

|       |       |                                  |   |  |
|-------|-------|----------------------------------|---|--|
| 65–66 | 47–50 | Transmission enabling renewables | Possible framework covering information provision and policy issues to be addressed<br>Develop policy solutions | <p>The framework for this project has been published on the Commission's website. Two phases of policy solutions were identified:</p> <ul style="list-style-type: none"> <li>Phase one of the transmission to enable renewables (TTER) project has been completed, and the report and a 'resource map' for potential renewable energy development have been published.</li> <li>Phase two of the project has commenced and to date has resulted in publication of a report on the development of marine energy, and a review of system protection schemes (SPS) in Australia. These outline some potential opportunities for the use of SPS in New Zealand.</li> </ul> |
|-------|-------|----------------------------------|---|--|

### Integration issues

|    |        |                        |   |  |
|----|--------|------------------------|---|--|
| 67 | 50, 79 | Strategic wind project | Complete phase 3—initiate rule changes arising from impact investigations | <p>The Board agreed an implementation plan in March 2008. This is being progressed with the following key rule changes:</p> <ul style="list-style-type: none"> <li><b>Fault ride through investigations</b>—the Wind Generation Investigation Project recommended that fault ride through standards be established for grid connected generators. The Commission engaged Transpower to complete an analysis of the characteristics of typical high voltage faults on the New Zealand power system and to review fault ride through standards used in other jurisdictions. The initial report has been published. The Commission plans to seek feedback during the development of fault ride through rules.</li> <li><b>Wholesale market wind integration</b>—the Commission is progressing initiatives to improve wind integration into the wholesale market. This includes provision of information that can assist generators with decision-making, and consideration of forecasting issues. The Commission is targeting the release of a wind integration consultation paper by November 2009 and, depending on feedback, implementation could commence in the 2010 calendar year.</li> </ul> |
|----|--------|------------------------|---|--|

| 2009 GPS Para.   | 2008 GPS Para. | Requirement  | Performance standard for 2008/09   | Progress to 30 June 2009   |
|--|----------------|--|--|--|
| <b>6. Security of supply</b>   |                |  |  |  |
| Security of supply background, key requirements and objective for the Commission |                |  |  |  |
| 11   | 51–57          | Correlation of intermittent generation             | Possible finalisation of 2007/08 work<br><br>Assessment of peak capability | This work was deferred. Priority was placed on the winter 2008 work.<br><br>The assessment of peak capacity has been completed as part of the <i>Annual Security Assessment 2008</i> .   |
| 11   | 51–57          | Price demand elasticity assessment                 | Carry out analysis to develop understanding of demand response to price    | This work was deferred. Priority was placed on the winter 2008 work.   |
| Security of supply policy  |                |  |  |  |
| 17–19  | 58–60<br>78    | Implement reserve energy review recommendations    | Complete implementation of review recommendations                          | The <i>Security of Supply Policy</i> was published in October 2008.<br><br>In December 2008 the Commission published the submissions received in response to the system security forecast rule amendment consultation.   |
| Information, forecasting and monitoring  |                |  |  |  |
| 20–23  | 61–64          | Information, forecasting and monitoring (security) | Ongoing requirements   | The Commission publishes regular security of supply updates on its website, including hydro risk curves (replacing the Minzone) and assessments of risk to security of supply (Riskmeter).<br><br>The Commission launched the Supplyline website in April 2009.                                  |
| Hydro storage guidelines   |                |  |  |  |
| 24–25  | 65–66          | Hydro storage guidelines                           | Included as part of the annual security assessment                         | The <i>Annual Security Assessment 2008</i> was published in December 2008.   |
| Reserve energy   |                |  |  |  |
| 26–32  | 67–73          | Contracting reserve energy capacity                | Considered as part of the annual security assessment                       | The <i>Annual Security Assessment 2008</i> was published in December 2008. The Commission concluded that it was not necessary for it to purchase additional reserve energy for the 2009 winter (the Whirinaki 155 MW power station has been contracted for reserve generation since April 2005). |
| Emergency management   |                |  |  |  |
| 33–34  | 74–75          | Response planning and contingency arrangements     | Implement reserve energy and emergency options as needed                   | The Commission monitored the winter 2008 supply situation and acted to ensure hydro storage was conserved. Actions taken during the year are described in part one of this Annual Report.  |
| Levy   |                |  |  |  |
| 35–36  | 76–77          | Cost and recovery from reserve energy requirements | Ongoing arrangements   | Ongoing arrangements have been met.  |

| 2009<br>GPS<br>Para.                                     | 2008<br>GPS<br>Para. | Requirement   | Performance<br>standard for<br>2008/09  | Progress to 30 June 2009  |
|--|----------------------|---|---|---|
| <b>7. System operation and wholesale related markets</b> |                      |   |   |   |
| 67   | 79                   | Contracting for the operation of the electricity system and markets | Business-as-usual   | <p><b>System Operator service provider agreement (SOSPA)</b>—the Commission consulted on the proposed price change as part of its appropriation consultation for 2009/10. A report was provided to the Minister on the Commission's proposed appropriations. The new contract was signed on 12 August 2009.</p> <p><b>System Operator Policy Statement</b>—on 31 March 2009, the System Operator submitted a <i>Draft 2009 Policy Statement</i> to the Commission. The Commission consulted on a formal statement of proposal. The Commission recommended the rule change to the Minister on 9 July 2009 and it was gazetted on 16 July 2009.</p> <p><b>Draft 2009 System Operator Procurement Plan (Schedule C5)</b>—on 29 May 2009, the System Operator submitted a <i>Draft 2009 Procurement Plan</i> to the Commission. The Commission published the draft. On 3 July 2009 the Commission announced consultation on a formal statement of proposal and proposed rule amendments included in the <i>Draft 2009 Procurement Plan</i>.</p> <p><b>Market Administrator compliance reports</b>—the Commission publishes Market Administrator compliance reports.</p> |
| 67   | 79                   | Market design review (includes NZEECS action—page 62)               | Market design work on the options paper has the potential to result in further work in 2008/09<br>Release of final market design review (solutions) paper<br>Implementation phase | The <i>Market Design Options Paper</i> was consulted on in July 2008. Initial work commenced on a range of areas arising out of the options paper and consultation. This work forms part of the wider Market Development Programme (MDP) that pulls together the results of the Market Design Review, <i>Review of 2008 Winter</i> and the Commerce Commission investigation.   |
| 67   | 79                   | Market information project  | Potential initiatives from Market Design Review to improve market information and analysis  | Initial work commenced under the MDP on a range of areas arising out of the Market Design Review, see above.<br><b>Energy consumption data</b> —in December 2008 the Commission made available the underlying data used to produce charts showing change in retailers' share of customers (charts in figures 71-84) in the <i>Market Design Review: Options Paper</i> .   |

| 2009 GPS Para.                       | 2008 GPS Para. | Requirement                          | Performance standard for 2008/09  | Progress to 30 June 2009  |
|--------------------------------------|----------------|--------------------------------------|---|---|
| 67                                   | 79             | Offer and dispatch rule development  | <p>Completion of work from 2007/08</p> <p>Work arising out of the wind project</p> <p>Potential work arising out of market design review</p>  | <p>Minor offer and dispatch rule changes, started in 2007/08 were gazetted on 2 October 2008.</p> <p>Work is progressing under the wind integration project. Consultation is expected in November 2009. A paper is being prepared on short-term initiatives from the wind project implementation project plan. The plan includes work in the common quality area and on integration of wind into the wholesale market. The Commission expects to consult on short-term initiatives later in the 2009 calendar year.</p> <p>An offer and dispatch related initiative from the Market Design Review, addressing dispatchable demand, is included in the MDP.</p>  |
| 67, 114                              | 79, 124        | Guidelines for secondary networks    | Embedded network guidelines completed   | The embedded network guidelines were updated and published on the Commission's website in May 2008. The review resulted from the changes to part J of the Rules.  |
| 67                                   | 79             | Pricing process improvements         | <p>Implement initial initiatives</p> <p>Publish consultation paper on additional possible initiatives</p>   | <p>Initial initiatives have been implemented:</p> <ul style="list-style-type: none"> <li>Information sheets published on how the System Operator resolves infeasibilities and high spring washer situations</li> <li>Pricing process flow diagram published</li> <li>Pricing data inputs table published.</li> </ul> <p>In November 2008 the Commission published a consultation paper on issues and indicative options for the spot market pricing process and UTS provisions. Consultation closed on 20 February 2009. The interim pricing period proposal is being finalised and other pricing elements are being developed.</p>   |
| 67                                   | 79, 125        | Electricity hedge market development | <p>Develop and implement remaining initiatives proposed by the Hedge Market Development Steering Group</p> <p>Potential work from the market design review</p> <p>(Next hedge market survey due in 2009/10)</p> | <p>Consultation was completed on hedge disclosure rules in September 2007. A workshop on the publication of risk management contract information was held in August 2008. An update report was published on 23 September 2008. In November 2008 the Commission published a report regarding hedging on foreign exchange risks.</p> <p>The new rules governing the disclosure of hedge contract information came into effect on 2 February 2009.</p> <p>Hedge work arising from the Market Design Project is outlined above.</p> <p>The Commission has undertaken two surveys of the New Zealand electricity hedge market. The first was completed in 2005. The results of the latest survey were published in April 2008.</p> |
| Common quality development programme |                |                                      |   |   |
| 67                                   | 79             | Expand normal frequency band         | <p>Complete market investigation of normal frequency bands and frequency keeping (FK) procurement</p> <p>Complete business case and initiate rule changes</p>   | <p>Work is progressing but is not on track due to System Operator resource constraints.</p> <p>The South Island has been utilising dynamic bands since 2007. The report of a trial of a smaller band in the North Island is pending. When the report is completed the project scope will be reviewed.</p>   |

| 2009<br>GPS<br>Para.                          | 2008<br>GPS<br>Para. | Requirement                                    | Performance<br>standard for<br>2008/09                                       | Progress to 30 June 2009  |
|---|----------------------|--|--|---|
|   |                      | Multiple frequency keepers                     | Develop a system to co-ordinate multiple frequency keepers                   | Development of a system to co-ordinate multiple frequency keepers has been completed.   |
|   |                      |  | Complete market integration investigation and expert technical investigation | The market integration investigation and expert technical investigation has been completed.<br>The Commission has consulted on an options paper based on the technical and market integration reports. Consultation closed on 7 November 2008.<br>The Commission is planning the next stages and is developing a project plan for the detailed design.  |
|   |                      | HVDC frequency sharing capability              | Complete investigation and recommend course of action                        | The HVDC frequency sharing investigation is being carried out. The Grid Owner is carrying out an evaluation of current HVDC control systems to allow integration of Automatic Generation Control (AGC) signals. The evaluation is expected to allow development of a recommended course of action.  |
|   |                      | HVDC instantaneous reserve transfer capability | Stage 2—define rule changes and market system requirements                   | This work is on hold due to higher priorities.  |
| <b>Transmission risk management</b>           |                      |  |  |   |
| 68–<br>69                                     | 80–<br>81            | Transmission hedge market development          | Finalise proposal and make recommendations to the Minister                   | A consultation paper, <i>Issues for Managing Locational Price Risk</i> , was released on 8 July 2008.<br>The Commission is considering a range of location hedge options, from a simple reallocation mechanism (referred to as locational rental allocations) to a simplified auction based mechanism (referred to as financial transmission rights). Cost benefit assessments are being carried out to inform future work.<br>The Commission expects to complete the proposal and its implementation in 2009/10. |
| <b>8. Transmission</b>                        |                      |  |  |   |
| <b>Transmission background and objectives</b> |                      |  |  |   |
| 70–<br>71                                     | 82–<br>83            | Part F—Transmission rule changes               | (Not in SOI—<br>Added in 2008/09<br>third quarter)                           | Rule change proposals were received from Transpower in December 2008. In addition, the Minister has asked the Commission to consider amendments that may be required. This is now incorporated into the 2009 GPS and is being addressed.<br>The Commission sought further information from Transpower essential to progress the proposals.<br>The Commission expects to complete consideration and recommendations to the Minister early in the 2009/10 financial year.   |

| 2009<br>GPS<br>Para.  | 2008<br>GPS<br>Para. | Requirement   | Performance<br>standard for<br>2008/09   | Progress to 30 June 2009   |
|---|----------------------|---|--|--|
| Connection to and use of the national grid  |                      |   |  |  |
| 72–<br>75   | 84–<br>87            | Grid reliability standards (GRS)  | Business-as-usual  | <p>Business-as-usual work continues.</p> <p><b>External peer review of Grid Reliability Standards</b>—the Commission engaged international experts to review the GRS. The report was published in October 2008.</p> <p><b>Value of unserved energy</b>—the Commission is undertaking a two-stage investigation into the value of unserved energy. Stage 1 of the Investigation was completed, and the report published on 31 January 2009.</p> <p>In March 2009, the Commission initiated stage 2 of the project. The Commission is seeking information from network companies for the project.</p>  |
| 76  | 88                   | Transmission contracting arrangements (Benchmark Agreement (BA), and Interconnection Rules (ICR)) | Support implementation   | <p>The Commission has been supporting implementation.</p> <p>Compliance problems arose for a number of parties. As a result, the Commission is investigating options for the power factor requirements in the connection code. An issues paper was published on 26 September 2008.</p>   |
| Investment in and maintenance of the transmission network, planning ahead, environmental effects, transmission alternatives |                      |   |  |  |
| 77, 8   | 89, 9                | <i>Statement of Opportunities</i> (SOO)   | SOO August 2008  | The SOO was published on 29 August 2008.   |
| 78–<br>88   | 90–<br>106           | Grid investment decision-making   | <p>Depends on timing of complete proposals from Transpower, decisions are expected to be made on:</p> <ul style="list-style-type: none"> <li>- HVDC link upgrade</li> <li>- North Auckland and Northland (NAaN) grid upgrades</li> <li>- West Coast grid upgrade</li> <li>- Economic investments required to support renewables</li> </ul> | <p>Status of proposals:</p> <ul style="list-style-type: none"> <li>• <b>Otago</b>—both the High Court and Court of Appeal turned down a request for judicial review—the Court of Appeal decision was released in December 2008.</li> <li>• <b>North Island (Whakamaru–Pakuranga) grid upgrade (NIGU)</b>—on 4 May 2009, the High Court turned down a request for judicial review.</li> <li>• <b>West Coast</b>—(\$19m) approved 21 July 2008.</li> <li>• <b>HVDC</b>—(\$672m) approved 25 September 2008.</li> <li>• <b>NAaN proposal</b>—(\$473m) an intention to decline notice was issued 19 December 2008. Following consideration of additional material, the Commission approved the NAaN proposal 1 on 28 April 2009. Transpower withdrew NAaN proposal 2 on 20 April 2009.</li> <li>• <b>Lower South Island proposal</b>—deferred by Transpower, possible submission in mid 2009.</li> <li>• <b>Wairakei ring proposal</b>—(\$141 m) submitted on 17 December 2008. Timetable revised in January 2009. Notice of intention to approve 20 February 2009. Approval finalised.</li> </ul> |

| 2009<br>GPS<br>Para. | 2008<br>GPS<br>Para. | Requirement  | Performance<br>standard for<br>2008/09                           | Progress to 30 June 2009  |
|----------------------|----------------------|--|--|---|
|                      |                      |  |  | <ul style="list-style-type: none"> <li>• <b>Maungatapere bus security investment proposal</b>—(\$4.1m) submitted 19 December 2008. Notice of intention to approve 20 February 2009. Approval finalised.</li> <li>• <b>Wellington 110kV interconnection investment proposal</b>—(\$9.57m) submitted 19 December 2008. Notice of intention to approve 13 March 2009. Approval finalised.</li> <li>• <b>Woodville – Mangamaire – Masterton transmission investment proposal</b>—(\$17.4m) submitted 19 December 2008. Notice of intention to approve 13 March 2009. Approval finalised.</li> </ul> |
|                      |                      |  |  | <ul style="list-style-type: none"> <li>• <b>Marsden substation investment proposal</b>—(\$6.4m) submitted 29 May 2009 as part of 2008 GUP. Submissions sought and closed 26 June 2009. The Commission decided to issue a notice of intention to approve the proposal on 30 June and the notice was published on 3 July 2009.</li> </ul> <p>NB No requests for public conferences were received for the Wairakei, Maungatapere, Woodville, Wellington and Marsden investment proposals, therefore the notice of intentions became final decisions after 10 working days.</p>                     |
|                      |                      |  |  | <p><b>Reliability investments:</b></p> <ul style="list-style-type: none"> <li>• <b>Bombay Bus Security investment proposal</b>—(\$1.9m) submitted on 12 March 2009, as part of the 2008 GUP. Consultation closed on 3 April 2009. Notice of intention to approve released on 1 May 2009. Withdrawn by Transpower on 8 May 2009. Resubmitted on 30 June 2009.</li> <li>• <b>Redclyffe Bus Security investment proposal</b>—(\$1.9m) submitted on 12 March 2009, as part of the 2008 GUP. Consultation closed on 3 April 2009. Approval finalised (no conference requested).</li> </ul>           |
|                      |                      |  |  | <p><b>Tactical transmission upgrades—application for amended approval costs</b>—on 6 May 2009 Transpower applied to the Commission to amend the approval costs of a number of Tactical Transmission Upgrade (TTU) projects approved in December 2005. The Commission consulted on the proposal, closing on 22 May 2009.</p>   |
| 87–<br>88            | NA                   | New requirements in the 2009 GPS: Investment in minor transmission works | 2009–2013 SOI: address transmission implications of the 2009 GPS | <p>Potential rule-changes, including addressing the 2009 GPS requirements, and proposals from Transpower submitted in December 2008, are being considered.</p> <p>The Board agreed the approach at the 30 June Board meeting.</p>   |

| 2009 GPS Para.   | 2008 GPS Para. | Requirement   | Performance standard for 2008/09   | Progress to 30 June 2009  |
|--|----------------|---|--|---|
| Pricing for connection to and use of the national grid, and cost recovery and pricing principles |                |   |  |   |
| 97–99, 63  | 107–109, 45    | Transmission pricing methodology (TPM)                              | Transpower is to address issues raised by internal audit. The Commission monitors progress | The TPM was gazetted on 12 July 2007. Transpower has provided evidence of audit, which the Commission has accepted.   |
| 97–99, 63  | 107–109, 45    | Transmission pricing review   | Scoping to be carried out  | <p>The Commission initiated a wide-ranging review of options for the allocation methodology for transmission costs, the basis for which Transpower can charge for its services. On 20 March 2009 the Commission announced:</p> <ul style="list-style-type: none"> <li>• The formation of the Transmission Pricing Technical Group (TPTG)</li> <li>• A call for expressions of interest from consultants to carry out a high-level options investigation.</li> </ul>   |
| <b>9. Distribution</b>   |                |   |  |   |
| Pricing methodologies  |                |   |  |   |
| 100–102  | 110–112        | Distribution pricing methodologies (includes NZEECS action—page 62) | Ongoing monitoring<br>Develop regulations if necessary                                     | <p>Consultation has taken place with the Commerce Commission on the development of principles and guidelines, rather than a regulatory approach, for distribution pricing methodologies.</p> <p><b>Principles or model approaches to distribution pricing</b>—on 3 April 2009 the Commission commenced a project to develop pricing principles or model approaches for electricity distribution pricing, building from the Pricing Approaches Working Group (PAWG) report (February 2005). The report received widespread support from industry participants at the time.</p> <p>In June 2009 the Commission published a consultation paper on draft proposed model approaches to distribution pricing. Submissions close on 3 July 2009.</p> |
| 102  | 112            | Monitoring of changes in urban and rural lines charges              | Formal monitoring implemented  | This has not taken place during 2008/09 as priority was given to other work.  |
| Use of system agreements   |                |   |  |   |
| 103  | 113            | Distribution use-of-system agreements                               | Business-as-usual monitoring   | Business-as-usual monitoring is taking place. (See report under 2008 GPS paragraphs 17–20.)   |
| <b>10. Interrelationship with the Commerce Commission</b>  |                |   |  |   |
| 104–109  | 114–119        | Memorandum of understanding (MOU)                                   | Further update requested by 30 November 2008—paragraph 119 of the 2008 GPS                 | The Commission published the updated MOU on 28 November 2008.   |

| 2009<br>GPS<br>Para.              | 2008<br>GPS<br>Para. | Requirement   | Performance<br>standard for<br>2008/09  | Progress to 30 June 2009  |
|-----------------------------------|----------------------|---|---|---|
| <b>11. Distributed generation</b> |                      |   |   |   |
| 111                               | 121                  | Guidelines or standards for domestic-scale distributed generation (includes NZEECS actions—pages 62 and 63) | Investigate the provision of guidelines or standards for domestic-scale distributed generation  | This project was delayed by priority being given to winter 2008 security work.  |
| 112–<br>113                       | 122–<br>123          | Distributed generation: itemised billing  | Production of guidelines and standards completed  | Itemised billing (transparency of invoices) completed: included in consultation on terms and conditions between retailers and customers, carried out in 2007/08. The guidelines were completed as part of the model domestic contract.  |
| <b>12. Retail</b>                 |                      |   |   |   |
| 114                               | 124                  | Market design improvements in the retail area   | Market design work on the options paper has the potential to result in further work in 2008/09<br>Release of final market design review (solutions) paper<br>Implementation phase | See the Market Design Review report under 2008 GPS paragraph 79.<br>Work is being undertaken with Consumer New Zealand and the Ministry of Consumer Affairs on improved tariff information on the Powerswitch website, due for completion by the end of September 2009.<br>The Commission is working on expanding its capability to analyse retail tariff changes as part of its market design programme.<br>The Commission is participating in work being undertaken by EECA and the Ministry of Social Development on household energy affordability. |
| 115                               | 125                  | Review of part J of the Rules   | Complete implementation and initiate business-as-usual monitoring   | The major rule changes and system developments took place in 2007/08. Minor reconciliation rule changes were completed on 5 September 2008 and came into force on 1 November 2008.<br>Business-as-usual monitoring has commenced.   |
| 115                               | 125                  | Review of part D of the Rules (metering)  | Initiate review   | Consultation took place in August–October 2008 on issues and options.<br>The review scope was approved in and nominations were sought for a review reference group March 2009.<br>Two forums have been run: a home area networks forum on 20 April 2009; and a radio and conventional ripple control systems forum on 8 June 2009.  |
| 115                               | 125                  | Consumer switching rules compliance   | Business-as-usual monitoring  | Registry information is being monitored and exceptions noted. Breach reports are being submitted to the Market Governance team when appropriate.  |

| 2009<br>GPS<br>Para.   | 2008<br>GPS<br>Para. | Requirement  | Performance<br>standard for<br>2008/09                     | Progress to 30 June 2009   |
|--|----------------------|--|--|--|
| Reconciliation of, and payment for, distribution line losses |                      |  |  |  |
| 116  | 126                  | Loss factors methodology—including loss factors and loss optimisation (includes NZEECS action—p62) | Ongoing monitoring<br><br>Develop regulations if necessary | <p><b>Loss factors methodology</b>—guidelines for the calculation of loss factors were published on 18 September 2008. A Loss Factor Review Panel (LFRP) was established and met on 23 March, 13 May and 7 July 2009.</p> <p><b>Distribution loss optimisation</b> is being addressed in two parts:</p> <ul style="list-style-type: none"> <li>• <b>Minimising non-technical distribution losses</b>—an issues and options paper on minimising non-technical distribution losses is being prepared but is currently a low priority.</li> <li>• <b>Minimising technical distribution losses</b>—in relation to technical (capital investment related) losses, the Commission expects to publish an issues paper for consultation by August 2009.</li> </ul> |
| <b>13. Accountability requirements</b>                       |                      |  |  |  |
| 118  | 128                  | Quarterly report to the Minister   | Ongoing reporting  | Quarterly reports have been provided to the Minister.  |

**Part five**  
other information

## The Electricity Commission

The Electricity Commission is a Crown Agent set up under the Electricity Act 1992 to oversee New Zealand's electricity industry and markets. It began operating in September 2003.

The Crown Entities Act 2004 governs the Commission's accountability arrangements.

The Electricity Act 1992 sets out the principal objectives and specific outcomes with which the Commission is charged. The Act also sets out the Commission's functions and lists the processes under which the Electricity Governance Regulations 2003 (Regulations) and Electricity Governance Rules 2003 (Rules) are established and amended. The Regulations and Rules set out in detail some of the obligations and responsibilities of the Commission and the electricity industry.

The *Government Policy Statement on Electricity Governance* (GPS) sets out the Government's expectations of the Commission, including the objectives and outcomes that the Government wants the Commission to give effect to.

## Statutory objectives and outcomes

The outcomes to which the Commission contributes are set out in section 172N of the Electricity Act 1992:

### 1. The principal objectives of the Commission in relation to electricity are:

- a to ensure that electricity is produced and delivered to all classes of consumers in an efficient, fair, reliable, and environmentally sustainable manner; and
- b to promote and facilitate the efficient use of electricity.

### 2. Consistent with those principal objectives, the Commission must seek to achieve, in relation to electricity, the following specific outcomes:

- a energy and other resources are used efficiently;
- b risks (including price risks) relating to security of supply are properly and efficiently managed;
- c barriers to competition in electricity are minimised for the long-term benefit of end users;
- d incentives for investment in generation, transmission, lines, energy efficiency and demand-side management are maintained or enhanced and do not discriminate between public and private investment;
- e the full costs of producing and transporting each additional unit of electricity are signalled;
- f delivered electricity costs and prices are subject to sustained downward pressure; and
- g the electricity sector contributes to achieving the Government's climate change objectives by minimising hydro spill, efficiently managing transmission and distribution losses and constraints, promoting demand-side management and energy efficiency and removing barriers to investment in new generation technologies, renewables and distributed generation.

## Governance and management

The Commission is governed by a Board appointed by the Minister of Energy and Resources. The Board is to have no fewer than five members, and no more than nine. Members hold office for a term of up to three years and may be reappointed. The Board generally meets on a three-weekly basis, and on other occasions when necessary. Board fees are funded from the levy on the electricity industry, which also funds the Commission's operations.

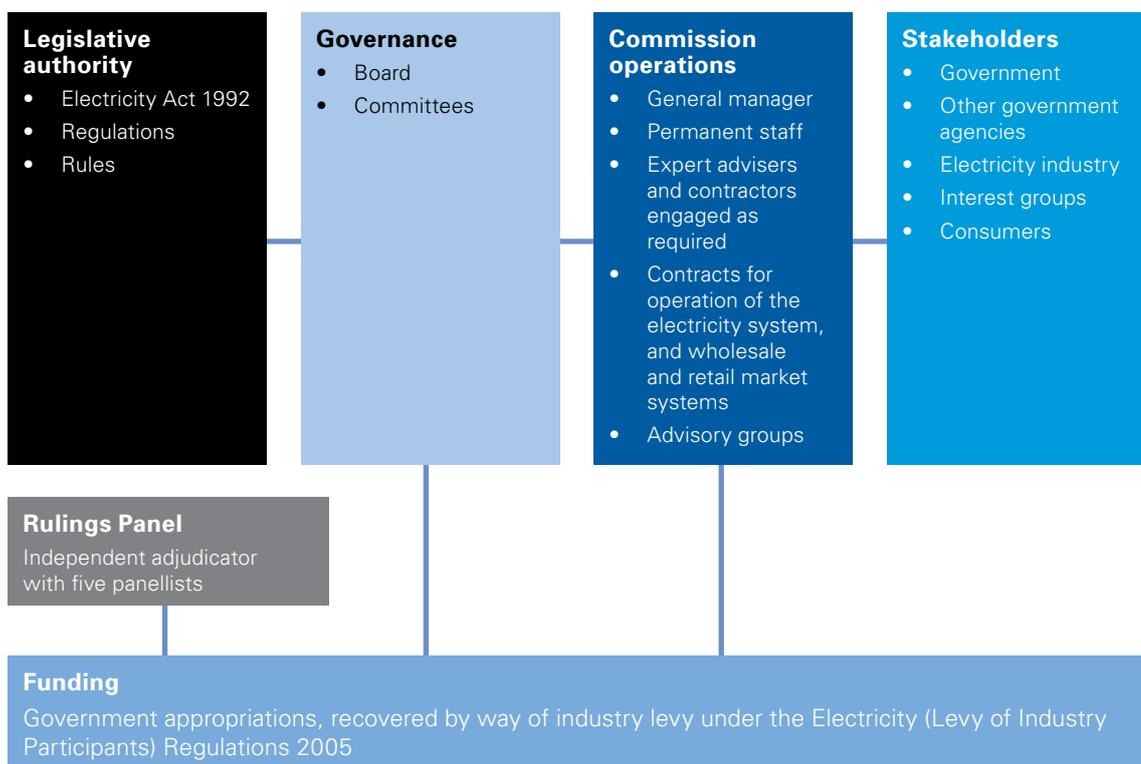
The Commission is managed by a General Manager. The General Manager employs a small professional team to deliver core services. External expert advice is contracted on a project-by-project basis where appropriate and necessary. The Commission also draws on the experience of advisory groups.

Service provision contracts are used for the delivery of six major operational services central to the effective functioning of the electricity system and markets.

An independent Rulings Panel has been established to deal with breach notifications referred to it by the Board.

Figure 20 summarises the Commission's governance, management and funding arrangements.

**Figure 20: governance, management and funding of the Electricity Commission**



**Source:** Electricity Commission

## Roles and functions

### Operation of the electricity system and markets

The Commission is responsible for the performance of the electricity system, and wholesale and retail markets. The Commission carries out this work by contracting and managing external service providers. The Commission contracts the System Operator for the day-to-day operation of the electricity system.

The wholesale market involves bids to buy and offers to sell electricity. For that to happen, the Commission contracts the Pricing Manager to set final prices, the Reconciliation Manager to reconcile electricity volumes, and the Clearing Manager to carry out the process for settling accounts. The Commission contracts the Wholesale Information and Trading System to carry out information transfers, especially the uploading of bids and offers.

In the retail market, the Commission contracts the Registry to hold information on points-of-connection for consumers. The Registry enables consumers to switch retailers and retailers to access the information they need to facilitate the switching process. The Commission appointed itself as Market Administrator in 2004.

### Ensuring compliance with regulations and rules

The Commission is responsible for developing, monitoring and enforcing compliance with various regulations and the Rules, including:

- Operation of the wholesale markets (spot and hedge)
- Operation of the retail market
- Consumer protection activities
- Monitoring of the Electricity Governance (Connection of Distributed Generation) Regulations 2007
- Monitoring of the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004.

The Commission aims to facilitate greater understanding of the regulations and the Rules, thereby improving compliance, and to identify areas that may need to be changed.

The Commission advises the Minister on statutory regulations and the Rules to ensure that the wholesale and retail markets operate efficiently and fairly.

### Information provision

The Commission collects and publishes information to facilitate the efficient operation of the electricity system and markets. The Commission collects and publishes information to guide investment in transmission and transmission alternatives in the form of the *Statement of Opportunities* (SOO). Other information provision includes the *Centralised Dataset* (CDS) and wholesale and retail market reports<sup>14</sup>.

The Commission has also developed voluntary information publication arrangements with the industry including hydro spill data and up-to-date information on retail tariffs. The Commission is working on improving accessibility to wholesale and retail market information including implementing disclosure of hedge market contract information.

<sup>14</sup> Information about the CDS and a range of statistical information is available on the Commission's website at: [www.electricitycommission.govt.nz](http://www.electricitycommission.govt.nz)

## Transmission investment decision-making

Transpower is responsible for planning the development of the grid and must apply to the Commission for approval of its grid upgrade plans (GUPs). The Commission has statutory responsibility for decision-making on grid investment proposals from Transpower. Once a grid investment has been approved, Transpower is responsible for all aspects of the upgrade, including land acquisition and resource consents.

## Security of supply

The Commission is required to use reasonable endeavours to ensure security of supply, in particular for peak and winter supply, without assuming any demand reduction from emergency conservation campaigns. At the same time it must minimise distortions to the ordinary operation of the electricity market.

The Commission works with the electricity industry to ensure security of supply. To do so, it collects and monitors a considerable amount of data and publishes information on the security of supply status. The future need for reserve energy is reviewed on at least an annual basis.

The Commission may contract for reserve energy and would manage security of supply emergencies if required. The expected result is that, if needed, implementation of reserve energy and emergency measures by the Commission provides an effective contribution to mitigating risks.

## Electricity efficiency

The Commission has a significant and growing role in delivering programmes for electricity efficiency. In the 2007 Budget, the Government approved funding of \$44.5 million (excluding GST) over the 2007/08 to 2009/10 years. The goal is to significantly reduce general and peak electricity demand and CO<sub>2</sub> emissions through more efficient use of electricity.

This investment is expected to realise sustained electricity efficiency and conservation gains. Ongoing annual benefits by the end of the 2009/10 financial year, from the combined programmes, are expected to be: electricity savings of 450 GWh per annum; and CO<sub>2</sub> savings of 87,000 tonnes per annum.

The Commission's investments in electricity efficiency take place where this is significantly cheaper than the long term costs of building extra generation capacity.

## Performance information

The Commission's output classes, performance measures, and financial statements relating to these roles and functions are included in part three of this Annual Report.

Figure 21 summarises the Commission's roles and functions.

**Figure 21: Electricity Commission roles and functions**

## What the Commission does

### Maintenance and development of the market

- The Commission is responsible for maintaining the regulatory framework governing the management and operation of the electricity markets. This includes developing voluntary arrangements or guidelines when appropriate and Rules when required. The Commission can also grant exemptions to the Rules under certain circumstances.
- Future focus is on ensuring the system allows innovation and ensuring the Rules are up to date with developments, e.g. new technologies.
- The Commission seeks to remove unnecessary barriers to new investment in distributed generation and generation from renewable energy sources.

### Operation of the wholesale and retail markets

- The Commission is responsible for ensuring the effective day-to-day operation of the electricity wholesale and retail markets in accordance with the Rules.
- The Commission contracts third parties or 'service providers' to deliver these outputs on its behalf.

### System operation

- The Commission is responsible for ensuring the effective day-to-day operation of the electricity system in accordance with the Rules.
- The Commission contracts Transpower as System Operator to provide these services.
- A key focus is ensuring the successful integration of new types of generation (e.g. wind) and implementing improvements that enhance common quality and reduce costs.

### Monitoring and compliance

- The Commission monitors and enforces compliance with the Electricity Governance Regulations, Rules and other legislation. The Commission has resolved 1,089 breach notifications to 30 June 2009.
- The Commission investigates, and resolves alleged undesirable trading situations.
- The Commission monitors the implementation of voluntary arrangements, model agreements and guidelines it has issued.

### Information

- A fundamental role for the Commission is to collect and distribute information to inform the industry, interested organisations and electricity consumers.
- The information and models published by the Commission can assist industry with investment decisions on generation and transmission.
- The Commission also publishes a range of statistical information relating to the operation of the wholesale and electricity markets and has been involved in providing information to consumers to assist with purchase and use decisions (including efficiency and power savings).

### Transmission investment decisions

- The Commission assesses and approves (or declines) Transpower's grid upgrade proposals.

### Security of supply

- The Commission monitors security of supply and has powers to act to address emergencies. Up-to-date security status information is available on the Commission's website.
- To date the Commission has contracted the Whirinaki power station to provide reserve energy when needed. The Commission can take other actions such as running conservation campaigns and buying back demand from consumers, as was contemplated during winter 2008.

### Electricity efficiency

- The Commission promotes electricity efficiency, including funding efficiency programmes.
- The Commission seeks to remove unnecessary barriers to new investment in demand-side initiatives.

## What the Commission does not do

Set strategic policy for the electricity sector.

Carry out planning for the electricity sector.

Set retail or wholesale prices.

Control prices set by Transpower or lines companies.

Regulate the gas industry.

Adjudicate on retail disputes. This is to be carried out by an independent complaints body.

Decide the mix of generation types and electricity efficiency initiatives to meet new demand.

Provide baseload generation.

Approve new generation projects.

Set policy or become involved in the operation of the Resource Management Act 1991 (RMA).

Set policy or national strategy for energy efficiency or conservation.

## Others involved

Strategic policy for the electricity sector is set by the Government with policy advice from the Ministry of Economic Development (MED).

Planning for generation investment is carried out by both state-owned and private sector companies. Transpower is responsible for planning the national grid.

Distribution (lines) companies are responsible for planning local networks.

Retail and wholesale prices are determined by the market.

The Commerce Commission has a pricing regulation function for Transpower and lines companies.

The gas industry has a co-regulatory arrangement under the Gas Industry Company Ltd.

Electricity retailers are required to belong to the consumer complaints scheme, once approved.

Whether gas, coal or wind generation will meet new demand is determined by decisions made by investors in existing and new generation. Decisions about investing in electricity efficiency are made by consumers.

Generation is provided by generation companies.

New generation projects must meet Resource Management Act requirements.

The RMA is administered by the Ministry for the Environment.

MED and EECA are lead agencies for national strategy and policy advice on energy efficiency and conservation.

## Management and capability

The Commission values the people who choose to work in the organisation and is committed to providing a work environment that supports employees to achieve their full potential.

Work at the Commission is necessarily of a high standard in keeping with the magnitude of the issues. In completing work and fulfilling obligations the Commission recognises the need to operate with consistently high standards of behaviour and integrity.

The Commission's multicultural workforce is based in Wellington, and comprises fifty eight permanent staff, two of whom work part-time. Thirty five staff are male and 23 are female.

The review of policies and procedures that support the Commission's goal to comply with Good Employer obligations is an ongoing process, as is reporting against the goal. Regular staff meetings provide a forum for staff participation and comment.

## Leadership, accountability and culture

Clear strategic direction given by the Board and General Manager is directly linked to the Statement of Intent, leading through to project planning and to individual performance objectives, providing a clear sense of purpose and defined expectation.

Identification and implementation of leadership training and development for all levels of management is ongoing.

## Recruitment, selection and induction

Turnover for the 2008/09 year was 14.5 per cent.

Vacancies within the Commission are advertised both internally and externally where appropriate. Consideration is given to development opportunities for existing staff, along with operational and strategic goals of the organisation.

A fair and transparent recruitment process is undertaken, which results in the best person for the role being appointed. EEO principles and policy are applied at all stages of the process.

A comprehensive induction process is provided for all new staff and commissioners.

## Employee development, promotion and exit

The Commission seeks opportunities for staff development resulting in some movement within the organisation on both temporary and permanent assignment. All staff have development plans that are reviewed quarterly, and internal and external training is undertaken.

Exit interviews are conducted with all departing staff and acted upon as appropriate.

## Flexibility and work design

The Commission is very conscious of a desire to provide a realistic work/life balance for staff.

Non-standard work arrangements are implemented where possible, and are considered for staff dealing with exceptional circumstances. Those returning from maternity leave, injury, or serious illness are supported in their integration back into the workforce.

## Remuneration, recognition and conditions

All staff have an annual review of salary. There is moderation in the process to ensure it is as fair, consistent and objective as possible.

There is ongoing recognition of milestones, as appropriate, and success is celebrated.

## Safe and healthy environment

Staff drawn from across the organisation make up a proactive Health and Safety Committee.

An active, healthy lifestyle is encouraged. An Employee Assistance Programme scheme is available to staff, and reference material including stress management, is available on the Commission intranet.

The Harassment and Bullying Policy is provided to staff at induction.

The Code of Conduct alerts staff to acceptable standards of behaviour and processes and consequences of breaches.

## Consultation and rule-changes

The Electricity Commission puts considerable emphasis on effective consultation in carrying out its functions, including consultation related to:

- Issues on which the Commission may consider recommending rule-changes
- Grid investment decision-making (as required under part F of the Rules)
- The Commission's planning process.

Specific processes are followed for rule-changes. The Commission reports to the Minister, with recommendations, and the Minister makes the final decision. Both the Commission's recommendations and the Minister's decisions on rule-changes are published in the New Zealand Gazette.

During the 2008/09 year the Commission carried out 37 consultation processes.

Where possible the Commission focuses on ensuring the markets operate through voluntary arrangement and guidelines. However, there are also extensive regulations and rules governing the operation of the markets, most of which were in force before the establishment of the Commission. The Commission has undertaken some major development of the Rules, such as completing part F (transmission) and reviewing part J (reconciliation), and has also completed a wide range of other rule-changes of varying complexity. During the 2008/09 year 13 rule changes were completed and a major review of part D (metering) was started.

## Risk management

The Commission has a proactive risk management framework in place. The Board Risk and Audit Committee review the risk register as part of its regular quarterly meetings.

## Value for money of the Commission's work

The cost-effectiveness of the Commission's work is assured through:

- **Appropriation consultation**—the Commission's planned work priorities and appropriations are scrutinised through public consultation in accordance with section 172ZCA of the Electricity Act 1992. The Commission provides information on its proposed work priorities and high-level information on intended expenditure. Where relevant and possible, information is provided on the potential benefits being sought in terms of net present value. While very detailed costing information is not available at this stage of the planning cycle, the information provided allows levy payers and other interested parties to provide feedback on the value being provided by the Commission.
- **Assessment of proposed regulations**—the benefits and costs of proposed regulation or rule changes are scrutinised through public consultation process in accordance with sections 172F and 172H of the Electricity Act 1992.
- **Assessment of electricity efficiency programmes**—the Commission assesses potential costs and benefits of electricity efficiency programmes compared with the long-run marginal cost of new generation.

In addition to sharpening its strategic focus and continuing to deliver high quality outputs, the Commission has also been improving how it works in order to maximise the value of the Commission's work for New Zealand, at the lowest reasonable cost to levy payers.

Value-for-money and performance improvement initiatives are built into the way that the Commission prioritises and manages its work programmes. Increased emphasis on value-for-money resulted in reduced planned spending of \$5.420 million for 2009/10.

However, the Commission's financial restraint has been balanced out by increased costs of the essential service provided by Transpower New Zealand in its role as System Operator, contracted to the Commission. Negotiating an appropriate contract has been a major challenge for the Commission over the last year.

## Planning and reporting

In addition to the requirements of the Crown Entities Act 2004, specific consultation, planning and reporting requirements for the Commission are contained in the Electricity Act 1992 and the GPS.

In developing the SOI, the Commission consulted with levy payers as required by section 172ZCA of the Act. The Commission also consulted with the industry on the projects to be included in the work programme. The Commission used this input to develop its three-year objectives, statement of service performance, and work programme, for the SOI. The draft SOI was provided to the Minister for comment, before being finalised and tabled in Parliament after Budget day.

The Commission prepares an Annual Report in accordance with section 150 of the Crown Entities Act 2004. The report also provides the information on GPS performance standards required under section 172ZM of the Electricity Act 1992. The financial performance, non-financial performance, and GPS performance are audited by Audit New Zealand. The report is tabled in Parliament. The report is then published and distributed by the Commission.

The Commission also publishes a report against the GPS on its website on a quarterly basis.

## Management and capability performance measures

| Main operational performance measures 2008-2011                       | Result   |
|---|----------|
| 1. The Commission's consultation protocol is followed when applicable | Achieved |
| 2. The Commission manages within its appropriations                   | Achieved |
| 3. Maintain low level of staff turnover                               | Achieved |
| 4. Complete a review of the performance management process            | Achieved |

## Relationships with other government agencies

### Ministry of Economic Development

The Ministry of Economic Development (MED) is the Government's policy adviser for the energy sector, including the electricity sector. The MED also acts as the purchase adviser to the Minister on the requirements of the Crown Entities Act 2004.

### Ministry of Consumer Affairs

The Ministry of Consumer Affairs is part of the MED. Paragraph 6 of the 2009 GPS includes an expectation that the Commission will consult with the Ministry of Consumer Affairs when pursuing outcomes that directly impact on small consumers. This expectation is being met.

## Ministry for the Environment

The Ministry for the Environment is responsible for administering the Resource Management Act 1991 (RMA). The RMA is the legislation under which generators apply for resource consents for the construction and operation of generating plant and any associated development work. RMA requirements also apply to the development of transmission and distribution infrastructure, and some maintenance work. The Ministry is responsible for managing the call-in process for resource consents and for developing national policy statements, including the national policy statement on transmission.

## Commerce Commission

The Commerce Commission administers the price control regime applying to transmission and distribution businesses, and enforces the legislation that requires a level of ownership separation between network activities and generation/retailing.

The relationship between the Electricity Commission and Commerce Commission is addressed in paragraphs 104–109 of the 2009 GPS. The two commissions have developed a memorandum of understanding (MOU), which is available on the Electricity Commission's website.

David Caygill was appointed as an Associate Member of the Commerce Commission in January 2008.

## Energy Efficiency and Conservation Authority

The Energy Efficiency and Conservation Authority (EECA) promotes energy efficiency, energy conservation and renewable energy.

The Commission works closely with EECA to co-ordinate electricity efficiency initiatives and design and implement programmes to promote and encourage the uptake of electricity efficiency measures among consumers.

The Electricity Commission and EECA have a MOU, which is available on the Commission's website.

The Electricity Commission's role and relationship with EECA is outlined in paragraphs 55–60 of the 2009 GPS.

## Parliamentary Commissioner for the Environment

The Parliamentary Commissioner for the Environment (PCE) was set up under the Environment Act 1986. The PCE carries out an annual examination of the Electricity Commission's achievement against GPS objectives and outcomes concerning the environment under section 172ZP of the Electricity Act 1992.

## Directions issued by ministers

On 21 July 2008 the Minister of State Services and the Minister of Finance issued a direction regarding all-of-government shared authentication services pursuant to section 107 of the Crown Entities Act 2004.

Crown agents were directed as follows:

3. before developing a proposal to invest in or build online credential management or identity verification capability as an alternative to using all-of-government shared authentication services, whether the proposal is to be funded from retained depreciation funding or new funding, to consult with State Service Commission; and
4. if, after such consultation:
  - i. the Crown agent still intends to invest in or build alternative online credential management or identity verification capability; and
  - ii. the State Service Commission has not agreed, either in the individual case or by reference to a generic class consent, to the Crown agent investing in or building alternative online credential management or identity verification capability,

- the Crown agent must obtain the approval of its responsible Minister and the Minister of State Services before taking action to implement the proposal, unless any requirement in this clause 1 would be inconsistent with section 113 of the Crown Entities Act 2004.

The Commission was not involved in any proposals relating to this direction during 2008/09.

## Board, committees and advisory groups

### Board

The Commission is governed by a Board appointed by the Minister. The Board is to have no fewer than five members and no more than nine. Members hold office for a term of up to three years and may be reappointed. The Board generally meets on a three-weekly basis and on other occasions when necessary. Board fees are funded from the levy on the electricity industry, which also funds the Commission's operations.

The Board members at 30 June 2009 were:

- David Caygill, Chair
- Richard Bentley
- David Bull
- Linda Constable
- Peter Harris
- Stan Rodger (until August 2009)
- Roger Sowry (appointed April 2009).

The Board has formed a number of committees to address specific items of business. These are:

- Electricity Governance Rules Committee
- Remuneration Committee
- Risk and Audit Committee
- System Operations Committee
- Undesirable Trading Situations Committee.

Further information about the Board and its committees is provided on the Commission's website at: [www.electricitycommission.govt.nz/aboutcommission/board/](http://www.electricitycommission.govt.nz/aboutcommission/board/)

### Rulings Panel

The Commission appoints the members of the Rulings Panel (a body corporate established under the Electricity Governance Regulations 2003) and is responsible for its funding. The Rulings Panel is the industry dispute resolution and disciplinary body that determines complaints and certain disputes brought to it under the Regulations and Rules.

Further information about the Rulings Panel is available on the Commission's website at: [www.electricitycommission.govt.nz/rulingsp/](http://www.electricitycommission.govt.nz/rulingsp/)

## Advisory and project groups

The Commission has used advisory groups to provide advice on sector development since we began operating in 2003. The Commission's requirements of advisory groups in terms of the type of input they provide has changed over time. Although the revised Government Policy Statement in May 2009 no longer specifically requires the Commission to use advisory groups, the Commission sees value in continuing to use such groups. A recently completed a review has clarified the processes by which the sector, consumers, Commission staff and the Board can best use of the advisory groups. As a result of the review the Commission decided to:

- Disestablish the five existing advisory groups, plus the Hedge Market Development Steering Group
- Establish four new advisory groups
- Establish project teams as needed for specific projects, primarily for very detailed or technical tasks.

The new advisory groups are:

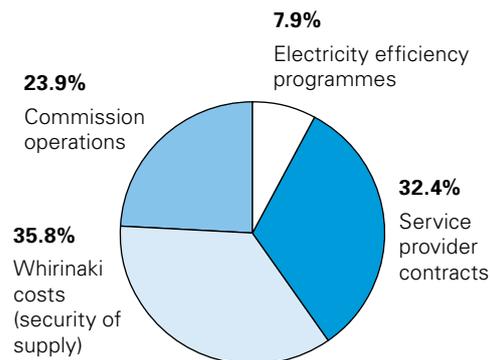
- Investment Advisory Group—this group takes a broader investment perspective than the former Transmission Advisory Group, though its key focus is on transmission investment issues
- Security Advisory Group—this group continues with the work of the former Security Advisory Group, but may also have a role in some aspects of system operations work
- Market Design Advisory Group—this group focuses on wholesale market development dealing with tasks arising from the Commission's Market Design Review, Commerce Commission review, development of markets etc
- Retail and Consumer Advisory Group—this group focuses on consumer issues such as customer switching and carry out projects that promote strong retail competition.

The terms of reference and the schedule of members for each group are available at:  
[www.electricitycommission.govt.nz/advisorygroups/index.html](http://www.electricitycommission.govt.nz/advisorygroups/index.html)

## Funding and levy

The Commission is funded by appropriations from Parliament under Vote Energy. The appropriations cover all the services and activities of the Commission. Figure 22 shows the broad areas of the Commission's expenditure for 2008/09.

**Figure 22: expenditure 2008/09**



### Notes:

**Service provider contracts**—costs that cover agreements between the Commission and the companies that provide services to operate the electricity system and wholesale and retail markets.

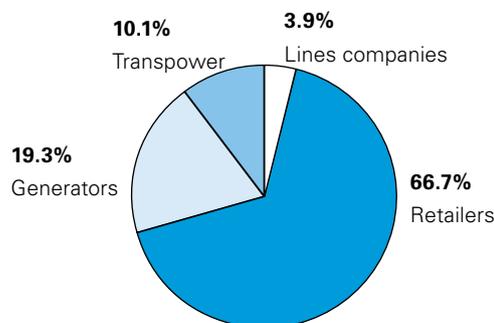
**Commission operations**—all operational costs of the Commission (except service provider costs) including rent, overheads, staff costs, Board costs, and external legal and other professional advice.

**Whirinaki costs (security of supply)**—costs of the Commission's contract with the Crown for the availability and operation of the Whirinaki power station. Also included is the cost of tendering for reserve energy, if needed.

**Electricity efficiency programmes**—costs of electricity efficiency programmes and electricity efficiency potentials modelling.

The Crown is reimbursed for the cost of the Commission by way of a levy on the electricity industry. The levy is collected by the Commission on behalf of the Crown. The various components of the Commission's funding are levied on different sectors of the electricity industry. The amount paid by an individual company depends on the volume of activity for that company. Allocation of the levy to electricity industry sectors is shown in figure 23.

**Figure 23: levy allocation 2008/09**



# Glossary and abbreviations

## Abbreviations used in this report

|                      |  |
|----------------------|--|
| <b>Act</b>           | Electricity Act 1992                                     |
| <b>AGC</b>           | Automatic Generation Control                             |
| <b>BA</b>            | Benchmark (Transmission) Agreement                       |
| <b>Board</b>         | Board of the Electricity Commission                      |
| <b>CDS</b>           | Centralised Dataset                                      |
| <b>CFL</b>           | compact fluorescent lamp                                 |
| <b>Commission</b>    | Electricity Commission                                   |
| <b>DSM</b>           | demand-side management                                   |
| <b>EECA</b>          | Energy Efficiency and Conservation Authority             |
| <b>EGR Committee</b> | Electricity Governance Rules Committee                   |
| <b>GEM</b>           | generation expansion model                               |
| <b>GPA</b>           | grid planning assumptions                                |
| <b>GPS</b>           | Government Policy Statement on Electricity Governance    |
| <b>GRS</b>           | grid reliability standards                               |
| <b>GUP</b>           | grid upgrade plan  |
| <b>HVDC</b>          | high-voltage direct-current                              |
| <b>Minister</b>      | Minister of Energy and Resources                         |
| <b>MED</b>           | Ministry of Economic Development                         |
| <b>MEPS</b>          | Minimum Energy Performance Standards                     |
| <b>MOU</b>           | memorandum of understanding                              |
| <b>MSP</b>           | Transpower's (as System Operator) Market Systems Project |
| <b>NAaN</b>          | North Auckland and Northland grid upgrade                |
| <b>NIGU</b>          | North Island (Whakamaru–Pakuranga) grid upgrade          |
| <b>NZEECS</b>        | New Zealand Energy Efficiency and Conservation Strategy  |
| <b>NZES</b>          | New Zealand Energy Strategy                              |

|                    |  |
|--------------------|--|
| <b>Regulations</b> | Electricity Governance Regulations 2003    |
| <b>Rules</b>       | Electricity Governance Rules 2003          |
| <b>SOI</b>         | Statement of Intent                        |
| <b>SOO</b>         | Statement of Opportunities                 |
| <b>SOSPA</b>       | System Operator service provider agreement |
| <b>TPM</b>         | Transmission Pricing Methodology           |
| <b>Transpower</b>  | Transpower New Zealand Limited             |

## Glossary

**Advanced metering systems**—electronic meters that measure electricity, record consumption and meter event information electronically, have two-way communications, and can be remotely read. Advanced meters may also have a range of additional attributes.

**Ancillary service**—the System Operator has contracts with generators, customers, retailers and distributors to provide ancillary services. Ancillary services comprise black start, over-frequency reserve, frequency-keeping reserve (also known as frequency-regulating service), instantaneous reserve or voltage support. The System Operator obtains instantaneous reserve on a half-hourly basis through the market. Ancillary services are described in the annual System Operator Procurement Plan, available on the Commission's website.

**Board**—the Board of the Commission as provided for in section 172M of the Electricity Act 1992.

**Carbon dioxide (CO<sub>2</sub>)**—carbon dioxide, methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) are considered to be the main 'greenhouse' gases. CO<sub>2</sub> is the most significant of the three.

**Centralised Dataset (CDS)**—a collection of data published by the Commission to support planning processes underlying decisions on transmission and transmission alternatives. The Commission retains information relating to transmission and transmission services, under section III, part F of the Rules.

**Committee**—a committee of the Board of the Electricity Commission appointed by the Commission as provided for by the Crown Entities Act 2004.

**Common quality**—those elements of quality of electricity conveyed across the grid that cannot be technically or commercially isolated to an identifiable person or persons. Common quality is often referred to in conjunction with system operations.

**Compact fluorescent lamp (CFL)**—an energy-saving replacement for incandescent light bulbs.

**Consumer**—any person who is supplied electricity for consumption. A consumer may include a distributor, a retailer or a generator when supplied with electricity for consumption.

**Demand-side initiative**—an initiative that encourages or facilitates electricity consumers to modify their usage in a way that reduces consumption in a specific time period or shifts consumption from one time period to another.

**Demand-side management (DSM)**—implementation of policies or measures designed to control or influence the demand for electricity.

**Distributed generation**—a distributed (or embedded) generator is a small-scale generator that commonly inputs electricity to the distribution network rather than the transmission grid. A distributed generator can include an industrial plant or domestic generation system that sells excess generation into the system.

**Distributor**—a participant that owns or operates a local electricity network. For the purposes of parts D, E and J of the Rules, 'distributor' includes an embedded network owner. For the purposes of part C of the Rules, 'distributor' includes consumers with a point of connection to the grid.

**Electricity Act 1992 (the Act)**—as amended by later Acts, it regulates the New Zealand electricity industry, and provides the statutory framework for the Electricity Commission's operation.

**Electricity Amendment Act 2004**—enacted in October 2004, this Act added to and clarified the Commission's responsibilities and authorities, including adding electricity efficiency functions. The changes were part of a package of government policy announcements made at the time the Commission was formed.

## **Electricity and Gas Complaints**

**Commissioner**—a separate organisation from the Electricity Commission, the Commissioner provides electricity consumers with a free and independent dispute resolution service for complaints about their electricity lines or retail companies.

**Electricity efficiencies potentials study**—also referred to as 'the potentials study'. The study, published in September 2007, was conducted by the Commission and EECA to answer the following questions:

- How much cost-effective electricity efficiency resource is available across all sectors of the New Zealand economy, in terms of capacity reductions at peak times (in MW), and total consumed electricity (in MWh) by region, by sector, by end-use technology?
- How could the Electricity Commission prudently act to realise the cost-effective electricity efficiency improvements?

## **Electricity Governance Regulations (Regulations) and Electricity Governance Rules (Rules)**

—the Electricity Governance Regulations 2003 and the Electricity Governance Rules 2003 under which the electricity market has operated since 1 March 2004. The Regulations include provisions related to service provider agreements, undesirable trading situations, rule breaches and exemptions, and the establishment and proceedings of the Rulings Panel. The Rules set out various authorities and responsibilities of the Commission to carry out market and system governance functions, as well as to make decisions relating to Transpower and the transmission grid (part F of the Rules).

**Electricity Governance Rules Committee**—the Electricity Governance Rules Committee (EGR Committee) is a committee of the Board. The Board has delegated responsibility to the EGR Committee to make decisions on how breach notifications should be responded to. In cases where participants wish to settle investigated breaches, the Board is required to approve any formal agreements. For more serious breaches, the Board may lay complaints with the Rulings Panel, which operates independently from the Board.

**Embedded generation**—see **distributed generation**.

**Energy Efficiency and Conservation Authority (EECA)**—the Energy Efficiency and Conservation Authority (EECA) was established under section 20 of the Energy Efficiency and Conservation Act 2000. It promotes energy efficiency, energy conservation and renewable energy.

**Estimates of Appropriations (Estimates)**—the formal budget document as released on Budget night each year. This document outlines funding and performance for all government entities for the year ahead. The Commission receives funding under Vote Energy.

**Frequency keeping**—the frequency of the New Zealand grid is normally maintained at 50 Hertz frequency and is the number of cycles per second. Frequency keeping is delivered through contracting generation that keeps the frequency of the grid within its normal band. Frequency keeping involves increasing or decreasing generation within a set band to ensure that supply equals demand on a second-by-second basis.

**Generator**—the owner of generating units connected to the grid or to a local network, or a person who acts, under parts G and H of the Rules, on behalf of the owner of such generating units. This includes embedded generators and intermittent generators.

**Government Policy Statement on Electricity Governance (GPS)**—issued by the Minister and specifies the objectives and outcomes the Government wants the Commission to give effect to, and against which the Commission must report. Authority for the GPS is provided by section 172ZK of the Electricity Act 1992. Under section 172ZL of the Act, the Commission is obliged to include in its SOI performance standards that relate to all of the GPS objectives and outcomes. These performance standards are subsequently reported on in the Annual Report in accordance with section 172ZM of the Act (see part four of this report). The GPS was last updated in May 2009.

**Grid or national grid**—the high-voltage electricity transmission network that transmits electricity throughout New Zealand. This network is used to connect grid injection points and grid

exit points to transmit electricity, throughout the North and South Islands of New Zealand over more than 12,000 kilometres of transmission lines, including the HVDC link. It connects major power generation stations to local distribution networks, operated by local lines companies and large industrial users. The grid is owned by state-owned company, Transpower New Zealand Limited.

**Grid investment test (GIT)**—applied to transmission investment proposals from Transpower. The GIT is provided for under part F of the Rules and requires that a proposed investment maximise the expected net market benefit or minimise the expected net market cost compared with alternative projects.

**Grid upgrade plan (GUP)**—Transpower's plan for investments in grid upgrades, which must be provided to the Commission for review and approval.

**Hedge contract**—a financial risk management product that protects against price risks associated with the spot price of electricity.

**High-voltage direct-current (HVDC)**—at present the only high-voltage direct-current transmission is the line and cable under Cook Strait that connects the Haywards substation in the North Island with Benmore power station in the South Island.

**Hydro risk curve**—a tool for monitoring security of supply risk during periods of low hydro inflows. Detailed information is available at [www.electricitycommission.govt.nz/opdev/secsupply/](http://www.electricitycommission.govt.nz/opdev/secsupply/)

**Intermittent generation**—generation for which the source is intermittent and not easily predicted, such as wind or wave generation.

**Megawatt hour (MWh)**—1 megawatt hour is equal to 1,000 kilowatt hours. Megawatt hours are the metering standard unit for the wholesale market.

**Ministry for the Environment (MfE)**—responsible for the Resource Management Act 1991 (RMA). The Ministry is a government department, responsible to the Minister for the Environment.

**Ministry of Economic Development (MED)**—the Ministry responsible for Vote Energy, under which the Commission’s appropriations are included as non-departmental output classes. The Ministry provides the Government with policy advice on energy matters.

**Minzone**—under the October 2008 Security of Supply Policy, the Minzone has been replaced by hydro risk curves.

**New Zealand Energy Strategy (NZES)**—a national strategy, for which development and implementation is led by the Ministry of Economic Development (MED). The 2007 New Zealand Energy Strategy is under review.

**New Zealand Energy Efficiency and Conservation Strategy (NZECS)**—a national strategy, for which development and implementation is led by the Ministry of Economic Development (MED) and the Energy Efficiency and Conservation Authority (EECA). The 2007 strategy is being reviewed and updated.

**Outcome**—the result that the Commission is seeking to influence or achieve. An outcome is defined in the Public Finance Act 1989 as “a state or condition of society, the economy, or the environment; and includes a change in that state or condition”.

**Output**—a product or service that the Commission is responsible for delivering to a specified quality, timeliness and quantity (if appropriate). Outputs are defined in the Public Finance Act 1989 as “goods or services that are supplied by a department, Crown entity, Office of Parliament, or other person or body; and includes goods or services that a department, Crown entity, Office of Parliament, or other person or body has agreed or contracted to supply on a contingent basis, but that have not been supplied”.

**Parliamentary Commissioner for the Environment (PCE)**—the Parliamentary Commissioner for the Environment was established under the Environment Act 1986. As an independent Officer of Parliament, the PCE has wide-ranging powers to investigate environmental concerns.

**Participants**—participants are the industry-related groups or individuals who engage with the Commission as defined in the Regulations. Participants include:

- Electricity retailers
- Electricity distributors
- Electricity generators
- Line owners
- Electricity consumers connected directly to the grid
- People who purchase electricity from the Clearing Manager
- Service providers
- Metering equipment owners
- Ancillary service agents
- Data administrators
- Approved test houses.

**Regulations**—the Electricity Governance Regulations 2003 (Regulations) as amended from time to time in accordance with the Electricity Act 1992.

**Reserve energy**—energy capability bought by the Commission as a reserve against peak, winter or dry year hydro shortfalls. Reserve energy requirements cover tendering for reserve energy generation and emergency options, and the costs associated with the Whirinaki reserve energy plant being available.

**Resource Management Act 1991 (RMA)**—the primary legislation relating to the use of land, air and water. Land-use activities, including those associated with generation and transmission of electricity and discharges or taking of water, are required to comply with rules prepared under the RMA and consents granted under the RMA. Consent applications are generally heard and determined by local authorities and may be appealed to the Environment Court.

**Retailer**—a person or company that supplies electricity to a consumer or to another retailer.

**Ring-fenced generation**—using a generation plant or demand-side initiatives dedicated to providing reserve energy.

**Risk and Audit Committee**—a committee of the Board that oversees the risk policy and framework, and internal audit processes.

**Riskmeter**—a high-level graphical representation of the outlook for electricity supply. The Riskmeter is available on the Commission's website and is updated as necessary.

**Rule breach**—occurs when a participant fails to meet its obligations under the Regulations and Rules.

**Rulings Panel**—established under the Electricity Governance Regulations 2003, deals with the formal complaints of breaches of the Regulations or Rules by market participants referred to it by the Commission. If the Rulings Panel upholds a complaint, it has several options available including imposing penalties against participants, awarding costs or compensation, issuing suspension or termination orders, and recommending rule changes. It also determines certain disputes between participants and can hear appeals on specific decisions made by the System Operator.

**Service providers**—the Electricity Commission is responsible for ensuring the effective day-to-day operation of the electricity system and markets through the operation of core system and market services in accordance with the Rules. The Commission provides the following services through service provider contracts:

- Clearing Manager
- Wholesale Information and Trading System
- Pricing Manager
- Reconciliation Manager
- Registry
- System Operator.

**Smart meters**—see **advanced metering systems**.

**Spot market**—the buying and selling of wholesale electricity is done through a 'pool', where electricity generators offer electricity to the market and retailers bid to buy the electricity. This market is called the spot or physical wholesale market.

**Statement of Intent (SOI)**—published in accordance with part 4 of the Crown Entities Act 2004. The SOI is the Commission's formal public accountability document, setting out its plans and

financial information for one year in detail and the next two years in more general terms. The SOI provides information on what the Commission plans to do to progress the principal objectives and specific outcomes in section 172N of the Electricity Act 1992, and includes performance standards for the objectives and outcomes of the GPS as required by section 172ZL of the Act. The Commission's achievements against the SOI expectations, and its financial management, are audited by Audit New Zealand and reported to Parliament in the Annual Report.

**Statement of Opportunities (SOO)**—the Commission is required under section III of part F of the Rules, to publish a SOO for transmission and transmission alternatives at least every two years. The SOO is to enable the identification of potential opportunities for efficient management of the grid, including investment in upgrades and transmission alternatives.

**System operations**—the minute-by-minute (real-time) control and co-ordination of the grid including management of security, dispatch of generation and reserves, and control of voltage and frequency.

**System Operations Committee**—a committee of the Board.

**System Operator**—the service provider responsible for scheduling and dispatching electricity in real-time, and avoiding fluctuations in frequency or disruption of supply.

**Undesirable trading situation (UTS)**—arises when there is a threat to orderly trading or settlement that cannot be resolved satisfactorily under the Rules. The Commission can investigate any potential UTS and take certain actions it considers appropriate.

**Undesirable Trading Situations Committee**—a committee of the Board.

**Winter energy margin**—expected available generation (after allowing for planned and unplanned outages, available thermal fuel and transmission constraints) minus expected demand (as a proportion of expected demand for the winter period (April to September)). For the purpose of assessing expected available hydro, mean inflows are used. For the purposes of assessing expected available wind generation, long-run averages are used.

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