System Operator Performance Review and Assessment

1 September 2007 to 31 August 2008

December 2008

Executive summary

The Electricity Commission has a legal obligation to review and assess the performance of the System Operator every financial year. This is related to the Commissions role as funder of the System Operator.

The review in this report covers the 12-month period from 1 September 2007 to 31 August 2008. The System Operator's self-review report for the same period is a key input into this review.

The performance of the System Operator has been reviewed and assessed under headings representing the review requirements in the Electricity Governance Regulations 2003 and the Electricity Governance Rules 2003. Analysis and conclusions made in the review are based on the information available to the Commission staff as well as the contextual factors that may have affected the System Operator's performance during the review period.

There are a few key messages conveyed in this report. The primary message is that the System Operator has satisfactorily performed its core functions as required by the Regulations and Rules. Looking ahead the Commission is keen to see more engagement by the System Operator with the Commission's industry development work programme. The Commission would also like to see the System Operator continue to take initiatives to reduce the cost of the services and resources it procures.

The Commission is looking forward to agreeing with the System Operator some key performance standards in the coming year with the objective of improving the annual review and assessment process.

Glossary of abbreviations and terms

AUFLS	Automatic Under-frequency Load Shedding System
Board	Electricity Commission Board
Commission	Electricity Commission
MSP	The System Operator's Market Systems Project
PPOs	Principal Performance Obligations
Regulations	Electricity Regulations 2003
Rules	Electricity Governance Rules 2003
SOI	Electricity Commission Statement of Intent 2008–2011
SOSPA	System Operator Service Provider Agreement
SSF	System Security Forecast

Contents

Executive summary A

Glossary of abbreviations and terms B

1. Introduction and purpose of this report 1
1.1 Introduction 1
1.2 Purpose of this report 1

2. Background 2
2.1 Process 2
2.2 Legal requirements 2

3. Review framework 4
3.1 Framework 4

4. Assessment 5
4.1 Introduction 5
4.2 Overall comment on performance 5
4.3 Compliance with Regulations and Rules 7
4.4 Operation of the regulations and rules 9
Policy Statement 10
Procurement plan 10
System security planning 12
System Security Forecast 12
National and regional planning 12
Grid emergencies 13
4.5 Service Provider Agreement 14
4.6 Reports provided to the Commission 15
4.7 Agreed performance standards 15
4.8 Other relevant matters 16
Development Work 16
Generation commissioning 17
Stakeholder Relations 17

5. Conclusions 19

References 20

1. Introduction and purpose of this report

1.1 Introduction

1.1.1 The Electricity Governance Regulations 2003 (Regulations) and the Electricity Governance Rules 2003 (Rules) require the Electricity Commission (Commission) Board (Board) to review the performance of the System Operator once every year. This review role is related to the Commissions role as funder of the System Operator.

1.2 Purpose of this report

1.2.1 The purpose of this paper is to provide a review and assessment of the performance of the System Operator in accordance with the requirements of the Rules and Regulations.

2. Background

2.1 Process

2.1.1 This review is the fourth under the market governance arrangements and covers the year from 1 September 2007 to 31 August 2008.

2.1.2 The System Operator is required to prepare a review and assessment of its own performance to the Commission every year and it submitted this document on 26 September 2008. Its self-assessment provides a commentary on many aspects of the System Operator's performance and is an important input into this review by the Commission.

2.2 Legal requirements

2.2.1 The requirements of the review process and outcome are outlined in both the Regulations and the Rules.

2.2.2 Regulation 47 requires the Commission to review the performance of the System Operator at least once in each financial year and the review must concentrate on the System Operator's compliance with:

(a) its obligations under the Regulations and Rules;

(b) the operation of the Regulations and Rules;

(c) any performance standards agreed between the System Operator and the Commission; and

(d) the provisions of the System Operator's service provider agreement with the Commission.

2.2.3 Regulation 48 requires the Commission to take into account the following matters when conducting the review:

(a) the terms of the System Operator agreement;

(b) the reports from the System Operator to the Commission;

(c) the performance of the System Operator over time in relation to part C of the Rules;

(d) the extent to which acts or omissions of other parties have impacted on the System Operator's performance and the nature of the task being monitored;

(e) reports or complaints from any person;

(f) the fact that real time co-ordination of the power system involves a number of complex judgments and inter-related incidents;

(g) any disparity of information between the Commission and the System Operator; and

(h) any other matter the Commission considers relevant.

2.2.4 Regulation 49 requires the Board to publicise (on its website) all self-review reports it receives from the System Operator that are required under regulation 45 or the Rules within five business days of receiving them.

2.2.5 Rule 14 of section II of part C of the Rules requires the System Operator to submit, no later than 30 September in each year, to the Board a self-review and assessment of its performance in the previous 12 month period ending 31 August.

2.2.6 Rule 14 of section II of part C of the Rules also requires the Board to review and assess the performance of the System Operator in the 12-month period ending 31 August. The Board's review and assessment of the System Operator are required to be published within 10 business days after the Board meeting at which the review and assessment is completed.

2.2.7 In its Statement of Intent 2008-2011 (SOI), the Commission set some performance measures under output class one, electricity governance and market operations. One such measure, under the main performance measures 2008/2009, is to complete an annual performance review of the System Operator's performance within three months of receipt of the System Operator's self-review report.

3. Review framework

3.1 Framework

3.1.1 This review and assessment of the System Operator's performance has been arranged under headings that follow the guidelines contained in the Regulations and Rules:

(a) compliance with the regulations and rules;

(b) operation of the regulations and rules;

(i) policy statement;

(ii) procurement plan;

(iii) system security planning; and

(iv) scheduling and dispatch;

(c) performance against the provisions of the System Operator Service Provider Agreement (SOSPA);

(d) the reports provided to the Commission (content, quality, and timeliness);

(e) performance against standards agreed between the System Operator and the Commission; and

(f) other relevant matters.

3.1.2 Additional items in regulations 47 and 48, which do not appear in paragraph 3.1.1 above, have not been included in the scope of the report because there were no relevant issues to report on.

3.1.3 The review process aims to cover all aspects, both positive and negative, of the System Operator's performance and provide constructive feedback, wherever possible, for the purpose of continuous performance improvement.

3.1.4 As input to the review, Commission staff conducted a number of internal meetings to elicit feedback from the different Commission groups who regularly work with the System Operator.

3.1.5 The System Operator has been given the opportunity to comment on this performance review report and its views have been taken into consideration.

4. Assessment

4.1 Introduction

4.1.1 In conducting the review and assessment of the System Operator's performance, the Commission has reflected on the System Operator's self-review, the environmental conditions experienced during the review period, and other matters as required under the Rules and Regulations. In particular, this review should be read in the context of a winter where the industry and consumers were faced with unusually dry conditions, and the System Operator played a key role in helping the industry through this uncertain period.

4.1.2 The following sections are set out in accordance with the review framework required by the Regulations and Rules.

4.2 Overall comment on performance

4.2.1 The System Operator has a key role in the regulatory arrangements. It is required to take reasonable and prudent measures to ensure it can dispatch sufficient generation and ancillary services so the system always meets demand and remains intact during normal contingencies. At the same time, being a reasonable and prudent System Operator requires it to exercise sound economic management (as the Commission's service agent) when striving to procure and dispatch sufficient available resources.

4.2.2 To provide the context for the review it is important to note a number of features which had an impact on the role of the System Operator.

4.2.3 The major feature of the year was the management required to cope with the unusually dry autumn and winter in the South Island. Storage in the South Island storage lakes dropped well below normal levels after one of the lowest inflow sequences ever recorded. This put significant stress on the electricity system and on the ability of the System Operator to coordinate sufficient generation to meet demand and cope with contingencies.

4.2.4 The Commission congratulates the System Operator on the leadership it showed as it became apparent that the winter was dry. The System Operator delivered timely responses to the system consequences of low hydro generation.

4.2.5 The System Operator is also to be commended for its planning and real-time role in operating the power system at normal times and during grid emergencies. Although there were some situations where supply was tight, the System Operator has again done a good job ensuring the 'lights stayed on'.

4.2.6 At a time when the System Operator was making efforts to help the industry get through the dry winter, it is to be commended for also making changes to the method for selecting frequency keepers in an effort to reduce high and rising costs. The Commission encourages it to increase its efforts in this area to try to keep the increasing cost of this and other ancillary services in check.

4.2.7 The Commission has a substantial industry development work programme aimed at meeting its objectives under its own SOI and the Government Policy Statement (GPS). Several initiatives in this work programme are in the area of common quality or wholesale market, and require input from the System Operator including expert technical advice, modelling and analysis.

4.2.8 Over this review period, as with previous years, the Commission continues to be concerned and frustrated with the delays in engaging on matters of importance to the industry. The Commission recognises the System Operator's primary role is in the area of system operation. However, it would like to see it take steps to improve its ability to balance its high level of commitment in this role, with greater commitment and delivery on the Commission's industry development work programme. To that end, the Commission hopes that the completion of the Market Systems Project (MSP) and arrangements for provision of advisory services in the new SOSPA (both discussed below) will assist in addressing this imbalance and that the System Operator will be better placed to provide the timely assistance and specialist advice on industry development initiatives that the Commission is responsible for pursuing on behalf of the industry.

4.2.9 The Commission also intends agreeing a set of Key Performance Indicators for the coming review period to establish a common understanding of expectations, and to provide further structure to the process of monitoring and assessing the System Operator's performance over time.

4.2.10 This year has seen a continuation of the System Operator's development of a new suite of market software tools that will replace its existing software. The MSP project began in late 2004 and, after a lengthy delay, the Commission understands that the new systems are due to be introduced late in the first quarter of 2009. This has proved to be a very substantial project in scope, resources, budget, and timeframe and the Commission looks forward to its conclusion.

4.2.11 While recognising the need for MSP, it has, at times, reduced the Commission's access to key System Operator staff and its ability to progress a number of important development work streams. The functionality of the new market systems has been fixed for over two years to allow for the new systems to be developed. However, this means that any changes must either be held over for some time, pending completion of MSP implementation, or be made to both the existing system and then again in the new market system, but only after a delay while the new system is 'bedded in'. This situation has reduced the

Commission's ability to make significant changes to the present arrangements and constrained the pace and approach for several of the Commission's industry development initiatives in its work programme. The Commission is looking to the System Operator to establish appropriate arrangements for timely, efficient and cost-effective software development moving forward post MSP implementation in order to facilitate the development work programmes of the System Operator and of the Commission.

4.2.12 Experience over the past few years has shown that the existing SOSPA contract, while largely appropriate for provision of day-to-day system operation services under the Rules, is not well-suited to provision of technical advisory services to the Commission. Prompted by this, and by the System Operator's notification of increasing costs, the System Operator and Commission have been negotiating the terms and provisions of a new Service Provider Agreement during the review period. It is proposed that the revised contract package will include, amongst other things, arrangements for the provision of technical advisory services to the Commission and for work programme co-ordination. The Commission hopes to conclude these negotiations early in 2009.

4.3 Compliance with Regulations and Rules

4.3.1 As a key service provider to the Electricity Market, the Regulations and Rules place many requirements on the System Operator. This section outlines the Commission's assessment of the System Operator's compliance with those obligations.

4.3.2 The System Operator is generally very conscientious in its approach to complying with the Regulations and Rules. However, the Commission notes that the number of breaches this year has increased when compared with the previous year. This is mainly due to breaches of the rules regarding the updating of grid information received from the Grid Owner[1]. The Commission is concerned about the increase in the incidence of these breaches but notes that the System Operator expects the new market system, currently in development, will reduce the manual activity associated with this process and the number of breaches in this area.

4.3.3 The System Operator is also required to meet, and plan to meet, the frequency obligations set out in the Rules. Frequency excursions were maintained within the frequency bands specified in the Rules[2] and no excursions occurred below 48 Hz or above 52 Hz in either island.

[1] Rule 1.3.1.3, 1.3.2.4, and 1.3.4.7 of schedule G6 of part G of the Rules

[2] Rule 2.2.3 of section II of part C of the Rules

4.3.4 With regards to managing time error, during the review period, the System Operator notified the Commission of a breach of the Principal Performance Obligation (PPO)[3] requiring the System Operator to plan to maintain grid frequency time error. The breach was detected while the System Operator was investigating another breach and both occurred in the previous review period, two days apart.

4.3.5 Although time error does not pose a security or market risk, the rule has the status of a PPO and is a measure of power quality. The Commission acknowledges the thorough investigation the System Operator has undertaken into the cause and the corrective actions it has implemented.

4.3.6 The System Operator reported that the 110kV transmission grid dropped below minimum voltage levels (90% of nominal) at the Pakuranga substation on 8 March 2008 at 12:05 for 40 minutes. This occurred during a planned grid reconfiguration for an outage. After the switching was completing, voltage began to fall and when load management failed to halt the decline, the outage was recalled.

4.3.7 Although maintaining voltage levels within normal limits is not part of the PPOs, they are an important measure[4] that ensures:

(a) there is sufficient flexibility for the System Operator to operate the power system; and

(b) the grid operates at voltage levels within the design limits of equipment drawing power from and injecting power into the grid.

4.3.8 The fact that these limits were exceeded this year is noteworthy because it is such a rare occurrence. It is especially unusual for it to occur during a planned outage when the System Operator's power system modelling would normally be expected to highlight such an issue during its preparation for the outage.

4.3.9 The Commission referred one breach of the Rules by the System Operator to the Rulings Panel during the review period. The matter concerned the incorrect modelling of the Wilton transformer in May 2006 on two consecutive days. The Rulings Panel determined that a fine of $4,000 for each event (total of $8,000) was appropriate.

4.3.10 It is again pleasing to see that no breaches were alleged against the System Operator by other participants this year. This reflects the high importance the

[3] Rule 2.2.5 of section II of part C of the Rules requires the System Operator to plan to maintain grid frequency time error within +/- five seconds of New Zealand Standard Time

[4] Part of the System Operator's security policy to avoid cascade failure is the intention to avoid exceeding asset capability (including voltage limits), as set out in rule 4.1.1 of schedule C4 (policy statement) of part C of the Rules

System Operator puts on its compliance with the Rules and avoiding any breaches.

4.3.11 Overall, the Commission is comfortable with the System Operator's performance in complying with the Regulations and Rules.

4.4 Operation of the regulations and rules

4.4.1 It is not only important to the Commission that the System Operator meets its regulatory commitments, it is equally important to consider and acknowledge the manner and form in which the System Operator fulfils those duties.

4.4.2 Fundamentally, the System Operator is required to be a "reasonable and prudent system operator" – a term which is defined in the Rules as:

> exercising that degree of skill, diligence, prudence, foresight and economic management, as determined by good international practice and which would reasonably and ordinarily be expected from a skilled and experienced **system operator** engaged in the co-ordination of an integrated transmission network under the same or similar circumstances as applied in New Zealand at the time.

4.4.3 In fulfilling the duty of being reasonable and prudent, the System Operator is required to meet the PPOs and the dispatch objective. The PPOs require the System Operator to[5]:

(a) act as a "reasonable and prudent system operator" to dispatch assets made available to avoid cascade failure of assets which results in the loss of demand; and

(b) ensure frequency remains within upper and lower limits;

4.4.4 During the review period, there were neither blackouts, nor any frequency or voltage excursions large enough to cause the automatic under frequency load shedding (AUFLS) relays to disconnect demand.

4.4.5 The System Operator's dispatch objective[6] is to take the offers from generators and maximise, for each half hour, the gross economic benefits to all purchasers of electricity at the grid exit points, less the cost of supplying the electricity at the grid injection points and the costs of ancillary services purchased by the System Operator.

4.4.6 The Commission is satisfied that the System Operator has performed its duty to meet the dispatch objective during the review period. However, it would like to see improvements in the accuracy of the constraints it applies to the dispatch of generation to reflect the limits of the transmission system. The Commission is

[5] Rules 2.1 and 2.2 of section II of part C of the Rules

[6] Rule 2 of section III of part G of the Rules

pleased to see that the System Operator is planning to deliver a significant improvement in this area in a later release of its new market systems (due late in 2009).

Policy Statement

4.4.7 The System Operator documents its policies and practices for being a reasonable and prudent System Operator in the Policy Statement, which is inserted into the Rules as schedule C4 of part C. The Policy Statement is a core document in the Rules that the System Operator is required to review annually[7] and the Commission appreciates the considerable time and effort required to complete this task.

4.4.8 This year, the System Operator reviewed the existing Policy Statement and decided that the changes it might make were too few and not significant enough to warrant going through the review process. Consequently, it sought an exemption from the requirement to provide a new draft. As consultation on the intention of the Commission to grant the exemption showed the industry largely agreed, the Commission granted the exemption, no review was carried out and schedule C4 remained unchanged in this review period. The Commission is comfortable with this outcome, which showed good practice by the System Operator for the efficient use of resources.

Procurement plan

4.4.9 The Procurement Plan sets out the method and means by which the System Operator intends to procure ancillary services, comprising of instantaneous reserve, frequency keeping, voltage support, over frequency reserve, and black start. It is also a core document in the Rules the System Operator is required to review annually[8] and the new draft becomes a schedule (C5) in part C of the Rules. The System Operator implements the Procurement Plan by entering into contracts with providers. It then coordinates the scheduling and dispatch of electricity and ancillary services to operate the power system in real time to meet its PPOs. The costs of these services are allocated to market participants according to the rules in section IV of part C.

4.4.10 The Commission appreciates the time and effort required to conduct the annual review process. The System Operator is again to be commended for its initial pre-consultation process with market participants before submitting the draft plan to the Commission. It was also pleased to see changes made to the draft which allow for more innovation in the way outcome-based services might be provided (e.g. fixed price frequency keeping, sub-contracting, etc).

---

[7] This requirement is contained in rule 10 of section II of part C of the Rules.

[8] This requirement is contained in rule 4 of section IV of part C of the Rules.

4.4.11 When the new draft was submitted, the System Operator provided a cost-benefit analysis from the System Operator's perspective for the key changes in the procurement plan. This analysis assisted the Commission in its own assessment of the costs and benefits of the changes.

4.4.12 Once consultation on the draft ended, the System Operator carefully considered the advice of submitters and the Commission. Furthermore, the System Operator made staff available to discuss the submissions and alternative wording at the Common Quality Advisory Group meeting and was open to and agreed to changes as a result. This cooperative attitude and collaborative approach is appreciated by the Commission as it demonstrates a properly consultative approach.

4.4.13 The Commission noted the small number of residual issues that could not be accommodated in the review timeframe provided for in the Rules. These issues have been added to the Commission's formal process for later consideration.

4.4.14 Once the new plan is finalised each year, the System Operator negotiates and manages contracts with ancillary service agents to provide ancillary services. It also implements, maintains, and operates systems directly related to the provision of such services.

4.4.15 The System Operator is to be commended for the smooth contract negotiation process in securing ancillary services for 2008/09. This is no doubt helped by the consultative approach taken in the Procurement Plan review process.

4.4.16 The Commission commends the work the System Operator has been doing on Black Start testing. The Black Start ancillary service is purchased from generators that can start a unit or units up to synchronous speed, without use of power from the grid, and remain stable while the transmission system is reconnected following a total blackout. Ensuring the generators can fulfil this role requires much preparation and planning as the grid must be reconfigured to disconnect the generating units being tested from the rest of the grid. The System Operator has achieved its goal of carrying out one test every year and there has been valuable learning from the two tests already completed.

4.4.17 The Commission notes that the System Operator's contract with Mighty River Power to provide voltage support from Marsden was in such a form that it continued to be required to pay Mighty River Power until the contract expired in October 2008, even though a transformer fault in July 2007 meant the synchronous condenser was disconnected from the grid and no reactive power could be delivered to the grid. The Commission acknowledges that Transpower traversed all contractual and legal avenues to terminate or suspend this contract, but would encourage Transpower to explore possible arrangements (if any exist) that would help avoid or mitigate this type of contractual difficulty in the future.

4.4.18 The Commission also has a wider concern about the level and rate of increase in the cost of ancillary services. It is aware that the high wholesale electricity prices this year, largely due to the dry winter, have influenced ancillary service costs (especially instantaneous reserve and frequency keeping) and the System Operator's prime objective is to procure sufficient quantities to meet the PPOs. The Commission appreciates initiatives taken by the System Operator to find new entrants to the market in areas of escalating cost such as frequency keeping.

4.4.19 The Commission believes there are further opportunities to reduce costs. As the Commission's agent in the procurement of ancillary services, it expects the System Operator to continue to support the requirement in the Electricity Act 1992 to ensure delivered electricity costs and prices are subject to sustained downward pressure[9]. The Commission proposes that this opportunity be formalized in performance standards to be agreed with the System Operator for 2008/09.

System security planning

4.4.20 As part of its system security planning, the System Operator engages in several planning activities across different time frames, all of which are important in maintaining the integrity of the power system and achieving the PPOs.

System Security Forecast

4.4.21 For its long-term planning, the System Operator produces a System Security Forecast (SSF). This is a significant piece of work that the System Operator is required to carry out regularly.[10] It consists of demand and supply forecasts and power system modelling and provides the System Operator's forecast of its ability to meet its PPOs over the next 10 years.

4.4.22 The System Operator submitted an update to the SSF in December 2007.

4.4.23 The Commission appreciates the quality of the SSF document and the data analysis on which it is based.

National and regional planning

4.4.24 The System Operator continues to demonstrate leadership and a responsive approach for initiatives that address issues that might affect power system management. It leads and participates in forums, providing advice and

[9] Section 172N(2)(f)

[10] Rule 15 of section II of part C of the Rules requires the System Operator to prepare, publish, and provide to the Board a system security forecast once every two years but it is also required to revise the forecast every six months if, in the reasonable opinion of the System Operator, changes to the power system warrant a revision .

coordinating measures to resolve regional security issues in both the upper South Island and upper North Island areas.

4.4.25 The Commission notes that the summer and winter groups for the upper North Island and the summer group for the upper South Island maintained a watching brief for the year as no new issues were identified. The forum for upper South Island winter security agreed a contingency plan in response to the late commissioning of plant and outage of 220kV transmission circuits.

4.4.26 In addition, two other forums led by the industry, a special 'dry year planning' forum of industry Chief Executives and the National Winter Group, were convened regularly during the year to consider actions that would help maximise the transmission of generation south during the unusually dry winter. The System Operator is to be commended for its participation and responsiveness in carrying out actions recommended by these groups, especially:

(a) the swift introduction of the special winter schedule (SWS);

(b) initiatives to increase reserve available in the South Island to maximise south transfer of electricity across the HVDC link; and

(c) the increase in information made available to participants on pressure points on the system (e.g. transfer across the HVDC link, instantaneous reserve offered and cleared).

4.4.27 In last year's review report, the Commission recommended the System Operator, when asked for solutions, consider both interim solutions and complete solutions, where appropriate. The Commission notes that in a year when it was needed more than most, the System Operator demonstrated an innovative and agile approach in developing and implementing progressive initiatives.

Grid emergencies

4.4.28 The System Operator declared a total of 23 grid emergencies during the review period, all of which it managed without serious system security implications.

4.4.29 Last year's review noted the failure of the faxination system to disseminate timely notices during the generation shortage event on 19 June 2006 and that steps were in place to fix this problem. The System Operator was alleged to be in breach of the rule requiring it to issue a grid emergency notice as soon as practicable after declaring a grid emergency. The System Operator has agreed to a settlement which includes various measures to be put in place to ensure written formal notices are delivered to relevant participants.

4.4.30 As part of that settlement, the System Operator launched a project to improve the format and information contained in grid emergency notices. Any changes resulting from this project are expected to be introduced by the System Operator in next year's draft Policy Statement.

4.4.31 Overall, the Commission is satisfied that the System Operator was appropriately responsive to events that occurred in real time during the review period.

4.5 Service Provider Agreement

4.5.1 The SOSPA sets out the terms under which Transpower agrees to perform the role of System Operator. In late 2006, the System Operator notified the Commission that it wished to vary the terms of the SOSPA. Early in 2007, the two parties commenced discussions that are continuing at the time of writing this report and, as such, it is inappropriate that this report attempt to address any of the issues being raised in the discussions until they are completed.

4.5.2 Under the SOSPA, besides the obligations to meet its requirements of the Rules and Regulations, the System Operator has two main obligations pertinent to this review, the disaster recovery plan and the warranties.

4.5.3 With regards to the disaster recovery plan, the System Operator has an obligation to have in place and comply with a number of arrangements and procedures relating to backups and disaster recovery. The System Operator notified the Commission in its self-review that it found no need to alter the current System Operator Disaster Recovery Plan but it made changes to the Business Continuity Plan in August 2007. The Commission is pleased to note that the System Operator is planning to complete a business continuity simulation exercise in 2009.

4.5.4 With regards to the warranties required of the System Operator in the SOSPA, it reiterated in its self-review that as at 31 August 2008, it was unaware of anything within its reasonable control which might or would adversely affect its ability to provide the contracted services under the SOSPA and that it had sufficient resources, skills and supervision to carry out the said services.

4.5.5 However, as it did in its last self-review, the System Operator has stated that it does not have sufficient financial resources to carry out the said service and as such it cannot ensure it can continue to act as a reasonable and prudent System Operator.

4.5.6 In response to this and other issues, negotiations to vary the SOSPA have been continuing since the last review period and these are nearing conclusion. The Commission hopes that the provisions of the new SOSPA, once negotiations have concluded, will address both the System Operator's and the Commission's issues in the coming year.

4.5.7 The financial review provided in the System Operator's self-review stated that the base agreement fees charged to the Commission totalled over $21 million, for the period from 1 September 2007 to 31 August 2008, plus additional fees of over $115,000 for services in addition to those provided under the base contract. The

Commission notes that the System Operator's advice to the Commission, included in the fees for additional services, amounts to less than 1% of its total revenue.

4.6 Reports provided to the Commission

4.6.1 The Commission receives monthly operational and system performance reports and numerous ad-hoc reports from the System Operator. The following table lists some of these and the Commission's comments on their timeliness, content, quality.

Report	Comment
Monthly reports	The Commission appreciates the timeliness and content of the monthly reports. Much of the content is very valuable but the Commission has noted occasional lapses recently that have resulted in incorrect data being published or missing data.
Investigation reports	The Commission acknowledges the significant amount of technical resources dedicated by the System Operator in support of the Wind Generation Investigation Project (WGIP). With regards to the timeliness of technical reports produced for this project, the Commission understands the impact of other work on the progress of this project. It considers though that the quality of the analytical work is high but there is room for improvement in the quality of the written reports, at least to match the quality of equivalent international reports in other overseas' jurisdictions
Self-review	The Commission appreciates the effort the System Operator makes on its self-review but would like to see more self-commentary on how well it rates its own performance.

4.7 Agreed performance standards

4.7.1 The Commission has not agreed any performance standards with the System Operator, additional to the requirements already outlined in the Rules and the Regulations. However, the Commission intends to begin discussions with the System Operator on agreeing a set of Key Performance Indicators for the coming review period to establish a common understanding of expectations, and to provide further structure to the process of monitoring and assessing System Operator performance over time.

4.8 Other relevant matters

4.8.1 The System Operator has a wide variety of other roles not specifically mentioned in this report. These roles are wide ranging and include activities such as commissioning of assets jointly with asset owners, processing of dispensation/equivalence arrangements, assessing asset capability statements and test programmes, assisting in the form of submissions and contributions with rule changes, systems development and investigation projects.

4.8.2 This section reviews the manner and form of some of the more significant interactions.

Development Work

4.8.3 Within the review period, the System Operator has made considerable progress in its MSP, which is a very substantial project in terms of cost, staff resources, and timeframe. The project was originally targeted for delivery by the middle of 2007. However, there have been significant delays in progress throughout the lifetime of the project. The project is now expected to be substantially complete at the end of the first quarter of 2009.

4.8.4 The MSP has diverted considerable resources over the review period. Major delays in the completion of the project, plus operating the system in dry year conditions, have prolonged the period of reduced System Operator capacity to work on other development initiatives. Furthermore, the functionality of the new market software has been fixed since the end of 2006, which results in a duplication of software changes in the existing and new systems if a development is implemented prior to the MSP roll-out.

4.8.5 Given the Commission's role in the electricity market, the Commission is careful to consult with the System Operator on any proposals to make rule changes that might affect the System Operator. Introducing this extra step in the development of proposals requires timely engagement and feedback. Lengthy delays can frustrate the rule change process.

4.8.6 The System Operator has provided assistance to the Commission on the development of several rule changes and several Commission development initiatives over the review period. The Commission acknowledges that this has required careful management of resources while progressing day to day operations and work on dry year initiatives.

4.8.7 However, even allowing for these special circumstances, the Commission continues to be frustrated with the delays in being able to engage with the System Operator on some issues. The System Operator is to be commended for preparing and publishing a business performance charter but the Commission has noted occasions where the System Operator performance has significantly

failed to meet the commitments listed in its own charter. Given that the range of issues, from timely response to phone or email messages to updates on unachievable previously advised timetables, is quite detailed, these issues are better discussed directly and resolved between the Commission and the System Operator in the coming year.

4.8.8 Some of the Commission's development initiatives have had mixed engagement with the System Operator and some comments by Commission staff have been:

Project	Comment
FK selection changes	"Satisfied with the speed of implementation once the System Operator realised that its tools already contained the function necessary to achieve the desired outcome."
Frequency Regulation Market	"Satisfied with level of engagement on project so far."
Variable Reserves	"Satisfied with the implementation of interim solution and priority attached to full solution following implementation of MSP."
Demand-side bidding and forecasting	"We have subtle differing views with the System Operator but progress is affected by delays in implementing MSP."
AUFLS rule change	"Unsatisfied at the delays in getting the System Operator to engage on this matter."

Generation commissioning

4.8.9 The Rules require generators to liaise closely with the System Operator when commissioning new generation plant.[11] The Commission acknowledges the significant workload that commissioning planning activities place on the System Operator and is pleased with the relatively seamless manner in which most new generation is integrated within the power system.

Stakeholder Relations

4.8.10 The System Operator disseminates information via various means, mainly by posting information on its website and providing data to the Commission for its centralised datasets that are later published.

4.8.11 During the review period, the System Operator distributed seven newsletters to its email distribution list. However, no workshops were held as the series on the new market systems, proposed to take place in October 2007, was cancelled due to the delay in the project's implementation.

[11] Commissioning requirements are set out in technical code A of schedule C3 of part C

4.8.12 The Commission also appreciates the considerable effort the System Operator has spent to improve the format of its website and its contents. In particular, the Commission commends the System Operator for making more procedures and forms available via its web pages. The Commission is also pleased to see more up-to-date data relating to the power system.

5. Conclusions

5.1.1 The Commission is pleased with the System Operator's performance in the operation of the power system, its contribution to managing the dry winter period, and its review of the procurement plan. In these areas, the System Operator demonstrates the level of engagement, leadership, conscientiousness, and initiative the Commission would like to see extended to all facets of its role.

5.1.2 The Commission's main concern during the review period has been with the level of engagement by the System Operator to industry development initiatives in the Commission's work programme. In part, this has been due to the extra activities required of the System Operator over winter and because of the lengthy delay in the completion of MSP. It hopes that the provision of advisory services in the new contractual arrangements will relieve these constraints and the System Operator will be better placed to provide the timely advice the Commission needs.

5.1.3 In conclusion, the Commission considers that, during the review period, Transpower, as System Operator, has satisfactorily performed its core functions in accordance with the Rules and Regulations, especially in a dry year characterised by significant stress on the power system.

5.1.4 However, the Commission is keen to see improvements in the System Operator's performance in two aspects:

(i) substantially more engagement in the development initiatives that the Commission is responsible for pursuing on behalf of the industry, and assisting the Commission to meet the objectives set for these initiatives, as expressed in the Commission's SOI and the GPS; and

(ii) having a programmed approach to reducing the cost of the services and resources it procures and dispatches in the manner expected of fulfilling its requirement to be a reasonable and prudent System Operator.

5.1.5 The Commission intends to agree with the System Operator some key performance standards, pursuant to regulation 47(2)(c), in the coming year.

References

Electricity Commission (2008), Electricity Governance Rules 2003, *http://www.electricitycommission.govt.nz/rulesandregs/rules*

Electricity Commission (2008), Statement of Intent 2008-2011, *http://www.electricitycommission.govt.nz/publications/index.html#soi*

New Zealand Parliamentary Counsel Office (2008), Electricity Governance Regulations 2003, *http://www.legislation.govt.nz/regulation/public/2003/0374/latest/096be8ed801e11a6.pdf*

Transpower (2008), System Operator Annual Review and Assessment 2007/08: 1 September 2007 to 31 August 2008, *http://www.electricitycommission.govt.nz/opdev/servprovinfo/annual*

Transpower New Zealand Ltd (2006), System Security Forecast 2006, *http://www.systemoperator.co.nz/publications#cs-85803*