

System operator service strategy

System operator's strategic plan for 2015-2020
and key business activities for 2015-16

19 June 2015

Background

The Security and Reliability Council's (SRC) functions under the Electricity Industry Act 2010 include providing advice to the Electricity Authority (Authority) on the performance of the system operator.

The system operator enquired with the SRC secretariat in early 2015 whether the SRC would like to comment on the system operator's five-year strategic plan (2015-2020). The SRC Chair agreed to the suggestion.

The main way in which the SRC have previously assessed the performance of the system operator is by reviewing the annual reports on the performance of the system operator (a self-review by the system operator and a review by the Authority). The SRC has also expressed an interest in "integrated and prioritised performance measures", as manifested in the SRC's long-standing action item #1.

The system operator's strategy is a topic that has not previously been considered by the SRC. In principle, the SRC's consideration of the system operator's strategy may be able to influence future performance, however there may be some parts of the strategy that are not directly related to performance, and as such will be outside the scope of the SRC to consider.

The purpose of this paper is to present the key elements of the system operator's strategic plan for 2015-2020 to the SRC and seek the SRC's advice to the Authority Board. The system operator will give an oral presentation at the meeting, though all of the attached material is recommended reading.

The SRC may wish to consider the following questions.

- | | |
|------------|--|
| Q1. | Does the SRC agree that the system operator's strategic goals will result in improved performance? Does the SRC wish to make any suggestions for amendments to the strategic directions? |
| Q2. | Does the SRC agree that the system operator's key business initiatives for 2015-16 (slides 6-7) align with the strategy? Does the SRC wish to make any suggestions for amendments to the key business initiatives? |
| Q3. | What advice, if any, does the SRC wish to provide to the Authority? |
| Q4. | Does the SRC wish to continue to receive papers concerning the system operator's strategy? |



Strategic Plan for the System Operator Service

Security and Reliability Council Meeting
1 July 2015



SYSTEM OPERATOR



What we're doing

- We have a five year strategic plan outlining our purpose and plans from 1 January 2015 to 30 June 2020
- Purpose of the System Operator:

*To operate a competitive electricity market
and deliver a secure power system
for the long-term benefit of consumers*

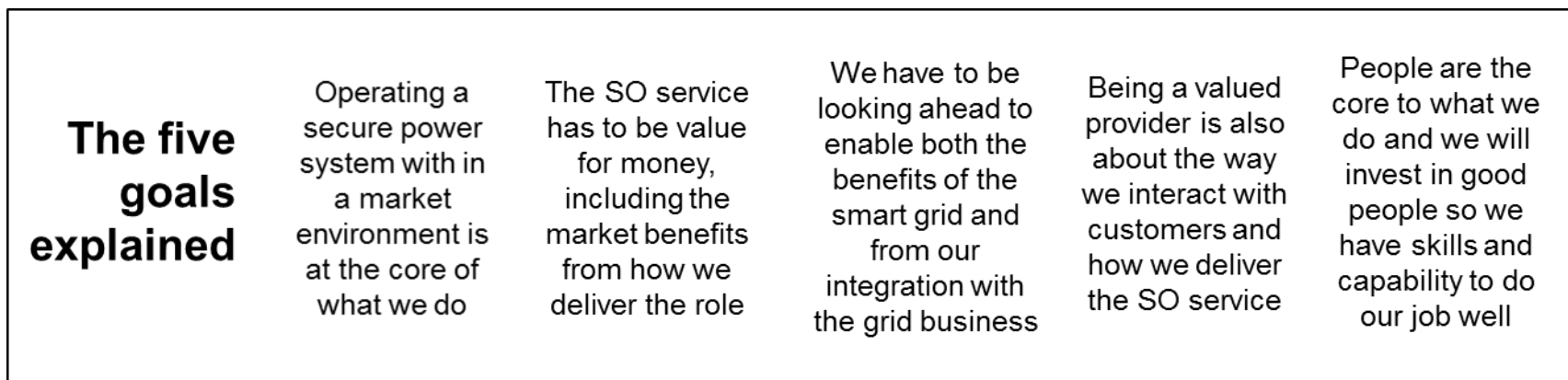


Why we have, and have published, a five-year strategic plan

- Provides transparency on Transpower's strategic plan for the system operator service 2015-2020
- Demonstrates our commitment to ensure we are not solely security-focused
- Challenges us to plan and carry out our work in a manner that enables us to:
 - align the system operator service with the Authority's industry objective
 - add value with the service we provide, and provide the service in a manner that is value-for-money
 - plan for tomorrow and provide transparency about those plans
 - strengthen our relationships with and understanding of the Authority, market participants and consumers



Our strategic plan to get there



A valued provider to the Authority and market participants in delivering a high quality and efficient system operator service, as well as strategic value and a commercial return to Transpower



A view of the future in 2020

- Authority and market participants will **understand what we do and why we do it, as well as the value we add**
- Our policies and procedures align with the CRE and **we have released \$5 million per annum in market benefits** as a result
- We're delivering projects to budget and **90% of the projects are on time, delivering the expected benefits**
- We're leveraging off developments involving **the grid technology and tools** within Transpower
- **Unplanned outages** of the market systems **will not exceed two hours** at a time, or happen more than **three times a year**
- We're providing the Authority and market participants with a **strategic roadmap** for the **market systems** and **SCADA**





What are we doing in 2015/16

- 8 key business initiatives to progress actions specified in our strategic plan

Assisting the Authority to meet its statutory CRE objective

Seeking opportunities to add value through the provision of information to support an efficient market

Developing an efficient balance between risk, reliability and resilience

Improvements to deliver a system operator service that meets or exceeds expectations and represents value for money

A transparent business and technology requirements roadmap for investment required to deliver the system operator service

Building capability, and promoting a professional, responsive service culture

Engaging with and understanding the Authority, market participants and consumers

Maximising opportunities arising from being part of the entire Transpower business



What success looks like in June15/16

- **25%** of our policies and procedures **align with the CRE**
- We have **released \$1 million per annum in market benefits** as a result of CRE or capital projects
- We have completed a **black start/system restoration** desktop simulation **exercise**
- We're delivering **projects to budget** and **90%** of the projects are **on time, delivering the expected benefits**
- We're **leveraging off developments** involving the grid technology and tools within Transpower
- We're **publishing event reports** which assist industry to understand the behaviour of the power system and market



Keeping the energy flowing

SYSTEM OPERATOR STRATEGIC PLAN 2015 – 2020

TRANSPower



THIS **STRATEGIC PLAN** SETS OUT KEY DELIVERY STRATEGIES FOR TRANSPower NEW ZEALAND LIMITED (TRANSPower) IN ITS ROLE AS SYSTEM OPERATOR OVER THE FIVE YEARS TO 2020.



The strategy is driven by our regulatory obligations, the Electricity Authority's (the Authority's) objective and market development direction, the capabilities of market participants, and the provision of long-term benefits to New Zealand consumers.

Transpower engages with the Authority and market participants to determine the best way to deliver operations and move forward.

This plan lays out what we are going to do, and the outcomes we seek over the five years. The outcomes in this document form the basis for scorecard reporting on our achievements in the annual self-review of system operator performance.

This five year strategic plan (1 January 2015 – 30 June 2020) forms the basis of Transpower's annual business plans for the system operator service. Specific initiatives to progress actions and achieve the desired outcomes will be set out in the relevant business plan.

This plan is a living document that will be reviewed annually to ensure it continues to align with the overall strategic direction of both the Authority and Transpower, as well as to trends and changes in the wider electricity industry.

SYSTEM OPERATOR STRATEGIC PLAN 2015 – 2020 OVERVIEW

PURPOSE

Operate a competitive electricity market and deliver a secure power system for the long-term benefit of consumers



MEASURES OF SUCCESS

Valued provider to the Electricity Authority and market participants in delivering a high quality and efficient system operator service, as well as strategic value and a commercial return to Transpower



STRATEGIC GOALS

1

Delivering competition with security

2

Demonstrating value for money

3

Planning for tomorrow

4

Strengthening relationships

5

Investing in good people



KEY INITIATIVES

Competition, reliability and efficiency (CRE)

Efficient operations

Active development

Service culture

Safety first

Risk, reliability and resilience

Capex decision criteria

Enabling full participation

Engagement and consultation

Right mix of skills

Predictability

Seeking value-add

Maximise use of assets

Communication and transparency

Awareness and agility

Information provision

Market systems roadmap and well-run projects

Business acumen



FOUNDATION

The joint objective for the delivery of the system operator service is summarised as:
Deliver an efficient system operator service that promotes competition and provides a reliable supply

The system operator is a service provider to the Authority

Transpower has agreed a joint objective for the system operator with the Electricity Authority¹:

We will deliver long term benefits to New Zealand consumers in the course of operating and developing the broader electricity market by:

- promoting competition, for example by removing technical barriers to entry and participation in the wholesale market;
- ensuring reliable supply, for example by efficiently balancing risk and the costs of risk reduction and by taking advantage of new technologies as they become commercial; and
- promoting efficient operation of the New Zealand electricity industry, for example by delivering an efficient and effective system operator service and by developing and implementing improvements in the market.

The joint objective is reflected in this strategic plan, and our strategic goals are aligned with the Authority's outputs² as follows:

SYSTEM OPERATOR'S STRATEGIC GOALS		1 Delivering competition with security	2 Demonstrating value for money	3 Planning for tomorrow	4 Strengthening relationships	5 Investing in good people
AUTHORITY'S OUTPUTS	Compliance	✓		✓		✓
	Monitoring, information and education			✓	✓	
	Operation of the electricity system and markets	✓	✓	✓	✓	
	Market development	✓	✓	✓	✓	

¹ Relationship Charter – Electricity Authority and Transpower as provider of the System Operator service

² From the Authority's Statement of Intent, 1 July 2014 – 30 June 2014

The system operator is Transpower

Transpower is the provider of the system operator service as well as being the owner and operator of the national grid. This enables strong synergies between these roles:

- ensuring consistency between how the grid owner plans and delivers a dynamic grid, and how the system operator maximises the capability of the assets and systems provided;
- enabling a fully integrated response to system incidents to reduce their impact on consumers; and
- providing a lower cost system operator service through sharing of skills and tools in power system analysis, outage planning, asset commissioning and operator training.

The system operator is privy to confidential information, and must be impartial between asset owners, including between the grid and generators. Transpower has information and conflict of interest procedures to ensure compliance with these requirements.

The relationship between Transpower's strategic goals in its role as system operator, as laid out in this strategic plan, and the strategies and purposes of Transpower are:

TRANSPower'S STRATEGIC GOALS AS SYSTEM OPERATOR	1 Delivering competition with security	2 Demonstrating value for money	3 Planning for tomorrow	4 Strengthening relationships	5 Investing in good people
TRANSPower'S STRATEGIES	Run an effective electricity market	Deliver a resilient, cost effective transmission service for our customers Seek continuous business improvement	Plan an enduring grid that delivers smart solutions, cost effectively	Deliver excellent customer service and stakeholder engagement on a commercial platform	Invest in good people Deliver a safe, zero harm workplace
TRANSPower'S PURPOSE	<i>We connect New Zealanders to their power system through safe smart solutions for today and tomorrow</i>				

TRANSPower'S VALUES

The power of us	We work with care	We're here for New Zealand	We do clever simply
We listen to each other - we unite to make things happen - we are better together	We care for each other and our communities and we keep everybody safe - we are open, honest and respectful	We work hard to keep the lights on for our fellow Kiwis and we're careful how we spend their money	This is a great place to work. We deliver excellence - we change, adapt, and make better

RATIONALE:

The system operator service delivers both security and the platform for a competitive electricity market. Getting the balance right between these outcomes is critical.

Document hierarchy for the system operator**The Electricity Industry Act 2010**

Authority's CRE objective
Transpower as system operator

Electricity Industry Participation Code

Describes aspects of the system operator service.
Responsibility of the Authority

Policies

Policy statement and procurement plan. Consulted on by the system operator, approved by the Authority

Procedures

System operator procedures, feedback sought where market directly affected

Strategic goal 1

DELIVERING COMPETITION WITH SECURITY

THIS WILL BE DONE BY

- Delivering to the requirements of the Electricity Industry Participation Code 2010 (the Code).
- Applying the Authority's competition, reliability and efficiency objective (the CRE objective) to all applicable system operator actions, policies and procedures.
- Developing an efficient balance between risk and the costs of risk reduction, and between reliability and resilience, in our policies, procedures and systems.
- Ensuring predictable outcomes for market participants from what we do.
- Providing information that supports an efficient market, including the capabilities of the network, the balance of supply and demand, and the system impacts of participants' equipment and its operation.

OUTCOMES

- We will avoid cascade failure of the power system from our actions and enable the timely and safe restoration of the grid following events.
- As the system and market grows in complexity, we will be maximising the use of power system capability through improving situational awareness and anticipatory actions.
- Our policies and procedures will all have been evolved to align with the CRE objective. In doing so, we aim to release \$5 million per annum in market benefits.
- We will have minimised the number of occasions where, for urgent operational reasons, we have had to diverge from our policies and procedures.
- No major pricing incidents will be exacerbated through incorrect information from the system operator.
- Unplanned outages of the market systems will not exceed two hours at a time, or happen more than three times a year.

Strategic goal 2

DEMONSTRATING VALUE FOR MONEY

THIS WILL BE DONE BY

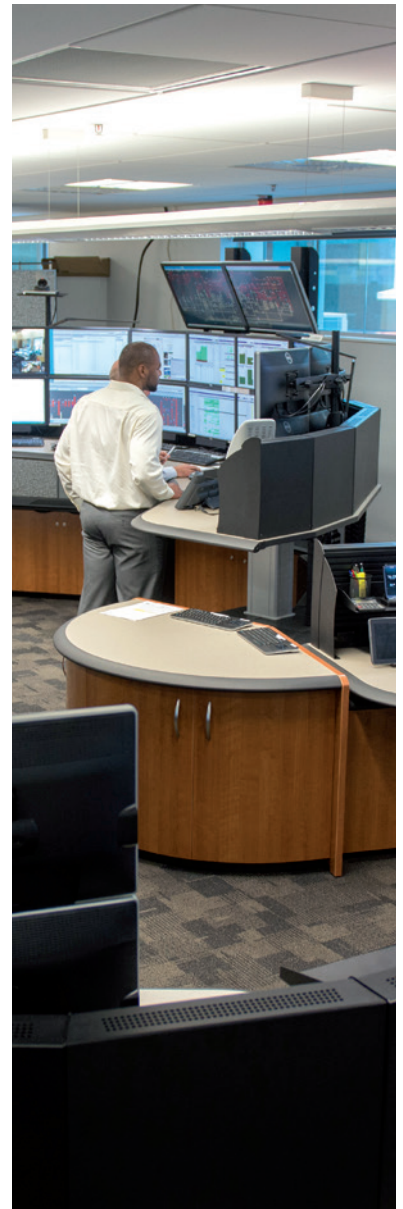
- Identifying and implementing the most efficient means of delivering a system operator service that meets or exceeds expectations, and seeking continuous business improvement.
- Implementing and applying capital investment decision criteria for service enhancements to ensure such investments are necessary, good electricity industry practice, and align with the CRE objective and this strategic plan.
- Providing the Authority and market participants with a strategic roadmap for optimised expenditure on the market systems and SCADA infrastructure.
- Establishing a specialised programme and projects team focused on overseeing and ensuring the efficient and timely delivery of all capital investments for the system operator service.
- Agreeing with the Authority, and monitoring and reporting on, project-related performance measures.
- Seeking opportunities to add value to market participants and consumers through the system operator service.

OUTCOMES

- We will reduce the real operating costs for the existing baseline system operator services and share efficiency gains with consumers.
- We will have published a transparent investment roadmap to retain the capability to deliver the service, with the value of planned capital projects understood by market participants.
- All approved capital enhancement investments will meet decision criteria consistent with the CRE objective and this strategic plan for the system operator service.
- Our portfolio of planned capital investment projects will:
 - be delivered to budget;
 - 90% of the projects will be delivered on time; and
 - deliver, or enable the market to deliver, the expected benefits.

RATIONALE:

Performing the system operator role is an essential service to market participants and New Zealand consumers, but has its costs. We have a responsibility to demonstrate that we do this efficiently.



RATIONALE:

We operate in an environment where grid, generation, load, communications and IST technologies are ever evolving. We need to anticipate, enable and lead such changes through our services and infrastructure.

Strategic goal 3

PLANNING FOR TOMORROW

THIS WILL BE DONE BY

- Understanding the needs of market participants and consumers as well as the evolution of technology and behavioural trends in power system and market operation both in New Zealand and internationally.
- Identifying and implementing opportunities for efficient improvement, through working with the Authority, market participants and other service providers on:
 - market developments;
 - continuous improvement of our policies and procedures; and
 - recommending, analysing and implementing Code amendments.
- Reducing barriers to market entry and participation, and providing a level playing field across technologies.
- Working within Transpower to:
 - ensure consistency between how the grid owner develops a more dynamic grid, and how the system operator plans to operate it; and
 - maximise opportunities and leverage off developments involving the grid, technology and tools.
- Simplifying the market system applications to reduce the cost and time needed to support, maintain and enhance them.

OUTCOMES

- A system operator service will be responding to an ever-evolving environment to ensure the continual delivery of an optimum level of service.
- System operator policies, procedures and systems will make the most efficient use of existing and emerging technologies and practices drawn from an awareness of trends both in New Zealand and internationally.
- The market system will:
 - have reduced system complexity, improved resilience and enable greater flexibility to respond to changing market development priorities and needs; and
 - be aligned with business functions and run on fully supported technology that is well aligned with the Authority's, system operator's and vendors' roadmaps.



Strategic goal 4

STRENGTHENING RELATIONSHIPS WITH THE AUTHORITY AND MARKET PARTICIPANTS

THIS WILL BE DONE BY

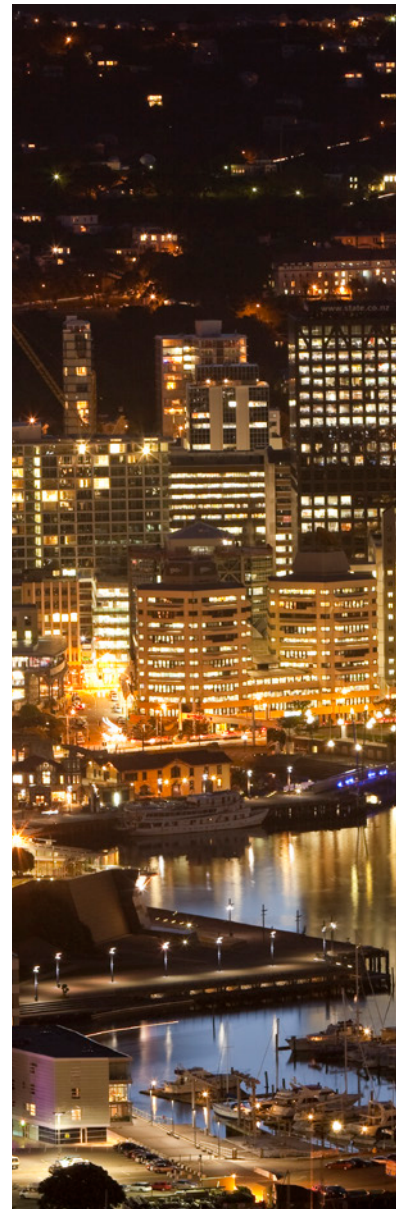
- A responsive service culture.
- Engaging with the Authority, market participants and consumers to identify how we can add greater value to our relationship with them.
- Interacting with the Authority and market participants in developing a transparent strategic roadmap for capital investment required to deliver the system operator service.
- Demonstrating professionalism, objectivity and impartiality in all our actions.
- Respecting the confidentiality of information received by the system operator from asset owners.

OUTCOMES

- The Authority and market participants will value us as a critical source of information, of market operation, analysis of system issues and, where appropriate, training.
- Market participants will be actively involved in the development and enhancement of the system operator service through our engagement as part of seeking Authority approvals.
- We will be publishing timely and objective analysis of system events, near-events and trends, and identifying any policy or procedural changes required.
- The Authority and market participants will understand what we do, why we do it, how we do it and the value we add in enabling a market that provides long term benefits to New Zealand consumers.
- Our performance and responsiveness will be acknowledged in the Authority's and market participants' feedback.

RATIONALE:

To deliver the system operator service efficiently we need effective relationships with the Authority as funder and regulator, and the electricity industry as market participants.



RATIONALE:

For all its technology, the system – with all its complexities – is still operated and developed by people. Investing in good people with appropriate skills in the right roles is critical to managing these complexities.



Strategic goal 5

INVESTING IN GOOD PEOPLE

THIS WILL BE DONE BY

- Reinforcing Transpower's safety messaging to lift the awareness of safety and its implications for system operation.
- Recruiting and retaining people with the right skills in the right roles.
- Providing appropriate training and ongoing development to staff, relevant to the complexities of the power system, electricity market and market systems, and the economic impacts of events.
- Providing a workplace and culture that learns from successes and failures to proactively enhance the training and processes and celebrates the achievement of milestones and success.
- Encouraging staff members to meet high professional standards in both work ethic and workplace behaviour, and to support each other and work in a collaborative manner.
- Encouraging an agile and commercial approach and can-do attitude.

OUTCOMES

- Safety will be a focus in all our considerations, including day-to-day operation and in the adoption of new practices, systems and technologies.
- Errors through manual operation will reduce over time reflecting the investment in training.
- System operations division staff engagement will exceed 65%.
- We will:
 - retain good staff;
 - be skilled in articulating ourselves clearly and concisely;
 - demonstrate awareness of developing issues through anticipatory action and timely resolution;
 - have a cohesive and collaborative workplace; and
 - act as one, with one voice that reflects Transpower's core values.

