

# Operational Performance Report to the Electricity Authority December 2010

## Purpose

This report summarizes the results of the System Operator's review of its performance for December 2010, as required under Clause 3.14 of the Electricity Industry Participation Code 2010. An additional Operational Update is also provided for the information of the Authority.



SYSTEM OPERATOR

*Keeping the energy flowing*

TRANSPower



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## 1. COMPLIANCE WITH RULE BOOK AND PARTS 7 AND 8:

### 1.1 PRINCIPAL PERFORMANCE OBLIGATIONS (PPOs)

The Principal Performance Obligations (PPOs) of the System Operator are to act as a reasonable and prudent operator with the objective of meeting certain PPO outcomes.

The System Operator's performance against the PPO outcomes, during December, was as follows:

PPO No	Description	PPO Outcome
7.2(1)(a)	Avoid cascade failure	Met
7.2(1)(b)(i)	Maintain frequency in the normal band	Met
7.2(1)(b)(ii)	Manage frequency during momentary fluctuation	Met
7.2(1)(b)(iii)	Limit rate of occurrences of momentary fluctuations	Met
7.2(1)(b)(iv)	Recover quickly from a fluctuation	Met
7.2(1)(b)(v)	Manage time error	Met
7.2(1)(b)(vi)	Eliminate time error once a day	Met
7.2©	Maintain other standards	Met
8.5	Restoration objective	Met

### 1.2 GRID EMERGENCIES

There were eleven grid emergencies declared in the period.

Grid Emergencies			
Date	Time	Summary Details	Island
02-Dec-10	08:40	Grid Emergencies were declared for insufficient generation offers in the Upper North Island and insufficient transmission capacity in the Waikato region. The grid was re-configured at KIN to alleviate the situation.	N
21-Dec-10	16:45		
22-Dec-10	07:49		
23-Dec-10	09:12		
24-Dec-10	07:50		
27-Dec-10	10:15		
28-Dec-10	10:00		
29-Dec-10	09:05		
30-Dec-10	08:25		
31-Dec-10	07:45		
29-Dec-10	03:27	A Grid Emergency was declared to allow the temporary reconfiguration of the Upper South Island transmission system after the tripping of reactive plant during a planned outage resulted in high voltages.	S



### 1.3 SYSTEM EVENTS

There were two system events (frequency excursion) during the reporting period:

Date	Time	Summary Details	Island	Freq (Hz)
02/12/10	15:05	Ohau A Power Station tripping resulted in a momentary drop in frequency in the South Island.	S	49.26 Hz
08/12/10	14:11	A tripping at Huntly Power Station resulted in a momentary drop in frequency in the North Island.	N	49.26 Hz

### 1.4 CONNECTION POINT EVENTS

There were four connection point events during the reporting period:

Date	Time	Summary Details	Generation/Load interrupted (MW)	Restoration time (minutes)
02/12/10	06:26	Glenbrook 33 kV bus sections B and D tripped resulting in a partial loss of connection.	26	120
20/12/10	9:26	Redclyffe 110 / 33 kV supply transformers tripped resulting in a loss of supply to Redclyffe.	41	55
20/12/10	22:48	50 kV Te Kaha – Waiotahi Circuit 1 tripped resulting in a loss of supply to Te Kaha.	1	1162
25/12/10	05:38	Carrington St 110 / 33 kV supply transformers tripped resulting in a loss of supply to Carrington St.	16	50

### 1.5 SYSTEM OPERATOR COMPLIANCE WITH RULE BOOK: PARTS 7 AND 8

During December, the System Operator notified no breaches of Part 7 or Part 8.

### 1.6 PARTICIPANT COMPLIANCE

During December, the System Operator notified no alleged Part 8 breaches against participants.

### 1.7 APPLICATIONS FOR DISPENSATIONS

During December, one dispensation application was received by the System Operator.

## 2. PART 13 COMPLIANCE

### 2.1 SYSTEM OPERATOR COMPLIANCE

During December, the System Operator notified one breach of Schedule G6 1.3.4.7 of Part G of the EGRs for failing to incorporate revised information from the Grid Owner about the AC transmission system configuration in formulating the dispatch schedule. This was a breach of the EGRs rather than the Code as the event occurred prior to the introduction of the Code on 1 November 2010

### 2.2 PARTICIPANT COMPLIANCE

No participant breach of Part 13 was reported by the System Operator during the month of December 2010.



### 3. ANCILLARY SERVICES

#### 3.1 SUMMARY OF PROCURED ANCILLARY SERVICES

The following is a summary of the contracted ancillary services, as at December 2010:

Ancillary Service Agent	FK	IR	OFR	BS	VS
Contact Energy	√*	√	√*	√	√*
Counties Power		√			
Energy Response		√*			
Genesis Power	√	√		√	
KCE Mangahao and Todd Mangahao		√*	√		
Meridian Energy	√*	√*	√*	√*	
Mighty River Power	√*	√*	√	√*	√*
NZ Aluminium Smelters		√*			
NZ Steel		√*			
Nga Awa Purua			√		
Northpower		√*			
Norske Skog		√			
Powerco		√*			
Pan Pac		√			
TrustPower		√*			
Tuaropaki (Mokai)			√		
Unison		√			
Vector		√*			
WEL Networks		√*			
Wellington Electricity Networks		√			
Winstone Pulp International		√			

(1) FK - Frequency Keeping

(4) BS - Black Start

(2) IR - Instantaneous Reserves

(5) VS - Voltage Support

(3) OFR - Over Frequency Reserve

\*Longer term contract

#### 3.2 PROCUREMENT PLAN

The System Operator awarded a contract to Contact Energy for Zone 1 voltage support services from Otahuhu. The contract is for the period from 1 December 2010 to 30 November 2013.

The contracts for ancillary services procured for the 2010-11 period came into effect on 1 December 2010.



## 4. RECOMMENDATIONS FOR CHANGE TO CODES AND RELATED MATTERS

### 4.1 CODE CHANGE PROPOSALS

No rule change proposals were made in December 2010.

### 4.2 EXEMPTION APPLICATIONS

No exemption applications were made during the month of December 2010.

## 5. OPERATIONAL UPDATE:

### 5.1 COMMISSIONING OF GENERATION ASSETS

The following table is a summary of active, publicly disclosed commissioning projects where the System Operator is involved:

Summary of generator commissioning			
Generator Name	Asset Owner	Description	Status
Nga Awa Purua	Mighty River Power	A second geothermal power station at Rotokawa.	Awaiting final ACS.
Te Rere Hau	NZ Windfarms	A new wind farm development located in the Tararua Ranges.	Assessing final ACS.
West Wind	Meridian Energy	A new wind farm development located close to Wellington.	Assessing final ACS.
Stratford Peaking Plant	Contact Energy	Two 100MW gas fired peaking units to be located close to the existing Stratford power plant.	Commissioning activities commenced during November 2010.
Te Uku	Meridian Energy	A new wind farm connection at Te Kowhai Substation	Commission activities commenced during November 2010.

## 6. CONFLICTS OF INTEREST

There were no new conflicts of interest arising during the month of December 2010.

## 7. DEVELOPMENT AND RESOURCES

During December, in addition to routine operations, System Operator resources were applied as follows:

- Preparation for operations with SFT continued during December
- Transpower's HVDC Pole 3 project to define tool changes
- TASC projects
- Scarcity Pricing
- Dispatchable demand
- Normal frequency management
- Under frequency management
- AGC project scoping and costing



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## 8. ELECTRICITY INDUSTRY PARTICIPATION CODE PART 7

### Code 7.10 Separation of Transpower Roles

In performing its role as System Operator, Transpower New Zealand Limited (Transpower) has not been materially affected by any other role or capacity Transpower has under the Electricity Industry Participation Code 2010 or under any agreement.

