

Operational Performance Report to the Electricity Commission January 2010

Purpose

This report summarises the results of the System Operator self review of its performance for the above month, as required under Regulation 45 of the EGR's. An additional Operational Update is also provided for the information of the Commission



SYSTEM OPERATOR

Keeping the energy flowing

TRANSPower



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1. COMPLIANCE WITH RULE BOOK, PART C AND REGULATIONS:

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 the month, was as follows:

PPO No	Description	PPO Outcome
2.1	Avoid cascade failure	Met
2.2.1	Maintain frequency in the normal band	Met
2.2.2	Manage frequency during momentary fluctuation	Met
2.2.3	Limit rate of occurrences of momentary fluctuations	Met
2.2.4	Recover quickly from a fluctuation	Met
2.2.5	Manage time error	Met
2.2.6	Eliminate time error once a day	Met
2.3	Maintain other standards	Met
5.0	Restoration objective	Met

1.2 GRID EMERGENCIES

There were three grid emergencies reported in the period:

Date	Time	Summary Details	Island
21 January 2010	11:20	A Grid Emergency was declared for load management and a grid reconfiguration at Bombay to manage a contingency of either Ohinewai-Otahuhu 1 or 2 circuits which would cause offload time violations on Bombay-Hamilton 1 and 2 circuits.	North
25 January 2010	15:12	A Grid Emergency was declared for load management in Zone 1. Trippings of Hamilton-Whakamaru 1 and Ohinewai-Whakamaru 1 circuits as a result of fire under the circuits caused overloading and subsequent trippings of Arapuni-Hamilton 1 and 2 as well as Arapuni-Bombay 1 circuits.	North
28 January 2010	15:46	A Grid Emergency was declared at Penrose and Pakuranga for transfer of load from Penrose to Mount Roskill due to an unplanned outage of Otahuhu T4 interconnecting transformer. For the loss of either Bombay-Hamilton 1 or 2, or Otahuhu-Penrose 5 or 6 circuits, Otahuhu T2 interconnecting transformer would exceed its advised rating.	North



1.3 SYSTEM EVENTS

There were three system events (frequency excursions) during the reporting period:

Date	Time	Summary Details	Island	Freq (Hz)
17 January 2010	10:16	HVDC runback operation causing momentary frequency fluctuations in both North and South Islands.	North South	49.18 50.41 51.94
21 January 2010	17:13	Maraetai-Waipapa, Maraetai-Whakamaru 1 and 2 circuits tripped causing momentary drop in frequency in the North Islands.	North	49.3
25 January 2010	14:45	Hamilton-Whakamaru 1 circuit tripped (preceded by the tripping of Ohinewai-Whakamaru 1 circuit earlier at 14:17) causing momentary drop in frequency in the North Island.	North	49.5

1.4 CONNECTION POINT EVENTS

There were two connection point events during the reporting period:

Date	Time	Summary Details	Generation/Load interrupted (MW)	Restoration time (minutes)
21 January 2010	04:47	Balclutha-Halfway Bush 1 tripped resulting in loss of connection at Berwick.	5	116
21 January 2010	17:13	Maraetai-Waipapa 1, Maraetai-Whakamaru 1 and 2 circuits tripped causing loss of connection at Waipapa and Maraetai	WPA 43.7 MTI 151	157 154

1.5 SYSTEM OPERATOR COMPLIANCE WITH RULE BOOK: PART C

During January, the System Operator did not self-notify any Part C breaches.

PARTICIPANT COMPLIANCE

The System Operator notified no alleged Part C breaches against participants in January 2010.

APPLICATIONS FOR DISPENSATIONS

During January 2010, the System Operator issued one draft dispensation however received no applications for dispensation or applications to withdraw dispensations.

2 PART G COMPLIANCE

The System Operator notified one Part G breach during the month of January being a breach of Part G Schedule G6 1.3.2.4 for failing to incorporate grid owner information regarding the AC transmission system configuration, capacity, and losses in formulating the Schedule of Dispatch Prices and Quantities (SDPQ).

3 ANCILLARY SERVICES

SUMMARY OF PROCURED ANCILLARY SERVICES

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

Ancillary Service Agent	(1)FK	(2)IR	(3)OFR	(4)BS	(5)VS
Meridian Energy	√	√	√*	√*	
Contact Energy	√*	√*	√*		√*
Mighty River Power	√	√		√*	√*
Genesis Power	√	√		√	
TrustPower		√*			
Vector		√			
Northpower		√			
Powerco		√*			
Unison		√			
WELNetworks		√			
CountiesPower		√			
NZ Steel		√*			
Pan Pac		√			
Winstone Pulp International		√*			
KCE Mangahao and Todd Mangahao		√*			
Norske Skog		√*			
Energy Response		√			
NZ Aluminium Smelters		√*			

* denotes longer term contract

FK	FREQUENCY KEEPING	IR	INSTANTANEOUS RESERVES
OFR	OVER FREQUENCY RESERVE	VS	VOLTAGE SUPPORT
BS	BLACK START		

VOLTAGE SUPPORT – ZONE 1

The System Operator is required by the EGR's to annually advise the peak and penalty voltage support rates for the coming 12 months (effective 1 March 2010).

Zone 1 distributors were informed of the new peak and penalty rates for the period 1 March 2010 to 28 February 2011, which are:

Peak Rate: **156 cents/kvar**

Penalty Rate: **241 cents/kvar**

4. RECOMMENDATIONS FOR CHANGE TO EGRS AND RELATED MATTERS:

4.1 RULE CHANGE PROPOSALS

There were no new rule changes proposed by the System Operator during January 2010.

4.2 EXEMPTION APPLICATIONS

There were no exemption applications submitted by the System Operator in January 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	Completed initial connection to the Grid. Commissioning was ongoing throughout January and continues into February .
Te Rere Hau	NZ Windfarms	A new wind farm development located in the Tararua Ranges	Commissioning activities commenced and will continue in 2010 as new turbines are connected.
West Wind	Meridian Energy	A new wind farm development located close to Wellington	Commissioning is ongoing.
Stratford peaking plant	Contact Energy	Two 100MW gas fired peaking units to be located close to the existing Stratford power plant.	Commissioning planning.

6. CONFLICTS OF INTEREST

The System Operator identified a new conflict of interest relating to an under frequency event on 17 January 2010 of which a potential causer was the grid owner. The System Operator will use its conflict of interest management techniques (as set out in the policy statement) to manage this conflict.

The System Operator continues to manage the conflict of interest identified in its August report relating to the potential under frequency event charges arising from the 1 August 2009 under frequency event.

7. DEVELOPMENT AND RESOURCES:

During January, in addition to routine operations, System Operator resources were applied to:

- Policy statement review – discussions with key participants

- Input into the following EC market development initiatives: interim pricing issues, demand-side bidding and forecasting, scarcity pricing and instantaneous reserve dispatch
- Continued work on SCADA roadmap
- RMT upgrade (investigation stage)
- Variable reserve reintroduction into market tools (due February 2010)
- SFT testing
- Continuation of technical analysis of AUFLS requirements
- Technical analysis into North Island over frequency issues
- Discussion with EC on frequency sensitive relays

8. REGULATION 50 (4) STATEMENT:

Regulation 50 (4) Statement:

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 Governance Regulations 2003 or the Rules or under any agreement.