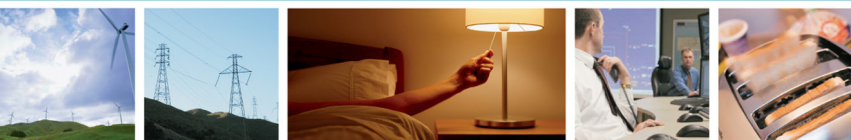


Operational Performance Report to the Electricity Commission September 2010

Purpose

This report summarizes the results of the System Operator's review of its performance for September 2010, 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 fifteen grid emergencies declared in the period.

| Grid Emergencies | | | |
|------------------|-------|---|--------|
| Date | Time | Summary Details | Island |
| 04/09/10 | 04:35 | A Grid Emergency was declared after multiple trippings caused by the Canterbury earthquake. This was necessary to prevent overloading in the Canterbury 66 kV network after the loss of all three Islington 220 / 66 kV inter-connecting transformers. | S |
| 18/09/10 | 00:33 | A Grid Emergency was declared to manage restoration of load after an unplanned outage of Hokitika Otira 1 and Kumara Otira 1 during a concurrent emergency outage of Dobson Greymouth 1 caused a loss of connection to Greymouth, Kumara, and Hokitika Substations. | S |
| 06/09/10 | 17:10 | 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 |
| 18/09/10 | 08:56 | | |
| 20/09/10 | 18:42 | | |
| 21/09/10 | 08:37 | | |
| 22/09/10 | 07:17 | | |
| 23/09/10 | 07:47 | | |
| 24/09/10 | 07:54 | | |
| 25/09/10 | 09:23 | | |
| 26/09/10 | 08:53 | | |
| 27/09/10 | 07:43 | | |
| 28/09/10 | 07:43 | | |
| 29/09/10 | 07:43 | | |
| 30/09/10 | 07:43 | | |



1.3 SYSTEM EVENTS

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

| Date | Time | Summary Details | Island | Freq (Hz) |
|----------|-------|--|--------|----------------------|
| 04/09/10 | 04:36 | Magnitude 7.1 earthquake hit the Canterbury region, centred near Darfield, focal depth of 10 km. Multiple feeder and transformer trippings occurred with approximately 266 MW of load being lost in a 60 sec period. | S | 50.93 Hz |
| 06/09/10 | 02:51 | Stratford power Limited tripped resulting in a momentary drop in frequency in both Islands. | N S | 49.41 Hz 49.52 Hz |

1.4 Connection Point Events

There were ten connection point events during the reporting period:

| Date | Time | Summary Details | Generation/Load interrupted (MW) | Restoration time (minutes) |
|----------|-------|---|----------------------------------|----------------------------------|
| 04/09/10 | 04:36 | HOR T5 & T8 tripped during the Canterbury Earthquake, loss of supply to the HOR 33 kV GXP. | 5 | 227 |
| 04/09/10 | 04:36 | SPN T1 & T2 tripped during the Canterbury Earthquake, loss of supply to the SPN 33 kV GXP. | 24 | 193 |
| 04/09/10 | 04:55 | PAP Substation was disconnected from the grid to alleviate overloads in the network that resulted from the trippings caused by the Canterbury Earthquake. | 35 | 213 |
| 09/09/10 | 23:24 | Te Kaha – Waiotahi 1 tripped causing a loss of connection to Te Kaha. | 1 | 12 |
| 16/09/10 | 13:55 | Te Kaha – Waiotahi 1 tripped causing a loss of connection to Te Kaha. | 1 | 200 |
| 17/09/10 | 06:01 | Te Kaha – Waiotahi 1 tripped causing a loss of connection to Te Kaha. | 1 | 560 |
| 17/09/10 | 20:36 | Te Kaha – Waiotahi 1 tripped causing a loss of connection to Te Kaha. | 1 | 1390 |
| 18/09/10 | 00:20 | Kumara – Otira 1 & Hokitika – Otira 2 tripped causing loss of supply to Greymouth, Kumara, and Hokitika as Dobson – Greymouth was out of service. | 11 7 0 | 19 (HKK) 23 (GYM) 23 (KUM) |
| 18/09/10 | 17:43 | Dobson T1, T2 tripped, loss to DOB 33 kV GXP. | 5 | 41 |
| 26/09/10 | 06:16 | Dobson – Greymouth 1 and Atarau – Reefton – Inangahua 1 tripped, loss of supply to Dobson. | 6 | 50 |

1.5 SYSTEM OPERATOR COMPLIANCE WITH RULE BOOK: PART C

During September, the System Operator notified one Part C breach for failing to provide the clearing manager with the correct allocable costs for voltage support.

1.6 PARTICIPANT COMPLIANCE

During September, the System Operator notified no alleged Part C breaches against participants.



1.7 APPLICATIONS FOR DISPENSATIONS

During September, there were four new dispensation applications received by the System Operator. No dispensations were granted by the System Operator in September.

2. PART G COMPLIANCE

2.1 SYSTEM OPERATOR COMPLIANCE

One breach of Part G was reported by the System Operator during the month of September for incorrectly imposing constraints on a generation plant.

2.2 PARTICIPANT COMPLIANCE

No participant breach of Part G was reported by the System Operator during the month of September

3. ANCILLARY SERVICES

3.1 SUMMARY OF PROCURED ANCILLARY SERVICES

The following is a summary of the contracted ancillary services, as at September 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
OFR Over Frequency Reserve
BS Black Start

IR Instantaneous Reserves
VS Voltage Support



3.2 PROCUREMENT PLAN

During September, the System Operator completed its tender for the provision of over frequency reserve in the North Island. Four contracts were awarded and these will commence on 1 November 2010. None of the contracts involved run-back arrangements and therefore the System Operator will not require a variation to the Procurement Plan to allow for this.

During September, the System Operator also prepared its annual tender for the remaining ancillary services (instantaneous reserve, frequency keeping, black start and over frequency reserve). The tender documentation will be sent out on 8 October and the closing date for tenders is 2 November.

The tender for voltage support closes on 8 October and the System Operator will then progress the evaluation process.

4. RECOMMENDATIONS FOR CHANGE TO EGRs AND RELATED MATTERS

4.1 RULE CHANGE PROPOSALS

No rule change proposals were made in September 2010.

4.2 EXEMPTION APPLICATIONS

No exemption applications were made during the month of September however the System Operator was granted an exemption by the Commission for the requirements under rule 6.1 of Part J to advise circumstances where load has changed from one GXP or point of connection to another.

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 prior to completing final assessment. |
| Te Rere Hau | NZ Windfarms | A new wind farm development located in the Tararua Ranges. | Commissioning activities commenced in 2009. |
| West Wind | Meridian Energy | A new wind farm development located close to Wellington. | Awaiting final ACS prior to completing final assessment. |
| Stratford Peaking Plant | Contact Energy | Two 100MW gas fired peaking units to be located close to the existing Stratford power plant. | Commissioning Plan and technical testing requirements progressed this month. |



6. CONFLICTS OF INTEREST

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

7. DEVELOPMENT AND RESOURCES

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

- Preparation work for the December 2010 SSF;
- Parallel operations for SFT continued during September;
- Finalising the System Operator Annual Report;
- Continued work with Transpower's HVDC project to define tool changes; required for the commissioning of Pole 3.

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.

