SO MONTHLY OPERATIONAL AND SYSTEM PERFORMANCE REPORT TO THE ELECTRICITY AUTHORITY FOR AUGUST 2016

FOR THE ELECTRICITY AUTHORITY

Transpower New Zealand Limited

August 2016

Keeping the energy flowing

TRANSPOWER

Transpower New Zealand Limited The National Grid

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Report Purpose

This report is Transpower's review of its performance as system operator for August 2016, in accordance with clause 3.14 of the Electricity Industry Participation Code 2010 (the Code).

Operational issues are provided for the information of the Electricity Authority (Authority). A separate detailed system performance report will be provided to Authority staff.

1 Operational and system performance update

Potential integer issue in market system

In June, Transpower's IST Critical Support Team identified a binary integer issue in the market system test environment that, if realised in production, would likely have resulted in an application freezing, or the development of schedules containing incorrect results. An urgent fix was developed and implemented before any market system impact occurred. An investigation continued to identify similar issues, with three identified and fixed in August, the last fix being implemented on 18th August. No other issues have been identified since.

Upper North Island voltage stability (1st August)

On 1st August, there was an N-1 Zone 1 voltage stability issue identified for the loss of Huntly Unit 5 in the schedule for the following day. The Upper North Island Stability constraint was adjusted. The result was insufficient offered generation in the Upper North Island and a Warning Notice was issued. Genesis Energy responded by offering a Huntly Rankin unit which resolved the generation shortfall with the revised constraint limit.

As the situation was inconsistent with previous planning studies of Upper North Island security limits a real time study was undertaken of the morning peak and this highlighted a significant difference between the system operator's study time analysis and the real time analysis. A subsequent review identified an error in the reactive power flow profile used in the study tool in the market system. The cause was attributed to an error made during an earlier SCADA model upgrade. It has been rectified and a summary report issued to industry participants explaining what happened and the validity of previous studies on Upper NI limits.

Hawkes Bay snow storm

On 6th August, a severe snow storm between Taupo and Hawkes Bay interrupted power supply to the entire Hawkes Bay region (209MW) on two occasions for approximately two hours in each case.

Following restoration of the first event (which occurred at 2:45 am) the ongoing intensity of the storm meant Hawkes Bay was only being supplied via a single circuit – a circuit which also had a high likelihood of tripping.

With a second tripping almost certain to occur, the system operator prepared Hawkes Bay to become an electrical island constraining local Hawkes Bay generation (at Whirinaki and Waikaremoana) to match local load. This was intended to enable Hawkes Bay to continue to be supplied if electrically disconnected from the main grid due to the tripping of the remaining circuit. This was achieved through the use of a constraint to limit flow across the remaining circuit in preparation for islanding.

Initially, local generation in excess of the local load was dispatched due to some industrial load still being off (from the first tripping). Before local generation could be reduced to balance the local load (to enable successful islanding) the remaining 220kv circuit tripped at 9:59 am and a second loss of supply to the region occurred.

An operational process is being prepared to guide system co-ordinators on when and how to prepare a regional islanding when there is a high risk of loss of connection to the main grid due to adverse environmental conditions in regions such as the Bay of Plenty and Hawkes Bay.

High peak prices

August saw a number of extremely tight morning and evening peaks – on several occasions the system came close to running out of offered energy and/or reserve. Warning notices were issued on 1st and 8th August and the situation in each case was alleviated by demand being lower than forecast or thermal generators committing additional generation close to gate closure.

TSAT On-line

TSAT (Transient Security Analysis Tool) testing and implementation was successfully completed. TSAT online will allow real time monitoring of the effect on electrical frequency of system events. This will lead to a more secure system and in the long term allow the system to be operated closer to its dynamic frequency limits.

As of 1st September, TSAT is now being used as a real time operational tool. Transpower will use TSAT to monitor real time N-1 frequency stability for both pre and post under frequency events.

2 Market design and system enhancement project updates

Progress against in-flight market design and service enhancement projects is included below along with details of any variances from the current Capex Plan.

National Market for Instantaneous Reserves – Testing is continuing with User Acceptance Testing now underway. Training preparation is going well with both the e-Learning and workshop based training due to commence in September. Transition planning is well advanced and an industry communications plan has been created. This project is tracking to the current Capex Plan with no variance expected.

EDF Phase III – The investigation project is underway. The EDF Phase III Solution Options and Development Approach determined a preferred approach and was endorsed in August. The high level estimate (+25%) was discussed at the project governance as well as with the Authority on 19th August. Costs are presently being developed but are expected to be higher than that indicated in the current Capex Plan.

Efficient Procurement of Extended Reserves – A draft Technical Requirements Schedule (TRS) for consultation has been prepared and a review was carried out on the example procurement schedule. The project is continuing preparation for industry consultation. This project is tracking to the current Capex Plan with no variance expected.

3 Security of Supply update

High North Island inflows continued in August. South Island inflows dropped below average and South Island storage levels also declined, although the current storage level continues to remain well above average. The hydro risk meter is currently at normal.

- As at 1st September 2016 aggregate primary New Zealand storage was 129% of average.
- North Island inflows were 111% of average in August.
- South Island inflows were 81% of average in August.
- Measurements are based on daily inflow values.
- Hydro generation met 64% of demand in August.

4 Compliance update

The system operator self-reported two breaches of the Code in August. In the first event a non-response schedule failed to publish within the requisite time period due to it being started later than usual following a market system outage.

In the second event, our obligation to report uses of discretionary action was not completed. On 19th May a Code amendment changed our reporting requirement from a daily to a monthly obligation. Around the same time, there was a change in staff members who prepare the monthly report and the new obligation was not communicated. The Code obligation has been captured for subsequent monthly reports.

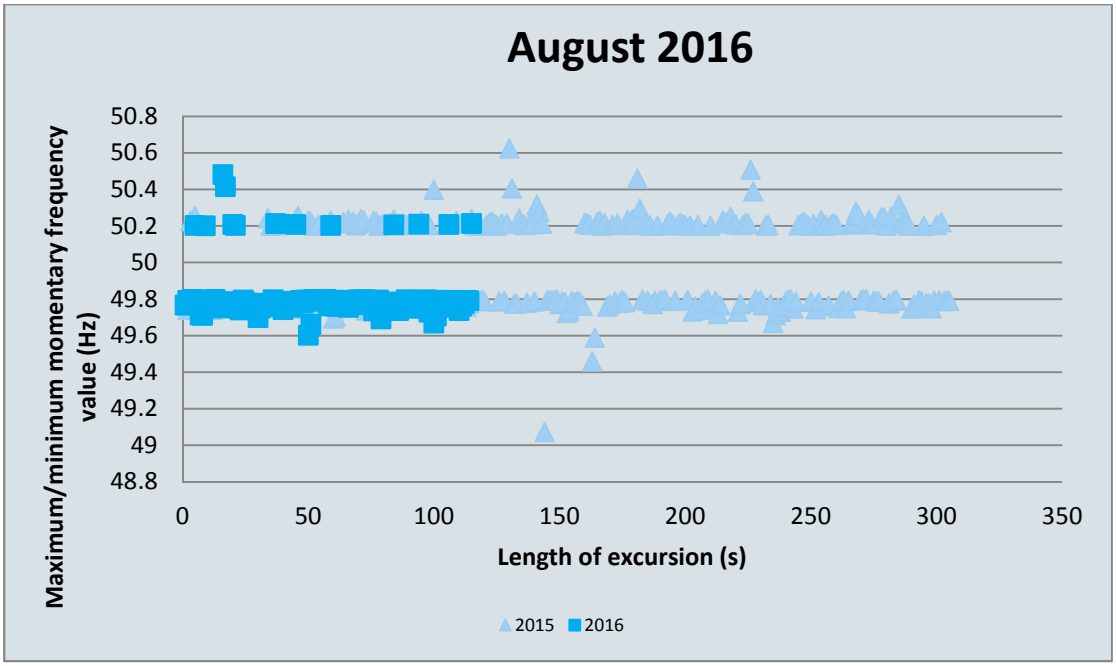
Appendix B shows instances where the system operator has applied discretion under 13.70 of the Code.

5 Operational management

5.1 Frequency fluctuations

Maintain frequency in normal band and recover quickly from a fluctuation

The chart below shows the maximum or minimum frequency reached and length of each frequency excursion outside the normal band (49.8 to 50.2 Hz) during the reporting period. The majority of excursions are within 0.4 Hz of the normal band and frequency typically returns to within the normal band within two minutes.



Maintain frequency and limit rate occurrences during momentary fluctuations

The table below shows the total number of momentary fluctuations outside the frequency normal band, recorded in both Islands, over the last 12 months. The 12 month cumulative totals, grouped by frequency band, are compared to the frequency performance objective (PPO).

Frequency Band	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Annual rate	PPO target
55.00 > Freq >= 53.75														**0.2***
53.75 > Freq >= 52.00														**2***
52.00 > Freq >= 51.25														**7**
51.25 > Freq >= 50.50		1	1	3		1	3						**9**	**50**
50.50 > Freq >= 50.20	146	52	52	37	10	18	31	30	42	29	25	13	**485**	
50.20 > Freq > 49.80														
49.80 >= Freq > 49.50	172	128	173	111	84	101	118	125	106	89	128	102	**1437**	
49.50 >= Freq > 48.75				1	1		1		2		1		**6**	**60**
48.75 >= Freq > 48.00														**6**
48.00 >= Freq > 47.00														**0.2**
47.00 >= Freq > 45.00														**0.2**

***** South Island

Manage time error and eliminate time error once per day

There were no time error violations in the reporting period.

5.2 Voltage management

Grid voltages did not exceed the Code voltage ranges during the reporting period.

5.3 Security notices

The following table shows the number of Warning Notices, Grid Emergency Notices and Customer Advice Notices issued over the last 12 months.

Notices issued	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16
Demand Allocation Notice	-	-	-	-	-	-	-	-	-	-	-	-
Grid Emergency Notice	-	1	2	1	4	2	2	2	5	2	3	2
Warning Notice	-	3	-	-	-	-	-	-	3	2	2	5
Customer Advice Notice	10	7	9	16	3	7	19	11	12	3	8	7

5.4 Grid emergencies

The following table shows grid emergences declared by the system operator in the reporting period.

Date	Time	Summary Details	Island
06/08/16	02:45	A grid emergency was declared to assist with restoration following the total loss of supply to the Hawkes Bay region during a major snowstorm.	N
06/08/16	10:10	A grid emergency was declared to assist with restoration following the total loss of supply to the Hawkes Bay region during a major snowstorm.	N

6 Ancillary services

The proposed draft Procurement Plan was provided to the Authority and is currently being consulted with industry. The new plan is intended to take effect on 1st December 2016, in line with the ancillary service contracts.

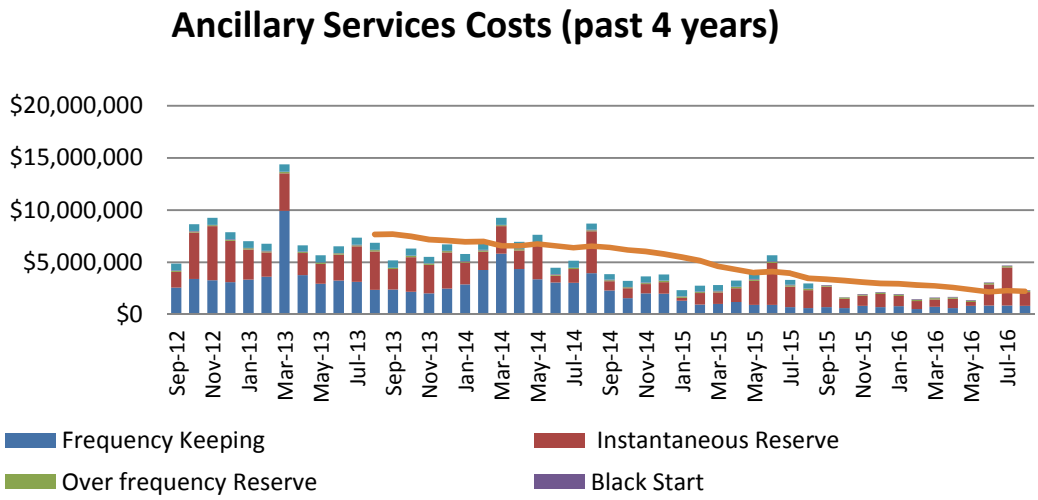
We are preparing to conduct a tender for over-frequency reserve next month. The existing ancillary service contracts for instantaneous reserve and frequency keeping will be rolled over until next year.

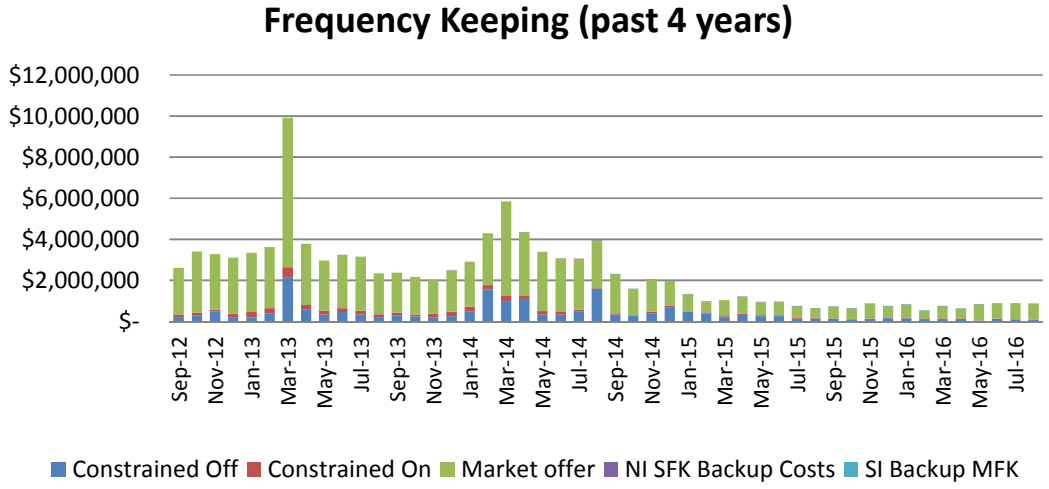
Refer Appendix A for graphs.

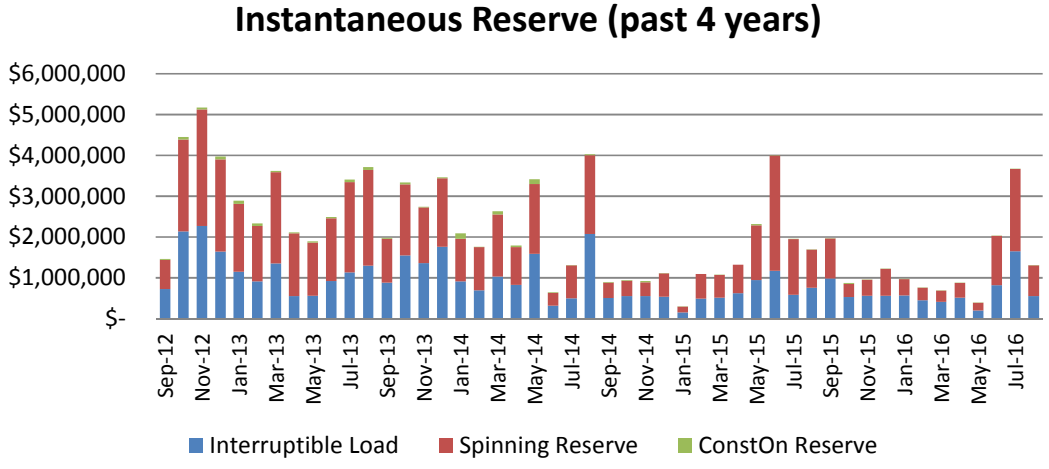
7 Separation of Transpower roles

In performing its role as system operator, Transpower has not been materially affected by any other role or capacity Transpower has under the Code or under any agreement.

Appendix A: Ancillary Services Graphs







Note: IR Cost May 2012 = 14.129M, IR Cost Jun 2012 = 8.164M

Appendix B: Discretion

Event Date & Time	Event Description
6/8/2016 2:48:13 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 ENR Max : 0 Start: 06-Aug-2016 02:48 End: 06-Aug-2016 03:00 Notes: Tripping of both circuits into Hawkes Bay. Last Dispatched Mw: 13.8
6/8/2016 2:48:23 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 ENR Max : 0 Start: 06-Aug-2016 02:48 End: 06-Aug-2016 03:00 Notes: Tripping of both circuits into Hawkes Bay. Last Dispatched Mw: 18.5
6/8/2016 2:48:32 a.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 ENR Max : 0 Start: 06-Aug-2016 02:48 End: 06-Aug-2016 03:00 Notes: Tripping of both circuits into Hawkes Bay. Last Dispatched Mw: 7.7
6/8/2016 3:01:31 a.m.	WHI0111 Discretion Clause 13.70, Part 13 FIR Max : 0 Start: 06-Aug-2016 03:01 End: 06-Aug-2016 04:00 Notes: Last Dispatched: IntF: 20 IntS: 20
6/8/2016 6:05:00 a.m.	Decision made to use discretion to increase WKA MW output to ~120MW in order to decrease flows on WHI-WRK & RDF-WRK circuits and increase the likelihood of a successful island, given the likelihood of another trip of WHI-WRK (reports of >25cm of snow fallen overnight in the region). This level of generation the maximum possible without getting into $5000 price tranche at WKA.
6/8/2016 6:12:50 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 ENR Min : 35 Start: 06-Aug-2016 06:12 End: 06-Aug-2016 09:30 Notes: System security. Lessen load on WHI_WRK_1 circuit. Last Dispatched Mw: 13.8
6/8/2016 6:13:23 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 ENR Min : 58 Start: 06-Aug-2016 06:13 End: 06-Aug-2016 09:30 Notes: System security. Lessen load on WHI_WRK_1 circuit. Last Dispatched Mw: 18.5
6/8/2016 6:13:43 a.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 ENR Min : 32 Start: 06-Aug-2016 06:13 End: 06-Aug-2016 09:30 Notes: System security. Lessen load on WHI_WRK_1 circuit. Last Dispatched Mw: 7.7
6/8/2016 6:23:31 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Min : 35 Start: 06-Aug-2016 06:23 End: 06-Aug-2016 09:30 Notes: System security to reduce load on WHI_WRK_1 circuit. Previous applied discretion ended and reapplied on MW's only. Last Dispatched Mw: 32
6/8/2016 6:23:47 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Min : 58 Start: 06-Aug-2016 06:23 End: 06-Aug-2016 09:30 Notes: System security to reduce load on WHI_WRK_1 circuit. Previous applied discretion ended and reapplied on MW's only. Last Dispatched Mw: 58
6/8/2016 6:24:04 a.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 EN Min : 32 Start: 06-Aug-2016 06:24 End: 06-Aug-2016 09:30 Notes: System security to reduce load on WHI_WRK_1 circuit. Previous applied discretion ended and reapplied on MW's only. Last Dispatched Mw: 31.3
6/8/2016 7:11:36 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 25 Start: 06-Aug-2016 07:11 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 0
6/8/2016 7:23:52 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 30 Start: 06-Aug-2016 07:23 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 25
6/8/2016 7:25:00 a.m.	WHI is on line. Dispatch will be adjusted as required to minimize the flows on WHI_WRK circuit.
6/8/2016 7:33:39 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 35 Start: 06-Aug-2016 07:33 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 30

6/8/2016 7:45:41 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 40 Start: 06-Aug-2016 07:45 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 35
6/8/2016 7:57:04 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 45 Start: 06-Aug-2016 07:57 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 40
6/8/2016 8:00:56 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 60 Start: 06-Aug-2016 08:00 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 45
6/8/2016 8:42:33 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 70 Start: 06-Aug-2016 08:42 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 60
6/8/2016 9:04:18 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 85 Start: 06-Aug-2016 09:04 End: 06-Aug-2016 09:30 Notes: System security. To reduce load on WHI_WRK_1 circuit. Last Dispatched Mw: 70
6/8/2016 9:25:26 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Max : 35 Start: 06-Aug-2016 09:25 End: 06-Aug-2016 12:30 Notes: System security for Hawkes Bay and the risk of islanding. Last Dispatched Mw: 35
6/8/2016 9:25:40 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Max : 58 Start: 06-Aug-2016 09:25 End: 06-Aug-2016 12:30 Notes: System security for Hawkes Bay and the risk of islanding. Last Dispatched Mw: 58
6/8/2016 9:25:53 a.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 EN Max : 32 Start: 06-Aug-2016 09:25 End: 06-Aug-2016 12:30 Notes: System security for Hawkes Bay and the risk of islanding. Last Dispatched Mw: 32
6/8/2016 9:52:51 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Max : 90 Start: 06-Aug-2016 09:52 End: 06-Aug-2016 12:00 Notes: System security to balance flows across WHI_WRK_1 circuit. Last Dispatched Mw: 140.78
6/8/2016 9:54:43 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Min : 36 Start: 06-Aug-2016 09:54 End: 06-Aug-2016 12:00 Notes: System security to balance flows across WHI_WRK_1 circuit. Last Dispatched Mw: 36
6/8/2016 9:55:03 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Min : 59 Start: 06-Aug-2016 09:55 End: 06-Aug-2016 12:00 Notes: System security to balance flows across WHI_WRK_1 circuit. Last Dispatched Mw: 59
6/8/2016 9:55:18 a.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 EN Min : 33 Start: 06-Aug-2016 09:55 End: 06-Aug-2016 12:00 Notes: System security to balance flows across WHI_WRK_1 circuit. Last Dispatched Mw: 33
6/8/2016 10:30:03 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 ENR Max : 0 Start: 06-Aug-2016 10:30 End: 06-Aug-2016 11:00 Notes: Hawkes bay blacked out due to WHI_WRK_1 tripping. Last Dispatched Mw: 0
6/8/2016 10:30:12 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 ENR Max : 0 Start: 06-Aug-2016 10:30 End: 06-Aug-2016 11:00 Notes: Hawkes bay blacked out due to WHI_WRK_1 tripping. Last Dispatched Mw: 0
6/8/2016 10:30:44 a.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 ENR Max : 0 Start: 06-Aug-2016 10:30 End: 06-Aug-2016 11:00 Notes: Hawkes bay blacked out due to WHI_WRK_1 tripping. Last Dispatched Mw: 0
6/8/2016 11:35:37 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 50 Start: 06-Aug-2016 11:35 End: 06-Aug-2016 12:00 Notes: Hawke's Bay security due to WRK RDF outage.Last Dispatched Mw: 0
6/8/2016 11:41:29 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 25 Start: 06-Aug-2016 11:41 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 25
6/8/2016 11:43:28 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Max : 15 Start: 06-Aug-2016 11:43 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 0

6/8/2016 11:43:28 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Min : 15 Start: 06-Aug-2016 11:43 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 0
6/8/2016 11:43:39 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Max : 10 Start: 06-Aug-2016 11:43 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 0
6/8/2016 11:50:13 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 50 Start: 06-Aug-2016 11:50 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 25
6/8/2016 11:50:41 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Max : 25 Start: 06-Aug-2016 11:50 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 10
6/8/2016 11:50:51 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Max : 25 Start: 06-Aug-2016 11:50 End: 06-Aug-2016 12:00 Notes: Last Dispatched Mw: 15
6/8/2016 11:55:24 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Max : 25 Start: 06-Aug-2016 11:55 End: 06-Aug-2016 13:00 Notes: Last Dispatched Mw: 25
6/8/2016 11:55:30 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Max : 25 Start: 06-Aug-2016 11:55 End: 06-Aug-2016 13:00 Notes: Last Dispatched Mw: 25
6/8/2016 11:56:04 a.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Max : 50 Start: 06-Aug-2016 11:56 End: 06-Aug-2016 13:00 Notes: Last Dispatched Mw: 25
6/8/2016 11:56:48 a.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Max : 35 Start: 06-Aug-2016 11:56 End: 06-Aug-2016 13:00 Notes: Last Dispatched Mw: 25
6/8/2016 12:01:16 p.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 EN Max : 20 Start: 06-Aug-2016 12:01 End: 06-Aug-2016 12:30 Notes: Last Dispatched Mw: 0
6/8/2016 12:01:37 p.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 EN Max : 20 Start: 06-Aug-2016 12:01 End: 06-Aug-2016 13:00 Notes: Last Dispatched Mw: 0
6/8/2016 12:01:57 p.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 75 Start: 06-Aug-2016 12:01 End: 06-Aug-2016 13:00 Notes: Last Dispatched Mw: 50
6/8/2016 12:12:38 p.m.	TUI1101 PRI0 Discretion Clause 13.70, Part 13 EN Max : 35 Start: 06-Aug-2016 12:12 End: 06-Aug-2016 12:30 Notes: Last Dispatched Mw: 35
6/8/2016 12:12:49 p.m.	TUI1101 TUI0 Discretion Clause 13.70, Part 13 EN Max : 50 Start: 06-Aug-2016 12:12 End: 06-Aug-2016 12:30 Notes: Last Dispatched Mw: 50
6/8/2016 12:12:59 p.m.	TUI1101 KTW0 Discretion Clause 13.70, Part 13 EN Max : 20 Start: 06-Aug-2016 12:12 End: 06-Aug-2016 12:30 Notes: Last Dispatched Mw: 20
24/8/2016 8:14:44 a.m.	HLY2201 HLY6 Discretion Clause 13.70, Part 13 EN Min : 15 Start: 24-Aug-2016 08:14 End: 24-Aug-2016 08:30 Notes: Low residual, Industrials on low load (could increase at any stage). Last Dispatched Mw: 36.38
24/8/2016 8:20:22 a.m.	HLY2201 HLY6 Discretion Clause 13.70, Part 13 EN Min : 5 Start: 24-Aug-2016 08:20 End: 24-Aug-2016 08:30 Notes: Low residual, Industrials on low load (could increase at any stage). Last Dispatched Mw: 15
24/8/2016 8:28:27 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 EN Min : 10 Start: 24-Aug-2016 08:28 End: 24-Aug-2016 09:00 Notes: Low residual. Industrial load expected back at any time. Last Dispatched Mw: 10.8

24/8/2016 8:59:16 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 10 Start: 24-Aug-2016 08:59 End: 24-Aug-2016 09:30 Notes: Low residual. Industrial load expected back at any time. Last Dispatched Mw: 10
24/8/2016 9:25:36 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 10 Start: 24-Aug-2016 09:25 End: 24-Aug-2016 10:00 Notes: Low residual. Industrial load expected back at any time. Last Dispatched Mw: 10
24/8/2016 9:37:58 a.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 10 Start: 24-Aug-2016 09:37 End: 24-Aug-2016 10:00 Notes: Low residual. Industrial load expected back at any time. Last Dispatched Mw: 10
24/8/2016 4:46:56 p.m.	HLY2201 HLY6 Discretion Clause 13.70, Part 13 ENR Min : 5 Start: 24-Aug-2016 16:46 End: 24-Aug-2016 18:30 Notes: For security of system Last Dispatched Mw: 9.87
24/8/2016 6:18:23 p.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 50 Start: 24-Aug-2016 18:18 End: 24-Aug-2016 19:00 Notes: Last Dispatched Mw: 70.58
24/8/2016 7:18:53 p.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 40 Start: 24-Aug-2016 19:18 End: 24-Aug-2016 19:30 Notes: Last Dispatched Mw: 67.1
24/8/2016 7:56:21 p.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 20 Start: 24-Aug-2016 19:56 End: 24-Aug-2016 20:30 Notes: Last Dispatched Mw: 42.73
25/8/2016 6:56:18 p.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 51 Start: 25-Aug-2016 18:56 End: 25-Aug-2016 19:00 Notes: Last Dispatched Mw: 66.6
25/8/2016 7:05:48 p.m.	WHI2201 WHI0 Discretion Clause 13.70, Part 13 ENR Min : 20 Start: 25-Aug-2016 19:05 End: 25-Aug-2016 19:30 Notes: Last Dispatched Mw: 51
6/2/9191 5:14:00 p.m.	MAN2201 MAN0 Discretion Rule 4.3, Section III, Part G. EN Min : 0 Notes: End of Potline 2 off-load, 80MW. Last Dispatched Mw: 588