

# CRITICAL CONTINGENCY OPERATOR



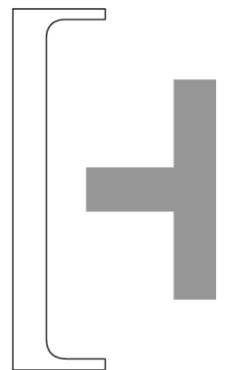
## ANNUAL INDUSTRY EXERCISE 2022

### “EXERCISE ATIRU”

Test of the First Gas Ltd Critical Contingency Management Plan

Prepared in accordance with the Gas Governance (Critical Contingency Management) Regulations 2008

16 June 2022



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## CONTENTS

<b>1. Introduction</b>	<b>2</b>
<b>2. Executive Summary</b>	<b>3</b>
<b>3. Exercise Implementation</b>	<b>4</b>
<b>4. Exercise Scenario</b>	<b>5</b>
<b>5. Summary of Assessment against Test Criteria</b>	<b>6</b>
<b>6. Recommendations</b>	<b>8</b>
<b>7. TSO Exercise Test Criteria and Observations</b>	<b>9</b>
<b>8. CCO Exercise Test Criteria and Observations</b>	<b>15</b>
<b>9. Retailers and Large Consumers Exercise Test Criteria &amp; Observations</b>	<b>19</b>
<b>10. Asset Owners Exercise Test Criteria and Observations</b>	<b>22</b>

**Appendix A – Exercise Injects**

**Appendix B – Exercise Timeline**

**Appendix C – Notice Summary**

**Appendix D - Asset Owners Public Statements and Retailer Media Appeals**

**Appendix E – Retailer Curtailment Plan Test Report Template**

## **Acknowledgment**

The success of this exercise was directly attributable to the time and effort contributed by the participants during the planning, execution, and feedback phases. These contributions are recognised and appreciated and have assisted in identifying valuable improvement opportunities.

## 1. Introduction

The Critical Contingency Operator (CCO) is required by regulation 34 of the Gas Governance (Critical Contingency Management) Regulations 2008 (the regulations), to instigate exercises to test that:

- the Critical Contingency Management Plan (CCMP) complies with regulation 25 and gives effect to the purpose of the regulations; and
- the contact details included in the CCMP in accordance with regulation 25 are current; and
- the list of emergency contact details maintained by Retailers in accordance with regulation 43 is current.

After the exercise, regulation 34 also requires that:

- a) within 10 business days of the exercise the Transmission System Owner (TSO) must provide a report to the CCO that:
  - explains why it's CCMP does or does not comply with regulation 25 and gives effect to the purpose of the regulations; and
  - identifies areas in which its CCMP can be improved: and
  - recommends any CCMP amendments that should be made.
- b) within 10 business days of receiving the TSO report, the CCO must provide a report to the industry body that:
  - assesses the effectiveness of the CCMP; and
  - evaluates any amendments to the CCMP recommended by the TSO; and
  - identifies any amendments to the regulations, CCMP, communications plan or information guide that would improve that instruments effectiveness in achieving the purpose of the regulations.

A test exercise, "Exercise Atiru" was carried out on 18 May 2022. The exercise required the CCO, TSO, Asset Owners (Producers), Large Consumers and Retailers to carry out tasks and activities associated with the regulations, CCMP and other relevant documents.

## 2. Executive Summary

Exercise Atiru provided an opportunity for parties to practice their response to a critical contingency event in a safe environment and subsequently enhance their knowledge and competency for dealing with an actual event.

The exercise was completed successfully and tested the core critical contingency phases and information flows associated with an event, such as declaration, demand curtailment, regional status, and public information statements. Retailers and Large Consumers were issued with curtailment instructions and provided consumer compliance updates.

Evidence from this exercise demonstrated that:

- The TSO has a good understanding of its role and responsibilities for critical contingency events and is well prepared to respond.
- Producers were able to respond to the CCO's request for information on the opportunities to increase upstream gas production in a timely manner.
- Large consumers are well prepared to receive curtailment instructions and have a good understanding of the application of any critical processing designations.
- Communication channels between the CCO and the Electricity System Operator are effective.
- Retailers are prepared to respond to a critical contingency and have processes and systems in place.
- The length of time it would take for Retailers to contact all their consumers with curtailment instructions would vary significantly.
- The level of confidence that emergency contact details maintained by Retailers in accordance with regulation 43 are current varies between Retailers.

The CCO concludes that overall, the industry demonstrated that it is prepared and able to respond to a critical contingency event.

With respect to regulation 34, the CCO concludes from this exercise that:

- the CCMP complies with regulation 25 and is effective in achieving the purpose of the regulations; and
- the CCMP contains the contact details required by regulation 25 and that they are current; and
- the list of emergency contact details maintained by Retailers in accordance with regulation 43 is current for **some** Retailers; however, there is insufficient evidence to conclude that this applies to **all** Retailers.

Consequently, the CCO considers that no amendments to the regulations, CCMP, communications plan or information guide are required because of this exercise.

However, this report makes recommendations in Section 6 which, if fully implemented would:

- improve the efficiency of processes and procedures to support application of the CCMP.
- improve the level of confidence that the list of emergency contact details maintained by all Retailers required by regulation 43 is current.

### **3. Exercise Implementation**

A Participants Brief for the exercise was issued to all participants on 11 April 2022. This Brief provided information on how the exercise would be structured and managed; the level of participation required for the exercise and the test objectives of the exercise.

The test exercise was desk-top only. Formal notices were sent and published, and communications made to industry participants, but no physical actions affecting equipment or gas supplies were carried out.

Prior to the exercise, the CCO offered training sessions on critical contingency management to industry participants. The approach to training was a change from previous years and included a general overview session as well as targeted sessions for Retailers, Producers and Large Consumers. The general overview session provided an introduction/refresher on the purpose and function of the regulations. The targeted sessions enabled more focused discussions with each of the key stakeholder groups about their roles and responsibilities during a critical contingency event.

The inputs for this report on Exercise Atiru include:

- the CCO's pre-test exercise audit of the TSO
- the Event Log of the activities on the day of the exercise
- the TSO's post exercise report
- the self-assessment forms and feedback from Retailers
- feedback from other participants
- the CCO's own observations.

## 4. Exercise Scenario

The exercise scenario was designed and managed by the CCO and involved two stages:

- Firstly, a mechanical failure of the Kaitoke Compressor Station which is located near Wanganui and maintains system pressure in the south pipelines supplying Wellington and the Hawkes Bay. This failure occurred when a cold weather storm was moving over Wellington and heading north and led to a breach of the critical contingency pressure threshold at Waitangirua, near Wellington.
- Secondly, once the storm arrived in Taranaki, damage to the electricity supply network resulted in unplanned outages at the Kupe and Oaonui Gas Production Stations. This led to a rapid loss of Maui Pipeline linepack on a day when it was already relatively low due to the cold weather and Mokau Compressor Station being out of service for planned maintenance. This led to a breach of the Kapuni Gas Treatment Plant (KGTP) and Rotowaro critical contingency pressure threshold.

As a result of the Kaitoke Compressor Station failure and breach of the Waitangirua threshold, a regional critical contingency was declared by the CCO followed by demand curtailment instructions for bands 3 and 4 south and east of Wanganui (there are no band 0, 1 or 2 loads on this part of the system).

The subsequent unplanned outages at the Kupe and Oaonui Production Stations led to the CCO reclassifying the critical contingency event from “regional” to “non-regional”. Demand curtailment instructions for bands 0, 1 & 2 were issued for all areas, whilst the band 3 & 4 curtailments remained in place for loads south and east of Wanganui.

The exercise required the CCO, Firstgas as Transmission System Owner (TSO) and stakeholders to carry out tasks and activities associated with the regulations, CCMP and other relevant documentation.

The test exercise was desk-top only. Formal notices were sent and published, and communications made to transmission system users, but no physical actions affecting equipment or gas supplies were carried out.

A series of exercise injects were pre-designed and issued at set times during the exercise. These injects were designed to ensure the full range of activities required to meet the test objectives were triggered. The complete exercise injects are detailed in Appendix A.

## 5. Summary of Assessment against Test Criteria

### 5.1. CCO Assessment

The exercise was completed successfully and tested the core critical contingency phases and information flows associated with an event including:

- The TSO was issued with curtailment instructions and revised demand curtailment instructions for Retailers and Large Consumers who subsequently provided consumer compliance updates.
- The TSO provided public statements relating to the failed assets.
- The CCO explored available opportunities to increase upstream gas production with Producers and draw on gas storage.
- The CCO consulted with the Electricity System Operator with respect to the need for Huntly Power Station to utilise its electricity supply designation.
- The CCO provided public statements.
- Large Consumers assessed the application of their critical processing designations.

The CCO's overall observations from the exercise include:

- The TSO demonstrated a good understanding of its role and responsibilities for critical contingency events and is well prepared to respond and met the specified regulatory timeframes for providing information to the CCO during the exercise.
- Producers responded to the CCO's request for information on the opportunities to increase upstream gas production in a timely manner.
- Large consumers demonstrated a good understanding of curtailment instructions and the application of any critical processing designations.
- Communication channels between the CCO and the Electricity System Operator were effective.

With respect to regulation 34, the CCO concludes from this exercise that:

- the CCMP complies with regulation 25 and is effective in achieving the purpose of the regulations; and
- the CCMP contains the contact details required by regulation 25 and that they are current; and
- the list of emergency contact details maintained by Retailers in accordance with regulation 43 is current for **some** Retailers; however, there is insufficient evidence to conclude that this applies to **all** Retailers.

Consequently, the CCO considers that no amendments to the regulations, CCMP, communications plan or information guide are required because of this exercise. However, this report makes recommendations in Section 6 which, if fully implemented would:

- improve the efficiency of processes and procedures to support application of the CCMP.
- improve the level of confidence that the list of emergency contact details maintained by all Retailers required by regulation 43 is current.

## 5.2. TSO Assessment

Pursuant to section 34(5) of the regulations, Firstgas is required to provide a report to the CCO within 10 Business Days of the completion of a critical contingency test exercise that:

- a. Explains how the Firstgas CCMP meets or does not meet the test criteria in section 34(1) of the regulations.
- b. Identifies areas in which the Firstgas CCMP can be improved.
- c. Recommends any amendments Firstgas considers should be made to the CCMP.
- d. Provides any other information that Firstgas considers appropriate.

Firstgas submitted this report to the CCO on Wednesday 1 June 2022.

Firstgas considers that the Firstgas CCMP complies with regulation 25 and when implemented during the test exercise gave effect to the purpose of the regulations.

Firstgas has a suite of internal documentation that complements the CCMP, including various processes, plans, policies, and guidelines. This supporting documentation is designed to provide additional information or more detailed explanation on how aspects of the CCMP are to be interpreted or applied. Ten (10) actions are identified to improve the efficiency of processes and procedures to support application of the CCMP. However, the TSO does not consider that the issues, opportunities, and outcomes resulting from Exercise Atiru reach the threshold for requiring amendments to the Firstgas CCMP.

Firstgas does intend to review its CCMP during the 2022 calendar year. If the CCO does consider changes to the CCMP are necessary because of the test exercise, Firstgas would incorporate them during this revision process.



## 6. Recommendations

The following is a summary of the CCO recommendations arising from this exercise:

#	Recommendation	Responsible
1	<i>Provide Document 09456 Critical Contingency Pipeline Thresholds Overview and Background to the CCO when the current review is finalised.</i>	TSO
2	<i>The CCO view the other gas gate alarms, (5 hours to 30 barg) in Gas Control when next practical.</i>	CCO/TSO
3	<i>Firstgas implement the new Emergency Response Plan, and then perform an exercise to test that plan and share the findings with the CCO.</i>	TSO
4	<i>As part of the current emergency management upgrade project, standardise role titles such as Duty Officer/Manager, clarify responsibilities and update processes and email addresses accordingly.</i>	TSO
5	<i>Continue with the training program to have all Control Room Operators go through Incident Controller training and formal assessment/ approval process.</i>	TSO
6	<i>Update and revise the Gas Industry Company Guidelines for determining regional critical contingencies to provide guidance where the critical contingency status may change.</i>	GIC
7	<i>Review existing notice templates to ensure any change to the status of a critical contingency is clearly stated.</i>	CCO
8	<i>Improve the description of the area affected by a critical contingency on CCO Notices.</i>	CCO
9	<i>Establish real-time remote access to SCADA data for the CCO.</i>	TSO
10	<i>Request Retailers to provide a copy of their Retailer Curtailment Plan to the CCO.</i>	CCO
11	<i>Liaise with those Retailers that did not test customer contact details or provide evidence of testing as part of the exercise to obtain evidence and assurance that the contact details are current.</i>	CCO/GIC
12	<i>Identify and progress opportunities to make the processes and information flows associated with curtailment compliance updates more efficient and effective.</i>	TSO

## 7. TSO Exercise Test Criteria and Observations

### 7.1. Pre-Exercise Audit of TSO by CCO

The pre-exercise elements were audited on the 12 May 2022 (6 days prior to the actual exercise date). All items were audited with the Firstgas Systems Control Manager, Senior Transmission Commercial Advisor and Senior Transmission Scheduler. The audit was conducted via Teams due to the Firstgas Covid-19 protocols.

#### 7.1.1. Does the CCMP provide for compliant thresholds that meet the purpose of the regulations? [r25(1)(a)]

##### **Thresholds:**

The TSO Document 09456 Critical Contingency Pipeline Thresholds Overview and Background sets out the rationale for each pressure threshold and the recommended settings. This document was last reviewed in February 2021, and the draft document was provided as a part of this audit.

##### **Observations:**

- *No suggestions for changes to the existing thresholds were made but Firstgas intends to review this document again over the coming weeks, before finalising the February 2021 draft.*

##### **Recommendations:**

- *Provide Document 09456 Critical Contingency Pipeline Thresholds Overview and Background to the CCO when the current review is finalised.*

##### **Scada System Alarms**

The pressure threshold alarm settings were checked against screen prints from the current SCADA system and found to be correct as detailed in the following table:

Measurement Point	Threshold		SCADA As Found		SCADA As-Left	
	Pmin	Hours	Low	Critical Low	Low	Critical Low
Rotowaro	30.0	3	7	3	As found	As found
Westfield	37.5	6	8	6	As found	As found
Waitangirua	37.0	10	12	10	As found	As found
Hastings	30.0	5	7	5	As found	As found
KGTP	35	3	4	3	As found	As found
Gisborne	30.0	5	7	5	As found	As found
Taupo	30.0	5	7	5	As found	As found
Tauranga	30.0	5	7	5	As found	As found
Whakatane	30.0	5	7	5	As found	As found
Cambridge	30.0	5	7	5	As found	As found
Whangarei	27.5	5	7	5	As found	As found

**Observations:**

- Alarms have also been established for all other gas gates on SCADA and have been previously reviewed but were not able to be viewed as a part of this audit due to Covid restricted access to Gas Control.

**Recommendations:**

- The CCO view the other gas gate alarms, (5 hours to 30 barg) in Gas Control when next practical.

**Threshold information to CCO:**

The CCO confirmed that the threshold information was being received reliably. It was also confirmed that the data being sent to the CCO was the same SCADA data as that being viewed by Gas Control.

**Observations:**

- The CCO observed that the hourly data was being received more than half an hour after the hour to which the data relates. Firstgas noted they were having the same issue with the data sent to OATIS, but that this was unlikely to be remedied until the next SCADA upgrade.

**Recommendations:**

- None

**7.1.2. Does the CCMP contain descriptions of the events that the TSO considers may feasibly result in a breach of the thresholds? [r25(1)(b)]**

The CCMP contains description of the events that the TSO considers may feasibly result in a breach of the thresholds and it includes explanation of situations or occasions where thresholds may be breached for short durations due to high demand or system flow changes (i.e., transient conditions).

**Observations:**

*These had not recently changed but were considered by all parties to the audit to appropriately reflect likely events.*

**Recommendations:**

- None

**7.1.3. Does the CCMP contain actions that the TSO may take to remedy any threshold breach? [r25(1)(c)]**

The CCMP refers to the Pipeline Emergency Response Plans and associated Specific Event Guides for the management of pipeline emergencies.

The CCMP states that the emergency response capability is tested and evaluated by either a trial exercise or training exercise on a regular basis.

**Observations:**

- *Last year's pre-exercise audit noted that an in-depth overhaul of the Emergency Response Plan was underway with the assistance of external specialists. This review has been undertaken but the new plan has not yet been implemented due to delays exacerbated by COVID. The last test/exercise, other than the annual CCO exercise, was in December 2020. Firstgas confirmed that implementation of the new plan and its testing is a priority and had recently acquired additional resource to progress this.*

**Recommendations:**

- *Firstgas implement the new Emergency Response Plan, and then perform an exercise to test that plan and share the findings with the CCO.*

**7.1.4. Are the contact details in the CCMP current? [r25(1)(i)]**

The contacts are listed in Appendix 4 of the CCMP. Section 3.2 of the CCMP states that:

*The operational contact details for the target audience for communications under the CCMP are contained in OATIS. OATIS stores contact details by contact group and party. Members of the target audience who are regular users of OATIS (e.g., shippers, Maui pipeline interconnected parties etc.) have separate OATIS contact groups from those who do not use OATIS regularly (e.g., gas distributors, retailers etc.). This enables First Gas to send notifications (via SMS and e-mail) to each relevant OATIS contact group when necessary.*

*Parties that have access to OATIS have the responsibility for ensuring that their contact details in OATIS are current. Reminders for these parties to check and confirm, or advise of changes to, their contact details in OATIS will be sent by email on a monthly basis.*

*For parties that do not have access to OATIS, and any changes not caught by the monthly check by parties with OATIS access, First Gas will check/update all contact details every six months or at other times considered appropriate by First Gas.*

OATIS contacts list for Maui and FGL were provided by the TSO. The actions undertaken to ensure the TSO contacts were up to date and had full coverage of the relevant organisations were described. It was confirmed that the database included contacts for all relevant organisations, including the newest two retailers and some spot checks were made between the contact lists supplied and the OATIS system.

**Observations:**

- *Some operational contacts were wrongly described as billing contacts in the contacts report.*
- *Firstgas had recently demonstrated which emails and mobile numbers had been contacted for an example notice by collating the delivery addresses directly from the system, so this check was not repeated as a part of this audit. It could be repeated in the future as confirmation of the system behaving as expected.*

**Recommendations:**

- *None*

**7.2. Does the CCMP have a process for demand curtailment and restoration consistent with the purpose of the regulations? [r25(1)(d)]**

Section 5.4 and 5.5 of the CCMP details the demand curtailment and restoration processes.

**Observations:**

- *The demand curtailment applied in the exercise was consistent with the process outlined in the CCMP.*
- *In this exercise, the CCO elected to not test the demand restoration processes due to the nature of the scenario.*

**Recommendations:**

- *None*

**7.3. Does the CCMP have a communications plan describing how the TSO will communicate to and from the participants and within what timeframes? [r25(1)(e)]**

Section 3 of the CCMP details the communication plan. The communications plan describes the notices that Firstgas will issue to affected parties during a critical contingency event, the reciprocal communications, and the timeframes under which those communications will take place.

Section 3.3.1 of the CCMP states that all notices issued by Firstgas in accordance with the CCMP will be published:

- on OATIS as a 'public' notice.
- in a PDF format.
- using the proforma templates set out in the CCO Communications Plan.
- within 30-minutes of receiving them from the CCO.
- with an accompanying email and SMS notification to those stakeholders' set-up to receive such notifications in OATIS.

**Observations:**

- *These criteria were met during the exercise.*

**Recommendations:**

- *None*

**7.4. Does the CCMP contains the contact details of suitably qualified TSO employees responsible for giving communications and directions under the CCMP and Communications Plan? [r25(1)(f)]**

Appendix 6 of the CCMP contains appropriate and up to date contact details of the suitably qualified TSO employees responsible for giving communications and directions under the CCMP and communications plans. These were used to establish initial contact between Firstgas and the CCO at the start of the exercise via the Firstgas Control Room and to the nominated person who is the Transmission Duty Officer.

The Duty Officer became the Incident Controller and subsequently appointed a System Control Liaison Officer role to be the key contact for the CCO.

**Observation:**

- *Firstgas is evolving its emergency management processes and there were some discrepancies in the use of role titles.*
- *The lines of communications between the Firstgas Duty Officer or the System Control Liaison Officer and the CCO were initially duplicated which creates the potential for miscommunication.*

**Recommendations:**

- *As part of the current emergency management upgrade project, standardise role titles such as Duty Officer/Manager, clarify responsibilities and update processes and email addresses accordingly.*

**7.5. Does the CCMP detail circumstances in which the TSO may consider restoration should be directed in an order different from the regulations? [r25(1)(g)]**

Section 5.6 and Appendix 11 of the CCMP details the steps taken for considering alternative restoration arrangements.

**Observations:**

- *This was not specifically tested through this test exercise, as the nature of the scenario was such that demand restoration was not carried out.*

**Recommendations:**

- *None*

**7.6. Does the CCMP have a process to determine the contingency imbalances? [r25(1)(h)]**

Appendix 8 of the CCMP contains detailed 12-step and 22-step processes for contingency imbalance calculation methodologies consistent with MPOC and GTC respectively. This section also describes how Firstgas will properly integrate the contingency imbalance regime prescribed in the CCM Regulations with Firstgas' business-as-usual regime under Section 8 of the Gas Transmission Code (GTC).

**Observations:**

- *Critical Contingency imbalances would have been required to be calculated in the test exercise circumstances because of the reclassification of the event as "non-regional" when the KGTP and Rotowaro pressure thresholds were breached.*

**Recommendations:**

- *None*

**7.7. Does the CCMP provide effective mechanisms for making information available to the CCO? [r25(1)(j), r38, Communications Protocol]**

Sections 3 and 4 of the CCMP address communications with, and the provision of information to the CCO. The CCMP also refers to the CCO Communications Plan, which in turn references the Communications Protocol.

The Communications Protocol is not formally recognised or referred to under the regulations. However, it was developed by the TSO and the CCO to support the Communications Plan by specifying processes to ensure efficient information and communications flows between the CCO and TSO in accordance with the requirements set out in regulations 38 and 38A. A summary of the Communications Protocol is provided in Appendix 11 of the CCO's Communications Plan.

**Observations:**

- *Communications were carried out in a manner consistent with the CCMP, CCO Communications Plan and the Communications Protocol.*

**Recommendations:**

- *None*

**7.8. Is there a protocol for informing the CCO of potential CC conditions? [r25(1)(j), r38(1A)(a)(i)]**

Section 2 of the CCMP addresses pre-critical contingency situations and sets out the conditions under which the TSO will notify the CCO of an event it believes could or would result in a critical contingency scenario. It also states that Firstgas will communicate with the CCO in accordance with the CCO Communications Plan.

**Observations:**

- *The TSO met the regulatory requirement to alert the CCO within 15 minutes of an event within the transmission system that has the potential to create a critical contingency. However, it was noted that the initial response in the Firstgas Control room was slower than it might have been, although was still competently carried out.*

**Recommendations**

- *Continue with the training program to have all Control Room Operators go through Incident Controller training and formal assessment/ approval process.*

## 8. CCO Exercise Test Criteria and Observations

### 8.1. CCO Process for determining, declaring, and notifying critical contingency [r48-49]

The first exercise inject was issued at 09:00. The TSO subsequently alerted the Duty CCO and requested they contact Gas Control. Due to a suspected SMS system failure, the message was not received by the CCO until after the required response timeframe, so the TSO followed procedure and called the CCO number directly. Gas Control briefed the CCO on the event based on the first inject. The Control Room Operator relayed the system conditions described in the inject which stated that the Waitangirua pressure threshold had reached the critical point of 10 hours to 37bar.

The TSO confirmed to the CCO that the pressure conditions at Waitangirua were not transient. The CCO determined that a breach of the Waitangirua pressure threshold had occurred and advised the TSO that a critical contingency was being declared at 09:23 and written notice would be issued as soon as possible.

The CCO requested a Security of Supply alert to be sent by the TSO to confirm the system conditions. A draft critical contingency declaration notice was prepared, and the content confirmed by the TSO. The critical contingency notice was issued at 09:45.

#### **Observations:**

- *The critical contingency declaration notice was subsequently issued to the TSO and published on the CCO website within required timeframes.*

#### **Recommendations:**

- *None*

### 8.2. CCO process for determining and declaring regional status [r52A]

The CCO determined that the breach of the Waitangirua pressure threshold caused by the failure of the Kaitoke Compressor Station constituted a regional critical contingency as it was only affecting a part of the transmission system. The regional critical contingency status was notified as a part of the declaration notice.

The subsequent unplanned outages of the Kupe and Oaonui Gas Production Stations meant that there was a significant reduction in gas supply to all the transmission system which resulted in a breach of the KGTP and Rotowaro pressure thresholds. Consequently, the CCO determined that the critical contingency status had changed from regional to non-regional. The change to non-regional status was notified as part of the revised curtailment notice.

#### **Observations:**

- *Regulation 45(2) requires the industry body to prepare and publish guidelines to assist the CCO in determining whether a critical contingency is regional. The current Gas Industry Company Guidelines for determining regional critical contingencies was published on 28 February 2014. This guideline does not provide guidance where the critical contingency status may change.*
- *Feedback from participants has indicated that change from a regional to non-regional critical contingency event was not as evident as it could be. The Revised Demand Curtailment Notice*



*used the phrase “and the previously issued regional curtailment remains in place”, which could potentially confuse some recipients.*

**Recommendations:**

- *Update and revise the Gas Industry Company Guidelines for determining regional critical contingencies to provide guidance where the critical contingency status may change.*
- *Review existing notice templates to ensure any change to the status of a critical contingency is clearly stated.*

### 8.3. CCO processes for issuing notices during a CC event [r51,52, 53, 59]

The Communications Protocol incorporates a process with associated timeframes for the TSO to provide information to the CCO that is considered necessary to ensure that the CCO has the information required to prepare and issue notices to the TSO and stakeholders.

**Observations:**

- *The notices issued for the exercise were sent to the correct parties and stakeholders and contained the correct information and were issued within regulatory timeframes.*
- *Feedback from one participant noted that the CCO’s description of the affected areas was not clear without referring to a drawing.*

**Recommendations:**

- *Improve the description of the area affected by a critical contingency on CCO Notices.*

### 8.4. CCO processes for demand curtailment, exploration of alternative supply and restoration [r53]

Given the initial uncertainty, then subsequent lengthy timeframes (at least 72 hours) of the estimated time to repair Kaitoke compressor station, the CCO issued instructions at 10:32 for curtailment of Bands 3 and 4 to remove the large loads from the part of the system affected by the event.

The subsequent unplanned outages of the Kupe and Oaonui Gas Production Stations meant that there was a significant reduction in gas supply to all the transmission system and resulted in a breach of the KGTP and Rotowaro pressure thresholds. Consequently, the CCO determined that the critical contingency status had changed from regional to non-regional and that curtailment of Bands 0, 1 and 2 across the entire system would be required to stabilise the system.

The CCO sent an email request to all Producers at 11:09 to explore opportunities for additional gas supply:

- A Storage Facility responded that they could supply 2TJ/hr
- One Producer responded that they had an additional 10.1TJ in storage that could be released.
- One Producer confirmed that they were already supplying at maximum capacity.
- One Producer queried what price they would get if they were to supply additional gas.

The CCO issued instructions at 11:43 which revised the demand curtailment requirements. The curtailment of Bands 0.1 and 2 was required for all areas. The curtailment of Bands 3 and 4 south and east of Wanganui remained in place.

**Observations:**

- *There was a well-reasoned approach to determining proposed curtailment for both phases of the event - bolstered by checking with the TSO and obtaining clear agreement.*
- *Producers responded to the CCO's exploration of additional gas supply in a timely manner.*
- *One Producer advised that the unknown critical contingency price makes it difficult for them to know whether to increase or decrease production or keep it the same.*
- *The regulations include a mechanism for determining the critical contingency price for contingency imbalances (regulations 67-72). This mechanism is currently under review by Gas Industry Company through their 'Statement of Proposal for amending the Critical Contingency Management Regulations'.*

**Recommendations:**

- *None*

**8.5. CCO process for determining and notifying termination [r60]**

The exercise was concluded before the need for a termination notice arose due to the scenario requiring a three-day repair time.

**8.6. CCO modelling of the system operates effectively and gives consistent results [r53, r38]**

Load curtailment decisions are supported by a load modelling tool. The TSO provides the CCO with data files of the current transmission system conditions from their SCADA system. These files are provided at 5-minute intervals via an automated process. By the time the CCO receives the files and loads them into the modelling tool, the data is approximately 10 minutes old.

**Observation:**

- *Actual SCADA data was not used during the exercise as all system conditions were simulated for the purpose of the exercise.*
- *In a real event, the CCO will be relying on SCADA data of system conditions which does not represent real-time conditions. Regulation 38(1A)(b) requires the TSO to provide real-time remote access to the relevant data.*

**Recommendation:**

- *Establish real-time remote access to SCADA data for the CCO.*

**8.7. CCO publishes information [r54A, Schedule 5]**

The CCO had obligations to provide public statements in accordance with Schedule 5 of the regulations. At 10:49, the CCO requested that Firstgas provide information that would inform the CCO's Status Update Notice. Firstgas was able to provide a Draft Asset Owner Statement that was reviewed in conjunction with the CCO.

The GIC provides support to the CCO on the provision of media and public information and following consultation, a CCO Status Update Notice which was published at 12:41.

**Observations:**

- *The public information statements provided by Firstgas and the CCO were consistent and were issued in accordance with the regulatory timeframes.*

**Recommendations:**

- *None*

**8.8. CCO performs to required standard [SPACCO Schedule 2]**

Schedule 2 of the SPACCO sets performance standards and target/measures for determining, declaring, decision making, communication and termination during a critical contingency event.

**Observations:**

- *The Exercise Event Log in Appendix B demonstrates that the CCO performed the required tasks in accordance with the performance standards.*

**Recommendations:**

- *None*

## 9. Retailers and Large Consumers Exercise Test Criteria & Observations

### 9.1. Participation

All Retailers and Large Consumers were requested to participate in the exercise and issued with a Participants Briefing on 11 April.

A targeted training session for Retailers on Critical Contingency Management was held on 13 April. There were representatives from all Retailers at this session except Hanergy.

A targeted training session for a significant Large Consumer was held on 7 April.

### 9.2. Retailer curtailment plans to contain sufficient information to ensure a person responsible for gas usage at each consumer installation can be contacted at any time. [r43]

The Retailer Curtailment Plans are submitted by Retailers to Gas Industry Company but are not held by the CCO.

The CCO has a nominated primary contact for each Retailer and regards this contact as a person who will ensure that the Retailer Curtailment Plan is actively managed, the internal processes are in place and the relevant staff trained and able to implement the plan.

#### **Observations:**

- *It would be optimal if the CCO was able to have sight of all the Retailer Curtailment Plans to ensure they always have the correct primary contacts for Retailers.*

#### **Recommendations:**

- *Request Retailers to provide a copy of their Retailer Curtailment Plan to the CCO.*

### 9.3. Retailer to test that the list of emergency contact details maintained in accordance with regulation 43 is current. [r34]

Prior to the exercise, Retailers were advised that they would be required to undertake such testing to confirm that the processes that support their certified Retailer Curtailment Plan, which ensure that the list of emergency contact details maintained in accordance with regulation 43 is current. Testing should include sampling of both longstanding and recently acquired customers to confirm completeness and accuracy of contact details.

Retailers were also advised that testing of consumer contact details could be carried out prior to the exercise day.

Retailers were required to provide supporting evidence of such testing to the CCO within 7 business days of completion of the exercise. The CCO provided an optional Test Report Template for Retailers to use (Appendix F).

A summary of the feedback received from Retailers on testing of emergency contact details is shown below:

Retailer	Date Retailer Curtailment Plan last updated:	Number of consumers impacted by the scenario	% of consumers impacted by the scenario and contacted during or adjacent to the exercise	Processes for holding and maintaining emergency consumer contact details outlined?
Vector (OnGas)	April 2021	36	100%	Yes
Greymouth Gas	March 2014	2	100%	Yes
Mercury	May 2022	2	100%	Yes
Genesis Energy & Frank Energy	September 2020	356	53%	Yes
Contact Energy	June 2018	226	18%	Yes
Nova Energy & MegaTEL	March 2021	3718	0%	Yes
Trustpower	May 2022	100% of contacts contacted in the weeks preceding the exercise		
Pulse Energy	No feedback received			
Hanergy	No feedback received			

**Observations:**

- Retailers have a range of processes and procedures for contacting consumers to issue curtailment instructions which are generally commensurate with the number of consumers serviced. The exercise highlighted that the length of time taken for Retailers to contact all their consumers would vary significantly.
- Testing of consumer contact details for this exercise saw a noticeable improvement from previous exercises.
  - Four Retailers, (Trustpower, Greymouth, Vector OnGas and Mercury) elected to contact all their consumers either prior to, or during the exercise, to test that the details they held were correct.
  - Two Retailers, (Genesis Energy and Contact Energy) contacted a sample of consumers.
  - One Retailer (Nova Energy) elected not to test any of their consumer contact details, placing full reliance on their business-as-usual process for capturing and maintaining them.
  - Two Retailers, (Pulse Energy and Hanergy) did not provide any feedback on their participation in the exercise or evidence of testing consumer contact details.

- *The CCO considers that without the testing of at least a sample of consumer contact details by all Retailers, a key requirement of the annual exercise is not fully achieved.*

**Recommendations:**

- *Liaise with those Retailers that did not test customer contact details or provide evidence of testing as part of the exercise to obtain evidence and assurance that the contacts are current.*

**9.4. Retailers and large consumers to provide regular updates to TSO [r55/56]**

Retailers provided curtailment compliance updates to Firstgas using the Firstgas Combined Large Consumer and Retailer Update Template. These were subsequently consolidated into a single update and provided to the CCO.

**Observations:**

- *The provision of Retailer Curtailment Compliance updates was less than optimal due to:*
  - *Some Retailers not providing curtailment compliance updates to Firstgas.*
  - *A low level of curtailment compliance being reported by some Retailers.*
- *One Retailer provided feedback that the template could be simplified and made more user-friendly.*
- *One Retailer provided feedback that they found the CCO’s Curtailment Notice confusing with regards to the title of one of the tables. The same Retailer noted that the description of the geographic area affected was not sufficiently clear.*

**Recommendation:**

- *Identify and progress opportunities to make the processes and information flows associated with curtailment compliance updates more efficient and effective.*
- *Improve the description of the area affected by a critical contingency on CCO Notices.*

**9.5. Retailers to Implement Media Appeals [r53]**

The following Retailers are signatories to the Domestic Gas Retailers Communications Protocol: Trustpower, Contact Energy, Genesis Energy, Mercury, and Pulse Energy. The Protocol provides for the establishment of a position of a “Lead Retailer” to act for and on behalf of all the Signatories during a critical contingency event in respect to the organisation of national media appeals for conservation of gas by domestic consumers. The role of Lead Retailer for 2022 is held by Mercury.

**Observations:**

- *Media appeals were not required for this scenario, so the Protocol was not tested as part of the exercise. However, the lead Retailer took the opportunity to carry out some communications checks.*

**Recommendations:**

- *None*

## 10. Asset Owners Exercise Test Criteria and Observations

### 10.1. The owner of the damaged or failed component publishes the required information [r54A]

Firstgas was the affected asset owner in the exercise due to the failure of the Kaitoke Compressor Station.

The gas production stations that experienced unplanned outages were not required to publish information relating to failed assets since the curtailment of band 3 consumers occurred before their assets failed.

#### ***Observations:***

- *Firstgas provided two public statements for the exercise that were published on OATIS in accordance with the CCMP.*

#### ***Recommendations:***

- *None*

## Appendix A – Exercise Injects

### Inject # 1 for TSO.

For the purposes of the exercise, Gas Control is to assume that:

- Mokau Compressor Station is unavailable due to a Planned Outage.
- Pipeline upstream of Kaitoke CS limited to 64bar
- A southerly storm front is affecting Wellington and heading north.
- There is high gas demand in Wellington associated with the cold weather and the morning peak.
- Kaitoke Compressor Station has just tripped and the station ESD'd
- SCADA is now showing
  - Kaitoke Compressor Station ESD.
  - Inlet pressure at Waitangirua is 55bar.
  - Pressure threshold at Waitangirua is 10 hours to 37bar
  - Maui pipeline linepack is 255TJ
  - Maui pipeline is losing 2TJ/hr
  - Ahuroa is taking gas into storage at 1TJ/hr
- Field Technician is approximately 30 minutes from site.

### Inject # 2 for TSO

For the purposes of the exercise, Gas Control is to assume that:

- A Field Technician has arrived at Kaitoke Compressor Station
- There is evidence of fire damage in the Compressor building
- The Compressors cannot be restarted, and investigation is underway but additional resources are required.
- Estimated time to repair is not known.
- SCADA is now showing
  - Pressure at Waitangirua is 54bar.
  - Pressure threshold at Waitangirua is 9 hours to 37bar
  - Maui pipeline linepack is 254TJ
  - Maui pipeline is losing 2TJ/hr
  - Ahuroa is taking gas into storage at 1TJ/hr



### **Inject #3 for TSO.**

For the purposes of the exercise, the Duty Officer is to assume that:

- A southerly storm front with gales force winds has reached Taranaki.
- Oaonui and Kupe Production Stations have now both experienced an unplanned electricity outage and have ceased flowing gas into the transmission system.
- Production Station outputs just prior to the electricity outage:
  - Oaonui 28 scms
  - Kupe 21 scms
  - Pohokura (OMV) 18 scms
  - Pohokura (Todd) 6 scms
  - Mangahewa 14 scms
  - McKee 0 scms
  - Turangi 14 scms
  - KGTP 6 scms
  - Kowhai 2 scms
- SCADA is now showing
  - Maui pipeline linepack is 252TJ
  - Maui pipeline is losing 9TJ/hr
  - Pressure threshold at KGTP is 3 hours to 35 bar.

### **Inject #4 for Producers**

For the purposes of the exercise, Producers are to assume that:

- Mokau Compressor Station is unavailable due to planned maintenance.
- Maui pipeline linepack is 252TJ
- A Critical Contingency has already been declared due to an unplanned outage at Kaitoke Compressor Station affecting gas supply south of Wanganui.
- A southerly storm front with gales force winds has reached Taranaki.
- Oaonui and Kupe Production Stations have now both experienced an unplanned electricity outage and have ceased flowing gas into the transmission system
- Powerco are unable to advise when electricity will be restored.
- Production Station outputs just prior to the electricity outage were:
  - Oaonui 28 scms
  - Kupe 21 scms
  - Pohokura (OMV) 18 scms
  - Pohokura (Todd) 6 scms
  - Mangahewa 14 scms
  - McKee 0 scms
  - Turangi 14 scms



- Curtailment is taking effect on both affected systems.
- SCADA is now showing
  - Maui pipeline linepack is 239TJ
  - Ahuroa storage is flowing gas into the system at 2TJ/hr
  - Maui pipeline is losing 1TJ/hr
  - Pressure threshold at Rotowaro is 4 hours to 30bar
  - Pressure threshold at Waitangirua is 10 hours to 37bar

### **Inject #8 for Producers**

For the purposes of the exercise, Producers are to assume that:

- Kupe and Oaonui Production Stations do not have power.
- Estimated time for power to be restored is 12 hours.
- Curtailment is taking effect to balance supply and demand.
- Maui pipeline linepack is 239TJ
- Ahuroa storage is flowing gas into the system at 2TJ/hr
- Maui pipeline is losing 1TJ/hr

### **Inject #9**

For the purposes of the exercise, the Duty Officer is to assume that:

- Kaitoke Compressor Station repairs are progressing.
- Kupe and Oaonui Production Stations do not have power
- Curtailment is taking effect on both affected systems.
- Both systems are now in balance for supply and demand.
- SCADA is now showing
  - Maui pipeline linepack is 239TJ
  - Ahuroa storage is flowing gas into the system at 2TJ/hr
  - Maui pipeline is gaining 1TJ/hr

### **Inject #10 for Producers**

#### **Exercise Atiru**

For the purposes of the exercise, Producers are to assume that:

- Kupe and Oaonui Production Stations do not have power and remain off
- Curtailment is taking effect on both affected systems.
- Both systems are now in balance for supply and demand.

**Inject #11 for all Participants.**

**Exercise Atiru**

There will be no further injects for the exercise. For this scenario which would span more than 12 hours, demand restoration requirements would be subject to on-going review by the CCO, and regular status updates would be provided.

Instructions to restore demand would be issued as and when supply to the gas transmission system was stabilised. Demand Restoration Notices and Critical Contingency Termination Notice will not be issued for this exercise.

## Appendix B – Exercise Event Log

This log is a summary of events. Not every communication has been noted in this report.

<b>Event:</b>	<b>Exercise Atiru</b>	<b>Date:</b>	<b>18/05/2022</b>
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Time	From	To	Details
08:50	Exercise Control	All Participants	Exercise Atiru has commenced – email & SMS Website updated to reflect exercise commenced
09:00	Exercise Control	TSO Gas Control	Inject #1 issued by email and followed up with phone call.
09:04	Gas Control	CCO	Gas Controller sends SMS to CCO requesting Duty CCO to contact Gas Control. No response received from CCO so followed up with phone call as per protocol. SMS to CCO was subsequently received by CCO, delayed in transit. Protocol of follow-up call worked, no actions arising.
09:13	TSO Gas Control	CCO	Gas Control contacts CCO and briefs on Kaitoke compressor incident and timeframe for technician to get to site. Initial assessment by Gas Control identified 10 hours to 37bar threshold at Waitangirua had been reached. Gas control advises they have backed off KGTP outlet pressure to compensate for the temporary reduced Maximum Working Pressure on the 600 loop lines. CCO requested Security of Supply alert to be sent. David Innes confirmed as TSO Duty Officer.
09:23	CCO	TSO Duty Officer	<b>CCO determines that breach of Waitangirua pressure threshold has occurred.</b> <b>CCO advises the TSO that a Critical Contingency is being declared and written notice will be issued as soon as possible.</b> <b>CCO commences preparing CC Declaration Notice.</b>
09:30	TSO Gas Control	CCO	Security of Supply Alert #1 issued. 30 minutes after inject #1 provided.
09:34	CCO	TSO Duty Officer	Draft Critical Contingency Notice CC-0059 based on discussions and Security of Supply alert sent for review.
09:39	TSO Duty Officer	CCO	Review of Draft CC Notice carried out and agreed wording accepted as is.
09:45	CCO	TSO & Stakeholder	<b>Critical Contingency Declaration notice CC-0066 emailed to TSO &amp; Stakeholders.</b>
09:45	CCO	TSO	Call to advise that Declaration Notice has been sent and obtain update.
09:45	CCO	GIC	Provide update that critical contingency has been declared.

Time	From	To	Details
09:48	CCO		Critical Contingency notice CC-0066 published on website.
09:53	CCO	TSO & Stakeholders	SMS text advising CC-0066 has been issued.
09:53	Exercise Control	TSO Duty Officer	Inject #2 issued and followed up with phone call.
09:54	TSO	Stakeholders	OATIS (Maui) New Critical notice ID 67220 "Exercise Atiru –Critical Contingency Declaration Notice CC-0066" - Action Required. 9 minutes after CCO Notice issued.
09:56	TSO	Stakeholders	OATIS (Vector) New Critical notice ID 67221 "Exercise Atiru – Critical Contingency Declaration Notice CC-0066" - Action Required. 11 minutes after CCO Notice issued.
10:13	TSO Duty Officer	CCO	TSO provides update confirming Technician has arrived at Kaitoke CS, identified evidence of a fire, and the compressors are unable to be started. TSO estimated repair time not yet known. CCO / TSO agree curtailment to band 3 and 4 required. Next update from TSO at 11:00am latest.
10:14	TSO Duty Officer	CCO	Security of Supply Update #2 issued. 20 minutes after inject #2 provided.
10:23	CCO	TSO	Email draft curtailment notice (CC-0067) for TSO review
10:25	TSO Duty Officer	CCO	Review of Draft Curtailment Notice carried out and confirmed as ok via email.
10:32	CCO	GIC	Call to advise that curtailment of Bands 3&4 required. CCO will be requesting media support from GIC.
<b>10:32</b>	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Demand Curtailment notice CC-0067 emailed to TSO &amp; copied to Stakeholders.</b>
10:37	CCO	TSO & Stakeholders	SMS text advising CC-0067 has been issued.
10:40	CCO		Curtailment notice CC-0067 published on CCO website.
10:41	CCO	GIC Media	GIC Media support requested
10:41	TSO	Stakeholders	OATIS (Maui) New Critical notice ID67222 "Exercise Atiru" – Direction to Curtail Demand Notice CC-0067" - Action Required. 3 minutes after CCO Notice issued.
10:44	TSO	Stakeholders	OATIS (Vector) New Critical notice ID67223 "Exercise Atiru" – Direction to Curtail Demand Notice CC-0067" - Action Required. 4 minutes after CCO Notice issued.
10:46	Exercise Control	TSO Duty Officer	Inject #3 issued to TSO and followed up with phone call.

Time	From	To	Details
10:46	Exercise Control	Producers + Ahuroa	Inject #4 issued to Producers and Ahuroa Storage advising of CC status change from Regional to Non-Regional and explaining situation with Oaonui and Kupe tripping.
10:49	CCO	TSO Duty Officer	Informing curtailed Band 3 and 4 therefore requesting asset owner statement to inform status notices as the event progresses.
10:50	TSO Duty Officer	CCO	TSO advises Oaonui PS and Kupe PS have tripped and system losing ~9Tjs/hr. KGTP inlet breach. TSO/CCO agree revised CC from Regional to Non-Regional. CCO advises that further curtailment to Bands 0 to 2 now required to stabilise the system.
10:54	TSO Duty Officer	CCO	TSO calls to explain loop line pressure restrictions are being lifted with Pipeline Certifier approval at 11:10. Curtailling under MPOC 15.1 in response to producer outages
10:56	CCO	Huntly Power Station	Call to confirm current level of gas usage. 2.288GJ being used for gas turbine. No gas being used for Rankine units.
10:58	CCO	Electricity System Operator	Call to confirm that curtailment of all gas-fired electricity will be required. ESO advised one Rankine unit at Huntly was already running. Second unit would not be required.
11:07	CCO	TSO Duty Officer	Draft Revised Demand Curtailment Notice CC-0068 based on discussions sent for review.
11:09	TSO	CCO	Security of Supply Update #3 issued. 23 minutes after inject #3 provided.
11:09	CCO	Producers and Ahuroa Storage	Email requesting additional gas if possible and/or available.
11:10	CCO	Methanex	Call to confirm current level of gas usage and how long full curtailment will take.
11:19	CCO	GIC	Call to provide update on additional curtailment requirements for Bands 0-2.
11:20	TSO Duty Officer	CCO	Review of Draft Revised Curtailment Notice CC-0068 carried out and confirmed as ok.
<b>11:23</b>	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Revised Demand Curtailment notice CC-0068 emailed to TSO &amp; copied to Stakeholders.</b>
11:25	OMV	CCO	Response to enquiry about additional gas, Pohokura is running at full rates
11:29	CCO	Producers and Ahuroa	Inject #6 issued to Producers and Ahuroa advising of ongoing power outage at Oaonui and Kupe. Next update 1:00pm.
11:30	CCO		Revised Demand Curtailment notice CC-0068 published on CCO website.
11:31	CCO	TSO & Stakeholders	SMS text advising CC-0068 has been issued.

Time	From	To	Details
11:35	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID67224 "Exercise Atiru" – Revised Direction to Curtail Demand Notice CC-0068" - Action Required. 8 minutes after CCO Notice issued.
11:35	CCO	Ballance	Call to confirm that curtailment notices have been received & understood.
11:38	TSO Duty Officer	CCO	Email advising Contact and Nova could have gas in store that could be extracted.
11:39	TSO	Interconnected Parties	OATIS (Vector) New Critical notice ID67225 "Exercise Atiru" – Revised Direction to Curtail Demand Notice CC-0068" - Action Required. 12 minutes after CCO Notice issued.
11:40	Exercise Control	TSO Duty Officer	Inject #5 Kaitoke unavailable for at least 72 hours. Power outages to Oaonui and Kupe continuing. Powerco working on repairs. Next update by 1pm.
11:43	Todd Energy	CCO	Advising of available gas in storage that could be released
11:44	TSO	CCO	Phone update on exercise status. Kaitoke unavailable for at least 72 hours. Kupe/Oaonui time to repair unknown. System status update.
12:01	TSO	CCO	SOS #4 issued confirming current situation status as per Inject #5.
12:02	GIC	CCO	Draft media release sent for CCO review and comment. Stated if no response, the release will be published at 1pm.
12:12	OMV	CCO	Email advising OMV update on Oaonui outage and Pohokura continue to flow at 100%
12:14	Todd Energy	CCO	Email advising timeframe to begin extraction (1hr) and let down rate is approximately 3-3.5 Sm <sup>3</sup> /s (0.3TJ per/hr) of available stored gas
12:17	CCO	TSO and GIC	Status update notice CCO-069 draft emailed to TSO and GIC for their comments. To be published by 1pm.
12:18	CCO	GIC	Call to discuss media release and status update notices.
12:27	Genesis Energy	CCO	Phone from Amanda Kennedy update on Huntly status, query re designation.
12:31	CCO	GIC	Email advising no comments re the media release
12:31	FGL Critical Compliance	CCO	Update on curtailment compliance. Band 3-5%, Band 4 – 10%.
12:36	TSO	Stakeholders	OATIS (Maui) New Non-Critical notice ID617226 "Exercise Atiru" – First Gas Asset Owner Status - Action Required.
12:38	TSO Duty Officer	CCO	Status update notice CCO-069 no comments or changes required.



<b>Time</b>	<b>From</b>	<b>To</b>	<b>Details</b>
12:39	TSO	Stakeholders	OATIS (Vector) New Non-Critical notice ID67227 "Exercise Atiru" – FirstGas Asset Owner Status – Action Required.
<b>12:41</b>	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Status update notice CCO-069 issued via email.</b>
12:41	GIC	CCO	Updated version of the media release for approval. Will be published at 12:50 if no response.
12:46	TSO	CCO	Phone call to discuss Compliance Report as emailed at 12:36. Several retailers yet to respond so commercial team chasing up via phone calls.
12:48	CCO	TSO & Stakeholders	Status update notice CCO-069 issued via SMS and loaded to website
12:49	CCO	GIC	Email to say no comments for the media release.
12:51	Exercise Control	Producers and Ahuroa	Inject #8 Exercise status and update email
12:52	Exercise Control	TSO Duty Officer & Comms	Inject #7 Exercise status update email.
12:54	FGL Critical Compliance	CCO	Genesis Large User update email.
12:56	FGL Critical Compliance	CCO	Flexgas Large User update email.
1:02	TSO	Stakeholders	OATIS (Maui) New Critical notice ID67228 "EXERCISE ATIRU Critical Contingency – Status update notice CCO-069.
1:03	FGL Critical Compliance	CCO	Methanex Large User update email.
1:11	TSO	Stakeholders	OATIS (Vector) New Critical notice ID67229 "EXERCISE ATIRU Critical Contingency – Status update notice CCO-069.
1:14	FGL Critical Compliance	CCO	Contact Energy Large User update email.
1:23	TSO	CCO	Phone update on system status. Curtailment affects being seen. Compliance reports being received and will issue new update around 1:30.
1:30	TSO	CCO	SOS #5 email. System and exercise status update.
1:42	Exercise Control	TSO	Inject #9 email. Exercise status update.
1:45	Exercise Control	Producers and Ahuroa	Inject #10 email. Exercise status and update.
1:45	TSO	CCO	Phone update on system status. Curtailment affects being seen. System now in balance.
1:46	FGL Critical Compliance	CCO	Compliance Update email.

<b>Time</b>	<b>From</b>	<b>To</b>	<b>Details</b>
1:51	TSO	CCO	Email – SOS #6 System update.
2:12	TSO Media Liaison	CCO	Draft media release for CCO comment (Update 2)
2:19	FGL Critical Compliance	CCO	Methanex Large User update 14:00
2:25	CCO	GIC	Call to provide update on status. No further injects to follow.
2:31	FGL Critical Compliance	CCO	Compliance Update
2:40	CCO	TSO Media Liaison	Email response to draft media release (Update 2). No comments.
2:46	Exercise Control	TSO & Stakeholders	Email – Inject #11. Final inject for this exercise. Retailers to supply last compliance update by 3pm.
2:54	FGL Critical Compliance	CCO	Email confirmation from Todd that Mangorei Power Station had curtailed. Ballance AU Plant have been delayed providing a curtailment update.
3:14	TSO	Stakeholders	OATIS (Maui). New Non-Critical notice ID67233 "Exercise Atiru - Critical Contingency First Gas Asset Owner Statement Update 2.Status Action Required
3:16	TSO	Stakeholders	OATIS (Maui). New Critical notice ID67234 "Exercise Atiru - Critical Contingency First Gas Asset Owner Statement Update 2.Status Action Required.
3:27	FGL Critical Compliance	CCO	Methanex Large User update
3:36	GIC	CCO	Updated version of the media release for approval. Will be posted at 3:45 if no response.
3:44	CCO	GIC	Email response to media release update. No comments. And thanks for their support and work through the exercise.
3:52	FGL Critical Compliance	CCO	Compliance status update.
3:52	Exercise Control	TSO & Stakeholders	Email - CCO Annual Exercise has now ended.
3:54	Exercise Control	TSO & Stakeholders	SMS – CCO Annual Exercise has now ended.
3:57	TSO	Stakeholders	OATIS (Maui). New Critical notice ID67238 "Exercise Atiru - Exercise Termination." - Action Required
3:59	Exercise Control	TSO & Stakeholders	Retailers Feedback requirements post exercise report template.

## Appendix C – Notices Summary

All CCO notices can be viewed in full on the CCO Website at: <https://www.cco.org.nz/historical-events/>

All First Gas TSO notices can be viewed on the OATIS website at: <https://www.oatis.co.nz> using 'Notice Search' button and begin date of 18/05/22

### CCO Notices to TSO

CCO Notice ID	Notice Type	Time CCO e-mailed Notice to TSO	Time TSO Published CCO Notice	
			OATIS (Maui)	OATIS (First Gas)
CC-066	Critical Contingency Declaration	09:45	09:54	09:56
CC-067	Direction to Curtail Demand	10:32	10:41	10:44
CC-068	Revised Direction to Curtail Demand	11:23	11:35	11:39
CC-069	Status Update	12:41	13:02	13:11

The exercise was ended without moving through the restoration and termination phases.

## Appendix D - Asset Owners Public Statements



### FGL Schedule 5(2) CCM Regulations Public Statement

<b>Firstgas Limited – Transmission System Event Public Statement / Update:</b>	
<b>Report No:</b>	<b>2022-05-18_12.00 - Update No.1</b>
<b>What has Happened?:</b>	There has been an unplanned outage at First Gas' Kaitoke Compressor Station near Whanganui which has suffered extensive damage. A breach of the Waitangirua Critical Contingency threshold in Wellington has also occurred, meaning the system pressure is reducing due to the loss of compression at Kaitoke.
<b>Actions Being Taken to Effect Repairs:</b>	The Firstgas Engineering team are currently assessing repair options for Kaitoke Compressor Station (CS).  Instructions to reduce demand in the affected areas have been issued to the gas industry.
<b>Estimation of the Likely Duration of each Step of the Repair Process:</b>	An estimated time to repair Kaitoke CS will take at least 72 hours.
<b>Estimated Time of When the Component will be Returned to Service:</b>	An estimated time to return to service is not yet known.
<b>Will the Component be Temporarily Restored to a Reduced Level of Service?:</b>	An estimated time to repair will take at least 72 hours.

- Further information on Firstgas Limited and the Gas Transmission System can be found on the Firstgas website [www.firstgas.co.nz](http://www.firstgas.co.nz)
- The Critical Contingency Operator is also required to make regular public statements and updates, which will be posted on the CCO website [www.cco.org.nz](http://www.cco.org.nz)

### FGL Schedule 5(2) CCM Regulations Public Statement

Firstgas Limited – Transmission System Event Public Statement / Update:	
<b>Report No:</b>	<b>2022-05-18_2.45pm - Update No.2</b>
<b>What has Happened?:</b>	There has been an unplanned outage at First Gas' Kaitoke Compressor Station near Whanganui which has suffered extensive damage. A breach of the Waitangirua Critical Contingency threshold in Wellington has also occurred, meaning the system pressure is reducing due to the loss of compression at Kaitoke.
<b>Actions Being Taken to Effect Repairs:</b>	Repairs have commenced at Kaitoke Compressor Station (CS) and are expected to be completed within the next 72 hours.  Gas demand has now been reduced in the affected areas.
<b>Estimation of the Likely Duration of each Step of the Repair Process:</b>	An estimated time to repair Kaitoke CS is 72 hours.
<b>Estimated Time of When the Component will be Returned to Service:</b>	An estimated time to return to service is 72 hours.
<b>Will the Component be Temporarily Restored to a Reduced Level of Service?:</b>	It will not be possible to temporarily restore the asset but the site will be recommissioned within 72 hours.

- Further information on Firstgas Limited and the Gas Transmission System can be found on the Firstgas website [www.firstgas.co.nz](http://www.firstgas.co.nz)
- The Critical Contingency Operator is also required to make regular public statements and updates, which will be posted on the CCO website [www.cco.org.nz](http://www.cco.org.nz)

## Appendix E – Retailer Curtailment Plan Test Report Template

<b>Retailer Name:</b>								
Date Retailer Curtailment Plan last updated:								
Date consumers were last notified of the existence of the critical contingency regulations as set out in regulation 44.								
<b>Curtailment Bands:</b>		<b>3</b>	<b>3CP</b>	<b>4</b>	<b>4CP</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	How many consumers did you have in each of the affected bands?							
2	During the exercise, how many consumers in each curtailment band did you contact?							
3	Of those consumers contacted, how many were the correct contact details?							
4	Of those consumers contacted, how many were aware of their obligations under a critical contingency?							
5	Description of process in place to ensure consumer emergency contact details are maintained and up to date in accordance with regulation 43.							
6	Description of methods and processes in place for issuing urgent notice to consumers to curtail or restore demand in accordance with regulation 56.							
7	Comments on the levels of consumer understanding of your instructions and their obligation to comply with directions							
8	Description of process for implementing any media appeals if directed by the CCO under regulation 53(1)(db).							

9	Comments on the Retailer Compliance Update Form and process.	
10	Comments on the quality and effectiveness of your Retailer Curtailment Plan.	
11	Comments on the level of awareness and understanding of your Retailer Curtailment Plan within your organisation	
12	Comments on exercise format, lessons learnt and any planned changes or initiatives you may take identified during the exercise.	
13	What are the 'actions arising' for your organisation because of this exercise?	
14	Any other comments?	