

# CRITICAL CONTINGENCY OPERATOR



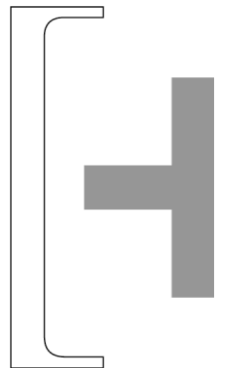
## ANNUAL INDUSTRY EXERCISE 2023

### “EXERCISE KARAKA”

Test of the First Gas Ltd Critical Contingency Management Plan

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

June 2023



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## **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 Karaka" was carried out on 10 May 2023. The exercise required the CCO, TSO and retailers to carry out tasks and activities associated with the regulations, CCMP and other relevant documents.

## 2. Executive Summary

Exercise Karaka 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 were issued with curtailment instructions and provided consumer compliance updates.

Evidence from this exercise demonstrated that:

- Firstgas has a good understanding of its role and responsibilities for critical contingency events but recent structure changes and new people in various associated roles did present challenges in their response.
- Retailers are prepared to respond to a critical contingency and have processes and systems in place.
- Retailers have processes in place should a media appeal to domestic consumers be required.
- There is an improved level of confidence that retailers are maintaining consumer emergency contact details.

This year's scenario was a 'regional' event which did not impact producers or large consumers. They were however invited to take the opportunity to consider their own preparedness for a critical contingency. They were included in all exercise communications.

Firstgas has developed new emergency procedures which were exercised for the first time. They also took the opportunity to place less experienced staff in key roles to assist in the development of the organisation's depth of talent. This meant some processes went less smoothly than in previous exercises but maximized the learning opportunity presented by the exercise. The exercise provided a good training opportunity and identified key training and process improvement actions.

It was good to see a higher level of engagement from retailers with regard to the testing of consumer emergency contacts, providing a greater level of reassurance than prior years. It was however noticeable that retailers had a broad range of capability with regard to their mechanisms for contacting consumers and their expectations about how long this may take.

Firstgas as asset owner, the GIC and the CCO all prepared public information within the timeframes required and the retailers provided media statements. It was however noted it had been some while since media representatives had met together to consider their critical contingency processes. There is significant scope for them to produce divergent or confusing messages.

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.

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.

### **3. Exercise Implementation**

A Participants Brief for the exercise was issued to all participants on 28 March 2023. 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.

The inputs for this report on Exercise Karaka include:

- the CCO's pre-test exercise audit of Firstgas
- the Event Log of the activities on the day of the exercise
- Firstgas' 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 involved damage to the Firstgas Bay of Plenty Pipeline at Putāruru. This required a regional curtailment down to band 6 at a list of affected gas gates. Retailers were requested to implement media appeals for domestic consumers to conserve gas.

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

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.

**Observation:**

- *In its capacity of Exercise Control the CCO team sent inject #1 to the Control Room and inject #2 to the Duty Manager, followed up by a phone call and visit from Exercise Control to the Duty Manager to highlight the sending of the inject. However, Firstgas had expected all the injects to go to the Control Room. There was therefore a delay in the Firstgas' response to inject #2.*

**Recommendation:**

- *Communications protocols for exercise injects be agreed prior to the next exercise.*

## 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:

- Firstgas was issued with curtailment instructions and revised demand curtailment instructions for retailers.
- Firstgas provided a public statement relating to the failed asset.
- The CCO provided a public statement.
- Retailers drafted media appeals.
- Retailers provided curtailment updates.

The CCO's overall observations from the exercise include:

- Firstgas demonstrated a good understanding of its role and responsibilities for critical contingency events.
- Firstgas' new emergency procedures and structure established an additional level in the response team within their organisation, which lengthened communication chains. Also, they had set-up new generic email addresses for various internal roles that had not been tested or well communicated, which caused confusion. This was exacerbated by Firstgas' use of the exercise as a learning opportunity for less experienced staff.
- The Retailer's demonstrated a higher level of consumer contact testing than in the prior exercises, giving a greater reassurance about the accuracy of the emergency contacts held. They also demonstrated a healthy review of their own processes, suggesting the targeted training sessions have been valued.
- Some valuable recommendations have therefore been identified, both those detailed in this report, and those identified in participant's own response debriefs, demonstrating the value of the annual exercise.

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 consumer emergency contact details maintained by retailers in accordance with regulation 43 is current for 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.

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 Tuesday 23 May 2023.

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. Thirteen (13) actions were identified by Firstgas to improve the efficiency of processes and procedures to support application of the CCMP. However, Firstgas does not consider that the issues, opportunities, and outcomes resulting from Exercise Karaka reach the threshold for requiring amendments to the Firstgas CCMP.

## 6. Recommendations

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

#	Section	Recommendation	Responsible
1	4	<i>Communications protocols for exercise injects be agreed prior to the next exercise.</i>	<i>CCO/Firstgas</i>
2	7.1.4	<i>Firstgas to publish user guides for parties to update their own contacts in OATIS.</i>	<i>Firstgas</i>
3	7.3	<i>Firstgas review its processes in collaboration with the CCO, to ensure OATIS notices are posted in a timely manner.</i>	<i>Firstgas</i>
4	7.4	<i>Firstgas should review the suite of email addresses used for critical contingencies (including the control room, CC liaison and compliance</i>	<i>Firstgas</i>



#	Section	Recommendation	Responsible
		<i>update emails), ensure they are tested and communicated, identify and update all relevant documentation with the new addresses.</i>	
5	7.4	<i>Until the next iteration of the CCMP is updated with the new Control Room address, ensure the autoreply on the <a href="mailto:gas.control@firstgas.co.nz">gas.control@firstgas.co.nz</a> message is revised to ensure the recipient is reassured that their e-mail has been received.</i>	Firstgas
6	7.7	<i>Firstgas should review the software used for producing Security of Supply alerts to see why inaccurate information from a previous issue was replicated.</i>	Firstgas
7	7.7	<i>Firstgas staff new to the Control Room, Duty Officer and CC Liaison roles should receive more training in how to respond in the initial stages of an event to improve their confidence in following the relevant processes and communicating key information quickly and accurately.</i>	Firstgas
8	7.7	<i>Firstgas to review where the CC Liaison person fits in their emergency response structure to best expedite quick and accurate communication with the CCO.</i>	Firstgas
9	8.2	<i>GIC to continue to undertake the revision of the Guidelines for determining regional critical contingencies.</i>	GIC
10	8.3	<i>CCO to review its notice processes to address the risk of forgetting email attachments and change the link to the CCO website.</i>	CCO
11	8.4	<i>Investigate further the existence of the Glenbrook Co-Generation plant and ensure it is in the correct curtailment band.</i>	CCO
12	9.3	<i>Pass the Genesis observation about some band 6 consumers using less gas than domestic consumers, back to the GIC for consideration in the regulatory review process.</i>	CCO
13	9.4	<i>Firstgas continue to work with retailers to ensure that they understand curtailment compliance processes and expectations.</i>	Firstgas
14	9.5	<i>The GIC organise a meeting of media representatives from retailers, Firstgas and other asset owners to review how they work together to supply efficient and cohesive public information in the event of a critical contingency.</i>	GIC

#	Section	Recommendation	Responsible
15	10.1	Firstgas to review asset owner statement process and undergo further staff training to ensure it is understood where/when the asset owner statement should be posted.	Firstgas

## 7. TSO Exercise Test Criteria and Observations

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

The pre-exercise elements were audited on the 8 May 2023 (2 days prior to the actual exercise date). All items were audited with the Firstgas Senior Commercial Advisor Transmission, Manager, Systems Operations, Senior Transmission Scheduler and Manager, Integrated Control Room. The audit was conducted at the Firstgas Control Room in Bell Block.

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

##### Thresholds:

In January 2023, Firstgas revised Document 09456 Critical Contingency Pipeline Thresholds Overview and Background which sets out the rationale for each pressure threshold and the recommended settings. This revision included the changes that were implemented when Firstgas issued a revised v12 CCMP in October 2020.

Firstgas considers that the current CC Pressure Thresholds specified in the v13 CCMP remain appropriate within the current permissible limits set out in Schedule 1 of the CCM Regulations.

Firstgas has been in discussions with the GIC around potential changes to the pressure limits / ranges set out in Schedule 1 of the CCM Regulations. GIC has advised they intend to include potential changes to Schedule 1 of the CCM Regulations in a Statement of Proposal they intend to circulate to stakeholders in 2023.

##### Scada System Alarms

The pressure threshold alarm settings were checked on the 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

Alarms have also been established for all other gas gates on SCADA and a sample of these was also viewed and found to be correct.

**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:**

- *Document 09456 Critical Contingency Pipeline Thresholds Overview and Background will be due for annual review in January 2024.*
- *The CCO observed that the hourly data was being received 35 minutes after the hour to which the data relates. Firstgas advised that this was unlikely to be remedied until the next SCADA upgrade scheduled for Q3 2024. The 5-minute data files are received within 5 minutes so the CCO is able to access relatively current data.*

**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 v13 CCMP contains description of the events that Firstgas 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). These were considered by all parties to the audit to appropriately reflect likely events.

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

The v13 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:**

- *Firstgas has completed an in-depth overhaul of its emergency management process. Two new documents were published in March 2023:*
  - *Emergency Management Plan (Doc #10579)*
  - *Asset Emergency Response Plan Gas Transmission (Doc #10580)*
- *These documents describe the processes for responding to an “Incident” which is managed by the Control Room and an “Emergency” which is managed by a Duty Manager. In this structure, the CCO will liaise with the Control Room unless an Emergency is declared. When an Emergency is declared the CCO will liaise with the Duty Manager unless a Critical Contingency Liaison person is nominated. The Critical Contingency Liaison role has authority to agree actions to be undertaken by Firstgas in relation to the Critical Contingency Management aspects.*
- *Firstgas advised that regular (monthly and bi-monthly) test exercises are carried to test the different event levels.*

**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 current 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 Firstgas 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, Firstgas will check/update all contact details every six months or at other times considered appropriate by Firstgas.*

OATIS contacts list for Maui and FGL were provided by Firstgas. The actions undertaken to ensure Firstgas 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.

**Observation:**

- FGL has developed user guides for parties to update their own contacts in OATIS. The guides have yet to be published.

**Recommendation:**

- Firstgas to publish user guides for parties to update their own contacts in OATIS.

**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.*

**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. However, the process for posting CCO instructions on OATIS was noticeably slower than for recent exercises and in the case of the status update notice took the full 30 minutes.*
- *Firstgas process requires the Scheduler posting the notice to be instructed to do so by the Duty Manager or delegate despite the fact that the Scheduler is a direct recipient of the CCO notice. The Duty Manager or delegate also reviews the draft CCO notice before the CCO sends it. This double handling of the notice by the Firstgas Duty Manager from the point when it is drafted by the CCO to the point it is sent out by Firstgas, adds significant time to the overall communication process.*

**Recommendation:**

- *Firstgas review its processes in collaboration with the CCO, to ensure OATIS notices are posted in a timely manner. An option being that once the Duty Manager or delegate has reviewed*

*the draft CCO notice, they pre-authorise the Scheduler to post the notice immediately on receipt from the CCO, then checks to confirm this has been done.*

**7.4. Does the CCMP contain 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 Firstgas CCMP contains appropriate and up-to-date contact details of the suitably qualified Firstgas employees responsible for giving communications and directions under the CCMP and communications plans. These details were used for electronic communication between Firstgas and the CCO during the exercise.

**Observations:**

- *Firstgas had implemented new email addresses shortly before the annual exercise, including a new e-mail address for the Control Room. The current version of the CCMP still includes [gas.control@firstgas.co.nz](mailto:gas.control@firstgas.co.nz), which is still monitored as the message is auto forwarded to the new address. However, an out of office message is sent to anyone communicating with the old address stating that the email address is no longer monitored which caused some concern and confusion.*
- *There was also a new address for the person appointed by the Firstgas Duty Manager as the CC Liaison person, which had not been communicated prior to the exercise. When it was used by the CCO the message went to the CCO liaison's personal address rather than the expected generic inbox, causing delay in the review of draft CCO notices.*

**Recommendations:**

- *Firstgas should review the suite of email addresses used for critical contingencies (including the control room, CC liaison and compliance update emails), ensure they are tested and communicated, identify and update all relevant documentation with the new addresses.*
- *Until the next iteration of the CCMP is updated with the new Control Room address, ensure the autoreply on the [gas.control@firstgas.co.nz](mailto:gas.control@firstgas.co.nz) message is revised to ensure the recipient is reassured that their e-mail has been received.*

**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.

**Observation:**

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

#### 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).

##### **Observation:**

- *Critical contingency imbalances would not have been required to be calculated in the test exercise circumstances because of the classification of the event as "regional".*

#### 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 Firstgas and the CCO to support the Communications Plan by specifying processes to ensure efficient information and communications flows between the CCO and Firstgas 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.*
- *The first Security of Supply message received by the CCO contained incorrect information relating to an abnormal situation occurring a few days prior to the annual exercise.*
- *Security of Supply notices were slow to reach the CCO, both the initial notice from the Control Room and the subsequent notices from the CCO Liaison pushed to the limit of the Communication Protocol timeframes.*
- *The Control Room was slow to notify the Duty Manager of the event and to communicate key information provided in inject #1 about the location of the event.*
- *The new Firstgas emergency response structure meant that the CC liaison person was further removed from the source of information in the Control Room and Incident Response team.*

##### **Recommendations:**

- *Firstgas should review the software used for producing Security of Supply alerts to see why inaccurate information from a previous issue was replicated.*

- *Firstgas staff new to the Control Room, Duty Officer and CC Liaison roles should receive more training in how to respond in the initial stages of an event to improve their confidence in following the relevant processes and communicating key information quickly and accurately.*
- *Firstgas to review where the CC Liaison person fits in their emergency response structure to best expedite quick and accurate communication with the CCO.*

#### **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 Firstgas 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:**

- *Firstgas 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, as noted in section 7.7 that the initial response in the Firstgas Control room was slower than it might have been and some of the information supplied was inaccurate/incomplete.*

### **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 09:01. Firstgas subsequently alerted the Duty CCO and requested they contact the Control Room, the SMS was received and the Duty CCO promptly responded. They were advised of the gas escape which may need isolating and requested urgent confirmation of whether it would be isolated and, if so, the location of the isolation, a Security of Supply alert and the contact details of the Duty Manager.

When no further information was received for 13 minutes the Duty CCO was proactive in pursuing contact with the Duty Manager and repeating the request for information. When a Security of Supply notice with erroneous information was received, this was escalated to get it corrected. Once the corrected Security of Supply notice was received the Duty CCO rang the Duty Manager, confirmed that the pipeline will be isolated and therefore a breach of a downstream pressure threshold is inevitable. The CCO immediately declared a critical contingency and within 5 minutes had sent a draft declaration notice to Firstgas for review.

After 15 minutes the CCO had not heard back from Firstgas so rang and sought a verbal confirmation they were content with the declaration notice and proceeded to post it.

#### **Observation:**

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



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

The CCO determined that the isolation of the Bay of Plenty pipeline 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.

### **Observations:**

- *A recommendation from Exercise Atiru (2022) “Update and revise the Gas Industry Company Guidelines for determining regional critical contingencies to provide guidance where the critical contingency status may change” is still to be closed out.*

### **Recommendation:**

- *GIC to continue the revision of the Guidelines for determining regional critical contingencies.*

## 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 Firstgas 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 Firstgas 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.*
- *The demand curtailment notice was emailed without the PDF version of the notice attached. The opening Exercise Control email was also sent out without the Participant’s Brief attached and the link to the CCO website didn’t work.*

### **Recommendation:**

- *CCO to review its notice processes to address the risk of forgetting email attachments and change the link to the CCO website.*

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

Once the pipeline was isolated and the initial time to repair was established as at least 48 hours, the CCO calculated that a curtailment to band 4 would be required as a minimum to enable the repair to occur. In this regional scenario the exploration of opportunities for additional gas was not applicable. A curtailment notice detailing the curtailment to band 4 and the affected gas gates was issued.

At 11:37 Firstgas communicated to the CCO that the estimated time to repair had been established as at least 72 hours (this was weather dependent). The CCO then calculated that an additional curtailment to include bands 5 and 6 would be required. A revised curtailment notice was therefore drafted by the CCO, shared with Firstgas and then formerly sent to Firstgas at 12:01. The notice was copied to stakeholders, posted on the CCO website and an SMS sent.

The process for demand restoration was not tested as a part of this scenario.

**Observations:**

- *There was a well-reasoned approach to determining proposed curtailment for both phases of the event - bolstered by checking with Firstgas and obtaining clear agreement.*
- *Multiple touch points with Firstgas extended the notice process and created multiple possible points of failure in the communication chain. The recommendation above that Firstgas reviews the notice and gives the Scheduler advance authority to post the notice on receipt, should significantly reduce the time it takes to get a notice out to the industry and also reduce the risk of communication failure.*
- *During the exercise the Electricity System Operator (ESO) contacted the CCO to report they had received communication from Glenbrook Co-generation plant, to explore the impact on the electricity system in the case of them needing to shutdown during a critical contingency event. The CCO had been unaware of the existence of Glenbrook Co-Generation plant.*

**Recommendations:**

- *Investigate further the existence of the Glenbrook Co-Generation plant and ensure it is in the correct curtailment band.*

**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. Firstgas 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.

**Observations:**

- *Firstgas is undertaking a SCADA upgrade project which will result in the CCO being able to view real-time SCADA data to better facilitate real-time decision making.*

- *Actual SCADA data was not used during the exercise as all system conditions were simulated for the purpose of the exercise.*
- *The model was however used to calculate curtailment requirements to create sufficient time for the repair.*

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

The CCO had obligations to provide public statements in accordance with Schedule 5 of the regulations by 1pm. At 11:16, 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 12:47.

#### **Observation:**

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

### **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.

#### **Observation:**

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

## **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 28 March. This year's brief went into more detail about expectations around the

retailer's testing of contacts as in prior years there had been differing levels of participation making it difficult for the CCO to have overall reassurance of the accuracy of the contacts held by retailers.

Prior to the exercise, the annual training for all stakeholders, designed as introductory overview, was delivered via Teams on 19 April. The session was well attended and received positive feedback.

'Bespoke' training sessions were also delivered for the largest retailers, Genesis, Contact, Mercury/Trustpower and Nova between 12 and 21 April. These focused sessions allowed the retailer obligations to be highlighted in more detail than the general overview training and for colleagues to discuss their organisation's response processes without being inhibited by the presence of other stakeholders. The TSO also provided one on one sessions to Retailers and Large Consumers around curtailment compliance processes and expectations, an offer that was accepted by a number of the stakeholders.

This year's regional scenario didn't directly affect producers or large consumers, but they were invited to attend the annual training and encouraged to observe exercise communications and take the opportunity to review the readiness of their own processes on exercise day.

Feedback was received after the exercise from all retailers except for Pulse.

#### **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. Some retailers choose to share their plan with the CCO.

All the retailers that provided feedback confirmed that they have processes for capturing emergency contacts and keeping them up to date and provided some detail about their processes.

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

This year's Participant's Brief gave more detailed advice to retailers about testing their emergency contacts. All retailers have different circumstances, but the following suggestion was made:

*Contact a sample of consumers across the different bands to verify that contact details are current. The sample of consumers contacted should be commensurate to the retailers total number of consumers, but the CCO recommends at least:*

- *All Band 3 consumers*
- *20% of Band 4 consumers*
- *All Band 5 consumers*
- *10% Band 6 consumers*
- *All Band 7 consumers*

*Keep statistics relating to the number of consumers contacted in each band and the number of updates made to your contact database.*

This advice was highlighted during the Retailer training sessions.

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 a 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:

### Contact Energy

Consumer Curtailment	Curtailment Band				
	3	4	5	6	7
3. How many consumers do you have in each curtailment band?	3	861	0	2399	52
Prior to and/or during the exercise, how many consumers in each curtailment band did you contact to verify their contact details?	3	99	0	3	0
For the consumers contacted to verify contact details, what percentage were incorrect?	0%	*7.61%	0%	0%	0%
*In all instances we were able to confirm the number we hold for the company is correct, however not correct if an emergency was to arise. The correct emergency contact people and numbers were identified during the calls and are being updated in our system.					
If the exercise scenario was a real event, how long would it have taken you to contact all the consumers in each of the curtailment bands?	5 mins per call All affected consumers would also receive an SMS in a real scenario				

### Genesis Energy

Consumer Curtailment	Curtailment Band				
	3	4	5	6	7
How many consumers do you have in each curtailment band?	67	1062	6	2864	80
Prior to and/or during the exercise, how many consumers in each curtailment band did you contact to verify their contact details?	60 (90%)	187 (17.6%)	-	420 (14.7%)	70 (87.5%)

For the consumers contacted to verify contact details, what percentage were incorrect?	5%	4%	-	5%	5%
7. If the exercise scenario was a real event, how long would it have taken you to contact all the consumers in each of the curtailment bands?	15 Mins	2.5hrs	10 Mins	4hrs	10 mins

### Hanergy

Consumer Curtailment	Curtailment Band				
	3	4	5	6	7
How many consumers do you have in each curtailment band?				1	
Prior to and/or during the exercise, how many consumers in each curtailment band did you contact to verify their contact details?				1	
For the consumers contacted to verify contact details, what percentage were incorrect?					
7. If the exercise scenario was a real event, how long would it have taken you to contact all the consumers in each of the curtailment bands?				The same day	

### Mercury

Consumer Curtailment	Curtailment Band				
	3	4	5	6	7
How many consumers do you have in each curtailment band?	0	2	0	23	0
Prior to and/or during the exercise, how many consumers in each curtailment band did you contact to verify their contact details?	-	2	-	23	-
For the consumers contacted to verify contact details, what percentage were incorrect?	-	0%	-	5%	-

If the exercise scenario was a real event, how long would it have taken you to contact all the consumers in each of the curtailment bands?	-	Approx. 5 mins	-	Approx. 50 mins	-
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## Trustpower

Consumer Curtailment	Curtailment Band				
	3	4	5	6	7
How many consumers do you have in each curtailment band?	0	23	0	76	0
Prior to and/or during the exercise, how many consumers in each curtailment band did you contact to verify their contact details?	None contacted during exercise as we contact consumers every 6 months to ensure contact details correct				
For the consumers contacted to verify contact details, what percentage were incorrect?	N/A	N/A	N/A	N/A	N/A
If the exercise scenario was a real event, how long would it have taken you to contact all the consumers in each of the curtailment bands?		1 Hour		2.5 Hours	

## Nova and Megatel

Consumer Curtailment	Curtailment Band				
	3	4	5	6	7
How many consumers do you have in each curtailment band?	Nova 22 MegaT EL 0	Nova 407 MegaTEL 3	Nova 0 MegaTEL 0	Nova 533 MegaTEL 15	
Prior to and/or during the exercise, how many consumers in each curtailment band did you contact to verify their contact details?	<ul style="list-style-type: none"> <li>N/A - Nova and MegaTEL customer contact details are confirmed each time they contact us as stated in question 1 above. Nova/MegaTEL also complete the below: <ul style="list-style-type: none"> <li>Do a whole customer base check in late July each year.</li> <li>Send a CCO information and contact details update email/letter (in line with our CCO regulation obligations) at least once every 24 months.</li> </ul> </li> </ul>				

For the consumers contacted to verify contact details, what percentage were incorrect?	<ul style="list-style-type: none"> <li>Generally, we find updates are required to around 10% of our customer base.</li> </ul>
If the exercise scenario was a real event, how long would it have taken you to contact all the consumers in each of the curtailment bands?	<ul style="list-style-type: none"> <li>We estimate around 1 hour to get the data ready and 10 minutes to send out the notifications (SMS/Email). <i>Note: This estimate may vary depending on the time of day and the actual day (i.e., weekday versus weekend/public holiday).</i></li> </ul>

**OnGas** - provided feedback using the prior year's template

<b>Curtailment Bands:</b>	<b>3</b>	<b>3C</b>	<b>4</b>	<b>4C</b>	<b>5</b>	<b>6</b>	<b>7</b>
How many consumers did you have in each of the affected bands?	7	1	1	0	0	0	0
During the exercise, how many consumers in each curtailment band did you contact?	7	1	1	0	0	0	0
Of those consumers contacted, how many were the correct contact details?	7	1	1	0	0	0	0
Of those consumers contacted, how many were aware of their obligations under a critical contingency?	7	1	1	0	0	0	0

**Greymouth** - provided feedback via email

*We audited (and updated) our customer contact lists in the days preceding the training.*

**Transgas** - Transgas reported they had emergency contacts for all their consumers, which had been tested and proven current in May 2023. Their customers were not affected by the scenario.

**Pulse** - provided no feedback.

Some highlights from the retailer feedback, which demonstrated their engagement, included the following:

- Added new step into the process to ensure we are following up with customer after initial contact to ensure gas curtailed as do not expect consumer to curtail within first call.
- In future events we will pull consumption data for all customers and prioritise contact accordingly.
- We also make use of our bi-annual regulatory requirement to communicate this information (plus our emergency contact template) to customers, which we are exploring the opportunity of completing on a more frequent basis.
- We contact all Gas Curtailments consumers every 6 months to ensure contact details are up to date. We also chase up those we don't hear from. For all new consumers, these are followed up immediately for contact info.



- Our retailer plan and the CCOs pre-exercise training were both invaluable.
- Revisit the media release template and get COE approval of this in advance to alleviate any delays in future.
- We had Teams instant messaging running during the exercise with all the team on it which kept everyone up to speed with what was going on. We also allocated the team with 'roles' during the event for everyone to be on the same page and know what they are to complete confidently.
- Our customer website allows us to publish a bulletin for all customers so that they can understand what is occurring.

Genesis suggests that the contact of band 6 customers should be reduced based on consumption of gas. Many of these customers consume less gas than the average residential property and should therefore be treated as such. A minimum threshold could be introduced, perhaps affecting the maximum threshold already in place.

**Observation:**

- *It was good to see a higher level of consumer contact testing this year from some retailers. This together with information gleaned during discussions at the individual retailer training sessions about each companies' processes and information supplied as a part of the feedback process such as the highlights detailed above, provided the CCO with a higher level of assurance that retailers are actively managing their emergency contact details and the associated processes.*
- *It was noticeable that retailers had a broad range of capability with regard to their mechanisms for contacting consumers and their expectations about how long this may take.*
- *Some retailers make good use of SMS in combination with phone calls.*

**Recommendations:**

- *Pass the Genesis observation about some band 6 consumers using less gas than domestic consumers, back to the GIC for consideration in the regulatory review process.*

**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. Firstgas reported on their experience of the compliance update process as follows.

*Most retailers provided curtailment compliance updates to Firstgas by the requested deadline of 1300 hrs. These were consolidated by Firstgas and the first curtailment compliance update was issued to the CCO at 1345 hrs. Immediately following this first compliance update, Firstgas discussed its concerns about the low level of curtailment compliance (e.g. 4% for Band 4) with the CCO and activated the Firstgas Commercial Team to contact affected retailers in order to emphasise the urgency of the demand curtailments being implemented. The quality, quantity, and timeliness of curtailment compliance updates by retailers did vary throughout the exercise. For example:*

- *Some retailers did not provide updates by the specified time<sup>1</sup>*
- *A Retailer provided the curtailment compliance template populated with total ICP numbers within the affected bands and delivery points, but no details on numbers of consumers actually curtailed*
- *Curtailment compliance updates were provided directly to the CCO as opposed to the Firstgas email addresses set out on the curtailment compliance template<sup>2</sup>*
- *Some retailers provided prompt and accurate curtailment compliance information until such time as they correctly notified Firstgas to say all affected consumers were now fully curtailed*

*At 1357 hrs Firstgas issued a second curtailment compliance update to the CCO, now with data previously missing from the first update due to it being sent to the CCO directly by a Retailer.*

*At 1529 hrs and again at 1545 hrs, Firstgas issued further curtailment compliance updates to the CCO.*

*CCO Exercise Control issued an email at 1552 hrs indicating that Exercise Karaka had ended.*

*Section 3.9 of Firstgas' CCMP discusses communications with large consumers and retailers. That section states that the timely provision of accurately populated compliance updates is essential during any critical contingency event. This is because the CCO uses this information, in conjunction with other information and analysis made available by Firstgas, to assess the stability of the transmission system and better inform CCO decision-making during the critical contingency. As noted in Section 4 and 6 of this report, while some retailers did provide timely updates to Firstgas during Exercise Karaka, there were some instances of "no or slow" curtailment compliance updates from some retailers. Whilst Firstgas representatives did follow-up with retailers, there continues to be opportunities for improvement in this area, which are discussed further in Sections 6 and 8.*

*The quality, quantity, and timeliness of curtailment compliance updates by retailers did vary throughout the exercise. For example:*

- *Some retailers did not provide updates by the specified time*
- *Total ICP numbers were provided, but no details on numbers of consumers actually curtailed*
- *Curtailment compliance updates were provided directly to the CCO as opposed to the Firstgas*

*Some retailers provided prompt and accurate curtailment compliance information.*

**Recommendation:**

- *That Firstgas continue to work with retailers to ensure that they understand curtailment compliance processes and expectations*

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<sup>1</sup> We understand that for at least one Retailer this was as a result of key personnel being involved with a real-time (i.e. non-exercise) operational issue.

<sup>2</sup> It is acknowledged that the curtailment compliance template had not been updated to reflect a new Firstgas Control Room email address and the automated email response received when using the old Gas.Control@firstgas.co.nz may have caused confusion.

The only specific Retailer feedback about the curtailment process related to the receipt of an auto reply that said the [gas.control@firstgas.co.nz](mailto:gas.control@firstgas.co.nz) was no longer monitored. We recommend that Firstgas review this email address along with the others used in a critical contingency, this recommendation is already noted above.

#### 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 2023 is held by Genesis.

Genesis provided a draft media appeal as a part of the exercise, as did Nova who choose not to be a part of the protocol.

Genesis provided the following additional information in their retailer feedback:

“Genesis was the lead retailer for exercise Karaka and used this to test our curtailment plan and processes regarding media appeals. We engaged our external communications team to compile media appeals, these were then shared with the other retailers involved in the exercise. The media channels used were social media, radio, television, and our other communication channels such as our website, mobile app and 0800 phone line IVR. Information provided by the CCO during the exercise was used to provide an informative media appeal to the public. “

#### **Observation:**

- *There was proactive communication from Genesis, with a phone call being received by the CCO from Genesis to confirm they had identified the request for a media appeal and that it was being prepared.*
- *Firstgas as asset owner, the GIC and the CCO all prepared public information within the timeframes required and the retailers provided media statements. It was however noted it had been some while since media representatives had met together to consider their critical contingency processes. There is significant scope for them to produce divergent or confusing messages.*

#### **Recommendation:**

- *The GIC organise a meeting of media representatives from retailers, Firstgas and other asset owners to review how they work together to supply efficient and cohesive public information in the event of a critical contingency*

## 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 damage to the affected pipeline.

#### **Observation:**

- *Firstgas provided two public statements for the exercise but neglected to publish the first one on OATIS in accordance with their CCMP. The second statement was published.*

#### **Recommendation:**

- *Firstgas to review asset owner statement process and undergo further staff training to ensure it is understood where/when the asset owner statement should be posted.*

## **Appendix A – Exercise Injects**

**Inject #1 for TSO.      09:00am**

### **Exercise Karaka**

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

- A Firstgas Field Technician is calling the Control Room to report that they have arrived on site at Tomalin Road in Putāruru to issue a permit. The contractor has started work before he arrived and has struck the 500 pipeline. There is a large escape of gas and it's making a roaring sound. The pipeline will need isolating. The nearest isolation points are Arapuni East MLV upstream and Lichfield Meter Station downstream.

Further advice on the Transmission system conditions will be provided before 10:00am.

The TSO is to assume that the CCO is not aware of the above status and will only act on information provided by the TSO.

### **Exercise Karaka**

**Inject #2 for TSO.      10:15am**

### **Exercise Karaka**

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

- Field staff have isolated the Bay of Plenty pipeline between Arapuni East MLV and Lichfield Meter Station.
- Pipeline has been punctured by an excavator.
- An assessment of the damage is underway.
- Estimated time to repair is not known but will be at least 24 hours.

Further advice on the pipeline conditions will be provided before 11:00am.

The TSO is to assume that the CCO is not aware of the above status and will only act on information provided by the TSO.

### **Exercise Karaka**

**Inject #3 for TSO      11:26am**

**Exercise Karaka**

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

- The pipeline damage has been assessed. The pipeline has been dented and gouged so the damaged section will need to be cut-out and replaced.
- Estimated repair time is 72 hours.

Further advice on pipeline conditions will be provided by 1.00pm.

The TSO is to assume that the CCO is not aware of the above status and will only act on information provided by the TSO.

**Exercise Karaka**

**Inject #4 for all Participants.    15:00 Email to all participants**

**Exercise Karaka**

There will be no further injects for the exercise.

For this scenario which would span more than 72 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.

Any queries or feedback regarding this inject can be sent to [cco@cco.org.nz](mailto:cco@cco.org.nz).

**Exercise Karaka**

## 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 Karaka</b>	<b>Date:</b>	<b>10/05/2023</b>
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<b>Time</b>	<b>From</b>	<b>To</b>	<b>Details</b>
08:30			CCO Website Current Events page updated to say Exercise Karaka is scheduled for today and will commence at 9am.
08:50			CCO website updated to advise exercise Karaka commenced.
08:50	Exercise Control	CCO Email Contacts	Email to advise Exercise Karaka has commenced
08:51	Exercise Control	CCO SMS Contacts	SMS to advise Exercise Karaka has commenced.
08:55	Stakeholder	CCO	Advising Participants Brief not attached and link to CCO website not working.
08:58	Exercise Control	CCO Email Contacts	Exercise commencement email re-sent with attachment and updated website link.
09:01	Exercise Control	BBK Control Room	Inject #1 issued by email and followed up with phone call.
09:04	BBK Control Room	CCO	Gas Controller sends SMS to CCO requesting Duty CCO to contact Control Room.
09:05	CCO	BBK Control Room	CCO contacts Control Room. CCO advised of gas escape on Bay of Plenty pipeline which may need isolating. CCO requests urgent confirmation whether pipeline will be isolated and the location of the isolation. CCO requests Security of Supply alert to be sent and confirmation of who the TSO Duty Manager is.
09:18	CCO	BBK Control Room	CCO following up as not heard back. Request to speak with Duty Manager but not in Control Room. Contact number provided for Duty Manager.
09:21	CCO	TSO Duty Manager	Duty Manager not aware of any event but will go to control room to determine what is happening. CCO requests urgent confirmation whether pipeline will be isolated and the location of the isolation.
09:31	BBK Control Room	CCO	Security of Supply Alert #1 issued. 30 minutes after inject #1 provided. Limited details on the report and some details from a previous event still contained in document. Exercise Karaka not stated in the coms.
09:35	CCO	BBK Control Room	CCO responds to Security of Supply Alert #1 and requests the location of the damage and the isolation points to be advised asap.

Time	From	To	Details
09:35	BBK Control Room	CCO	Revised Security of Supply Alert #1 issued. 34 minutes after inject #1 provided.
09:39	CCO	TSO Duty Manager	CCO calls Duty Manager for an urgent update. The Duty Manager still not certain of isolation location but advises that the CCO that the pipeline will be isolated. Duty Manager agrees that a breach of a downstream pressure threshold is inevitable. Duty Manager advises that an Emergency Response Team is being assembled and confirms who the Critical Contingency Liaison person will be.
09:40	CCO	TSO Duty Manager	<b>CCO determines that a breach of a downstream pressure threshold is unavoidable.</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>
09:45	CCO	TSO Duty Manager	Draft Critical Contingency Notice CC-0078 based on discussions and Security of Supply alert #1 sent for review.
09:53	CCO	TSO Duty Manager	Phoned TSO to get update on declaration notice draft. Still reviewing. CCO requests urgent confirmation.
10:00	TSO CC Liaison	CCO	Discussion on content of Declaration Notice. Verbal confirmation that Notice can be issued.
<b>10:04</b>	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Critical Contingency Declaration notice CC-078 emailed to TSO &amp; Stakeholders.</b>
10:06	TSO Intelligence - EMT	CCO	Email confirming CC-078 is OK to be issued.
10:06	CCO		Website updated with Declaration Notice CC-078.
10:06	CCO	GIC	Called to ensure awareness of event and declaration notice.
10:11	CCO	CCO SMS Contacts	SMS text advising CC-078 has been published.
10:11	TSO CCO Liaison	CCO	Called to confirm their contact details. Will provide an update in 15 mins after Emergency Team meeting. Advised contact email for CCO Liaison.
10:14	Exercise Control	TSO Duty Manager	Inject #2 emailed and followed with phone call to Duty Manager mobile. Not answered...message left.
10:20	Exercise Control	TSO Duty Manager	Face to face to ensure receipt of Inject #2. Advised that Emergency Team in a Time Out session so no communication allowed.
10:25	TSO	Stakeholders	OATIS (Maui) New Critical notice ID 72378 "Exercise Karaka – Critical Contingency Declaration Notice CC-078" - Action Required. 22 minutes after CCO Notice issued.
10:29	TSO	Stakeholders	OATIS (Vector) New Critical notice ID 72379 "Exercise Karaka – Critical Contingency Declaration Notice CC-078" - Action Required. 22 minutes after CCO Notice issued.



Time	From	To	Details
10:33	TSO	Exercise Control	TSO querying the next exercise inject. Advised that it was sent to the Duty Manager. Request that future injects go to the Control Room.
10:45	TSO CCO Liaison	CCO	TSO provides verbal update: Estimated time to repair not known but at least 48 hours. CCO proposes curtailment to band 4 and curtailment notice will be issued for their review asap. TSO will provide next update by 11am latest.
10:47	CCO	TSO CCO Liaison	Draft Demand Curtailment notice sent for review. (CC-079)
11:00	BBK Control Room	CCO	Security of Supply Update #2 issued. 45 minutes after inject #2 provided. Limited information and incorrect contact details.
11:02	TSO CCO Liaison	CCO	Phone call to discuss Curtailment notice. Time to repair at least 48 hours. Otherwise, good to go.
<b>11:05</b>	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Demand Curtailment notice CCO-079 emailed to TSO and Stakeholders.</b>
11:07	CCO		Website updated with Demand Curtailment Notice CC-079.
11:09	CCO	CCO SMS Contacts	SMS text advising CC-079 has been published.
11:09	Stakeholder	CCO	Advising Notice not attached to email.
11:12	CCO	TSO & Stakeholders	Resent CCO-079 email with attachment.
11:16	CCO	TSO CCO Liaison	Asset owner statement requested.
11:17	Exercise Control	GIC	Phone call re curtailment notice submission. Discussion about whether media have been in contact. Not as yet.
11:20	CCO	GIC Media	Advised on curtailment notice submission. Request media support. Advised media release has been prepared. CCO will provide status notice on receipt of the Asset Owner report.
11:22	TSO	Stakeholders	OATIS (Vector) New Critical notice ID 72380 "Exercise Karaka" – Direction to Curtail Demand Notice CC-079" - Action Required. 11 minutes after CCO Notice issued.
11:26	TSO	Stakeholders	OATIS (Maui) New Critical notice ID 72381 "Exercise Karaka" – Direction to Curtail Demand Notice CC-079" - Action Required. 14 minutes after CCO Notice issued.
11:27	Exercise Control	BBK Control Room	Inject #3 emailed to Control Room.
11:31	TSO Media	CCO	Asset Ownership statement No.1 emailed.
11:37	TSO CC Liaison person	CCO	Update discussion re Inject #3. Estimated 72 hours to repair but this is weather dependent.

Time	From	To	Details
			Further curtailment required to Bands 5 & 6. Retailer Media appeals also requested. Asset owner statement will need to be revised.
11:37	Nova Energy	CCO	Email re curtailment compliance bounced-back from <a href="mailto:gas.control@firstgas.co.nz">gas.control@firstgas.co.nz</a> Forwarded to Firstgas for response. Various subsequent emails.
11:47	CCO	TSO CCO Liaison	Draft Revised Demand Curtailment notice sent for review. (CC-080)
11:49	CCO	GIC Media	Email authorising GIC as designated agency for media enquiries.
11:50	Greymouth	CCO	Email re bounce-back from gas.control@firstgas.co.nz for Compliance Updates.
11:58	TSO CCO Liaison	CCO	Security of Supply Update #3 issued. 31 minutes after inject #3 provided. Limited information and incorrect contact details. Next update 13:00.
12:01	TSO CCO Liaison	CCO	Confirmation that CC-080 draft revised curtailment notice is OK to send.
12:01	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Revised Demand Curtailment notice CC-080 emailed to TSO and Stakeholders.</b>
12:05	CCO		Website updated with Revised Demand Curtailment Notice CC-080.
12:09	CCO	CCO SMS Contacts	SMS text advising CC-080 has been published.
12:13	CCO	TSO CCO Liaison	Draft Retailers to Implement Media Appeals Notice CC-081 sent for review.
12:14	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID 72382 "Exercise Karaka" – Revised Direction to Curtail Demand Notice CC-080" - Action Required. 13 minutes after CCO Notice issued.
12:17	GIC Media	FGL media & CCO	Draft media release issued.
12:19	TSO	Interconnected Parties	OATIS (Vector) New Critical notice ID 72383 "Exercise Karaka" – Revised Direction to Curtail Demand Notice CC-080" - Action Required. 18 minutes after CCO Notice issued.
12:21	TSO CCO Liaison	CCO	Confirmation that CC-081 Retailers to Implement Media Appeals draft reviewed and OK.
12:30	<b>CCO</b>	<b>TSO &amp; Stakeholders</b>	<b>Retailers to Implement Media Appeals notice CC-081 emailed to TSO and Stakeholders.</b>
12:32	CCO		Website updated with Retailers to Implement Media Appeals notice CC-081.
12:33	CCO	CCO SMS Contacts	SMS text advising CC-081 has been published.

Time	From	To	Details
12:38	TSO Media	CCO	Final version of asset owner statement emailed.
12:38	Genesis	CCO	Phone call to advise Genesis are drafting media releases and will be reviewed internally and will follow the process required for lead retailer.
12:39	Contact Energy	CCO	Retailer and Large User compliance report. Advised to send to Firstgas as per the template.
12:41	TSO	Interconnected parties	OATIS (Maui) New Critical notice ID 72386 "Exercise Karaka" – Notice to Retailers to Implement Media Appeals Notice CC-081" - Action Required. 11 minutes after CCO Notice issued.
12:43	TSO	Interconnected parties	OATIS (Vector) New Critical notice ID 72387 "Exercise Karaka" – Notice to Retailers to Implement Media Appeals Notice CC-081" - Action Required. 13 minutes after CCO Notice issued.
12:47	CCO	TSO & Stakeholders	<b>Status Update Notice CC-082 emailed to TSO and Stakeholders.</b>
12:48	CCO		Website updated with Status Update Notice CC-082.
12:50	CCO	CCO SMS Contacts	SMS text advising CC-082 has been published.
13:11	Genesis Energy	Retailers	Draft media release for domestic consumer media appeals issued.
13:10	TSO	Interconnected parties	OATIS (Maui) New Critical notice ID 72388 "Exercise Karaka" – Firstgas Asset Owner Statement" - Action Required.
13:12	TSO	Interconnected parties	OATIS (Vector) New Critical notice ID 72389 "Exercise Karaka" – Firstgas Asset Owner Statement" - Action Required.
13:16	AMS / Transpower	CCO	Discussion Glenbrook Power participating in exercise to test their processes. Their curtailment in a real event would impact on power supply residual levels.
13:17	TSO	Interconnected parties	OATIS (Vector) New Critical notice ID 72390 "Exercise Karaka" – Status Update Notice CC-082" - Action Required. 30 minutes after CCO Notice issued.
13:19	TSO	Interconnected parties	OATIS (Maui) New Critical notice ID 72391 "Exercise Karaka" – Status Update Notice CC-082" - Action Required. 31 minutes after CCO Notice issued.
13:45	FGL Critical Compliance	CCO	Update on retailer curtailment compliance level. Low level of compliance reported so far.
13:50	TSO	CCO	Face to face discussion on curtailment compliance. Concern that compliance is very low (i.e., 4% band 4). TSO going to follow up directly with retailers.
13:54	TSO CCO Liaison	CCO	Security of Supply Update #4 issued. Next update 14:00
13:57	FGL Critical Compliance	CCO	Further update on curtailment compliance level with Contact Energy data added.

<b>Time</b>	<b>From</b>	<b>To</b>	<b>Details</b>
14:07	TSO CCO Liaison	CCO	Greymouth have responded and all customers curtailed. TSO is still following up on curtailment compliance levels. Exercise control advised that no further injects will be provided. Process to follow its course with retailer compliance etc.
14:36	TSO CCO Liaison	CCO	Advising that repairs should be complete by 13 May. Next update 3:30pm.
15:29	FGL Critical Compliance	CCO	Retailer curtailment compliance results summary.
15:35	CCO	Nova	Request copy of their media appeal
15:37	Nova	CCO	Copy of media appeal provided.
15:45	FGL Critical Compliance	CCO	Retailer curtailment compliance results summary.
15:52	Exercise Control	CCO Email Contacts	Email to advise Exercise Karaka has ended.
15:53	CCO	CCO SMS Contacts	Website updated to advise Exercise Karaka has ended.
15:56	CCO	Stakeholders	SMS to advise Exercise Karaka has ended.
15:58	TSO	Interconnected parties	OATIS (Maui) New Critical notice ID 72396 "Exercise Karaka" – "Exercise has ended." - Action Required.
15:59	TSO	Interconnected parties	OATIS (Vector) New Critical notice ID "Exercise Karaka" – "Exercise has ended." - Action Required.

## Appendix C – Notice Summary

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

All Firstgas TSO notices can be viewed on the OATIS website at: <https://www.oatis.co.nz> using 'Notice Search' button and begin date of 10/05/23

### CCO Notices to TSO

CCO Notice ID	Notice Type	Time CCO e-mailed Notice to TSO	Time TSO Published CCO Notice	
			OATIS (Maui)	OATIS (Firstgas)
CC-078	Critical Contingency Declaration	09:40	10:25	10:29
CC-079	Direction to Curtail Demand	11:05	11:22	11:26
CC-080	Revised Direction to Curtail Demand	12:01	12:14	12:19
CC-081	Retailers to Implement Media Appeals	12:30	12:41	12:43
CC-082	Status Update	12:47	13:10	13:12

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

## Appendix D - Asset Owner Public Statements and Retailer, GIC Media Releases



### Exercise Karaka - FGL Schedule 5(2) CCM Regulations Public Statement Template

Firstgas Limited – Transmission System Event Public Statement / Update:	
Report No:	Wednesday, May 10, 11.30am – No.1
What has <u>Happened?</u> :	Damage to the Firstgas Bay of Plenty Pipeline at Putāruru resulting in a significant gas escape.
Actions Being Taken to Effect Repairs:	Firstgas has isolated the Bay of Plenty pipeline between Arapuni East Main Live Valve and Lichfield Meter Station. An engineering assessment of the damage is underway.
Estimation of the Likely Duration of each Step of the Repair Process:	Estimated time to repair is still being assessed but will be at least 48 hours.
Estimated Time of When the Component will be Returned to Service:	Estimated time to repair is still being assessed but will be at least 48 hours.
Will the Component be Temporarily Restored to a Reduced Level of <u>Service?</u> :	No.

- 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)

**Exercise Karaka - FGL Schedule 5(2) CCM Regulations Public Statement Template**

Firstgas Limited – Transmission System Event Public Statement / Update:	
<b>Report No:</b>	Wednesday, May 10, 12.45 – No.2
<b>What has <u>Happened?</u>:</b>	<p>Damage to the Firstgas Bay of Plenty Pipeline at Putāruru resulting in a significant gas escape.</p> <p>Firstgas has isolated the Bay of Plenty pipeline between Arapuni East Main Line Valve and Lichfield Meter Station.</p> <p>Field crews have been mobilised to site.</p> <p>The CCO has directed load curtailment up to and including Bands 5 and 6 to stabilise the transmission system downstream of the isolated section while the repairs are carried out.</p> <p>The CCO has instructed Retailers to commence media appeals for domestic consumers to reduce their gas usage, in accordance with their Retailer Curtailment Plan (Regulation 43(4)).</p>
<b>Actions Being Taken to Effect Repairs:</b>	<p>Firstgas has isolated the Bay of Plenty pipeline between Arapuni East Main Line Valve and Lichfield Meter Station.</p> <p>An engineering assessment has identified that the pipeline has been dented and gouged. The damaged section will need to be cut-out and replaced.</p>
<b>Estimation of the Likely Duration of each Step of the Repair Process:</b>	Estimated time to repair is 72 hours based on suitable weather conditions.
<b>Estimated Time of When the Component will be Returned to Service:</b>	Estimated time to repair is 72 hours based on suitable weather conditions.
<b>Will the Component be Temporarily Restored to a Reduced Level of <u>Service?</u>:</b>	No.

- 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)

**As supplied by Genesis on behalf of the retailer protocol**

## **Media statement**

**10 May, 2023, 12.45pm**

### **Gas emergency sparks reduce call to consumers**

Residential and commercial gas consumers have been asked to urgently reduce gas use after damage to a pipeline at Putāruru has caused a significant gas leak.

Regions affected are Bay of Plenty, Rotorua, Taupō and Gisborne. It is expected to take 72 hours to repair the Firstgas Bay of Plenty pipeline.

In response to the critical contingency emergency, gas curtailment notices have been issued to industrial, medium and small commercial gas consumers.

As the gas supply system has not stabilised, gas retailers are now asking residential consumers in the affected areas to reduce their gas usage to a minimum until further notice.

Any commercial customers who have not yet been contacted by their retailer should cease using gas in anticipation of being directed to do so by their retailer.

Genesis Energy's Acting Chief Customer Officer Cameron Jardine says the conservation measures are designed to extend the availability of gas for as long as possible while efforts are made to restore normal supply.

"Public safety is the number one concern, and field crews have been mobilised to the site at Putāruru," said Jardine. "New information will be provided as it comes to hand."

Jardine asked consumers to note they should not turn off their gas service valve at the gas meter.

"Gas is still safe to use. The issue is one of supply. We are simply asking consumers to reduce use of gas as much as possible by not using gas appliances such as gas-fired heaters, stoves, hobs, and gas-heated hot water, or only using appliances sparingly."

***This message is provided by the following retailers – Genesis Energy, Contact Energy, Frank Energy, Mercury, Pulse Energy, Switch Utilities and Trustpower.***

ENDS

**For further information, please contact:**



**As supplied by Nova**

## **Media Statement**

# **Media appeal to domestic natural gas consumers**

This is a message for residential natural gas consumers in the greater Bay of Plenty, Gisborne, Rotorua, and Taupo regions.

The First Gas Bay of Plenty Pipeline at Putāruru has been damaged resulting in a significant escape of natural gas.

As a result of this incident, a critical contingency emergency is now in effect for the greater Bay of Plenty, Gisborne, Rotorua, and Taupo regions. We are asking natural gas consumers, except for those with approved critical designations, to stop using their natural gas immediately.

Any consumers who have not yet been contacted by their retailer should cease using gas in anticipation of being directed to do so. These conservation measures are designed to extend the availability of natural gas for as long as possible while repair work is complete to restore normal supplies.

Public safety is our number one concern, and field crews have been mobilised to the repair the pipeline.

The estimated time to resolve this incident is approximately 72 hours. New information will be provided as it comes to hand.

Please note we do not want consumers to turn off their natural gas meters valves. All we are seeking is all consumers in the affected areas to stop using all natural gas by ceasing to use their gas appliances for example, gas-fired heaters, stoves/hobs, and hot water.

Essential service business, hospitals and rest homes with approved critical designations are not affected at this stage.

**ENDS**

Further information contact:

## As supplied by GIC

10 May 2023

Immediate release

### **Exercise Karaka: Gas Critical Contingency Event (exercise)**

The Gas Industry Critical Contingency Operator has declared a Critical Contingency due to damage to the Firstgas Bay of Plenty Pipeline at Putāruru, resulting in a significant gas escape.

As a result, the Critical Contingency Operator considers that a breach of a downstream pressure threshold is unavoidable. The Critical Contingency Operator has issued a notice to gas users in band 3, 4, 5 and 6 in Rotorua, Taupo, the Bay of Plenty and Gisborne areas to curtail their demand to stabilise the system while repairs are carried out.

There are no Band 0, 1 or 2 consumers in the part of the transmission system affected by the pipeline damage.

Firstgas has isolated the Bay of Plenty pipeline between Arapuni East Main Live Valve and Lichfield Meter Station. An engineering assessment of the damage is underway and field crews are on site. Estimated time to repair is not known but will be at least 72 hours.

For further information relating to either the asset or estimated time of repair, please contact Firstgas Ltd.

ENDS

Contact: John Pagani, Gas Industry Co, 021 570 872, [john.pagani@gasindustry.co.nz](mailto:john.pagani@gasindustry.co.nz)

Issued by Gas Industry Co on behalf of the Critical Contingency Operator. Gas Industry Co is the industry-owned co-regulator of the gas industry. The incident is managed by the gas asset owner.

### **Information about critical contingency management and curtailment**

The critical contingency operator makes a declaration of a critical contingency if pressure on the transmission pipelines falls below a threshold. The operator will call for certain consumers to stop using gas to stabilise pressure in the transmission pipelines. Many critical contingencies can be managed by curtailing only the load from large petrochemical and power generation plants. The CCO issues curtailment directions to transmission system owners, who relay them to large consumers and to retailers, who in turn notify their customers. Customers who are required to curtail demand will receive an urgent notice from their retailer or transmission system owner.

More information is available here: [Critical Contingency Operator - Current Event \(cco.org.nz\)](https://cco.org.nz)