



CCO ANNUAL EXERCISE 2020

Exercise Hohoro

Test of the First Gas Ltd Critical Contingency Management Plan

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

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Critical Contingency Operator
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Acknowledgment

This exercise was carried out under Level 3 of the COVID-19 pandemic and the associated workplace restrictions. Despite this, industry participants were supportive of the exercise during the planning, execution and feedback phases. These contributions are recognised and appreciated and have assisted in identifying valuable improvement opportunities, as well as demonstrating an extra level of process resilience.

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 test exercises. These exercises should test that:

- the Critical Contingency Management Plan (CCMP) complies with regulation 25 and achieves 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 required by regulation 43 is current.

A test exercise, “Exercise Hohoro” was carried out on 6 May 2020. The exercise required the CCO, TSO, Asset Owners, Large Consumers and Retailers to carry out tasks and activities associated with the regulations, CCMP and other relevant documents.

After the exercise, regulation 34 also requires that:

- within 10 business days of the exercise the Transmission System Owner (TSO) must provide a report to the CCO explaining why it’s CCMP does or does not comply with regulation 25 and gives effect to the purpose of the regulations; identifies improvements and recommends CCMP amendments.
- within 10 business days of receiving the TSO report, the CCO provides a report to the industry body that assesses the effectiveness of the CCMP; evaluates any amendments recommended by the TSO; and identifies any amendments to the regulations, CCMP, communications plan or information guide that would improve the effectiveness in achieving the purpose of the regulations.

This report on Exercise Hohoro for the industry body is based on:

- the CCO’s pre-test exercise audit of the TSO
- the TSO post exercise report
- Retailer self-assessment forms and feedback
- Feedback from other participants
- the CCO’s own observations.

After completion of the exercise and the required reporting, a change process occurs to implement any recommendations arising, with consultation where appropriate.

2. Executive Summary

Exercise Hohoro 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 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.

Due to the Covid-19 Level 3 restrictions across New Zealand at the time of the test exercise, the majority of participants were working from their homes to respond to the event and made use of online technologies to support communications and sharing of key information and documentation.

The exercise tested the core critical contingency phases and information flows associated with an event, such as declaration, demand curtailment and CCO public information statements. Retailers and Large Consumers were issued with curtailment instructions and provided a consumer compliance update.

Evidence from this exercise indicates that:

- Overall, the TSO demonstrated a good understanding of its role and responsibilities for critical contingency events and is well prepared to respond. The TSO met the specified regulatory timeframes but did not meet all the supplementary timeframes for providing information to the CCO during the exercise. This was primarily due to the people providing the information working from home.
- The level of engagement in the exercise by Retailers with respect to testing emergency contact details was less than optimal as has been the cases in previous exercises. Only three Retailers elected to contact a high percentage of their consumers that would have been affected by the scenario to test that the details they held were correct. Two Retailers contacted a small sample of consumers. Three Retailers elected not to contact any consumers and five Retailers did not provide any feedback or evidence of testing consumer contact details.

All Retailers have a Retailer Curtailment Plan which sets out their process for contacting their consumers. However, it is not clear from this exercise if those processes for all Retailers are robust and have been tested.

- The one Large Consumer affected by the exercise scenario demonstrated an understanding of their responsibilities for critical contingency events.
- Producers and the Electricity System Operator were not directly affected by this year's regional scenario, but communications were still tested.

The CCO concludes from this exercise that:

- The CCMP complies with regulation 25 and is effective in achieving the purpose of the regulations.
- The CCMP substantially contains the contact details required by regulation 25 and that they are current. However, this evidence is not without deficiencies and further work is required in the management and maintenance of contact details.
- The exercise provided only limited evidence to conclude that the list of emergency contact details maintained by all Retailers required by regulation 43 is current.

This report makes recommendations in Section 5 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 the TSO is current.
- improve the level of confidence that the list of emergency contact details maintained by all Retailers required by regulation 43 is current.

3. Exercise Scenario

The exercise scenario was designed and managed by the CCO. The scenario centered on 3rd party damage to the First Gas North Pipeline at Pukekawa north of Huntly resulting in a gas escape. The test scenario resulted in a loss of gas supply into the Auckland and Northland sections of the transmission system, with the need to curtail demand connected to those sections of pipeline until repairs could be completed.

The exercise required the CCO, TSO, Retailers and a Large Consumer to carry out tasks and activities associated with the regulations, CCMP and other relevant documents.

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

Due to the Covid-19 Level 3 restrictions across New Zealand at the time of the test exercise, First Gas elected to manage this exercise with an Emergency Response Team (ERT) who were all working from their homes, rather than assembling in the First Gas New Plymouth offices.

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 injects are detailed in Appendix A.

4. Summary of Assessment against Test Criteria

4.1. CCO Assessment

The CCO considers that the test exercise:

- provided sufficient evidence to conclude that the CCMP complies with regulation 25 and is effective in achieving the purpose of the regulations.
- provided evidence to conclude that the contact details contained in the CCMP as required by regulation 25 are substantially current. However, this evidence is not without deficiencies and further work is required in the management and maintenance of contact details.
- provided only limited evidence to conclude that the list of emergency contact details maintained by Retailers required by regulation 43 is substantially current given that:
 - three Retailers elected to contact a high percentage of their consumers to test that the details they held were correct.
 - two Retailers contacted a small sample of consumers.
 - three Retailers elected not to contact any consumers
 - five Retailers did not provide feedback or evidence of testing consumer contact details.

The CCO has made recommendations in Section 5 to:

- 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 the TSO is current.
- improve the level of confidence that the list of emergency contact details maintained by Retailers required by regulation 43 is current.

4.2. TSO Assessment

Exercise Hohoro was the fourth formal test of the current First Gas CCMP. First Gas considers that the CCMP complies with Regulation 25 and when implemented during the test exercise gave effect to the purpose of the CCM Regulations.

First Gas has identified actions to improve the efficiency of processes and procedures to support application of the CCMP but does not consider there is a need to amend the First Gas CCMP based upon the outcomes of Exercise Hohoro alone.

An update of the CCMP was scheduled to be completed to coincide with the development of the new Gas Transmission Access Code (GTAC) which will replace the current Vector Transmission and Maui Pipeline Operating Codes. As part of this update, First Gas also proposed to revisit notification mechanisms and the potential for increased digital utility as part of the new IT platform designed to support the GTAC. However, this update has been delayed as a result of the deferral of the wider GTAC implementation project.

First Gas is now in the process of developing a set of more immediate amendments to the CCMP that was used and tested during Exercise Hohoro. Such changes will include:

- Updates to some of the pressure threshold triggers set out in section 5;
- Updates to the list of applicable stakeholders; and
- Suggestions made by customers during last year’s consultation process that are not specifically GTAC-related.

5. Recommendations

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

Item	Recommendation	Responsible
1	<i>Review the CCMP and amend pressure threshold as recommended in the Pressure Thresholds Review Paper.</i>	TSO
2	<i>Provide a report to the CCO that clearly shows who receives email and/or sms notifications when a Critical Contingency notice is posted on OATIS (a ‘public’ notice in OATIS).</i>	TSO
3	<i>Ensure there is at least one contact in OATIS for every affected party identified in the CCMP Appendix 4.</i>	TSO
4	<i>Ensure that the OATIS replacement project includes the functionality for CCMP contacts details to be effectively managed and maintained.</i>	TSO
5	<i>Investigate the cause of the failure of the email alerts on the First Gas side of OATIS to be sent.</i>	TSO
6	<i>Modify the Communications Protocol to specify that written Periodic Updates should be provided within 30 minutes of a material changes to conditions and undertake staff training to ensure TSO team members are aware of the importance/urgency of these communications.</i>	TSO/CCO
7	<i>Review the Communications Protocol to support the use of MS Teams for CCO/TSO collaboration on preparing and agreeing Notices.</i>	TSO/CCO
8	<i>Gas Industry Company engages with Retailers to ensure they test their critical contingency customer contacts prior to or during the next annual exercise and provide evidence of such testing.</i>	GIC
9	<i>Document an approved process for the compilation and distribution of Compliance Updates.</i>	TSO
10	<i>Consider Retailer and Large Consumer feedback on the Compliance Update template as part of the implementation of the new GTAC IT platform.</i>	TSO

6. Pre-Exercise Audit of TSO by CCO

The pre-exercise elements were audited on the 28 April 2020 (1 week prior to the actual exercise date). All items were audited by holding a pre-arranged telephone conference with the First Gas Systems Control Manager and Senior Transmission Commercial Advisor.

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

6.1.1. Thresholds:

Five previous annual exercise pre-audits have made recommendations that the rationale for each threshold be documented to clearly establish whether each threshold is still representative for that part of the system or whether it needs to be reviewed considering any system changes.

The TSO made progress on this action and has prepared a Pressure Thresholds Review Paper that sets out the rationale for each threshold. It also recommends some changes to the current threshold settings and changes to Schedule 1 in the Regulations.

During the audit, the TSO advised that the document has been finalised and was going through the required internal First Gas document management approval process. This process was completed after the exercise had been carried out and was issued to the CCO on 18 May 2020.

6.1.2. SCADA System Alarms

Due to the COVID-19 restriction in place at the time of the audit, the TSO self-checked the threshold alarm settings in SCADA and reported them to be correct.

6.2. 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).

The TSO is planning a review of the CCMP to modify some of the pressure thresholds as outlined in the Pressure Thresholds Review Paper.

Recommendations:

1. *Review the CCMP and amend pressure thresholds as recommended in the Pressure Thresholds Review Paper.*

6.3. 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 Emergency Response Plan has been reviewed during the year by the TSO to reflect some organisational and procedural changes.

A more in-depth overhaul of the Emergency Response Plan is underway with the assistance of external specialists and will be implemented within the next 12 months.

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

An OATIS contacts list was provided by the TSO.

The contacts are used by the OATIS system to automatically send emails and SMS text messages to the affected parties alerting them to the existence of the full notices in OATIS. The full notice is not sent with the email or text alert and affected parties must access the notices on the OATIS website.

The following observations are made from a review the list provided:

- It is not clear who receives email and/or sms notifications when a Critical Contingency notice is posted on OATIS.
- From the list of contact emails there are email addresses that are no longer relevant and there are no email addresses listed for some stakeholders e.g. GIC.
- There are organizations listed in Appendix 4 of the CCMP that are not listed on the contact lists (First Gas, Bay of Plenty Energy, Origin Energy, TAG Oil, Cheal Petroleum, Westside NZ Ltd, Fonterra).
- The Maui and FGL lists both come out as one list although the title on the list suggests that the list is Maui specific, when in fact it is for both sides of OATIS.

The findings from this pre-exercise audit are in-line with the findings from previous audits. The management and maintenance of the contact lists remains an opportunity for improvement. Last year, the emphasis was improving this as part of the OATIS replacement project, however this has been delayed until October 2021 at the earliest.

Recommendations:

- 2. Provide a report to the CCO that clearly shows who receives email and/or sms notifications when a Critical Contingency notice is posted on OATIS (a 'public' notice in OATIS).***
- 3. Ensure there is at least one contact in OATIS for every affected party identified in the CCMP appendix 4***
- 4. Ensure that the OATIS replacement project includes the functionality for CCMP contacts details to be effectively managed and maintained.***

7. TSO Exercise Test Criteria and Observations

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

Demand curtailment notices were issued successfully and in accordance with the CCMP. A summary of the notices issued by the CCO to the TSO and by the TSO to relevant parties are included in Appendix C.

The CCMP states that *“In the interest of timely notification, First Gas elects to create a PDF of the notice issued by the CCO and attaches it to the published OATIS notice”*. This approach has been adopted for several years and is reinforced by the CCO during the annual industry training.

In this exercise, the CCO elected to not test the demand restoration processes.

7.2. 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 First Gas CCMP details the communication plan. The communications plan describes the notices that the TSO will issue to affected parties during a critical contingency event, the reciprocal communications and the timeframes under which those communications will take place.

During the exercise it was noted that the email alerts for any of the exercise related OATIS notices on the First Gas side of OATIS were not being sent or received. SMS alerts were functioning in accordance with the communication plan set out in the CCMP and all notification mechanisms on the Maui OATIS side (SMS and email) operated as anticipated. This could have led to delays in Large Consumers and Retailers becoming aware of the critical contingency and demand curtailment instructions. First Gas investigated the email notification issue during the exercise and resolved it later that day, however the root cause of this issue has yet to be confirmed.

Recommendations:

- 5. Investigate the cause of the failure of the email alerts on the First Gas side of OATIS to be sent.**

7.3. 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 First Gas 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 First Gas and the CCO at the start of the exercise via the First Gas Control Room and to the nominated person who is the Transmission Duty Officer. The Duty Officer became the Incident Controller.

7.4. 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 First Gas CCMP details the steps taken for considering alternative restoration arrangements. In this exercise, the demand restoration process was not tested.

7.5. 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 VTC respectively. This section also describes how First Gas will properly integrate the contingency imbalance regime prescribed in the CCM Regulations with First Gas's business-as-usual regime under section 8 of the Vector Transmission Code (VTC).

The CCO determined that the facts of Exercise Hohoro constituted a "regional" critical contingency so no critical contingency imbalances would be required for this event.

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

Sections 3.8 and 4 of the First Gas CCMP address communications with, and the provision of information to, the CCO. The document refers to the CCO Communications Plan for the detail. The exercise was carried out in a manner consistent with the current CCO Communications Plan.

Detailed communication was also managed through the CCO's Communications Protocol. The Communications Protocol sets out the information requirements that apply to the TSO during normal system conditions, as well as during abnormal system conditions which do not amount to a potential or actual critical contingency. These requirements are consistent with sections 38 and 38A of the regulations. A summary of the Communications Protocol is provided in Appendix 11 of the CCO's Communications Plan.

Whilst most communications were carried out in a manner consistent with the First Gas CCMP and the CCO Communications Plan there were occasions where the requirements of the Communications Protocol were not met:

- The first Security of Supply Update provided by the TSO to the CCO took 39 minutes to send after the first interject had be introduced by the CCO. This exceeds the required timeframe of 30 minutes.
- Security of Supply Updates two and three from the TSO took 33 minutes and 41 minutes respectively to send to the CCO. Section 3.4 of the CCO Communications Protocol states that the timeframe for written Periodic Updates is in accordance with the agreed periods. Although no specific periods were agreed in terms of these updates, the TSO does acknowledge that these should ideally have been within a 30-minute window.
- Security of Supply Update five from the TSO to the CCO indicated no changes to status since the

previous update. However, the CCO had introduced interject four some 31 minutes prior to the Security of Supply Update being sent. Therefore, Security of Supply Update five should have contained the new information from interject four.

The primary reason for the above delays was due to the people providing the information working from home and not being fully aware of the required timeframes. However, the overall communication processes used were consistent with those described in the CCMP.

Not all processes in the Communications Protocol were needed and therefore not tested.

Recommendations:

- 6. Modify the Communications Protocol to specify that written Periodic Updates should be provided within 30 minutes of a material changes to conditions and undertake staff training to ensure TSO team members are aware of the importance/urgency of these communications.***

**7.7. 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 First Gas will communicate with the CCO in accordance with the CCO Communications Plan.

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, as outlined in section 7.6, the TSO did not meet all the supplementary timeframes for providing information to the CCO during the exercise.

7.8. Is the CCMP consistent with the MPOC and VTC? [r25(2)]

No inconsistencies between the CCMP and MPOC or VTC were observed as a result of this exercise.

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 09:03. The TSO subsequently alerted the Duty CCO and requested they contact Gas Control. The CCO called Gas Control and the Operator briefed the CCO on the event based on the first inject. The Operator relayed the system conditions described in the inject and advised that further investigations were being initiated. The CCO noted that the situation sounded concerning and requested a further call as soon as the TSO had assessed situation.

Gas Control called the CCO at 09:18 to advise of a possible blockage in the pipeline north of Rotowaro and potentially a Main Line Valve had closed. Field staff were being mobilised to investigate. The Operator requested that the CCO call the TSO Duty Officer.

The CCO and TSO Duty Officer discussed and agreed that a Potential Critical Contingency notice should be issued while further investigations were being carried out. A Potential Critical Contingency Notice was subsequently issued at 09:52.

At 10:20, the CCO was informed of a loss of containment on the First Gas North Pipeline. The timeframe to repair was not known but was potentially 36 – 48 hours. The CCO determined that a breach of Westfield pressure threshold was unavoidable and gave notice to the TSO that a critical contingency was being declared at 10:30 on 6 May 2020 and written notice would be issued as soon as possible. The critical contingency declaration notice was subsequently issued to the TSO and published on the CCO website within required timeframes.

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

The CCO determined that this scenario constituted a regional critical contingency, and this was notified as a part of the declaration notice.

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. As outlined in section 7.6 above, some of these timeframes were not fully achieved.

The Communications Protocol process also includes steps for the TSO to review the CCO's draft notices. While this was achieved during the exercise it became apparent that this process could be expediated by reviewing the notices via a medium such as Microsoft Teams.

The notices were sent to the correct parties and stakeholders and contained the correct information and were given within required timeframes. One CCO Status Update Notice was issued with the incorrect notice number however this was identified by the TSO and quickly rectified before the notice was posted on OATIS.

Recommendations:

- 7. Review the Communications Protocol to support the use of MS Teams for CCO/TSO collaboration on preparing and agreeing Notices.***

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

In addition to the damage to the First Gas North Pipeline, First Gas had advised that the First Gas 200mm Kapuni Pipeline which feeds from Rotowaro to Auckland in parallel with the main North pipeline, was isolated for maintenance at a location north of Rotowaro. At this stage it was not known if this pipeline could be returned to service to provide an alternate supply (albeit at a reduced capacity). Given this uncertainty, the CCO issued instructions at 11:32 for curtailment to Band 4 to remove the large loads from the system.

The CCO was able to advise the TSO that Load Modelling indicated that without the 200mm Kapuni Pipeline being available, load curtailment up to and including Band 7 would be required along with media appeals to restrict gas usage. This curtailment would provide a system survival time of approximately 36 hours.

The TSO was subsequently able to confirm that the 200mm Kapuni Pipeline could be brought back into service. The CCO determined that further load curtailment would not be required.

There was a well-reasoned approach to determining proposed curtailment and exploring alternative supply, bolstered by checking with the TSO and obtaining clear agreement.

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 two-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 SCADA Data File Transfer Process provides data files for the load model. During events, files are provided at 20-minute intervals. In addition, the TSO is able, when requested, to provide the most recent SCADA data file either by email or by copying it on to a USB stick and handing it to the CCO. This process helps eliminate any delays associated with the SCADA Data File Transfer Process.

During the exercise, when the TSO switched the SCADA data files to “event” mode at the CCO’s request, the delivery of files successfully changed from 1 hour to twenty-minute intervals.

8.7. CCO publishes information [r54A, Schedule 5]

The CCO had obligations to provide public statements in accordance with Schedule 5 of the regulations. During the exercise, the CCO requested that First Gas provide information that would inform the CCO’s Status Update Notice.

First Gas was able to provide a Draft Asset Owner Statement that was reviewed in conjunction with the CCO. Information from this statement was incorporated in the CCO Status Update Notice which was published at 12:52.

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.

The Exercise Event Log demonstrates that the CCO performed the required tasks in accordance with the performance standards. For this exercise the three key persons authorised to perform the CCO role all operated from home and were able to collaborate effectively using videoconferencing communications.

9. Retailers and Large Consumers Exercise Test Criteria & Observations

9.1. Participation

All Retailers were requested to participate in the exercise and issued with a Participants Briefing on 2 April 2020. A reminder for the exercise was issued on 1 May 2020

As part of the exercise, Retailers were 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 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).

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

Large Consumers also participated in the exercise and were observed to respond in accordance with the requirements of the CCMP.

9.2. Ensure the Retailer curtailment plan contains 24/7 contact information for each consumer installation [r43]

A summary of the feedback received from Retailers affected by the exercise is shown below.

Retailer	% of Band 3 & 3CP consumers impacted by the scenario and contacted during or adjacent to the exercise	% of Band 4 & 4CP consumers impacted by the scenario and contacted during or adjacent to the exercise	Processes for holding and maintaining emergency consumer contact details outlined?
Greymouth Gas	100%	100%	Yes
Vector (OnGas)	90%	78%	Yes
Mercury	NA	100%	Yes
Contact Energy	100%	3%	Yes
Genesis Energy	7%	0%	Yes
Trustpower	0%	0%	Yes
Nova Energy	0%	0%	Yes
MegaTEL	0%	0%	Yes
Hanergy	No feedback received		
Pulse Energy	No feedback received		
Switch Utilities	No feedback received		
Energyclub NZ	No feedback received		
Scholarship (NZ) Ltd	No feedback received		

Three Retailers, (Greymouth, Vector OnGas and Mercury) elected to contact a high percentage of their consumers to test that the details they held were correct.

Two Retailers (Contact Energy and Genesis Energy) contacted a small sample of consumers.

Three Retailers (Trustpower, Nova Energy and MegaTEL) elected not to contact any consumers and placed full reliance on their business as usual process for capturing and maintaining consumer contact details.

Five Retailers, (Hanergy, Pulse Energy, Switch Utilities, Energyclub NZ and Scholarship) did not provide any feedback or evidence of testing consumer contact details.

Some Retailers elected not to contact consumers due to the COVID-19 restrictions being in place and because some businesses were shut down anyway.

A specific part of the annual exercise specified in regulation 34 (1) (c) is to test that the list of emergency contact details maintained by Retailers in accordance with regulation 43 is current. Without the testing of at least a sample of Retailer contacts, a key part of the effectiveness of the annual exercise is lost. As has been found in previous exercises, there appears to be a reluctance by some Retailers to embrace testing of consumer contacts.

The Retailer Curtailment Plans are submitted to the Gas Industry Company who may be better positioned than the CCO to enforce the requirement for Retailers to test consumer contact details as part of an annual exercise.

Recommendation:

- 8. Gas Industry Company engages with Retailers to ensure they test their critical contingency customer contacts prior to or during the next annual exercise and provide evidence of such testing.***

9.3. Ensure the Retailer has up to date curtailment band information for each consumer [r43]

Those Retailers who provided a self-assessment report confirmed their consumers by band.

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

Retailers and Large Consumers provided curtailment compliance updates to the TSO using their Combined Large Consumer and Retailer Update Template. These were subsequently consolidated by the TSO into a single update and provided to the CCO. Observations with this process include:

- The TSO has identified that the process for consolidating and providing the compliance updates to the CCO should be formally documented and included in the First Gas Document Management System.
- One Retailer provided feedback that the template could be simplified and made more user-friendly.

Recommendation:

9. Document an approved process for the compilation and distribution of Compliance Updates.

10. Consider Retailer and Large Consumer feedback on the Compliance Update template as part of the implementation of TACOS platform to support the new GTAC.

9.5. Retailers to give urgent notice to their consumers affected by a CC direction [r56]

Those Retailers who provided a self-assessment report advised their processes for contacting consumers.

Three Retailers contacted all or most of their consumers. Two Retailers contacted a sample of their consumers to check contact details were correct. Three Retailers did not contact any of their consumers. Five Retailers did not provide any feedback to the CCO.

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 again highlighted that the time taken for Retailers to contact all consumers would vary significantly.

9.6. Retailers to Implement Media Appeals [r53]

The following Retailers are signatories to the Gas Retailers Communications Protocol: Trustpower, Contact Energy, Energy On-line, Genesis Energy, Mercury, Pulse Energy and Switch Utilities.

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 2020 is held by Contact Energy.

Media appeals were not required for this exercise scenario.

10. Asset Owners Exercise Test Criteria and Observations

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

First Gas was the affected asset owner in this exercise and information was provided to the CCO and published in accordance with the CCMP and associated processes.

Appendix A – Exercise Injects

09:05am Inject # 1 for TSO.

For the purpose of the exercise, Gas Control are to assume that the following information is now being presented in SCADA:

- Flow through Rotowaro Compressor Station has reduced from 24scms to 5scms.
- Outlet pressure at Rotowaro Compressor Station being maintained.
- The compressors are running.
- Flows and pressures on Morrinsville lateral remaining stable.
- Pressure at Papakura East inlet has dropped from 70barg to 65Barg.
- Pressure at Glenbrook DP is dropping.
- Pressure threshold at Westfield is showing 10 hours to 42bar.

10:00am Inject # 2 for TSO:

For the purpose of the exercise, Gas Control are to assume that they have received a call from the Fire Brigade who have been called to junction SH22 and Thompson Tonga Road in Pukekawa. The Fire Brigade advises that:

- There is a large gas escape in the paddock about 50m from Thompson Tonga Road.
- There is a large excavator in field near the gas leak.
- A contractor is on site has said they were installing land drains when the gas main erupted.
- The excavator driver has left site.
- The road has been closed and traffic is being diverted.

At the time of the call from the Fire Brigade, SCADA indicates:

- Flow through Rotowaro Compressor Station has reduced from 24scms to 5scms.
- Outlet pressure at Rotowaro Compressor Station being maintained.
- The compressors are running.
- Flows and pressures on Morrinsville lateral remaining stable.
- Pressure at Papakura East inlet and outlet has equalised to 62bar and is dropping.
- Pressure threshold at Westfield is showing 7 hours to 42bar.
- Inlet Pressure at all gas gates north of Rotowaro Compressor Station on SCADA are dropping.

11.00am Inject # 3 for TSO

For the purpose of the exercise, the Duty Officer is to assume that Field Staff who have arrived on site at Thompson Tonga Road in Pukekawa have provided the following information.

- The gas escape has stopped so the Glen Murray MLV and Pukekawa MLV must have both closed.
- The 400 North pipeline has been gouged and pierced by a 20-tonne excavator with a tiger tooth bucket.
- The excavator tooth has been scraped longitudinally along the top of the pipe at the 11 o'clock position. The gouge is approximately 80mm long and 10mm wide. The hole is approximately 40mm long at 5mm wide.

12.30pm Inject # 4 for TSO.

For the purpose of the exercise, the Duty Officer is to assume that the ER Team has provided the following update:

- Pipeline repairs teams have been mobilised and repairs are expected to take approximately 36 hours.
- A decision has been made to reinstate the 200 line.
- Estimated time to reinstate the 200 line = 4 hours.

15:00 Inject #5 for all participants

There will be no further injects for the exercise.

For this scenario which would span more than 24 hours, demand curtailment and 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 restored. Demand Restoration Notices and Critical Contingency Termination Notice will not be issued for this exercise.

Please continue with your involvement in the exercise as required until you are advised that the exercise has ended.

Any queries or feedback regarding this inject can be sent to cco@cco.org.nz or, for more urgent queries please call Exercise Control.

Appendix B – Exercise Timeline

Exercise Control Log

Please note this is a summary only of events. Not every communication has been noted in this report.

Event:	Exercise Hohoro	Date:	06/05/2020
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Time	From	To	Details
08:59	Exercise Control	All Participants	Exercise Hohoro has commenced – email & SMS Website updated to reflect exercise commenced
09:03	Exercise Control	TSO Gas Control	Inject #1 issued by email and followed up with phone call.
09:06	Gas Control	CCO	Gas Controller sends SMS to CCO requesting Duty CCO to contact Gas Control
09:07	CCO	Gas Control	CCO contacts Gas Control. Gas Controller relays information provided in Inject #1. Gas Control investigating further. CCO requested SCADA data be switched to Event Mode and Security of Supply alert to be sent. CCO advised intention to assess system conditions while further information on situation was obtained. CCO noted that the situation sounds concerning and would appreciate a further call when TSO has assessed situation.
9:18	Gas Control	CCO	Possible blockage in pipeline north of Rotowaro & field staff mobilised to investigate. Possibly a Main Line Valve closed. Request CCO to call TSO Duty Officer.
9:21	CCO	TSO Duty Officer	Duty Officer explained that it may be a possible blockage in the pipeline or a MLV closed. Field staff mobilised to site. Discussed and agreed need to issue a Potential Critical Contingency notice.
09:31	Contact Energy	Exercise Control	Unable to open Retailer Consumer Compliance Template from CCO website. However, quickly determined that it only occurs when attempting to save the file from the link itself.
09.39	CCO	TSO Duty Officer	Draft Potential Critical Contingency Notice CC-0054 based on discussions sent for review. (Security of Supply alert not yet received)
9:41	TSO Duty Officer	CCO	Discussed and modified Potential CC notice
09:42	Gas Control	CCO	Security of Supply Update #1 issued. 39 minutes after Inject #1 issued.
09:52	CCO	TSO & Stakeholder	Potential Critical Contingency notice CC-0054 emailed to TSO & Stakeholders.

Time	From	To	Details
09:56	CCO		Potential Critical Contingency notice CC-0054 published on website.
09:58	CCO	TSO & Stakeholders	SMS text advising CC-0054 has been issued.
10:00	CCO	Electricity System Operator	Confirmed they had received communications and that the scenario did not affect electricity generation
10:05	CCO	GIC	Briefed the GIC of the issue and that a potential notice had been issued
10:06	Exercise Control	TSO Gas Control	Inject #2 issued and followed up with phone call.
10:17	Gas Control	CCO	Gas Controller relays information provided in Inject #2. Request CCO to contact Duty Officer.
10:18	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID55978 "Exercise Hohoro – Potential Critical Contingency Declaration Notice CC-0054" - Action Required. 26 minutes after CCO Notice issued.
10:20	CCO	TSO Duty Officer	Discussed TSO assessment. Possible repair time 36 to 48 hours. CCO determines that breach of Westfield pressure threshold is unavoidable, and TSO concurs. CCO gives urgent notice (oral) to TSO that Critical Contingency is being declared at 10:30am and written notice will be issued as soon as possible. CCO commences preparing CC Declaration Notice.
10:36	CCO	TSO Duty Officer	Draft Critical Contingency Notice CC-0054 based on discussions sent for review. (Security of Supply alert not yet received)
10:37	CCO	TSO Duty Officer	Missed call, left message.
10:38	TSO Duty Officer	CCO	Duty Officer confirms Draft Declaration Notice looks correct.
10:40	Gas Control	CCO	Security of Supply Update #2 issued. 34 minutes after Inject #2 issued.
10:45	CCO	TSO & Stakeholder	Critical Contingency Declaration notice CC-0055 emailed to TSO & Stakeholders.
10:48	CCO		Critical Contingency Declaration notice CC-0055 published on website.
10:49	CCO	TSO & Stakeholders	SMS text advising CC-0055 has been issued.
10:51	CCO	NZRC	Confirmed large consumer was aware of event and its impact on their location, that curtailment instruction should be expected

Time	From	To	Details
10:53	Exercise Control	TSO Gas Control & Duty Officer	Inject #3 issued and followed up with phone call.
10:56	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID55980 "Exercise Hohoro – Critical Contingency Declaration Notice CC-0055" - Action Required. 11 minutes after CCO Notice issued.
11:06	CCO	TSO Duty Officer	Duty Officer confirms pipeline damage details. Estimating 36 to 48 hours to repair. Assessing ability to return the 200 pipeline to service. Discussed curtailment of Bands 1 to 4 to start reducing demand. CCO to prepare draft notice and send for review. Written Security of Supply update requested.
11:15	CCO	Methanex	Confirmed large consumer was receiving notifications, but that their location was not affected
11:17	CCO	TSO Duty Officer	Draft Demand Curtailment Notice CC-0056 based on discussions sent for review. (Security of Supply Update #3 not yet received)
11:18	CCO	TSO Duty Officer	Discussed draft curtailment notice. Duty TSO will call back.
11:23	TSO Duty Officer	CCO	TSO advised that Engineering investigating options for bringing the 200 pipeline back into service. Would need to lower pressure to 40 barg which is not feasible. Estimated repair time still 36-48 hours. CCO advised that Band 3 & 4 is estimated to provide around 17 hours. Band 7 and media appeals up to a maximum of 36 hours.
11:32	CCO	TSO & Stakeholders	Demand Curtailment notice CC-0056 emailed to TSO & copied to Stakeholders.
11:34	CCO		Curtailment notice CC-0056 published on website.
11:34	CCO	TSO & Stakeholders	SMS text advising CC-0056 has been issued.
11.34	TSO Gas Control	CCO	Security of Supply Update #3 issued. 41 minutes after Inject #3 issued.
11:41	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID55984 "Exercise Hohoro" – Direction to Curtail Demand Notice CC-0056" - Action Required. 9 minutes after CCO Notice issued.
11:41	CCO	GIC	Briefed GIC on progress and criticality of the reconfiguration of the pipeline regarding curtailment decisions
11:50	CCO	TSO Duty Officer	Request for Asset Owner Statement by 12:30pm to enable CCO to provide a public status update.
11:52	TSO Duty Officer	CCO	Request for Asset Owner Statement acknowledged.
12:09	NZ Refining	CCO	Advising that notices have been received and curtailment being implemented. Requesting to be included on future SITREPs.
12:26	Exercise Control	NZ Refining	Advice and request acknowledged.

Time	From	To	Details
12:30	TSO	CCO	MS Team Meeting established to review First Gas Asset Owner Statement.
12:31	TSO Gas Control	CCO	Security of Supply Update #4 issued advising estimated repair time.
12:33	TSO Duty Officer	CCO	MS Teams session to run through the First Gas asset owner statement. Looks good. Add point about investigating reinstatement of 200 pipeline.
13:26	TSO Duty Officer	CCO	Engineers have completed assessment and 200 pipeline can be reinstated temporarily at 86.2 barg and at full capacity for this scenario. It will be put into operation at 6pm (4.5 hours).
12:45	CCO	Transmission Schedulers	Advising that no email notifications have been received for First Gas Notices on OATIS.
12:47	TSO	CCO	First Gas Asset Owner Statement provided.
12:52	CCO	Stakeholders	Status Update notice CC-0057 emailed to Stakeholders & copied to TSO.
12:55	CCO		Status Update notice CC-0057 published on CCO website
12:56	CCO	Stakeholders	SMS text advising Status Update CC-0057 has been issued.
13:03	Critical Compliance	CCO	Curtailment compliance update provided by TSO.
13:11	NZ Steel	CCO	Advising that curtailment commenced at 12.20pm
13:17	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID55986 "Exercise Hohoro - Critical Contingency Status Update Notice - CC-0057" - Action Required
13.18	CCO	NZ Steel	Advising that compliance updates should be sent to TSO.
13:20	Exercise Control	TSO Gas Control & Duty Officer	Inject #4 issued and followed up with phone call.
13:40	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID55992 "Exercise Hohoro – First Gas Media Release"
13.52	TSO Gas Control	CCO	Security of Supply Update #5 issued advising no change to earlier actions and no further updates to be provided unless requested.
13.58	CCO	TSO Duty Officer	Draft Status Update Notice CC-0058 based on discussions sent for review. (No further information provided in SoS Update #5)
14:01	CCO	TSO Duty Officer	CCO confirms that Draft 2nd status update has been sent. Duty TSO will review and call back.
14:04	TSO Duty Officer	CCO	TSO confirms that Status Update Notice looks good. Minor change to format.
14.08	CCO	Stakeholders	Status Update notice CC-0058 emailed to Stakeholders & copied to TSO.
14:12	CCO		Status Update notice CC-0058 published on CCO website
14.14	CCO	Stakeholders	SMS text advising Status Update CC-0058 has been issued.

Time	From	To	Details
14:16	TSO Duty Officer	CCO	Advised that Status Update notice CC-0058 has the wrong notice number on it (CC-0057).
14:20	Critical Compliance	CCO	Further curtailment compliance update provided by TSO.
14:21	CCO	Stakeholders	Status Update notice CC-0058 re-issued with correct Notice number to Stakeholders & copied to TSO.
14:25	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID55996 "Exercise Hohoro - Critical Contingency Status Update Notice - CC-0057" - Action Required
14:20	Critical Compliance	CCO	Curtailment compliance update regarding NZ Refining provided by TSO.
14:45	Exercise Control	All Participants	Email to all participants to advise that no further injects will be issued and Demand Restoration and Termination notices will not be issued for the exercise.
15:17	Exercise Control	All Participants	Advised that exercise has ended
15:20	CCO		Website updated to reflect Exercise Hohoro has ended.
15:21	Exercise Control	Stakeholders	SMS text advising that Exercise Hohoro has ended.
15:24	Exercise Control	Retailers	Requested feedback on testing on Retailer Curtailment Plans and provided optional template
15:35	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID56000 "Exercise Hohoro - Exercise Termination." - Action Required

Appendix C – Notice Summary

All CCO notices can be viewed in full on www.cco.org.nz – Historical Events

All First Gas TSO notices can be viewed on www.oatis.co.nz – First Gas Information Exchange, using ‘Notice Search’ button and begin date of 06/05/20

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-0054	Potential Critical Contingency Declaration	09:52	10:17	10:22
CC-0055	Critical Contingency Declaration	10:45	10:55	10:57
CC-0056	Direction to Curtail Demand	11:32	11:40	11:43
CC-0057	Status Update	12:52	13:16	13:17
CC-0058	Status Update	14:21	14:24	14:26

The exercise was ended without moving through the termination phase.

Appendix D – Retailer Curtailment Plan Test Report Template

Retailer Name:								
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.								
Curtailment Bands:		3	3CP	4	4CP	5	6	7
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?	