



Maui Development Limited
Proposed Critical Contingency
Management Plan

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

Last updated 17 July 2009

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1.0 Introduction

1.1 Purpose

This Critical Contingency Management Plan (CCMP) has been prepared by Maui Development Limited (*MDL*) in compliance with its obligations as a transmission system owner (TSO) under the Gas Governance (Critical Contingency Management) Regulations 2008 (The Regulations).

The stated purpose of The Regulations is to “achieve the effective management of critical gas outages and other security of supply contingencies without compromising long-term security of supply” [r3]¹.

1.2 Scope

Section 25 of The Regulations specifies the content to be included in a CCMP. The Regulations are included with this document as Attachment 1.

1.3 Relationship with the MPOC

The Regulations define the relationship between a TSO’s CCMP and its operating code. To avoid doubt the provisions describing this relationship are provided here:

- “A proposed critical contingency management plan must be consistent with MPOC, VTC, or any other transmission system code except to the extent necessary to comply with these regulations.” [r25 (2)]; and
- “A payment under these regulations in relation to a contingency imbalance discharges in full any payment obligation or liability under MPOC, VTC, or any other transmission system code in respect of the same contingency imbalance.” [r81 (1)]; and
- “This regulation does not limit regulation 13(2) and (3).” [r81 (2)].

It is important for readers to understand that the MPOC continues to apply during a critical contingency, and is subject only to the relevant provisions of The Regulations. In this regard *MDL* will continue to perform its role and duties under the MPOC to the extent consistent with the relevant regulations. *MDL* will continue to act as a *Reasonable and Prudent Operator*, and whenever possible, and consistent with The Regulations and CCMP will use MPOC mechanisms and instruments where necessary to give affect to the results of the application of The Regulations.

¹ Note that references contained in square brackets cite applicable provisions from The Regulations

1.4 Roles during a critical contingency

The roles of the CCO and *MDL* during a critical contingency are described in The Regulations. *MDL* as a TSO during a critical contingency is required to “comply with the directions of the CCO” [r54 (a)], and based on those directions, *MDL* must “issue directions to retailers and large consumers” in accordance with The Regulations, and in a manner consistent with this CCMP and the communications plan contained within [r54 (b) (ii)].

1.5 Terminology

This CCMP uses terminology defined in both The Regulations and the MPOC. To avoid confusion, MPOC terminology is italicised in this CCMP.

2.0 Pre-critical contingency

2.1 Potential critical contingency

The MPOC sets out *MDL's* rights and obligations before a critical contingency. If *MDL* suspects that an *Emergency, Contingency Event, Force Majeure Event, Pipeline Contingency Event, Pipeline Emergency*, or an interruption under Section 15 of the MPOC could result in a critical contingency on the *Maui Pipeline*, then it will use its reasonable endeavours to notify affected *Shippers* and *Welded Parties* as early as reasonably practicable².

If it is likely that an *Emergency, Contingency Event, Force Majeure Event, Pipeline Contingency Event, Pipeline Emergency*, or an interruption under Section 15 of the MPOC will result in a breach of the critical contingency threshold for the *Maui Pipeline*, then *MDL* will inform the CCO by telephone and confirm the details in writing. Information provided to the CCO will include details of the parts of the transmission system affected and predictions on when the issue could be resolved. When the issue has been resolved, *MDL* will inform the CCO by telephone and confirm the details in writing.

2.2 Events that may cause threshold breaches, and remedy actions

The following events may result in a breach of the critical contingency threshold for the *Maui Pipeline*:

- Loss or reduction of supply from a gas producer(s).
- A *Receipt Point Welded Party* (including a *TP Welded Party*) injecting less than its *Scheduled Quantity* in to the *Maui Pipeline*.
- Loss or reduction in compression capacity.
- Pipeline defect or damage causing temporary de-rating of pipeline – no loss of containment.
- Pipeline defect or damage causing loss of containment.
- Main line valve malfunction causing isolation of downstream pipeline.
- A *Delivery Point Welded Party* (including a *TP Welded Party*) taking more than its *Scheduled Quantity* from the *Maui Pipeline*.

Prior to any breach of the critical contingency threshold, each of these events would be managed in accordance with the MPOC. *Section 15* of the MPOC contains provisions that allow *MDL* under certain circumstances to curtail *Approved Nominations, Scheduled Quantities* and gas flow at *Welded Points*. In addition, *MDL* is required under but subject to, the MPOC to use its reasonable endeavours to

² MPOC, Section 15.3

maintain a *Contingency Volume* for use during a *Contingency Event, Maintenance or Force Majeure Event*³.

The introduction of off-specification gas is considered to be a credible system threat. However it is unlikely that this would give rise to a breach of the threshold. *MDL* employs a number of controls and monitoring procedures to protect against this event occurring and has plans and equipment available to deal with it.

MDL also has comprehensive emergency response plans, which are activated by a variety of scenarios including physical damage or limitations to the *Maui Pipeline* and unplanned supply interruptions. *MDL's Technical Operator* operates a 24/7 Gas Operations Control Centre (GOCC) which is also used as an emergency control centre when emergency response plans are activated. Emergency response capability is tested and evaluated by either a trial exercise or training exercise on a regular basis.

Once a critical contingency has been declared by the CCO these remedial actions may continue to be taken, if appropriate, in combination with load curtailment instructions given by the CCO.

Note that the *Maui Pipeline* critical contingency threshold required under r25 (1) (a) is described in Section 4.2.

³ MPOC, Section 15.5.

3.0 Communications Plan

3.1 Purpose and objective

The purpose of this communications plan is to describe the notices that *MDL* will issue during a critical contingency, the reciprocal communications, and the timeframes under which those communications will take place.

Contact details for pipeline stakeholders who might be involved in a critical contingency and the *MDL* representative⁴ who will be responsible for communicating to the CCO are also provided in this communications plan⁵.

The overriding objective of this plan is to meet the requirements of The Regulations [r25 (e), (f), (i), (j)].

Target audience

The target audience (target audience) for communications under a CCMP is defined in The Regulations [r25 (e), (f)]. In the context of *Maui Pipeline* the target audience includes the following:

- Critical Contingency Operator
- *Maui Pipeline Shippers*
- *Maui Pipeline Welded Parties*⁶ and *TP Welded Parties*⁷

Contact details

Operational contact details for the persons representing the groups above other than the CCO and *MDL*'s TSO representative, are contained in and regularly updated in OATIS.

Shippers and *Welded Parties* have the primary responsibility for ensuring that contact details are current. Contact details will be checked by *MDL* every six months or at other times considered appropriate by *MDL*. Reminders for *Shippers and Welded Parties* to maintain their contact details will be sent by email on a regular basis.

Contact details for the CCO are provided in Section 6.1.

MDL is required to nominate a person who will be responsible for receiving communications from the CCO, and giving communications to the CCO under the communications plan. This person is also required to give directions in accordance

⁴ For the purposes of critical contingency management this will be the System Duty Officer

⁵ Note that the list of *Shippers*, *Welded Parties*, and *TP Welded Parties* in Section 6.1 of this CCMP is as at the date of this CCMP, as stated on the title page of this CCMP.

⁶ For the *Maui Pipeline*, *Welded Parties* includes large consumers who are directly connected to the *Maui Pipeline*.

⁷ The contact details for *TP Welded Parties* and TSOs are the same.

with the CCMP [r25 (e) and (f)]. The details for this person are provided in Section 6.1⁸.

3.2 Communication of notices

MDL intends to use the operational contact details contained in the “Contact Details” screen of OATIS, which includes the “Operational Contact”, “Email Address”, “SMS” and “Telephone Number” fields, for the purpose of communicating notices. An updated OATIS contacts report is generated every day and these reports are stored outside of OATIS. In the event that OATIS is unavailable during a critical contingency the most recent contacts report will be used.

Notices are classified as either urgent or ordinary. According to the circumstances urgent notices⁹ either will be given in writing or will be given orally by telephone¹⁰ and confirmed in writing. Written confirmation will be sent by electronic transmission as described in r21 (1) (d). Ordinary notices will be sent by electronic transmission¹¹.

All written notices will be posted on OATIS as critical notices. Written notification alerting parties of the existence of posted notices will be sent direct from OATIS using email and SMS text messages. The notice will be considered received by the recipient on the date and at the time it is posted on OATIS. Should it not be possible for a party to be set up in OATIS to view notices and/or receive notice alerts from OATIS, alternative systems for transmitting email and SMS text messages will be considered.

For ease of access all notices posted in OATIS will be available in the public domain.

If OATIS is unavailable or is unable to post written notices, *MDL* will use standard PC applications to communicate written notices.

If the communication of notice alerts by SMS text messages and email is unavailable via OATIS, *MDL* will use alternative SMS text messaging and email communication using standard PC applications.

If standard PC applications are unavailable *MDL* will communicate notices by telephone and give written confirmation as soon as reasonably practicable afterwards. Should land line and cell phone services be unavailable *MDL* will use its satellite phone service to communicate notices by telephone.

MDL will communicate to *Welded Parties* in curtailment bands 0, 1a, and 1b¹² by urgent notice.

CCO communications

⁸ See footnote 6

⁹ Urgent notices are described in r23 (3)

¹⁰ An “urgent notice may be given orally where the person issuing a notice considers that the urgency of the situation means the notice should not be given in writing.” [r23 (2)]

¹¹ Ordinary notices are described in r21 (1) (d)

¹² Refer to Table 8 for curtailment arrangements.

MDL will communicate to the CCO by urgent notice. Urgent notices from *MDL* to the CCO will be communicated orally by telephone and confirmed in writing using standard PC email applications.

In the event that standard PC applications are unavailable, *MDL* will communicate by telephone and provide written confirmation by email as soon as reasonably practicable afterwards. Written communications may be hand delivered if standard PC applications are unavailable.

If land line and cell phone services are unavailable *MDL* will use its satellite phone service to communicate by telephone or use face to face communications if possible.

3.3 Communications at the declaration of a critical contingency

Declaration of a critical contingency – *MDL* communication

Within the hour, or as soon as reasonably practicable, after receiving the CCO notice declaring a critical contingency, *MDL* will send Notice of Declaration of Critical Contingency to the target audience. The purpose of this notice is described in Table 1 below.

Table 1: Notice of Declaration of Critical Contingency

The purpose of this notification is to advise that the CCO has declared a critical contingency. The notice will give details of the parts of the <i>Maui Pipeline</i> that are affected, advice that CCO directions passed on by <i>MDL</i> to the target audience must be complied with as specified in The Regulations, and that communications described in the communications plan have commenced.
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A pro forma of this notice is included in Section 6.2

3.4 Communications and information during a critical contingency

The CCO will issue notices and directives to *MDL* during a critical contingency. Based on these *MDL* will issue directives to the target audience using the notices described in this section.

If *MDL* is unable to comply with CCO directions for the reasons described in r47¹³, it will give urgent notice to the CCO orally by telephone and confirm the details in writing. Details will describe the issue that has resulted in *MDL* being unable to comply with Part 3 of The Regulations.

If at any time during or after a critical contingency *MDL* has information that a party has not complied with directives to curtail demand; revise demand curtailment; or to restore demand, *MDL* will provide this information to the CCO if requested by the CCO.

¹³ This provision relates to safety.

Standard MDL notices sent during a critical contingency

Table 2: Notice of Direction to Curtail Demand

Within the hour, or as soon as reasonably practicable, after MDL has received direction from the CCO to implement curtailment of demand, MDL will send this notice to the target audience.

The purpose of this notice is to give directions in accordance with the directive issued by the CCO to curtail load to stabilise the affected parts of the *Maui Pipeline*. The directive will be in accordance with the curtailment bands in Section 4.4. The notice may contain directions to curtail subsets of load within a curtailment band or subsets of geographically located load within a curtailment band.

Welded Parties will be requested to give regular updates to MDL on their compliance with the direction. These updates will be at hourly intervals, or at other times to be agreed with MDL from the time a notice has been issued.

A pro forma of this notice is included in Section 6.2

Table 3: Notice of Direction to Revise Demand Curtailment

Within the hour, or as soon as reasonably practicable, after MDL has received Urgent Notice from the CCO directing it to revise curtailment of demand, MDL will send this notice to the target audience.

The purpose of this notice is to give directions in accordance with the directive issued by the CCO to revise load curtailment for the purpose of further stabilising the *Maui Pipeline*. The directive will be in accordance with the curtailment bands in Section 4.4. The notice may contain directions to curtail subsets of load within a curtailment band or subsets of geographically located load within a curtailment band. **This notice is not to be confused with the direction to terminate a critical contingency.**

For the avoidance of doubt this notice supersedes the original Notice of Direction to Curtail Demand and any previous Notice(s) of Direction to Revise Demand Curtailment. It includes all demand previously directed for curtailment and all additional demands that now require curtailment.

Welded Parties will be requested to give regular updates to MDL on their compliance with the direction. These updates will be at hourly intervals, or at other times to be agreed with MDL from the time a notice has been issued.

A pro forma of this notice is included in Section 6.2

Table 4: Notice of Direction to Restore Curtailed Demand

Within the hour, or as soon as reasonably practicable, after *MDL* has received direction from the CCO to restore curtailed demand, *MDL* will send this notice to the target audience.

The purpose of this notice is to give directions in accordance with the directive issued by the CCO based on it having determined that the *Maui Pipeline* has stabilised to the extent that curtailed gas demand can be restored and the order in which is to be restored. The notice may contain directions that demand is to be restored in the reverse order in which it was curtailed i.e. last to be curtailed is first to be restored. The notice may contain directions to restore curtailed demand in an order other than the reverse order described above. The notice may also contain directions to restore demand in accordance with the requirements of CDEM legislation¹⁴. **This notice is not to be confused with the direction to terminate a critical contingency.**

For the avoidance of doubt this notice supersedes any previous notice(s) of Direction to Restore Demand. It includes all demand previously directed for restoration and any additional demands that can now be restored.

Welded Parties will be requested to give regular updates to *MDL* on their compliance with the direction. These updates will be at hourly intervals, or at other times to be agreed with *MDL* from the time a notice has been issued.

A pro forma of this notice is included in Section 6.2

Communications received by *MDL* during a critical contingency

In addition to communications received by *MDL* from the CCO during a critical contingency, *MDL* will receive regular communications from other parties. These will most likely be in the form of regular updates from *Welded Parties* giving details about their compliance with *MDL* directions during a critical contingency in accordance with r55. The content of these notices is described below in Table 5. *Welded Party* updates will be provided to the CCO by *MDL* as soon as reasonably practicable after *MDL* has received the updates.

Table 5: Notice of *Welded Party* Compliance Update

Welded Parties must follow directions for curtailment, revised curtailment and restoration of demand and provide *MDL* with regular updates of compliance in accordance with r55.

Updates on compliance are required at hourly intervals, or at other times to be agreed with *MDL* from the time a notice has been issued.

A pro forma of this notice is included in Section 6.2

3.5 Communications at the termination of a critical contingency

The CCO will issue notice of termination to *MDL* in accordance with r61.

MDL will give notice of the termination to the target audience as soon as reasonably practicable.

¹⁴ Civil Defence Emergency Management

MDL communications

Table 6: Notice of Termination of Critical Contingency

Within the hour, or as soon as reasonably practicable after *MDL* has received notice from the CCO to terminate the critical contingency, *MDL* will issue this notice.

The purpose of this notification is to advise that the CCO has determined to terminate the critical contingency. The notice will contain details on the time and date that the critical contingency terminated (Section 6.2).

3.6 Information requirements

MDL is required to make the information described in r38 (1) of The Regulations available to the CCO.

Mode of delivery

In the interests of efficiency and practicality, the CCO will have read-only access to predefined areas within the OATIS system. This will allow the CCO to access information relevant to a critical contingency in a timely and efficient manner. The CCO will also have read-only access to current and historic metering data via the SCADA system. In addition to this, internal *MDL* business processes will be developed to ensure an effective flow of information between CCO and *MDL* at the onset, during, and in the recovery phase of a critical contingency.

It is noted here that under r38 (2) (b) this information must only be used by the CCO for the purpose of performing its obligations under The Regulations. Because the CCO will have access to *Confidential Information* *MDL* will request the CCO to sign a non-disclosure agreement. *MDL* notes that section 24.2 (d) and (i) of the MPOC may apply, but that sections 24.3 and 24.4 of MPOC still have to be complied with.

4.0 Intra-critical contingency processes

4.1 Safety

The Regulations [r47] state that: “No person is required to comply with a provision of this Part¹⁵ to the extent that compliance would unreasonably endanger the life or safety of that person or any other person.”

If *MDL* is unable to comply with Part 3 of The Regulations for safety reasons, it will inform the target audience by critical notice and provide details about the alternative actions that *MDL* intends to take.

4.2 Pipeline thresholds

The critical contingency threshold range for the *Maui Pipeline* is specified in Schedule 1 of The Regulations.

The threshold is expressed both as a minimum pressure threshold (P_{\min}) and in terms of the time remaining to reach P_{\min} . The time threshold is based on the need to allow sufficient time for load curtailment directives to be issued and complied with by the affected consumers in the selected curtailment bands during a critical contingency.

Within the range provided in The Regulations, 32.0 barg/3 hours to P_{\min} has been selected as the critical contingency threshold for *Maui Pipeline* (see Table 7 below). This figure has been selected based on a technical review of the threshold values and is considered a point where the suction pressure to the Vector compressors at Rotowaro would start to move out of a satisfactory operating envelope to maintain adequate pressure in the Vector transmission system. 3 hours is deemed to be sufficient time to make large enough reductions in load by curtailing *Welded Parties* in bands 1a and 1b across both the *MDL* and Vector transmission systems to avoid pressure at Rotowaro dropping below 32.0 barg.

Table 7: Critical contingency threshold for *Maui Pipeline*

Pipeline Name	Point Of Measurement	Pmin (barg)	Threshold Time (Hours to reach Pmin)
<i>Maui Pipeline</i>	Rotowaro	32.0	3

The minimum operating pressure is described in The Regulations as “the minimum pressure that is required to maintain the supply of gas across the relevant part or parts of the transmission system and to avoid disruption of distribution systems connected to the transmission system.” [r25 (1) (a) (iv)].

¹⁵ Part 3 of The Regulations

4.3 Declaration of a critical contingency

The process for declaring a critical contingency as described in The Regulations [r48], is summarized below.

The CCO must make a determination that there is a critical contingency if:

- The CCO considers that a breach has occurred of 1 or more of the thresholds that are specified in a CCMP under r25 (1) (a); or

The CCO:

- Has a reasonable expectation that a breach of 1 or more of those thresholds is otherwise unavoidable; and
- Considers that the determination is necessary to achieve the purpose of these regulations

4.4 Curtailment arrangements

During a critical contingency *MDL* will follow the directions received by it from the CCO as required by The Regulations [r54]. These may include directions given to *MDL* by the CCO to instruct consumers to curtail demand in accordance with the curtailment arrangements specified in Schedule 2 of The Regulations (see Table 8 below). For the avoidance of doubt, curtailment arrangements under The Regulations are separate from, and independent of, curtailment under MPOC¹⁶.

Table 8: Curtailment arrangements prescribed in Schedule 2 of The Regulations

Curtailment band	Consumption in terajoules (TJ)	Description
0	N/A	Gas off taken for injection into gas storage.
1a	More than 15TJ per day	Consumers (excluding essential service providers) supplied directly from the transmission system who have an alternative fuel capability. If minimal load consumer then manage wind-down of plant.
1b	More than 15TJ per day	Consumers (excluding essential service providers) supplied directly from the transmission system who do not have an alternative fuel capability. If minimal load consumer then manage wind-down of plant.
2	More than 10TJ per annum and up to 15TJ per day	Consumers (excluding essential service providers) with alternative fuel capability. If minimal load consumer then manage wind-down of plant.
3	More than 10TJ per annum and up to 15TJ per day	Consumers (excluding essential service providers) without alternative fuel capability. If minimal load consumer then manage wind-down of plant.
4	More than 2TJ per annum and up to 10TJ per annum	Consumers, excluding essential service providers. Minimal load consumers in curtailment bands 1a to 3 curtailed in full.

¹⁶ Curtailment arrangements under The Regulations are different from the curtailment arrangements described in Section 15 of the MPOC.

5	More than 2TJ per annum	Essential service providers.
6	2TJ or less per annum	All remaining consumers.

MDL will issue notices to the target audience, as soon as reasonably practicable following receipt of directions from the CCO.

The CCO will issue demand curtailment directives to *MDL* who will then issue directions to the target audience, based on the CCO directive.

CCO curtailment notices may contain directions to curtail subsets of load within a curtailment band or subsets of geographically located load within a curtailment band. The CCO is responsible for ensuring that its directions, (including any curtailment directions), meet the objectives set out in Schedule 2 Clause 1 of The Regulations. If *MDL* believes that the CCO’s directives are inconsistent with the objectives described in Schedule 2 then it will inform the CCO immediately by telephone and then provide written confirmation. *MDL*’s arrangements and processes to provide relevant notices to parties, as described in this plan, have been designed to complement CCO instructions and are consistent with these objectives.

4.5 Alternative restoration arrangements

Curtailed demand will normally be restored in the reverse order in which it was curtailed i.e. last to be curtailed is first to be restored.

The CCO will issue demand restoration directions to *MDL* who will then issue directions to the target audience.

Under The Regulations [Schedule 2, 3 (2)] restoration of gas supply may occur in an order different to that described above. Any alternative restoration approach suggested by *MDL* will be discussed with the CCO. The CCO will make the final decision on how to restore supply. Some alternative restoration approaches could include the following:

- a) Partial restoration of consumers in curtailment bands 1a, 1b and 2 ahead of, or at the same time as consumers in bands 3, 4, 5 and 6. This would allow consumers to make preliminary preparations for a return to full production (for example performing a “cold start” on large plant). The circumstances and requirements of each large consumer will be considered by *MDL* and the CCO.
- b) Full or partial restoration to electricity generation facilities classified as large consumers ahead of curtailment bands 3, 4, 5 and 6. This may be required in circumstances where the electricity System Operator requests support from gas fired generation facilities to prevent widespread electricity outages. This restoration approach would be discussed by *MDL* with the CCO, the electricity System Operator, and CDEM.
- c) Consumers in bands 0, 1a, 1b, and 2 being restored ahead of smaller consumers in bands 3, 4, 5 and 6. This could happen where technical

and operational issues have resulted in a longer term outage on a discreet section of the pipeline located downstream from the main gas supply, leaving some parties unaffected by the outage. This could include for example, a three week long outage caused by a pipeline rupture affecting consumers near Mokau that does not affect large consumers operating off the southern part of *Maui Pipeline*.

- d) Deferment of restoration to some or all groups curtailed where in *MDL*s view:
- i. The *Contingency Volume* (or part of it) should be replenished before restoration is completed. This is important because immediately after a critical contingency has been terminated the *Contingency Volume* would provide a buffer to assist in preventing an immediate return into critical contingency; and
 - ii. Where Non-Specification Gas could enter Maui Pipeline¹⁷; or
 - iii. Where *Maui Pipeline* is undergoing *Maintenance*¹⁸; or
 - iv. Where a *Force Majeure Event* occurs that is not the reason for the critical contingency¹⁹; or
 - v. Where a *Welded Party* gives notice to *MDL* of a *Curtailement*²⁰.

The possible alternative arrangements above would better achieve the purpose of The Regulations by ensuring efficient use of gas, “minimising the net public cost”, and “ensuring the effective operational management of a critical contingency”. These are objectives specified in The Regulations [Schedule 2, (1)].

If *MDL* considers that curtailed demand should be restored in an order different to the normal restoration order it will inform the CCO by telephone and confirm the details in writing.

During demand restoration *MDL* will monitor *Maui Pipeline* stability and capacity. Should the system be adversely affected *MDL* will contact the CCO immediately by telephone and discuss suggested actions to rectify the situation. Suggestions may include requirements for modifications to existing restoration directives or delays in issuing further restoration directives.

¹⁷ MPOC 15.1 (i)

¹⁸ MPOC 15.1 (ii)

¹⁹ MPOC 15.1 (iii)

²⁰ MPOC 15.2

5.0 Contingency imbalances

5.1 Contingency imbalance period

The Regulations specify that contingency imbalances should be determined based on either a daily (whole-day) basis or using a sub-daily period [r75 (a) and (b)].

Vector Gas Ltd, as TSO, is unable to obtain or derive information to make calculations on the sub-daily basis. As a result r75 (b) (ii) of The Regulations applies. After discussion with Vector Gas Ltd and the industry body, it has been decided that MDL has to use a whole-day imbalance calculation period to calculate contingency imbalances.

The Regulations define a “whole day” as commencing at 0000 hours on the day on which the critical contingency was declared [r75 (b) (ii) (A)]. The day will conclude at 2400 hours on the day in which the critical contingency was terminated [r75 (b) (ii) (B)]. This is the same as an MPOC *Day*²¹ and to be clear, this is in New Zealand Standard Time (NZST).

5.2 Contingency imbalance calculation methodology

MDL will use the following steps to determine the contingency imbalances for each affected party over the period of a critical contingency²². These steps will be carried out as soon as possible after the critical contingency has been terminated so that business as usual under the MPOC can resume, and before the time period provided for in r74(1):

1. Retrieve the quantity of gas contractually agreed to inject or entitled to take by all interconnected parties²³ at their interconnected point(s). This would include *Scheduled Quantities* at *Welded Points* accessed via OATIS.²⁴ If OATIS data is unavailable, then ‘best information available’ will be used.

²¹ Under the MPOC a “Day” means a period of 24 consecutive hours, beginning at 0000 hours (New Zealand Standard Time).

²² “Price and imbalances provisions do not apply to regional critical contingencies” [r82]

²³ An “interconnected party” is defined in The Regulations by reference to the interconnection agreement described in the definition and the part of the transmission system affected by the critical contingency; in the case of Maui Pipeline this is the entire Maui Pipeline. For this purpose the interconnection agreement must: (a) be current; (b) allow for a person “to take gas from, or inject gas into,” an interconnection point; and (c) relate to an “interconnection point” of the kind defined in The Regulations. Note also that The Regulations do not distinguish between *Large Stations* and *Small Stations* therefore *Small Stations* will be subject to contingency imbalance calculations.

²⁴ OATIS is the information exchange system that MDL uses to receive and display operational pipeline information. The OATIS website homepage is www.oatis.co.nz.

2. Retrieve the measured quantities for all interconnected parties at their interconnected point(s). This would include validated injection and off-take gas flow quantities accessed via OATIS, or 'best information available' at all *Welded Points*²⁵. Note: In the event that OATIS is not available then "best information available" may include raw gas flow data from *Welded Points*. This information would be collected and converted to energy units manually.
3. If necessary, proportionally adjust quantities in accordance with r75 (d)²⁶.
4. Calculate the volume of each contingency imbalance for each interconnected party's interconnection point in gigajoules in accordance with r74 (2) (a) & (b).
5. Calculate the aggregate positive contingency imbalance.
6. Calculate the aggregate negative contingency imbalance.
7. If the aggregate negative contingency imbalance exceeds the aggregate positive contingency imbalance, this difference will be treated as a positive contingency imbalance to be allocated to *MDL* in accordance with r74 (2) (c) and r75 (f) (i).
8. If the aggregate negative contingency imbalance is less than the aggregate positive contingency imbalance, allocate the difference to each *Welded Point* with a positive contingency imbalance in accordance with r75 (f) (ii)²⁷.
9. Receive the critical contingency price in dollars per gigajoule from the industry expert in accordance with 72(4).

²⁵ For *Small Station Welded Points* best information available will be *Scheduled Quantity*.

²⁶ This adjustment could be made if it is proven that an interconnected party did not follow curtailment instructions. The provision appears to be intended to ensure (i) "causer pays" applies in respect of a default and its consequences, and (ii) the defaulter should not benefit from its default. The provision will be applied to achieve that result as far as possible. For further clarity on this provision, Gas Industry Company has stated that "The reason for 75(c) and 75(d) is to provide a mechanism to adjust downstream reconciliation processes so that the allocations to shippers reflect quantities consumed by their customers during the CC period. In practice it is not expected that 75(c) and 75(d) would need to be used. The structure of the curtailment bands means that the first bands to be curtailed will have time of use metering and no adjustments under 75(c)/75(d) would be required". It should also be noted that curtailment at Small Stations in accordance with r75(c) is highly unlikely as a result of the curtailment bands to which the connected consumers fall, the negligible demand and the maximum design flow rates at these stations.

²⁷ When then the critical contingency imbalance quantities have been identified these must be removed from OATIS so that the *Welded Point Running Operational Imbalance* only reflects quantities subject to MPOC provisions and so that business as usual can resume with the least amount of disruption. To achieve this step the critical contingency imbalances will be cashed out at \$0 in OATIS. This approach utilises existing OATIS functionality thereby avoiding the cost to users for OATIS changes. OATIS cash out only adjusts the *Running Operational Imbalance* figure in OATIS, it does not extract the daily *Operational Imbalance* activity amount or *Excess Daily Imbalance* amount associated with a critical contingency imbalance.

10. Calculate the value of each contingency imbalance in accordance with the following formula: $XA = P \times MA$ in accordance with r75(h).
11. Send the contingency imbalance amounts (volume and value) to the GIC in accordance with r77 (1) (a) & (b). This information will be sent in digital spreadsheet format via electronic transmission.
12. If an error is discovered in the contingency imbalance calculation then *MDL* will advise the industry body in accordance with r80 of The Regulations.

5.3 MPOC processes and critical contingency

Details about how MPOC business as usual processes will work during a critical contingency are provided in a separate document. This document is publically available and is located in the Publications section in OATIS under the title “Management of the interrelationship between the MPOC and the Gas Governance (Critical Contingency Management) Regulations 2008”.

6.0 Appendices

6.1 Contact details

CCO

Contact	
Critical contingency operator	<u>Steve Ilkovics</u> Normal contact numbers: 06 759 6525 027 496 1980 (cell)
Critical contingency operator assistant	<u>Mark Richards</u> Normal contact number: 06 769 8202
Email address	cco@vector.co.nz
24/7 contact details. In order of preference. Use these during critical contingencies	021 0219 8170 (cell) 06 759 6516 0800 CCO 123 0088 163 144 7406 (satellite)
CCO internet site	https://www.oatis.co.nz/Ngc.Oatis.UI.Web.Internet/Common/CCOHome.aspx

MDL TSO representative

Contact	Email Address	Cell Phone	Direct Dial Number
MDL TSO representative – System Duty Officer	gas.controller@vector.co.nz	027 442 9051	(06) 759 6525

As at the date of this CCMP, the other parties in the target audience include the following:

Other TSOs, Shippers and Welded Parties

Category	Company
Other Transmission System Owners	<ul style="list-style-type: none"> Vector Gas Limited
Shippers	<ul style="list-style-type: none"> Contact Energy Limited Greymouth Gas New Zealand Limited Genesis Power Limited Mighty River Power Limited Nova Gas Limited Methanex NZ Limited Multigas (NZ) Limited Shell New Zealand Limited Shell Todd Oil Services Limited Todd Taranaki Limited Vector Gas Contracts Limited Vector Gas Limited Wanganui Gas Limited
Welded Parties	<ul style="list-style-type: none"> Contact Energy Limited Genesis Power Limited Greymouth Gas New Zealand Limited Maui Development Limited Methanex NZ Limited Shell Exploration New Zealand Limited Shell Todd Oil Services Limited

	<ul style="list-style-type: none"> • Todd Pohokura Limited • Todd Taranaki Limited • Vector Gas Limited
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Contact details for the target audience, other than the CCO and MDL's TSO representative, are contained in and updated under OATIS from time to time.

6.2 Pro forma notices

Declaration of critical contingency

<p>Notice of Declaration of Critical Contingency</p> <p>This notice is issued in accordance with the MDL CCMP. The critical contingency operator declared a critical contingency at [time] [date]. This critical contingency [has/has not] been designated as a regional critical contingency.</p> <p>It is advised that all directions issued by the critical contingency operator from the declaration of the critical contingency must be complied with.</p> <p>The communications described in the critical contingency operator communication plan and MDL CCMP are now activated.</p> <p>Load curtailment is not required at this stage and instructions are awaited from the critical contingency operator.</p> <ol style="list-style-type: none"> 1. Event causing critical contingency 2. Parts of transmission system affected 3. Summary of actions being taken to resolve event <p>Notes:</p> <p>(a) This notice will be considered received by the recipient on the date and at the time it is first transmitted to the recipient.</p> <p>(b) Alerts regarding this notice will also be communicated by email and SMS text message.</p> <p>(c) Critical contingency imbalance calculations commence at 0000 hours on the day that this notice is issued. Note that to be consistent with existing MPOC processes this is New Zealand Standard Time. Note that contingency imbalance provisions do not apply to regional critical contingencies.</p>
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Direction to curtail demand

Notice of Direction To Curtail Demand

This notice is issued in accordance with the *MDL* CCMP. The critical contingency operator gave direction to curtail demand at [date] [time].

All directions issued by the critical contingency operator from the declaration of the critical contingency must be complied with.

Welded Parties must follow this direction as soon as reasonably practicable and provide *MDL* with regular updates of compliance. These updates will be at hourly intervals, or at other times to be agreed with *MDL* from the time a notice has been issued. Updates are to be communicated to the designated *MDL* contact in Section 6.1 of this CCMP using the pro forma notice *Welded Party Compliance Update*.

The communications described in the critical contingency operator communication plan and *MDL* CCMP continues to be activated.

- 1. Event causing critical Contingency**
- 2. Parts of transmission system affected**
- 3. Summary of actions being taken to resolve event**
- 4. Curtailments now directed**

Curtailment band	Description of consumers to be curtailed	Location of customers to be curtailed	Quantity to flow to (GJ)
0			
1a			
1b			

Notes:

- (a) The notice will be considered received by the recipient on the date and at the time it is first transmitted to the recipient.
- (b) Alerts regarding this notice will also be communicated by email and SMS text message.

Direction to revise demand curtailment

Notice of Direction to Revise Demand Curtailment

This notice is issued in accordance with the *MDL* CCMP. The critical contingency operator gave direction to revise demand curtailment at [date] [time].

For the avoidance of doubt this notice supersedes the original Notice of Direction to Curtail Demand and any previous Notice(s) of Direction to Revise Demand Curtailment and includes all demand previously directed for curtailment.

All directions issued by the critical contingency operator from the declaration of the critical contingency must be complied with.

Welded Parties must follow this direction as soon as reasonably practicable and provide *MDL* with regular updates of compliance from the time this notice was issued. These updates will be at hourly intervals, or at other times to be agreed with *MDL* from the time a notice has been issued. Updates are to be communicated to the designated *MDL* contact in Section 6.1 of this CCMP using the pro forma notice *Welded Party Compliance Update*.

The communications described in the critical contingency operator communication plan and *MDL* CCMP continues to be activated.

- 1. Event causing critical contingency**

- 2. Parts of transmission system affected**

- 3. Summary of actions being taken to resolve event**

- 4. Revisions to curtailments now directed**

Curtailment band	Description of consumers to be curtailed	Location of customers to be curtailed	Quantity to flow to (GJ)
0			
1a			
1b			

Notes:

- (a) The notice will be considered received by the recipient on the date and at the time it is first transmitted to the recipient.

- (b) Alerts regarding this notice will also be communicated by email and SMS text message.

Direction to restore curtailed demand

Notice of Direction to Restore Demand

This notice is issued in accordance with the *MDL* CCMP. The critical contingency operator gave direction to restore curtailed demand at [time] [date].

For the avoidance of doubt this notice supersedes any previous Notice(s) of Direction to Restore Demand and includes all demand previously directed for restoration.

It is advised that all directions issued by the critical contingency operator from the declaration of the critical contingency must be complied with.

Welded Parties must follow this direction as soon as practicable and provide *MDL* with regular updates on compliance. These updates will be at hourly intervals, or at other times to be agreed with *MDL* from the time a notice has been issued. Updates are to be communicated to the designated *MDL* contact in Section 6.1 of this CCMP using the pro forma notice *Welded Party Compliance Update*.

The communications described in the critical contingency operator communication plan and *MDL* CCMP continue to be activated.

- 1. Event causing critical contingency**
- 2. Parts of transmission system affected**
- 3. Summary of actions being taken to resolve event**
- 4. Demand restoration now directed**

Curtailed band	Description of consumers to be restored	Location of customers to be restored	Quantity to flow to (GJ)
0			
1a			
1b			

- 5. Details regarding order for restoration of curtailed demand**

Notes:

- The notice will be considered received by the recipient on the date and at the time it is first transmitted to the recipient.
- Alerts regarding this notice will also be communicated by email and SMS text message.

Welded Party update

Welded Party Compliance Update

Welded Parties must follow directions for curtailment, revised curtailment and restoration of demand as soon as practicable, and provide *MDL* with regular updates of compliance.

Updates are to be communicated by email to the designated *MDL* contact in Section 6.1 using this pro forma. If email is unavailable then updates will be provided over the phone. Updates are to be provided at hourly intervals, or at other times to be agreed with *MDL* following the issue of the notice.

Compliance Update (name and company)	
Notice Type: (delete as appropriate)	Curtailment / Revised Curtailment / Restoration
OATIS Notice Identifier* for the compliance notice being updated on	

* This identifier can be found on the OATIS Notice Search page

Curtailment band	Description of consumers to be curtailed	Location of customers to be curtailed	Compliance update details	Direction to curtail/ quantity to flow to (GJ)	Actual flow quantity (GJ)
0					
1a					
1b					

Notice of termination of critical contingency

Notice of Termination of Critical Contingency

This notice is issued In accordance with the *MDL* CCMP. The critical contingency operator terminated the critical contingency at [date] [time].

It is advised that all directions issued by the critical contingency operator from the declaration of the critical contingency must be complied with.

The communications described in the critical contingency operator communication plan and *MDL* CCMP are deactivated at the time and date that the critical contingency is terminated.

1. Time and date critical contingency terminated

2. Event that caused critical contingency

3. Parts of transmission system affected

4. Details of event resolution

Notes:

- (a) The notice will be considered received by the recipient on the date and at the time it is first transmitted to the recipient.
- (b) Alerts regarding this notice will also be communicated by email and SMS text message.
- (c) Daily critical contingency imbalance calculations conclude at 2400 hours on the day this notice is issued. Note that to be consistent with existing MPOC processes this is New Zealand Standard Time. Note that contingency imbalance provisions do not apply to regional critical contingencies.

7.0 Attachments

- 7.1 Attachment 1: Gas Governance (Critical Contingency Management) Regulations 2008 [As at 4th November 2008]**