



# **Urgent Amendments to the Gas Governance (Critical Contingency Management) Regulations 2008**

**RECOMMENDATION TO THE MINISTER**

7 December 2023



**Gas Industry Co.**

# Executive Summary

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*Gas Industry Co's Recommendation to the Minister: Urgent Amendments to the Gas Governance (Critical Contingency Management) Regulations 2008* is recommending amendments to the Gas Governance (Critical Contingency Management) Regulations 2008 to remove the Broadlands and Taupo gas gates from the critical contingency threshold limits in Schedule 1 of the Regulations.

This recommendation relates to the Gas Governance (Critical Contingency Management) Regulations 2008 (CCM Regulations), an existing gas governance arrangement.

Gas Industry Co is recommending that the Minister recommends that the Governor General, by Order in Council, amend Schedule 1 of the CCM Regulations to remove the Broadlands and Taupo gas gates as points of measurement that are required to be included in Firstgas's critical contingency management plan. Approval of the amendment will ensure that Schedule 1 of the CCM Regulations is consistent with Firstgas's operation of the gas transmission system between Reporoa and Taupo and avoid a critical contingency event being declared in relation to normal operation of the transmission system. When the Reporoa to Taupo section of the transmission system is operated at Firstgas's proposed operating pressure of 10 bar g, the ability to issue curtailment directions at the Broadlands and Taupo gas gates is unlikely to achieve the effective management of critical gas outages or other security of supply contingencies without compromising long-term security of supply.

Gas Industry Co is recommending that the Minister make this amendment in reliance on the urgent regulation making provisions in section 43P of the Gas Act. The Broadlands and Taupo gas gates need to be removed from Schedule 1 of the CCM Regulations ahead of Firstgas's change to the operating pressure of the transmission pipeline between Reporoa and Taupo to avoid declaration of critical contingency events at the Broadlands and Taupo gas gates in relation to normal operation of this section of the transmission system.



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# 1. Purpose and background

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## 1.1 Purpose

The purpose of this recommendation is to recommend that the Minister recommends that the Governor General amends Schedule 1 of the CCM Regulations to remove the Broadlands and Taupo gas gates as points of measurement that are required to be included in Firstgas's critical contingency management plan.

## 1.2 Background

### **Gas Governance (Critical Contingency Management) Regulations 2008**

When a gas supply event (such as a gas production station failure or a pipeline rupture) occurs, it reduces or stops the flow of gas into or through the affected pipeline. The remaining gas pressure in the transmission and distribution systems will cause the gas to keep flowing to delivery points or customer premises, at least until the pressure is no longer sufficient to maintain the flow.

When a gas supply event occurs, in the absence of a requirement that consumers stop (or in some cases reduce) their use of gas, there is a risk that pressure in the gas transmission and gas distribution systems could fall to a level where gas is unable to flow. If sufficient pressure is not maintained in downstream networks, it is estimated that recovering a distribution network serving a large urban area could take many months. Falling system pressures may also impact the delivery of gas to certain designated consumers who require gas for certain essential and critical care services or providing time for an orderly shutdown of a plant to prevent or mitigate major plant or environmental damage.

The most significant gas supply event to date is the five-day Maui pipeline outage that occurred in October 2011. There have also been several shorter-term gas supply events.

### **Critical contingency threshold limits and curtailment**

The Critical Contingency Operator (CCO), an independent service provider appointed under the CCM Regulations, is required to declare a critical contingency in relation to a critical gas outage or security of supply event if the timeframes for the transmission system to reach certain pressure thresholds specified in a critical contingency management plan are breached.

The declaration of a critical contingency provides a signal to industry participants and large consumers of an event that may potentially impact supply and provides the CCO with a legal basis on which to issue mandatory curtailment directions. The purpose of curtailment directions is to preserve available linepack in the gas transmission system with the aim of avoiding loss of pressure on downstream networks.

The timeframes and pressure thresholds in the critical contingency management plan are proposed by the transmission system owner, reviewed by an expert advisor, and are subject to Gas Industry Co approval.

Schedule 1 of the CCM Regulations specifies the permissible limits for the thresholds in the critical contingency management plan and the points on the transmission system where the

minimum operating pressure is measured. The permissible limits in Schedule 1 have remained unchanged since the CCM Regulations were made in 2008.

The critical contingency threshold limits are as follows:

Pipeline	Maximum time before minimum operating pressure is reached	Minimum time before minimum operating pressure is reached	Minimum operating pressure range	Point of measurement*
<b>Maui pipeline</b>				
Rotowaro	5 hours	2 hours	32 (±2.5) bar g	Rotowaro Compressor Station
<b>Vector pipeline</b>				
South	10 hours	3 hours	35 (±2.5) bar g	Waitangirua WTG06910
Hawkes Bay lateral	6 hours	3 hours	30 (±2.5) bar g	Hastings HST05210
Frankley Rd to Kapuni	6 hours	3 hours	35 (±2.5) bar g	Kapuni (GTP) KAP09612
Bay of Plenty	6 hours	3 hours	30 (±2.5) bar g	Gisborne GIS07810
Bay of Plenty	6 hours	3 hours	30 (±2.5) bar g	Taupo TAU07001
Bay of Plenty	6 hours	3 hours	30 (±2.5) bar g	Tauranga TRG07701
Bay of Plenty	6 hours	3 hours	30 (±2.5) bar g	Whakatane WHK32101
Morrinsville lateral	6 hours	3 hours	30 (±2.5) bar g	Cambridge CAM17201
Central (North)	6 hours	3 hours	40 (±2.5) bar g	Westfield WST03610
North	6 hours	3 hours	25 (±2.5) bar g	Whangarei WHG07501
For any other gas gate on the Maui or Vector pipeline	6 hours	3 hours	30 (±2.5) bar g	Gas gate not specified elsewhere

\*The codes specified in the fifth column of this table refer to the gas gate codes determined under the Gas (Switching Arrangements) Rules 2008.

The current minimum operating pressure for the Taupo gas gate, as specified in Firstgas's approved critical contingency management plan, is 30.0 bar g with a threshold time of five hours before minimum operating pressure is reached. The Broadlands gas gate is subject to the "any other gas gate" threshold. The minimum operating pressure and threshold time before the operating pressure is reached for the Broadlands gas gate is identical to the Taupo gas gate.

**Table 1 pipeline thresholds**

Pipeline Name	Point of Measurement	P <sub>min</sub> (barg)	Threshold Time (Hours to reach P <sub>min</sub> )
Maui	Rotowaro	30.0	3
Maui	Any other gas gate	30.0	5
South	Waitangirua	37.0	10
Hawkes Bay Lateral	Hastings	30.0	5
Frankley Road to KGTP	KGTP	35.0	3
Bay Of Plenty	Gisborne	30.0	5
Bay Of Plenty	Taupo	30.0	5
Bay Of Plenty	Tauranga	30.0	5
Bay Of Plenty	Whakatane	30.0	5
Morrinsville Lateral	Cambridge	30.0	5
Central (North)	Westfield	37.5	6
North	Whangarei	27.5	5
Firstgas Pipeline	Any other gas gate	30.0	5

Firstgas has proposed several amendments to the pressure threshold limits in Schedule 1 of the CCM Regulations. Gas Industry Co is considering these proposed amendments as part of its consultation on a wider set of amendments to the CCM Regulations. The proposed amendments include removal of the pressure thresholds for the Broadlands and Taupo gas gates. The amendments relating to the Broadlands and Taupo gas gates are included within

the scope of this urgent recommendation due to Firstgas's proposed reduction in operating pressure between Reporoa and Taupo associated with the injection of biomethane at the Broadlands gas gate from March 2024. Other amendments to the pressure thresholds are currently included, and will be consulted on, as part of Gas Industry Co's full statement of proposal that will follow this recommendation.

### **Reporoa biomethane project**

First Renewables and Ecogas have announced a commercial arrangement for the injection of biomethane into the Firstgas transmission pipeline at the Broadlands gas gate. The injected biomethane will blend with natural gas into the gas transmission system that supplies consumers in the Taupo and Reporoa region.

The majority of biomethane produced at Ecogas' facility will be injected into the transmission system for supply to gas consumers, with some being used onsite for process requirements.

The injection of biomethane is expected to commence from March 2024. Initial estimates suggest that this facility will be able to produce renewable gas equivalent to supplying 7,200 homes and avoid 11,000 tonnes of carbon dioxide emissions per year.

Firstgas has advised that the current minimum operating pressure for the Broadlands and Taupo gas gates will not enable the injection and delivery of biomethane to the transmission network at the Broadlands gas gate without additional compression. Additional compression is likely to impact the economics of the Reporoa biomethane project through additional capital and operating costs.

Firstgas's intention, which is reflected in its Asset Management Plan, is to operate the section of the transmission pipeline between the Reporoa and Taupo gas gates at 10 bar g (i.e. below the current minimum operating pressure of 30 bar g specified in its critical contingency management plan and below the threshold limits in Schedule 1 of the CCM Regulations). The operating pressure on this section of the transmission system would not be increased unless demand requires it.

Firstgas's proposed operation of this section of transmission system below the minimum operating pressure in its critical contingency plan will mean that the critical contingency operator is required to declare a critical contingency in accordance with regulation 48 of the CCM Regulations. This will trigger consequential processes in the Regulations relating to management of a critical contingency event. The minimum operating pressure in Firstgas's critical contingency management plan cannot be changed to reflect a lower operating pressure without an amendment to Schedule 1 of the CCM Regulations.



## 2. Process to amend regulations

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### 2.1 Power to regulate arrangements relating to management of critical contingency events

Section 43F(2)(e) of the Gas Act 1992 provides the Governor General, on the recommendation of the Minister, with the power to make regulations for the following purposes:

*Arrangements relating to outages and other security of supply risks*

*(e) providing, in relation to wholesale or any other markets for gas, for arrangements relating to outages and other security of supply risks, including imposing requirements in connection with those matters on any industry participant or consumer (other than a domestic consumer):*

Section 43S provides for supplementary regulation making powers in relation to gas governance regulations, including for processes and procedures in relation to any regulations.

Gas Industry Co considers that the Minister is empowered to recommend that the Governor General make the proposed amendments to the CCM Regulations contained in this recommendation under sections 43F(2)(e) and 43S. Gas Industry Co notes that the CCM Regulations were made in reliance on sections 43F, 43G and 43S of the Gas Act.

### 2.2 Requirements when recommending urgent regulations

Section 43P of the Gas Act provides that the consultation and assessment processes under sections 43L and 43N of the Gas Act may be deferred if the recommending body considers that it is necessary or desirable in the public interest that the proposed regulations be made urgently. This recommendation is made in reliance on section 43P of the Act.

Within 6 months of the urgent regulations being made, Gas Industry Co is required to comply with the assessment and consultation requirements of section 43L and 43N of the Gas Act that apply to a recommendation for gas governance regulations and make a recommendation on whether the urgent regulations should be revoked, replaced or amended. The Minister may then revoke, replace or amend the urgent regulations.

### 2.3 Rules or regulations

Section 43Q of the Act empowers the Minister to make a rule for all or any of the purposes for which a gas governance regulation may be made. In deciding whether to make a rule rather than a regulation, the Minister must have regard to:

1. the importance of the rule, including whether the rule has a material effect on the rights and interests of individuals;
2. the subject matter of the rule, including whether the rule contains detailed or technical matters rather than matters of general principle;
3. the application of the rule, including whether the rule applies principally to a particular group (e.g. industry participants) rather than the general public;
4. the expertise and rule-making procedures of the recommending body.

Gas Industry Co considers that the proposed amendments should be made by gas governance regulations as the proposal amends an existing gas governance regulation.

## 3. Proposed changes to CCM Regulations

### 3.1 Summary of proposed amendments to the CCM Regulations

The proposed amendments remove the Broadlands and Taupo gas gates from Schedule 1 of the CCM Regulations.

The amendments will clarify that the Broadlands and Taupo gas gates are not subject to the critical contingency threshold limits that apply to any other gas gate on the Maui pipeline or Vector pipeline.

### 3.2 Effect of the proposed amendments to Schedule 1 of the CCM Regulations

The proposed amendments to Schedule 1 of the CCM Regulations must be considered in the context of Firstgas's proposed operation of the Reporoa to Taupo section of the gas transmission system at a lower operating pressure of 10 bar g.

The following table summarises the impact of retaining and removing the Broadlands and Taupo gas gates as points of measurement in Schedule 1 of the CCM Regulations and Firstgas's critical contingency management plan when the transmission system between Reporoa and Taupo is operated at 10 bar g.

	Taupo and Broadlands points of measurement are retained	Taupo and Broadlands points of measurement are removed
<b>Normal operating conditions</b>	<p>The critical contingency operator will declare a critical contingency and determine the appropriate curtailment directions as there will be a breach of the critical contingency management plan pressure thresholds of five hours to 30 bar g at the Broadlands and Taupo gas gates.</p> <p>It is unclear how the critical contingency operator would achieve the purpose of stabilising system pressure for a section of the transmission system that is operated below the minimum operating pressure in its normal operating state.</p>	<p>Demand is unimpacted. No critical contingency is declared.</p>
<b>Critical gas outage or security of supply event</b>	<p>Demand can be curtailed as this section of the transmission will already be operating under the minimum operating pressure for the Broadlands and Taupo gas gates.</p>	<p>Demand can be curtailed at the Broadlands or Taupo gas gates if a critical contingency is declared at Reporoa, or an upstream delivery point, in relation to a critical gas</p>

	<p>The Broadlands and Taupo gas gates may lose supply in a short period of time due to the lower pressure on this section of the transmission system.</p> <p>outage or other security of supply event upstream of Reporoa. Demand cannot be curtailed in relation to a critical gas outage or other security of supply event between the Reporoa gas gate and Taupo gas gate.</p> <p>The Broadlands and Taupo gas gates may lose supply in a short period of time due to the lower pressure on this section of the transmission system</p>
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Our conclusion is that, when the transmission operating pressure between Reporoa and Taupo is reduced to 10 bar g, retaining the Broadlands and Taupo gas gates as points of measurement in Schedule 1 of the CCM Regulations will result in an unworkable situation where a critical contingency event is declared for these gas gates despite this section of the transmission system being operated at its normal operating pressure. Removal of the Broadlands and Taupo gas gates from the points of measurement will address this issue. We do not consider that an alternative minimum operating pressure for the Broadlands and Taupo points of measurement (i.e. a minimum operating pressure of less than 10 bar g) would better meet the purpose of the CCM Regulations for the following reasons:

1. For critical gas outages and security of supply events upstream of the Reporoa gas gate, curtailment of demand at the Broadlands and Taupo gas gates could still occur without separate points of measurement for the Broadlands and Taupo gas gates as a pressure threshold at an upstream point of measurement would be met.
2. For critical gas outages and security of supply events downstream of the Reporoa gas gate, curtailment of demand at a pressure below 10 bar g would have minimal impact on the timeframe to loss of supply at the Broadlands and Taupo gas gates. Loss of supply to these gas gates would occur in a short period of time even with curtailment of demand.

Accordingly, our recommendation is that Schedule 1 of the CCM Regulations is amended to remove the Broadlands and Taupo gas gates.

### 3.3 Requirement for the amendment to be made urgently

Gas governance regulations may be made without consultation or an assessment of costs and benefits if it is necessary or desirable in the public interest that the proposed regulations be made urgently. As discussed in the preceding sections of this paper, within six months of the regulations being made, the assessment and consultation requirements in the Gas Act must be complied with.

The key driver for this urgent recommendation is the need to ensure that Schedule 1 of the CCM Regulations is aligned with the operation of the transmission system. The injection of biomethane and associated reduction in transmission system pressure is scheduled for March 2024. We understand that there is little flexibility in the commencement date due to the need to ensure that the commercial and technical elements of the biomethane project are aligned.

Schedule 1 of the CCM Regulations needs to be amended to remove the Broadlands and Taupo gas gates prior to the reduction in operating pressure to avoid unnecessary declaration of critical contingency events at the Broadlands and Taupo gas gates.

If there is any material change to the timing of the biomethane injection or the proposed change in operating pressure, that change can be addressed through the consultation process that is required to follow the urgent amendment. For example, if Firstgas decides not to proceed with a reduction in the operating pressure on this section of the transmission system, or proposes an alternative operating pressure, Gas Industry Co is able to recommend that the amendment is revoked, replaced or amended following the consultation process.



## 4. Recommendation

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Gas Industry Co recommends, in reliance on section 43P of the Gas Act 1992, to the Minister, that the Gas Governance (Critical Contingency Management) Regulations 2008 be amended pursuant to section 43F(2)(e) and 43S of the Gas Act 1992, and in accordance with sections 43J to 43P (as applicable) of that Act, as set out in section 3 of this recommendation.

## About Gas Industry Co

Gas Industry Co is the gas industry body and co-regulator under the Gas Act.

Its role is to:

- Develop arrangements, including regulations where appropriate, which improve:
  - the operation of gas markets;
  - access to infrastructure; and
  - consumer outcomes;
- Develop these arrangements with the principal objective to ensure that gas is delivered to existing and new customers in a safe, efficient, reliable, fair, and environmentally sustainable manner; and
- Oversee compliance with, and review such arrangements.

Gas Industry Co is required to have regard to the Government's policy objectives for the gas sector, and to report on the achievement of those objectives and on the state of the New Zealand gas industry.

### ENQUIRIES:

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